# GRADUATE STUDIES BULLETIN

2019-2021



FLORHAM CAMPUS • Madison, New Jersey METROPOLITAN CAMPUS • Teaneck, New Jersey VANCOUVER CAMPUS • Vancouver, British Columbia, Canada WROXTON COLLEGE • Wroxton, England

## Graduate Studies Bulletin 2019–2021

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### Locations

Florham Campus (Madison, NJ) Metropolitan Campus (Teaneck, NJ) Vancouver Campus (British Columbia, Canada)

### Wroxton College (Wroxton, England)

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### Graduate Admissions & Financial Aid Offices

**Office Hours and Locations** 

#### Florham Campus\*

*Graduate Admissions* Rothman Building Phone: 973-443-8905

*Financial Aid* Hennessy Hall, Courtyard Phone: 973-443-8700

#### Metropolitan Campus\*

*Graduate Admissions & Financial Aid* Kron Building Graduate Admissions: 201-692-2554 Financial Aid: 201-692-2363

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### **University Website**

fdu.edu

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Learning Disabilities (M.A.). Management (M.B.A.) for Executives — General Management Specialization — Health Sector Management Specialization Management Information Systems (M.S.). Management Information Systems (M.S.). Management Information Systems (M.S.). Marketing (M.B.A.). Mathematical Foundations (M.A.). Medical Technology (M.S.). Nursing (M.S.N.). Accelerated D.N.P. Programs. Accelerated D.N.P. Programs. Accelerated D.N.P. Programs. Adult Gerontology Nurse Practitioner Clinical Track. Adult Gerontology Nurse Practitioner — Education or Administration Focus Clinical Track. Adult Gerontology Nurse Practitioner — Forensic Focus Clinical Track. Adult Gerontology Nurse Practitioner Post-Master's Certificate. Family Nurse Practitioner Clinical Track. Family Nurse Practitioner Clinical Track. Family Nurse Practitioner Clinical Track. Family Nurse Practitioner Clinical Track. Family Nurse Practitioner Post-Master's Certificate. Family Psychiatric/Mental Health Nurse Practitioner Clinical Track. Family Psychiatric/Mental Health Nurse Practitioner Post-Master's Certificate. Nursing Administration Nonclinical Track. Nursing Information Systems Nonclinical Track. Nursing Practice (D.N.P.). Accelerated D.N.P. Programs. Post-Baccalaureate Nursing to D.N.P. with	<b>133</b> 69 73 74 <b>176</b> 177 136 178 180 191 180 .181 181 .181 .181 .181 .184 .183 .183 .183 .183 190 191 192
Learning Disabilities (M.A.). Management (M.B.A.) for Executives — General Management Specialization — Health Sector Management Specialization Management Information Systems (M.S.). Management Information Systems (M.S.). Marketing (M.B.A.). Mathematical Foundations (M.A.). Medical Technology (M.S.). Nursing (M.S.N.) Accelerated D.N.P. Programs	<b>133</b> 69 73 74 <b>176</b> 177 <b>136</b> 177 136 177 136 177 180 191 180 .181 183 .181 184 182 .183 183 190 191 192 192
Learning Disabilities (M.A.). Management (M.B.A.) for Executives — General Management Specialization — Health Sector Management Specialization Management Information Systems (M.S.). Management Information Systems (M.S.). Management Information Systems (M.S.). Marketing (M.B.A.). Mathematical Foundations (M.A.). Medical Technology (M.S.). Nursing (M.S.N.). Accelerated D.N.P. Programs. Accelerated D.N.P. Programs. Accelerated D.N.P. Programs. Adult Gerontology Nurse Practitioner Clinical Track. Adult Gerontology Nurse Practitioner — Education or Administration Focus Clinical Track. Adult Gerontology Nurse Practitioner — Forensic Focus Clinical Track. Adult Gerontology Nurse Practitioner Post-Master's Certificate. Family Nurse Practitioner Clinical Track. Family Nurse Practitioner Clinical Track. Family Nurse Practitioner Clinical Track. Family Nurse Practitioner Clinical Track. Family Nurse Practitioner Post-Master's Certificate. Family Psychiatric/Mental Health Nurse Practitioner Clinical Track. Family Psychiatric/Mental Health Nurse Practitioner Post-Master's Certificate. Nursing Administration Nonclinical Track. Nursing Information Systems Nonclinical Track. Nursing Practice (D.N.P.). Accelerated D.N.P. Programs. Post-Baccalaureate Nursing to D.N.P. with	<b>133</b> 69 73 <b>74</b> <b>176</b> 177 <b>69</b> <b>136</b> 177 180 191 180 81 181 81 81 81 82 83 83 181 182 83 184 82 183 184 182 183 184 182 184 182 184 182 192 192 192 192 192 192 192 192 192 192 192 192 192 192 192 192 192 193 194 191 192 193 194 194 194 194 194 194 194 194 194 194 194 194 194 194 194 194 194 194 194 194 194 194 194 194 194 194 194 194 194 194 194 194 194 194 194 194 194 194 194 194 194 194 194 194 194 194 194 194 194 194 194 194 194 194 194 194 194 194 194 194 194 194 194 194 194 194 194 194 194 194 194 194 194 194 194 194 194 194 194 194 194 194 194

Pharmacy (Pharm.D.) Political Science (M.A.) Psychology	10
Psychology	
	21 21
Florham Campus	22
Industrial/Organizational Psychology (M.A.	
Metropolitan Campus	22
Postbaccaulaureate Respecialization Program	
in Psychology	22
Clinical Psychology (Ph.D.)	22
Forensic Track	22
Clinical Psychopharmacology	
(Postdoctoral M.S.)	22
Forensic Psychology (M.A.)	22
General/Theoretical Psychology (M.A.)	23
School Psychology (Psy.D.)	23
School Psychology (M.A.)	
School Psychology Certification	
Public Administration (M.P.A.)	
Global Affairs Specialization	24
Global Transportation Management Certificate	
Global Transportation Management Specialization	
Health Care Management Specialization	
Public Finance Specialization	
Public Management Certificate	
Public Management Specialization Public Policy Specialization	
Public Health (M.P.H.).	24 <b>24</b>
Generalist Track	
Health Analytics Track	
Health Policy Track	
Population Health in Addiction and Recovery Track	247.24
School Psychology (Psy.D.)	
School Psychology (Advanced Psy.D.)	23
School Psychology (Five-year Psy.D.)	23
School Psychology (M.A.)	
Service Innovation and Leadership (M.S.)	
Sports Administration (M.S.A.)	
Coaching Theory and Strategies Certificate Coaching Theory and Strategies Specialization	
Sports Administration Certificate	
Sports Administration Specialization	
Student Services Administration (M.A.)	25
Admissions and Financial Aid Administration Certifica	te25
Admissions and Financial Aid Administration	
Specialization	
Specialization Institutional Risks Administration Certificate	
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Specialization Institutional Risks Administration Certificate Institutional Risks Administration Specialization Intercollegiate Sports Administration Certificate On-campus Student Administration Specialization On-campus Student Administration Specialization Supply Chain Management (M.S.) Taxation (M.S.) Teaching (M.A.T.).	25 25 25 7
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Specialization Institutional Risks Administration Certificate Institutional Risks Administration Specialization Intercollegiate Sports Administration Certificate On-campus Student Administration Specialization On-campus Student Administration Specialization Supply Chain Management (M.S.) Taxation (M.S.) Teaching (M.A.T.) Teaching English as a Second/Foreign Language (TESL/TEFL) (M.A.) ternational Studies.	25 25 
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Specialization Institutional Risks Administration Certificate Institutional Risks Administration Specialization Intercollegiate Sports Administration Certificate On-campus Student Administration Specialization On-campus Student Administration Specialization Supply Chain Management (M.S.) Taxation (M.S.) Teaching (M.A.T.) Teaching English as a Second/Foreign Language (TESL/TEFL) (M.A.) ternational Studies Vancouver Campus 260, Wroxton College 260 culty and Administration	25 25 7 13 14
Specialization Institutional Risks Administration Certificate Institutional Risks Administration Specialization Intercollegiate Sports Administration Certificate On-campus Student Administration Specialization On-campus Student Administration Specialization Supply Chain Management (M.S.) Taxation (M.S.) Teaching English as a Second/Foreign Language (TESL/TEFL) (M.A.) ternational Studies Vancouver Campus 260, Wroxton College 260 Culty and Administration 276	25 25 7 13 14 26
Specialization Institutional Risks Administration Certificate Institutional Risks Administration Specialization Intercollegiate Sports Administration Certificate On-campus Student Administration Specialization On-campus Student Administration Specialization Supply Chain Management (M.S.) Taxation (M.S.) Teaching English as a Second/Foreign Language (TESL/TEFL) (M.A.) ternational Studies Vancouver Campus 260, Wroxton College 260 Culty and Administration 276	25 25 7 13 14 26
Specialization Institutional Risks Administration Certificate Institutional Risks Administration Specialization Intercollegiate Sports Administration Certificate On-campus Student Administration Specialization On-campus Student Administration Specialization Supply Chain Management (M.S.) Taxation (M.S.) Teaching (M.A.T.) Teaching English as a Second/Foreign	

### Academic Calendar 2019–2021\*

(New Jersey Campuses)

#### Fall Semester 2019

Registration/Academic	
Counseling and Advising	August 12–23
Classes Begin, 8 a.m. (Mon.)	August 26
Labor Day Holiday (Mon.)	September 2
Last Day for New	-
Registrations and	
Final Drop/Add Changes	
(Mon.)	September 9
Midterm Progress Reporting	1
Opens (Mon.)	September 30
Fall Recess	October
(MonTue.)	14-15
Midterm Progress Reporting	
Closes (Tue.)	October 22
Last Day for Student	
Withdrawal from Classes	
(Fri.)	November 1
Priority Registration for	November
Spring Semester 2020	4–19
Thanksgiving Recess Begins,	
11 p.m. (Tue.)	November 26
Classes Resume, 8 a.m. (Mon.)	December 2
Last Day of Classes, Fall	
Semester (Mon.)	December 9
Reading/Snow Makeup Days	December
(Tue.–Wed.)	10-11
Final Examinations**	December
(ThuWed.)	12-18
Semester Ends, 11 p.m. (Wed.)	December 18

,	
Winter Session 2020 Classes Begin, 8 a.m. (Thu.) Classes End, 11 p.m. (Fri.)	January 2 January 17
Spring Semester 2020	
Registration/Academic Counseling and Advising Martin Luther King Jr. Day	January 2–17
Holiday (Mon.) Classes Begin, 8 a.m. (Tue.)	January 20 January 21
Last Day for New Registrations and	
Final Drop/Add Changes (Mon.) Midterm Progress Reporting	February 3
Opens (Mon.) Spring Recess	February 24 March 9–14
Online Registration for Summer 2020 Sessions Opens (Sun.)	March 15
Classes Resume, 8 a.m. (Mon.) Midterm Progress Reporting Closes (Sat.)	March 16 March 21
Last Day for Student Withdrawal from Classes (Fri.)	April 3
Priority Registration for Fall Semester 2020	April 6–17
Last Day of Classes, Spring Semester (Mon.)	May 4
Reading/Snow Makeup Days (Tue. and Wed.) Final Examinations**	May 5–6
(Thu.–Wed.) Semester Ends, 11 p.m. (Wed.)	May 7–13 May 13
University Commencement	

May 18

#### **Summer Sessions 2020** C. man Section I 2020

Summer Session I 2020	
Classes Begin, 8 a.m. (Mon.)	May 18
Memorial Day Holiday (Mon.)	May 25
Memorial Day Holiday	
Makeup Day (Fri.)	May 29
Classes End, 11 p.m. (Sat.)	June 27
Summer Session II 2020	
Classes Begin, 8 a.m. (Mon.)	June 8
Independence Day Holiday	
(Sat.)	July 4
Independence Day Holiday	
Makeup Day (Fri.)	July 10
Classes End, 11 p.m. (Sat.)	July 18
Summer Session III 2020	
Classes Begin, 8 a.m. (Mon.)	June 29
Independence Day Holiday	, ,
(Šat.)	July 4
Independence Day Holiday	
Makeup Day (Fri.)	July 10
Classes End, 11 p.m. (Sat.)	August

8

#### Fall Semester 2020 ł

Registration/Academic	
Counseling and Advising	August 10-21
Classes Begin, 8 a.m. (Mon.)	August 24
Labor Day Holiday (Mon.)	September 7
Last Day for New	-
Registrations and	
Final Drop/Add Changes	
(Tue.)	September 8
Midterm Progress Reporting	
Opens (Mon.)	September 28
Fall Recess (MonTue.)	October 12–13
Midterm Progress Reporting	
Closes (Tue.)	October 20
Last Day for Student	
Withdrawal from Classes	
(Fri.)	October 30
Priority Registration for	November
Spring Semester 2021	2–17
Thanksgiving Recess Begins	
11 p.m. (Tue.)	November 24
Classes Resume, 8 a.m.	
(Mon.)	November 30
(Mon.) Last Day of Classes,	
(Mon.) Last Day of Classes, Fall Semester (Mon.)	December 7
(Mon.) Last Day of Classes, Fall Semester (Mon.) Reading/Snow Makeup Days	December 7 December
(Mon.) Last Day of Classes, Fall Semester (Mon.) Reading/Snow Makeup Days (Tue.–Wed.)	December 7 December 8–9
(Mon.) Last Day of Classes, Fall Semester (Mon.) Reading/Snow Makeup Days (TueWed.) Final Examinations**	December 7 December 8–9 December
(Mon.) Last Day of Classes, Fall Semester (Mon.) Reading/Snow Makeup Days (Tue.–Wed.) Final Examinations** (Thu.–Wed.)	December 7 December 8–9 December 10–16
(Mon.) Last Day of Classes, Fall Semester (Mon.) Reading/Snow Makeup Days (TueWed.) Final Examinations**	December 7 December 8–9 December

#### Winter Session 2021

Classes Begin, 8 a.m. (Mon.) Jan	nuary 4
Martin Luther King Jr. Day	-
	nuary 18
Classes End, 11 p.m. (Wed.) Jan	nuary 20

#### Spring Session 2021

Registration/Academic	
Counseling and Advising	January 4–22
Classes Begin, 8 a.m. (Mon.)	January 25
Last Day for New	,
Registrations and	
Final Drop/Add Changes	
(Mon.)	February 8
Midterm Progress Reporting	-
Opens (Mon.)	March 1
Spring Recess	March 15–20
Online Registration for	
Summer 2021 Sessions	
Open (Mon.)	March 15
Classes Resume, 8 a.m. (Mon.)	March 22
Midterm Progress Reporting	
Closes (Sat.)	March 27
Last Day for Student	
Withdrawal from Classes	
(Fri.)	April 9
Priority Registration for	-
Fall Semester 2021	April 12–23
Last Day of Classes, Spring	
Semester (Sat.)	May 8
Reading/Snow Makeup Days	
(MonTue.)	May 10–11
Final Examinations**	
(WedTue.)	May 12–18
Semester Ends, 11 p.m. (Tue.)	
University Commencement	TBD

#### **Summer Sessions 2021**

Summer Session I 2021	-
Classes Begin, 8 a.m. (Mon.) Memorial Day Holiday (Mon.) Memorial Day Holiday Makeup Day (Fri.)	May 24 May 31 June 4
Classes End, 11 p.m. (Sat.)	July 3
Summer Session II 2021 Classes Begin, 8 a.m. (Mon.) Independence Day Holiday (Mon.) Independence Day Holiday Makeup Day (Fri.) Classes End, 11 p.m. (Sat.)	June 14 July 5 July 9 July 24
Summer Session III 2021 Independence Day Holiday (Mon.) Classes Begin, 8 a.m. (Tue.) Independence Day Holiday Makeup Day (Fri.) Classes End, 11 p.m, (Sat.)	July 5 July 6 July 9 August 14

### **Major Religious Holy Days**

The University respects the observance of major religious holy days by members of the campus community. Officers of administration and of instruction responsible for scheduling required academic activities or essential services are expected to avoid conflict with such holy days as much as possible.

\*The academic calendar is subject to change with appropriate notice. \*\*Grades due no later than 5 p.m. on the third day after exam is administered.

(Mon.)

### Academic Calendar 2019–2021\* (Vancouver Campus)

### Fall Trimester 2019

Fail Irimester 2019	
Undergraduate New Student	
Orientation/Registration	August
(Mon.–Fri.)	26-30
Labor Day Holiday (Mon.)	September 2
Undergraduate Classes	
Begin, 8 a.m. (Tue.)	September 3
Graduate New Student	
Orientation/Registration	September
(TueFri.)	3–6
Graduate Classes Begin,	
8 a.m. (Mon.)	September 9
Last Day for New	
Registrations and Final	
Drop/Add Changes	
(Mon.)	September 16
Thanksgiving Holiday (Mon.)	October 14
Thanksgiving Holiday	
Makeup Day (Thu.)	October 17
Midterm Grades Due (Mon.)	October 28
Last Day for Student	
Withdrawal from	
Classes (Mon.)	November 4
Remembrance Day Holiday	
(Mon.)	November 11
Registration for Spring 2020	
Begins (Tue.)	November 12
Remembrance Day Holiday	
Makeup Day (Thu.)	November 14
Last Day of Classes, Fall (Sat.)	December 7
Final Examinations**	December
(Mon.–Sat.)	9–14
Academic Term Ends,	
11 p.m. (Sat.)	December 14

### Spring Trimester 2020

Undergraduate New Student	
Orientation/Registration	January
(MonFri.)	13-17
Undergraduate Classes	
Begin, 8 a.m. (Mon.)	January 20
Graduate New Student	,
Orientation/Registration	January
(Mon.–Fri.)	20-24
Graduate Classes Begin,	
8 a.m. (Mon.)	January 27
Last Day for New	
Registrations and Final	
Drop/Add Changes (Mon.)	February 3
Family Day Holiday (Mon.)	February 17
Family Day Holiday	·
Makeup Day (Thu.)	February 20
Midterm Grades Due (Mon.)	March 16
Last Day for Student	
Withdrawal from	
Classes (Mon.)	March 23
Registration for Summer	
2020 Begins (Mon.)	March 30
Good Friday Holiday	
Makeup Day (Thu.)	April 9
Good Friday Holiday (Fri.)	April 10
Easter Holiday (Mon.)	April 13
Easter Holiday Makeup	1
Day (Thu.)	April 16
Last Day of Classes, Spring	1
(Sat.)	April 25
Final Examinations**	April 27–
(MonSat.)	May 2
Trimester Ends,	v
11 p.m. (Sat.)	May 2

Pre-Commencement Dinner (Tue.) Vancouver Campus Commencement (Wed.) University Commencement in New Jersey (Mon.)	May 5 May 6 May 18
Summer Trimester 202	20
New Student Orientation (Tue.–Fri.) Classes Begin, 8 a.m. (Mon.)	May 19–22 May 25
Last Day for New Registrations and Final	
Drop/Add Changes (Mon.)	June 1
Registration for Fall 2020 Begins (Mon.) Last Day for Student	June 22
Withdrawal from Classes (Mon.)	June 29
Canada Day Holiday (Wed.) Canada Day Holiday	July 1
Makeup Day (Thu.) Last Day of Classes (Sat.) Final Examinations**	July 2 July 25 July 27–
(Mon.–Sat.) Trimester Ends,	August 1
11 p.m. (Sat.)	August 1

#### Fall Trimester 2020

Vancouver Campus

Undergraduate New Student	
Orientation/Registration	August 31–
(Mon.–Fri.)	September 4
Labor Day Holiday (Mon.)	September 7
Undergraduate Classes	
Begin, 8 a.m. (Tue.)	September 8
Graduate New Student	1
Orientation/Registration	September
(TueFri.)	8-11
Graduate Classes Begin,	
8 a.m. (Mon.)	September 14
Last Day for New	
Registrations and Final	
Drop/Add Changes	
(Mon.)	September 21
Thanksgiving Holiday (Mon.)	October 12
Thanksgiving Holiday	0.1.1.
Makeup Day (Thu.)	October 15
Midterm Grades Due (Mon.)	November 2
Last Day for Student	
Withdrawal from	N 1 0
Classes (Mon.)	November 9
Remembrance Day Holiday	November 11
(Wed.)	November 11
Remembrance Day Holiday	November 12
Makeup Day (Thu.)	November 12
Registration for Spring 2021 Begins (Mon.)	November 16
Last Day of Classes, Fall (Sat.)	December 12
Final Examinations**	December
(Mon.–Sat.)	14–19
Academic Term Ends,	17-19
11 p.m. (Sat.)	December 19
· · p.m. (out.)	

#### **Spring Trimester 2021**

Undergraduate New Student	
Orientation/Registration	January
(Mon.–Fri.)	11–15
Undergraduate Classes	11 15
Begin, 8 a.m. (Mon.)	January 18
Graduate New Student	January 10
Orientation/Registration	January
(Mon.–Fri.)	18–22
Graduate Classes Begin,	10-22
8 a.m. (Mon.)	Jonuory 25
	January 25
Last Day for New	
Registrations and Final	
Drop/Add Changes	Eshawar 1
(Mon.) Family Day Holiday (Mon.)	February 1
Family Day Holiday (Mon.)	February 15
Family Day Holiday	Eshawar 10
Makeup Day (Thu.)	February 18
Midterm Grades Due (Mon.)	March 15
Last Day for Student	
Withdrawal from	March 22
Classes (Mon.)	March 22
Registration for Summer	Manal 20
2021 Begins (Mon.)	March 29
Good Friday Holiday	A
Makeup Day (Thu.)	April 1
Good Friday Holiday (Fri.)	April 2 April 5
Easter Holiday (Mon.)	April 5
Easter Holiday Makeup	A
Day (Thu.)	April 8
Last Day of Classes, Spring	4 104
(Sat.)	April 24
Final Examinations**	April 26–
(Mon.–Sat.)	May 1
Trimester Ends,	M 4
11 p.m. (Sat.)	May 1
Vancouver Campus	
Pre-Commencement	N
Dinner (Tue.)	May 4
Vancouver Campus	M 5
Commencement (Wed.)	May 5
University Commencement	TDD
in New Jersey	TBD

#### **Summer Trimester 2021**

New Student Orientation	
(Mon.–Fri.)	May 17–21
Victoria Day (Mon.)	May 24
Classes Begin, 8 a.m. (Tue.)	May 25
Last Day for New	
Registrations and Final	
Drop/Add Changes	
(Mon.)	May 31
Registration for Fall 2021	
Begins (Mon.)	June 21
Last Day for Student	
Withdrawal from	
Classes (Mon.)	June 28
Canada Day Holiday (Thu.)	July 1
Canada Day Holiday	
Makeup Day (Thu.)	July 8
Last Day of Classes (Sat.)	July 24
Final Examinations**	
(Mon.–Sat.)	July 26–31
Trimester Ends,	
11 p.m. (Sat.)	July 31

\*The academic calendar is subject to change with appropriate notice. \*\*Some exams run to 9:30 p.m. on each day. Grades

\*\*Some exams run to 9:30 p.m. on each day. Grades are due no later than 5 p.m. on the third day after the exam is administered.

## **The University**

### **FDU** Mission Statement

Fairleigh Dickinson University is a center of academic excellence dedicated to the preparation of world citizens through global education. The University strives to provide students with the multidisciplinary, intercultural and ethical understandings necessary to participate, lead and prosper in the global marketplace of ideas, commerce and culture.

### **University Vision**

Fairleigh Dickinson University strives to be a leading institution of higher education dedicated to empowering its faculty and staff to provide innovative programming, respond with integrity and agility to emerging challenges, cultivate student success and prepare graduates to fulfill their potential, transform their lives and become competent and responsible citizens of the world.

### Value Statement

As a community of learners, Fairleigh Dickinson University is committed to an educational environment that fosters growth and development, social justice, understanding among people and enrichment for all who study and work at the University.

### **FDU Cares**

### Community

We have an educational community that is diverse and demonstrates creativity, enthusiasm and responsibility.

### Advantage

We strive to provide the values of education and the opportunity for personal growth and enrichment.

### Respect

We care about one another and ourselves and are committed to treating all people with civility and consideration.

### Ethics

We believe everyone's rights and freedoms should be respected and that we must act with integrity and accountability.

### Support

We endeavor to provide an environment for success based on cooperation, communication and caring.

### **General Information**

Fairleigh Dickinson University, New Jersey's largest private university, is a nonsectarian, coeducational institution offering programs on the undergraduate, graduate and professional levels.

Founded as a small junior college in 1942, the University now maintains two major campuses in northern New Jersey the Metropolitan Campus in Teaneck, and the Florham Campus in Madison, a campus in England and a campus in Canada.

The Metropolitan Campus offers a wide range of programs and degrees from the associate to the Ph.D. and includes the depth and breadth of the liberal arts faculty, the focus and strength of the engineering programs, the variety and importance of the health professions, the quality of the clinical psychology doctoral program and the presence of the largest number of professional accredited programs on any FDU campus. The campus serves as the home of the ELS Language Center. The Campus is home to 18 Division I sports.

On the grounds of the former estate of Florence Vanderbilt and Hamilton Twombly, the Florham Campus is a selective, primarily residential campus with a strong honors program, offering a broad variety of strong undergraduate and graduate programs in business, the arts, the physical sciences and social and behavioral sciences. Florham is home to FDU's School of Pharmacy and Health Sciences, the Daniel and Martina Lewis Center for Healthcare Innovation and Technology, the Rothman Institute for Innovation and Entrepreneurship, the internationally distributed The Literary Review and the oft-cited survey research group, the FDU Poll. The campus is also host to 19 Division III sports teams, from baseball to tennis.

Recognizing that the student profile on most U.S. campuses is changing dramatically, the University's Anthony J. Petrocelli College of Continuing Studies provides an enhanced focus on the adult learner, addresses the special educational needs of nontraditional students and continues to position FDU as a leader in providing learning opportunities with a strong academic foundation for students of all ages.

The Silberman College of Business is accredited by AACSB International - The Association to Advance Collegiate Schools of Business. The College offers undergraduate and graduate programs in business administration at the Florham Campus, Metropolitan Campus and Vancouver Campus.

### **Brief History**

1942 — A two-year college is founded in Rutherford by Dr. Peter Sammartino and his wife, Sylvia (Sally). One hundred and fifty-three students are enrolled.

1948 — In response to the need for higher education in northern New Jersey, Fairleigh Dickinson College expands its programs into a four-year curriculum.

1948 — First accreditation is achieved from the regional accrediting agency, the Middle States Association of Colleges and Schools.

1954 — The first graduate-level program is offered — a master's degree in business administration — still one of the University's most popular programs.

1954 — A second campus is acquired: formerly Bergen Junior College, in Teaneck, New Jersey.

1956 — By action of the New Jersey State Board of Education, Fairleigh Dickinson College becomes Fairleigh Dickinson University.

1956 — The College of Dental Medicine admits its first students.

1957 — *The Literary Review* is founded as an international journal of contemporary writing.

 $195\hat{8}$  — Å third campus is created in Madison, New Jersey, on the former estate of Florence Vanderbilt Twombly.

1964 — Edward Williams College, a two-year college offering associate's degrees, with highly personalized instruction and guidance, begins classes on the Hackensack side of the Teaneck Campus.

1965 — The University opens its first overseas campus, Wroxton College in England.

1967 — The founding president, Dr. Peter Sammartino, retires after 25 years of service and is appointed chancellor and president emeritus. Dr. J. Osborn Fuller is appointed president.

1967 — The FDU Press is established and will print more than 1,500 scholarly books.

1970 — The College of Dental Medicine moves to a new multimilliondollar facility on the Hackensack side of the Teaneck Campus.

1970 — The innovative and popular Saturday College of Edward Williams College opens, offering the opportunity to earn an associate's degree by taking courses on Friday evenings and Saturdays.

1972 — Fairleigh Dickinson University dedicates its second overseas campus, the West Indies Laboratory at St. Croix, U.S. Virgin Islands.

1974 — Dr. Jerome M. Pollack becomes the third president of the University.

1982 — The first students are admitted to a program for the Ph.D. in clinical psychology.

1983 — Walter T. Savage is appointed acting president.

1984 — Dr. Robert H. Donaldson becomes the fourth president of the University.

1987 — The George and Phyllis Rothman Center, the University's major, state-of-the-art athletic and recreation facility, opens in Hackensack.

1989 — With the creation of the Rothman Institute of Innovation and Entrepreneurship at Madison, Fairleigh Dickinson becomes the first university in the nation to build a facility dedicated to entrepreneurial education.

1990 — The College of Dental Medicine graduates its last class. Dr. Francis J. Mertz is appointed to an interim term as president of the University. Because of significant damage to the West Indies Laboratory by Hurricane Hugo, the facility is closed.

1992 — Dr. Francis J. Mertz is appointed president of the University.

1993 — FDU's Board of Trustees approves a facilities master plan that allows for the implementation of three major construction projects by fall 1995. The board also votes that the University merge its operations on the Rutherford Campus with those of Teaneck and Madison beginning with the 1994–95 academic year. 1994 — Dickinson Hall reopens at the Metropolitan Campus.

1995 — The Roberta Chiaviello Ferguson and Thomas G. Ferguson Recreation Center opens at the Florham Campus.

1998 — The Martin F. Stadler, Patrick J. Zenner, Hoffmann-La Roche Inc. Academic Building opens at the Florham Campus. New College of General and Continuing Studies is formed to address the special educational needs of nontraditional students, including adult learners.

1999 — Dr. J. Michael Adams is appointed president. The Park Avenue Residence Hall opens at the Florham Campus.

2000 — The University modifies its mission, placing a greater emphasis on "the preparation of world citizens through global education."

2001 — The University's survey research group, PublicMind<sup>™</sup> (now Fairleigh Dickinson University Poll), makes the first of hundreds of press releases based on measurements of public opinion.

2002 — Missions of the New Jersey campuses are indicated by new identities: Florham Campus (Madison) and the Metropolitan Campus (Teaneck). FDU creates its United Nations Pathways Lecture Series and earns designation as a nongovernmental organization (NGO) associated with the U.N. Department of Public Information.

2003 — The residence halls, Northpointe and Rutherford Hall, open at the Metropolitan Campus and Florham Campus, respectively.

2004 — Chaîne House opens at the Florham Campus. The International School of Hospitality and Tourism Management and the national headquarters of Confrérie de las Chaîne des Rôtisseurs, the world's premier gourmet society, are located in the building.

2005 — New College of General and Continuing Studies is renamed Anthony J. Petrocelli College of Continuing Studies.

2006 — Lee Gildart and Oswald Haase School of Computer Sciences and Engineering is named to honor science mentors of alumnus, space-farer and entrepreneur Gregory Olsen, whose gift is the largest in FDU's history. 2007 — The University opens an international campus, Vancouver Campus, in British Columbia, Canada.

2009 — Fairleigh Dickinson is approved for "Special Consultative Status" as a nongovernmental organization with the U.N. Economic and Social Council (ECOSOC). FDU is the first university in the world to earn this rank. FDU grants its first doctor of nursing practice degree.

2010 — Vancouver Campus graduates its first class. In recognition of the generosity of John Giovatto and in memory of his brother, Frank, the Metropolitan Campus dedicates the Frank Giovatto Library.

2011 — The University's largest capital campaign, FDU NOW, beats its target of \$50 million by almost \$9 million.

2012 — Sheldon Drucker is appointed to an interim term as president of the University. The School of Pharmacy and Health Sciences opens. It is New Jersey's first pharmacy school associated with a private university and only the second in the state. The John and Joan Monninger Center for Learning and Research opens at the Florham Campus.

2013 — Sheldon Drucker is appointed president of the University.

2014 — The Board of Trustees approves a five-year strategic plan that includes initiatives to improve the value and affordability of an FDU degree, expand key programs and focus on new areas of growth and innovation.

2015 — FDU dedicates the Daniel and Martina Lewis Center for Healthcare Innovation and Technology at the School of Pharmacy and Health Sciences.

2016 — University Provost and Senior Vice President for Academic Affairs Christopher A. Capuano becomes the University's eighth president on July 1, 2016.

2017 — Fairleigh Dickinson University celebrates its 75th Anniversary. The School of Public and Global Affairs is formed.

2018 — The new School of the Arts is launched.

2018 — FDU officially launched the public phase of its historic fundraising campaign — One University Many Dreams — with a \$100 million target.

2019 — Knights win first NCAA Tournament basketball game. Restored footbridge between Teaneck and Hackensack, Metropolitan Campus reopens.

### Impact

Fairleigh Dickinson University has had a widespread impact upon northern New Jersey. Approximately 70 percent of its more than 125,000 alumni have remained in New Jersey, and many work in the area's industries. Companies such as Alcatel-Lucent; AT&T; BD; Bestfoods; Deloitte; Erlesson; Honeywell International Inc.; IBM; Johnson & Johnson; Novartis; Pfizer Inc.; Prudential; and Wyeth employ large numbers of Fairleigh Dickinson University alumni.

The University sponsors a wide variety of educational opportunities, many in cooperation with local school districts, local businesses and even military installations, bringing University expertise to a large number of citizens.

### Campuses

Fairleigh Dickinson has two campus locations in northern New Jersey and overseas campuses in England and Canada. Maps of the two U.S.-based campuses are included at the back of this *Graduate Studies Bulletin*.

### **Florham Campus**

Madison, New Jersey

### Location

The Florham Campus is located on the outskirts of Morristown on Route 124, near the intersection of Interstate 287, about 35 miles west of New York City. The campus is flanked by Drew University and the College of Saint Elizabeth, and its neighbors include the headquarters of several Fortune-500 companies. It is conveniently next to the Convent Station, NJ Transit railroad station, the bus line and Morristown airport. It is approximately a 20-minute drive from Newark Liberty International Airport.

### Description

This campus, situated on a beautifully landscaped park of 178 acres, became known as "Florham" when it was created as an estate for Florence Vanderbilt Twombly and her husband, Hamilton, by Frederick Law Olmsted (who also designed the grounds of New York City's fabled Central Park) in 1897.

The Florham Campus serves a large residential undergraduate population,

attracting students from across the country and abroad. During evenings and weekends, however, graduate and adult students are drawn to the campus's convenient and flexible degree programs. Studies are offered through the Maxwell Becton College of Arts and Sciences, the Silberman College of Business, the Anthony J. Petrocelli College of Continuing Studies and University College: Arts • Sciences • Professional Studies. In addition to campus-based studies, the Silberman College hosts its executive M.B.A. and leadership development programs at the Wyndham Hamilton Park Hotel and Conference Center, which is located adjacent to the campus's grounds. In addition, FDU's School of Pharmacy and Health Sciences is located just down the road in a state-of-the-art facility one mile from campus.

Some of the campus's Georgian-style buildings are more than a century old, and have been adapted to meet the educational mission of the University. The 100-room Hennessy Hall (Mansion) features classrooms, offices, conference-style meeting rooms and a large ballroom (Lenfell Hall). The estate's former Orangerie is part of the John and Joan Monninger Center for Learning and Research (library).

The campus includes both older and recent constructions featuring Georgian architecture, such as the Science Building, the Roberta Chiaviello Ferguson and Thomas G. Ferguson Recreation Center (with an indoor swimming pool, gymnasium, fully equipped physical fitness center and racquetball courts) and the Martin F. Stadler, Patrick J. Zenner, Hoffmann-La Roche Inc. Academic Building that houses 20 classrooms, student lounges and a dining facility for commuter and part-time students as well as the traditional undergraduate population.

Other major campus facilities include a science complex, a theater, a center for entrepreneurship and innovation, residence hall complexes and a refurbished Frank Santoloci Student Center with facilities for dining, recreation, student government, a student-operated pub, a bookstore and student activities.

### **Metropolitan Campus**

Teaneck, New Jersey

### Location

The Metropolitan Campus is located in the heart of the dynamic New York/New Jersey corridor, just minutes from Manhattan. The campus is directly accessible from Route 4, six miles from the George Washington Bridge, and stretches along the east and west banks of the Hackensack River. It features ample parking for commuters, as well as public transit stops right on campus. It is within a half-hour drive of Newark Liberty International Airport.

### Description

The Metropolitan Campus features a university atmosphere with an international perspective. Its location as a bedroom community of New York City helps it to attract nearly equal numbers of undergraduates, adult learners and fulland part-time graduate students from throughout the country and the world. Minority and international students comprise nearly a third of the campus population, providing a decidedly cosmopolitan perspective to the campus. The campus offers ready access to the amenities and resources of a major citycenter, and the security and collegiality of a mid-sized college campus. Studies are offered through the Silberman College of Business, University College: Arts • Sciences • Professional Studies and the Anthony J. Petrocelli College of Continuing Studies.

Carving the 88-acre campus into two distinctive areas is the Hackensack River. The Metropolitan Campus is comprised of 55 buildings spanning the communities of Teaneck and Hackensack, New Jersey. The campus architecture is primarily contemporary, although some of the campus's quaint older buildings housing departments and specialty areas reflect the area's Dutch Colonial heritage.

Robison Hall, the Frank Giovatto Library, Alumni Hall and the Muscarelle Center for Building Construction Studies are set along the river's east edge, while Dickinson Hall and the George and Phyllis Rothman Center (a 5,000-seat athletic and recreation facility) are located along the river's west side. Other major facilities include a renovated Fitness Center (with a student lounge), the Student Union Building, University Hall and several residential complexes. Limited graduate housing is available in the campus's newest residence hall, Northpointe (2003). Both Teaneck and Hackensack feature easy access to restaurants and shops, and plentiful on-campus parking is available.

#### **Wroxton College**

Wroxton Near Banbury, Oxfordshire, England

Wroxton College is the British campus of the University, situated in the ancestral home of Lord North at Wroxton Abbey in Oxfordshire. It is centrally located in England, lying near Banbury, between Oxford and Stratford-upon-Avon. The latter is, of course, the birthplace of William Shakespeare and a regular destination of Wroxton students attending productions of the Royal Shakespeare Company.

London is just 75 miles away from the campus, and while there are several scheduled College excursions to the city, there also is regular train service from Banbury.

Originally constructed as an Augustinian priory in 1215, Wroxton Abbey has accommodated several British monarchs and statespeople such as Theodore Roosevelt. It now houses the College's classrooms and seminar rooms, the library, fully modernized student-lodging facilities and computer laboratories.

Wroxton College is a unique experience both culturally and academically for students seeking to extend their horizons. Students have come to Wroxton from more than 250 American colleges and universities to participate in an academic program offered by a resident British faculty and visiting British scholars.

In the fall and spring semesters, undergraduate courses are offered in English theater and drama, literature, fine arts, social sciences, education and international business. There is also ample opportunity for independent study. The academic offerings are supplemented by an extensive program of tours to various historic sites, artistic and cultural centers and places of political and commercial significance.

Admissions inquiries should be addressed to the Wroxton College/Studyabroad Office, 285 Madison Avenue, Madison, New Jersey 07940, (973) 443-8086 or 1 (800) 338-8803.

#### **Vancouver Campus**

Vancouver, British Columbia, Canada As a leading innovator in global education, Fairleigh Dickinson University consistently seeks new ways to offer its unique learning opportunities to students worldwide. The University's newest campus and second international location is situated in Vancouver, British Columbia, Canada. Students at the Vancouver Campus have the unique opportunity to earn an undergraduate and graduate degree from an American university while studying in Canada.

The campus officially opened in fall 2007 in a newly renovated, state-of-the-art facility in the city's historic and cosmopolitan Yaletown section. Located in western Canada near the U.S. border, Vancouver is one of the world's most scenic and multicultural cities. Consistently rated one of the world's most livable cities, Vancouver is surrounded by stunning natural beauty, including mountains, the Pacific Ocean, a rainforest, parks and beaches. Warmed by Pacific Ocean currents and protected by a range of mountains, Vancouver enjoys mild temperatures year-round.

Vancouver Campus serves primarily international students from around the world. Three undergraduate degree programs are currently available on campus: the B.S. in business administration with a concentration in international business and optional minors in entrepreneurship, finance, marketing or information technology; the B.S. in information technology with a minor in business administration and optional concentrations in network and systems administration and web-development technology; and the B.A. in individualized studies with specializations in applied technology business, business, communication, hospitality and tourism and international relations. All programs use the same curricula offered for these degrees at FDU's New Jersey campuses, and all offer U.S. degrees approved by the State of New Jersey's Commission on Higher Education. Classes follow a trimester calendar that enables students to complete their degrees in less than three years by attending classes year-round.

The first graduate degree program for Vancouver Campus, the Master of Administrative Science (M.A.S.), was approved on April 27, 2011, and classes began in the summer of 2011. Specializations offered within the M.A.S. program include: computer security and forensic administration, emergency management administration, global health and human services administration, global leadership and administration, global technology administration and human resources administration.

The second graduate degree program for the Vancouver Campus, the Master of Science in hospitality management studies, was approved in December 2014, and classes began in the summer of 2015.

In addition to its degree programs, Vancouver Campus's pre-University program is available to students who need additional support in developing their English language skills before starting their degree studies.

Fairleigh Dickinson University received approval on May 8, 2006, from the British Columbia Ministry of Advanced Education to offer degree programs and operate as a university in British Columbia. FDU was the first non-Canadian institution to gain approval under the new, more stringent standards adopted by British Columbia in 2003.

Admissions inquiries should be directed to the Office of Admissions, Vancouver Campus, at (604) 682-8112 or 1-877-338-8002 (in North America) or by email at vancouver-admissions@fdu.edu.

### Accreditation

Fairleigh Dickinson University is accredited by the Middle States Commission on Higher Education\* and licensed by the State of New Jersey, Office of the Secretary of Higher Education.

In addition to the accreditation held by all programs for academic purposes, specialized curricula have applied for and been granted approval by the following recognized professional agencies: accountancy - New Jersey State Board of Public Accountants; business, Silberman College of Business - AACSB International - The Association to Advance Collegiate Schools of Business; chemistry — American Chemical Society (this accreditation applies only to the Bachelor of Science program offered by Maxwell Becton College of Arts and Sciences at the Florham Campus, Madison, New Jersey); civil engineering -Engineering Accreditation Commission of ABET\*\* (EAC/ABET); civil engineering technology - Engineering Technology Accreditation Commission of ABET\*\* (ETAC/ABET); clinical mental health counseling - Council for Accreditation of Counseling and Related Educational Programs (CACREP); clinical psychology (Doctor of Philosophy Program) -American Psychological Association; computer science — Computing Accreditation Commission of ABET\*\* (CAC/ABET) (this accreditation applies only to the Bachelor of Science in computer science program at the Metropolitan Campus, Teaneck, New Jersey); construction engineering technology - Engineering Technology Accreditation Commission of ABET\*\* (ETAC/ABET); education — initial accreditation with Council for the Accreditation of Educator Preparation (CAEP) and New Jersey State Department of Education; electrical engineering -Engineering Accreditation Commission of ABET\*\* (EAC/ABET); electrical engineering technology — Engineering Technology Accreditation Commission of ABET\*\* (ETAC/ABET); hotel and restaurant management - Accreditation Commission for Programs in Hospitality

Administration (ACPHA) (this accreditation applies only to the Bachelor of Science program); mechanical engineering technology - Engineering Technology Accreditation Commission of ABET\* (ETAC/ABET); pharmacy ----Accreditation Council for Pharmacy Education\*\*; physical therapist assistant - Committee on Accreditation in Physical Therapy Education: radiography - Joint Review Committee on Education in Radiologic Technology; nursing -New Jersey State Board of Nursing and the Commission on Collegiate Nursing Education (CCNE); school psychology National Association of School Psychologists (NASP); Silberman College of Business - AACSB International - The Association to Advance Collegiate Schools of Business; inclusion on approved lists of the American Medical Association and the American Dental Association (Medicine, Dentistry) by virtue of the accreditation by the Middle States Commission on Higher Education.

### Official University Photography

Fairleigh Dickinson University reserves the right to photograph members of the University community, including but not limited to, its students and faculty, in situations appropriate to the image of an academic institution, and to publish likenesses in Fairleigh Dickinson University publications, websites, videos or other recruitment or promotional materials. However, the University will, to the extent feasible, honor requests of constituents who do not wish their images photographed or published.

\*ABET, http://www.abet.org \*\*Accreditation Council for Pharmacy Education, 135 South LaSalle Street, Suite 4100, Chicago, IL 60603; phone: (312) 664-8575; fax (312) 664-4652; website: www.acpe-accredit.org

\*3624 Market Street, Philadelphia, Pa. 19104-2680. \*\*ABET, http://www.abet.org

Fairleigh Dickinson University is comprised of four colleges: Maxwell Becton College of Arts and Sciences, Silberman College of Business, the Anthony J. Petrocelli College of Continuing Studies and University College: Arts • Sciences • Professional Studies and two stand-alone schools: School of Pharmacy and Health Sciences and School of Public and Global Affairs.

More than 50 graduate degree programs are offered by the colleges. The colleges' degree programs and their faculty and staff are listed on this and the following pages. The admissions and academic requirements and detailed descriptions of each program are listed in alphabetical order within the Program section of this *Graduate Studies Bulletin* pages 41–259.

### Maxwell Becton College of Arts and Sciences

Florham Campus, Madison, New Jersey Geoffrey S. Weinman, Dean

#### The Maxwell Becton College of Arts and Sciences deepens students' understanding of their chosen fields, while teaching them

of their chosen fields, while teaching them to communicate and reason clearly and effectively. The College is committed to helping students advance their careers or continue studies for higher degrees.

### **Programs**

- Animation (M.A.)
- Animation (M.F.A.)
- Chemistry (M.S.)
- Clinical Mental Health Counseling (M.A.)
- Communication (M.A.)
- Creative Writing (M.F.A.)
- Creative Writing and Literature for Educators (M.A.)
- Education for Certified Teachers (M.A.)\*
- Educational Leadership (M.A.)\*\*
- Film (M.F.A.)
- Health Science (M.H.S.)
- Psychology
- Industrial/Organizational Psychology (M.A.)
- Teaching (M.A.T.)\*\*\*

Graduate courses in mathematics are available to students in the M.A.T. program and to qualified undergraduates with the permission of the department.

### **Faculty & Staff**

#### Administration

G.S. Weinman, Dean J. Lehr, Associate Dean

\*While the Master of Arts in education for certified teachers (see pages 126–131) is awarded through FDU's University College: Arts • Sciences • Professional Studies on the Metropolitan Campus, Teaneck, New Jersey, nearly all courses required in fulfillment of the degree are offered at the Florham Campus, Madison, New Jersey.

\*\*Master of Arts in educational leadership (see pages 132–133).

\*\*\*Master of Arts in Teaching (see pages 137–140)

### School of the Arts

T. Rosen, Director; H. Libov, Chair and Director, M.F.A. in Film; R. Barkley, Director, M.A. and M.F.A. in Animation; R. Chace, Director, M.A. in Creative Writing and Literature for Educators; J. O'Neil, Coordinator of Graphic Design; R. Steinke, Director, M.F.A. in Creative Writing; J. Cinco, G. Cochrane, A. Cohen, D. Daniel, D. Grand, E. Hoffman, S. Hollis, D. Landau, S. Lents, C. Loewus, J. Moonelis, J. Shaw

#### Department of Biological and Allied Health Sciences

J. Salierno, Chair; J. Agugliaro, M. El-Sherbeini, S.R. Hardie, T. Loreng, P. Melloy, E. Morton, E. Myers-Arnold, B. Narayanan, H. Parzer

### Department of Chemistry and Biochemistry

A. Teslja, Chair; G. Anderle, M. Avaltroni, S. Bashkova, J. Bogart, M. Elshaer, E. Salaski

### Department of Communication Studies

G. Radford, Chair; C. Caldiero, K. Dunsmore, C. Foster, K. Haspel, S. Latson, J. Lehr

#### Department of Literature, Language, Writing and Philosophy

M. Boyd, Chair; P. Bazán-Figueras, S. Belen-Ramos, P. Benson, L. Corces, K. Douglas, A. Fader, N. Ghosh, O. Makridis, G. Pastorino, A. Patrick, A. Patton, F. Pinto, B. Rabinowitz, E. Reid, K. Sammond, G. Weinman

#### Department of Mathematics, Computer Science and Physics

L. Khreisat, Chair; I. Darwish, B. Knorr, R. Mayans, J. Namazi, P. Penrice, D. Richton, K. Sharma, G. Singh, N. Sinha, M. Slaby, Y. Teper, D.R. Tracy

#### Department of Psychology and Counseling

A. Tasso, Chair; D. Brown, D. Calcagnetti, T. Conklin, D. DeNigris, R. Griffo, E. Harrington, A. Wagener, D. Wentworth

### Silberman College of Business

Florham Campus, Madison, New Jersey: Metropolitan Campus, Teaneck, New Jersey; and Vancouver Campus, British Columbia, Canada

#### James G. Almeida, Interim Dean

The Silberman College of Business is accredited by AACSB International - The Association to Advance Collegiate Schools of Business. AACSB is the premier business school accrediting body.

Silberman College is a tricampus college of the University, offering graduate programs at the Florham Campus, Madison, New Jersey, and on the Metropolitan Campus, Teaneck, New Jersey. Its major goal at the graduate level is to develop the analytical ability and perspective of the graduate student in order to contribute to success as a responsible executive.

The College, a community of committed educators, administrators and staff, has as its mission to instill in its students a superior level of businessmanagement competence by offering distinctive programs that blend academic excellence and practical business knowledge with a global multicultural orientation.

The College aims to achieve recognition as a leading provider of high-quality, innovative education in business administration and as a leader in the enhancement of the practice of business management through the applied research and professional activities of the faculty.

The College achieves its mission through:

- Curricula that are directed to the educational growth of students and are responsive to the needs of the business community,
- Teaching excellence in all programs,
- Research capabilities that advance the practice of business management and • Close ties with the business community served by the College.

The College includes several institutes to support graduate business education. The Rothman Institute of Innovation and Entrepreneurship provides students with cross-disciplinary opportunities to explore the meaning and process of capitalism and free enterprise in the nation's economy.

### **Major Programs of Study**

• Master of Business Administration (M.B.A.) Specializations Accounting **Business Administration** Finance International Business (Metropolitan Campus only) Management

Marketing

Pharmaceutical Management Studies (Florham Campus only)

- Master of Business Administration (M.B.A.) — Management for Executives - General Management
  - Health Sector Management
- Master of Science (M.S.) Accounting
- Master of Science (M.S.) Digital Marketing (online only)
- Master of Science (M.S.) Supply Chain Management
- Master of Science (M.S.) Taxation (Florham Campus only)

In addition to the above programs, the College offers a post-M.B.A. graduate certificate. Students with an M.B.A. may receive certification in a second major upon completion of an additional 12 required and elective credits for that major.

### **Faculty & Staff**

Administration

J.G. Almeida, Interim Dean and Associate Dean for Graduate Programs J.D. Wischnevsky, Assistant Dean for Undergraduate Programs P. Caliguari, Director, Executive Programs R. West, Director, Tax Program

#### Department of Accounting, Taxation and Law

R. West, Chair; F. Brunetti, D. Buzinkai, M. Calderisi, D. Collier, Z. Fried, S. Guempel, A.J. Rosman, H. Rozen, V. Sampath, J. Schiff, A. Schultzer, J. Skarbnik, Y. Yan

#### Department of Economics, Finance and International Business

K. Denning, Chair; P. Anastasopoulos, K. Betz, E. Cowan, F. Englander, J. Kiernan, R. Kjetsaa, C. Ng, S. Tuluca, X. Yang

#### Department of Marketing, Information Systems and Decision Sciences

L. Qin, Chair; A. Bazargan, G. Bronson, R. Chandrashekaran, Y. Demotta, B. Ertimur, A. Fask, J. Hsu, M. Kieff, Y. Kim, K. Masten, K.G. Mun, J. Reid, M. Sedaghat, X. Tan, Z.Wang, K.P. Yoon

#### Department of Management and Entrepreneurship

G. Jones, Chair; J.G. Almeida, S. Bear, S. Behson, D. Celentano, G. Farias, T. Hansbrough, J. Harmon, I. Krysa, O. Nwachukwu, D. Scotti, G. Sollars, J.D. Wischnevsky

### Rothman Institute of Innovation and Entrepreneurship

D.G. Caldwell, Executive Director

### Anthony J. Petrocelli College of Continuing Studies

Florham Campus, Madison, New Jersey; Metropolitan Campus, Teaneck, New Jersey; and Vancouver Campus, British Columbia, Canada

#### Lisa R. Braverman, Dean

The Anthony J. Petrocelli College of Continuing Studies, formerly known as New College of General and Continuing Studies, offers adult learners a convenient and flexible program for their special educational needs.

Recognizing that the student profile on most U.S. campuses is changing dramatically, the University's Petrocelli College was introduced to provide a unified approach and enhanced focus on the adult learner and to continue to position FDU as a leader in providing learning opportunities in a strong academic foundation for students of all ages.

The College features programs integral to the University's commitment to serve "lifelong learners." These include seven graduate degree programs and postbaccalaureate education and nondegree programs, with many credit, noncredit and certification options. In addition, Petrocelli College features precollege programs and two- and fouryear undergraduate degree offerings for adults. For the financial planning certificate program, the paralegal studies program and other continuing education programs go to

http://view2.fdu.edu/academics/ continuing-education/.

In conjunction with the other colleges, Petrocelli College also is heavily involved with distance-learning initiatives, summerand winter-session programming and the support and development of credit certificate programs.

While based on the Metropolitan Campus, the College offers programs on both New Jersey campuses, at more than 25 offsite locations throughout the state of New Jersey, and at Vancouver Campus, British Columbia, Canada. Courses are offered in formats, at times and in locations convenient for adult learners.

#### **Programs**

- Administrative Science (M.A.S.)
- Cyber and Homeland Security Administration (M.S.)
- Hospitality Management Studies (M.S.)
- Service Innovation and Leadership (M.S.)
- Sports Administration (M.S.A.)
- Student Services Administration (M.A.)

#### Faculty & Staff Administration

L.R. Braverman, Dean D. Fredericks, Associate Dean for Continuing Education

K. Zatz, Assistant Dean, School of Administrative Science

P. Dar, Executive Director of Marketing

A. Sperrazza, Executive Director of Enrollment Management

F. Alonso, Director, *Puerta al Futuro* Program and Latino Promise and HACER Program

J. Steiner, Director, Online Programs

J.H. Behnke, Director of Web,

Instructional Technology and Online Learning

M. Haines, Director of Student Support Services

J. Niser, Director, International School of Hospitality and Tourism Management

J. Lue Raia, Director of Corporate Outreach and Training

D.L. Ganley, Senior Coordinator for Offcampus Credit Programs

J. Sahni, Coordinator of Online Programs *Faculty* 

C. Acosta, F. Alonso, W. Antoine, J. Ariken, W. Aroca, B. Assadi, J. Bachman, M. Barto, P. Blank, J. Buenahora, C. Bygrave, M. Collado, J. Devine, P. Durso, A.K. Garg, I. Gersh, M. Hawzen, D. Hoover, F. Karger, J.C. Kim, E. Kovacs, L. Kurland, P. Laubsch, X. Li, T. Llallire, R. Lubisco, P. MacIntyre, S. McCloud, R. Medaska, A. Nicki, F. Oliver, E. Oliveros, M. Oujo, A. Ritz, R. Rosada, H. Roy, W. Schuber, R. Selig, M. Shakona, T. Swanzey, W. Toms, L. Ultan

### University College: Arts • Sciences • Professional Studies

Metropolitan Campus, Teaneck, New Jersey, and Vancouver Campus, British Columbia, Canada

### Vicki L. Cohen, Interim Dean

University College: Arts • Sciences • Professional Studies, is committed to educating students for the world.

University College emphasizes professionally accredited and careeroriented programs that prepare future leaders to work effectively in a global environment, regardless of profession. Its wide array of programs is strongly grounded in the liberal arts, recognizing that professionals in all fields require a multidisciplinary and multicultural perspective to be successful. The college also stresses experiential and field-based learning through internships, studentdirected research, cooperative education and community service that supplement academic instruction, enhance careerrelated experiences and develop students' social and moral identities as productive citizens.

The mission of University College is facilitated by its location in northern New Jersey's Bergen County and proximity and ease of access to New York City. Courses and curricula incorporate the unique commercial, scientific and cultural resources of the metropolitan area to create a learning laboratory of exceptional diversity and richness. The resources of this vital cosmopolitan area contribute to all aspects of University College activity and, at the same time, the College maintains a suburban campus atmosphere.

University College offers a wide range of undergraduate and master's degree programs in such areas as psychology, criminal justice, education, the natural sciences, nursing, engineering and technology, computer science, media and communication and the humanities. Many of its schools offer accelerated and combined undergraduate/graduate degree programs as well as special areas of concentration and minors.

University College is organized into schools to be more responsive to student needs. Specifically, there are eight schools within the college:

• The School of Art and Media Studies covers the disciplines of communication, fine arts and multimedia studies.

• The Lee Gildart and Oswald Haase School of Computer Sciences and Engineering covers the disciplines of civil engineering, computer engineering, electrical engineering, mechanical engineering, computer science, cybersecurity and information assurance, electronic commerce, engineering technology, information technology, management information systems and mathematics. Accredited undergraduate programs are offered in electrical engineering, electrical engineering technology, civil engineering technology, computer science, construction engineering technology and mechanical engineering technology.

• The School of Criminal Justice, Political Science and International Studies covers the disciplines of criminal justice, criminology, private security, political science and international studies. Programs at the undergraduate and graduate level are offered.

• The Peter Sammartino School of Education offers accredited programs for teacher certification in elementary and secondary education, education for certified Teachers, educational leadership, English as a second language, teaching English as a second/foreign language, teacher of students with disabilities and learning disabilities consultant.

• The School of the Humanities covers the disciplines of English, history, philosophy, humanities, foreign languages, religion and interdisciplinary studies.

• The School of Natural Sciences houses the disciplines of biology, biochemistry and chemistry.

• The Henry P. Becton School of Nursing and Allied Health includes the disciplines of nursing and allied health including a Doctor of Nursing Practice (D.N.P.). Accredited programs are offered in nursing, medical technology and radiography.

• The School of Psychology houses the discipline of psychology, including an accredited Ph.D. program in clinical psychology and a Psy.D. program in school psychology.

### **Programs**

- Biology (M.S.)
- Chemistry (M.S.)
- Computer Engineering (M.S.)
- Computer Science (M.S.)
- Cosmetic Science (M.S.)
- Criminal Justice (M.A.)
- Cybersecurity and Information Assurance (M.S.)
- Education for Certified Teachers (M.A.) (Reading Specialist Certification)
- Educational Leadership (M.A.) (Principal/Supervisor Certification)
- Electrical Engineering (M.S.E.E.)
- Electronic Commerce (M.S.)
- Learning Disabilities (M.A.) Teacher of Students with Disabilities
- Management Information Systems (M.S.)
- Mathematical Foundations (M.A.)
- Medical Technology (M.S.)
- Nursing (M.S.N.)
- Nursing Practice (D.N.P.)
- Political Science (M.A.)
- Psychology
- Clinical Psychology (Ph.D.)
- Clinical Psychopharmacology (Postdoctoral M.S.)
- Forensic Psychology (M.A.)
- General/Theoretical Psychology (M.A.)
- School Psychology (Psy.D.)
- School Psychology (M.A.)

 Teaching (M.A.T.) Teacher Certification Preschool to Grade3; Elementary Education/K–6; English as a Second Language; Bilingual Education (ESL); Secondary Education Content Area/K–12 (Art, Biological Sciences, Chemistry, Earth Science, English, Mathematics, Physical Science, Physics, Social Studies, World Languages)

• Teaching English as a Second/Foreign Language (TESL/TEFL) (M.A.) (International students only)

In addition to the above programs, the College offers a postbaccalaureate respecialization program in psychology certificate. Programs in Language, Culture and Professional Advancement (PLCPA) offers courses in English for Specific Purposes (ESP) for international students and any interested domestic students. These courses are called English for Professional Success (EPS). The College also offers several postbaccalaureate certificate programs training teachers for the Orton-Gillingham approach to reading instruction.

### **Faculty & Staff**

**Administration** V.L. Cohen, Interim Dean J. Boyd, Interim Associate Dean

#### School of Art and Media Studies

J. Boyd, Interim Director; Y. Aronson, B. Battistoli, K. Buzzard, T. LoPonte, M. Roberts, Z. Sun

#### Lee Gildart and Oswald Haase School of Computer Sciences and Engineering

A. Tan, Director; H. Silver, Deputy Director; S. Abdelazim, V. Alizadeh, M. Azarderakhsh, A. Casti, Z. Chen, W. Choi, W. Dai, M. Farag, S. Huddy, V. Janarthanan, F. Jnaid, Y. Kim, E. Kose, B. Lefkowitz, M. Lewis, Y. Liu, Z. Mao, K. Mondal, S. Mukherjee, A.R. Rao, Y. Tang, A. Vatsa, H. Zhao

### School of Criminal Justice, Political Science and International Studies

S. Raphalides, Director; D. Evans, E. Garcia, J. Kenny, K. Kattelman, B. Ojo, E. Panuccio, N. Sachs

#### Peter Sammartino School of Education

M. Singer, Interim Director; J. Bornstein, M. Farrell, N. Hansen, E. Hellerman, J. Jones, K. Joshi, C. Karpinski, L. Meskin, T. Montani, L. Ray, K. Spence, S. Suh, R. Westbrook

#### School of the Humanities

J. Boyd, Director; J. Gifford, F. Ingledew, M. Pitts, C. Rasmussen, J. Scorza, C. Shanafelt, A. Velásquez, J. Wagner, L. Winters, W. Zimmerle

#### School of Natural Sciences

J. Dougherty, Co-director; M. McClary, Co-director; A. Benzecry, G. Dorata, I.R. Isquith, I. Kumar, M. Leonida, R. Lo Pinto, A. Murphy, G. Nandikotkur, N. Philips, J. Stout, A. Wallace, M.P. Warunek

#### Henry P. Becton School of Nursing and Allied Health

M. Guttman, Director; S. Colon Cabassa, Associate Director for Undergraduate Programs; M. Rossignol, Associate Director for Florham Programs; M. Rubin, Associate Director for Allied Health; B. Yu, Associate Director for Graduate Program; M. Vargas, Coordinator, D.N.P. Program; J. Couper, H. Egbuonu, N. Edwards-Hammond, C. Garzone-Johnson, E. Graulich, C. Jasko, M. Molloy, S. Palmer, J. Regan-Livingston, A. Sanzari, P. Ukaigwe, C. Werther

#### School of Psychology

R. McGrath, Director; S. Armeli, C. Bergstein, C.A. Capuano, A. Eisen, B. Freer, M. Guiney, J. Lachenmeyer, K. Loeb, E. McGlinchey, E. Oak, D. Pogge, R. Prentky, C. Radnitz, L. Tiersky, K. Viezel, G. Winters, J. Zibulsky

### Department of Physical Education

C. Liggett, Coordinator

#### Programs in Language, Culture and Professional Advancement

M. Mohamad, Director, University College: Arts • Sciences • Professional Studies, Metropolitan Campus and Vancouver Campus

### School of Pharmacy and Health Sciences

Florham Campus, Madison, New Jersey (230 Park Avenue, Florham Park, New Jersey)

Michael J. Avaltroni, Dean

#### **Programs**

• Health Sciences (M.H.S.)

• Pharmacy (Pharm.D.)

• Public Health (M.P.H.)

### **Faculty & Staff**

### Administration

M.J. Avaltroni, Dean

A. Rivkin, Assistant Dean for Faculty B. Rossi, Assistant Dean for Experiential Education

C. Sandifer, Assistant Dean for Students Affairs and Programmatic Effectiveness B. Berić-Stojšić, Director of Master of Public Health Program

#### Faculty

A. Carbone, H. Cho, A. Dushenkov, S. Falbaum, K. Frey, A. Gallipani, Y. Guo, J. Han, O. Iwuchukwu, P. Jungsuwadee, J. Kalabalik, N. Kalhoff, D.P. Kim, C. Lam, M. Leibfried, A.E. Özdener, J. Palummo, K. Patel, S. Patel, A. Pennoyer, R. Quinn, N. Ryba, L. Rozaklis, M. Slugocki, J. Sullivan, G. Vaidean, L. Westrich, A. Zelinski

## School of Public and Global Affairs

Florham Campus, Madison, New Jersey; and Metropolitan Campus, Hackensack, New Jersey

#### Peter J. Woolley, Founding Director

The School of Public and Global Affairs is distinguished by project-based learning in multinational classes led by accomplished practitioners focusing on issues of both local and global importance. The school also includes the nationally recognized FDU Poll.

### Programs

- Global Affairs (M.A.)
- Public Administration (M.P.A.)

### **Faculty & Staff**

P.J. Woolley, Founding Director P. Laubsch, M.P.A. Program Coordinator D. Cassino, Director of Experimental Research, FDU Poll

R. Higginson, Director of Market Research, FDU Poll K. Jenkins, Executive Director, FDU Poll A.C. Innes, Assistant to the Director

### Faculty

A. Adrignolo, H. al-Bayati, J. Buenahora, W. Roberts

### **Admissions; Financial Aid and Scholarships; Registration, Tuition and Billing Information**

## **Admissions**

### **General Information**

Students seeking to register for classes or to enroll in any graduate degree or certificate program offered at Fairleigh Dickinson University must formally apply for admission.

An applicant seeking a graduate degree or certificate may enroll as a matriculated or nonmatriculated student. An applicant who is not seeking a graduate degree or certificate may enroll in classes for credit as a nondegree student, or as a visiting student or auditor. Applications should be sent to the Graduate Admissions Office at the campus (Florham Campus, Madison, New Jersey; Metropolitan Campus, Teaneck, New Jersey) the student plans to attend. Candidates may apply for admission to one campus only. For information about the School of Pharmacy and Health Sciences Sciences go to www.fdu.edu/pharmacy.

The University reserves the right to deny admission to any applicant who, in the judgment of the Admissions Committee, may not benefit from Fairleigh Dickinson University's educational programs or whose presence or conduct may impact negatively on its program(s). The University also reserves the right to refuse enrollment in or admittance to any course to any admitted student who engages in conduct deemed by the University, in its sole discretion, as interfering with the learning experience or safety of any person in the University community.

Applications are processed on a rolling basis with the exception of the Ph.D. program in clinical psychology, which has a December 15 deadline; the Psy.D. program in school psychology, which has a March 1 deadline; the M.A. program in school psychology, which has a March 15 deadline; and the M.A. in forensic psychology, which has a May 15 deadline. These programs are offered only at the Metropolitan Campus.

Students are encouraged to apply as early as possible to allow time to complete the application process prior to the start of classes. The requirements for matriculation vary with each program. However, all candidates for matriculation must submit a Graduate Application Form online, a nonrefundable application fee and official transcripts from all previously attended colleges and universities verifying completion of a bachelor's degree at an accredited institution of higher learning. Graduate entrance examinations, including the Graduate Record Examinations (GRE), Graduate Management Admission Test (GMAT), Miller Analogies Test (MAT), PRAXIS I (Core Academic Skills) and PRAXIS II (Content Area) and letters of recommendation are required for admission to some graduate programs. Personal interviews are not generally required but may be requested as part of the admissions process. Students must check the specific admissions requirements for the program in which they are interested.

Applicants who wish to enroll as nonmatriculating or nondegree students may register for classes on the basis of unofficial documents with the approval of a graduate faculty adviser.

A satisfactory score on one of the following accepted tests of English proficiency: 70 score on the internet-based Test of English as a Second Language (TOEFL), 6.0 overall band score on the IELTS, 53 score on Pearson's PTE-A, 1150 score on the GTEC or completion of level 112 of Intensive English at the ELS Language Center is required of those applicants whose native language is not English and who have not completed their baccalaureate degree at an Englishlanguage college or university.

### Degree- and Certificate-Seeking Students

#### Matriculated Students (In a Degree or Certificate Program)

An applicant for admission to a graduate degree or certificate program may be accepted as a matriculated student if the applicant's admission file is complete, including all required documents, and if the student is recognized as meeting all requirements for admission to the program. (Note: Requirements for admission to a certificate program might be different from those required for admission to a degree program.)

In certain cases, with the approval of a graduate faculty adviser, a matriculated student may be permitted to enroll in graduate classes prior to the receipt of official documents or completion of specific prerequisite course work. Or, a matriculated student with academic deficiencies may be admitted on probation. Students matriculating in this manner may have a specific time or credit limit imposed upon their acceptance and subsequent reregistration.

Only matriculated graduate students enrolled in a degree program or in programs leading to state certification are eligible to apply for financial aid.

#### Nonmatriculated Students (Intending to Matriculate in a Degree or Certificate Program)

An applicant for admission to a graduate degree or certificate program may, at the discretion of the department or school, be accepted as a nonmatriculated student if the applicant's admission file is incomplete, lacking required documents, but contains documents affirming completion of a bachelor's degree and the signature of an authorized graduate adviser. A nonmatriculated student enrolling in graduate classes is permitted a 9-credit maximum.

A nonmatriculated student is reviewed for matriculation when all required documents are received by the Office of Academic Records.

A nonmatriculated student is not eligible to apply for financial aid.

### Nondegree- and Noncertificate-Seeking Students

### Students Enrolled in Classes for Credit

A student who does not intend to enroll in a graduate degree or certificate program may, at the discretion of the department or school, register for individual graduate classes for credit and is admitted with a 9credit maximum on the basis of documents affirming completion of a bachelor's degree and the signature of an authorized graduate adviser. A nondegree or noncertificate student enrolled in classes for credit may utilize those credits to fulfill requirements for a degree or certificate program if he/she applies and is accepted as a matriculated student.

A nondegree/noncertificate student is not eligible to apply for financial aid.

#### Visiting Students (Matriculated at Another College or University and Enrolling in Classes for Credit)

A visiting graduate student is admitted on the basis of a Certificate of Eligibility Form signed by an authorized adviser at the college or university where he/she is matriculated.

A visiting student is not eligible to apply for financial aid at Fairleigh Dickinson University. However, he/she may be eligible to apply for financial aid through his/her home university by utilizing a consortium agreement.

### Auditor (Students Enrolled in Credit Classes Who Do Not Receive Grades or Credits)

To audit a class, no academic documentation is required. The student must present an Audit Form, signed by the faculty member teaching the class, to the Office of Enrollment Services. If an audit student enrolls in classes offered through the Office of Continuing Education, he/she registers through the Office of Continuing Education and is eligible to receive a Certificate of Attendance upon completion of the program.

An auditor pays for 1 credit at the regular tuition charge and is not eligible to apply for financial aid. No grade is given for the course audited; therefore, it cannot be used as future credit. Special rates may apply for FDU graduates and senior citizens.

## Readmission for Graduate Study

Matriculated students who interrupt their studies for one or more semesters, without requesting a leave of absence in writing, must request reinstatement by submitting an Application for Readmission. (No application fee is required.) Readmitted students are governed by the *Graduate Studies Bulletin* issued for the academic year of reinstatement and are subject to the current admissions and curricular requirements for the program to which they are seeking readmission.

### Change of Program

A matriculated student who is currently enrolled in a graduate program at one college and wishes to change the program to one that is offered in another college within the University must submit a new application and all required documents to the Graduate Admissions Office at the campus where the program is being offered.

### Transfer Credit

Graduate credits earned at another accredited institution may be accepted in transfer, in accordance with the curricular requirements of the degree program and the academic policies of the colleges. Generally, transfer credit will be considered for those courses completed within the last 5 years in which a grade of B or better has been earned. A maximum of 9 credits may be accepted in transfer.

Academic course waivers are available in some graduate degree programs, including the M.B.A., M.S. in computer science, M.S. in information systems and M.S. in electronic commerce. Graduate prerequisite course work may be waived for students who have completed relevant undergraduate course work, with appropriate grades, within the last five years.

Application for transfer or waiver credit is made through the academic school or department in conjunction with the Office of Enrollment Services. To request a transfer or waiver evaluation, the student must submit an official transcript and course description. A request for an official evaluation of transfer or waiver credit should be concurrent with the student's admission to the program. In some degree programs, students may be required to submit challenge exam scores to receive transfer or waiver credit.

### **International Students**

International students seeking admission to any graduate program at FDU may apply online at www.fdu.edu/global and upload copies of their documents to the Supplemental Items section in the application. Official supporting documentation may be reported to: Office of International Admissions 1000 River Road, T-KB1-01 Teaneck, NJ 07666 Phone: 1-201-692-2205 Email: global@fdu.edu

Supporting documents include one official set of transcripts and, if not in English, one official translation, reflecting the student's academic history since secondary school, verifying the completion of the equivalent to a four-year bachelor's degree program in the United States at an accredited institution of higher education.

Additional supporting documents include letters of recommendation, graduate entrance exams such as the GRE, GMAT, etc., and other items may be required for admission to some graduate

### Admissions

programs. Students may email global@fdu.edu to check the current admission requirements for specific academic programs.

International students are required to provide a qualifying score on one of the following accepted tests of English proficiency: 70 score on the internet-based Test of English as a Second Language (TOEFL), 6.0 overall band score on the IELTS, 53 score on Pearson's PTE-A, 1150 score on the GTEC or completion of level 112 of Intensive English at the ELS Language Center. Students who have completed at least two years of study in any of the following countries are not required to submit an English test score: Anguilla, Antigua and Barbuda, Australia, Bahamas, Barbados, Belize, Bermuda, Botswana, British Virgin Islands, Canada (except Quebec), Cayman Islands, Dominica, Fiji, Gambia, Ghana, Gibraltar, Grenada, Guyana, Ireland, Jamaica, Kenya, Lesotho, Liberia, Malawi, Mauritius, Montserrat, Namibia, New Zealand, Nigeria, Papua New Guinea, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Seychelles, Sierra Leone, Singapore, Solomon Islands, South Africa, Swaziland, Tanzania, Tonga, Trinidad and Tobago, Turks and Caicos Islands, Uganda, United Kingdom, United States, Vanuatu, Zambia and Zimbabwe.

Students may apply to a participating Pre-Master's Program (PMP) at the Metropolitan Campus, which allows one semester of English course work at the University to prepare a student for matriculation into the graduate degree program. To confirm if their program of interest can accept PMP applicants, students may email global@fdu.edu. In addition to academic eligibility, one of the following scores will be required for PMP admission: 60 score on the internet-based TOEFL, 5.5 overall band score on the IELTS, 50 score on Pearson's PTE-A, 1075 score on the GTEC or completion of level 110 of Intensive English at the ELS Language Center. Students who wish to study at the ELS Language Center may apply to the University for conditional acceptance to select graduate programs.

Applications for admission to the fall semester should be completed no later than July 1, and applications for spring no later than December 1. International students applying for an F/J visa status must provide evidence of financial support for at least the first academic year of study at the University.

Prior to enrolling at the University, international students are required to take a placement test to determine if additional English-language study is required. If test results indicate further study is needed, the language requirements may consist of one or more semesters of English for Professional Success (EPS) course work.

Students who have completed at least two years of academic study in any of the following countries are exempted from placement testing: Anguilla, Antigua and Barbuda, Australia, Bahamas, Barbados, Bermuda, British Virgin Islands, Canada (except Quebec), Cayman Islands, Gibraltar, Grenada, Guyana, Ireland, Jamaica, Montserrat, New Zealand, Trinidad and Tobago, Turks and Caicos Islands, Uganda, United Kingdom and United States.

International graduate students enrolling on an F/J visa must register for at least 9 credit hours each academic semester to maintain student visa status in compliance with U.S. federal regulations. The University requires that international students carry University insurance coverage for sickness and medical benefits. The University requires that international students submit an evaluation of their previous academic course work through an evaluation service accredited by NACES (see www.naces.org) within two months of enrolling at the University.

## **Financial Aid and Scholarships**\*

Fairleigh Dickinson University administers a variety of academic and need-based funding from federal, state and University sources. Financial aid is available to qualified full-time and part-time matriculated students at Fairleigh Dickinson University. A graduate student is considered to be enrolled full time when registered for a minimum of 9 credits per semester. New and returning students are expected to file the Free Application for Federal Student Aid (FAFSA) no later than April 15. The FAFSA must be filed EVERY year.

Financial aid is awarded annually and is based on continued eligibility, enrollment status, availability of funds and maintenance of satisfactory academic progress. In addition, a student may not be in default and/or may not owe a refund on any Title IV and/or HEA loans or grants.

International students are not eligible for federal, state or University need-based financial aid. However, international students are eligible for athletic funding (as provided by the National Collegiate Athletic Association [NCAA] guidelines) as well as academic scholarships.

All available sources and types of academic and need-based funding are detailed throughout this section.

### University-funded Programs

#### University Provost's Scholarship Program for Graduate Study

All students admitted to a master's program beginning with the spring 2013 semester and who plan to register for a minimum of 6 credits may apply. Eligible candidates must have a minimum undergraduate grade point ratio of 3.00 (on a 4.00 scale) and standardized test scores acceptable for admission. The University Provost's Scholarship awards

\*Information within the Financial Aid and Scholarships section is subject to change. Students should contact the Office of Financial Aid for any revisions or additions. range from \$100.00 per credit to \$300.00 per credit and cannot be combined with other University scholarship or assistantship. Students enrolled in graduate study as part of a combined (bachelor's/master's) degree program or enrolled in a master's program with a nonstandard tuition rate are not eligible. More information about the University Provost's Scholarship Program for Graduate Study, including the list of eligible master's programs and maintenance criteria for scholarship awards, can be found on the University Provost's Scholarship webpage www.fdu.edu/provostscholarship or for more information email provostscholarship@fdu.edu.

#### Combined Degree Advantage Program Scholarship

Students admitted into the University's combined degree program are able to earn a bachelor's and a master's degree in five years.

### **University Fellowships**

Fairleigh Dickinson University funds fellowships for full-tuition scholarships (up to 9 credits per semester). Fellowships are awarded by the academic department/ school in which the student is studying or planning to study. All inquiries should be directed to the appropriate academic program administrator. The receipt of a fellowship supercedes other FDU funding and will result in the reevaluation of any existing financial aid award.

### **Teaching Fellowships**

Students receive a fellowship of one-half tuition plus \$2,000 during the first and second years of the program and one-half tuition during the third year of the program. Some research and clinical practice have an additional stipend included, and various additional fellowships are available for students who meet certain conditions.

### Graduate Administrative Assistant Fellowships

Recipients of graduate administrative assistant fellowships assist with the administration of programs within admissions, career management and other administrative areas of the University for 720 hours per academic year (360 hours per semester). Stipend compensation is \$4,000.00 per academic year (\$2,000.00 per semester).

### University-funded Grant Programs

### Alumni Incentive Grant

Effective fall 2001, an alumnus/a of the University may be eligible for the Alumni Incentive Grant in the amount of \$100 per credit. The alumnus/a must be matriculated. The grant cannot be used in conjunction with any other University tuition discount and/or University aid program. Contact the Graduate Admissions Office for further details.

#### Privately Funded Scholarships

### Johnson & Johnson Scholarship

The Johnson & Johnson Scholarship provides funding for doctoral candidates enrolled in the Ph.D. in clinical psychology program at the Metropolitan Campus, Teaneck, New Jersey, who demonstrate a commitment to enhancing health care in certain targeted counties of New Jersey. Inquiries should be made to the academic administrator of the clinical psychology program.

### Sammartino Scholarship

The Peter Sammartino Endowment and the Sylvia Sammartino Endowment are scholarship funds which were created through the bequests left by the University's founder and first president, Peter Sammartino, and his spouse, Sylvia Sammartino. Scholarships are available to students enrolled in the Master of Arts in Teaching program in the Peter Sammartino School of Education. A demonstration of the desire to teach is one of the criteria. Scholarships up to one half of tuition are awarded.

### **Nurse Faculty Loan Program**

The Henry P. Becton School of Nursing and Allied Health offers the Nurse Faculty Loan Program (NFLP). Students who have an interest in becoming nurse faculty after having finished the Master of Science in Nursing program or the Doctor of Nursing Practice program may borrow for tuition and fees (less amounts received from other sources). Applicants should arrange for an interview with the project director, Prof. Jeannie Couper, at couperj@fdu.edu, 201-692-2850.

### Federally Funded Programs

Financial aid from federal sources is available for eligible students from the Federal Direct Loan program. The Free Application for Federal Student Aid (FAFSA) must be filed by April 15 each year for consideration. Eligibility is based on enrollment and satisfactory progress toward completion of the degree program.

### Federal Veterans' Educational Assistance Programs

### Veterans' Education Benefits

Veterans' educational benefits may be available to students who have served in the U.S. Armed Forces. More information may be found at the Department of Veterans Affairs GI Bill<sup>®</sup> website: http://www.gibill.va.gov/.

### Post 9/11 GI Bill

The Post 9/11 GI Bill - also commonly known as Chapter 33 — is a VAadministered program for individuals with at least 90 days of aggregate active duty service after September 10, 2001 and are still on active duty, or if they are an honorably discharged veteran or were discharged with a service-connected disability after 30 days. Purple Heart recipients, regardless of length of service, are qualified for Post 9/11 benefits at the 100 percent level. This benefit provides up to 36 months of educational benefits. If the students' release from active duty was before January 1, 2013, there is a 15-year time limitation for use of benefits. For individuals whose last discharge date is on or after January 1, 2013, the time limitation has been removed.

It is important to note that Fairleigh Dickinson University has agreed to participate in the Yellow Ribbon Program, that is a provision of the Post-9/11 Veterans Educational Assistance Act of 2008. Under this program, FDU has agreed to fund tuition expenses for eligible veterans that exceed the highest public instate undergraduate tuition rate by matching a VA contribution of 50 percent with an FDU contribution for the same amount.

This program will provide the following benefits for eligible individuals:

• Tuition and fees paid directly to the school are not to exceed \$24,476.79 (2019). The cost of private university tuition and fees may be fully covered for those veterans eligible for the Yellow Ribbon Program.

• A monthly housing allowance based on the Basic Allowance for Housing for an E-5 with dependents at the location of the school where the student physically attends the majority of classes.

• A yearly books-and-supplies stipend of \$1,000.00 paid proportionately based on enrollment.

If students are enrolled exclusively in online training their monthly Basic Allowance for Housing will be \$894.50 (2019). If students are on active duty, they will not receive the housing allowance. If students are enrolled half time or less they will not receive the Basic Allowance for Housing.

Students who utilize Post 9/11 GI Bill. Chapter 33 at 100 percent and VA Vocational Rehabilitation, Chapter 31 will not have an Enrollment Hold placed on their account or registration pending disbursement of funding for tuition and fees. Their account will not have penalty fees applied as a result of late tuition payment by the VA. Students will not be required to secure alternative or additional funding as a result of late payment by the VA. For charges incurred for campus housing and meals, the student may be liable for payment if these charges are not covered by the VA benefit. Students will need to supply their Certificate of Eligibility and Semester Enrollment Form to the School Certifying Official.

### The GI Bill

As provided under Chapter 30 of the Montgomery GI Bill, students that entered the military after June 30, 1985, are eligible for educational benefits if they elected to reduce their monthly salary by \$100.00 for the first 12 months of active duty.

### VA Vocational Rehabilitation

The VA Vocational Rehabilitation Bill-Chapter 31 incurs the cost of tuition, fees and books. Eligible veterans must apply directly with the Department of Veteran's Affairs, 20 Washington Place, Second Floor, Newark, New Jersey 07102.

### *Survivors' and Dependents' Educational Assistance Program (DEA – Chapter 35)*

Dependents' Educational Assistance (DEA – Chapter 35) provides education and training opportunities to eligible dependents of certain veterans. The program offers up to 45 months of educational benefits. These benefits may be used for degree and certificate programs, apprenticeship and on-the-job training. A spouse may take a correspondence course. Remedial, deficiency and refresher courses may be approved under certain circumstances.

### Federal Tuition Assistance

Military Tuition Assistance is a benefit paid to eligible members of the Army, Navy, Marines, Air Force and Coast Guard. Congress has given each service the ability to pay up to \$250.00 per credit for the tuition expenses of its members. A member is eligible for up to \$4,000.00 a fiscal year in Federal Tuition Assistance benefits.

Each service has its own criteria for eligibility, obligated service, application process and restrictions. This money is usually paid directly to the institution by the individual services.

### Other Veterans' Affairs Educational Benefits

There are additional veterans' educational benefits available for the dependents and widows of veterans who died of servicerelated causes.

Individuals in the Selected Reserve (Chapter 106) and those who contributed to the Veterans Education Assistance Program (VEAP-Chapter 32) may also be eligible for VA educational benefits.

For additional information regarding veterans' educational benefits, please contact the State of New Jersey Department of Military and Veteran Affairs State Approving Agency, P.O. Box 340, Eggert Crossing Road, Trenton, New Jersey 08625 directly.

### **Federal Loan Programs**

### Federal Direct Unsubsidized Loan

Eligible students may borrow up to \$20,500.00 per year (\$33,000.00 for graduate health-profession students enrolled in a nine-month academic year and \$37,167.00 for graduate healthprofession students enrolled in a 12-month academic year) from the Federal Direct Unsubsidized Loan program. Interest begins accruing at disbursement but may be capitalized and payments deferred until enrollment ceases (or drops below halftime). The interest rate is tied to financial markets and is determined each June for new loans made for the upcoming award year (July 1 to the following June 30). Each loan will have a fixed interest rate for the life of the loan and therefore students borrowing over multiple years may have loans at varying interest rates. There is a loan fee paid by borrowers at the time of disbursement, which, at the time of printing, is 1.062 percent for loans processed on or after October 1, 2018, and before October 1, 2019 (subject to change). The Direct Unsubsidized Loan has a six-month grace period following the last date of at least half-time attendance (graduation, withdrawal or reduction in enrollment) before repayment begins.

### Federal Direct Graduate PLUS Loan

Eligible students may borrow up to the cost of attendance less any amounts received from other sources from the Direct Graduate PLUS loan. Interest accrues at disbursement but may be capitalized while enrolled at least halftime. The interest rate is tied to financial markets and is determined each June for new loans made for the upcoming award year (July 1 to the following June 30). Each loan has a fixed interest rate for the life of the loan and therefore students borrowing over multiple years may have loans at varying interest rates. There is a loan fee paid by borrowers at the time of disbursement, which, at the time of

printing, is 4.248 percent for loans processed on or after October 1, 2018, and before October 1, 2019 (subject to change due to federal budget cuts). Eligibility for the Direct Graduate PLUS loan is based on a credit review.

### Important Information About Financial Aid

### Terms and Conditions of Financial Aid Awards

Students awarded financial aid from University, federal and/or state sources will receive a Financial Aid Award Notice.

Financial aid offers are based on fulltime attendance (9 credits/semester for graduate students) and anticipated housing plans as reported on the FAFSA. Students must inform the Office of Financial Aid immediately, in writing, of any changes in enrollment or housing plans so that financial aid may be reevaluated accordingly.

Financial aid offers are conditional based on receipt of any requested information by the Office of Financial Aid. Financial aid applicants may be required to submit additional documentation, which may lead to revisions in the financial aid awards offered.

Award offers are contingent upon maintaing satisfactory academic progress toward completion of the degree program. Satisfactory academic progress reviews are performed at the conclusion of each semester. Failure to maintain satisfactory academic progress will result in the loss of financial aid funding. Detailed information about satisfactory academic progress may be found online at http://view2.fdu.edu/admissions/graduateadmissions/graduate-financialaid/graduate-satisfactory-academic-

progress/.

The University awards grants and scholarships from University operating funds and reserves the right to substitute funding received from private or endowed sources. In such an event, a revised Financial Aid Award Notice will be sent detailing the substitution.

Financial aid funding will be used toward balances owed to the University, including, but not exclusively, tuition, room, board, medical insurance, fees, fines, etc. If students do not wish to have funding from federal sources used to pay "noneducational expenses" such as parking fines, they must notify the Office of Enrollment Services in writing.

Receipt of financial assistance from any sources may affect eligibility for financial aid as detailed on the award notification. The Office of Financial Aid must be informed of the receipt of additional awards not already noted.

Federal and state awards may be based on estimated funding levels. The Office of Financial Aid reserves the right to make adjustments as a result of changes in federal- and/or state-funding levels.

#### **Renewal of Financial Aid**

A student must maintain the minimum requirements for the renewal of any scholarship funding (as was outlined previously and in the original scholarship notification letter).

Students who receive need-based financial aid from any source are eligible to apply for a renewal of this aid. To be eligible for a renewed need-based financial aid package, the student must:

1. File the FAFSA application no later than April 15 (including the correct **Federal School Code: 002607** for the Metropolitan Campus, Teaneck, New Jersey, and **004738** for the Florham Campus, Madison, New Jersey);

2. Respond to all requests for information/documentation by the Office of Financial Aid and meet eligibility requirements as determined by the U.S. Department of Education and the University; and

3. Maintain "Satisfactory Academic Progress" as mandated by the U.S. Department of Education.

#### Satisfactory Academic Progress

Detailed information about Satisfactory Academic Progress may be found at http://view2.fdu.edu/admissions/graduateadmissions/graduate-financial-aid/ graduate-satisfactory-academic-progress/.

### **Tuition Payment Options**

It is possible that the financial aid package may not cover all University expenses. The University does not guarantee the ability to meet a student's full financial need. As a result, there may be an amount left between the federal family contribution, the amount of aid offered by the University and the total cost of education.

## **Registration, Tuition and Billing Information**

## Registration: Fall, Spring and Summer

New students are notified concerning registration procedures by the Admissions Office.

Continuing students receive advanced registration privileges. This advanced registration begins in April for summer and fall terms and mid-November for spring and winter terms.

All students should register through their home campus.

Students will not be permitted to register for courses unless all financial obligations to the University have been satisfied. Academic records also will be withheld until all financial obligations have been resolved.

### **Tuition and Fees**

All fees, tuition and charges are subject to change at any time at the discretion of the University's Board of Trustees.

Fees and charges are for the academic year 2019-2020 or for the specific service described, unless otherwise stated. New tuition and fees charges for 2020-2021 will be announced in the spring of 2020. Please check with the Office of Enrollment Services for current charges. Graduate Program Tuition Maxwell Becton College of Arts and Sciences All Programs (per semester, per credit)......\$1,285.00 Silberman College of Business, All Programs (per semester, per credit)......\$1,347.00 Anthony J. Petrocelli College of Continuing Studies All Programs (per semester, per credit)......\$1,285.00 University College: Arts • Sciences • **Professional Studies** Master's Level: Education, History, Political Science, International Studies, Natural Sciences, Psychology (per semester, per credit).....\$1,285.00

University College: Arts • Sciences • **Professional Studies** Master's Level: Allied Health, Computer Science, Electronic Commerce, Engineering, Management Information Systems, Medical Technology, Nursing, Systems Science (per semester, per credit).....\$1,285.00 University College: Arts • Sciences • **Professional Studies** Doctoral Programs (per semester, per credit)...... \$1,405.00 Per Semester Installment M.B.A. in Management for Executives\*.....\$40,570.00 M.B.A. in Health Sector Management specialization\*.....\$40,570.00 Per Academic Year Ph.D. in Clinical Psychology...\$41,698.00 Dissertation\*\*.....\$5,006.00 Internship Charge\*\*.....\$260.00 Dissertation Maintenance......\$510.00 Psy.D.in School Psychology (5-year Program).....\$41,698.00 Dissertation per credit......\$1,405.00 Summer Internship Charge\*\*.....\$260.00 Dissertation Maintenance..... \$510.00 Psy.D. in School Psychology (3-year Program) per credit.....\$1,405.00 Summer Internship Charge\*\*.....\$260.00 Dissertation Maintenance..... \$510.00 Doctorate of Nursing Practice per credit.....\$1,405.00 Program Fee..... \$232.00 Doctor of Pharmacy Program.....\$39,550.00 Doctor of Pharmacy Dual Degree Program (M.S./M.H.S./M.A. Track).....\$41,912.00

Doctor of Pharmacy Dual Degree Program (M.B.A./M.P.A. Track).....\$44,272.00 E-learning Fee (per year).....\$1,324.00 Student Services Fee (per year).....\$342.00 Per Summer Session\* Wroxton College..... Tuition per credit is based on the student's program of study Fees per Academic Year Matriculation maintenance: Master's Program, per semester.....\$139.00 Proficiency Exam.....\$265.00 Application Fee.....\$50.00 Graduation Fee Master's Degree..... \$245.00 Doctoral Degree.....\$495.00 Technology Fee Full-time......\$924.00 Part-time.....\$430.00 Health and Major Medical (Mandatory)\*\* International Students (Fulltime and part-time) Full year.....\$1,581.00 Spring semester only.....\$980.00 Domestic (Full-time only) Full year.....\$1,581.00 Spring semester only.....\$980.00 Additionally, there are other fees assessed for

Additionally, there are other fees assessed for specific student requests such as thesis binding. For information on these and other fees, contact the Office of Enrollment Services.

All graduate students in residence will be assessed fees according to fee schedules of undergraduate residential students.

\*Total charges \$81,140.00 for 21-month M.B.A. in management for health and for executives health sector management specialization. \*\*Per semester. \*Does not include airfare or technology fee. \*\*Mandatory only for full-time students, can be waived for domestic students with documentation of alternative coverage. International students cannot waive the fee.

### Tuition Reimbursed From Employers

Many corporations and business concerns provide tuition assistance to qualified employees. Students who are employed full time should inquire through their personnel department about their company's tuition-aid program.

### **Terms of Payment**

The payment deadline is established as August 15 for the fall semester and January 15 for the spring semester. By these dates, students must have paid their tuition, room and board and fees charges in full or have been enrolled into an approved payment plan. All students are expected to pay summer and winter sessions' charges on their day of registration or prior to the term's start date. Payments may be made by check made payable to Fairleigh Dickinson University and mailed to the Office of Enrollment Services on the student's home campus. Students may also pay in person on either of the two campus locations. Refer to "Credit Cards" for additional information on how to make a payment using a third-party service provider.

### **Credit Cards**

The University has contracted with a third-party processor to provide this service, TouchNet. Students have the option to pay online.

Access information is available on the enrollment services website at http://inside.fdu.edu or directly on the student's WebAdvisor account.

The processor will charge a nonrefundable 2.85 percent convenience fee to the credit card user based on the amount of the payment for MasterCard, Visa, American Express and Discover. The convenience fee is for the use of the service and retained in full by the vendor not the University. Students may also pay by ACH (electronic check) with no fee assessed.

Students may access their account balance using the University's WebAdvisor system or if students need assistance with determining their student account balance, they may contact the Office of Enrollment Services by calling:

• 201-692-2213 for the Metropolitan Campus or

• 973-443-8600 for the Florham Campus.

### **Tuition Payment Options**

It is possible that the financial aid package may not cover all University expenses. The University does not guarantee the ability to meet a student's full financial need. As a result, there may be an amount left between the federal family contribution, the amount of aid offered by the University and the total cost of education.

### Fairleigh Dickinson University Deferred Payment Plan

The deferred payment plan allows a student to make an initial 25 percent down payment on the total charge for the fall or spring semester. The balance is then paid in three monthly installments. A \$45 fee per term is assessed for this plan.

### Corporate Reimbursement Deferred Payment Plan

Students who receive corporate reimbursement may be eligible to defer their tuition payment until 45 days after the completion of the course. There is a 4 percent service charge for this accommodation.

### **Payment Deadline**

Please adhere to payment deadlines and policies established by the University for each semester. Failure to comply will result in late charges.

### Refund Schedule: Fall and Spring Semesters, 12–15 Weeks

Prior to first day of semester\* 100% cancellation of tuition and course-associated fees.

- During first week of semester\* 90% credit for tuition charges only.
- During second week of semester\* 80% credit for tuition charges only.
- During third week of semester\* 60% credit for tuition charges only.
- During fourth week of semester\* 40% credit for tuition charges only. Grade of W recorded for course dropped.
- During fifth week of semester\* 20% credit for tuition charges only. Grade of W recorded for course dropped.
- After fifth week of semester\* NO REFUND OF TUITION AND FEES. Withdrawal grade based on University policy, recorded for deleted courses.
- During final two weeks of semester WITHDRAWALS FOR THE TERM ARE NO LONGER ACCEPTED.

### Refund Schedule for Modular Courses

### *Three-, Four- and Five-week Modules*

Withdrawal prior to first day of class*	100%
Withdrawal during first week of class*	50%
Withdrawal thereafter* NO REFUND DUE STUDENT.	

### Six-, Seven-, Eight-, Nine-, and 10-week Modules

Withdrawal prior to first day of	
class*	100%
Withdrawal during first week of	
class*	75%
Withdrawal during second week of	
class	50%
Withdrawal thereafter*	
NO REFUND DUE STUDENT.	

\*Actual dates for fall and spring semesters are available upon request and posted in the enrollment services areas of each campus.

### **Registration, Tuition and Billing Information**

#### Refund Schedule: Summer Six-, Nine- and 12-week Sessions

Prior to first day of session\* and 12-week session

100% cancellation of tuition and course-associated fees.

During first week of session\* 75% credit of tuition only.

During second week of session\* 50% credit of tuition only.

After second week of session\* NO REFUND DUE STUDENT.

### Refund Schedule: Summer/ Winter Three-week Sessions

Prior to and during the first and second days of session\*

100% cancellation of tuition and course-associated fees.

After the second day of session\*

NO REFUND DUE STUDENT. The summer refund schedules do not apply to special or weekend programs. Refund schedules for these programs are available at the Office of Enrollment Services.

### Withdrawals/Refunds

Any alteration of a student's schedule must be made in writing, with the student's signature, to the Office of Enrollment Services. Forms to delete a course(s) or withdraw completely from the University are available in the Office of Enrollment Services. Only those alterations with an effective date **prior to the first day of the semester** will be accorded a 100 percent refund of tuition or a cancellation of 100 percent of the tuition due to the University.

### Late Payment Charges

A Late Payment Charge will be collected at the time any payment (full or partial) is applied to an outstanding balance according to the following schedule: Late payment charge is indicated in italics under the length of time indicated.

#### **Payment Made in Period** Fall Semester

August 18–October 5 2% of payment October 6–November 2 4% of payment November 3–November 30 6% of payment December 1–January 3 8% of payment January 4–January 31 10% of payment

February 1 and thereafter 12% of payment

### Spring Semester

January 18–February 28 2% of payment March 1–31 4% of payment April 1–30 6% of payment May 1–31 8% of payment June 1–30 10% of payment July 1 and thereafter 12% of payment

### Summer Sessions

Summer payments are due at the time of registration. If payment is received after the end of the Summer Standard term, a 6% late fee will be applied to the payment made.

However, if the student stops attending the University and the account is taken over by the collections department, a 12% penalty will be assessed to the unpaid balance.

#### Winter Session

Week 1–Week 3 of Session

Students who pay their intersession charge after the third week of the term will be assessed a 6% late fee in the payment made. However, if the student stops attending the University and the account is taken over by the collections department, a 12% penalty will be assessed to the unpaid balance.

### **Collection Fee**

By registering for a course or courses, the student has entered into a contractual agreement with Fairleigh Dickinson University and has a financial obligation to pay the expenses incurred. In the event the student fails to honor his/her financial obligation, the student will also be responsible to pay all collection costs associated with the University's attempt to collect the past-due balance; collection costs can include a third-party collection fee of 30 percent of the past-due balance. The University reserves the right to report unpaid account information to any credit bureau.

### **Employee Educational Tuition Grants (ETG)**

Employees or dependents of employees must apply for an Educational Tuition Grant (ETG) through the Office of University Human Resources prior to being registered. Upon approval, a voucher will be issued to the registrant to be presented along with the registration form at the Office of Enrollment Services/Registration. Employees are responsible for fees. The tuition credit will be applied to employee's/ dependent's account 3–4 weeks into the term by the Financial Aid Office.

\*Actual dates for modular courses and summer and winter sessions are available upon request and posted in the enrollment services areas of each campus.

## **Student Life**

College is a total educational experience. Learning takes place both within and outside the classroom and contributes to the growth and development of all students.

The division of student affairs provides leadership for programs and activities that enhance and supplement classroom experiences and enrich the studentcentered environment at FDU for all students.

This catalog provides a brief overview of services, policies, procedures and regulations. For more detailed information, please see the *Student Handbook* on FDU's website (www.fdu.edu).

### **Dean of Students**

The dean of students provides administrative leadership, supervision and coordination for the division of student affairs. The division is committed to enhancing the quality of life for the students and provides a holistic student development. The division is the catalyst for creating and maintaining a campus climate that fosters intellectual, physical, spiritual, psychological, professional and social development of students and represents students' needs to the University administration and the faculty.

Campus ministry, residence life, campus/student life, health services and student counseling and psychological services are encompassed in the student affairs division. The dean's office oversees student leaves of absence. The overall coordination of disciplinary matters, student government advisement, student affairs publications, the orientation of new students and commencement exercises are among the responsibilities of the Office of the Dean of Students.

The Dean of Students Office is available to respond to all aspects of the students' needs and should be used to mediate and resolve difficulties.

### **Campus Life**

### **Florham Campus**

### Office of Campus Life

The Office of Campus Life promotes student leadership opportunities and provides co-curricular experiences that encourage personal development and learning in a responsible, respectful and supportive community environment. The staff promotes a quality of life that responds to and supports the changing nature of students by empowering them to become leaders in a global-based society.

The Office of Campus Life is responsible for residential and housing services, student activities, Greek life, multicultural affairs, First Year Experience, community service and student clubs/organizations. The office is located in the Student Center.

The *Student Handbook*, which includes rules, regulations and helpful information necessary for campus life, is available on the FDU website (www.fdu.edu).

### **Residence Halls**

*Park Avenue*: This building has 312 beds in apartment-style suites of four. Each suite has two bedrooms, two bathrooms, a kitchen area and a common living room. The building is reserved for upperclass housing.

*Rutherford Hall*: Named after the University's first campus, this 293-bed residence hall opened in September 2003. Rutherford Hall houses upperclassmen in double bedrooms with a private bath. All rooms are climate controlled. Laundry, vending and trash facilities are located near the elevator on each floor. All floors have a common lounge.

*The Village*: The Village is composed of nine buildings and is used for upperclass housing. Each building consists of 10 sixperson suites, a bathroom and three bedrooms. This area is coed by suites.

*Twombly Halls*: Florence and Hamilton Twombly Halls are traditional residence halls that provide double-room occupancy and a common hall bathroom facility. Both buildings primarily house first-year students. The Twomblies are coed by floors.

### Wellness

Wellness at the University includes both student health services and student counseling and psychological services. Inhouse referrals between student health services and the counseling services help to ensure that students receive these comprehensive services in a confidential setting.

#### Student Counseling and Psychological Services

Student counseling and psychological services complements the academic experience of the student body by facilitating healthy personal, social and intellectual development of students. Life circumstances, skills deficits and/or mental health problems may at times interfere with a student's ability to successfully achieve important academic and life goals. The office's unique environment and role allows it to help students identify their problems, manage their emotions, learn new problem-solving skills and successfully meet the academic and social challenges of University life. This is accomplished by offering counseling, diagnostic evaluation, psychotherapy, advocacy and mental health referrals; developmental, preventative and remedial counseling to University students; consultation, educational and training services to the University community; and experiential workshops on essential life skills (i.e., assertiveness, stress management, sleep hygiene).

The student counseling and psychological services staff offers groups and workshops to the campus community on a variety of interest areas such as stress management, study skills, time management, drug abuse, etc.

Student counseling and psychological services also offers holistic approaches to stress management such as Pet Therapy. Students are provided opportunities to destress and experience living more fully in the moment with certified therapy dogs.

#### Student Health Services

For information on Student Health Services go to page 27.

### **Metropolitan Campus**

### Office of Student Life

The Office of Student Life at the Metropolitan Campus promotes student leadership opportunities and provides cocurricular experiences that encourage personal development and learning in a responsible, respectful and supportive community environment. The staff promotes a quality of life that responds to and supports the changing nature of students by empowering them to become leaders in a global-based society.

Some of the services that the Office of Student Life provides are management of the Student Union Building, supervision of more than 85 student organizations, leadership development, community service, Greek life, campus events and traditions, Student Union Building employment, Information Desk, Knight Club gaming area, Knight Owl concessions, Metro Lounge study area, student advocacy, Student Government Association fiscal operations and much more.

The Office of Student Life is located on the main level of the Student Union Building.

### Office of Housing and Residence Life

The Office of Housing and Residence Life strives to provide and sustain a safe, comfortable, secure and nurturing livingand-learning environment for students that is conducive to their personal growth, supports their academic pursuits, encourages and fosters a sense of community, civic responsibility and cultivates an appreciation of diversity.

Housing and Residence Life is responsible for the overall management, administration and program development of all University residential facilities with a capacity for approximately 1,000 residents. Living in the residence halls affords and encourages each resident the opportunity to partcipate in the shaping of their community.

University Court: This residence hall is comprised of 10 townhouse-style buildings. Each building has one to three same-gender sections on two floors of double-occupancy rooms with some single- and tripleoccupancy rooms. There are shared bathrooms and a common area in each section. Special living options are located in this area: L.I.F.E. House (Living in a Free Environment), Global Scholars' Hall and Honor's House. University Court is open to graduate and undergraduate students. Freshmen admitted to L.I.F.E. House, the Global Scholars or Honors Scholars programs may choose to reside in this area in designated buildings that may include building sections with same-gender floors.

Lindens: The Lindens are comprised of eight buildings with three coed floors of same-gender suites, each consisting of three double-occupancy rooms. Each suite has a shared bathroom and common area. Specific Linden buildings may be designated for upperclass and graduate students only. Academic year-round housing (August to May), when available, is provided in Linden 6 on a first-come, first-served basis. There are two kitchens in Linden 6. Building entry doors are staffed with a 24-hour hall security assistant when classes are in session. New freshmen are not eligible to request a single room.

Northpointe: A traditional corridor-style residence hall consisting of four coed floors housing approximately 290 residents in same-gender, double-occupancy rooms. Each bedroom has a private bathroom. A common lounge, laundry room and vending machines are located on each floor. A kitchenette is available on the third floor. ADA-compliant rooms are available. The Northpointe main entry door is staffed with a 24-hour hall security assistant when classes are in session.

All residence-hall rooms have cable television plus wired and wireless internet access.

For more information about hte programs and services offered by Housing and Residence Life visit www.fdu.edu/reslifemetro.

### **Campus Ministry**

The objective of campus ministry is threefold: to advocate for the spiritual wellness of the University community; to coordinate formal and informal religious services for a diverse student, faculty, staff and administrative community; and to provide the general coordination of all religious activities on campus including, but not limited to, the education of the University community about various religious heritages.

As members of the division of student affairs, the chaplains are available for

consultation on all matters, incidental or serious. Working with his colleagues in the division, the chaplain facilitates students' continued wellness at the University.

#### Student Counseling and Psychological Services

Student Counseling and Psychological Services (S-CAPS) complements the academic experience of the student body by facilitating healthy personal, social and intellectual development by offering psychological and mental health counseling for students seeking to work through personal problems. Life circumstances, skills deficits and/or mental health issues may at times interfere with a student's ability to successfully achieve important academic and life goals. S-CAPS aim is to help students gain greater understanding of themselves and their values, identify problems and attitudes which contribute to them, explore alternative courses of action and develop skills to cope with their problem(s), increasing their academic, social and vocational successes.

All services provided by S-CAPS are **private and confidential**, and are provided **free of charge** to all interested Fairleigh Dickinson University students.

The college years can be exciting, challenging and scary all at the same time. Sometimes life can feel a little overwhelming and tough to face on one's own. Social, academic or personal conflict can create feelings of distress, as well as strain one's sense of emotional well-being. When students experience disturbing thoughts, emotions or events, it is often helpful to speak with a nonjudgmental expert in human relations.

Fairleigh Dickinson University students often see a counselor because they are experiencing a tough time due to social, academic, or personal struggles. S-CAPS licensed mental health counselors provide emotional treatment and/or support to help students problem solve personal issues, increase their academic retention and focus and lead happier and more productive lives.

- Some reasons for counseling:
- Stress
- Anxiety and Fear
- Depression
- Relationship Issues
- Confusion
- Concern for a Friend or Loved One

### **Student Life**

- Difficulty Balancing College, Work and Family
- Multicultural Demands
- Anger
- Grief and Loss
- Adjustment Problems
- Feeling Sad or Lonely
- Trouble Concentrating, Studying or Taking Tests
- Concerns About Alcohol or Other Drugs
- Family Problems

### Student Health Services

For information on Student Health Services see this page.

### Career Development Center

Career development provides comprehensive services, programs and activities designed for the University community.

Career advising is offered for students to explore their personal values, interests, abilities and career alternatives. Advisers are available to help evaluate students' activities, skills and past experiences and relate these to future employment. Assistance with résumé writing, interview skills and job-search strategies are provided to help students with their job search.

Students needing internships, part-time, full-time, summer or volunteer employment can use the career development job-search websites to access current job postings. Students and alumni can connect with employers through career fairs, employee-networking events, careerrelated workshops and on-campus recruiting.

### **Dining Services**

The dining service programs are designed to provide students, faculty, staff and guests with a wide array of nutritionally balanced and appealing menus. Several meal plans are available as well as a special commuter-program package. All dining hall meals include salad bars, soups of the day, entrée varieties, vegetable choices, beverages and desserts on an "all-you-caneat" basis. Premium entrées as well as festive holiday meals are presented several times a year. Each campus has a main dining hall and other convenient snack bar locations. Dining hall continuous hours of operation are:

Monday–Thursday\* 7:30 a.m.–9:30 p.m.

Friday\*

7:30 a.m.-7:30 p.m.

Saturday and Sunday\*

11:30 a.m.–7:30 p.m.

Snack bar locations/hours of operation are posted. Sick trays and take-out lunches are available upon request.

### International Student Services

The Office of International Student Services serves the international community at the Metropolitan Campus and the Florham Campus. The department offers a wide array of programs and services to more than 1,000 international students from approximately 90 countries. Orientation programs are presented to facilitate the adjustment of international students to the American system of education and to offer insight into the cultural life of the United States. Cultural and social programs are offered for students to experience the surrounding New York/New Jersey metropolitan area.

Through immigration services, the department helps students maintain their status in compliance with immigration regulations and apply for the immigration benefits for which they are eligible. All international students are required to purchase the University Group Medical insurance.

### **Student Health Services**

The health services' goals include keeping students well, providing care when they are not well and empowering students to make informed decisions about their health. Nurse practitioners and professional nurses assist students with their health concerns.

As both a resource and health clinic, student health services provides students with information regarding available medical and health-related services. Programs on wellness and health are offered as part of the student learning experience. All students are welcome.

Requirements for health and immunization records may vary, depending on the academic program in which the student is enrolled and whether the student is a commuter and/or dormitory resident. Personalized requirements and details are available at

http://view2.fdu.edu/metropolitancampus/student-health-services/ and at http://view2.fdu.edu/florham-campus/ health-services/.

The University requires each full-time student to carry a University-sponsored accident policy and sickness and major medical coverage. As accident benefits are mandatory, the premium is included in college fees. If a domestic student has private sickness and major medical coverage, the University-sponsored program may be waived. A copy of the student's private insurance card then must be submitted to www.firststudent.com. International students must present relevant documentation to the International Student Services Office. The cost of the University-sponsored insurance is kept low to make basic health insurance available to all students.

The student health service on each campus is staffed with competent, experienced registered nurses and nurse practitioners. For major emergencies and/or surgeries, the neighboring community hospitals are utilized. A student may, however, choose his or her own physician at any time, either in or out of the hospital as long as he or she is in network.

### Center for Psychological Services

The services provided by the Center for Psychological Services, located at the Metropolitan Campus, Teaneck, New Jersey, include psychological counseling, psychotherapy and psychodiagnostics. These services are available to the entire University community, including students, staff, faculty and their families, as well as to the general non-University community, regardless of residence. Services are provided by licensed psychologists and doctoral psychology students and are available on a sliding-scale fee basis.

Students can feel comfortable applying to the center as it functions on a purely confidential basis, and the center's records are not part of any University database. Also, for the student, fees may be reduced to a minimal level when indicated.

### **Student Life**

The center offers a full range of services for adolescents, children and adults. Services include individual, group and family therapy; marital and premarital therapy; and various specialized behaviormodification programs. Psychological assessment also is available, including vocational testing.

### Athletics

Athletics plays a key role in the educational experience at Fairleigh Dickinson University and serves as an important building block for development of school spirit among students, faculty, staff, alumni and friends of the University.

The varsity athletics program offers opportunities for all students, men and women, to enhance their physical skills at the highest competitive level and to improve personal attributes such as discipline, leadership, teamwork and sportsmanship. In recognition of geographic factors, the varsity programs are divided between the Metropolitan Campus (Division I) and the Florham Campus (Division III). The athletics program also offers intramural and recreational opportunities to meet the needs and interests of the diverse campus population by providing a variety of activities in a relaxed environment.

### **Metropolitan Campus**

The Metropolitan Campus offers competition on the prestigious and highly competitive National Collegiate Athletic Association (NCAA) Division I level. The Knights sponsor 19 programs in total including eight men's teams: baseball, basketball, cross country, golf, soccer, tennis and indoor/outdoor track and field and 11 women's teams: basketball, bowling, cross country, fencing, golf, soccer, softball, tennis and indoor/outdoor track and field and volleyball. Athletic scholarship assistance is offered in all sports to deserving student-athletes, while prospective student-athletes are encouraged to contact the athletic department for further information

The Burgundy and Blue compete as a member of the Northeast Conference (NEC) and have won a total of six NEC Commissioner's Cups, which are emblematic of the overall achievements of the athletic program. Across the board, the Knights have enjoyed tremendous success highlighted by a pair of NCAA National Bowling Championships (2006, 2010); three National Fencing Championships (1960, 1963, 1969); six NCAA Men's Basketball Tournament appearances; 18 NCAA Men's Soccer Tournament appearances; and eight Northeast Conference Women's Golf Championships. Across the board, the Knights have collected 66 NEC Team Championships. Most recently, the 2018-19 FDU men's basketball team made school history by winning the program's first-ever NCAA Tournament game and advancing in the tournament. The historic season included the team's second NEC Championship in the past four seasons and first NEC Regular Season Championship in 13 years. Individually, the Knights have featured five NCAA Track and Field Champions between the men's and women's programs, four National Intercollegiate Women's Fencing Association (NIWFA) Champions, seven NEC Men's Golf Champions and five NEC Women's Golf Champions.

On both the Teaneck and Hackensack sides of campus, you will find state-of-theart athletic facilities which host events throughout the year. In Hackensack, the flagship facility is the George and Phyllis Rothman Center which rests on the banks of the Hackensack River. The facility is home to the FDU basketball, volleyball, fencing and track and field teams as well as the weight room and the athletic department's administration. Throughout the year, the facility hosts major community events including graduation ceremonies and the Bergen County High School Basketball Jamboree. Also located on the Hackensack side of the river is the FDU Softball Field. Crossing the pedestrian bridge to the Teaneck side of campus, you will find the Naimoli Family Baseball Complex, which is home to the Knights baseball team. The complex, which is one of the top baseball facilities in all of New Jersey, was built in 2011 and named after Vince Naimoli an FDU alumnus and original owner of the Major League Baseball franchise Tampa Bay Rays. Across the street from the baseball complex lies University Stadium and the FDU Tennis Courts. The FieldTurf University Stadium is home to the FDU men's and women's soccer programs and features seating for more than 1,200 fans. For more information regarding FDU Knights athletics, visit FDUKnights.com.

### **Florham Campus**

The University's Florham Campus holds membership in the NCAA (Division III), the Eastern Collegiate Athletic Conference and the Middle Atlantic Conference. Men's varsity teams compete intercollegiately in baseball, basketball, cross country, football, golf, lacrosse, soccer, swimming and tennis. Women athletes compete in basketball, cross country, field hockey, golf, lacrosse, soccer, softball, swimming and tennis.

An important facet of the University's commitment to athletics is the Roberta Chiaviello Ferguson and Thomas G. Ferguson Recreation Center, an 82,000square-foot complex which contains three full-size basketball courts; a performance court which seats 3,000; a suspended three-lane jogging track; weight-training, aerobic and dance facilities; a 25-yard competition swimming pool; two racquetball courts; and offices and locker rooms for student and intercollegiate use.

Robert T. Shields Field is the 4,000-seat home of Devils football, field hockey, men's and women's lacrosse and men's and women's soccer. It has a state-of-the-art scoreboard and press box atop the bleachers. The playing surface is field turf, which allows games to be played in any weather.

The athletic department sponsors intramural competition in volleyball, basketball, tennis, softball, touch football, bowling, golf, cross country and swimming. Several recreation and fitness programs, such as aerobics, karate, yoga and dance, also are offered by the athletic department. A majority of students at the Florham Campus are actively involved in the intercollegiate and intramural programs that are offered.

## Family Educational Rights and Privacy Act (FERPA)

As a recipient of federal educational funds, Fairleigh Dickinson University is bound by the requirements of FERPA. Subject to specified exceptions set forth by FERPA, the University is required to have a student's written consent before disclosing personally identifiable information from a student's educational records to third parties. An educational record is information directly related to a student, which is maintained by the University or any individual on behalf of the University, in any recorded form. Grades, evaluations, financial records. class-attendance records and financial-aid records are common examples of educational records.

FERPA gives students a right to review and copy their educational records and to challenge any educational record for being inaccurate or misleading. The University must provide a hearing to any student who wishes to challenge an educational record on either ground. If the University grants the student's challenge, it must amend the record in question. If the University does not grant the student's challenge, it must nevertheless allow the student to append a statement to the disputed record. The University maintains a log which identifies persons who have accessed a student's record. Students have a right to review log.

There are a number of exceptions to FERPA's prohibition against nonconsensual disclosure of personally identifiable information from education records. Under these exceptions, the University is permitted to disclose personally identifiable information from education records without consent, though they are not required to do so. Among these exceptions are the University's right to disclose personally identifiable information to: parents of students who are listed as dependents on their parents' federal income tax returns; appropriate third parties in the event of a health or safety emergency; parents of students under 21 years of age with regard to the student's violation of any federal, state or local law or of any rule of policy of the institution governing the use or possession of alcohol or a controlled substance; and final results of a disciplinary hearing to victims of a crime of violence or a nonforcible sex offense.

FERPA allows the University to disclose students' Directory Information without consent. University students will be provided an opportunity at the start of each academic year to request that the University not disclose their Directory Information.

### **Student Regulations**

The University reserves the right in its sole judgment to make changes of any nature in the University's academic program, courses, schedule or calendar whenever in its sole judgment it is deemed desirable to do so. The University also reserves the right to shift colleges, schools, institutes, programs, departments or courses from one to another of its campuses. The foregoing changes may include, without limitation, the elimination of colleges, schools, institutes, programs, departments or courses; the modification of the content of any of the foregoing; the rescheduling of classes, with or without extending the announced academic term; and the cancellation of scheduled classes or other academic activities. If such changes are deemed desirable, the University may require or afford alternatives for scheduled classes or other academic activities and will give adequate notification of any change such as is reasonably practical under the circumstances.

The University may suspend classes if they cannot be held for reasons beyond its reasonable control, such as fire, destruction of buildings, civil disturbances, work stoppage, labor dispute, strike, lock out (and whether or not in any of the last four cases it is within the University's power to concede to or meet the demands of its faculty or other employees), wars or governmental actions. If such suspension lasts for an extended period of time and the University does not schedule appropriate make-up classes, a partial refund of tuition will be made as the University deems appropriate under the circumstances. Payment of tuition or attendance at any classes shall constitute a student's acceptance of the University's rights as set forth in this and the preceding and following paragraphs.

Students who accept enrollment at the University are expected to live up to the highest standards of academic integrity, conduct themselves with decorum and responsibility, abide by the rules and regulations promulgated from time to time by the University and otherwise comply with the requirements of the applicable Code of Student Rights, Responsibilities and Conduct as stated in the *Student Handbook*, available from the Dean of Students Office and on the FDU website (www.fdu.edu). The University reserves the right to discipline, including dismissal or suspension, any student who fails to comply with the foregoing.

### Policy on Prohibited Discrimination, Harassment and Related Misconduct

The University is committed to maintaining a fair and respectful environment for living, working and studying. To that end, and in accordance with federal and state law, this University applies to the conduct of, and protection of, University faculty, staff, administrators, supervisors, employees, students, volunteers, guests, patrons, independent contractors or clients and visitors of the University and prohibits any of the foregoing from harassing and/or discriminating against any other member of the University community because of that person's sex, race, creed, color, religion, handicap/disability, gender, gender expression, gender identity, genetic information, age, marital status, sexual orientation, veteran status, pregnancy status, ancestry or national origin. Incidents of harassment and discrimination will be met with appropriate disciplinary action, up to and including dismissal from the University.

### **Student Life**

### Nondiscrimination and Equal Opportunity

The University is committed to maintaining a discrimination-free academic environment for its students and employees. No one will be denied employment or admission to the University on the basis of sex, race, creed, color. religion, handicap/disability, gender, gender expression, gender identity, genetic information, age, marital status, sexual orientation, veteran status, pregnancy status, ancestry or national origin. The University does not discriminate on the basis of any of the aforementioned protected classes in the recruitment and admission of students, the recruitment and employment of faculty and staff and the operation of any of its programs and activities as specified by the federal or state law and regulations. Every member of the University community is expected to uphold this policy as a matter of mutual respect and fundamental fairness in human relations. Every student of this institution has a responsibility to conduct himself/herself in accordance with this policy as a condition of enrollment. Further, every University employee has a responsibility to conduct himself/herself in accordance with this policy as a condition of employment.

### **Reporting of Complaint**

Any University student, employee, volunteer, guest, patron, independent contractor, client or visitor who feels subjected to harassment or discrimination in any manner, including complaints about the conduct of administrators, supervisors, employees, staff, faculty, volunteers, students and visitors, should immediately report the matter to Public Safety [(201) 692-2222 or (973) 443-8888], the University's Title IX coordinator [(201) 692-2706] and/or one of the deputy Title IX coordinators [(973) 443-8574 or (201) 692-2190]. Any member of the University community who feels at risk of imminent harm should call law enforcement at 911.

Please refer to the University's "Policy on Prohibited Discrimination, Harassment and Related Misconduct" for more information regarding support services that may be available to reporting parties as well as the adjudication process. The policy may be found at http://fdu.edu/hr/ nondescriminationandantiharassment policy.pdf.

### **Clery Act**

The Jeanne Clery Disclosure of Campus Security Policy and Campus Crime Statistics Act is a federal law that requires colleges and universities to disclose information about campus crime and security policies. Fairleigh Dickinson University Metropolitan Campus director of the department of public safety is responsible to prepare and distribute the annual reports for the four campuses. The reports are also available on the Fairleigh Dickinson University website at https://view2.fdu.edu/about-fdu/factsabout-fdu/clery-act-statistics/.

For a paper copy of the report, contact Metropolitan Campus Public Safety Director David Miles at 201-692-2227 or dmiles@fdu.edu.

## **Academic Support and Research**

Intellectual life at a university goes beyond the classroom. Each campus of FDU has its own libraries, computer centers and research facilities, which foster the intellectual growth of students outside the classroom.

### Academic Support and Student Services Centers

The Academic Support Center at the Florham Campus, Madison, New Jersey, and the Academic Resource Center at the Metropolitan Campus, Teaneck, New Jersey, help students develop excellence. Dedicated professionals provide a range of services — free of charge — to students who are having difficulty in a course or those who are highly motivated and want to hone their skills to change a potential B to an A.

Although each campus's center has some unique aspects, they all offer three basic services: workshops to develop study skills; tutoring for academic subjects; and testing, placement and instruction in basic skills.

Workshop offerings include those in the Core courses: reading, writing, academic study skills and, for those who require it, English as a second language. Development of reading skills is considered crucial to students' success; participants are taught how to adjust reading skills to the material at hand whether a biology text or a 19th-century novel - and maximize comprehension and retention of the material. Individualized tutoring sessions help students who come in when they need concentrated assistance in overcoming problems in a specific course. The centers also administer the Accuplacer Placement Tests to selected incoming students and place students in the appropriate classes.

### **Metro Writing Studio**

The Metro Writing Studio supports the University's mission to graduate students who are competent and confident writers by providing writing support of every kind *free of charge* for all students, faculty and staff of Fairleigh Dickinson University. Located on the second floor of the Giovatto Library, the studio is staffed with professionally credentialed tutors. Individual, one-on-one tutoring is available primarily on a drop-in basis; limited appointments are also available.

Additionally, the studio hosts writingrelated workshops such as "Introduction to APA Format," "Writing the Graduate Thesis," "Writing Technical Lab Reports" and "Basic Grammar." The studio also hosts topical "Conversational Fridays" designed to help students for whom English is not a first language practice their English in a casual atmosphere.

To learn more about all of the services the Metro Writing Studio provides, please call 201-692-2166 or visit http://ucoll.fdu.edu/metro.

### Libraries

The University maintains libraries at both its New Jersey campuses, the Florham Campus in Madison and the Metropolitan Campus in Teaneck. The University also maintains a library at its Wroxton College campus in England that supports the academic programs offered there. The Vancouver Campus provides a reference and circulating collection that supplements the FDU Online Library.

The Metropolitan Campus libraries include the Frank Giovatto Library in Teaneck and the Business Research Library (Dickinson Hall) in Hackensack. The Giovatto Library collection contains approximately 156,000 volumes. Approximately 350 periodical titles are currently received. The Giovatto Library also offers a collection (3,000) of both educational and popular DVDs and audiobooks on CD. Special collections include the Gehl collection of psychoanalytic materials, the Columbia film archives and selected presidential papers on microfilm.

The Sammartino Room, located on the ground floor of the Giovatto Library, is intended to house and showcase the intellectual and historical heritage of the University. The collection includes monographs by the founder and first president Peter Sammartino as well as the University, monographs published by FDU Press, FDU's *The Literary Review*, doctoral dissertations, yearbooks, faculty publications and FDU memorabilia. The Special Collections suite includes the Faculty Display Case with recent faculty publications; the Alumni Publications Display; the Magister Room, which houses the campus's master theses and honors theses. Desktop workstations are available in the Sammartino Room and the entire suite has wireless access. The J. Michael Adams Room, in the Special Collections Suite adjacent to the Sammartino Room, opened in October 2013. In addition to books and memorabilia, it houses the International Association of University Presidents (IAUP) archives.

The library offers a wide variety of workshops and programs open to students, and library news is available through the Giovatto Library Facebook page and blog. The library has two Boston by Steinway pianos and sponsors a library recital program for students and staff. The Giovatto Art Gallery offers exhibit space to faculty, staff and students.

One of the campus's most prominent work of art is Epic of America, which hangs on the face of the Giovatto Library. The casting was created by famous artist William Zorach. He described the symbolism as "The Indians that possessed this land ... left us a rich heritage — We are all sun worshippers, loving life and the great forces of creation, renewed each day and yet never the same." The flags represent all the flags that "have flown over this country until we were all united under one flag." The woman represents America itself, beautiful and full of fertile promise. And the man and the child represent "the spirit of enterprise and education, leading the new generation to carry on the work of today into the new visions of tomorrow - the new age flowing into life."

At the Florham Campus, the library is part of the John and Joan Monninger Center for Learning and Research. The older portion of the library building occupies the site of the greenhouses of the former Vanderbilt-Twombly estate. The large reading room at the front of the building, the Orangerie, once held tropical plants, and is all that remains of the original greenhouse-orangerie complex. The Fred Hassan Orangerie, designed by McKim, Mead and White, faces Hennessy Hall across a wide expanse of lawn, which is part of the larger Frederick Law Olmsted-designed grounds.

Developed at the Florham Campus location is a library collection of more than

147,000 book volumes, some 120 current newspapers and periodicals plus more than 1,500 backfiles. It also holds more than 2,700 DVDs and videos for classroom and individual use.

The Monninger Center library contains a computer lab with 18 workstations and black-and-white and color printing. There are two additional workstations within the Reference Room that have graphic-design software. The Reference Room is also used as a display space for exhibits showcasing the library's circulating and special collections.

The noncirculating print collections in the Monninger Center include the Douglas Lloyd Kahn Collection on the History of Photography and Film with some 4,300 plus titles; and the smaller, noncirculating collections of the Kushen Family Collection in memory of Betty Kushen, Ph.D., including special editions of 19thand 20th-century British women writers; Literature by Black Authors, in particular African-American writers in first editions; the Twombly estate collection; as well as the archives of Fairleigh Dickinson University founder Peter Sammartino; and the New York Cultural Center.

Extensive reference collections are available at all campus libraries for consultation and research, with the library serving its campus as a center for education and learning. At each facility, professional librarians offer individual guidance as well as classroom instruction in library use and research methodology.

Students and faculty on both campuses have easy access to all FDU library materials through the online catalog. Intercampus loan requests can be delivered to the appropriate campus within two to three days. A user needing library materials not owned by FDU can access library holdings throughout the country with interlibrary loans. These can be requested either online or in person at any campus library.

The FDU Online Library provides access to more than 190 subscription databases containing more than 138,000 full-text journals, more than 160,000 ebooks and three streaming video collections. Most resources within the FDU Online Library are available 24/7, both on campus and remotely.

The FDU library digital collection is available at www.fdu.edu/digitallibrary. This collection consists of unique items from the University's archives and from distinctive collections developed in collaboration with non-library partners, related to both the history of northern New Jersey and the University. Materials include historical photographs and documents, student newspapers, digital artifacts and maps. This collection is continually growing as the University works to preserve its heritage.

For further information call:

Monninger Center (Florham Campus) at (973) 443-8516

Giovatto Library (Metropolitan Campus) at (201) 692-2278

Business Research Library (Hackensack) at (201) 692-2608

### **Computer Facilities**

Almost all students at the University make use of one of the campus computer centers, whether their majors are in the sciences, engineering, business, education or liberal arts, graduate or undergraduate. The computers available feature a wide range of application software and programming languages for students in all disciplines. From the time a student is admitted, he or she may obtain, and use, a University NetID account to obtain email, network storage and printing capabilities.

Florham Campus: The technology client services and support teams (formerly the computing services department) at the Florham Campus manages microcomputer labs in several buildings. The Dreyfuss Building has four general-purpose computer labs. There are also state-of-the-art computer graphics, animation and video-editing labs, which include high-resolution computer graphics equipment for the production of professional-quality, computer-generated art, 2D/3D animation, digital video and multimedia presentations. There are special-purpose computer lab facilities across the campus to support mathematics, computer science, physics, biology, chemistry, visual and performing arts and others. There are general and business labs in the John and Joan Monninger Center for Learning and Research and the Academic Support Center.

Metropolitan Campus: The Metropolitan Campus technology client services and support teams (formerly the computing services department) manages three general-purpose computer labs in University Hall, along with a state-of-theart graphics lab used for the production of high-quality graphics, 2D/3D animation, digital video and multimedia presentations, and three general-purpose computer labs in Dickinson Hall. There are specialpurpose computer lab facilities across the campus to support mathematics, computer science, physics, biology, chemistry, visual and performing arts, psychology, nursing, video editing, engineering, athletics and others. There are general and business labs in the Frank Giovatto Library and the Academic Support Center.

Each computer lab is equipped with Lenovo ThinkCentre All-in-One desktop computers replete with Intel<sup>™</sup> i7 processors, LCD flat-panel display and combination CD-RW/DVD-RW drives for file storage and access to optical-based materials. All of the computers are connected to the University-wide network for file and print sharing and access to the internet. All lab computers are running the Microsoft Windows 10 operating system with a large suite of general-purpose software, such as Microsoft Office Professional, and discipline-specific software to support academic computing. Computer labs that are also used as classrooms are equipped with a highresolution/high-intensity computerprojection systems and/or high-definition, flat-panel display technology.

To keep pace with changes in technology and increasing demands for memory and processing power, campus computing center computers are acquired on a lease technology refresh program.

FDU has a laptop loaner program that enables students to "borrow" a laptop computer for use within the campus libraries. The loaner laptops are imaged with many software applications and can access the internet via the University wireless network. Additionally, the University's automated library system provides anyone the ability to search the holdings of both campuses from any location using the internet and NetID credentials for authentication.

University systems and security operates and maintains the University data centers, enterprise systems and networking infrastructure, which are used by all, regardless of campus or location. These systems support both the academic and administrative needs of the University. Services include a system for Universityrun web pages, faculty and staff personal web pages, a library automation system, an email system and other platforms for advancing the needs of the academic programs. These systems can be accessed using the internet.

High-speed, fiber-optic networking connects most buildings at the University to FDU's computer network. This facilitates communications among the students and faculty and provides easy access to all of the software and computer resources. Almost all of the academic buildings, including the libraries, have wireless LAN capabilities. This feature allows students with a laptop and a standard 802.11b/g/n/ac wireless LAN card to access the campus network, untethered, from any of those buildings. Every student has access to wired and wireless connectivity in his/her room to connect his/her computer device to the University network. These connections provide students with high-speed access to network resources and the internet. Wireless connectivity is also available in most of the common areas within residence halls.

### UTAC

The Fairleigh Dickinson University Technical Assistance Center (UTAC) provides around-the-clock technical support services for more than 200 commercial off-the-shelf software applications, Microsoft and Macintos (OS 8.x and higher) operating systems, all common browsers,

Webcampus/BlackBoard, virtually all network connectivity options and password-reset support. This 24-hour helpdesk support is available to all students from the time they are officially admitted to the University.

For more information call the Office of Information Resources and Technology at (973) 443-8689.

### Acceptable Use Policies for Computer Usage

The University computing resources support the instructional, research and administrative activities of the University. Users of these facilities may have access to University resources, sensitive data and external networks. Consequently, it is imperative for all users to behave in a responsible, ethical and legal manner. Students are responsible for complying with relevant acceptable-use policies. Failure to comply with these policies may result in charges of violation of the Code of Student Rights, Responsibilities and Conduct and possible state and federal action.

The Fairleigh Dickinson University Acceptable Use Policy for Computer Usage and the Resident Network Acceptable Use Policy may be obtained from the University information systems website at the following URL: http://isweb.fdu.edu/ policies/oirt\_policy. html.

### Research

The variety, scope and incidence of research and related scholarly activity within the University continue to increase. Usually research carried out by the faculty combines the inquiry for new knowledge with the education of students at the graduate and undergraduate levels. Great emphasis is placed on research and related activities, independent study and inquiry and action projects and employment as means of developing abilities. Faculty research grants support research-related activities and travel. Government and industry, in addition to the University, support and sponsor University research activities.

Research and educational development activity is found in all academic disciplines. Research is integral to graduate programs in chemistry, communication, clinical mental health counseling and psychology in the Maxwell Becton College of Arts and Sciences.

The master's-level program in chemistry provides research experience through a thesis-based research program. Students work alongside experienced faculty researchers in areas of analytical chemistry, biochemistry, inorganic chemistry, organic chemistry and computational and experimental physical chemistry. Current research within the department includes computational modeling of collagen mutations to determine their role in biological systems, development of surface bound anti-infective coatings for use in the biomedical industry, quantum mechanics and molecular orbital theory applied to metalloporphyrins, correlation of protein structure and function and separation and purification of biomaterials.

Students have an opportunity to perform a full year of research working on original work in these areas, including but not limited to experimental design, analytical techniques, data analysis and conclusions.

At the end of their research experience, students are required to write a formal master's thesis and defend their work during a research seminar to complete the degree requirements.

In Becton College's psychology, industrial/organizational psychology and clinical mental health counseling programs, opportunities for research are provided both within courses and on a one-to-one basis with faculty. Student-faculty collaboration is frequent and often results in scholarly presentations at professional meetings as well as publications in relevant academic journals. Both qualitative and quantitative methods are used for data collection and analysis. Students have pursued research interests in a wide variety of areas such as work/life-balance issues, career-development patterns, personal and organizational factors affecting work performance, personality traits and the effects of stress. Students in the industrial/organizational psychology program also have the option of completing a master's thesis.

Students have also investigated mental health processes (including psychological disorders and resiliency factors) as well as counseling techniques and treatment outcomes.

Communication studies faculty have published work in professional and scholarly journals and written books on communication theory, organizational and crisis communication, advertising, communication pedagogy, semiotics, network analysis and language and social interaction. Mentored research is regularly offered at the undergraduate and graduate levels.

The School of Pharmacy and Health Sciences engages in research across the spectrum of patient care, social and administrative sciences, health outcomes and pharmaceutical science. Faculty engage students in projects on topics ranging from health and wellness, delivery of care, study design and outcome evaluation and the role of the pharmacist in accountable care-organization administration and health care delivery. Additionally, basic-science research on drug delivery, evaluation and analysis of sterile compounds and other sterile techniques also take place within the school's research facilities.

University College: Arts • Sciences • Professional Studies prides itself on its emphasis on research. The Metropolitan Campus houses the clinical psychology and school psychology doctoral programs where students and faculty do research in such areas as behavioral medicine, cognitive, psychological and psychoeducational testing and women's issues to name a few. Faculty in the English and comparative literature department focus on modern and 19th-century English and American writers.

The Henry P. Becton School of Nursing and Allied Health faculty and students are engaged in various research projects and activities in the honors, master's and Doctor of Nursing Practice (D.N.P.) programs. D.N.P. students are engaged in evidence-based research for their dissertation projects. Some students implement research on patient outcomes, health policy and management in collaboration with various hospitals. D.N.P. students are required to pass an oral defense of their research or evidencebased projects.

The Peter Sammartino School of Education, also part of University College, is funded by local and state agencies and the Office of Education for a variety of innovative programs. Research is conducted in the areas of learning disabilities, ESL, bilingual education, dyslexia, social justice and equity, culturally responsive teaching, educational philosophy and history and more.

The Lee Gildart and Oswald Haase School of Computer Sciences and Engineering focuses on research on electronic commerce, electronic business, organizational memory, organizational memory information systems, knowledge management, wireless communication systems, radio resource management, optimization for engineering applications, optical devices, multimedia streaming, cross layer design, mobile computing, communication networks, mobile ad hoc networking, network management, conflict control, deadlock, ADA programming, real-time systems and formal methods, digital and adaptive signal processing, array processing, image processing, pattern recognition, biometric authentication, database systems, data warehouse, security, software reuse, component-based software engineering, semantic deep web, service-oriented computing, VLSI design and near-ring theory.

Research interests of faculty in the School of Natural Sciences are wide ranging and include such diverse topics as: microbiology, protozoan ecology and behavior, marine toxicology and invertebrate biology, biochemistry, enzymes, expression of extracellular matrix genes, wound care, application of biocatalysis in the preparation of pharmaceuticals, chitosan nanoparticles, polymer chemistry and computational chemistry.

The Silberman College of Business places significant emphasis on faculty maintaining their academic and professional qualifications to deliver quality business education programs. Faculty maintain their academic qualifications through rigorous research and other intellectual contributions related to their respective fields, thereby enhancing the quality of classroom instruction.

The research interests of faculty in the Silberman College of Business span several disciplines, including business law, economics, entrepreneurship, finance, health care systems, human resources, management, management information systems, marketing, quantitative analysis, production and operations management, managerial accounting and taxation. The faculty have researched and published numerous articles in peer-reviewed journals, presented at various national and international conferences, developed case studies, produced working papers, authored books and also served on expert panels for international organizations such as the United Nations. Some of the topics in which the college faculty have particular expertise include mergers and acquisitions, options theory, entrepreneurship and innovation, forensic science, sustainability, pricing theory, public relations, social networking, international finance, quality of health care and delivery, international taxation, role of information systems in managerial decision making and ecommerce, among others. Students have the opportunity to participate in such projects after consulting with the appropriate faculty.

Finally, research also is an integral component of activities at Anthony J. Petrocelli College of Continuing Studies. Faculty pursue scholarly inquiry in areas that include 19th-century European history, robotics and applied computer simulations, the history of the Bronx, medieval studies, classical philosophy, ethical issues in the late 20th and 21st centuries and women's studies.

The School of Administrative Science is conducting research in the fields of diplomatic leadership, computer security and forensics through the use of Petrocelli College's Cyber Crime Training Laboratory on the Metropolitan Campus, homeland security, emergency management, school safety, student services and sports administration.

The School of Public and Global Affairs includes the FDU Poll. Established in 2000, this vigorous survey research group has undertaken thousands of measurements in public opinion and attitudes, issuing 25-40 press releases and garnering tens of thousands of citations. The survey research group also regularly presents its findings at academic conferences and publishes them in academic journals. Its most cited work includes the effect of cable news watching in informing the public, the hesitation of men to vote for a woman candidate and public attitudes toward expanded casino and sports betting.

The FDU Poll receives an "A" rating from statistician Nate Silver's FiveThirtyEight blog. The ratings measure both accuracy and bias for all major polling services in the United States, providing an update to similar research the poll watchers conducted in 2014. FDU's "A" rating puts it in the top 15 of the more than 380 polling institutes reviewed and graded from A+ through F. The FDU Poll was found to have a 94 percent accuracy rate for predicting election results, and is one of only three Arated polling institutes with zero bias to their rankings.

### **Students With Disabilities**

Fairleigh Dickinson University has support services available to students with documented disabilities. Students with documented physical, learning or psychological disabilities may request reasonable modifications, accommodations, auxiliary aids or services which will provide them access to participate in programs and activities. Students with documented disabilities may request support services by contacting the campus ADA/504 coordinator. For the Florham Campus contact the director of disability support services at 973-443-8079. For the Metropolitan Campus contact the director of Academic Resource Center and disability services at 201-692-2078.

### Fairleigh Dickinson University Press

Fairleigh Dickinson University Press has published scholarly books for the academic market since 1967. It produces between 30 and 40 books each year in a variety of fields, with special emphasis on history, literature, the arts and the social sciences. The press publishes several book series, including American History and Culture, Italian Studies, Communication Studies, Willa Cather Studies, Mormon Studies, Shakespeare and the Stage and Law and Literature. It counts many award-winners among its publications, which are held in thousands of libraries around the world. Manuscripts that are considered for publication are subject to peer review by specialist scholars and selected for publication by an Editorial Committee composed of University faculty and an advisory board of associated scholars. The website for Fairleigh Dickinson University Press is www.fdu.edu/fdupress.

### The Literary Review

The Literary Review (TLR) is an international quarterly journal of contemporary writing founded in 1957. As one of the country's longest continually running university-affiliated quarterly, TLR is an ambassador for FDU in the international literary community, asserting and demonstrating FDU's commitment to the arts. Four times a year it publishes a new issue of the highest-quality poetry and prose and is recognized for its style, its bold approach, its loyalty to its contributors — whether they are emerging or established writers, and its dedication to world literature. The journal has won recognition for its good work and reinforces the FDU profile through inclusion in best-of anthologies and online features through aggregation, by being invited to speak on panels of conferences and festivals, by relationships with highprofile literary organizations, such as PEN American Center, the American Literary Translators Association and Council for Literary Magazines and Small Marketplaces (CLMP). Members train and mentor more than 25 undergraduate and graduate students a year through internships in literary publishing and collaborate extensively with the creative writing department and M.F.A. program of FDU.

### FDU Poll

Founded as an independent survey research center in 2001, the FDU Poll (also known as PublicMind<sup>TM</sup>) has produced hundreds of original studies and press releases on voter attitudes, public policy, elections and market trends. It is a nationally cited source of public opinion research or campaigns and elections as well as a variety of national issues such as automobile safety, eminent domain, gambling, the impact of a candidate's gender or voter perceptions and even the impact on New Jersey by the TV shows "The Sopranos" and "Jersey Shore." The poll is annually rated in the top 10 percent of polls nationally based on accuracy and lack of bias.

# **Academic Regulations**

## Attendance

Students are required to attend class, arrive on time and participate in all courses for which they are enrolled. Class attendance and participation are essential to academic progress. At the beginning of each semester, instructors will announce the specific attendance requirements for each course according to the policies of their academic departments and colleges. The policy will clearly delineate the number of permissible absences and the sanctions to be applied for excessive absences or tardiness. Each instructor will include the attendance policy on each syllabus to prevent any misunderstanding of the requirements for the course.

## **Academic Integrity Policy**

Students enrolled at Fairleigh Dickinson University are expected to maintain the highest standards of academic honesty. Students have the responsibility to make known the existence of academic dishonesty to their course instructor and then, if necessary, to their school director or department chair, as well as to the academic dean of their college. Course instructors have the added responsibility to state in advance, in their syllabi, any special policies and procedures concerning examinations and other academic exercises specific to their courses. Students should request this information if it is not provided by their course instructor.

Academic dishonesty includes, but is not necessarily limited to, the following:

1. *Cheating* — Giving or receiving unauthorized assistance in any academic exercise or examination. Using or attempting to use any unauthorized materials, information or study aids in an examination or academic exercise.

2. *Plagiarism* — Representing the ideas or language of others as one's own. A more complete description is listed below in the section titled "Plagiarism Described."

3. *Falsification* — Falsifying or inventing any information, data or citation in an academic exercise.

4. *Multiple Submission* — Submitting substantial portions of any academic exercise more than once for credit without the prior authorization and approval of the current instructor.

5. *Complicity* — Facilitating any of the above actions or performing work that another student then presents as his or her assignment(s).

6. *Interference* — Interfering with the ability of a student to perform his or her assignment(s).

## Plagiarism Described\*

As defined by the Council of Writing Program Administrators, plagiarism "occurs when a writer deliberately uses someone else's language, ideas or other original (not common-knowledge) material without acknowledging its source." ("Defining and Avoiding Plagiarism: The WPA Statement on Best Practices" <a href="http://www.wpacouncil.org/positions/WPAplagiarism.pdf">http://www.wpacouncil.org/positions/WPAplagiarism.pdf</a>>)

Plagiarism can occur in the following ways:\*\*

• Using text from another source (e.g. websites, books, journals, newspapers, etc.) without documenting the source;

• Using direct quotation from a text without quotation marks, even if the source has been cited correctly;

• Paraphrasing or summarizing the ideas or text of another work without documenting the source;

• Substituting a word or phrase for the original while maintaining the original sentence structure or intent of the passage;

• Using graphics, visual imagery, video or audio without permission of the author or acknowledgment of the source;

• Translating text from one language to another without citing the original work;

• Obtaining packaged information, foreign language translation or a completed paper from an online source and submitting it as one's own work without acknowledgment of the source; and

• Presenting the work of another student as one's own.

Fairleigh Dickinson University students are responsible for authenticating any assignment submitted to a course instructor should the instructor request it. Students must be able to produce proof that the assignment they submit is actually their own work. Therefore, students must engage in a verifiable work process on all assignments:

• Keeping copies of all drafts of work;

• Making photocopies of research materials (including downloads from websites);

• Writing summaries of research materials;

• Keeping Writing Center receipts;

• Keeping logs or journals of their work on assignments and papers; and

• Saving drafts or versions of assignments under individual file names on a computer, external drive or other source.

In addition to requiring students to authenticate their work, Fairleigh Dickinson University course instructors may employ various other means of ascertaining authenticity — such as using search engines to detect plagiarism, using external plagiarism-detection services, creating quizzes based on student work and requiring students to explain their work and/or process orally. The inability to authenticate work is sufficient grounds for a charge of plagiarism.

If subsequent evidence of plagiarism should be found after a grade has already been assigned, course instructors have the right to lower the grade and/or apply one of the sanctions listed below.

## Sanctions

Any student violating the University's Academic Integrity Policy will, for their first offense, receive one or a combination of the following penalties imposed by the course instructor:

1. *No Credit (0) or Failure* for the academic exercise.

- 2. Reduced grade for the course.
- 3. Failure in the course.

4. Recommendation for *Academic Probation* to the dean of the college in which the student is registered.

The course instructor shall file a notice using the University's Academic Integrity Policy Violation Report, a copy of which will be placed in the student's file maintained in the campus Office of Enrollment Services and in the Office of the Dean of Students.

In cases of interference and complicity, whether or not the student is registered in the affected course, the incident and

<sup>\*</sup>Adapted from the Kirkwood Community College plagiarism policy distributed at "Critical Challenges in Distance Education: Cheating and Plagiarism Using the Internet" workshop — April 3, 2003. \*\*From the Newark Academy Plagiarism Statement.

penalties shall be recorded in the student's file maintained in the campus Office of Enrollment Services and in the Office of the Dean of Students.

For a subsequent violation of academic integrity, a student will be subject to any combination of the above sanctions, and, after due review by the academic dean according to the procedure noted below, one of the following:

1. *Suspension* from the University for one year. Readmission will be contingent upon the approval of the academic dean.

2. *Dismissal* from the University. (Note: Dismissal from the University will be identified on the student's academic transcript as a result of the violation of the Academic Integrity Policy.)

## Procedure

When a course instructor believes that a student has violated the Academic Integrity Policy, the course instructor shall discuss the incident with the student as soon as possible. If, after the conference, the course instructor determines that an act of academic dishonesty has occurred, the course instructor may impose the appropriate sanctions. Within five days of the course instructor's action, the course instructor shall complete the Academic Integrity Policy Violation Report, copying his or her school director or department chair and the college dean. Within five days of completion of the course instructor's report, the academic school or department shall notify the student via certified mail/return receipt of the sanctions and the appeals' process. Copies of the notice shall be sent to the director of the school or chair of the department of the student's major, to the dean of the college in which the course is offered and to the campus Office of Enrollment Services and Office of the Dean of Students. The student may appeal the course instructor's decision as outlined below. Upon completion of the appeals process, the school director or department chair shall notify the student of the final disposition of the matter and the sanctions to be imposed, if any, via certified mail with copies to the course instructor, college dean, campus director of enrollment services and dean of students.

## **Appeals Process**

A student who is charged with violating the Academic Integrity Policy by a course instructor may appeal in writing to the director of the school or chair of the department in which the alleged incident took place. The letter must state the specific grounds for the appeal. The student must submit a written appeal to the school director or department chair within 14 days of receipt of the notification of the imposed sanctions. Failure to make an appeal within this 14-day period shall constitute a waiver of the student's right to appeal. Within 10 working days of receipt of the student's appeal, the school director or department chair will review the circumstances of the alleged violation with the student and the course instructor and recommend upholding, modifying or dismissing the sanctions imposed by the instructor. The school director or department chair, within five working days, shall notify the student in writing via certified mail of the outcome, with copies to the course instructor, school director or department chair of the student's major, academic dean of the college in which the course is offered, campus director of enrollment services and dean of students. If it is determined that a violation of academic integrity did not occur, the student's final grade in the course cannot be based on the assumption of such violation. If the differences between the course instructor and the student are not resolved by this review, the student may appeal the outcome to the dean of the college in which the course is offered.

Within 10 working days of the school director or department chair's notification, the student may submit a written appeal to the dean of the college in which the alleged dishonesty took place. The letter must state the specific grounds for the appeal. Upon receipt of the student's appeal, the dean shall provide the course instructor and his or her school director or department chair with a copy of the student's appeal. Within 10 working days, the dean shall convene a five-person appeals committee consisting of a faculty member at large from the college in which the course is offered, the dean or his or her designee, the dean or his or her designee, the campus dean or his or her designee, a faculty member from the department or school of the student's major and a student selected by the campus dean of students from the college in which the alleged dishonesty took place. The hearing

will be chaired by the college dean or his or her designee. The role of the appeals committee is to review the record of the matter and determine whether a finding of academic dishonesty is founded and whether the sanction imposed by the course instructor is consistent with the terms of this policy. The committee shall base its decision upon a review of the record but may meet with the student and the course instructor to secure additional information to help it in making a determination about the merits of the appeal. The committee can uphold, modify or dismiss the sanction imposed by the course instructor. The college dean shall notify the student (and campus director of enrollment services and dean of students) of the committee's decision within five working days of the hearing. For a second offense of academic dishonesty, the academic dean can "suspend or dismiss" the student as indicated above.

For a sanction of suspension or dismissal imposed by the academic dean, the student may file a written appeal to the University provost/senior vice president for academic affairs within 10 working days of receiving the notification of the dean's decision. The University provost or his or her designee, shall review the case within 10 working days of the receipt of the appeal. The University provost shall make the final decision, using any appropriate resources to assist in deciding the appeal. The University provost shall then notify all parties in writing of his or her final decision.

Revised January 28, 2015

## **Credit Hour Definition**

The University's calculation of credit hours for all credit-bearing courses and degree programs follow rules established by the New Jersey Secretary of Higher Education, which are consistent with the U.S. Department of Education's definition of a credit hour.

Section 9A:1-1.2 of the New Jersey Administrative Code provides that "Semester credit hour" means 50 minutes of face-to-face class activity each week for 15 weeks (or the equivalent attained by scheduling more minutes of face-to-face class activity per week for fewer weeks in the semester) in one semester complemented by at least 100 minutes each week of laboratory or outside assignments (or the equivalent thereof for semesters of different length).

## Academic Load

A student registered for 9 credits per semester is considered a full-time graduate student. Half-time status is applied to students who register for a minimum of 4.5 credits. A student may register for a maximum of 15 credits (18 credits in some cases) with written approval of the college dean and the department chairperson, school director or institute director of his/her major. In the Silberman College of Business a student may register for 12 credits (considered an overload) and needs the dean's approval.

No credit will be allowed for courses taken at another accredited institution of higher learning while enrolled in a degree program at Fairleigh Dickinson University unless approved in advance and in writing by the college dean, school or institute director and the student's major department chairperson or school/institute director.

## **Degree Requirements**

1. Students must complete all required credits for the program at Fairleigh Dickinson University other than those for which transfer credits have been awarded.

2. A cumulative grade point ratio (CGPR) of at least 2.75\* is required for graduation from all colleges except the Silberman College of Business and communication program (Maxwell Becton College of Arts and Sciences) and the Peter Sammartino School of Education. Master of Public Administration (School of Public and Global Affairs), the Henry P. Becton School of Nursing and Allied Health's Doctor of Nursing Practice (DNP) and Master of Science in Nursing (M.S.N.) programs, which require 3.00; a grade point ratio of at least 3.25 is required for the M.A. and M.A.T. in Teachers of Students with Disabilities, Ph.D. program in clinical psychology and Psy.D. program in school psychology. Students who receive two or more C grades will be warned, and if evidence of definite improvement in their academic performance does not ensue, they will be asked to withdraw from graduate study.

3. All graduate programs have an exit requirement for graduation. Students should ascertain the specific requirements from their departments.

\*Check degree requirements for individual majors.

4. Students must check with their department to ascertain whether a thesis is required for the degree. When the master's thesis is completed - whether required or optional — a candidate must file three copies of the approved thesis with the Office of Enrollment Services, no later than the last day of final examinations for any given semester. If the student's adviser does not require a copy of the approved master's thesis, a candidate need only file two copies of the approved thesis with the Office of Enrollment Services. Students must register for two semesters of Research and Thesis consecutively. Students must use the approved form for typing the master's thesis. Information may be obtained from the student's adviser.

5. Students should check with their major department to ascertain whether a comprehensive examination is required for their degree. If a comprehensive examination is required, students should inquire from their department as to the date for filing for the examination and the date on which it will be given.

6. A graduate program of study must be completed within a period of five years from the time the student first registers for graduate study. Exceptions to the **five-year** limitation or to the Silberman College of Business' and School of Pharmacy and Health Sciences' **seven-year** limitation must be requested **in writing** to the dean or the institute director and the student's major department chairperson or school director or institute director.

7. A candidate who is deficient in the basic undergraduate prerequisites will be required to meet the deficiency or deficiencies according to department or school guidelines.

## Maintenance of Matriculation Status

In order to maintain matriculation status, students must register consecutively for the fall and spring semesters. If consecutive registration is not maintained, students must reapply to the Admissions Office. It is recommended that graduate students who find it necessary to absent themselves from a major semester at the institution register for matriculation maintenance, thereby retaining active status. This process also provides the opportunity for the students to avail themselves of the use of various University facilities, i.e., recreational facilities and the libraries. See the "Tuition and Fees" section (page 22) for matriculation maintenance fee.

## Academic Leave of Absence

A leave of absence allows students to interrupt their graduate studies if necessary.

A leave of absence is granted for one semester with the privilege of renewal for one more consecutive semester. Request for a leave of absence must be approved in writing by the student's department chairperson or school director and the college dean. (Information on procedures for requesting a leave of absence is available from the Dean of Students Office on each campus.) Students wishing to renew their leave of absence also must do so in writing.

Students who have been granted a leave of absence will be maintained as students in good standing during the semester in which a leave of absence is taken, but will be discontinued for graduate study unless students register the semester following a leave of absence, or request and are granted an extension of the leave of absence.

## Withdrawal

Students must notify the Office of Enrollment Services in writing of their intention to withdraw from graduate study. Students who wish to return at a later date must reapply through the Admissions Office.

# Candidacy for a Graduate Degree

The application for graduation is located in WebAdvisor under Student Profile. Students should click on the link: Apply for Graduation. This must be done no later than eight months preceding graduation. Filing dates must be obtained from the Office of Enrollment Services. Degrees are awarded September 1, February 1 and the day of commencement in May.

## Grades

A system of grade points is used to determine students' general averages. Weighted letters for each credit hour are assigned grade points. (See below.)

The value of weighted letter grades is as follows:

A = 4.00	C+ = 2.33
A- = 3.67	C = 2.00
B + = 3.33	F = 0.00
B = 3.00	
B- = 2.67	

The definition of other letter grades is as follows:

- P Pass
- NC No Credit
- W Withdrawal
- Incomplete

If students wish to withdraw from a course, they must notify the Office of Enrollment Services on the form provided. Mere nonattendance or nonpayment of tuition does not constitute an official withdrawal.

## Regulations Governing Letter Grades

**P-Pass** — to be counted toward degree requirements but not averaged into students' cumulative grade point ratio (CGPR). P-Pass is not permitted in the Silberman College of Business.

**NC-No Credit** — not to be credited toward the degree requirements nor averaged into the CGPR. NC-No Credit is not permitted in the Silberman College of Business.

*W–Withdrawal –* not to be credited toward the graduate requirements nor averaged into the CGPR. Graduate students may withdraw from a course through the ninth week of a semester (through the fourth week of a summer session). After the ninth week (fourth week in summer sessions), withdrawal may be permitted for serious, documented, medical reasons or other unusual extenuating circumstances. Students requesting late withdrawal should present evidence of unusual circumstances and/or medical documentation to the Office of Enrollment Services.

*I–Incomplete* – this designation is not a substitute for a letter grade. It merely describes a student's temporary status in a course. It is to be given only in exceptional or emergency circumstances at the discretion of, and after consultation with, the instructor. Students have a responsibility to notify the instructor of circumstances preventing them from completing the requirements on time. Students will have up to the third week of the next full semester (excluding summer sessions) to complete the requirements. If the requirements have not been met within the prescribed period, the I will automatically become an F. The F is a letter grade and will count in the student's CGPR.

Special regulations may apply for Research and Thesis and Advanced Special Projects.

Requests for extensions must be made to the instructor, approved by the chair or director and forwarded to the college dean and the Office of Enrollment Services.

## **Grade Appeal Procedure**

While it is recognized that faculty hold the right and responsibility to grant a grade, a student who receives a grade that he or she believes to be unwarranted may appeal that grade by engaging in the following process:

1. Within the first three weeks\* of the start of the following full semester (fall or spring) in which the grade is received, the student shall have informally appealed the grade to the instructor. If no resolution of the matter results to the student's satisfaction, the student may initiate the following formal appeal process.

2. The student shall request in writing a meeting with the respective department chairperson or school director concerning the grade in question.

3. The chair or director shall report to the student on the resolution of the appeal within two weeks of that meeting.

4. If the issue is not resolved to the student's satisfaction, the student has one week to appeal in writing to the dean of the college in which the course is taught.

5. The dean shall review the entire matter with the student, the faculty member and/or the chairperson/school director involved.

6. If the dean feels there is no basis for a grade change, that determination is final and should be conveyed to the student in writing within two weeks of receipt of the student's appeal.

7. If the dean believes that an erroneous grade exists, the dean shall attempt to resolve the issue with the instructor. If, however, resolution is not achieved, the dean shall refer the case to the College Ad Hoc Grade Appeal Committee.

8. The committee is expected to convene within two weeks after receipt of the dean's referral.

9. Each College Ad Hoc Grade Appeal Committee shall consist of three faculty and one alternate selected by the college dean, and a professional staff person selected by the dean of students. Whenever possible, two of the faculty shall belong to the department or discipline of the instructor whose grading is in question.

10. The committee shall have the authority to recommend an appropriate course of action to the dean who shall have the authority to implement the recommendation. The recommendation shall be conveyed to all parties involved, in writing.

## **Repeated Courses**

If a student repeats a course, both the first and the second grade will remain on the transcript and will be computed into the cumulative grade point ratio.

## **Transcripts of Records**

Transcripts of records are made available via an online ordering service at www.getmytranscript.org. The cost of a transcript is \$5.00. Transcripts may be withheld if a student owes money to the University or has past-due federal loans at the time of the request.

## **Major Religious Holy Days**

The University respects the observance of major religious holy days by members of the campus community. Officers of administration and of instruction responsible for the scheduling of required academic activities or essential services are expected to avoid conflict with such holy days as much as possible.

<sup>\*</sup>In the case of a student who is being kept from either graduating or registering because of the grade in question, the process should begin immediately upon receipt of the grade report. If either the instructor or department chair/school director is unavailable, the student may proceed directly to the dean.

## Probation and Academic Disqualification, Graduate Policy

Students must maintain a minimum grade point ratio (GPR) of 3.00 to complete a graduate program. If the cumulative GPR falls below 3.00, the student is placed on probation. Students who receive two or more C grades will be put on probation. An adviser will meet with the student to set up a course of remediation, the student's records will be reviewed each semester, and the student may be limited to the number of credits taken while on probation. A student who has not shown evidence of academic improvement and has not met academic qualifications to graduate will be counseled out of the program. (The exceptions to this policy are the Henry P. Becton School of Nursing and Allied Health, the School of Pharmacy and Health Sciences, the School of Psychology, Peter Sammartino School of Education Clinical Placement, Maxwell Becton College of Arts and Sciences M.A. and M.F.A. in animation all listed below).

## School of Pharmacy and Health Sciences

Good academic standing is defined as achieving cumulative grade point ratio (GPR) of 2.75 or above at the end of any semester and/or remediation period. The Student Affairs and Academic Progression Committee reviews the progression of all students in the pharmacy program.

1. A student will be placed on academic probation when one or more of the following occurs:

• The student has failed course(s) or remediation for a course.

• The student's cumulative GPR falls below 2.75.

2. During the time a student is on academic probation, the student must meet with the assistant dean for student affairs and/or other deans or their designee(s) to discuss their course of action for returning to good academic standing.

3. Any student who is placed on academic probation or required to meet with the Student Affairs and Academic Progression Committee, must meet with the School of Pharmacy and Health Sciences financial aid counselor to discuss any possible financial-aid consequences.

4. A student may be removed from academic probation when the specific cause for being placed on academic probation has been removed, that is:

• The student passes the course that was previously failed; or

• The student's GPR is at or above 2.75; or

• For either cause, the student complies with any additional requirements from the assistant dean for student affairs and/or other deans or their designee(s).

5. A student may be suspended or terminated from the Doctor of Pharmacy Program if the student is not in good academic standing at the end of any semester. Action of suspension or termination will be determined following evaluation of in-class performance and a determination by the Student Affairs and Academic Progression Committee. If a student is not seen to be progressing through the program toward successful completion, he/she may be suspended or terminated from the program following a formal hearing with this committee.

## Peter Sammartino School of Education Clinical Placement

## **Clinical Probation and Removal**

If a candidate is asked **not** to continue placement in a school by the school/district due to incapacity to fulfill teaching or internship responsibilities; ineffectiveness or conduct unbecoming of a teacher or intern; or other just causes, it is the policy of the Peter Sammartino School of Education (SOE) that:

• The SOE program director/coordinator, the adviser of the candidate and all appropriate parties will be notified via email concerning this matter.

• The SOE program director/coordinator, director of field placement, adviser of the candidate and all other appropriate parties will meet with the candidate.

• The matter will then be considered by a committee consisting of the director/coordinator of the program, the adviser of the candidate, the director of field placement and at least one member of the administration of the SOE.

• Based on the review of all relevant information, a recommendation will be made to the director of the SOE as to whether or not the candidate should be allowed to continue the clinical experience and if a new placement will be made. The Office of Field Placement will determine when and where the placement will be made.

If a candidate is asked **not** to continue in a second placement by the school/district due to incapacity to fulfill teaching responsibilities; ineffectiveness or conduct unbecoming of a teacher; or other just causes, it is the policy of the SOE that:

• The candidate will NOT be allowed to continue in the clinical experience or take other clinical experiences.

• The SOE program director/coordinator and the adviser of the candidate will be notified by email.

• The SOE program director/coordinator, director of field placement, adviser of the candidate and all other appropriate parties will meet with the candidate. The candidate may request to have a representative present.

## **Academic Regulations**

• The matter will be considered by a committee consisting of the director/coordinator of the program, the adviser of the candidate, the director of field placement and at least one member of the administration of the SOE.

• Based on the review of all relevant information, a recommendation will be made to the director of the SOE as to whether or not the candidate should be allowed to continue in the program.

### Gildart Haase School of Computer Sciences and Engineering

Students must maintain a minimum grade point ratio (GPR) of 2.75 to complete a Master of Science degree. Any semester a student's semester or cumulative grade point ratio (CGPR) falls below 2.75, he/she is placed on probation. A student who has not met academic qualifications will be dismissed from the program.

## Henry P. Becton School of Nursing and Allied Health

Students must achieve a grade of B or higher in each nursing course. A cumulative GPR of 3.00 is required for continuation in the program and graduation from the University. Students who fail a second course may not repeat it. After failing a second course the student is dismissed.

### **Clinical Probation and Removal**

A student may be placed on clinical probation at the end of a clinical rotation if the student demonstrates either of the following:

• He/she cannot carry out expected clinical activities without direct supervision.

• Fails to demonstrate professional growth and development, or appropriate initiative, decision-making, or leadership.

After meeting with the courseresponsible faculty or course instructor to discuss the student's performance and the probationary process, the student will sign a contract agreeing to a plan to remove the probation. If the student meets his/her outcomes, probation will be lifted.

## Clinical Dismissal

Grounds for clinical dismissal are: 1. Failure to meet clinical educational outcomes.

2. Behavior that requires direct instructor intervention to prevent omissions or incomplete or unsafe care that would result in actual or potential physical or emotional harm to the client.

3. Behavior that actually or potentially harms the client physically or emotionally.

Any of these behaviors result in an NC (No Credit) grade for clinical and an F in the professional course. The student is not allowed to continue in the clinical experience for that course. If this is the student's first failure in a professional course, she/he may repeat the course the next time it is offered in their cohort.

## Programs in School of Psychology (M.A., Psy.D., Ph.D.)

### M.A. in General/Theoretical Psychology

Students receiving two or more grades below B- in any graduate course will be placed on academic probation with the possibility of a reduced course load for the next regular semester. Students receiving a concurrent or subsequent third grade below B- will not be permitted to continue in the program. A grade point ratio of at least 2.75 must be maintained at all times to continue in the program.

## Ph.D. in Clinical Psychology

The following are the conditions under which students may be terminated from the program:

1. If a student receives two or more grades of C+ or lower or one grade of F, or maintaining a grade point ratio of less than 3.20 for two consecutive years.

2. If a student fails the Ethics Qualifying Exam a second time.

3. If a student fails the Comprehensive Examination a third time.

4. If a student has not finished the degree within the specified time limit.

5. If a student has engaged in unethical or criminal behavior (plagiarism, cheating, violation of APA ethical guidelines or University or governmental law, including harassment). The criminal background check (described below) will be one source of information in this regard. Termination will be decided by the doctoral faculty as a whole.

6. If a student has psychological problems or deficiencies in professional competencies that affect the student's functioning in the program or ability to function effectively in a clinical or research capacity. Students should be aware that they are evaluated throughout their training with regard to their interpersonal, professional and ethical behavior, as well as their clinical and research competencies. Students' progress in the program is evaluated regularly, and any student who is exhibiting competency deficiencies or psychological problems that interfere with progress in the program will be advised on appropriate procedures for responding to faculty concerns, including, but not limited to, leave of absence, personal therapy or repeating a clinical or research practicum

experience. In the event of extreme concerns deemed unlikely to respond to remediation or sustained concerns with inadequate response to remediation will result in termination from the program.

7. If a student has been asked to leave an externship or internship, that is grounds for termination from the program.

## M.A. and Psy.D. in School Psychology

The following are the conditions under which students may be terminated from the School Psychology programs:

1. Receiving two or more grades of C+ or lower or one grade of F, or maintaining a cumulative grade point ratio (GPR) of less than 3.20 for two consecutive years.

2. Failing any part of the Comprehensive Examination on the third attempt.

3. Unethical or criminal behavior (e.g., plagiarism; cheating; violation of American Psychological Association (APA) or National Association of School Psychologists (NASP) ethical guidelines, University policy or governmental law; harassment; or endangering the welfare of a child).

4. Psychological or personal problems that affect the student's functioning in the program or ability to function effectively in a clinical capacity.

5. Not finishing the degree within the time limit.

6. Not remaining continuously enrolled

## M.A. in Forensic Psychology

The following are the guidelines by which students may be terminated from the master's program in forensic psychology:

1. Receiving two grades of C+ or below or one grade of F.

2. Failing the Comprehensive Examination a second time. Students must petition the program faculty for a third administration of the Comprehensive Exam.

3. Not finishing degree requirements in three years.

4. Unethical or criminal behavior (plagiarism, cheating, violation of APA ethical guidelines or University or governmental law, including harassment) that occurs either on campus, on internship site or in another academic or, in the case of criminal behavior, non-academic capacity. Termination will be decided by the program faculty and the department chair as a whole. The student will have the opportunity to present his/her side of the issue, as well as corroborating evidence. Legal advisers will not be involved in the hearing process.

5. Psychological problems that affect the student's functioning in the program or ability to function effectively in a clinical capacity. The program director and department chair will hold a meeting with the student to determine if such problems are evident. After consulting with the program faculty, a decision will be made on how to proceed. If deemed appropriate, the student will be asked to take a leave of absence to address these problems through psychotherapy. In the event of long-term, serious problems or a situation not adequately remediated by a leave of absence, a student may be asked to leave the program.

6. Unsuccessful completion (due to student's performance) of the internship a second time. (Students must petition the program faculty for a second internship placement and demonstrate that issues raised during the first placement have been addressed).

## M.S. in Clinical Psychopharmacology

Termination from the program will occur for the following reasons:

• Surrender of a license in any jurisdiction for disciplinary reasons.

• Documented academic dishonesty, as described in the University Academic Integrity Policy.

• Unethical or unprofessional behavior. Please note that this also includes course website postings and email communications with faculty and staff. Students are advised that their behavior while participating in the program should exemplify the ethical behavior of a professional psychologist with respect to all communications with clients, colleagues, fellow students, faculty and staff.

• Final grade of C+ or less in two or more courses.

• Failure of the qualifying examination on three occasions.

Termination will be at the discretion of the academic director working in consultation with appropriate personnel within the University.

## Maxwell Becton College of Arts and Science M.A. in Animation

## M.F.A. in Animation

A student who completes 9 or more credits with a cumulative grade point ratio (CGPR) of less than 2.75 will be placed on Academic Probation and will be subject to a reduced course load the following semester. If, at the completion of an additional 9 credits the CGPR is still below 2.75, the student will be subject to suspension or dismissal. This decision will be based on the student's overall academic performance and the student's likelihood of obtaining the minimum CGPR of 2.75 needed for graduation. If the student is permitted to continue his/her studies, the student's records will be reviewed each semester in which the CGPR remains below 2.75. The student will either be dismissed or will be subject to further credit limitations and minimum grade point requirements in order to be permitted to continue his/her studies.

## **Graduate Programs**

	FLOR	METR	0-C
Animation (M.A.)			
Animation (M.F.A.)			
Administrative Science (M.A.S.)*			online
Biology (M.S.)			
Business Master of Business Administration (M.B.A.) Accounting Business Administration Finance International Business Management Marketing Pharmaceutical Management Studies Saturday M.B.A. M.B.A. for Executives General Management Health Sector Management Master of Science (M.S.) — Accounting			
Master of Science (M.S.) — Digital Marketing Master of Science (M.S.) — Supply Chain Management Master of Science (M.S.) — Taxation		•	online
Chemistry (M.S.)			
Clinical Mental Health Counseling (M.A.)			
Communication (M.A.)			
Computer Engineering (M.S.)			
Computer Science (M.S.)			
Cosmetic Science (M.S.)			
Creative Writing (M.F.A.)/ Low-Residency Program			
Creative Writing and Literature for Educators (M.A.) Low-Residency Program	n 🔳		
Criminal Justice (M.A.)			
Cyber and Homeland Security Administration (M.S.)	-		online
Cybersecurity and Information Assurance (M.S.)			
<b>Concentrations and Certificate Programs</b> Concentrations and certificate programs are available many graduate degree programs. For informatio Table of Contents (pages 2–3) or the Index (page	ailab n, tu	rn to	the

\*Also offered at Vancouver Campus.



**O-C** = Off Campus (See chart on inside front cover for locations of off-campus programs.)

	FLOR	METR	0-C
Education			
Education for Certified Teachers (M.A.)			1.0
Educational Leadership (M.A.)	Ξ.		- 61
Learning Disabilities (M.A.)	_		_
Mathematical Foundations (M.A.)			1.0
Mathematical Foundations (M.A.)			onlin
Teaching (M.A.T.)			optio
Teaching English as a Second/Foreign Language	_	_	
(TESL/TEFL) (M.A.)			
		_	
Electrical Engineering (M.S.E.E.)			onlin
Electronic Commerce (M.S.)			
Film (M.F.A)			onlin
Global Affairs (M.A)			onlin
Health Science (M.H.S.)			
Hospitality Management Studies (M.S.)*	-	_	-
	-	_	-
Management Information Systems (M.S.)			
Medical Technology (M.S.)			
Nursing (M.S.N.)	1		onlin optio
Nursing Practice (D.N.P.)			
Pharmacy (Pharm.D.)			
Political Science (M.A.)			
Psychology			
Clinical Psychology (Ph.D.)			
Clinical Psychopharmacology			
(Postdoctoral M.S.)	on	line oj	ption
Forensic Psychology (M.A.)			
General/Theoretical Psychology (M.A.)			
Industrial/Organizational Psychology (M.A.)			
Postbaccalaureate Respecialization Program			
in Psychology			
School Psychology (Psy.D.)			
School Psychology (M.A.)			
		_	
Public Administration (M.P.A.)	-		_
Public Health (M.P.H.)			
Service Innovation and Leadership (M.S.)			online optio
Sports Administration (M.S.A.)			
· · · · · · · · · · · · · · · · · · ·			onlin optio
Student Services Administration (M.A.)			onlin
*Also offered at Vancouver Campus.			optio
AND OHEIEU UL VURCOUVEL CURIDUS.			

\*Also offered at Vancouver Campus.

## **Accounting • Administrative Science**

## Accounting (M.B.A.)

See Business, Accounting (M.B.A.), page 68.

## Accounting (M.S.)

See Business, Accounting (M.S.), page 74.

## Administrative Science (M.A.S.)

The Master of Administrative Science (M.A.S.) degree program is structured to meet the career-development needs of adult learners working in administrative and professional positions in government agencies, not-for-profit organizations and corporate settings. Its primary purpose is to enhance the administrative skills of its graduates.

The program is designed to primarily serve in-service students with five or more years of relevant professional work experience. The degree program is targeted toward working adults, and admission is based on multiple criteria, including the applicants' career and other accomplishments, personal maturity and evidence of commitment to graduate study and professional development. Special consideration will be given to applicants having a significant record of relevant professional and/or administrative experience in government and not-forprofit organizations.

The program combines both cognitive and affective (interactive) instruction through case studies, simulations, individual and group exercises and fieldwork that helps to develop the critical managerial effectiveness. The M.A.S. educational experience seeks to develop administrative competencies in a supportive learning environment in conjunction with specific and clear feedback.

This program is offered under the auspices of the School of Administrative Science, Anthony J. Petrocelli College of Continuing Studies, at the Florham Campus, Madison, New Jersey; the Metropolitan Campus, Teaneck, New Jersey; various locations throughout New Jersey; at the Vancouver Campus, British Columbia, Canada; and online.

## **Program Highlights**

A 30-credit program that can be completed in 20 months while working full-time.
An opportunity to begin the program at any one of three entry points during the year: September, January and April.
Small classes offered one evening per week (6:15–9:30 p.m.) in a 12-week trimester format or five consecutive Saturdays (8:30 a.m.-4:30 p.m.) to

accommodate the needs of working professionals.

- More than 30 convenient off-campus locations throughout New Jersey.
- Many courses are available online through an asynchronous delivery.
- A 50-percent tuition for all applicants.

#### Graduate Certificate Programs

#### Administrative Science

Students who wish to qualify for a Certificate in Administrative Science may do so by completing six courses (18 credits) from the M.A.S. degree course offerings listed on pages 44 to 54. These credits may then be applied to the M.A.S. degree. Any six courses (18 credits), on a matriculating or nonmatriculating basis, qualify for a Certificate in Administrative Science.

### Computer Security and Forensic Administration

This 18-credit graduate certificate program focuses on the criminal justice system's response to the expanding area of computer crime. Designed for law enforcement officials, corporate security executives and state agency investigators, the certificate provides training to appropriate personnel in the investigation, case development and protocols relating to computer crimes. Each course is taught in a computer laboratory to ensure direct relevance and practical application of all information being covered. Students are required to take six courses: MADS6637 Computer Systems Seizure and Examination, MADS6638 Computer Security Administration, MADS6639 The Forensic Expert, MADS6654 Forensics Administration, MADS6697 Current Issues in Cyber Forensics, MADS6701 Introduction to Computer Network Security, MADS6702 Investigation of Computer System/Network Emergencies, MADS6730 Malware Investigations, MADS6735 Introduction to Countermeasures for Malware and MADS6773 Current Issues in Forensic Sciences.

### Correctional Administration and Leadership

This 18-credit graduate certificate program focuses on the administration

and leadership of correctional institutions. Courses include MADS6600 Theory and Practice of Administration, MADS6602 Personnel Administration, MADS6606 Administrative Leadership in Complex Organizations, MADS6610 Organizational Decision Making, MADS6618 Leadership Plus, MADS6647 Organizational Planning and Risk Communications, MADS6656 Social Problems and Solutions, MADS6661 Managing Organizational Change and MADS6693 Leading Culturally Diverse Workplaces.

## Emergency Management Administration

This 18-credit graduate certificate is designed for community leaders involved in planning, policy making, implementation and administration of emergency management. Participants can select any six of the following courses: MADS6617 Emergency Management and Safety Administration, MADS6633 GIS and Emergency Administration, MADS6634 Community Threat Assessment and Risk Analysis, MADS6636 Global Preparedness for Catastrophic Emergencies, MADS6647 Organizational Planning and Risk Communications, MADS6648 Disaster Recovery and Organizational Continuity, MADS6698 Current Issues on Terrorism and Security and MADS6715 Special Topics: Global Terrorism and Emergency Management Preparation.

## Global Emergency Medical Services Administration

This 18-credit certificate is designed to enhance the knowledge and leadership skills of administrators and staff of organizations responsible (or potentially responsible) for provision of emergency medical services. All of New Jersey's mobile healthcare resources should be prepared to respond to crisis events. as well as to the everyday needs of their communities. Students are required to take six of the following courses: MADS6602 Personnel Administration, MADS6608 Organizational Communication and Conflict Resolution, MADS6617 Emergency Management and Safety Administration, MADS6620 Human Resource Systems: Approaches and Techniques for the Modern Workplace, MADS6636 Global Preparedness for Catastrophic Emergencies, MADS6646

Finance and Accounting for Health and Human Services and MADS6698 Current Issues on Terrorism and Security.

## Global Health and Human Services Administration

An 18-credit graduate certificate designed for professionals interested in health, hospital and human services administration. Students are required to take the following two courses: MADS6642 Global Health and Human Services Systems and MADS6643 Community Needs Assessment and Qualitative Analysis for Health and Human Services. Students may select four electives from the following: MADS6628 Building Strategic Partnerships, MADS6644 Law, Ethics and Policy for Health and Human Services, MADS6645 Marketing Social Change, MADS6646 Finance and Accounting for Health and Human Services, MADS6647 Organizational Planning and Risk Communications, MADS6718 Special Topics: Lifestyle Modification for Community Leaders, MADS6747 Relational Leadership, MADS6753 Special Topics: Elder Care: Legal Issues and MADS6763 Grants and Sponsored Projects Operations.

## Global Leadership and Administration

This 18-credit graduate certificate is especially designed for leaders and administrators of worldwide organizations. Participants can choose six courses from the following list: MADS6600 Theory and Practice of Administration, MADS6606 Administrative Leadership in Complex Organizations, MADS6609 Productivity and Human Performance, MADS6610 Organizational Decision Making, MADS6615 Global Leadership. MADS6618 Leadership Plus, MADS6627 Women's Leadership in Today's Global World, MADS6634 Community Threat Assessment and Risk Analysis, MADS6653 Global Citizenship Seminar, MADS6658 Leadership: Global Advanced Scholarship and Practice, MADS6661 Managing Organizational Change, MADS6675 Optimum Leadership, MADS6706 Collaborative Leadership, MADS6709 Special Topics: Creativity, Change and the 21st-century Leaders, MADS6731 Executive Communication as a Leadership

Tool and MADS6747 Relational Leadership.

## Global Security and Terrorism Studies

This 18-credit graduate certificate program is designed for military, police, fire and emergency management professionals who comprise the first-responder community. The certificate provides a broad understanding of terrorist groups and the methods they employ along with in-depth training on how to prevent and respond to terrorist acts. Courses include MADS6617 Emergency Management and Safety Administration, MADS6634 Community Threat Assessment and Risk Analysis, MADS6636 Global Preparedness for Catastrophic Emergencies, MADS6648 Disaster Recovery and Organizational Continuity, MADS6698 Current Issues on Terrorism and Security, MADS6701 Introduction to Computer Network Security, MADS6705 Homeland Security and Constitutional Issues and MADS6715 Special Topics: Global Terrorism and Emergency Management Preparation.

## Homeland Security Administration

This 18-credit, six-course certificate is designed to provide an introduction to the area of homeland security. Courses include MADS6617 Emergency Management and Safety Administration, MADS6636 Global Preparedness for Catastrophic Emergencies, MADS6648 Disaster Recovery and Organizational Continuity, MADS6697 Current Issues in Cyber Forensics, MADS6698 Current Issues on Terrorism and Security, MADS6705 Homeland Security and Constitutional Issues and MADS6715 Special Topics: Global Terrorism and Emergency Management Preparation.

## Human Resource Administration

This 18-credit graduate certificate program is geared to the human resource practitioner. Select any six courses from the following offerings to earn the certificate: MADS6602 Personnel Administration, MADS6603 Law and Administrative Practice, MADS6607 Collective Bargaining and Contract Administration, MADS6608 Organizational Communication and Conflict Resolution, MADS6609 Productivity and Human Performance, MADS6620 Human Resources Systems: Approaches and Techniques for the Modern Workplace, MADS6661 Managing Organizational Change, MADS6662 Customer Service for Public and Not-for-Profit Organizations and MADS6695 Advanced Employment Law.

## Law and Public Safety Administration

This 18-credit graduate certificate provides a leadership foundation for law and public safety professionals. Select any six courses from: MADS6601 Financial Administration, MADS6604 Ethics and Public Values, MADS6608 Organizational Communication and Conflict Resolution, MADS6610 Organizational Decision Making, MADS6617 Emergency Management and Safety Administration, MADS6618 Leadership Plus, MADS6620 Human Resource Systems: Approaches and Techniques for the Modern Workplace, MADS6626 Law-enforcement Executive Leadership Seminar, MADS6628 Building Strategic Partnerships, MADS6655 Contemporary Issues in Community Policing, MADS6656 Social Problems and Solutions, MADS6675 Optimum Leadership, MADS6703 Public Presentations and Media Strategies and MADS6762 Current Issues in Immigration Law.

## Leadership Theory and Practice

This 18-credit, six-course certificate is designed for individuals who would like to increase their leadership skills. There are differences between managers and leaders, and this course of study looks at the attributes of leaders, different theories that can be used and how leaders can vary their styles based on the situation at hand. Students are required to take at least two of the following courses: MADS6600 Theory and Practice of Administration, MADS6618 Leadership Plus and MADS6747 Relational Leadership. Students can choose the remaining courses from the following electives: MADS6640 Leading in Times of Crisis, MADS6675 Optimum Leadership, MADS6676 Perspectives on Leadership from Films, MADS6717 Special Topics: Leading Out of the Mainstream and MADS6731 Executive Communication as a Leadership Tool.

## Nonprofit Organizational Development

This 18-credit graduate certificate program is designed for professional leaders in the not-for-profit community. Students pursuing this credential may apply the credits toward the M.A.S. degree. Three core courses are required from the following four offerings: MADS6628 Building Strategic Partnerships, MADS6629 Planning and Program Development, MADS6631 Advanced Funding Practices and MADS6632 Technology Applications for Not-for-Profit Management. Students may choose three other courses from among those offered in the M.A.S. program. Recommended additional courses are: MADS6606 Administrative Leadership in Complex Organizations, MADS6608 Organizational Communication and Conflict Resolution, MADS6613 Marketing of Public, Private and Not-for-Profit Organizations, MADS6616 Grant Writing and Administration, MADS6618 Leadership Plus, MADS6645 Marketing Social Change, MADS6661 Managing Organizational Change, MADS6662 Customer Service for Public and Not-for-Profit Organizations, MADS6675 Optimum Leadership, MADS6747 Relational Leadership, MADS6763 Grants and Sponsored Projects Operations and MADS6781 Social Media Marketing.

## School Security and Safety Administration

This 18-credit graduate certificate program is designed for K-12 administrators and teachers to support the "Safe Schools" initiative. Courses include MADS6617 Emergency Management and Safety Administration, MADS6634 Community Threat Assessment and Risk Analysis, MADS6636 Global Preparedness for Catastrophic Emergencies, MADS6655 Contemporary Issues in Community Policing, MADS6691 Preventing Future Columbines, MADS6698 Current Issues on Terrorism and Security, MADS6707 The Impact of Terrorism on School Safety and MADS6714 Special Topics: Firstresponder Stress Awareness and Management.

## Online Graduate Degree and Certificate Programs

## **Online Availability**

As a result of funding provided by the U.S. Department of Defense through the National Guard Bureau, three administrative science graduate certificates - the Global Security and Terrorism Studies Certificate, the Emergency Management Administration Certificate and the Computer Security and Forensic Administration Certificate — as well as five additional Master of Administrative Science (M.A.S.) courses have been created online. Public safety leaders and managers from around the world have the opportunity to earn an online M.A.S. degree that has been reviewed and approved by the National Guard. In addition to these National Guard-approved programs, the school also offers online graduate certificates in Law and Public Safety Administration, Global Leadership and Administration and Global Technology Administration.

## **Admission Requirements**

The credentials required for admission to the Master of Administrative Science degree program as a matriculated student include the following:

1. A graduate application for admission and nonrefundable application fee.

2. A bachelor's degree from an accredited college or university with a minimum cumulative grade point ratio (GPR) of 2.70. Applicants with a GPR of less than 2.70 may be admitted as matriculated students on probation.

3. Official transcripts from all colleges and universities previously attended. Applicants who are unable to provide official documents at the time of enrollment may register as nonmatriculated or nondegree students, with the approval of a graduate faculty adviser.

Candidates for the graduate certificate program in administrative science may be accepted as matriculated students, based on proof of a bachelor's degree from an accredited college or university.

#### Post-graduate Certificate in Public and Nonprofit Leadership

This 24-credit post-graduate certificate program is designed to further enhance the

competencies of public and not-for-profit organization administrators. Upon successful completion of either the 30credit M.A.S. program or the 39-credit Master of Public Administration (M.P.A.) program, graduates can enroll in eight additional courses of their choice and earn a Certificate in Public and Nonprofit Leadership. Courses taken for the master's degree cannot be repeated; however, there are ample new courses to choose from under Special Topics plus other listed courses including the Wroxton College, Oxfordshire, England, summer seminars. Students who have graduated from universities other than Fairleigh Dickinson can also take advantage of the postgraduate certificate program.

## Requirements for the Master of Administrative Science Degree

The following are the specific program requirements for the M.A.S. degree. The curriculum areas and credit-distribution requirements are designed to provide students with flexibility in planning a program of study within a competencyfocused framework for professional development. Students must successfully complete 30 credits of graduate course work in the following three categories.

## Administrative Competencies (18 credits)

This core area includes the following areas of administrative science: budgeting and financial administration, human resources administration, information systems administration, regulatory and legal issues in administration, organizational behavior and organizational communications.

## Analytic and Decision-making Competencies (9 credits)

This core area includes course work in public policy analysis, economic analysis, quantitative reasoning, ethical and values issues and decision-making techniques that enable the student to analyze complex problems and develop appropriate strategies to address them.

## Capstone Seminar (3 credits)

This core area provides an integrative learning experience that focuses on organizational leadership and strategic planning. Ordinarily the last course that a student takes in the program, the capstone seminar is offered on the Metropolitan Campus and Florham Campus.

## **For Information**

For information about the M.A.S. and certificate programs, contact: assistant dean, School of Administrative Science, Fairleigh Dickinson University, Anthony J. Petrocelli College of Continuing Studies, School of Administrative Science, 1000 River Road, H-DH2-13, Teaneck, New Jersey 07666; Telephone: (201) 692-6522; Fax: (201) 692-7179.

## **Course Offerings**

## Administrative Science

School of Administrative Science

### MADS5000 1 Credit **Curricular Practical Training**

This one-credit independent study is designed primarily for graduate international students but may apply to any student wishing to engage in a paid internship. Students are expected to comply with the internship guidelines and meet any other requirements that may apply. This class allows students to experience the work environment while completing their studies in the appropriate Anthony J. Petrocelli College of Continuing Studies program.

#### MADS5001 1 Credit Curricular Practical Training

Students expand their knowledge of their area of specialization and apply concepts of different organizational structures and working relationships within a workplace environment. (For Vancouver Campus.)

#### MADS6600 3 Credits Theory and Practice of Administration

Introduction to issues of administration of public, private and not-for-profit organizations. Cases are used to analyze the relation of theory to practice and to illustrate the direct practical relevance of theoretical models to administrative action. This course is waived for graduates of the New Jersey Certified Public Manager<sup>®</sup> (CPM) program.

#### MADS6601 3 Credits Financial Administration

Analysis of the concepts and principles used in the financial administration of the public, private and not-for-profit sectors. This includes the key elements of accounting, budgeting, planning and control, auditing and their integration into a comprehensive administrative control system, including issues of systems design and implementation.

#### MADS6602 3 Credits **Personnel Administration**

This course provides an overview of personnel administration, focusing on a unified human resources management program, including the integration of human resources planning, job analysis, employee selection, training performance evaluation and compensation administration. This course is waived for graduates of the New Jersey Certified Public Manager<sup>®</sup> (CPM) Program.

## MADS6603

**3** Credits

#### Law and Administrative Practice

Exploration and analysis of the function of law in a democratic society. Emphasis is placed on understanding the law as a legal and moral force guiding and constraining public decision making and action.

### MADS6604

3 Credits

## **Ethics and Public Values**

This course focuses on the ethical dimensions of the personal and professional judgments of public sector managers. Cases are used to examine the ethos of public service organizations and the moral foundation of public policy.

## MADS6605

**3** Credits

## **Principles of Information Systems**

This course provides an overview of the role of information systems in the administration of public, private and not-for-profit organizations by presenting an integrated view of administration, information and systems concepts into a unified framework. Topics include information systems development, design implementation and evaluation strategies.

#### MADS6606 3 Credits

## Administrative Leadership in Complex Organizations

Analysis of leadership behavior and administrative activities. Examination of major theories of leadership and motivation, including trait, behavioral, situational and power-influence leadership theories and acognitive and cognitive motivational principles for various levels of the formal organization.

## MADS6607

**3** Credits

#### Collective Bargaining and Contract Administration

Analysis of federal and state employee relations laws and regulation. Topics include the bargaining environment, contract negotiations,

wage and benefit issues in arbitration, grievance arbitration and employee relations in nonunion organizations.

#### MADS6608 3 Credits

#### Organizational Communication and Conflict Resolution

Theories and models of communications and communications media; barriers to effective communication and techniques for improving interpersonal, group and organizational communications. Sources of conflict at the individual, group and organizational levels; methods of conflict management and resolution.

#### MADS6609 3 Credits

#### **Productivity and Human Performance**

Definitions and measurement of individual, team and organizational productivity, effectiveness and efficiency. Models for the analysis of organizational and individual productivity and productivity growth. Techniques for improving productivity.

## MADS6610 3 Credits

### **Organizational Decision Making**

Examination of processes in organizational decision making, the state of theory, research and applications for the practicing manager. Topics include administrative style and decision making; problem discovery and diagnosis; the search for solutions, evaluation and choice; group decision making; decision aids and support systems; and risk analysis.

#### MADS6611 3 Credits Special Topics: Introduction to Diplomacy and International Relations

Introductory course on the role and importance of diplomatic protocol in international relations for government and public officials. Topics include definition of diplomacy, types of international relations, international organizations and NGOs, comparative foreign policy, international human rights.

#### MADS6612 3 Credits Seminar in Strategic Management – Capstone\*

Approaches to formulating strategies that enable public, private and not-for-profit organizations to adapt to changing social, technological, economic and political conditions. Strategic management from the administrator's perspective. Development of long-range organizational strategies. Topics include forecasting, goal setting, environmental scanning,

\*Students should declare for graduation when registering for this course via the University's WebAdvisor system. implementation of organizational strategies and strategic management and public policy. Note: Taken as the last or next to last course after completion of at least 24 credits.

### MADS6613 3 Credits

## Marketing of Public, Private and Not-for-Profit Organizations

Course examines marketing concepts relevant to public, private and not-for-profit organizations that will enable administrators to match the goals, strengths and resources of an organization with the needs, wants and opportunities in the public sector.

#### MADS6614 3 Credits

## Comparative Public and Legal Systems

A global examination of alternative government and legal systems, public policy formulation and implementation and conflict resolution. Organization and operational characteristics of public providers, private organizations and notfor-profit providers in global settings are analyzed with particular reference to different approaches to leading political and social issues as advanced by the United States, United Kingdom and European Union. This course begins with a mandatory orientation at FDU's Metropolitan Campus. The class will discuss course format, research-paper requirements, books and other practical concerns of the trip.

#### MADS6615 3 Credits Global Leadership

Leadership theories of European and American theoreticians as well as the methods and practices of world organization leaders in government, private and not-for-profit organizations are studied, compared and discussed. Presenters are drawn from local governments and entrepreneurs who have created, innovated and implemented sweeping policy changes in the operation of government. Several site visits are included. This course begins with a mandatory orientation at FDU's Metropolitan Campus. The class will discuss course format, research-paper requirements, books and other practical concerns of the trip. Students must make their own travel arrangements. The cost of this program (tuition, room and board) is to be determined.

#### MADS6616 3 Credits

## **Grant Writing and Administration**

The course provides students with an understanding of the process of writing successful grant proposals, including responding to the Request for Proposal, letter proposals, defining needs, methodology, timelines and the budget. Learn the elements of preparing a winning proposal that can secure funding for major public sector initiatives. Students prepare and submit full grant proposals relevant to their organizations.

#### MADS6617 3 Credits Emergency Management and Safety Administration

The course will provide for an in-depth analysis of planning and administration for emergency management in the public and not-for-profit sectors, the need for emergency planning, recovering losses from Federal Emergency Management Agency (FEMA) and state agencies due to catastrophic events, identification and allocation of resources, incident command procedure, safety in the working environment and federal Occupational Safety and Health Administration (OSHA) and state Public Employee Occupational Safety and Health Act (PEOSHA) regulations. Students evaluate their environment and prepare a safety plan that is presented to the class.

#### MADS6618

## 3 Credits

### Leadership Plus

Master the best principles practiced by great leaders, past and present. Topics include creative and innovative thinking, superconscious mental laws, the constant pursuit of professionalism, craftsman-like dedication to quality, building effective self-directed teams, creating an energized workplace, the characteristics of effective learning organizations, capitalizing on leverage and the art of identifying and designing a shared destiny.

#### MADS6620

#### 3 Credits Human Resource Systems: Approaches and Techniques for the Modern Workplace

New approaches and techniques in human resource systems go beyond the theories and principles of personnel administration. A "handson" experience that utilizes case studies in each topic allows students to devise solutions. This course will use case studies, lectures, assigned readings and recent rulings. State and federal court decisions that impact public, private and not-for-profit sector organizations will be thoroughly examined.

#### MADS6626 3 Credits Law-enforcement Executive Leadership Seminar

New and complex challenges facing the lawenforcement community worldwide will be studied and discussed with top criminal justice leaders in Great Britain and the United States. Subjects include multijurisdictional police forces — Europol and Interpol, policing in a multiracial society, riot and public order, leadership and community policing, forensics

and crime-scene investigation, combating drugs,

the global impact of terrorism and combating chemical and biological warfare.

#### MADS6627 3 Credits Women's Leadership in Today's Global World

Public, private and not-for-profit sector administration and leadership development challenges are compared and studied as part of a women's leadership seminar focusing on global networking. Presenters are renowned CEOs and scholars whose cutting-edge accomplishments have distinguished them as leaders representing the public and not-for-profit sectors in and outside the United States. Study is combined with travel and experiential learning. This course begins with a mandatory orientation at FDU's Metropolitan Campus. The class will discuss course format, research-paper requirements, books and other practical concerns of the trip.

#### MADS6628 3 Credits Building Strategic Partnerships

Building strategic partnerships is key to organizational survival and success. This course will use case studies to explore the principles, approaches and motivations behind some of the most noteworthy collaborations forged by private and not-for-profit leaders.

#### MADS6629 3 Credits

### **Planning and Program Development**

Effective program development requires a clearly stated purpose of what an organization is trying to achieve, compelling evidence that demonstrates the importance of that need and a well-reasoned plan that outlines how an organization will meet this need in a costeffective manner. This course will explore how to turn an idea into a feasible project that merits funding. Students will learn the skills and strategies needed to assess need, plan for and design identifying trends and organize and manage information. Valuable online resources will be explored zeroing in on the top internet sites for research, reference and continued learning.

#### MADS6631 3 Credits Advanced Funding Practices

This course is designed to provide an in-depth study of comprehensive fund-raising planning. The course will focus on management issues including assessing organizational readiness, strategic approaches to the development process and evaluating results. The course also will provide students the opportunity to broaden their knowledge with regard to prospect research and cultivation, planned giving, corporate philanthropy and cause-related marketing.

#### MADS6632 3 Credits Technology Applications for Not-for-Profit Management

Learn to develop an approach to technology that best serves the needs of the organization. This course will provide an overview of how to plan for technology including website development, online marketing, database management, finance, accounting and working with consultants.

#### MADS6633 3 Credits

#### **GIS and Emergency Administration**

The course will provide an overview of GIS (Geographic Information Systems) applications at the administrative level of emergency management. Topics covered will include uses of GIS within the planning and mitigation phases, along with response and recovery assessments. Students will gain a valuable perspective on planning for and administering resources. A final course project will be assigned to include GIS budget funding and implementation strategies relative to individual administrative roles.

### MADS6634

#### 3 Credits

#### Community Threat Assessment and Risk Analysis

An analytic course designed for public safety officers, elected officials and business community leaders for developing collaborative approaches to counterterrorism and other security threats. Topics include vulnerability assessments, hazard mitigation, best practices, emergency planning, physical security surveying, networking of experts and community policing. Students will conduct a vulnerability-assessment survey within their organization and community and present a comprehensive response plan.

#### MADS6635 3 Credits Legal Research Methods and Analysis

Hands-on study of methods of legal research for nonlawyers, with a concentration on utilizing both fee-based and free internet legal sites. Instruction also will be provided in the procedures used in analyzing and interpreting court opinions and statutes. Students will prepare and present a legal brief, with supportive references and arguments, regarding an assigned legal issue. This hybrid course consists of classroom instruction, asynchronous online delivery plus independent research at FDU's law collection (Lexis Nexis and Westlaw).

#### MADS6636 3 Credits Global Preparedness for Catastrophic Emergencies

This course, taught by international experts, covers the following topics in a lecture/seminar format: emergency management, hazardous risk analysis, social dimensions of disasters, disaster recovery and organizational continuity, the psychology of terrorism, counterterrorism, weapons of mass destruction, biodefense mobilization and cyber security and forensics.

#### MADS6637

#### 3 Credits Computer Systems Seizure and Examination

This analytic course will cover the appropriate protocols for seizure of computer systems and their examination in cases of internet or computer fraud, terrorism, child pornography, internet crimes and other high-tech crimes or violations of organization rules and regulations. It will explore the use of technology to retrieve data and copy data on computers and on websites without disturbing the original data/site. It will study essential protocols needed to ensure the integrity of the data from the investigation process through prosecution or administrative disciplinary procedures.

## MADS6638

#### **3** Credits

#### **Computer Security Administration**

This course will provide an introduction to the basics of computer security (confidentiality, message integrity, authenticity, etc.) and investigate ways to prevent hackers from accessing websites. Encryption processes and firewall protection may not be enough for someone who wants to access data maintained on a computer or system. The course will analyze formal criteria and properties of hardware, software and database security systems, and will determine ways to improve overall site and system security. Additional topics to be reviewed include: formal specifications, verification of security properties, security policies that include hardening a site and preventing an intrusion, detection of an intrusion and how to react to such an intrusion, safeguards for systems, organizational training and protocols and other methods for providing data security in this technological age will be reviewed and assessed.

#### MADS6639 3 Credits **The Forensic Expert**

This analytic course will study what is necessary to become a forensic expert, the methods for preparing and presenting technical information in a courtroom or administrative-hearing setting and the use of technical and scientific witnesses in the area of high-tech crimes or violations of or agency rules and regulations. Appropriate

interaction with criminal justice agencies to develop internal security protocols will be emphasized. Individuals will learn how to trace security intrusions, what constitutes admissible proof, how to manage evidence and how to develop proactive initiatives in this area.

#### MADS6640 3 Credits Leading in Times of

## Leading in Times of Crisis

This course examines the principles of leadership during times of significant stress. Various models, strategies and tactics of leadership are studied using the examples of civilian and military leaders during the planning, implementation and execution of the World War II D-Day operation of June 1944.

## MADS6641 3 Credits

## **Contemporary Legal Issues**

This seminar will examine relevant legal issues in the workplace with a comparison of United States and United Kingdom law. Topics presented by leading experts will include workplace violence, social and privacy issues in the workplace, the troublesome employee, harassment in the workplace and various issues of hiring and termination.

## MADS6642

#### 3 Credits

#### Global Health and Human Services Systems

Offered in the United States with the option of an international setting, this course includes a comparison of health and human services philosophies, concepts and practices. Policy decisions and politics of health and human services delivery mechanisms are discussed with special emphasis on problem analysis and strategies to address issues.

#### MADS6643 3 Credits

#### Community Needs Assessment and Qualitative Analysis for Health and Human Services

Presents a framework for conducting and analyzing health and human services needs within the community. Designing projects, methods of collecting data, matching evaluation plans with community priorities and writing and evaluating proposals/reports providing an essential foundation for planning initiatives.

## MADS6644

#### 3 Credits Law, Ethics and Policy for Health and Human Services

Examines health and human services within the context of law, ethics, policy and the role of government and society. Provides a framework for analyzing policies in terms of social needs, workplace diversity and environmental issues in the context of exposure to liability and prevention of lawsuits.

#### MADS6645 3 Credits Marketing Social Change

Fundamental marketing concepts are applied to health and human services issues as a means to bring about social change. Attention is given to understanding the needs, wants and perception of the consumer in developing a social marketing plan, implementing it and evaluating its impact.

## MADS6646

#### 3 Credits Finance and Accounting for Health and Human Services

This course provides an overview of fiscal administrative decision-making and financial performance in health and human services organizations. Budget course and structure, planning and preparation, revenue forecasting, reporting, controls, cash-flow management, grants, endowments, audits and evaluation are emphasized.

#### MADS6647

#### **3** Credits

#### Organizational Planning and Risk Communications

Risk-communications practices, emergencyoperations planning and theory for public, private and not-for-profit organizations. Includes an overview of existing federal, state and local emergency-operations planning and communication processes using case studies and practical exercises.

#### MADS6648

**3** Credits

## Disaster Recovery and Organizational Continuity

This course examines the differences between accidents and disasters, the response for disasters, those "players" that will become involved in disaster response and recovery, the disaster cycle and how to maintain operations, whether civilian or military, to ensure organizational continuity. A key element in disaster recovery is the concept of isomorphism, where there is the opportunity for one organization to learn from the experiences of another organization, and this course seizes the opportunity to fully capture what has been learned dealing with previous events.

#### MADS6651 3 Credits

## **Operations Administration**

Operations management is the direction and control of various processes that move inputs into completed goods and services. Organizations administer products or services and determine how they are delivered. Various components of the organization must be coordinated to efficiently provide these services and/or products. Decisions are made every day on inventory, scheduling and capacity of the operations. Planning, project management, benchmarking, PERT (Program Evaluation and Review Techniques), CPM (Critical Path Method) and decision making are topics included in this course. This course will deal with management of processes, introduce students to the problems and issues involved with operations management and familiarize students with concepts, languages and tools in both service and production industries.

#### MADS6653 3 Credits

### **Global Citizenship Seminar**

Current workplaces are diverse in various aspects. Most organizations have a mix of workers from different ethnic and cultural backgrounds. For leaders, managers and supervisors to be effective in their workplaces, they must be aware of the diversity issues that impact their organization. This is increasingly important in a global context. Global citizenship requires awareness of the challenges globalization presents. Special emphasis will be placed upon a study of leadership, ethical worldview, communications and diverse subcultures presented from a global perspective along with political, social and economic issues. Comparative studies of the different systems will be the focus of student course work. The Global Citizenship Seminar will include various site visits designed to enhance the individual's understanding of the international issues that have direct and indirect effects on current and long-term goals of an organization.

#### MADS6654 3 Credits

#### **Forensics Administration**

This course examines the principles of forensics administration and how to apply them. Proper administration of forensic work is required to produce consistently high-quality forensic analysis. This course begins with a case study in a failed forensic administration. It provides the context for a review of the basics of forensics administration. Near the end of the course, the class will look at some new concepts. Topics covered include training and education of forensic analysis, accreditation, proficiency testing, audits, evidence presentation, information hiding and strategic redundancy.

#### MADS6655

#### **3** Credits

#### **Contemporary Issues in Community Policing**

This course explores community policing — a revolutionary movement, a philosophy and an organizational strategy that expands the traditional police mandate. It draws on the fields of administration, supervision, community organization, psychology, sociology, advertising, journalism, public speaking and problem

solving. The history of policing is examined to determine how and why community policing has emerged as the predominant philosophy used by police departments today. Special attention will be given to current issues that impact law enforcement and the future of community policing, especially in light of global terrorism.

#### MADS6656 3 Credits **Social Problems and Solutions**

This course presents a conceptual framework for understanding social problems. It presents administrative and managerial roles and issues concomitant with working in government, private and not-for-profit organizations, as well as implications for private enterprise. The nature of social problems, causes and consequences, incidence and prevalence, gainers and losers and underlying ideologies are developed using generalist and specific perspectives. The nature of managerial roles with a focus on solutions is developed theoretically and practically.

### MADS6658 3 Credits Leadership: Global Advanced Scholarship and Practice

The historical discourse on advanced learning has as its genesis work implemented in many Old World cities. This course will investigate the global history of educational institutions and models of scholarship. The topics included are: an overview of leadership, leadership as boundary spanning, diplomatic leadership as a behavior and an organizational auspice, impression management, interpersonal management, interpersonal communications in a multicultural world and levels of government and relationships to the private sector. This course is intended to provide students with theoretical and practical applications of scholarship and leadership. In addition to the course material, students will experience the culture of one of the University's international partners.

#### MADS6659 3 Credits Latin America and Globalization

This customized course reviews the past and current situations of Central and South American countries in relation to the world economy and globalization. Topics include historical relations between Latin America, the United States and Europe; revolution as a response to globalization; World Bank and International Monetary Fund (IMF) projects in

American products in the international market.

Latin America; and the future of Latin-

#### MADS6661 3 Credits

## **Managing Organizational Change**

This course provides an overview of the principles of organizational change in order to develop the knowledge skills and abilities to design and/or oversee basic change efforts, understand the change process along with the tools to conduct basic change efforts. The ability to change is essential for individual health and organizational growth and development, but change is often resisted for a variety of reasons.

#### MADS6662 3 Credits Customer Service for Public and Not-for-Profit Organizations

Learn how to connect an organization with customers and to train and develop a staff and customers for a shared-learning environment for customer-focused action. Communicate effectively through newsletters, surveys, instructor outreach meetings, videos, press conferences, seminars, internet, email and telephone. Exceed expectations through quality service, gaining trust and building a loyal customer base and civil coalition for a longterm, satisfying and productive leadership.

#### MADS6666 3 Credits **The New European Map**

This course provides students with a comprehensive exploration of the current state of the political environment of Europe through historical background and country-by-country analysis. Topics include the European Union, European legal systems, comparative political systems, the fall of communism, European international relations, etc.

#### MADS6672 3 Credits Ethics and Hu

## **Ethics and Human Rights**

Although there are internationally recognized human rights standards, many individuals who are displaced are not afforded the same rights as others. As countries accept a more global view of the world, human rights issues are being brought to the attention of the world. There is also a linkage between values, morality, ethics, law and human rights. This course will investigate the plight of displaced persons as far as human rights and its related issues are concerned. This includes the concept of ethics and ethical treatment of individuals regardless of their status.

#### MADS6674 3 Credits

## Sociological Perspectives of Disaster

This course identifies broadly defined significant historical and contemporary disasters. It then analyzes causes and effects of these disasters using classical and contemporary sociological theory. Particular emphasis is placed on implications for public policy. The course integrates facts, theories and public policies.

#### MADS6675 3 Credits

### **Optimum Leadership**

This course will explore major theories and practices of scholars and philosophers with a focus on the tools and knowledge necessary for 21st-century leadership development. Principles will be extracted from major contributors in the field, including Drucker, Bennis, Burns, Heifetz, Zenger, Folkman, Kanter, Gardner, Pouzes, Vaill, Greenleaf, Kellerman, Lipmann-Bluman, Goleman and others.

## MADS6676

#### 3 Credits Perspectives on Leadership from

Films Movies exaggerate and oversimplify, but they

Anotes exaggerate and oversimplity, but they can still be compelling case studies for the traits and actions they portray. This course uses a dozen classic movies, readily available for rental or purchase, as the material for the study of leadership issues. Students are invited to contribute insights from other movies and from their own experiences, to complement the assigned films.

## MADS6677

3 Credits

## Planning for Change in Information Technology

New or upgraded information technologies affect many areas of the workplace. The first steps in the development of any automated system are to understand and document what is needed. This course introduces the terms and techniques of information technology requirements planning that help promote a smooth transition from manual procedures or old technologies to new automated tools.

## MADS6679

**3** Credits

#### Intelligence-led Policing: Concepts, Practices and Issues

This course is designed as an introduction to the intelligence-led policing model. Intelligence-led policing links strategic planning crime analysis, priority setting, accountability, risk management and stakeholder involvement with investigative and front-line delivery of services. The course will include collection and analysis of data and essential actions to be taken. Case studies will be utilized to illustrate principles included in the course.

#### MADS6680 3 Credits Strategic Planning for Intelligence-led Policing

This course will emphasize highly productive collaborations to address goal setting, problem solving and decision making relative to situational awareness to address crime, homeland security and quality-of-life issues. Assessing environmental issues is also included. This course is designed for current or future senior-level decision makers.

#### MADS6681 3 Credits Intelligence Team Management

This course will explore methodologies for developing and managing an intelligence

initiative that includes the roles of decision makers, analysts and operators. Also included are situations that illustrate collaboration, integration and networking.

## MADS6682 3 Credits

#### **Intelligence Analysis**

This course will investigate the process of moving from raw data to intelligence. Included are methods for analyzing raw intelligence and determining the source credibility, critical thinking, logical reasoning, hypothesis testing and analytical reasoning. Introducing quantitative and qualitative analysis will also be covered. Assessing the validity of information received from various sources will be included along with the importance of maintaining an open mind to information and data. How to represent the analysis and recommendations through finished intelligence products to seniorlevel decision makers will also be included.

#### MADS6683 3 Credits

## Tactical and Operational Management

This course will define and distinguish between tactical and operational management relative to the effective and efficient deployment of resources to respond to crime, homeland security and emergency management issues.

#### MADS6684 3 Credits Principles of Information and Intelligence Collection

This course will explore the differences between information and intelligence collection within the framework of constitutional safeguards afforded to citizens. Covert and overt datacollection strategies including open-source information types are emphasized.

#### MADS6685 3 Credits Fusion Center Operations and Integration

This course will explore the methodologies for managing a high-performance fusion center that creates intelligence and warning for diverse constituencies. Included are strategies, principles, and practices for addressing all crimes, all hazards, all threats approach to homeland security and intelligence-led policing.

#### MADS6691 3 Credits

## **Preventing Future Columbines**

This course is based on research using sociology, psychology and brain research to develop program outlines for preventing school violence that may culminate in school shootings. Columbine is used as the index because it was the single most lethal case of school shootings in the United States. In addition, shootings that preceded and followed Columbine, along with Columbine, are examined for commonalities. signs and processes that led to shooting in the schools as well as programs that can be established to prevent shootings long before the violence escalates. The movement from bullying, the single most important forerunner of lethal violence, to uncontrollable rage, along with lifelong effects on self-imaging and quality of life are also examined.

## MADS6692

## **3 Credits**

## Cultural Diversity, Stereotype and Profile

The human cultural array possesses certain universals such as family, belief systems and modes of socialization. All of these are based on the system of social rules (the norms), which make life predictable and patterned. These also become the basis of stereotypes. A close examination of various subcultures to show their commonalities with all cultures will assist school personnel in reducing adversarial encounters.

## MADS6693

3 Credits

#### Leading Culturally Diverse Workplaces

With increased globalization, different cultures, beliefs and values become important aspects that an organization's leadership must understand and address. Cultural differences may result in conflict or ineffective and inefficient work groups and teams. Leaders who understand their own behaviors and beliefs are better able to acknowledge and embrace cultural differences and understand the implications of the global market and human capital strategies. This course will explore the dimensions of diversity, cross-cultural models, assessment tools and best practices to improve cross-cultural relationships. Effective team building and the impact of team-building activities on culturally diverse populations will be discussed. In addition to assigned readings and student projects, this course will include an international experience.

#### MADS6694 3 Credits **New Challenges of Leadership in a**

## Global Society

The importance of advanced leadership skills will be explored in all areas confronted by the

challenges of the global society. Emphasis will be placed on current trends in globalcommunication conflict management and international negotiation. Priority of study on latest trends in each activity will be highlighted.

## MADS6695 3 Credits

#### Advanced Employment Law

This course is designed to provide an in-depth study of the essential principles and foundations of employment law for managers and human resource personnel. The course will cover theories and practical applications of contractual law as a source of employment obligations, public policy claims, exceptions to the employment-at-will concept, workplace torts, federal and state regulation of the employment relationship with emphasis on the various laws against workplace discrimination and controlling court cases, family leave, health and safety issues, wage and hour considerations, disability and unemployment compensation. The course will be concluded with practical considerations concerning the present status of the various areas discussed.

## MADS6696

#### **3** Credits

#### **Building Effective Teams**

Establishing teamwork in an organization is not easy. This course provides students with a comprehensive overview of the team-leadership skills that make and keep organizations competitive. Topics include: team fundamentals, managing by vision and principle, achieving improvements in quality and productivity, setting goals and boundaries that change as the team matures, resolving common team problems.

#### MADS6697

## 3 Credits

**Current Issues in Cyber Forensics** This course will emphasize the use of computers and computer technology in investigating cases where computers or computer technology played a significant role. Techniques for safeguarding evidence, computer fingerprinting of suspected parties and interacting with investigative authorities will be covered. Students will become familiar with core computer science theory and practical skills necessary to perform preliminary computer forensic investigations, understand the role of technology in investigating computer-based crime and be prepared to deal with investigative bodies at basic levels. Students will also learn various techniques that aid in preventing computer incidents and recovery from such events.

#### MADS6698 3 Credits Current Issues on Terrorism and Security

This course provides an in-depth analysis of terrorism, the ideological forces and psychology behind terrorism and its worldwide network. Discussions and class assignments will focus on what government leaders can do to prepare their communities for the effects of a catastrophic event including assessing their security plan, its design and construction, agency policies, procedures and various types of security staffing.

#### MADS6700 3 Credits Global Technology Project Management

The course addresses the role of the project manager and the project team at each phase of the project life cycle. It will educate students about information technology projectmanagement skills through hands-on exercises, interactive case studies and relevant discussions with peers.

## MADS6701

#### 3 Credits Introduction to Computer Network Security

This course will introduce the basics of computer network security for the professional or personal user. The course will include both theoretical and practical application processes to block unauthorized access, remove covert programs and assess network vulnerabilities. In addition, it will provide mechanisms for strengthening computer network defenses from malicious users. This course is held in the U.S. with the option of taking the course overseas when scheduled, including FDU's Wroxton College in Oxfordshire, England.

#### MADS6702 3 Credits Investigation of Computer System/Network Emergencies

This course will introduce students to computersystem emergencies and responses to these emergencies. It will explore techniques and system configurations to create redundancy in critical computer systems and learn proper standards for data backup and recovery. It will also cover the pros and cons of adapt encryption. Students will learn how common hacking techniques are used for computer system intrusion as well as common techniques used to obtain information from employees. Also covered will be the development of a user agreement for the workplace, remote users and vendors with access to systems and consultants.

#### MADS6703 3 Credits Public Presentations and Media Strategies

This course provides the knowledge and skills needed to develop effective media-relations strategies for an organization. Public presentation skills are addressed in the context of developing and delivering effective messages, persuasion and communicating with key audiences during crisis situations. Emphasis will be placed on targeting audiences and analyzing their needs, developing positive working relationships with journalists and creating plans and policies which use media relations to enhance organizational goals.

#### MADS6704 3 Credits Managing Media Relations: From Local to Global

This course will offer practical, hands-on techniques in understanding the media, how to build relationships with journalists, how to communicate messages effectively and clearly and what steps to take when faced with a crisis. The aim is to equip administrators with commonsense tools to properly manage their own messages while also handling a variety of media — from newspapers to radio and TV to the internet.

#### MADS6705 3 Credits Homeland Security and Constitutional Issues

This required course provides an overview of constitutional issues, statutes and case law that govern homeland security professionals at the local, state and federal levels. Social, ethical and political implications of actions intended to preserve the safety and security of citizens are studied in relationship to the legal constraints placed on systems. This course will utilize case studies.

## MADS6706

**3** Credits

## **Collaborative Leadership**

This course will investigate the concept of leadership exhibited by a group that is acting collaboratively to resolve issues that all feel must be addressed. Since the collaborative process ensures that all people who are affected by the decision are part of the process, the course will explore how power is shared in the process and how leadership is developed.

#### MADS6707 3 Credits

## The Impact of Terrorism on School Safety

Increased incidents of violence in the schools has impacted how schools are responding to and preparing for potential issues. This course will investigate the latest school-violence trends, including fatal and nonfatal shootings, and the threat of terrorist attacks on American schools. The impacts of terrorism on school safety as well as crisis planning and current strategies for preparedness planning will be analyzed. Case studies of incidents as well as best practices in both the United States and the world will be studied.

#### MADS6708 3 Credits Special Topics: Administrative Research\*

This course surveys the basic methods of research likely to be encountered by administrators. The goal of the course is *not* to make students researchers or statisticians but to make them better research and statistics *consumers*. Quantitative techniques help administrators make budget projections, set staffing levels, determine service quantity and delivery logistics and estimate service demand. Topics covered include descriptive statistics, measurement and research design, inferential statistics and regression.

#### MADS6709

#### 3 Credits

#### Special Topics: Creativity, Change and 21st-century Leaders\*

Leaders of the 21st century can no longer deal just with change; they must be able to create, discover and invent new ways of thinking, new ways of dealing with greater changes yet to come and new ways of building organizations. This course focuses on recognized leadership characteristics and skills that stimulate change: vision, communication, synergistic decisionmaking, motivation and talent development. Students will engage in highly interactive stimulations and other exercises that require the willingness and an ability to challenge convention, shift paradigms, communicate effectively and challenge the status quo in order to develop unusual solutions to usual problems.

#### MADS6710 3 Credits **Special Topics: Dissonant Issues Seminar**\*

This course will explore a myriad of divisive and conflicting issues in contemporary society including: school reform, gangs, obscenity, religious extremism, global warming, identity theft, human trafficking, poverty, unemployment/underemployment, disease, immigration, drug smuggling, war, capital punishment and political corruption. Guest speakers will share their experiences and expert

\*Qualifies for administrative or analytic competence. Students are permitted to take two Special Topics courses in the M.A.S. program. Contemporary issues in administrative sciences — specific course topics will vary — may be repeated once for credit. Examples include customer service, professional development seminar, entrepreneurial public and not-for-profit organizations, administration organizational changes, public policy issues and analyses, etc. knowledge on these critical and sensitive issues supplemented by films and documentaries.

#### MADS6714 3 Credits Special Topics: First-responder Stress Awareness and Management\*

An in-depth analysis of the causes and consequences of first-responder perceived stressors is presented along with a detailed explanation of stress-management techniques. The course is designed primarily for members of the emergency service community (police, fire, emergency medical services [EMS] and health care providers).

### MADS6715 3 Credits

#### Special Topics: Global Terrorism and Emergency Management Preparation\*

Terrorism and its impact on governmental, social, legal and financial organizations is the basis of this course. Various measures to stem the growth of terrorism and to prevent it through intelligence, legislation and international collaboratives will be fully explored.

#### MADS6717 3 Credits Special Topics: Leading Out of the Mainstream<sup>\*</sup>

This course includes an extensive analysis of paradigms and how they affect behavior and decision making by examining both sides of major issues on public and private policy, politics, global economy, environment, media, health, law, public safety and ethics. Numerous guest speakers will present different views on current topics and events.

#### MADS6718 3 Credits Special Topics: Lifestyle Modification for Community Leaders\*

Leaders and managers face many workplace and life challenges that can lead to imbalance and conflict resulting in wrong decisions that affect the lives of many people. Everyone is living a stressful life leading to a depletion of energy, fatigue and even depression. This course will focus on achieving a healthier, more fulfilling lifestyle to meet the demands of life and work. This course is designed to lead students to a new level of awareness and empower them to make the life changes needed for full engagement as leaders.

\*Qualifies for administrative or analytic competence. Students are permitted to take two Special Topics courses in the M.A.S. program. Contemporary issues in administrative sciences — specific course topics will vary — may be repeated once for credit. Examples include customer service, professional development seminar, entrepreneurial public and not-for-profit organizations, administration organizational changes, public policy issues and analyses, etc.

#### MADS6720 3 Credits Special Topics: Metropolitan America: Influence of the Past and

**Future\*** The American metropolis at the end of the century is very different from what people anticipated about 50 years ago. At mid-century, they envisioned a clean, rationally planned environment of the future, free of long-standing problems such as traffic and poverty. The reality is so much more complex. Leaders built a metropolis that addressed some major problems, while at the same time creating new ones. The next 50 years surely will contain similar surprises. This class will take an in-depth view of those key influences shaping the past and future of the American metropolis. The

and future of the American metropolis. The overwhelming impact of government policy on the American metropolis, especially those policies which promote suburbanization and urban sprawl, will be reviewed and analyzed. To the future, a view of the growing disparities of wealth, a suburban political majority and perpetual urban underclass, racial integration and cultural diversity and the possible intensification of the urban crisis will be addressed.

#### MADS6730 3 Credits Malware Investigations

Short for malicious software, malware is defined as a program or file that is designed to specifically damage or disrupt a system, such as a virus, worm or a Trojan horse. This course will cover various malicious software applications used by today's cyber criminals. Reverse engineering techniques will be practiced. Understanding malware signatures and heuristics will be discussed and fully explained. Encryption and cryptology practices and procedures will be touched upon as additional means of destructive and illicit behavior.

#### MADS6731 3 Credits Executive Communication as a Leadership Tool

This broad-based and highly interactive course will help students develop a strong foundation in communication theory and practice, with an emphasis on communication skills development in the five key areas: written, oral, presentation, cross-cultural and listening skills. Further, students will examine great leaders — from inside and outside the business world — and

\*Qualifies for administrative or analytic competence. Students are permitted to take two Special Topics courses in the M.A.S. program. Contemporary issues in administrative sciences — specific course topics will vary — may be repeated once for credit. Examples include customer service, professional development seminar, entrepreneurial public and not-for-profit organizations, administration organizational changes, public policy issues and analyses, etc. how their communication skills, styles and approaches contributed to their leadership impact.

### MADS6732 3 Credits

## International Conflict Resolution

Sources and analysis of international conflicts, barriers to effective communication and diplomatic approaches to leading political solutions. Principles of international law and multilateral organizations. Study of different techniques used during important 20th- and 21st-century cases.

#### MADS6733 3 Credits

### **World Economy and Globalization**

This course reviews the past and current world economy and globalization. Topics include: relations between the industrialized nations and some specific countries in Asia, Africa and Latin America; current communist markets, transnational corporations, World Bank and International Monetary Fund; and the future of developing countries' products in the international market.

### MADS6735

#### 3 Credits Introduction to Countermeasures for Malware

This course will offer the basics of computer security countermeasures for the professional or personal user who encounters various types of malware such as spyware, phishing sites, spam, bots, root kits, viruses, key loggers, cookies and hijackers. The course will include both theoretical and practical-application processes to block unauthorized access, remove covert programs and assess network vulnerabilities. In addition, it will provide mechanisms for strengthening computer-network defenses from malicious users. This course will demonstrate to students how one can forensically copy a hard drive and run it in a virtual machine to examine the effects of the malware without changing the original hard drive.

## MADS6740

#### **3** Credits

## **Comparative Political Systems**

This course provides an overview of the main political regime, considering the different branches of power political parties, electoral systems, citizen participation, mass media, pressure groups and social movement. The course consists of case study and independent research.

#### MADS6747 3 Credits **Relational Leadership**

As the world continues to become even more complex, the need to connect and collaborate across disciplines, functional realities and

worldviews is a necessity. This complexity calls for leadership that is inclusive, ethical, empowering and sustaining. Whether viewed from an individual, group or process perspective, leading is very much about relating on every level and from different perspectives. Notable theory and research in the field will be discussed in a case-study approach to relational leadership. This course will explore relational leadership and its international implications for individuals and organizations.

#### MADS6751 3 Credits Cultural and Social Awareness Seminar

As individuals become more global in their perspectives, it is important that they understand how cultures and social structures are impacting their lives. Each person has a culture upon which beliefs and values are based. This course will explore various components relative to culture and social groups, such as diversity, verbal and nonverbal differences, prejudices and biases and barriers associated with culture and social awareness. This seminar will explore cultural and social awareness through case studies, the media, films, lectures and discussions.

## MADS6752 3 Credits

### **Current Issues in Latin America**

This course provides students with a comprehensive exploration of the core issues in Latin America through historical, political and social background and country-by-country analysis. Topics will include economics and comparative politics.

#### MADS6753 3 Credits Special Topics: Elder Care: Legal Issues\*

Increases in the elderly population have resulted in new and complex issues and concerns that impact everyone. These issues include making decisions for the elderly, caregiving, maintaining self-sufficiency or assistive-living accommodations and home and estate planning. This course will explore topics such as informed consent, decision-making capabilities, legal issues related to death and dying, privacy rights, geriatric services and funding, age discrimination and family-law issues. In addition to lectures, the course will include case studies and discussions.

\*Qualifies for administrative or analytic competence. Students are permitted to take two Special Topics courses in the M.A.S. program. Contemporary issues in administrative sciences — specific course topics will vary — may be repeated once for credit. Examples include customer service, professional development seminar, entrepreneurial public and not-for-profit organizations, administration organizational changes, public policy issues and analyses, etc.

#### MADS6758 3 Credits **Politics, Ideologies and Religion in the Middle East**

This course provides students with a comprehensive exploration of the politics, ideologies and religious issues through historical, political and social background. Lectures will also include a country-by-country analysis.

## MADS6760

3 Credits

## **Economics in the Middle East**

This course provides students with a comprehensive exploration of the historical and current economic issues of the Middle East, taking into account oil as a key resourse and its multiple political and economic consequences. Topics will also include country-by-country analysis.

#### MADS6762 3 Credits

#### **Current Issues in Immigration Law**

Topics will include human resources, political, economic and cultural issues involved in immigration law. It also will discuss the practical side of immigration in today's business world.

### MADS6763 3 Credits

#### Grants and Sponsored Projects Operations

Receipt of a grant or funded project requires a solid foundation of concepts, methods and requirements neessary to administer the enterprise. This course will cover the steps involved in setting up a grants-management system, managing documentation in line with compliance obligations, ensuring due diligence, reporting properly and utilizing best practices in implementing and completing the project as planned.

## MADS6764 3 Credits

## Current Issues in Africa

This course provides students with a comprehensive exploration of the current issues in Africa through a historical, political, economic and social background and countryby-country analysis. Topics will also include present economics and comparative political systems.

#### MADS6773 3 Credits

## Current Issues in Forensic Sciences

This course explores current issues and challenges confronting the forensic science community. The issues include reviews of the scope of forensic services, the various ways forensic services are organized, the professional and education requirements for careers in forensic science. The challenges include the uneven levels of service, the admissibility of scientific evidence and testimony in courts of law and the differences between criminal and homeland security forensic investigations.

#### MADS6775 3 Credits

### **Career-development Process**

The career-development process includes a number of steps which individuals may undergo numerous times. The process includes assessment of skills, interests, personality styles and values. Additional steps include effective job-search strategies as well as educational and training goals. The decision process looks at narrowing the options to determine the best choices for the individual. This course provides the theoretical and practical aspects of the career-development process.

#### MADS6776 3 Credits

#### Research Methods for Workforce Professionals

Workforce professionals need information from various sources to help make decisions for themselves and their customers. In addition to labor-market information, the workforce professional needs to look at projections for growth industries and labor demand. This course explores basic research methods as well as decision-making processes to assist the professional in providing the best choices for the customers.

#### MADS6777

3 Credits

### Leading Volunteers in Organizations

Many organizations rely on volunteers to provide essential services to public, private and not-forprofit organizations. Issues arise with how to recruit and utilize volunteers in organizations, whether all-volunteer or a mixed agency that includes individuals where part of the workforce is paid and part are volunteers. This course explores recruitment, training and retention issues that affect such types of organizations.

## MADS6778

3 Credits

## White-collar Crimes

White-collar crimes were originally those identified as embezzlement or theft after trust offenses. Technology has made this crime more difficult to investigate and prosecute. In addition, there are issues with sentencing and what appears to be leniency in these cases. This course explores the total issue of what these crimes are, how to investigate and prosecute them and the courts' impact on the issue.

#### MADS6779

3 Credits Mass Communication Theories

Mass communication involves creating and sending a message to a large group. Those in the

field of public relations need to understand these theories and utilize them as efficiently as the media, which have studied this and have utilized different theories to get their message out. A number of theories will be studied, including diffusion theory, cultivation theory, media dependency and functional approach to mass communication, among others.

#### MADS6780 3 Credits

#### **Society and Mass Communication**

This course explores the relationship between society and mass communication. Mass communication influences society in various ways, including advertising and education. Society's beliefs, values and norms are influenced by the media and also influence the media. The media provide news, information and even entertainment.

## MADS6781 3 Credits

## Social Media Marketing

Social media has become a necessary component of leading digital marketing programs. This course explains how to use social networks such as Twitter, Facebook, blogs, YouTube, message boards and other social media to understand what customers are saying. More importantly, this course helps students act on that knowledge with smarter digital campaigns in social media and elsewhere that show provable return on investment.

#### MADS6788 3 Credits Political and Economic History of Latin America

The history of Latin America beginning with the Spanish conquest and colonial period; the Independence movements; the new Republics and their evolution in the 19th century; social, economic and political perspectives. Students will do research on particular countries based on case studies.

#### MADS6789 3 Credits Modern Latin America

A comprehensive exploration of the most important trends and events affecting social, economic and political structures in Latin America during the 20th century. Circumstances specific to individual nations will be subject to case studies.

#### MADS6790 3 Credits Economic Development in Latin America

Latin-American nations as "developing countries"; research on the economic, political and social causes that explain current situations, consideration of poverty, income inequality, social discrimination, lack of technology and capital, increasing public debt, weak public institutions and the like, as well as the economic models and alternatives addressing these general difficulties.

#### MADS6791 3 Credits Economic Int

#### Economic Integration and Free Trade Agreements in Latin America

Recent attempts to achieve regional economic integration in South America, Central America and the Caribbean; review of these efforts, taking into account achievements and remaining difficulties; consideration of new economic trends based on globalization and Free Trade Agreements among certain Latin American countries and other nations or block of nations, such as the United States, China and the European Union.

## MADS6793

#### 3 Credits Brazil, Mexico, Colombia and Argentina: A Comparative Perspective

Brazil, Mexico, Colombia and Argentina are currently the most populated countries of Latin America. Each has an economic, political and social background that shows, with respect to the others, some similarities and differences; a comprehensive exploration of their current political situations and economic models, as well as social issues such as poverty, income distribution, discrimination, women's place in society, public debt, natural resources, foreign capital and the like.

#### MADS6794 3 Credits

#### **Cuba: Past, Present and Future**

Cuba as a Spanish colony; Jose Marti's ideology and the struggle for Independence; the Spanish-American War; the first decades of the new republic; Fulgencio Batista's dictatorship; and Fidel Castro's revolution, as well as the five decades of communist regime; its relationship with the United States and the World; the current situation under Raul Castro's government, and the perspectives for the near future.

### MADS6803

**3** Credits

#### **China: Past, Present and Future**

A comprehensive exploration of China's history and its impact on contemporary Chinese policies toward trade, democracy, human rights, resources, religious toleration and diversity, demographics, ethnic groups and China's role on the world stage.

#### MADS6806 3 Credits

#### **Exploring the United Nations**

History of the United Nations, its mission, membership, leadership; the General Assembly,

Security Council, Economic and Social Council and other constituent bodies; the United Nations and global issues, for example, human rights, the environment, nuclear weapons; the United Nations as an ideal and as a reality achievements and controversy.

## MADS6808

#### 3 Credits Current Issues in Central and Southern Asia

A comprehensive review of current issues in central and southern Asia. Countries discussed include: the former republics of the Soviet Union, Pakistan, Afghanistan and India; the nations of southeast Asia, such as Cambodia; and other important regions. Economic, political, cultural and social developments are studied through country-by-country and crosscultural analysis.

### MADS6809

#### 3 Credits The World of Tomorrow

This course provides an interesting exploration of the main forces that will determine the world of tomorrow. Topics include the changing nature of war; the mob impact of the new social mass media (Twitter, Facebook); security versus privacy (data-mining); and climate change, to the erosion of borders and sovereignty, free markets versus socialist ideals and the like.

#### MADS6813

**3** Credits

#### The U.N. Millennium Development Goals

This course takes the students through analysis of the eight millennium development goals (MDGs), which range from extreme poverty rates to halting the spread of HIV/AIDS and providing universal primary education, all by the target date of 2015 — to form a blueprint agreed to by all the world's countries.

#### MADS6814

#### **3** Credits

#### **Regional Organizations**

Selective exploration of regional organizations and their political, economic and strategic purposes and impact; organizations representative of the major geographical global regions: the European Union, the African Union, NAFTA, NATO and the Andean Group will be among those studied.

#### MADS6816 3 Credits The Impact of Media in World Politics

This course will provide a comprehensive exploration of the impact of media in world politics, taking account of the different regions and considering some case studies.

#### MADS6817 3 Credits Diplomacy and the U.S.A.: The Impact of Global Leadership

This course will examine the importance of global leadership in international relations within the context of a review of the diplomatic history of the United States. Among the topics to be explored are: global leadership, internationalism, isolationism, realism, idealism, multilateralism and unilateralism.

#### MADS6818 3 Credits Sustainable Development

Issues of growth in developing countries; limits of expansion in developed nations; the impact of environmental concerns and proposed solutions; the sustainability of United States and European expansion.

#### MADS6819 3 Credits Women's Rights

This course provides a comprehensive and comparative vision of women's rights in today's world. Although women's presence has highly increased in areas such as politics, economics, literature, public relations, arts and medicine in the last 50 years, there are still regions of the world where women's rights and opportunities are severely weakened. A comparative perspective of ideologies, religions and cultures will give the students a renovated approach on this fascinating topic.

## MADS6820 3 Credits

## U.N. Truths and Half Truths

This course provides a comprehensive exploration of the United Nations' goals and structure, considering its main organs such as the secretary-general, Security Council, General Assembly and Economic and Social Council (ECOSOC). It will emphasize their dynamic roles, in particular their achievements and missing objectives in today's world, taking account of a great variety of topics: human rights, nuclear weapons, environmental issues and the like.

#### MADS6821 3 Credits Russia: Past, Present and Future

This course provides an exploration of the Russian past, considering the Soviet era as well as the transition to the Russian Federation, taking account of the main political, economic and social aspects. The course also studies the role Russia plays in today's world as a member of the United Nations Security Council, and analyzes its relationship with the United States, the European Union, China and other regions of the world.

#### MADS6822 3 Credits Terrorism and Terrorist Acts

This course provides a comprehensive approach to the concepts of terrorism, its psychology and impact on governments and societies. Analyzing different aspects such as intelligence, cyber security legislation and international collaborations in order to develop a strong counterterrorism policy. Specific terrorist acts will be considered taking account of their causes and effects.

#### MADS6823 3 Credits Global Migration: Past, Present and Future

This course provides students with an understanding of the most important periods of migrations throughout history, as well as the main trends in today's world considering their causes, consequences and different state policies. Particular emphasis will be given to the economic relations among societies during the globalization era.

### MADS6824

### **3 Credits**

#### U.S. Presidential Campaigns: Foreign Perspectives

This course provides an overview of United States presidential campaigns, focusing on the rules for competition, the political parties and their candidates, the role of ideologies, money, media and public opinion and, more specifically, foreign perspectives and implications for the world of today.

#### MADS6825

**3** Credits

#### Introduction to Diplomacy and International Relations

This course is directed to students interested in contemporary international politics and relations between various actors in the international scene. Students will become familiar with the leading theories and concepts of international relations in conjunction with the historical context, explaining overall dynamics in global affairs such as human rights, globalization, security, terrorism and the like.

#### MADS6826 3 Credits ISIS or The Islamic State

This course provides students with a comprehensive exploration of the origins, methods and goals this terrorist group as well as the main strategies developed by the United States and other world powers to encounter it. Topics include particular terrorist actions and reactions, media coverage, religious extremism, military organization, international promotion and the like.

## MADS6827 3 Credits

## **U.S.A.-Latin America Relations**

This course will provide a comprehensive exploration of the political, economic, social and cultural relations between the United States and Latin America throughout history. It will also require some special case studies.

#### MADS6828

**3 Credits** 

#### U.S.A. New Foreign Policy: Risks and Fears

The United States foreign policy under Trump's presidency explores interesting issues such as free trade agreements; economic relations with China, Cuba and Venezuela; the wall and the Mexican border; immigration; ISIS; terrorism; the support to NATO; Guantanamo; and the like.

### MADS6829

## **3 Credits**

### The Future of the United Nations

The basic purpose of this course is to examine the major changes that are already visible in the structures of the post-World War II period, and to project how the multilateral systems exemplified by the United Nations and other international organizations will adjust to these changes.

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## Animation (M.A.)

The Master of Arts (M.A.) degree in animation offers three concentrations (3D character animation, video games and visual effects) that center around gaining hands-on skills in the chosen concentration. This major is designed for students who possess an undergraduate degree from an accredited university, college or art school who are looking to further sharpen their skills and increase their understanding of the discipline. It accepts recent undergraduates, master'slevel transfer students, working professionals who want to grow their animation skills, as well as people who desire a complete career change.

This major is a 36-credit degree. The fall and spring semesters are attended inresidence and the summer semesters are completed online.

Some courses in this program require basic prerequisite skills. If students do not possess the prerequisite skills upon entry they should acquire them independently or by completing undergraduate course(s) either prior to entering the program or while in the program. A candidate for admission is encouraged to make a personal appointment with an admissions counselor in order to discuss admission eligibility, education plans and/or take a campus tour. Prospective students may also arrange a meeting with the animation program director to discuss the curriculum options and tour the animation facilities.

## Admissions

M.A. in animation degree applicants must digitally submit a portfolio of 10–15 creative pieces as part of the application process. Acceptance is based on the quality of the work as well as meeting all of the other academic admission requirements of the University. The review committee is looking for work that is original in concept and content and will evaluate the portfolios to determine if the applicant qualifies to enter the program based on their artistic skills. If the submitted work infringes on copyright laws or is copied from other sources the applicant will be denied admission.

## Submit Portfolio

Email robinb@fdu.edu, and we will reply with login information to our cloud to upload your portfolio pieces.

### Graduate Admissions

No standardized testing is required.

#### Requirements

1. Completed FDU Graduate Admissions application.

2. Bachelor's degree from an accredited college or university with a minimum cumulative grade point ratio (CGPR) of 2.70 (applicants with a CGPR of less than 2.70 may be admitted on probation).

3. Official undergraduate and graduate transcripts from all colleges and universities attended.

4. Digital portfolio.

5. Two letters of recommendation (from a professor, employer or professional in the field familiar with the student's strengths and abilities).

6. Personal statement.

7. Résumé or curriculum vitae.

Upon entry, students select one of these concentrations to be their area of focus.

## **3D Character Animation Concentration**

In this concentration, students give personality and emotion to digital 3D characters. Through the use of software techniques and acute observation skills, they show their ability to portray convincing and engaging performances in their animated characters and creatures.

## Required Courses (18 credits)

Credits
ANIM5300
Storytelling 3
ANIM5400
Character Design3
ANIM6100
Digital Sculpting3
ANIM6150
3D Character Texturing3
ANIM6300
3D Character Animation 3
ANIM7000
Advanced 3D Character Animation3

### Major Electives (18 credits)

Six 3-credit ANIM5000- or higher-level courses

### **Video Games Concentration**

In this concentration, students design and create animations that are intended to be utilized in video games and interactive media. They learn how to optimize the visual data, bearing in mind the limitations of the platform that will be delivering it, in that the device will be dynamically rendering the incorporated assets in real time.

### Required Courses (18 credits)

Credits
ANIM5400
Character Design
ANIM5500
Digital 2D Animation
ANIM6100
Digital Sculpting3
ANIM6400
3D Animation for Games 3
ANIM6600
Game Creation 3
ANIM7500
Advanced Game Creation3

#### Major Electives (18 credits)

Six 3-credit ANIM5000- or higher-level courses

## **Visual Effects Concentration**

In this concentration, students animate illusions and tricks of the eye to simulate imagined events in stories and computergenerated environments. Along with enhancing and manipulating digital imagery created in a variety of 3D and 2D software programs, they also learn to integrate and composite believable components and visual effects into liveaction footage.

## Required Courses (18 credits)

ANIM5300
Storytelling 3
ANIM5500
Digital 2D Animation
ANIM5600
3D Layers in After Effects <sup>®</sup>
ANIM5700
Dynamic Effects and Particle
Systems in After Effects <sup>®</sup> 3
ANIM5800
Compositing in After Effects <sup>®</sup>
ANIM6350
3D Particle Systems and Effects 3

### Major Electives (18 credits)

Six 3-credit ANIM5000- or higher-level courses

## **Other Animation Electives**

ANIM5100	History of Animation and
	Special Effects
ANIM5200	History of Video Games
ANIM5750	3D Character Modeling
ANIM5850	Advanced Digital 2D
	Animation
ANIM5900	Expressions and Scripting
	in After Effects®
ANIM6700	Animating Fluids
ANIM6805	Motion Tracking
ANIM6900	Digital 2D Game Creation
ANIM7100	3D Character Animation -
	Weight, Overlap and
	Follow Through
ANIM7200	3D Character Animation –
	Emotion and Personality
ANIM7250	Lip-Syncing
ANIM7300	Animation with Hair/Fur
ANIM7400	Animation with Cloth
ANIM7425	Motion Capture
ANIM7525	Virtual Reality
ANIM7550	Internship I
ANIM7600	Video Game Team Project
ANIM7650	Thesis I
ANIM7700	Faculty/Student Research I
ANIM7750	Thesis II
ANIM7775	Internship II
ANIM7805	Faculty/Student Research II
ANIM7850	Thesis III
ANIM7900	Animation Career
	Preparation

## **Course Descriptions**

See "Course Offerings," pages 57-61.

## Animation (M.F.A.)

A Master of Fine Arts (M.F.A.) is the terminal degree in animation. FDU's M.F.A. in animation degree offers three concentrations (3D character animation, video games and visual effects) that center around gaining intensive hands-on skills in the chosen concentration. This major focuses on increasing practical, visual and creative skills to the highest level and provides students an opportunity to enhance their portfolios using 21st-century media and technologies. It also offers students the opportunity to participate in group projects and requires them to execute rigorous, in-depth thesis projects that demonstrate the skills learned in all of the classes in the curriculum. Upon completion, the thesis projects are exhibited in a public venue. Additionally, M.F.A. students prepare portfolios and other materials necessary for job applications and interviews. Before exiting the program, they are required to present their portfolios via mock interviews to a panel of professionals who will review, critique and provide feedback on their work.

This major accepts recent undergraduates, master's-level transfer students, working professionals who want to grow their animation skills as well as people who desire a complete career change. This major is a 60-credit degree. The fall and spring semesters are attended in-residence and the summer semesters, as well as the thesis courses, are completed online.

## Admissions

M.F.A. in animation degree applicants must digitally submit a portfolio of 10–15 creative pieces as part of the application process. Acceptance is based on the quality of the work as well as meeting all of the other academic admission requirements of the University. The review committee is looking for work that is original in concept and content and will evaluate the portfolios to determine if the applicant qualifies to enter the program based on their artistic skills. If the submitted work infringes on copyright laws or is copied from other sources the applicant will be denied admission.

## Submit Portfolio

Email robinb@fdu.edu, and we will reply with login information to our cloud to upload your portfolio pieces.

## Requirements

No standardized testing is required.
 Completed FDU Graduate

Admissions application.

3. Bachelor's degree from an accredited college or university with a minimum cumulative grade point ratio (CGPR) of 2.70 (applicants with a CGPR of less than 2.70 may be admitted on probation).

4. Official undergraduate and graduate transcripts from all colleges and universities attended.

5. Digital portfolio.

6. Two letters of recommendation (from a professor, employer or professional in the field familiar with the student's strengths and abilities).

7. Personal statement.

8. Résumé or curriculum vitae.

Upon entry, students select one of these concentrations to be their area of focus.

## **3D Character Animation Concentration**

In this concentration, students study indepth techniques that focus on every aspect of animating characters. Through the use of software techniques, acute observation skills and motion-capture technology, they master the skills needed to portray a high level of detail in animating believable characters and creatures.

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## Required Courses (36 credits)

Credits
ANIM5300
Storytelling 3
ANIM5400
Character Design 3
ANIM6100
Digital Sculpting3
ANIM6150
3D Character Texturing
ANIM6300
3D Character Animation 3
ANIM7000
Advanced 3D Character Animation3
ANIM7250
Lip-Syncing 3
ANIM7425
Motion Capture 3
ANIM7650
Thesis I
ANIM7750
Thesis II

Credits ANIM7850 Thesis III..... 3 ANIM7900 

## Major Electives (24 credits)

Eight 3-credit ANIM5000- or higher-level courses

## **Video Games Concentration**

In this concentration, students design and create animations that are intended to be utilized in video games, virtual reality and interactive media. They learn how to optimize the visual data, bearing in mind the limitations of the platform that will be delivering it, in that the device will be dynamically rendering the incorporated assets in real time.

## Required Courses (36 credits)

ANIM5400
Character Design
ANIM5500
Digital 2D Animation3
ANIM6100
Digital Sculpting3
ANIM6400
3D Animation for Games 3
ANIM6600
Game Creation 3
ANIM7500
Advanced Game Creation3
ANIM7525
Virtual Reality 3
ANIM7600
Video Game Team Project 3
ANIM7650
Thesis I 3
ANIM7750
Thesis II3
ANIM7850
Thesis III 3
ANIM7900
Animation Career Preparation3

#### Major Electives (24 credits)

Eight 3-credit ANIM5000- or higher-level courses

## **Visual Effects Concentration**

In this concentration, students animate illusions and tricks of the eye to simulate imagined events in stories and computergenerated environments. Along with enhancing and manipulating digital imagery created in a variety of 3D and 2D software programs, they also learn to

integrate and composite believable components and visual effects into liveaction footage.

### Required Courses (36 credits)

Credits
ANIM5300
Storytelling 3
ANIM5500
Digital 2D Animation 3
ANIM5600
3D Layers in After Effects <sup>®</sup>
ANIM5700
Dynamic Effects and Particle
Systems in After Effects <sup>®</sup>
ANIM5800
Compositing in After Effects <sup>®</sup> 3
ANIM6350
3D Particle Systems and Effects 3
ANIM6700
Animating Fluids 3
ANIM6805
Motion Tracking 3
ANIM7650
Thesis I 3
ANIM7750
Thesis II3
ANIM7850
Thesis III 3
ANIM7900
Animation Career Preparation3

#### Maior Electives (24 credits)

Eight 3-credit ANIM5000- or higher-level courses

### **Other Animation Electives**

ANIM5100	History of Animation and
	Special Effects
ANIM5200	History of Video Games
ANIM5750	3D Character Modeling
ANIM5850	Advanced Digital 2D
	Animation
ANIM5900	Expressions and Scripting
	in After Effects <sup>®</sup>
ANIM6900	Digital 2D Game Creation
ANIM7100	3D Character Animation –
	Weight, Overlap and
	Follow Through
ANIM7200	3D Character Animation –
	Emotion and Personality
ANIM7300	Animation with Hair/Fur
ANIM7400	Animation with Cloth
ANIM7550	Internship I
ANIM7700	Faculty/Student Research I
ANIM7775	Internship II
ANIM7805	Faculty/Student Research II

## **Course Offerings**

*Courses offered fall, spring and/or summer are* so noted. To determine availability of courses not so designated, please check with appropriate department chair.

### Animation

School of the Arts

## ANIM5100 **3** Credits

#### **History of Animation and Special** Effects

Students investigate and analyze the history of special effects and techniques while applying the understanding to modern-day visual effects and animation. Starting within-camera methods, this course covers topics that include traditional stop motion, camera-motion control, matte paintings, models and miniatures. Students also explore modern computer-generated visual effects, animation, compositing and production techniques.

#### ANIM5200 **3** Credits

#### **History of Video Games**

With the earliest video games surfacing in the 1950s, where they were primarily created as experimental projects at colleges and in tangent with big company research, this course teaches how games have developed over the years. Students learn how video gaming gained conventional popularity in the 1970s and 1980s, when arcade games, gaming consoles and home computer games became available to the general public. In this course students discover how video gaming evolved to become a widespread form of entertainment and a slice of contemporary culture throughout the world.

#### ANIM5300

#### **3** Credits Storytelling

This course teaches students how to write short animated stories that vividly create an intense experience for the reader through plot, structure, conflict, crisis points and climax. Students then convey those stories, by showing rather than telling, through producing sketched storyboards and pre-visualization animatics. They brainstorm together by arranging and rearranging the sketches in order to evoke a stronger narrative based on their classmates' input and feedback. Through this process, students consider modifications in their storylines as well as additional scenarios that may contribute to the enhancement of their ideas. Writing biography profiles that bring the story's characters to life is also covered in this course.

Fee

#### ANIM5400 3 Credits **Character Design**

Character design begins during the initial stages of the development of animated films and video games and plays a critical role in the creation and success of those pieces. In order to bring their characters to life, students in this class learn the process of designing imaginative original characters by sketching and assembling model sheets. These documents are routinely used in the industry to aid in standardizing the look, postures and personality of an animated character.

Fee

#### ANIM5500 3 Credits **Digital 2D Animation**

2D animation generates movement in a twodimensional imaginative space. Students in this course learn both the creative and technological skills necessary for animating characters and backgrounds in digital two-dimensional worlds. Creating bitmap and vector graphics using software programs are also covered in this course.

Fee

#### ANIM5600 3 Credits **3D Layers in After Effects<sup>®</sup>**

When a 3D layer is created in After Effects<sup>®</sup> it gains additional properties such as z-depth, material options, light, shadows and cameras. Students in this class expand their 3D skills to create the types of compelling animations that people are accustomed to seeing. They learn to transform 3D layers relative to the composition and customize the space to push the visuals to a higher level. Adding effects and masks to 3D layers, compositing 3D layers with 2D layers and creating and animating cameras and lights are also covered in this course. Prerequisite: ANIM1750 Motion Graphics with After Effects<sup>®</sup> or permission of program director.

#### ANIM5700 3 Credits **Dynamic Effects and Particle Systems in After Effects**®

A particle system is a technique in game physics, motion graphics and computer animation that uses a large amount of tiny graphics to mimic certain kinds of visually random events. These types of animations are very difficult to replicate with the usual rendering methods. Students in this class focus on pushing the envelope in creating realistic looking particle systems including fire, explosions, smoke, sparks, falling objects, clouds, fog, snow, rain, dust, stars and galaxies, as well as imaginary graphic effects such as glowing trails and magic spells. Prerequisite: ANIM1750 Motion Graphics with After  ${\rm Effects}^{\textcircled{\sc 0}}$  or permission of program director.

### ANIM5750 3 Credits **3D Character Modeling**

Characters are an integral part of many film and video game projects. In this course, students learn to create segmented and seamless 3D characters based on concept art of their own unique characters using a variety of polygonal modeling techniques. Emphasis on creating clean optimized meshes is taught in this course. Prerequisite: ANIM2500 3D Computer Animation or permission of program director.

#### ANIM5800 3 Credits **Compositing in After Effects<sup>®</sup>**

Compositing is the joining of visual elements from separate sources into a single image, usually to give the illusion that all those elements are parts of the same environment. This course teaches students how to replace parts of an image with other graphics in a convincing, seamless way so as to appear as if they are part of the original. Students learn to combine digital backgrounds with live-action sets and objects, as well as adding elements shot in small spaces to large virtual environments in order to enhance the reality of the visuals. Prerequisite: ANIM1750 Motion Graphics with After Effects<sup>®</sup> or permission of program director. Fee

#### ANIM5850 3 Credits

#### **Advanced Digital 2D Animation**

This course expands on the techniques learned in ANIM5500 Digital 2D Animation. The emphasis is on a more in-depth use of the vector animation toolset and the motion editor to produce engaging animations. Students learn attention to detail and study the subtleties necessary in creating polished, high-quality animated pieces. Prerequisite: ANIM5500 Digital 2D Animation.

Fee

#### ANIM5900 3 Credits

## Expressions and Scripting in After Effects<sup>®</sup>

Scripts automate monotonous tasks and perform complex calculations while expressions determine that a property equals something. This course teaches students how to use expressions to build connections between layer properties and to dynamically animate layers. They also learn to write scripts to assist in completing a series of commands and tell the software to perform a sequence of actions. Prerequisite: ANIM1750 Motion Graphics with After Effects<sup>®</sup> or permission of program director. *Fee* 

#### ANIM6100 3 Credits **Digital Sculpting**

Fee

This class teaches digital sculpting by learning how to create realistic 3D characters using industry-standard applications. The focus is on anatomy, form and proportion while learning how to add a high level of detail to polygonal meshes utilizing the software tools. Texture painting is also discussed and taught through a variety of comprehensive demonstrations, exercises and assignments. Prerequisite: ANIM 1850 3D Computer Modeling or ANIM2240 Low Poly 3D Modeling or permission of program director.

Fee

#### ANIM6150 3 Credits **3D Character Texturing**

Textures give the appearance of compound surfaces that reflect lighting as well as displaying the attributes and detail found in the materials, coloring and shading. In this class students learn about the various types of textures and finishes that can be applied to their 3D characters. They create custom texture maps and also learn how to control how they are applied to the surface of their character models using various methods such as the unwrapping and composite-mapping techniques. Prerequisite: ANIM1850 3D Computer Modeling or ANIM2240 Low Poly 3D Modeling or permission of program director. *Fee* 

#### ANIM6300 3 Credits **3D Character Animation**

Study 3D character animation techniques applied to seamless 3D characters as well as skinning and facial morphing. The focus is on the details of secondary motion, follow through and asymmetrical poses to emulate realistic body motion and facial expression. Prerequisite: ANIM2500 3D Computer Animation or permission of program director.

Fee

#### ANIM6350 3 Credits **3D Particle Systems and Effects**

Students learn to create and control various types of 3D particle systems to be able to implement special effects such as fire, explosions, fluids, dust, bubbles, disintegration, physics, collisions, etc. into their 3D scenes and animations. Prerequisite: ANIM2500 3D Computer Animation or permission of program director.

Fee

#### ANIM6400 3 Credits **3D Animation for Games**

A video game animator's job is to portray the movements and behaviors that happen in the game. This course teaches students how to animate game behaviors, sequences and cut scenes in an effective way to maximize the use of a game engine's technology within the limitations of that particular platform. They learn how it may be necessary to limit the amount of motion frames and the number of graphics displayed on the screen simultaneously. Because game animation is often a combination of a number of different kinds of motions, the students in this class learn to build and assemble libraries of reusable animations. Prerequisite: ANIM2500 3D Computer Animation or permission of program director.

Fee

#### ANIM6600 3 Credits Game Creation

Students integrate their game ideas using a cutting-edge powerful rendering engine. This course emphasizes bringing characters and objects to life inside a gaming environment. Students use the tools provided to create interactive graphic content while focusing on reducing the time needed to create visually stunning games. Assembling scenes containing original custom visuals, audio and realistic action that perform well on any platform are also covered in this course. Prerequisite: ANIM2500 3D Computer Animation or permission of program director.

### ANIM6700 3 Credits

## **Animating Fluids**

Fluid simulation is a computer-animation technique used to produce lifelike animations of liquids such as water and sludge. These kinds of simulations range in difficulty from enormously time-consuming, high-end animations for film to real-time particle systems used in modern games. This course covers creating various types of fluid effects in both 3D space as well as in 2D post. Prerequisites: ANIM1750 Motion Graphics with After Effects<sup>®</sup> and ANIM2500 3D Computer Animation or permission of program director.

Fee

#### ANIM6805 3 Credits Motion Tracking

Motion tracking is a cinematic practice of adding graphic elements to film footage with accurate size, location and movement in relation to the photographed elements in the scene. This course teaches students how to track the movement of a camera through live-action shots so that identical computer-generated camera moves can be duplicated using animation software. Students also learn how to composite animated elements into live-action shots so that they appear perfectly matched in perspective in order to look natural and seamless. Prerequisites: ANIM1750 Motion Graphics with After Effects<sup>®</sup> and ANIM2500 3D Computer Animation or permission of program director. *Fee* 

### ANIM6900 3 Credits Digital 2D Game Creation

This course teaches the game-creation process of combining 2D digital art and audio with game play, and instills how good planning plays an important role in video-game production. Students learn to understand the video-game production pipeline from the planning stage and level design, to creating sprites and graphic and audio assets, to assembling a prototype of a game.

Fee

## ANIM7000 3 Credits

ANIM7100

Advanced 3D Character Animation This course continues to develop the artistic and technical skills necessary to become a successful character animator by focusing the critical principles of animation like weight, overlapping motion and subtleties through the use of animation layering and muscle simulation. Students also learn how to better show feelings of happiness, desolation and distress by articulating the personality and emotion of their animated characters to the audience. This class builds on the character rigging and animation skills learned in the previous characteranimation course. Prerequisite: ANIM6300 3D Character Animation.

Fee

#### 3 Credits 3D Character Animation - Weight, Overlap and Follow Through

Follow through and overlapping are techniques that help to produce more realistic movement that looks as if the character imitates the laws of physics. The achievement of believable motion and how the action follows through is frequently more necessary than the move itself to making an animation appear more convincing. In this course students analyze the subtleties of motion and learn to understand how if one body part stops other parts may overlap and follow through the leading motion, gradually coming to rest. They also learn to add weight, mass and moving holds to add life to breathing characters. Prerequisite: ANIM6300 3D Character Animation.

Fee

#### ANIM7200 3 Credits

### 3D Character Animation – Emotion and Personality

Emotion and personality are the most challenging parts of character animation, because it is essential that it portrays both subtlety and scope in what is being visually communicated to the audience. In this class students learn the skills, procedures and thought processes for animating expressive faces coordinated with body language. Through the use of a variety of techniques, the focus is on evoking thought, enthusiasm and emotion in their characters' actions. Prerequisite: ANIM6300 3D Character Animation.

Fee

#### ANIM7250 3 Credits Lip-Syncing

Lip-syncing is the art of making an animated character's mouth move in unison with a prerecorded track of dialogue. To make a character appear to speak involves figuring out the timings of the speech as well as the actual animating of the mouth to match the dialogue track. This course teaches students how to make a character give the impression of speaking by use of manual timing as well as learning to use lip-syncing software. Prerequisite: ANIM6300 3D Character Animation.

Fee

## ANIM7300 3 Credits

## **Animation with Hair/Fur**

From feature films to broadcast TV, fur is now commonly seen in animations the world over. In this course students learn how to apply fur and hair to their 3D characters and experiment with the software features to give it the qualities (such as styling, flyaway, clumping and kinking) that they envision. Applying dynamics, gravity, collision detection and external forces (such as wind) to the hair are also covered in this course. Prerequisite: ANIM6300 3D Character Animation.

Fee

#### ANIM7400 3 Credits Animation with Cloth

In computer animation, cloth simulation refers to the production of soft-body objects that animate via flexible dynamics. As opposed to rigid-body animation, the shape of soft-body objects change and flex as they move. By learning specialized rendering properties that replicate real-world physics, students apply visually realistic clothing properties to their 3D characters. The focus is to enhance the realism of animated characters wearing flowing apparel. Prerequisite: ANIM6300 3D Character Animation.

Fee

#### ANIM7425 3 Credits **Motion Capture**

This course teaches the process of recording human movement, captured by an array of sensors which are placed on the body in a variety of combinations. Students learn to use software that records the actions of live actors and then map that motion data to 3D character models so that it performs the same movements as the actor. Whether animating for film or games, the techniques learned in this class allow for increased motion testing because of the ability to quickly animate digital 3D characters. Prerequisite: ANIM6300 3D Character Animation.

#### ANIM7500 3 Credits Advanced Game Creation

This course expands upon the techniques learned in ANIM6600 Game Creation. Students learn to add their own tools and to enhance performance while increasing graphic quality. This course also covers how to use the high-end customizable game-engine tools to quickly export visually exciting, fully produced games. Prerequisite: ANIM6600 Game Creation. *Fee* 

#### ANIM7525 3 Credits Virtual Reality

Virtual reality (VR) is the use of computer technology to create simulated environments where users are immersed in and able to interact with 3D worlds. In this course students learn to simulate a user's physical presence with imaginary environments in a way that allows them to interact with it through the use of stateof-the-art VR headsets. The goal is to simulate breathtaking sensory experiences by creating 3D environments and animations, as well as incorporating audio and precise motion tracking that transports users into worlds that are beyond the imagination. Prerequisite: ANIM6600 Game Creation.

#### ANIM7550 3 Credits Internship I

Students work at a company or organization between five and 20 hours per week, filling an animation, interactive media or video-game role. Internships may be paid or unpaid. Prerequisite: permission of program director.

#### ANIM7600 3 Credits Video Game Team Project

In the industry, video games are primarily produced by a team of people. The students in this class work in groups to design and create their own video games. The type of game and the role that each person fills are determined by the group with the oversight of the professor. Prerequisite: permission of program director. *Fee* 

#### ANIM7650 3 Credits **Thesis I**\*

Fee

In the M.F.A. thesis, students write, design and produce all aspects of a comprehensive project that exhibits everything learned in the graduate program to date. Thesis I lays the groundwork for the project by developing the story as well as the previsualization pieces that are typically produced when creating an animated film or game. These include writing project treatments and drafting story proposals, character development, writing and revising scripts, sketching story concepts, developing and refining detailed storyboards, audio recording, developing sound effects, assembling and editing animatics containing sketch motions and audio and the initial steps of creating graphic elements and 3D models. Each phase of the development undergoes a number of rigorous in-class critique sessions, after which improvements are implemented. Throughout the course students maintain a journal of their processes, successes, problems and challenges. Before the student can continue on to ANIM7750 Thesis II, the project must be approved by the professor and all of the requirements listed above must be completed. Prerequisite: permission of program director.

#### ANIM7700 3 Credits

#### **Faculty/Student Research I**

Members of the faculty engage in research projects with selected students with the goal of professional publication or presentation. Prerequisite: permission of program director.

#### ANIM7750 3 Credits Thesis II\*

Fee

In this course students finish building their digital 3D character models, 3D environments and digital props for their final piece. Designing, creating and mapping textures, as well as lighting and camera placement to be used in the various 3D scenes in their thesis project are completed in this class. After these elements are prepared, the students begin animating their characters and other models within the 3D scenes. As each element and animation is developed and refined, they go through a number of in-class critiques, after which improvements are implemented based on that feedback. As rough previews and refined motion tests are rendered, they are inserted into the animatic that was produced in ANIM7650 Thesis I which continues to grow and progress the digital previsualization of the piece. Throughout the course students update their

\*Online course.

journal. At the end of this course the professor evaluates each student's project. If the status of the project is approved, the student is permitted to move on to ANIM7850 Thesis III. Prerequisite: ANIM7650 Thesis I.

#### ANIM7775 3 Credits Internship II

Students work at a company or organization between five and 20 hours per week, filling an animation, interactive media or video-game role. Internships may be paid or unpaid. Prerequisite: permission of program director.

#### ANIM7805 3 Credits

#### **Faculty/Student Research II**

Members of the faculty engage in research projects with selected students with the goal of professional publication or presentation. Prerequisite: permission of program director.

#### ANIM7850

3 Credits

#### Thesis III\*

In this course students finish and refine all of the animated scenes for the project that they began in the previous thesis courses, and the process of 3D printing will also be taught. Based on in-class critiques, a number of missing pieces may need to be created in order to complete or enhance the story, or scenes may need to be revised and re-rendered. Paying close attention to the amount of time needed to complete all of the renders, the students render the final highres motion files for each scene upon its completion. As they are assembling the high-res files into the final edit, they will generate and composite post effects with the finished renders; enhance lighting; implement color correction; polish audio (narration, voice-over, sound effects); complete the postproduction; and design and animate the movie title and credits. In addition, the students write papers discussing their research and development phases, processes, successes, problems and challenges experienced throughout producing their project based on the journal that they have been maintaining. The papers also contain a final analysis of their project. At the end of the semester, students present their thesis projects to the public. In preparation for this, the students design display boards and tables to creatively exhibit their original concept sketches, storyboards, high-res computer printouts of various parts of their project and 3D prints of their characters and environments. The final animations will be projected on a large screen at the thesis event. In order to complete the course, students must submit their journal, written proposal, written script, concept sketches, storyboards, all of their previsualization pieces and their finished

\*Online course.

project, along with the written paper and the project analysis to the professor and program director for review. Prerequisite: ANIM7750 Thesis II.

#### ANIM7900 3 Credits Animation Career Preparation\*

This is the capstone course to be taken in the final semester prior to graduating from the program. Students present the animation work that they produced in all of their animation courses in the program to the class and discuss their professional interests and goals. Undergoing a series of follow-up critiques from their classmates, students learn to assemble and revise polished professional demo reels highlighting the strongest segments of each of their projects, focused on meeting their career goals. Based on additional critical feedback sessions, students design personalized logos that will be used to market themselves as professional animators. Personalized business cards, résumés, letters of introduction and follow-up letters are then written and designed, emulating the persona of their final logo. In order to present their demo reel and promote their animation skills to prospective employers, students learn how to plan (content, navigation, graphic design) and develop visually and technically impressive portfolio websites, exhibiting their own individual artistic style by following through with the branding established in the final logo design. How to implement and design social media presences and utilize other online avenues to market their skills and find work are also covered in this course. Prerequisite: permission of program director.

#### \*Online course.

## **Biology (M.S.)**

This program is offered under the auspices of the School of Natural Sciences, University College: Arts • Sciences • Professional Studies, Metropolitan Campus, Teaneck, New Jersey.

#### **Admission Requirements**

1. Graduation from an accredited college or university with a 3.00 cumulative grade point ratio and at least 24 semester hours in biology and a general program, including related scientific subjects, which would be equivalent to the biology major program offered for the Bachelor of Science degree at Fairleigh Dickinson University. Students who are deficient in some subjects, but whose records are otherwise superior, may make up their deficiencies while they are enrolled in the graduate program.

2. Undergraduate academic attainment in biology, which meets with the approval of the graduate biology faculty.

3. Submission of an official score report for the Graduate Record Examinations (GRE) General Test taken within the last five years. (The GRE requirement is waived for applicants who have completed a master's degree.)

4. Three letters of recommendation.

Applicants who have not completed all requirements for admission to the degree program may be permitted to enroll in classes for credit on a nonmatriculated or nondegree basis.

#### **Requirements for the Master of Science Degree**

1. Satisfactory completion of a minimum of 32 credits in the courses approved for a graduate major in biology. A minimum of 20 credits must be taken in biological sciences, selected from the courses described on pages 63–65. A maximum of 6 credits may be transferred from another institution with the permission of the school director if these credits are not part of an existing master's degree. In addition, courses may be taken in other colleges and campuses of the University, with the director's permission.

2. Before a student may register beyond 9 credits, he or she is required to select a biology adviser. The adviser will help the student select courses most appropriate for the student's needs and interests. Ideally, the student will select a faculty member in the area of interest most closely paralleling his or her own. This faculty member also may serve as the student's mentor.

3. Students have the option of completing their degrees with or without a research option. Students electing to do the research and thesis option must take BIOL7803, BIOL7804 Research and Thesis I, II, 2 credits each semester.

4. BIOL6900 Biology Seminar I and BIOL6901 Biology Seminar II are required 1-credit courses and must be taken in the fall and spring semesters.

## Required Biology Courses (20 credits)

(With or without research option above 2 credits)

The following 1-credit courses are both required and must be taken in the fall and spring semesters.

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			(	real	us
BIOL6900					
Biology	Seminar	I	 		.1
BIOL6901					
Biology	Seminar	II	 		.1

## *Elective Biology Courses* (18 credits)

These courses may include additional graduate biology courses, independent studies or other graduate chemistry or science courses that would fulfill a student's specific needs as approved by the graduate adviser and director for the Master of Science in biology.

Choose from the following courses.
BIOL5306
Immunology3
BIOL6240, BIOL6241
Molecular Cell Biology
(Lecture and Laboratory)4
BIOL6705
Advances in Cell Biology 3
BIOL6724
Human Genetics3
BIOL6725
Human Evolution3
BIOL6728
Bioethics
BIOL6733
Enzymology3
BIOL6740
Molecular Endocrinology3
BIOL6761
Advanced Microbiology3
BIOL6771
Behavioral Ecology3
BIOL6775
Physiological Ecology3

## **Biology**

Credits
BIOL6779
Darwinian Medicine 3
BIOL6845, BIOL6846
Molecular Biology Techniques
(Lecture and Laboratory)4
BIOL6888
Physiology of Disease 3
BIOL6892
Human Physiology3
ENVR6552
Environmental Risk Assessment
ENVR6569
Wetland and Watershed Resources3
Students have the option of completing
their degrees with or without a research
option. Students electing to do the
research and thesis option must take the 4-
credit sequence consisting of
BIOL7803
Research and Thesis I
BIOL7804
Research and Thesis II

## Elective Courses (12 credits)

Elective courses must be approved by the student's School of Natural Sciences' graduate adviser.

These courses may include additional graduate biology courses or independent studies that will fulfill a student's specific needs.

## Undergraduate Students

Senior undergraduate students with a 3.00 grade point ratio (GPR) may take graduate courses for undergraduate credit with permission of the instructor.

## Concentration in Business or Biotechnology

This curriculum is designed to enable biology graduate students to have a concentration in business or biotechnology.

## **Curriculum Requirements**

Same as for the Master of Science degree in biology (see pages 61–62), but including 12 credits of business courses or 14 credits of biotechnology courses taken as a unit concentration.

## **Elective Concentration Courses**

Elective courses (12 credits) for the concentration in business or 14 credits of biotechnology courses must be approved by the student's School of Natural Sciences graduate adviser and director of the intended concentration. These courses may include additional graduate biology courses, independent studies or other graduate courses that will fulfill a student's specific needs.

## **Concentration in Business**

### Business Concentration Elective Courses (12 credits)

Credits
ACCT5012
Financial Accounting: End-User
Applications2
ACCT6012
Managerial Accounting Applications2
ECON5012
Economic Analysis2
ECON6012
Managerial Economics2
ENTR6012
Entrepreneurship and Innovation2
LAW6012
Society, Ethics and the Legal
Environment of Business2
LAW6657
Applied Business Law3
MGMT5012
Foundations of Management 2
MGMT6012
Organizational Behavior and
Leadership2
MGMT6112
Managing Sustainability in a
Global Environment2
MGMT6621
Strategic Human Resource
Management2
MKTG5012
Marketing Principles2
MKTG6012
Strategic Marketing2
MKTG6112
Social Media Strategy2
Twelve credits may be selected from the
above listed elective courses for the business
concentration for the Master of Science in
biology degree as approved by the graduate
adviser and director.

The 5000-level business concentration elective courses are prerequisites for the 6000-level courses. Chosen course electives must be completed with a minimum grade of C.

## Concentration in Biotechnology

## Biotechnology Concentration Courses (16 credits)

	Credits
BIOL5306	
Immunology	3
BIOL6720	
Molecular Biotechnology	3
BIOL6743, BIOL6744	
Topics in Bioinformatics	
(Lecture and Laboratory)	3
BIOL6840	
Cell Culture	3
BIOL6845, BIOL6846	
Molecular Biology Techniques	
(Lecture and Laboratory)	4

### Biotechnology Concentration Electives (14 credits)

Choose from the following free elective
courses.
BIOL6240, BIOL6241
Molecular Cell Biology
(Lecture and Laboratory)4
BIOL6632
Selected Studies in Biology
BIOL6661
Lab: Advanced Microbiology2
BIOL6705
Advances in Cell Biology3
BIOL6719
Developmental Genetics
BIOL6724
Human Genetics
BIOL6728
Bioethics
BIOL6733
Enzymology3
BIOL6745
Endocrinology 3
BIOL6747, BIOL6748
Biotechniques (Lecture and
Laboratory)
BIOL6756
Dermal Pharmacology and
Immunology
BIOL6758
Advances in Pharmacology3
BIOL6760
Virology
BIOL6761
Advanced Microbiology 3
BIOL6772
Ecotoxicology3
Students have the option of completing
their degrees with or without a research
option. Students electing to do the
research and thesis option must take the 4-
credit sequence consisting of

Credits	
BIOL7803	
Research and Thesis I2	
BIOL7804	
Research and Thesis II2	

## **Elective Concentration Courses**

Elective courses (12 credits) must be approved by the student's School of Natural Sciences graduate adviser and director of the intended concentration.

These courses may include additional graduate biology courses, independent studies or other graduate courses that will fulfill a student's specific needs.

### **For Information**

For more information contact Dr. Marion McClary, professor of biological sciences and co-director, School of Natural Sciences, at (201) 692-2606 or mcclary@fdu.edu.

### **Course Offerings**

Courses offered fall, spring and/or summer are so noted. To determine availability of courses not so designated, please check with appropriate school director.

## **Biological Sciences**

School of Natural Sciences

#### BIOL5306 3 Credits Immunology

Study of the structure and function of the molecular and cellular components of the immune system, genetic bases of immune responses, normal and pathological responses, tumor immunology, transplantation and immunological techniques. Open to qualified undergraduates with permission of instructor or adviser.

#### BIOL6240 4 Credits Molecular Cell Biology

Modern cell biology investigates the central concept for cellular functioning — DNA to RNA to protein — by integrating biomolecules, biotechnology, regulating mechanisms, signals and signaling pathways and aberrations that result in pathology, such as cancer. Corequisite: BIOL6241 Laboratory: Molecular Cell Biology.

#### BIOL6241 0 Credits

#### Laboratory: Molecular Cell Biology

The laboratory encompasses sequential experiments using tissue culture: cell toxicity; apoptosis; oxidative stress; immunocytochemistry; ELISA (enzyme-linked immunosorbent assay), SiRNA (small interfering RNA) or promoter-reporter transfection, mRNA isolation, polymerase chain reaction, gel electrophoresis; Northern blotting. Corequisite: BIOL6240 Molecular Cell Biology.

### BIOL6632

3 Credits

**Selected Studies in Biology** Recent developments in special fields of biology.

## BIOL6661 2 Credits

#### Lab: Advanced Microbiology

Experiments illustrating topics discussed in BIOL6761 Advanced Microbiology. Corequisite: BIOL6761 Advanced Microbiology.

#### BIOL6700 3 Credits

#### **Advanced Biotechnology**

Molecular biotechnology encompasses the principles and applications of recombinant DNA technology in the production of commercial products such as ascorbate, antibodies, vaccines, growth factors, cytokines, nucleic acids, drugs, crops, livestocks; the diagnosis of genetic diseases or infections with nucleic acids, immunological or biological probes/systems that are mostly PCR based; the analysis of information through bioinformatics, genomics and proteomics; and protein or nucleic-acid therapy with agents such as enzymes, aptamers or interfering nucleic acids.

#### BIOL6705 3 Credits

## Advances in Cell Biology

Molecular organization of cells. Internal membranes and synthesis of macromolecules. The cell nucleus and cell division. Control of cell cycle. Cytoskeleton and cell-cell adhesion. The extra cellular matrix and signal transduction. *Fall, Spring* 

#### BIOL6719 3 Credits Developmental Genetics

#### This course introduces methods of current genetic and genomic analysis to understand the molecular mechanisms of development and regulation of genes in embryonic development. Lectures are based on developmental biology textbook and scientific literature on model organisms.

#### BIOL6720 3 Credits

## **Molecular Biotechnology**

Purification of DNA. Manipulation of prokaryotic and eukaryotic DNA. Vectors, cloning, gene expression and in vitro mutagenesis. Production of proteins from cloned genes. Applications of recombinant DNA technology in basic research, medicine, agriculture and industry. *Spring* 

### BIOL6724 3 Credits

## Human Genetics

Structure and function of human genes and chromosomes. Chromosome mapping and the human genome project. Numerical and structural chromosomal abnormalities, metabolic defects, genetic aspects of cancer and disorders of the immune system, gene therapy, genetic counseling and ethical issues. *Fall* 

#### BIOL6725 3 Credits Human Evolution

Evolutionary biology of human species. History of hominid lineage and how evolutionary pressures explain physical and behavioral adaptations to past and present environments. Modern human genetic diversity and its relevance to biomedical research. Prior course work in evolution is required. *Spring* 

### **BIOL6728**

## 3 Credits

Bioethics

Studies relating implications of biotechnological and biomedical innovations, individual perception of issues and the universal policies influencing the state of living species. *Summer* 

#### BIOL6733

3 Credits

## Enzymology

Enzyme sources and purification, structure, kinetics and mechanisms. Sequencing and characterization, biocatalysis, control of enzyme activity, clinical aspects of enzymology and applications in biotechnology. Use of protein data banks and molecular modeling. *Spring* 

#### BIOL6740 3 Credits

### Molecular Endocrinology

The course comprises of the biochemistry and molecular biology of hormone action: synthesis, secretion, release, regulation, metabolism, receptors, signal transduction, gene expression and the cellular effects of insulin, glucagon, catecholamines, glucocorticoids, growth hormone, growth factors, thyroxine, parathyroid hormone, calcitonin, gonadotropins, ovarian steroids, androgens, aldosterone, vasopression; and hormone imbalance and effects in aging, malignancy and disease.

#### BIOL6743

#### 3 Credits **Topics in Bioinformatics**

Current biological research using mega amounts of data provided by microarrays, crystallographic, sequencing and other techniques. Topics explore such data and some

## Biology

of the analysis methods available online focusing primarily on the DNA chips used for transcriptional profiling. Corequisite: BIOL6744 Lab: Topics in Bioinformatics.

## BIOL6744 0 Credits

## Lab: Topics in Bioinformatics

Experiments illustrating the topics discussed in BIOL6743 Topics in Bioinformatics. Corequisite: BIOL6743 Topics in Bioinformatics.

## BIOL6745

## 3 Credits

## Endocrinology

Physiology of hormones from endocrine and non-endocrine cells. Molecular structure, homology, biosynthesis, secretion, transport and metabolism of hormones. Mechanism of hormone action and receptor specificity. Pathophysiology of hormones. Techniques of measurement of hormone, production of hormone analogs. *Fall* 

#### BIOL6747 3 Credits Biotechniques

Current biotechnology techniques, including DNA cloning, gene regulation and protein expression/activity, using in-vitro models such as prokaryotic and eukaryotic cells or tissueequivalents. Corequisite: BIOL6748 Lab: Biotechniques.

#### BIOL6748 0 Credits Lab: Biotechniques

Experiments illustrating the topics discussed in BIOL6747 Biotechniques. Corequisite: BIOL6747 Biotechniques.

#### BIOL6756 3 Credits Dermal Pharmacology and Immunology

Skin structure, function and immunology and their impact on the application and efficacy of cosmetic products. Pharmacological principles such as pharmacokinetics and pharmacodynamics are reviewed. The importance of skin safety testing. *Spring* 

#### BIOL6758 3 Credits Advances in Pharmacology

Development and approval of new medications in the United States. Current medications used in the management of pathophysiological conditions involving the cardiovascular, respiratory, gastrointestinal, endocrine and nervous systems. Antiviral and antibacterial agents. Immunotherapy. Orphan drugs.

#### BIOL6760 3 Credits Virology

Virus morphology and chemical composition, transmission and dynamics of infection, virus entry, virus assembly and virus vectors. Recent discoveries in molecular biology, pathogenesis and medical aspects of viruses.

#### BIOL6761 3 Credits Advanced Microbiology

Organization of physiological processes in microorganisms, including structure, energyyielding mechanisms, macromolecular biosynthesis, growth and regulation. Prerequisite: undergraduate organic chemistry and microbiology. Spring

#### BIOL6771 3 Credits Behavioral Ecology

Behavioral ecology, conservative biology, mate choice, dispersal, reserve design, genetic diversity, subsistence harvesting and hunting. Note: FDU NetID (formerly Webmail) account required. Fully online course. *Summer* 

### BIOL6772 3 Credits Ecotoxicology

Principles and methods of biological testing for toxicity of effluents and receiving waters. Principles of cost-efficient compliance with toxicity limits placed on discharges. *Fall* 

#### BIOL6775 3 Credits Physiological Ecology

Discussion of current topics addressing physiological adjustment of animals to the physical and chemical environment, tolerance of temperature, osmotic conditions, partial pressures of oxygen and starvation. Lecture and seminar. Note: FDU NetID (formerly Webmail) account required. Fully online course. *Summer* 

#### BIOL6776 4 Credits Advances in Ecology

Interrelationships of biotic and abiotic components of the environment. Ecological energetics, population dynamics, distribution patterns, environmental imbalances and community succession will be studied. Corequisite: BIOL6777 Lab: Advances in Ecology. *Fall* 

## BIOL6777 0 Credits

## Lab: Advances in Ecology

Experiments illustrating the topics discussed in BIOL6776 Advances in Ecology. Corequisite: BIOL6776 Advances in Ecology. *Fall* 

#### BIOL6779 3 Credits

## **Darwinian Medicine**

Application of Darwinian reasoning to medical research and clinical practice. Intrinsic biological aging, pathology due to defense mechanisms, acute and stealth infection, novel environments, genetic diversity, design compromises and evolutionary legacies. Prior course work in evolution is required. *Spring* 

#### BIOL6840 3 Credits **Cell Culture**

Biology, characteristics and requirements of cells in culture. Aseptic cell culture methods and applications of the techniques to specific types of cell lines. Evaluation of cultured cell function. Scale-up of cell cultures. Cell-based assays and drug discovery. Applications in recombinant DNA technology. Fall Fee

### BIOL6845

4 Credits

## 3 Contact hours

### Molecular Biology Techniques

Classic and current biotechniques to include handling numbers, weighing and solution preparation, experimental design, spectrophotometry, chromatography, enzyme kinetics/inhibition, assays for reactive organ species, cell culture, agarose and polyacrylamide gel electrophoresis, Southern and Western blotting, cloning, eukaryotic cells, polymerase chain reaction (PCR) and real time. Corequisite: BIOL6846 Lab: Molecular Biology Techniques.

## BIOL6846

#### 0 Credits Lab: Molecular Biology Techniques

Experiments illustrate the topics discussed in BIOL6845 Molecular Biology Techniques. Corequisite: BIOL6845 Molecular Biology Techniques.

#### BIOL6888 3 Credits **Physiology of Disease**

The study of the physiological and biological manifestations of disease. Provides a basis as to how alterations in structure and function disrupt the human body as a whole. Prerequisites: BIOL3357 Human Structure and Function II and BIOL3358 Laboratory: Human Structure and Function II. Note: FDU NetID (formerly Webmail) account required. Fully online course.

#### BIOL6890 3 Credits Neuroscience

The organization and function of the human nervous system including the molecular, cellular systems, behavioral and cognitive levels of analysis. Note: FDU NetID (formerly Webmail) account required. Fully online course.

#### BIOL6891 3 Credits Histology

The structure and functional correlations of body tissues, cells, organs and organ systems. Note: FDU NetID (formerly Webmail) account required. Fully online course.

#### BIOL6892 3 Credits Human Physiology

Molecular, cellular and systems physiology of the nervous, muscular, cardiovascular, respiratory, urinary, immune, endocrine and reproductive systems. Note: FDU NetID (formerly Webmail) account required. Fully online course.

#### BIOL6900, BIOL6901 1 Credit Each Semester **Biology Seminar I, II**

A series of lectures by invited speakers on topics of current interest. Exposure of students to research developments and techniques in selected areas of specialization.

#### BIOL7803, BIOL7804 2 Credits Each Semester **Research and Thesis I, II**

The student is required to write and then defend before a faculty committee a thesis based on laboratory research and prepared under the supervision of a faculty member. *Fall, Spring Fee* 

## BIOL7810 3 Credits

## **Selected Studies in Biology**

As student interest requires, courses in highly specialized topics may be offered. *Fall, Wintersession, Spring* 

#### BIOL8000 1 Credit Curricular Practical Training

A Curricular Practical Training (CPT) requirement for work-experience course/independent study registration in most academic programs at FDU. The training experience is integral to the course and the detailed course objectives will be on a separate independent study proposal form. The student's work or training experience will be: part-time (20 hours or less per week) or full-time (more than 20 hours per week). A non-letter grade of P for Pass or NC for No Credit will be applied to degree audit as this course will be excess credit and not counted toward a degree requirement.

## ENVR6552 3 Credits

## Environmental Risk Assessment

This course describes the scientific basis for the steps in the risk-assessment processes and discusses current guidelines and procedures for perfoming them.

#### ENVR6569 3 Credits

## Wetland and Watershed Resources

Includes the study of natural characteristics of inland (freshwater) and coastal (tidal) wetland ecosystems. It also provides an overview of basic ecological principles related to watershed planning and describes the benefits of watershed management. It also examines wetland and watershed functions and values with applications to environmental impact assessment, wetlands and watershed planning, management and restroration. Course lectures and discussions will be supplemented by short, on-campus and local, off-campus field trips.

## **Business**

## **Programs**

Master of Business Administration (M.B.A.) (Specializations)

> Accounting See page 68.

Business Administration See page 68.

**Finance** See page 68.

International Business See page 69.

Management See page 69.

*Marketing* See page 69.

Pharmaceutical Management Studies See page 70.

Post-M.B.A. Graduate Certificate Program See page 70.

#### Master of Business Administration (M.B.A.) — Saturday M.B.A.

See page 72.

Master of Business Administration (M.B.A.) — Management for Executives See page 73. General Management

Specialization See page 73. Health Sector Management Specialization See page 74.

Master of Science (M.S.) — Accounting

See page 74.

Master of Science (M.S.) — Digital Marketing See page 75.

Master of Science (M.S.) — Supply Chain Management See page 76.

Master of Science (M.S.) — Taxation

See page 77.

The Silberman College of Business is accredited by AACSB International - The Association to Advance Collegiate Schools of Business. AACSB is the premier business school accrediting body.

The College of Business offers programs leading to the degrees of Master of Business Administration (M.B.A.) and Master of Science in taxation (M.S.), Master of Science in accounting (M.S.), Master of Science (M.S.) in digital marketing and Master of Science in supply chain management (M.S.). Courses for the M.B.A. and M.S. degrees are scheduled during the evening and on Saturdays. Some courses are offered during the day. Courses for the M.S. in digital marketing are fully online. Programs may be pursued either on a full-time basis or part-time basis.

## **Admission Requirements**

All students who wish to enroll for graduate course work within the Silberman College of Business must apply for admission as matriculated students. All students must meet the requirements for graduate status or receive special permission from the M.B.A. Office. Check the specific requirements for the program in which you are interested.

## **Academic Regulations**

In addition to the academic regulations found elsewhere in this bulletin, the following regulations apply to all College of Business students.

## 1. Cumulative Grade Point Ratio

A cumulative grade point ratio of 3.00 is required for graduation from the graduate programs of the College of Business.

## 2. Graduation Requirements

To be eligible for graduation, students must be matriculated, must have completed a minimum of 30 credits in the M.B.A. and a minimum of 24 credits in the M.S. program, must have completed all required courses in the program and must have a cumulative grade point ratio of 3.00 or better. Core courses cannot be waived.

## 3. Incompletes

The grade of I must be removed by the third week of the next full semester (excluding summer sessions). An Incomplete that is not removed within this period is automatically changed to an F. In case of well-documented extenuating circumstances, an instructor and a student may jointly petition the dean for additional time in which to complete the course work. Such petitions must be submitted within the same period. The grade of I cannot be removed by registering for the course at Fairleigh Dickinson University or by taking its equivalent elsewhere.

## 4. Matriculation Status

At least 80 percent of each student's nonwaivable credits must be completed at Fairleigh Dickinson University.

## 5. Residency Requirement

Matriculated students must maintain residency with the University during the period of time required to complete the course work required for the graduate degree. Residence means that students must be enrolled in the fall and spring semesters. Summers are not counted in the residency requirement. In addition, a total of 30 credits must be completed in residency. A student who fails to enroll in a fall or spring semester without filing an approved leave of absence is considered to have broken residency and must apply for readmission. In this case, all rules and regulations effective at the time that the student applies for readmission are applicable to the student. M.B.A./M.S. students are permitted two one-semester leaves of absence. The total time permitted to complete the degree is seven calendar years, excluding leaves of absence. Any extension may be granted only under extenuating circumstances and only by the M.B.A./M.S. program director.

## 6. Second M.B.A.

Award of a second M.B.A. is not permitted; however, students with an M.B.A. degree may receive certification in a second specialization upon completion of required and elected credits for that specialization. Students seeking a second area of specialization should consult with the M.B.A. program director. A 3.00 grade point ratio is required. Contact the respective M.B.A. advisers at the Metropolitan Campus, (201) 692-2424; and at the Florham Campus, (973) 443-8459.

## 7. Scholarly Requirements

Grades for graduate work may be found in the academic regulations section in the front of this bulletin.

An average of 3.00 or better is required for graduation. A graduate student who receives a grade of F is required to present cause for consideration by the M.B.A. program director (in the case of non-M.B.A. students the program's director) as to why continued studies should be permitted. Documentation must be presented and approved before commencement of the next semester or the student will not be allowed to continue the graduate program.

A graduate student receiving the grade of F in a required course must repeat the course and achieve at least a grade of B. (Such a retake does not expunge the grade of F and it remains part of the student's records.) Should this level of performance not be attained, the student will be denied further registration.

## 8. Probation, Suspension and Dismissal

A student who completes 9 or more credits with a cumulative grade point ratio (CGPR) of less than 3.00 will be placed on academic probation. If at the completion of an additional 9 credits the CGPR is still below 3.00, the student will be subject to suspension or dismissal. This decision will be based on the student's overall academic performance and the student's likelihood of obtaining the minimum CGPR of 3.00 needed for graduation. Subsequently, if the student is allowed to continue his or her studies, the student's records will be reviewed each semester in which the CGPR remains below 3.00. The student will either be dismissed or be subject to credit limitations and minimum grade point requirements in order to be permitted to continue his or her studies.

*Please Note:* A student who is *suspended* has a right to apply for readmission after the lapse of one 15-week semester, not including the summer sessions. To be readmitted, a student must submit evidence to the M.B.A. program director of the student's likelihood of successfully completing all remaining degree requirements.

A student who has been *dismissed* may not apply for readmission. The student is dropped from the University (full-time and part-time programs).

## 9. Transfer Credit

A maximum of 6 nonwaivable credits of graduate course work required for a degree may be approved for transfer from another AACSB-accredited college or university under the following conditions: the course work must be approved as part of the student's program of studies; it must not have been applied to the completion of the requirements for another degree; it must have been taken at the graduate level: it must have been taken within the past five years; and the student must have received a grade of B or better. Approval of transfer credit will be made by petition to the department chairperson for the course in question. A transcript of the course work must be on file before the petition can be considered.

## Master of **Business Administration** (M.B.A.)

## **General Programs**

Fairleigh Dickinson University's Silberman College of Business offers an M.B.A. program accredited by both the AACSB International - Association to Advance Collegiate Schools of Business and the Middle States Commission on Higher Education.\* A graduate student in the Silberman College of Business currently earns an M.B.A. by completing 42 credits of course work.

## **Admission Requirements**

Complete credentials for the evaluation of applicants for the M.B.A. degree program include the following:

1. A four-year bachelor's degree from an accredited or government-recognized college or university.

2. Official transcripts from all colleges and universities in which undergraduate or graduate course work was completed.

3. An official score report for the Graduate Management Admission Test (GMAT)/Graduate Record Examinations (GRE). FDU undergraduates with exemplary grade point ratios are eligible to waive the GMAT/GRE requirement. Contact the Office of Graduate Admissions for information.

4. An updated résumé.

5. A minimum score of 550 (paperbased) or 213 (computer-based) or 79 (internet-based) on the Test of English as a Foreign Language (TOEFL) is required for all applicants whose native language is not English.

6. International Student Proof of Financial Responsibility (for international students only).

## **Requirements for the Master** of Business Administration Dearee

The M.B.A. program consists of 42 credits. In addition to the requirements set forth by each specialization (10 of 42 credits) and the capstone course (2 of 42 credits), all

students must complete a set of foundation courses (12 credits) and the M.B.A. core module (18 credits) that includes the following courses:

## Foundation Courses (12 credits)

The foundation includes six courses. All classes are two credits.

	Credits
ACCT5012	
Financial Accounting: End-User	
Applications	2
DSCI5012	
Statistical Data Analysis	2
ECON5012	
Economic Analysis	2
FIN5012	
Principles of Finance	2
MGMT5012	
Foundations of Management	2
MKTG5012	
Marketing Principles	2

For each foundation course, the Silberman College of Business grants waiver credit. The waiver policy that governs each course is established by the department responsible for that course. Requests for waivers must be submitted to the appropriate department and approvals received before the end of the student's first semester in the program. For further information visit the Waiver Credit Policy Procedures section of the M.B.A. Advising website.

Each waiver of a foundation course reduces the number of required credits by the amount indicated.

## M.B.A. Core (18 credits)

The M.B.A. core consists of a total of 18 credits of required courses. These courses cannot be waived; however, a student will be eligible to transfer a maximum of 6 credits provided these credits have been earned in an M.B.A. program at another AACSB-accredited institution under the conditions listed in the Transfer Credit section. The M.B.A. core includes: ACCT6012

Managerial Accounting Applications.....2 DSCI6012

- Operations Management......2 ECON6012 Managerial Economics......2 ENTR6012 Entrepreneurship and Innovation.....2
- FIN6012 Corporate Finance.....2

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LAW6012
Society, Ethics and the Legal
Environment of Business2
MGMT6012
Organizational Behavior and
Leadership2
MIS6012
Information Systems for Managers2
MKTG6012
Strategic Marketing 2

## Capstone (2 credits)

All M.B.A. students must, within the final 8 credits of course work, complete either: ENTR7012 Entrepreneurship Capstone or **MGMT7012** 

Global Business Capstone.....2

## International Student Requirement

In certain circumstances it may be necessary for students to further develop their proficiency in English to ensure academic success. In these cases, students are required to take EPS5109 English for Occupational Purposes and EPS5119 English for Academic Purposes.

NOTE: Although EPS is a 0-credit course, students may elect to apply 3 developmental credits (using EPS) to their first semester plus 6 credits of graduate course work to complete full-time student schedule requirements.

## Graduation

To qualify for graduation, the student must, within seven years from the entry date, complete the prescribed curriculum and do so with no lower than a 3.00 cumulative grade point ratio. Only grades for graduate courses offered by the Silberman College of Business at Fairleigh Dickinson University or taken off-campus with prior authorization are used to compute the cumulative grade point ratio.

Students in the M.B.A. program have the option of earning a specialization in accounting, finance, international business, management, marketing, pharmaceutical management or through business administration electives. Details about the requirements for each specialization follow.

## Accounting (M.B.A.)

Due to the variations in the requirements specified by each state to sit for the CPA Exam and licensing, students are advised to refer to www.nasba.org.

This specialization is offered under the auspices of the department of accounting, taxation and law, Silberman College of Business, Florham Campus, Madison, New Jersey, and Metropolitan Campus, Teaneck, New Jersey.

## **Specialization Requirements**

Specialization requirements consist of a total of 12 credits of accounting courses.

In addition to the College's requirements for the Master of Business Administration degree (see page 67), students must complete the specialization requirements specific to their majors.

## Required Courses (6 credits)

	Credits
ACCT6630	
Intermediate Accounting I	
ACCT6635	
Intermediate Accounting II	3

## Elective (6 credits)

Choose from the following:
ACCT6605
Federal Tax I: Individual3
ACCT6617
Cost: Measurement, Planning
and Control*3
ACCT6618
Auditing Concepts and Methods3
ACCT6640
Advanced Financial Accounting3
ACCT6800
Graduate Independent Study1-3

For up-to-date course information go to http://view2.fdu.edu/academics/silberman-college/graduate/mba/mba-accounting/.

## **Course Descriptions**

See "Course Offerings," pages 78–90.

## Business Administration (M.B.A.)

M.B.A. students who do not wish to specialize in a specific discipline may customize their education by choosing any five graduate courses offered by the Silberman College of Business that meet their specific career goals and interests.

All students interested in the business administration M.B.A. degree must still complete the M.B.A. foundation courses (unless they receive waivers in any of these courses), the M.B.A. Core courses, as well as the capstone requirement (either ENTR7012 Entrepreneurship Capstone or MGMT7012 Global Business Capstone). However, students may fulfill their elective requirements with a mix of five graduate courses offered by any of the five departments within Silberman College of Business, Florham Campus, Madison, New Jersey, and Metropolitan Campus, Teaneck, New Jersey (subject to course availability).

For current course information visit http://view2.fdu.edu/academics/silbermancollege/graduate/mba/businessadministration-mba/.

## **Course Descriptions**

See "Course Offerings," pages 78-90.

## Finance (M.B.A.)

This specialization is offered under the auspices of the department of economics, finance and international business, Silberman College of Business, Florham Campus, Madison, New Jersey, and Metropolitan Campus, Teaneck, New Jersey.

## **Specialization Requirements**

In addition to the College's requirements for the Master of Business Administration degree (see page 67), students must complete the specialization requirements listed below.

## Required Courses (6 credits)

Credits
FIN6701
Strategic Financial Decisions2
FIN6721
Financial Markets and Investments2
FIN6731
Portfolio Management2

## Electives\* (4 credits)

Choose two from the following:
FIN6742
Global Finance2
FIN6751
Mergers and Acquisitions2
FIN6800
Graduate Independent Study1-2
FIN6801
Seminar in Corporate Finance2

For current course information visit http://view2.fdu.edu/academics/silbermancollege/graduate/mba/mba-finance/.

## **Course Descriptions**

See "Course Offerings," pages 78–90.

\*Students take ACCT6617 Cost: Measurement, Planning and Control in lieu of ACCT6012 Managerial Accounting Applications within the MBA Core.

# **Business • International Business • Management • Marketing**

# International Business (M.B.A.)

Rewarding careers for international business specialists exist in global corporate operations, international financial services, national and international government agencies, travel and leisure and transportation and banking, just to name a few.

The M.B.A. with a specialization in international business is offered under the auspices of the department of economics, finance and international business, Silberman College of Business, at the Metropolitan Campus, Teaneck, New Jersey.

## **Specialization Requirements**

In addition to the College's requirements for the Master of Business Administration degree, general programs (see page 67), students must complete the specialization requirements listed below.

# Required Courses (4 credits)

IBUS6012	cieuns
10030012	
International Business Concepts	2
IBUS6020	
Economics of International Trade.	2

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# Electives (6 credits)

Choose three from the following:
IBUS6072
International Management2
IBUS6706
International Marketing2
IBUS6742
Global Finance2
IBUS6800
Graduate Independent Study1–2

For current course information visit http://view2.fdu.edu/academics/silbermancollege/graduate/mba/mba-internationalbusiness/.

## **Course Descriptions**

See "Course Offerings," pages 78–90.

# Management (M.B.A.)

The M.B.A. with a specialization in management program is for professionals seeking to improve their skills in managing people and organizational systems. It is designed to build skills in leadership, team building and motivation of the workforce. The program builds knowledge of how business strategy affects organizational interaction with the marketplace and how to structure the workplace to enhance organizational growth and productivity.

This program is offered under the auspices of the department of management and entrepreneurship, Silberman College of Business, at the Florham Campus, Madison, New Jersey, and Metropolitan Campus, Teaneck, New Jersey.

## **Specialization Requirements**

In addition to the College's requirements for a Master of Business Administration degree, general programs (see page 67), students must complete the specialization requirements listed below.

# Required Courses (8 credits)

Credits
MGMT6112
Managing Sustainability in a
Global Environment2
MGMT6621
Strategic Human Resource
Management2
MGMT6633
Leadership and Change
Management2
MGMT6640
Leadership Development Project2

# Elective (2 credits)

Choose one from the following MGMT6625 Managing a Healthy Workforce......2 MGMT6700 Negotiation and Conflict Management...2 MGMT6800 Graduate Independent Study.......1–2

For current course information visit http://view2.fdu.edu/academics/silbermancollege/graduate/mba/mba-management/.

## **Course Descriptions**

See "Course Offerings," pages 78-90.

# Marketing (M.B.A.)

The marketing specialization curriculum prepares students with a solid foundation in the fundamentals of marketing strategy, consumer behavior and marketing research. Students build on this foundation by selecting from a number of marketing electives in specialized areas. The selection of electives is typically driven by the career goals of the students and include areas such as advertising, sales and promotions.

This specialization is offered under the auspices of the department of marketing, information systems and decision sciences, Silberman College of Business, at the Florham Campus, Madison, New Jersey, and Metropolitan Campus, Teaneck, New Jersey.

# **Specialization Requirements**

In addition to the College's requirements for the Master of Business Administration degree (see page 67), students must complete the specialization requirements listed below.

Specialization courses are offered online only.

# Required Courses (4 credits)

	Credits
MKTG6602	
Marketing	Research2
MKTG6603	
Consumer	Behavior2

# Electives (6 credits)

Choose three courses
MKTG6111
Digital Marketing Strategies2
MKTG6112
Social Media Strategy2
MKTG6113
Mobile Marketing Strategies2
MKTG6605
Marketing Communications2
MKTG6800
Graduate Independent Study1-2

For current course information visit http://view2.fdu.edu/academics/silbermancollege/graduate/mba/mba-marketing/.

## **Course Descriptions**

See "Course Offerings," pages 78–90.

1.

# Business • Pharmaceutical Management Studies • Post-M.B.A. Graduate Certificate Program

# Pharmaceutical Management Studies (M.B.A.)

The M.B.A. with a specialization in pharmaceutical management studies program has two objectives: 1) to prepare employees for greater management responsibilities in a challenging world and 2) to enhance the competitive position of pharmaceutical companies in global markets.

The program achieves these objectives by providing talented, motivated students with a thorough grounding in the principles of business management, coupled with training in subjects and skills of specific value to those working in these technologyintensive and heavily regulated pharmaceutical companies.

The program is sufficiently flexible to accommodate students of varied educational and industrial backgrounds. Past and present participants include men and women whose positions run the gamut from entry level to the executive suite, from production, research, finance and accounting to sales and marketing. Their educational backgrounds vary from undergraduate majors in liberal arts, science, engineering and business to earned master's and doctoral degrees.

This specialization is offered under the auspices of the department of management and entrepreneurship, Silberman College of Business, at the Florham Campus, Madison, New Jersey.

## **Specialization Requirements**

In addition to the College's requirements for the Master of Business Administration degree (see page 67), students must complete the specialization requirements listed below.

## Required Courses (6 credits)

Credits

## Electives (4 credits)

Cicuits
Choose two courses
PHAR6615
Pharmaceutical Marketing and
Product Development2
PHAR6640
Management of Research and
Technology in the Pharmaceutical
Industry2
PHAR6650
Management of Production,
Purchasing and Quality
Control in the Pharmaceutical
Industry 2
PHAR6680
Structure, Regulation and
Strategy of the Pharmaceutical
Industry 2
PHAR6800
Graduate Independent Study1-2

For current course information visit http://view2.fdu.edu/academics/silbermancollege/graduate/mba/mba-pharmaceuticalmanagement/.

## **Course Descriptions**

See "Course Offerings," pages 78-90.

# Post-M.B.A. Graduate Certificate Program

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The Post-M.B.A. Graduate Certificate Program was developed to meet the needs of M.B.A. graduates who, after receiving their degrees, find themselves working in environments that require a continuation of their education. Through promotion, employment with new companies, relocation or otherwise, M.B.A. degree holders often find themselves working in areas for which they were not originally trained. Other graduates realize the necessity of keeping current with a business environment that is rapidly changing. Courses are offered both in the evenings and on Saturdays.

## **Admission Requirements**

To qualify for the Post-M.B.A. Graduate Certificate Program, applicants must have received an M.B.A. or a specialized master's degree in a business-related field from an accredited college or university.

Students are not required to submit Graduate Management Admission Test (GMAT) scores.

## Requirements for the Post-M.B.A. Certificate

Students may choose courses from one of the following M.B.A. study areas: Accounting Finance International Business Management Marketing Pharmaceutical Management To qualify for the certificate, students must have at least a 3.00 cumulative grade

## Accounting Graduate Certificate

point ratio.

For a Certificate in Accounting, students must complete the following five courses (13 credits):

	Credits
ACCT5012	
Financial Accounting: End-User	
Applications*	2
ACCT6012	
Managerial Accounting Application	ons 2

\*Can be completed as part of the M.B.A. curriculum.

# **Business • Post-M.B.A. Graduate Certificate Program**

Credits
ACCT6630
Intermediate Accounting I 3
ACCT6635
Intermediate Accounting II3
ACCT6640
Advanced Financial Accounting3
In addition students have to complete any two courses (6 credits) from the following list:
ACCT6605
Federal Tax I: Individual
ACCT6606
Federal Tax II: Business Entities
ACCT6617
Cost: Measurement, Planning and
Control 3
ACCT6618
Auditing Concepts and Methods3

## Finance Graduate Certificate

For a Certificate in Finance, students must
complete the following six courses (12
credits):
ECON6012
Managerial Economics*2
FIN5012
Principles of Finance*2
FIN6012
Corporate Finance*2
FIN6701
Strategic Financial Decisions2
FIN6721
Financial Markets and Investments2
FIN6731
Portfolio Management2
In addition students will be required to
complete any three courses (6 credits) from
the following list:
FIN6112
Finance Decisions for
Sustainable Enterprise2
FIN6742
Global Finance2
FIN6751
Mergers and Acquisitions2
FIN6800
Graduate Independent Study2
FIN6801
Seminar in Corporate Finance2

## International Business Graduate Certificate (at Metropolitan Campus only)

For a Certificate in International Business,

students must complete the following five courses (10 credits): Credits ECON5012 Economic Analysis\*.....2 ECON6012 Managerial Economics\*......2 IBUS6012 International Business Concepts......2 **IBUS6020** Economics of International Trade......2 **MKTG5012** Marketing Principles\*.....2 In addition students have to complete any four courses (8 credits) from the following list:

IBUS6072	
International Management	2
IBUS6706	
International Marketing	2
IBUS6742	
Global Finance	2
IBUS6800	
Graduate Independent Study	. 2

## Management Graduate Certificate

For a Certificate in Management, students must complete the following seven courses (14 credits): MGMT5012 Foundations of Management\*.....2 **MGMT6012** Organizational Behavior and Leadership\*.....2 **MGMT6112** Managing Sustainabilty in a Global Environment.....2 MGMT6621 Strategic Human Resource Management.....2 MGMT6633 Leadership and Change Management.... 2 **MGMT6640** Leadership Development Project......2 **MGMT7012** Global Business Capstone\*.....2 In addition students have to complete any two courses (4 credits) from the following list:

### Credits

## MGMT6625

## Marketing Graduate Certificate

<b>y y y y y y y y y y</b>
For a Certificate in Marketing, students
must complete the following five courses
(10 credits):
Marketing specialization courses are
offered online only.
ENTR6012
Entrepreneurship and Innovation* 2
MKTG5012
Marketing Principles*2
MKTG6012
Strategic Marketing*2
MKTG6602
Marketing Research2
MKTG6603
Consumer Behavior2

In addition students have to complete any four courses (8 credits) from the following

list:
ENTR6112
Strategic Innovation Management2
MKTG6111
Digital Marketing Strategies2
MKTG6112
Social Media Strategy2
MKTG6113
Mobile Marketing Strategies2
MKTG6605
Marketing Communications2
MKTG6800
Graduate Independent Study2

## Pharmaceutical Management Graduate Certificate

For a Certificate in Pharmaceutical Management, students must complete the following five courses (12 credits):

Credits
ECON5012
Economic Analysis*2
MGMT5012
Foundations of Management*2
MKTG5012
Marketing Principles*
or
DSCI6012
Operations Management*2
PHAR6601
Health Care Systems and Policy3
PHAR6690
Managing the Value Proposition3
In addition students have to complete any
three courses (6 credits) from the following
list:
PHAR6615
Pharmaceutical Marketing and
Product Development**
PHAR6640
Management of Research
and Technology in the
Pharmaceutical Industry2
PHAR6650
Management of Production,
Purchasing and Quality
Control in the Pharmaceutical
Industry***
PHAR6680
Structure, Regulation and
Strategy of the Pharmaceutical
Industry2
PHAR6800
Graduate Independent Study 2

## For Additional Information

Students interested in this program should contact the Silberman College of Business M.B.A. Offices on the Metropolitan Campus at (201) 692-2424 or on the Florham Campus at (973) 443-8459 or visit

http://view2.fdu.edu/academics/silbermancollege/graduate/mba/graduate-certificates/.

# Master of Business Administration (M.B.A.) — Saturday M.B.A.

The Saturday M.B.A. program is designed for the business professional. The curriculum is designed using a blended pedagogical model that combines in-class and online sessions. Courses are delivered in eight-week modules. Students complete the program as a cohort, and this design enables them to balance work, personal and class commitments and achieve their career goals. Students can earn their M.B.A. within a 21-month period while continuing to meet their full-time responsibilities at work.

The program consists of 21 courses, each comprising 2 credits, for a total of 42 credits. The in-class sessions are scheduled between 8:30 a.m. and 5 p.m. Program cohorts are established twice a year, in the spring semester (January start), as well as in the fall semester (August start). Students may apply for the fall cohort as late as the second week of August and for the spring cohort as late as the second week of January.

## **Admission Requirements**

1. A four-year bachelor's degree from an accredited or government-recognized college or university.

2. Official transcripts from all colleges and universities in which undergraduate or graduate course work was completed.

3. An official score report for the Graduate Management Admissions Test (GMAT). Students who have taken the Graduate Record Examinations (GRE) may submit their GRE score in lieu of a GMAT score. FDU undergraduates with exemplary grade point ratios are eligible to waive the GMAT/GRE requirement. Contact the Office of Graduate Admissions for information.

4. An updated résumé.

5. A minimum score of 550 (paperbased), 213 (computer-based) or 79 (internet-based) on the Test of English as a Foreign Language (TOEFL) is required for all applicants whose native language is not English. 6. International Student Proof of Financial Responsibility (for international students only).

## Requirements for the Master of Business Administration Degree

## Foundation Courses (12 credits)

Credits

ACCT5012
Financial Accounting: End-User
Applications2
DSCI5012
Statistical Data Analysis 2
ECON5012
Economic Analysis2
FIN5012
Principles of Finance2
MGMT5012
Foundations of Management2
MKTG5012
Marketing Principles2

# Core Courses (20 credits)

ACCT6012		
Managerial Accounting Applications2		
DSCI6012		
Operations Management2		
ECON6012		
Managerial Economics2		
ENTR6012		
Entrepreneurship and Innovation2		
FIN6012		
Corporate Finance2		
LAW6012		
Society, Ethics and the Legal		
Environment of Business2		
MGMT6012		
Organizational Behavior and		
Leadership2		
MGMT7012		
Global Business Capstone		
or		
ENTR7012		
Entrepreneurship Capstone2		
MIS6012		
Information Systems for Managers2		
MKTG6012		
Strategic Marketing2		

<sup>\*</sup>Can be completed as part of the M.B.A. curriculum. \*\*Must take MKTG5012 Marketing Principles. \*\*\*Must take DSCI6012 Operations Management.

## Discipline-enrichment Courses

These courses are intended to enhance the content covered in the core courses by identifying a few specialized business topics that are of contemporary relevance and interest. Students have to complete five such courses, each worth 2 credits. Credits

DSCI6112
Project Management2
ENTR6112
Strategic Innovation Management2
FIN6112
Finance Decisions for a
Sustainable Enterprise 2
MGMT6112
Managing Sustainability in a
Global Environment2
MKTG6112
Social Media Strategy2

# Master of Business Administration (M.B.A.) — Management for Executives

The M.B.A. — Management for Executives program is structured such that it enables a current or future executive the opportunity to complete the academic requirements for the degree within 21 months while he or she continues to meet full-time work responsibilities. Each group of students (cohort) goes through the entire program as an integrated cohort, thereby developing a close working relationship that enriches and reinforces the learning process.

The program consists of 45 credits. The **general management specialty** includes two specialty courses (45-credit program) and **health sector management specialty** includes one specialty course (45-credit program).

Classes are scheduled on Saturdays, from 8:30 a.m. to 4:30 p.m.

The program curriculum also includes a required, 12-day study-abroad visit to an emerging market in Europe, Asia or Latin America. This visit is associated with the EXEC6509 International Business course. This visit is designed to provide the student with an appreciation of the opportunities and challenges associated with pursuing global business opportunities. In addition, students in the program also benefit from an executive coaching experience where each student works individually with an executive coach on issues ranging from career development to strengths and areas for improvement.

The program charge\* includes tuition, fees, books, meals, round-trip airfare and room and board during the overseas seminar. Tuition is payable at the beginning of each semester, intersession and summer session. The tuition is nonrefundable after the semester begins.

\*For tuition and fees, see Registration, Tuition and Billing Information, pages 22–24. New tuition and fee charges will be announced in the spring of each year. Please check with the Office of Enrollment Services for current charges. Program cohorts are established twice a year, both in the spring (February) and in the fall (September). New students may apply for the fall cohort as late as the third week of August and for the spring cohort as late as the third week of January.

This program is offered under the auspices of the Office of Executive Programs, Silberman College of Business.

## **Admission Requirements**

Complete credentials for the evaluation of applicants for the Master of Business Administration for Executives program include the following:

1. A bachelor's degree from an accredited college or university.

2. Official transcripts from all colleges and universities in which undergraduate or graduate course work was completed.

3. A minimum of five years of business experience.

4. A personal interview with the program director.

5. A current professional résumé.

6. Two letters of recommendation, with one from the student's immediate supervisor.

7. At the discretion of the program director, the Graduate Management Admission Test (GMAT) requirement may be waived, based on experience and prior academic achievement.

## Requirements for the Master of Business Administration Degree

## M.B.A. — Management for Executives

• General Management Specialization (45 credits)

• Health Sector Management Specialization (45 credits)

## General Management Specialization (45 credits) Foundation Courses (13.5 credits)

Cr	edits
EXEC5501	
Macroeconomic Analysis	1.5
EXEC5502	
Social, Legal and Ethical Issues	1.5
EXEC5503	
Fundamentals of Management	1.5
EXEC5504	
Fundamentals of Marketing	1.5
EXEC5505	
Fundamentals of Financial	
Accounting	. 1.5

# **Business • Accounting**

Credits
EXEC5506
Principles of Microeconomics1.5
EXEC5507
Principles of Finance1.5
EXEC5508
Statistical Thinking and Methods3
Core Courses (28.5 credits)
EXEC6501
Corporate Creativity and Innovation1.5
EXEC6502
Financial Accounting and Reporting3
EXEC6503
Managerial Economics
EXEC6504
Finance for Managers
EXEC6505
Organizational Behavior and
Leadership3
EXEC6506
Strategic Marketing
EXEC6507
Strategic Management of Information
Systems
EXEC6508
Supply Chain Management
EXEC6509
International Business
EXEC6510
Global Business Capstone3
Specialization Courses (3 credits)
EXEC6901
Managing Sustainability for
Competitive Advantage 1.5
EXEC6902
Project Management1.5

### Health Sector Management Specialization (45 credits)

Foundation Courses (13.5 credits)		
EHCM6901		
Fundamentals of Health Systems		
and Policy3		
EHCM6902		
Essentials of Health Care		
Financial Management1.5		
EXEC5503		
Fundamentals of Management1.5		
EXEC5504		
Fundamentals of Marketing1.5		
EXEC5505		
Fundamentals of Financial		
Accounting 1.5		
EXEC5506		
Principles of Microeconomics1.5		
EXEC5508		
Statistical Thinking and Methods3		

### Core Courses (28.5 credits)

Credits
EHCM6903
Finance for Health Care Managers3
EHCM6904
Health Care Operations Management 3
EXEC6501
Corporate Creativity and Innovation1.5
EXEC6502
Financial Accounting and Reporting3
EXEC6503
Managerial Economics3
EXEC6505
Organizational Behavior and
Leadership3
EXEC6506
Strategic Marketing
EXEC6507
Strategic Management of Information
Systems
EXEC6509
International Business
EXEC6510
Global Business Capstone3
Specialization Course (3 credits)
EHCM6905
Contemporary Issues in Health
Sector Management3

## **Course Descriptions**

See "Course Offerings," pages 78-90.

# Master of Science (M.S.) — Accounting

There are two tracks in this 30-credit program. Completion of Track A will academically qualify students to take the CPA Exam. Track A is designed for students who have an undergraduate major or concentration in accounting. Track B is suited for those students who lack an undergraduate background in accounting and desire a focus in this area at the graduate level. Track B students need an additional 24 business course credits to sit for the New Jersey CPA Exam. The tracks are offered evenings and Saturdays.

This program is offered under the auspices of the department of accounting, taxation and law, Silberman College of Business, at the Florham Campus, Madison, New Jersey; the Metropolitan Campus, Teaneck, New Jersey; and offsite.

## **Admission Requirements**

Complete credentials for the evaluation of applicants for the M.S. degree program include the following:

1. A four-year bachelor's degree from an accredited or government-recognized college or university.

2. Official transcripts from all colleges and universities in which undergraduate or graduate course work was completed.

3. An official score report for the Graduate Management Admission Test (GMAT). FDU undergraduates with exemplary grade point ratios are eligible to waive the GMAT/GRE. The GMAT requirement may be waived based on experience and prior academic achievement. Contact the Office of Graduate Admissions for information.

4. An updated résumé.

5. A minimum score of 550 (paperbased) or 213 (computer-based) or 79 (internet-based) on the Test of English as a Foreign Language (TOEFL) is required for all applicants whose native language is not English.

6. International Student Proof of Financial Responsibility (for international students only).

# Requirements for the Master of Science Degree — Accounting

## Track A

This 30-credit program is for students who have the bachelor's degree or concentration in accounting and is designed to meet the 150-hour educational requirements for the CPA Exam. Completion of Track A will academically qualify students to take the CPA Exam in New Jersey. Required Courses (15 credits) Credits ACCT6606 Federal Tax II: Business Entities......3 ACCT6680 Advanced Financial Reporting Topics.....3 ACCT6682 ACCT6690 Seminar: Accounting and Auditing LAW6657 Applied Business Law...... 3 Electives (15 credits) Tax electives may be chosen from the tax courses offered by the M.S. in taxation program at the University. See pages 77-78 or http://www.fdu.edu/tax. Subject to prior approval, such tax courses may be counted

## Track B

This 30-credit program is for students who do not have the bachelor's degree in accounting. NOTE: At least one undergraduate course in financial accounting is required for admission into the program.

toward the M.S. in taxation degree.

The requirements for the New Jersey CPA Exam have changed effective June 2017. In addition to 24 credits of accounting courses, 24 credits of business courses are also required. Six credits of business courses are already included in this Track B program. Students who have a business background with sufficient number of business credits will qualify to sit for the New Jersey CPA Exam. Students who do not have any business credits or have insufficient business credits will have to take up to an additional 18 credits of business courses to take the New Jersey CPA Exam. Required Courses (30 credits)

Credits
ACCT6605
Federal Tax I: Individual
ACCT6606
Federal Tax II: Business Entities
ACCT6617
Cost: Measurement, Planning and
Control 3
ACCT6618
Auditing Concepts and Methods 3
ACCT6630
Intermediate Accounting I3
ACCT6635
Intermediate Accounting II3
ACCT6640
Advanced Financial Accounting3
ACCT6680
Advanced Financial Reporting Topics 3
FIN6020
Financial Analysis for Accountants* 3
LAW6657
Applied Business Law3

## **For Information**

For detailed information contact the department of accounting, taxation and law at (973) 443-8459 or (201) 692-2424.

## **Course Descriptions**

See "Course Offerings," pages 78-90.

# Master of Science (M.S.) — Digital Marketing

The emergent digital environment has been transforming all aspects of business. Firms, regardless of their specialty, industry and size, are increasingly using digital technologies to communicate with clients, recruit employees, form relationships with consumers and develop brands. Spending on digital marketing is rising with 80 percent of companies planning to increase their digital budget with digital ads estimated to make up 41.4 percent of total media ad expenditures by 2019. Digital engagement and marketing operations/technology are top areas for skill development. Specifically, digital marketing, social media, search-engine optimization and analytics-related jobs are particularly in high demand.

This **online program** is offered under the auspices of the department of marketing, information systems and decision sciences, Silberman College of Business, Florham Campus, Madison, New Jersey, and Metropolitan Campus, Teaneck, New Jersey.

The M.S. in digital marketing prepares students to be tech savvy and strategically creative to fill a range of digital marketing positions ranging from content creation and social media to creative services and production.

The 30–34 credit program is **delivered entirely online**. The program credits are distributed across a core curriculum followed by elective courses and a flexible experiential learning module (i.e. internship or thesis option).

## **Admission Requirements**

Complete credentials for the evaluation of applicants for the M.S. degree program include the following:

1. A bachelor's degree from an accredited college or university.

2. Official transcripts from all colleges and universities in which undergraduate or graduate course work was completed.

# **Business • Supply Chain Management**

3. An official score report for the Graduate Management Admissions Test (GMAT)/GRE taken within the last five years. GMAT may be waived based on experience and prior academic achievement.

4. Current résumé.

5. A minimum score of 550 (paperbased) or 79 (internet-based) on the Test of English as a Foreign Language (TOEFL) is required for all applicants whose native language is not English.

6. International Student Proof of Financial Responsibility (for international students only).

## **Requirements for the Master of Science Degree**

## Foundation Module (4 credits)

Provides an understanding of the marketing discipline. May be waived based on prior academic preparation, reducing the degree to 30 credits.

Cre	eaits
DSCI5012	
Statistical Data Analysis	2
MKTG5012	
Marketing Principles	2
6 1	

### Digital Marketing Core (14 credits)

## Specialized Core (up to 12 credits)

Enables acquisition of specialized knowledge and skills based on personal interest and career path. Courses include topics related to search-engine optimization, web analytics, harnessing big data, database management and emerging technologies in marketing. Credits

	ereance
MKTG6614	
Search Engine Optimization	
and Advertising	3
MKTG6615	
Email and Database Marketing	3
MKTG6616	
Content Marketing	3
MKTG6617	
Web Analytics	3

## **Experiential Learning (4 credits)**

Students may seek academic credit for internships, or they may write a thesis on a digital marketing topic of their choice.

## **Course Descriptions**

See "Course Offerings," pages 78–90.

# Master of Science (M.S.) — Supply Chain Management

Effective management of their supply chain and operations is the key to value creation for many organizations, especially in today's fast-paced and highly global business environment. Employers increasingly seek candidates with skills that will enable their organizations to better manage their supply chains and operations. The supply chain management (SCM) profession has therefore witnessed significant job growth coupled with steadily increasing salaries. Whether individuals are starting off in their careers or are looking to make a career transition into supply chain management, an advanced degree such as a Master of Science in supply chain management will train them in critical aspects of supply chain management and will enable them to take advantage of the growing opportunities in the field.

The M.S. in supply chain management program at Silberman College of Business is an interdisciplinary program that emphasizes methodological, conceptual and strategic aspects of the management of supply chains and operations. The program is designed to foster the development of critical skills and capabilities required to manage globally distributed and diversified supply chains.

The program can be completed within 12 months while still being employed full time.

This program is offered under the auspices of the department of marketing, information systems and decision sciences, Silberman College of Business, Florham Campus, Madison, New Jersey, and Metropolitan Campus, Teaneck, New Jersey.

## **Admission Requirements**

Complete credentials for the evaluation of applicants for the M.S. degree program include the following:

1. A bachelor's degree from an accredited college or university.

2. Official transcripts from all colleges and universities in which undergraduate or graduate course work was completed. 3. An official score report for the Graduate Management Admissions Test (GMAT)/GRE taken within the last five years. GMAT may be waived based on experience and prior academic achievement.

4. Current résumé.

5. A minimum score of 550 (paperbased) or 79 (internet-based) on the Test of English as a Foreign Language (TOEFL) is required for all applicants whose native language is not English.

6. International Student Proof of Financial Responsibility (for international students only).

## Requirements for the Master of Science Degree – Supply Chain Management

The M.S. in supply chain management is obtained by completing 10 required classes in foundation courses (6 credits), core courses (12 credits), enrichment courses (9 credits) and capstone (3 credits).

# Foundation Courses (6 credits)

Credits
DSCI6600
Business Analytics3
DSCI6700
Introduction to Supply Chain
Management
Core Courses (12 credits)
DSCI6820
Logistics Management
DSCI6830
Pricing and Demand Management 3
DSCI6840
Global Sourcing, Procurement
and Negotiations3
DSCI6850
Global Supply Chain Finance3
Enrichment Courses (9 credits)
DSCI6650
Project Management
DSCI6750
Supply Chain Technologies3
DSCI6780
Sustainable and Lean Six Sigma3
Capstone Course (3 credits)
DSCI7004
Capstone Experiential Learning
of Supply Chain Management

## **Course Descriptions**

See "Course Offerings," pages 78-90.

# Master of Science (M.S.) — Taxation

The Master of Science in taxation is designed for those who currently practice in the field of taxation, such as accountants, attorneys and financial planners, as well as those who wish to enter the field by undertaking an intense study of the subject. It is highly focused and practice oriented, dedicated exclusively to the study of taxation. In scope, it is much more specific than the traditional course of study pursued in an M.B.A. program with only a concentration in taxation. The M.S. in taxation program provides students with an in-depth exposure to many areas of taxation, including individual, partnership, corporate, international, compensation, trusts, procedures and estate taxation. The course offerings in the program will not only cover the basic areas of taxation but will also encompass advanced subject matter and procedural areas of tax law. Credits in the M.S. in taxation program may qualify toward the 150 semester hours of education requirement for obtaining CPA certification. Details on what will qualify may, however, vary from state to state depending on the rules of each state accounting board.

Weekday evening classes are offered at the Florham Campus, Madison, New Jersey. From time to time, classes may be offered at the Metropolitan Campus, Teaneck, New Jersey. In addition, some classes are offered on Saturdays at the Florham Campus.

For more information, contact graduate advising at (973) 443-8459.

For the latest updates about the M.S. program, visit the M.S. in taxation website at http://www.fdu.edu/tax.

The program is offered under the auspices of the department of accounting, taxation and law, Silberman College of Business, Florham Campus, Madison, New Jersey.

### **Admission Requirements**

Complete credentials for the evaluation of applicants for the M.S. degree in taxation program include the following:

1. A bachelor's degree from an accredited college or university.

2. Official transcripts from all colleges and universities in which undergraduate or graduate course work was completed.

 An official score report for the Graduate Management Admissions Test (GMAT) or Graduate Record Examinations (GRE) taken within the last five years (see GMAT Waiver below).
 An updated résumé.

5. A minimum score of 550 (paper-

based) or 213 (computer-based) or 79 (internet-based) on the Test of English as a Foreign Language (TOEFL) is required for all applicants whose native language is not English.

6. International Student Proof of Financial Responsibility (for international students only).

## GMAT Waiver

The GMAT requirement is waived for CPAs, Enrolled Agents, Certified Financial Planners, Certified Management Accountants, Chartered Financial Analysts, attorneys and graduates with an M.B.A. degree from an AACSB-accredited college or university as long as applicants have undergraduate/graduate grade point ratios (GPRs) of 3.00 or higher (or if the Graduate Admissions Committee grants an exception for lower than 3.00 GPR).

Fairleigh Dickinson University graduates with exemplary GPRs are eligible to waive the GMAT.

The GMAT is also waived for applicants who have relevant and substantial professional work experience in the field of accounting, financial planning and/or taxation. Such applicants will need to document at least three years of relevant professional work experience. Students admitted under the workexperience exception will gain conditional admission and will be required to maintain at least a cumulative 3.00 GPR in their first 9 credits in the M.S. in taxation program or else be required to take the GMAT.

Contact the Office of Graduate Admissions for information.

For more information about the GMAT, call 1-800-717-4628 or 609-771-7330. Its website is https://www.mba.com.

## **Requirements for the Master of Science Degree — Taxation**

The M.S. in taxation degree is obtained by completing 10 tax classes (30 credits) in required and elective courses. Seven core courses (21 credits) listed below are required of all students. The remaining courses (9 credits) may be selected from electives listed below. To graduate, students must maintain a cumulative grade point ratio (CGPR) of 3.00 or better.

Additional prerequisite courses may be required of incoming students not meeting the appropriate undergraduate requirements. These prerequisite courses (or equivalents) include 3 credits in accounting, 6 credits in taxation, 3 credits in business law and 3 credits in finance.

Required Courses	Credits
TAX6621	
Advanced Federal Tax: Individual	l
Income Taxation	
TAX6622	
Advanced Corporate Tax I	3
TAX6670	
Tax Accounting	3
TAX6850	
Tax Research	3
TAX7724	
Tax Practice and Procedure I	3
TAX7727	
Advanced Federal Tax:	
Property Transactions	3
TAX7728	
Partnership Taxation	3

## Electives

Three courses (9 credits) from the following:
TAX6625
Estate and Gift Taxation3
TAX7705
U.S. International Corporate
Taxation
TAX7708
International Tax I: Sourcing and
Inbound3
TAX7710
International Tax II: Outbound3
TAX7711
International Tax III: Special Topics 3
TAX7723
Estate and Gift Tax Planning 3
TAX7725
Advanced Corporate Tax II3
TAX7726
Compensation: Executive
Compensation and
Nonqualified Plans

## Credits TAX7730 Income Taxation of Estates TAX7732 Tax Practice and Procedure II......3 TAX7734 Consolidated Returns...... 3 TAX7735 TAX7736 State and Local Taxation: Constitutional Issues...... 3 TAX7738 Compensation: Qualified Pension and Profit-sharing Plans......3 TAX7750 State and Local Taxation: Corporate and Individual Income TAX7752 State and Local Taxation: Sales, Use and Property Taxes...... 3 TAX8840 Taxation of S Corporations: Selected Studies......3 TAX8850 Taxation of Financial Products......3 TAX8860

## **Course Descriptions**

See "Course Offerings," pages 78-90.

# **Course Offerings**

Courses offered fall, spring and/or summer are so noted. To determine availability of courses not so designated, please check with appropriate department chair.

Note: Prerequisite courses for 6000-level and higher courses typically include the discipline's M.B.A. core courses. Check with your adviser.

## ACCT5012

## 2 Credits

#### Financial Accounting: End-User Applications

This course focuses on the information needs of the users-of-financial-statements community that includes, but is not limited to, managers, investors, creditors and regulators. The primary context of the course is financial accounting for corporate entities. This course assumes no prior knowledge of financial accounting.

### ACCT5521

3 Credits

#### Financial Accounting: An End-user Approach

An introduction to the financial reporting environment. Develops an understanding of the conceptual framework that underlies financialstatement preparation and presentation for both domestic and multinational firms. The course will provide students with the necessary skills to understand, use and analyze financial statements.

## ACCT6012

2 Credits

## **Managerial Accounting Applications**

This course focuses on the decision-support information that managers regularly use and need in the contemporary business setting. Topics include cost-volume profit, cost behavior, product costing, pricing, quality costs, budgeting variance analysis, short-term decision making and business-unit performance measurement. The course will begin with a session on understanding financial statements to provide articulation with the financial accounting course prerequisite. Prerequisite: ACCT5012 Financial Accounting: End-User Applications.

## ACCT6605

#### 3 Credits Federal Tax I: Individual

A first course in taxation for graduate students without prior study in taxation. It examines tax principles as they affect the individual.

## ACCT6606

## **3** Credits

Federal Tax II: Business Entities

This course is a sequel to ACCT6605 Federal Tax I: Individual. It examines taxation as it concerns business entities, such as C and S corporations, LLCs and partnerships. Students are encouraged to take ACCT6605 Federal Tax I: Individual before ACCT6606 Federal Tax II: Business Entities. Any student who has not taken ACCT6605 Federal Tax I: Individual will be instructed to self study certain materials from ACCT6605 Federal Tax I: Individual. Prerequisite: ACCT4267 Fundamentals of Federal Taxation or ACCT6605 Federal Tax I: Individual.

# ACCT6610 3 Credits

## **Managerial Accounting Applications**

An introduction to management accounting as part of a company's quantitative information system. Emphasis is placed on the role of accounting in decision making.

## ACCT6612 3 Credits

## **Planning and Budgeting**

Importance of business planning and control from the managerial point of view. Emphasis is on budgeting as a tool for profit planning and control. Prerequisite: ACCT5012 Financial Accounting: End-User Applications.

#### ACCT6617 3 Credits Cost: Measurement, Planning and Control

The basic elements of cost and cost control. Cost-accounting systems such as process costing, job-order costing, standard and direct costing, the planning, budgeting and control functions. Prerequisite: ACCT2021 Introductory Financial Accounting or ACCT5012 Financial Accounting: End-user Applications.

#### ACCT6618 3 Credits Auditing Concepts and Methods

The auditor's report. Basic auditing concepts and methods are studied in detail as they relate to assets, liabilities, revenues and expenses. Prerequisite: ACCT6630 Intermediate Financial Accounting I.

## ACCT6630 3 Credits

# Intermediate Accounting I

An in-depth study of generally accepted accounting principles as they relate to corporations; particular attention is given to financial reporting, revenue recognition, asset valuation and measurement. Basic difference in U.S. and international accounting are identified. Topics of current interest and controversy are introduced to prepare the student for more advanced courses. Prerequisite:ACCT2021 Introductory Financial Accounting, ACCT5012 Financial Accounting: End-User Applications or chair permission.

#### ACCT6635 3 Credits

## Intermediate Accounting II

This course continues the in-depth study of financial accounting began in ACCT6630 Intermediate Accounting I. Pronouncements of the Financial Accounting Standards Board and their applications, such as imgmtn the areas of accounting for liabilities, stockholders equity, dilutive securities, earnings per share and statement of cash flows are examined. Basic differences in U.S. and international accounting are identified. Recent developments and prospects for the future change in accounting thought are considered. Prerequisite: ACCT6630 Intermediate Accounting I or undergraduate equivalent.

#### ACCT6640 3 Credits Advanced Financial Accounting

An in-depth study of the accounting principles related to special areas such as business combinations, consolidations, foreign operations and partnerships. There is some exposure to accounting for nonprofit institutions such as state and local governments, educational systems, institutions and hospitals. Prerequisite: ACCT6630 Intermediate Financial Accounting I.

### ACCT6680 3 Credits

#### **Advanced Financial Reporting Topics**

A graduate-level course for students with a strong financial-theory background. The course focuses on a wide range of financial-reporting issues. Topics include leasing, accounting for income taxes, accounting for derivatives, foreign currency translation and hedging; accounting for pensions, accounting for share-based compensation, IFRS and cash-flow statements. Prerequisite: ACCT6635 Intermediate Accounting II.

### ACCT6682 3 Credits Advanced Auditing

The material for the first half of the course introduces the concept of auditing in the environment of a modern information system. The second half of the course covers analytic methods and statistics in an auditing environment. Prerequisite: ACCT4263 Auditing Concepts or ACCT6618 Auditing Concepts and Methods.

#### ACCT6684 3 Credits

## **Advanced Managerial Applications**

This is an advanced course in managerial accounting designed to develop a further appreciation for the uses of cost information in the administration and control of business organizations. The course focuses on measurement, analysis and use of accounting information for management decision-making in manufacturing, merchandising and serviceoriented businesses. The course may employ the case method to better understand how managerial accounting can create positive change in business organizations in a variety of industries. The course focuses on criticalthinking skills, decision making and communication. Prerequisite: ACCT3243 Cost Accounting: Measurement and Control or ACCT6617 Cost: Measurement, Planning and Control.

#### ACCT6690 3 Credits

#### Seminar: Accounting and Auditing Case Studies

A capstone course in the graduate program integrating technical and analytical accounting and auditing skills acquired throughout the program. The course makes exclusive use of case studies and group problem solving conducted by faculty and professionals from the corporate and public accounting sectors. Prerequisites: ACCT3242 Intermediate Financial Accounting II and ACCT4263 Auditing Concepts or ACCT6618 Auditing Concepts and Methods and ACCT6635 Intermediate Accounting II.

## ACCT6800

#### 1-3 Credits Graduate Independent Study

Studies in area of discipline with departmental approval.

### ACCT7701

## 3 Credits

### **International Accounting**

International accounting concepts and practices, including the influence of foreign national policies, legal requirements and business structures. Prerequisite: ACCT6630 Intermediate Accounting I.

## ACCT7702

#### 3 Credits Forensic Accounting and Litigation Support

Focuses on the role of the accountant in the area known as litigation support services. The course will be heavily case oriented and will encompass the accountant's role in such diverse consulting services as fraud investigation, commercial damages, business valuation, matrimonial disputes and forensic accounting services.

#### ACCT7737 3 Credits

## **Corporate Financial Reporting**

The fundamental underlying assumptions of accounting, the communications problem, the uses of the financial statements and the subjective standards of "fairness." Ethical problems of reporting as they relate to management and to the auditor. The surveillance and enforcement functions of the

Securities and Exchange Commission and other related institutions. The expansion of the reporting function to include forecasting, disclosures by diversified companies and other topics of current interest. Prerequisite: ACCT6630 Intermediate Accounting I.

#### BUSI5500 3 Credits Executive Communication and Leadership

This course is designed to provide students with: 1) a foundation in communication theory; 2) opportunities to evaluate and improve their managerial communication skills, both written and oral; and 3) an understanding of the strong correlation between communication and the responsibilities of top-level executives in organizations. Sample topics include persuasion theory, leadership styles, active listening, the writing process, audience analysis and platform dynamics.

## DSCI5012 2 Credits **Statistical Data Analysis**

This course introduces statistical thinking and practices of how to draw conclusions from the sample data. Topics include descriptive statistics, probability theory, statistical influence methods, analysis of variance and regression. Statistical software is frequently used for the computation. Emphasis is on understanding and interpreting statistical information and explaining statistical ideas to non-specialists.

### DSCI6012 2 Credits

#### **Operations Management**

The course provides concepts and knowledge on how firms design, produce and deliver goods and services to their customers. The broad themes of the course touch upon strategy, planning and control operations to achieve quality, efficiency, flexibility and speed. The course emphasizes the flows of material and information among the various supply-chain participants that create value. Analytical techniques in management science are introduced to solve various operationsmanagement problems. Prerequisite: DSCI5012 Statistical Data Analysis.

#### DSCI6112 2 Credits **Project Management**

#### This course is designed to offer the student the opportunity to learn how to effectively plan and manage projects that meet their organization's business goals. The course addresses fundamental concepts of successful project management, and the technical and managerial issues, methods and techniques of project management, and of managing project managers.

#### DSCI6600 3 Credits Business Analytics

This course explores data-driven methods that are used to analyze and solve complex business problems. Students will acquire analytical skills in building, applying and evaluating various models with hands-on computer applications. Topics include descriptive statistics, time-series analysis, regression models, decision analysis, Monte Carlo simulation and optimization models.

#### DSCI6650 3 Credits **Project Management**

This course addresses fundamental concepts of successful project management, with emphasis on project selection, planning and scheduling, team formation and governance, risk management, resource allocation and progress monitoring. Students will develop the skills on how to effectively plan, execute and manage projects and project portfolios that meet their organization's business goals.

#### DSCI6700 3 Credits Introduction to Supply Chain Management

This course provides an integrated and comprehensive coverage of topics in supplychain management, emphasizing issues, challenges and opportunities. It surveys current best practices in strategies and business models in a global supply chain. Topics include supply chain coordination, management of demand sourcing, inventories, operations and logistics. In a global supply chain, supply-chain risk management and role of information technology (Block chain technology in supply chain management).

#### DSCI6750 3 Credits Supply Chain Technologies

This course examines information technology applications that support a firm's operations in supply-chain management, purchasing, logistics and customer/supplier relations. It illustrates how the internet and information technologies are used to gain and sustain competitive advantage. Topics include ERP systems, SCM systems, CRM systems, e-procurement and elogistics management systems and other ebusiness applications. Prerequisite: DSCI6700 Introduction to Supply Chain Management.

## DSCI6780 3 Credits

## Sustainable and Lean Six Sigma

As organizations strive to provide high-quality goods and services while achieving financial sustainability and growth, they are facing increasing pressures and government regulations in terms of environmental responsibilities. This course presents a holistic approach to operational excellence in supply chains, demonstrating the methodologies and practices that successfully combine Six Sigma ideas with lean and environmental sustainability. Prerequisite: DSCI6700 Introduction to Supply Chain Management.

## DSCI6800

# 1-6 Credits

**Graduate Independent Study** Studies in an area of discipline with

departmental approval.

# DSCI6810

#### 3 Credits Operations Analysis

This course focuses on developing skills in building, implementing and evaluating optimization models and techniques to facilitate and assist decision making in the supply-chain and operations-management context. It is a hands-on course with applied fields including production planning, workflow scheduling, process analysis, inventory management, capacity management, resource planning and allocation and assortment planning. Prerequisites: DSCI6600 Business Analytics and DSCI6700 Introduction to Supply Chain Management.

## DSCI6820

3 Credits

## **Logistics Management**

Stressing both analytical and strategic aspects, this course covers key logistics functions within the supply chain such as logistics network design, transportation planning and execution, distribution operations, order fulfillment and reverse logistics. Emphasis is placed on being able to recognize and manage risk, and analyze various tradeoffs in the global marketplace. Prerequisites: DSCI6600 Business Analytics and DSCI6700 Introduction to Supply Chain Management.

## DSCI6830 3 Credits

## **Pricing and Demand Management**

This course aims to give students an understanding of current topics and tools addressing the needs of an organization at the demand end of the supply chain. Rather than the traditional supply-chain management approach of minimizing costs, this course considers the demand and value-chain management focus on maximizing contributions and revenues. The strategic and tactical management of demand requires the use of appropriate pricing policies and the active balancing of supply and demand. Executive decisions, informed by best practices, are needed to best meet modern stakeholder expectations. Topics discussed include market segmentation and pricing strategy. Proven tools such as prior optimization and revenue management are introduced. Prerequisite: DSCI6600 Business Analytics.

#### DSCI6840 3 Credits Global Sourcing, Procurement and Negotiations

This course teaches concepts and processes in supply and sourcing management, including analysis and selection of supply markets and suppliers, price and cost analysis, development of requirements, procurement of materials, services and equipment, buyer-supplier relationships, international contracts and negotiations and negotiation simulation with emphasis on global competitiveness, legal issues, social responsibilities and ethics. Prerequisite: DSCI6700 Introduction to Supply Chain Management.

#### DSCI6850 3 Credits Global Supply Chain Finance

This course demonstrates how successful management of the supply-chain activities and processes tie to the financial systems, objectives and performance of the firm. Topics include financial-statements analysis, supply-chain valuation, activity-based costing, capitalinvestment analysis, management of working capital, international financial markets, global trade finance and financial risk management. Prerequisite: DSCI6700 Introduction to Supply Chain Management.

# DSCI7004

#### 3 Credits Capstone Experiential Learning of Supply Chain Management

This capstone experience will require students to work on a project solicited and provided from real companies. The projects are related to specific knowledge and skills gained in the Master of Science in supply chain management program. The project will entail the detailed description of the project by clearly identifying the issues and the objectives the company is facing and hopes to achieve. Students will need to work with the company's executives and faculty adviser to collect the real data, analyze them and provide a feasible solution. The primary objective of this experience is to give students the opportunity to demonstrate that they are able to apply knowledge and skills accumulated in the Master of Science in supply chain management program to a specific supply chain problem. The capstone should be completed within the last module of the program prior to graduation. Students will be advised by faculty in the completion of their project. Prerequisite: All M.S. in supply chain management 6000-level courses.

## ECON5012 2 Credits

## **Economic Analysis**

Microeconomics foundations of consumers and business decisions, review of the rationale for

government intervention in specific markets, macroeconomic principles relating to the level of aggregate economic activity and government policies aimed at meeting growth, employment and price-stability goals.

#### ECON6012 2 Credits Managerial Economics

The application of microeconomic theory to decision making in the business firm. Overview of demand and consumer behavior, production and cost management, market structure and pricing. Understanding of tools developed to support the decision-making process at managerial level. Prerequisite: FIN5012 Principles of Finance.

#### ECON6620 2 Credits Economics of International Trade

An introduction to international trade, including elements of international economics and finance: barriers to trade, international commercial policies and their impact on the balance of trade, the balance of payments, capital flows, the international monetary systems. Prerequisite: ECON5012 Economic Analysis.

## ECON6800 1-3 Credits Graduate Independent Study

Studies in area of discipline with departmental approval.

# ECON7745

# 2 Credits

# Econometrics

The construction and testing of econometric models. Estimation of economic parameters, multiple regression analysis, cross section and time-series data.

#### EHCM6801 3 Credits Health Sector Management and Policy

This course provides a comprehensive overview of the structure and operations of the health care industry in the United States. Special emphasis is placed on the major forces and trends that are likely to shape the industry landscape and influence relationships among key stakeholders. Fundamentals of health care delivery, funding, insurance and reimbursement are addressed. Contemporary approaches to managing access, quality, technology and costs are discussed. The political policymaking process is examined with due regard for social and ethical implications of system reform initiatives.

#### EHCM6802 3 Credits Health Care Insurance, Reimbursement and Cost Control

The course will provide an overview of the principles of insurance and alternative methods of reimbursing providers for delivery of health services. Techniques used in prospective rate setting and financial risk-sharing will be discussed within the context of managed care. Contractual, regulatory and legal issues between insurers and health care providers are also examined. Contemporary approaches to managing the utilization and cost of health care services are considered. The course concludes with an assessment of future trends in health care insurance, reimbursement and cost control within the changing health care environment. Prerequisite: EHCM6801 Health Sector Management and Policy.

### EHCM6803

#### 3 Credits Health Care Quality and Service Management

A study of the techniques and applications for measuring, assessing and improving the efficiency and effectiveness of organizational outcomes for health care firms. Qualitative and quantitative tools for managing the clinical and experiential domains of health care are presented. Contemporary models and methods for controlling process/outcome variance, enhancing health-service quality, benchmarking performance and reporting results are discussed. This course will also consider strategies for managing the human-service experience as a means to enhance patient satisfaction and achieve competitive advantage. Topical coverage will be adjusted to reflect current issues in the health care industry. Prerequisite: EHCM6801 Health Sector Management and Policy.

#### EHCM6901 3 Credits Fundamentals of Health System

# Fundamentals of Health Systems and Policy

This course is designed to provide students with an overview of the fundamental characteristics of health systems in the United States relative to those in place globally. Identifies the major economic, social, demographic, political and regulatory forces that are likely to shape the external environment and linkages among the firms in this important and growing sector. The impact of these forces on health care decision making and policy formulation are discussed with due regard for legal and ethical implications.

# EHCM6902

#### 1.5 Credits Essentials of Health Care Financial Management

This course focuses on providing students with an understanding of the unique aspects of

managing financial transactions in the heavily regulated health care industry. The role of insurance coverage, health-plan design, managed-care protocols and third-party reimbursement methods will be examined from the health care provider's perspective. Attention will also be given to managing the health care revenue cycle, including medical coding systems, billing procedures and claims adjudication. The course is intended to establish the contextual foundation of the health care financial environment and to prepare students to receive formal exposure to the principles and theories of finance at the graduate level. Prerequisite: EHCM6901 Fundamentals of Health Systems and Policy.

# EHCM6903 3 Credits

## **Finance for Health Care Managers**

This course is targeted for the health care sector manager and is intended to provide an understanding of the role of financial management in the context of health care operations. It provides both the financial theories that a general manager needs to know and their applications to decision making in the health services. The course will build on the contextual foundations of the health care environment discussed in earlier courses. Prerequisites: EHCM6902 Essentials of Health Care Financial Management, EXEC5508 Statistical Thinking and Methods, EXEC6502 Financial Accounting and Reporting and EXEC6503 Managerial Economics.

## EHCM6904 3 Credits

#### **Health Care Operations Management** This course aims to provide the student with an understanding of - and skills to apply - the techniques for improving the performance of decision-making and delivery processes that enable provision of high-value health care services from a multi-stakeholder perspective. The course will present contemporary qualitative and quantitative operations management tools and methodologies with applications in health care service infrastructure, including balanced scorecards, performance measurement, monitoring, benchmarking and reporting, statistical process control, quality management, process design and improvement, scheduling and capacity management. This course will also consider strategies for managing the human service experience as a means to enhance patient satisfaction and achieve competitive advantage. Prerequisites: EHCM6901 Fundamentals of Health Systems and Policy, EHCM6902 Essentials of Health Care Financial Management and EXEC5508 Statistical Thinking and Methods

#### EHCM6905 3 Credits Contemporary Issues in Health Sector Management

This course is designed to offer students the opportunity to explore emerging issues and trends influencing the delivery of health care that may not have been covered in the standard set of health sector management specialization courses. The learning experience is designed as a seminar and will offer sufficient flexibility to accommodate the educational interests of the unique group of participants enrolled in a particular class cohort. Prerequisites: EHCM6901 Fundamentals of Health Systems and Policy, EHCM6902 Essentials of Health Care Financial Management, EHCM6903 Finance for Health Care Managers and EHCM6904 Health Care Operations Management.

## EHLS6801

**3** Credits

#### The Health Care and Life Sciences Industry Cluster

The course provides an overview of the health care/life sciences super-cluster. It identifies major forces and trends that are likely to shape the operating environment for companies in the sector and linkages among the firms in the cluster. The fundamentals of health care economics, financing, reimbursement, quality assurance and political policymaking are discussed. The spectrum of life science entities is considered in relation to the continuum of health care delivery.

#### EHLS6802 3 Credits

## Legal and Ethical Issues in Health Care and Life Sciences Management

This course outlines the underlying social framework for current legal, regulatory and ethical issues affecting health-policy formulation and the provision of medical services. It will address how the regulatory environment impacts health care and life sciences companies. It also provides an understanding of key ethical principles of decision-making in clinical practice and research involving human subjects. An overview of intellectual property and patent law is presented.

#### EHLS6803 3 Credits Managed Care and Provider Reimbursement

The study of current public- and private-sector reimbursement methodologies for acute, primary and chronic-care service providers. Techniques used in prospective rate setting and financial risk-sharing arrangements in the context of managed care will also be discussed. The course also examines regulatory and contractual issues as well as methods for expense management such as the use of formularies and tiered-benefits designs. The impact of managed care and reimbursement trends are considered as future challenges to health care and life sciences managers.

#### EHLS6804 3 Credits Health Sector Marketing and Consumer Behavior

An integrated overview of the theory and processes of modern marketing and consumer behavior as they apply to the delivery of health products and services to diverse populations. Emphasis is placed on the uniqueness of health services and social responsibility. Topics include market analysis, competitive positioning, development of the strategic marketing mix and customer service quality. Principles of productconcept development, pricing and distribution are presented. Strategies for promotion of health-related goods and services as well as regulations governing advertising, education and use of opinion leaders are discussed.

## EHLS6805

#### **3 Credits**

### **Health Care Financial Operations**

A manager's view of the principles of finance and their application to the internal operations of health care organizations. Methods for assessing the financial performance of health care facilities are reviewed. Techniques for financial planning, budgeting, cost analysis and current asset management are discussed. Issues pertaining to capital formation, project analysis and corporate combinations are also addressed. Emphasis is on managerial decision-making rather than on the technical aspects of accounting and financial analysis.

#### EHLS6807 3 Credits Health Quality and Outcomes Management

A study of the techniques and applications for measuring and improving the efficiency and effectiveness of organizational and service performance outcomes. Research methods, study designs and measurement issues are presented in the context of improving health care quality and outcomes. Contemporary models and methods of clinical-outcome research, benchmarking, performance measurement and public-outcomes reporting are also presented.

#### ENTR6012 2 Credits

## **Entrepreneurship and Innovation**

This course is an integral component of the M.B.A. core curriculum. It provides students with an understanding of the processes associated with innovation in the context of changing economic environments that are marked by fast cycle times for services and products. Challenges and opportunities

associated with creating sustainable value for an organization will be considered through the application of key concepts, processes and tools of decision-making at the level of the firm. Key concepts associated with innovation, entrepreneurship and business strategy will be validated by the use of appropriate pedagogical tools and the development of a business model project.

#### ENTR6101 2 Credits Small Business Management

Given the low survival rates of start-ups, the primary aspect of small business management is scaling - moving from start-up to an ongoing business. In this course, students will learn through simulation tools how to iterate products in response to changes in the market, adapt the initial business model for different stages in the lifecycle of an entrepreneurial business and address capacity-constraint dilemmas with respect to distribution-channel issues on rapid product launch. Students will also learn how to raise growth capital through crowd-funding and learn the concept of pivoting through case studies and by examining companies. Prerequisite: ENTR6012 Entrepreneurship and Innovation.

# ENTR6112 2 Credits

### **Strategic Innovation Management**

This course provides an opportunity for students to gain an understanding, from a strategy perspective, of what innovation is, the importance of innovation within organizations and how it can be managed. It introduces students to key concepts and models from the strategic management and innovation management literature. Prerequisite: ENTR6012 Entrepreneurship and Innovation.

## ENTR6301 2 Credits

#### **Family Business Management**

Family businesses are both the most complex and common form of business worldwide, but 85 percent fail within three generations. In this course, students will use cases and play the role of a business consultant in the process of learning how to successfully incorporate the needs of family, business and ownership, and use simulation to develop a business model that allows family businesses to successfully work together from one generation to the next namely, from family and business development through management to succession and change in the business. Though this course is particularly relevant for students who work in or may become part of a family business, it will give students the knowledge necessary for them in their future careers to advise family businesses. Prerequisite: ENTR6012 Entrepreneurship and Innovation.

# ENTR6502 2 Credits

## **Entrepreneurial Finance**

This course covers all aspects of entrepreneurial finance including company and investor strategy, expectations and negotiations, angel investors, venture capital, private equity, strategic alliances, the informal investor market, initial and secondary public offerings, bank lending and alternative sources of funding. Emphasis is on financing elements and techniques that make deals succeed, the implications of strategic decisions on finance and the impact of financing on the company strategy. Students are immersed in concepts such as valuation, cash flow, cash burn and analysis of viable revenue models and cost structures from both internal financing strategy and outside investor viewpoints. Financing issues will be explored in the context of start-ups, small businesses, growing ventures and internal ventures of established companies. Prerequisites: ACCT6012 Managerial Accounting Applications, ENTR6012 Entrepreneurship and Innovation and FIN6012 Corporate Finance.

#### ENTR6800 1–2 Credits Graduate Independent Study

Studies in area of discipline with departmental approval.

#### ENTR7012 2 Credits Entrepreneurship Capstone

This course immerses students in strategic planning, financing and growing of a business or a new venture within an existing business. Under the guidance of a faculty member, student teams partner with the management teams of real businesses to create and develop an entrepreneurial strategy and a business plan. Each team develops its business plan to provide an integrated framework for profitable growth in the context of the venture's strategic objectives. The course provides hands-on fieldwork in which students apply concepts they have acquired in their previous course work in addition to their professional experiences. Client companies typically cover a wide range of industries, markets, sizes and growth opportunities. MBA capstone course; available to every MBA candidate.

## ENTR7804 2 Credits

## **Social Entrepreneurship**

This course provides an opportunity for students to gain an understanding of the importance of employing entrepreneurial approaches to solving social problems and how social enterprises can be created and effectively managed. It introduces students, through lectures and case analyses, to challenges in running a social enterprise and strategies available to social entrepreneurs to effectively meet the challenges. Students will have an opportunity to develop a business model for a new social enterprise or analyze the strategies and performance of an existing social enterprise, through a project. Prerequisite: ENTR6012 Entrepreneurship and Innovation.

## EXEC5501 1.5 Credits

## **Macroeconomic Analysis**

This course will introduce students to the principles of macroeconomics and the application of theory for analyzing the impacts of government regulation of fiscal and monetary policy on employment, economic growth, inflation, interest rates and exchange rates.

# EXEC5502 1.5 Credits

## Social, Legal and Ethical Issues

This course is an introduction to the legal environment of business and includes coverage of regulatory agencies, litigation, contracts, business organizations and agency and employment issues.

### EXEC5503

1.5 Credits

## **Fundamentals of Management**

This course provides a baseline understanding of the processes of working with people and resources to accomplish organizational goals. In today's business world, highly effective executives not only apply the fundamental management principles of planning, organizing, leading and controlling, but also anticipate and adapt to change. This course explores the nature and application of these fundamental principles in the evolving environment of globalization and increased competitiveness. An integrative case study will be used to connect management principles to those from other disciplines in the executive M.B.A. foundations module.

## EXEC5504

1.5 Credits

## **Fundamentals of Marketing**

This course will introduce students to marketing terminology and concepts. The goal is to provide sufficient foundation knowledge to enable students to take courses in the core M.B.A. program. Accordingly, this course introduces students to such fundamental marketing concepts as the marketing mix, segmentation, marketing research and consumer behavior.

EXEC5505

#### 1.5 Credits Fundamentals of Financial Accounting

An introduction to the basic financial statements and the underlying concepts, conventions and principles.

## EXEC5506 1.5 Credits

# Principles of Microeconomics

Microeconomic foundations of consumer and business decisions, market structure and industrial organization.

#### EXEC5507 1.5 Credits **Principles of Finance**

# The course studies the essential compounding-

discounted techniques used to price assets and projects with deterministic cash flows. The course also studies the role of financial systems with regard to raising capital.

#### EXEC5508 3 Credits

#### **Statistical Thinking and Methods**

This course introduces statistical ideas and methods of how to draw conclusions from the data. It provides students with the ability to think statistically and appreciate statistical ideas. Topics include descriptive statistics, probability theory, confidence intervals, hypothesis testing, correlation, regression, analysis of variance and an introduction to nonparametric statistics. Statistical software is used frequently for computations. Emphasis is on interpreting statistical results and using statistical analyses for decision making.

#### EXEC6501 1.5 Credits

#### **Corporate Creativity and Innovation**

This 1.5-credit course is an integral part of the core curriculum in the M.B.A. management for executives program. It provides students with an appreciation for the role of creativity and innovation in facilitating the emergence of organizations and their continued development and growth. Students will examine the opportunities and challenges associated with applying these concepts in the creation of sustainable organizational value. A variety of individual and team-based assignments will be used to validate and apply the concepts presented in this course.

#### EXEC6502 3 Credits Financial Accounting and Reporting

This course focuses on the decision-support information that managers regularly use and need in the contemporary business setting. Topics include cost-volume profit, cost behavior, product costing, pricing, quality costs, budgeting variance analysis, short-term decision making and business-unit performance measurement. The course will begin with a session on understanding financial statements to provide articulation with the financial accounting prerequisite. Prerequisite: EXEC5505 Fundamentals of Financial Accounting.

## EXEC6503 3 Credits

## **Managerial Economics**

Microeconomic theory as applied to decision making in the business firm. Emphasis is placed on customer demand, cost management, strategic and tactical pricing, market and competitive actions and analyses. Prerequisites: EXEC5501 Macroeconomic Analysis and EXEC5506 Principles of Microeconomics.

## EXEC6504 3 Credits

## **Finance for Managers**

The course provides a practical view of the theories and models of finance for the general manager. It will explore risk-return models, cost of capital, capital budgeting, capital structure theory and practice. The course will also introduce a selection of topics such as, but not limited to, corporate reorganization and governance, quantifying strategic decisions with real options, dividend policy mergers and acquisitions or other timely topics of interest. Prerequisite: EXEC5507 Principles of Finance.

#### EXEC6505 3 Credits Organizational Behavior and Leadership

Creating and leading sustainable, ethical, successful and responsive organizations is the primary challenge for business and nonprofit leaders today. This course brings together the knowledge, research, insights and experiences of both management academics and organization development and management practitioners to address the challenges and opportunities in understanding and managing organizational behavior. This course emphasizes concepts and tools for assessing the social processes encountered in the workplace, so that one can become an effective and responsible leader, and it develops the students' own leadership skills and competencies. Prerequisite: EXEC5503 Fundamentals of Management

## EXEC6506 3 Credits

**Strategic Marketing** This course addresses the strategic and

This course addresses the strategic and consequent tactical concerns of a business in terms of building value. The course will address topics such as segmentation and positioning, new-product development and launch, brand equity, sustainability, product policy, pricing policy, distribution choices (bricks-and-mortar and e-commerce) and supply-chain management, promotional strategy and customer relationship management. Students will apply marketing principles in formulating marketing strategies and making managerial recommendation. Prerequisite: EXEC5504 Fundamentals of Marketing.

#### EXEC6507 3 Credits

### Strategic Management of Information Systems

This course focuses on the alignment of information systems (IS) with business strategies in order for business organizations to gain competitive advantage in a globalized environment. It explores fundamental concepts, models and frameworks of IS regarding the planning, investment, implementation and evaluation of information systems for strategic purposes. The course also examines the role of IS in transforming the organizational and business environment through the employment of various strategies, applications and technologies.

## EXEC6508 3 Credits

## **Supply Chain Management**

The course addresses the strategic and operational role of supply-chain management in the global business environment. It examines how supply-chain participants enhance the value of their products and services by orchestrating the management of quality, efficiency, flexibility and speed. Management science methods are utilized to obtain analytical solutions using mathematical models and software.

#### EXEC6509 3 Credits

### **International Business**

The study of basic managerial functions appropriate to international business. The role of the multinational corporation in contemporary world trade is discussed. Topics covered include organization, foreign licensing, international aspects of management, finance, taxation and cultural differences. This course includes a structured foreign-study tour to permit students to compare international business practices with those of U.S. firms. Knowledge acquired through the experience will be linked to other courses.

#### EXEC6510 3 Credits Global Business Capstone

The focus of this course is on corporate-level strategy for multidivisional firms striving to strategically restructure their business portfolios by expanding and diversifying domestically and internationally. Topics will include diversification strategies, tactics for global market entry/exit and structural alternative to support growth. Emphasis will be placed on integrating functional plans for implementing strategy at the corporate level. Students will work in teams to develop a comprehensive strategic plan using case studies of real-world companies as the primary learning modality.

#### EXEC6901 1.5 Credits Managing Sustainability for Competitive Advantage

Pursuing the "triple bottom line" of financial success, ecological stewardship and social equity has become essential to achieving sustained competitive advantage. This course will focus on the current and future challenges and opportunities relating to climate change, sustainable economic development and the role of business. It also will explore the theory, values and practical aspects of sustainability with special emphasis on strategic effectiveness. The class will draw on real issues and experiences of managers through case studies and guest speakers. Career opportunities in relation to sustainability will also be discussed.

#### EXEC6902 1.5 Credits **Project Management**

This course is designed to offer students the opportunity to learn how to effectively plan and manage projects that meet their organization's business goals. The course addresses fundamental concepts of successful project management, and the technical and managerial issues, methods and techniques of project management and of managing project managers.

## FIN5012 2 Credits

## **Principles of Finance**

This course surveys the financial environment and performs comparisons of firms based on their financial statements. It studies the essential compounding-discounting techniques used to price assets and projects with deterministic cash flows. Prerequisites: ACCT5012 Financial Accounting: End-user Applications, DSCI5012 Statistical Data Analysis and ECON5012 Economic Analysis.

#### FIN6012 2 Credits **Corporate Finance**

This course discusses how some of the most important financial theories are applied to a corporate setting. Blending theory and practice, the course introduces the concepts of risk, cost of capital, commitment of funds for long-term capital investment and other applications of interest. Prerequisites: DSCI5012 Statistical Data Analysis and FIN5012 Principles of Finance.

#### FIN6020 3 Credits

#### **Financial Analysis for Accountants**

The course covers the essential financial topics for the CPA exam. An introduction to time value of money and financial markets is followed by the valuation of bonds and stocks. Risk return models and capital structure are incorporated into a discussion of the cost of capital. Evaluation of cash-flow and project selection introduces the student to asset valuation. Analysis of financial ratios and of cash-conversion cycle lead to an understanding of the short-term management of the financial position of the firm.

### FIN6112

2 Credits

### Finance Decisions for Sustainable Enterprise

This course introduces the student to strategic financial decisions for a sustainable enterprise. The course discusses various strategic real options that would ensure that the corporation acts at the best time capturing the most value from its multiple strategic options. In addition, the course discusses capital structure and the various theories leading to a minimum cost of capital that would ensure that corporations have access to more projects and thus could create more value. Finally, concepts of valuation and its maximization toward achieving sustainability of the enterprise as well as the social and natural environment would be presented. Therefore, the course proposes to raise the awareness of the student to concepts of sustainable enterprise from financial perspectives leading to sound actions. Prerequisite: FIN6012 Corporate Finance.

#### FIN6701 2 Credits Strategic Financial Decisions

This course explores how sophisticated financial theory and knowledge can be used for the strategic decisions of the corporation. Prerequisite: FIN6012 Corporate Finance.

#### FIN6721 2 Credits

### **Financial Markets and Investments**

This course sets forth the theoretical framework underlying the role of capital markets. It studies the various financial instruments within the many asset classes and their trading. In addition, it introduces macro and industry analysis, the term structure of interest rates and other relevant concepts for investment analysis. Prerequisite: FIN6012 Corporate Finance.

#### FIN6731 2 Credits **Portfolio Management**

Applications of economics, statistics and investment analysis to the process of constructing, managing, revising and analyzing equity and fixed-income portfolios. Futures, options and other derivative securities are also considered, along with international investments. Prerequisite: FIN6721 Financial Markets and Investments.

#### FIN6742 2 Credits **Global Finance**

This course examines how the access and exposure to different currency, country and market environments can affect the financial and investment decisions of the firm. Topics include the determination of the exchange rates, measurement and management of the different exposures to currency risk, international investment decisions by firms, hedging and other timely topics. Prerequisite: FIN6012 Corporate Finance.

#### FIN6751 2 Credits

#### **Mergers and Acquisitions**

The course covers mergers and acquisitions (M&A), leveraged buyouts and joint ventures and strategic alliances as well as corporate restructurings. The history, laws and strategy of M&A along with corporate governance, sell-offs and business valuation are covered. Prerequisite: FIN6012 Corporate Finance.

#### FIN6800

#### 1-2 Credits

#### **Graduate Independent Study**

Studies in area of discipline with departmental approval.

## FIN6801

## 2 Credits

## **Seminar in Corporate Finance**

Advanced study in corporate finance. Specific topics vary by instructor. May be taken more than once with different instructors. Prerequisite/Corequisite: FIN6012 Corporate Finance.

#### IBUS6012 2 Credits

#### **International Business Concepts**

This is a survey course that introduces graduate students to international business. The underlying factors that drive globalization, shape international business environments and influence business strategies and organizational structures of multinational corporations are critically examined in the course. Thus, the course provides students with the necessary concepts, tools and skills that will permit them to analyze and respond effectively to dynamic changes in the global environment.

#### IBUS6020

#### 2 Credits

#### **Economics of International Trade**

An introduction to international economics, including international commercial policies and their impact on the balance of trade, the balance of payments, capital flows and the international monetary system. Prerequisite: ECON5012 Economic Analysis.

#### IBUS6072 2 Credits International Management

Operation of businesses in an international environment and the issues involved in ownership, management, labor, production, legal, control and public affairs as a result. Prerequisite: MGMT5012 Foundations of

#### IBUS6706 2 Credits International Marketing

An introduction of marketing considerations in international markets. Cultural differences, social patterns, channels of distribution, product attributes, pricing policies and promotional policies are examined within an international framework. Prerequisite: MKTG5012 Marketing Principles.

#### IBUS6742 2 Credits **Global Finance**

Management.

This course examines how the access and exposure to different currency, country and market environments can affect the financial and investment decisions of the firm. Topics include the determination of the exchange rates, measurement and management of the different exposures to currency risk, international investment decisions by firms, hedging and other timely topics. Prerequisite: FIN6012 Corporate Finance.

#### IBUS6800 1-2 Credits

## Graduate Independent Study

Studies in area of discipline with departmental approval.

## IBUS7715 1–3 Credits Doing Business in Europe

The development and conduct of business between the United States and Europe is analyzed with a focus on U.S. relations with the region in terms of its economic goals and business practices. Emphasis is placed on the growth of economic regionalism and the movement toward European integration since 1945.

#### LAW6012 2 Credits Society, Ethics and the Legal Environment of Business

This course provides an overview of the legal environment of business, including the court system, business litigation and alternate disputeresolution methods; the regulatory agencies and administrative law; basic contract and commercial law; and tort law as it relates to business issues. It also explores the relationship that exists between legal issues and the ethical issues that arise in connection with the ways that legal and social problems are addressed within the legal system.

#### LAW6657 3 Credits

#### **Applied Business Law**

This course covers the essential areas of the Uniform Commercial Code, namely contracts, agency, negotiable instruments, secured transactions, bankruptcy, partnerships and corporations. In addition, the Securities and Exchange Acts are given appropriate coverage.

#### MGMT5012 2 Credits

### **Foundations of Management**

This course prepares students to understand at a basic level how the functional areas of business fit within the larger context of organizations. The role of managers and the evolution of management from the classical, human relations and behavioral-systems schools of thought will be discussed. The general management functions of planning, organizing, controlling, staffing and leading will be introduced. Also covered in this course will be the basics of competitive strategy formulation, organization design, motivation, goal setting, group/team dynamics, international management and ethical decision making, as foundations for more advanced treatment of these topics in the M.B.A. core.

#### MGMT6012 2 Credits Organizational Behavior and Leadership

This course emphasizes concepts and tools for assessing the social processes encountered in the workplace. Although the primary focus is on understanding and managing individuals and teams, there is significant attention to systemlevel behavior and change. Students will focus on the application theories and the development of managerial skills, such as understanding individual differences, effectively working in teams, motivating and influencing others, managerial communications, ethical decisionmaking and leadership, as well as managing organizational change. Prerequisite: MGMT5012 Foundations of Management.

#### MGMT6112 2 Credits Managing

### Managing Sustainability in a Global Environment

The course will focus on the current and future challenges and opportunities relating to climate change, sustainable economic development and the role of business. It will explore theory, the values and practical aspects of sustainability, with special emphasis on the role of leadership and managing change. Prerequisite: MGMT6012 Organizational Behavior and Leadership.

#### MGMT6621 2 Credits Strategic Human Resource Management

This course focuses on the new and expanded role of the human resource professional. The course content is centered on the activities performed by a human resource department, for example, recruitment and selection, and compensation and benefits, which are the building blocks for the HR professional. An understanding of these HR functions also is important for line managers who have substantial responsibility for managing people. Prerequisite: MGMT6012 Organizational Behavior and Leadership.

## MGMT6625 2 Credits

## **Managing a Healthy Workforce**

People are the most important resource in determining the overall performance of organizations. Business enterprises are the largest financers of health insurance in the United States and are uniquely positioned to promote and influence the health, well being and productivity of workers. This course adopts an interdisciplinary approach to the challenge of managing a healthy workforce. Students will utilize knowledge acquired in their M.B.A. core courses to analyze and propose solutions to contemporary challenges such as responding to the mandates of recent health care reform legislation, promoting the health status of employees and their dependents, occupational health and safety, coping with job stress, managing the chronic-care needs of an aging workforce, controlling the cost and quality of health care and creating a corporate culture of health and wellness. Course participants will identify current issues and use a team approach to develop actionable management programs that foster workforce health and welfare. Prerequisites: MGMT6012 Organizational Behavior and Leadership and MGMT6621 Strategic Human Resource Management.

## MGMT6633

## 2 Credits

## Leadership and Change Management

Organizations must become more nimble so they can readily adapt to the shifting needs of the global marketplace. To that end, the ability to navigate organizational change is a competitive advantage. This course focuses on the development and application of strategies that will enable individuals to successfully lead organizational change. Topics include models and frameworks of change, as well as ethical responsibility and stakeholder engagement. Prerequisite: MGMT6012 Organizational Behavior and Leadership.

#### MGMT6640 2 Credits Leadership Development Project

This course would include project-based and reflective learning. Emphasis will be placed on negotiation, conflict or knowledge management. This serves as the capstone experience within the management major. Prerequisite: MGMT6012 Organizational Behavior and Leadership.

#### MGMT6700 2 Credits Negotiation and Conflict Management

Negotiation is a crucial aspect of the interactions among individuals, teams and organizations. Moreover, successful negotiations can create value for all participants. This course will introduce students to the theory and practice of negotiation through readings, role-play and other experiential exercises. Influences of culture and ethics on negotiation strategies will be assessed. Students will develop self-awareness through the discovery of their own negotiating style and build a repertoire of personal negotiation strategies. Prerequisite: MGMT6012 Organizational Behavior and Leadership.

## **MGMT6800**

1-3 Credits

#### **Graduate Independent Study**

Studies in area of discipline with departmental approval.

#### MGMT7012 2 Credits Global Business Capstone

Students will integrate strategic, marketing, operating and financial theories and practices to evaluate the formulation and implementation of business strategy in multinational-firm contexts. Issues pertaining to corporate diversification will be examined. Prerequisites: DSCI6012 Operations Management, MGMT6012 Organizational Behavior and Leadership and MKTG6012 Strategic Marketing. Note: This course is restricted to students who have 10 or fewer credits remaining for graduation.

## MIS6012 2 Credits

## **Information Systems for Managers**

This course helps students understand the role of information systems (IS) in supporting business operations and strategy and become effective in IS-related decision making as it relates to the organization and the global marketplace. The students learn the key information technologies and their business applications, including e-business, m-commerce and web-based applications. The influence of information technologies on management and organizations is also studied. Challenges and opportunities that arise in using and managing information resources are examined together with the application of emerging technologies.

#### MKTG5012 2 Credits Marketing Principles

This course will introduce students to marketing terminologies and concepts. The goal is to provide sufficient foundation knowledge to enable students to take courses in the core M.B.A. program. Accordingly, the course introduces students to such fundamental marketing concepts as the marketing mix, segmentation, marketing research and consumer behaviors.

## MKTG6012 2 Credits Strategic Marketing

This course addresses the set of strategic and tactical decisions that marketers need to make to be able to create, communicate and deliver value to selected target markets. The course will address topics such as segmentation, targeting and positioning; new-product development and launch; management of brand equity; and product, price, distribution and promotional strategy. Students will critique firms' marketing strategies that illustrate these issues. Students will also be responsible for integrating these concepts into a marketing plan for a new product. Prerequisite: MKTG5012 Marketing Principles.

#### MKTG6111 2 Credits Digital Marketing Strategies

This course explores digital marketing trends from a theoretical and practical perspective. The class will examine topics such as website design, search-engine optimization, search-engine advertising, email marketing, reputation management and analytics. Exercises and assignments are designed to provide students with the skills to develop, implement and evaluate effective digital marketing programs. Prerequisite: MKTG6012 Strategic Marketing.

#### MKTG6112 2 Credits Social Media Strategy

This course explores current social media platforms and their role in a company's marketing communication strategy, facilitating customer relationships, product innovation and brand equity. Specifically, the course examines how to create and implement a social media campaign, measure and track its performance and utilize appropriate analytic metrics and software platforms. Social media will be examined as part of a larger integrated marketing communication strategy. In addition, it will briefly cover social media's potential role in overall business operations. Applicable consumer behavior, communication and advertising theories will be covered. Prerequisite: MKTG5012 Marketing Principles.

#### MKTG6113 2 Credits Mobile Marketing Strategies

This course will examine the strategic uses of mobile marketing to be able to create and critique a mobile marketing plan. Students will be introduced to the quickly evolving mobile field and be exposed to topics such as mobileready websites, proximity marketing, mobile advertising, mobile applications, messaging and analytics. Prerequisites: MKTG6012 Strategic Marketing and MKTG6111 Digital Marketing Strategies.

## MKTG6602 2 Credits

## **Marketing Research**

This course is designed to provide an in-depth understanding of the marketing research process. This includes identifying and defining marketing problems with sufficient precision to permit the collection of the appropriate market data using a variety of methods. In addition, the course will focus on analyzing data using appropriate techniques to yield useable knowledge that can aid marketers in making better educated decisions. Prerequisites: DSCI5012 Statistical Data Analysis and MKTG6012 Strategic Marketing.

#### MKTG6603 2 Credits **Consumer Behavior**

This course will expose students to various theories and concepts relevant to understanding consumer behavior. The course will focus heavily on consumer psychology and consumer decision-making processes, including factors that influence these processes. This foundation will form the basis of understanding how managers can benefit from such knowledge so that they are better equipped to both predict and influence consumers' responses to marketing strategies and tactics. Prerequisite: MKTG6012 Strategic Marketing.

# MKTG6605

# 2 Credits

## **Marketing Communications**

The course is designed to provide an overview of marketing communications theory, strategy, management and tactics. Students will be exposed to a mixture of applied theory and practical examples of how marketing communications plans and tactics are developed and executed. Prerequisite: MKTG6012 Strategic Marketing.

#### MKTG6614 3 Credits Search Engine Optimization and Advertising

This course will provide an overview on search engine optimization (SEO), search engine marketing (SEM) and display advertising. Students will learn the importance of keyword

research, onsite and offsite SEO best practices, writing effective ad copy, ad bidding, account monitoring and organizing and display networks. Prerequisites: MKTG6012 Strategic Marketing, MKTG6111 Digital Marketing Strategies and MKTG6605 Marketing Communications.

#### MKTG6615 3 Credits Email and Database Marketing

This course will provide an overview of email marketing and database management and their role within an integrated marketing communication strategy. The course will examine how to create, manage and measure an email campaign as well as navigate ethical issues. In addition, emphasis will be given to developing and maintaining customer databases to further the students' understanding of consumer behavior and build stronger customer relationships. Prerequisite: MKTG6012 Strategic Marketing, MKTG6111 Digital Marketing Strategies, MKTG603 Consumer Behavior and MKTG6605 Marketing Communications.

## MKTG6616 3 Credits **Content Marketing**

This course will explore the important role that marketing plays in a company's inbound marketing strategy. Students will learn how to identify/develop engaging content, manage digital assets, understand applicable copyright and legal regulations, execute a content strategy and measure campaign results. Prerequisites: MKTG6012 Strategic Marketing, MKTG6111 Digital Marketing Strategies and MKTG6605 Marketing Communications. Corequisite: MKTG6112 Social Media Strategy.

#### MKTG6617 3 Credits Web Analytics

This course will explore how to utilize quantitative and qualitative data to better inform marketing decisions. Students will identify key performance indicators (KPI), be exposed to a variety of analytic tools, conduct A/B testing, familiarize themselves with analytic dashboards and create actionable analytic reports that will provide insight into website design, buying behavior, social media and advertising-related decisions. Prerequisites: DSCI5012 Strategic Marketing, MKTG6111 Digital Marketing Strategies and MKTG6602 Marketing Research.

## MKTG6800 1-2 Credits

## **Graduate Independent Study**

Studies in area of discipline with departmental approval. (Internship or special projects)

#### MKTG8850 1–2 Credits Advanced Special Projects: Marketing

Studies in an area of marketing, with departmental approval. It is the student's responsibility to obtain a faculty mentor. Prerequisite: MKTG5012 Marketing Principles.

# PHAR6601 3 Credits

## **Health Care Systems and Policy**

This course provides a comprehensive overview of the structure and operations of the United States health care delivery system. Major forces and trends that are likely to shape the external environment and linkages among industry stakeholders are identified and examined. Fundamentals of health care economics, financing, reimbursement, quality assurance and political policymaking are discussed with due regard for social and ethical implications. The spectrum of life sciences is considered in relation to the continuum of health care delivery. Students will prepare a position paper that applies course concepts to a contemporary issue of relevance to their specific career interests.

#### PHAR6615 2 credits

### Pharmaceutical Marketing and Product Development

This course surveys sales and marketing practices, constraints and promotion tools in the pharmaceutical and related industries, including new product development and licensing. Prerequisites: MKTG5012 Marketing Principles and PHAR6601 Health Care Systems and Policy.

#### PHAR6640 2 credits

## Management of Research and Technology in the Pharmaceutical Industry

Strategic, organizational and human factors involved in successful research and development operations in pharmaceutical and chemical companies are reviewed. Also covered are the selection and development of projects, creativity, liaison problems, control devices, analysis, reports and communications and other factors involved in program/project management. Prerequisites: MGMT5012 Foundations of Management and PHAR6601 Health Care Systems and Policy.

## PHAR6650

#### 2 credits Management of Production, Purchasing and Quality Control in the Pharmaceutical Industry

Overview of the problems and factors involved in effective supply-chain management of pharmaceutical facilities, from purchasing through production and quality control. Prerequisites: DSCI6012 Operations Management and PHAR6601 Health Care Systems and Policy.

#### PHAR6680 2 Credits Structure, Regulation and Strategy of the Pharmaceutical Industry

This course examines industry structure and its implications for both industry regulation and corporate strategy. Key issues of corporate strategy are addressed including, globalization, vertical integration, diversification and focus. Strategy and regulation are considered from the point of view of biotech companies, big pharmaceutical companies and industry suppliers. Prerequisite: PHAR6601 Health Care Systems and Policy.

## PHAR6690 3 Credits

## Managing the Value Proposition

Of strategic concern to pharmaceutical managers, regardless of their particular career focus, is the current emphasis on delivering "value" to stakeholders (whomever they may be). Successful response to this challenge requires a balanced approach to managing the effectiveness (quality) and efficiency (cost) of products/services delivered. The role of managed-care organizations as adjudicators of health care coverage and value will be explored. As their course project, students will be challenged to develop a compelling value proposition for a product or service germane to their chosen area of industry specialization. Prerequisites: PHAR6601 Health Care Systems and Policy and PHAR elective.

#### PHAR6800 1–2 Credits

## Graduate Independent Study

Studies in area of discipline with departmental approval.

#### PHAR7715 2 credits

## Topics in Current Developments

Current issues, ideas and problems of interest to the pharmaceutical and chemical industries. An emphasis on the use of current literature, the participants in current issues, specialists and intervention by government authorities. Enrollment by special permission only.

#### TAX6621

**3** Credits

# Advanced Federal Tax: Individual Income Taxation

This course is designed to introduce the student to the case method and the use of the Internal Revenue Code as a foundation for tax research and planning. Substantively, the course examines gains and losses, basis rules, capital assets, section 1231, taxation of capital transactions, depreciation and recapture, interest, charitable contributions and tax aspects of divorce. Prerequisite: ACCT6605 Federal Tax I: Individual.

#### TAX6622 3 Credits Advanced Corporate Tax I

This course introduces the study of corporate taxation. It covers the tax aspects of incorporation, financing the entity, distributions, redemptions and liquidations. S corporations also are covered, as well as the alternative minimum tax and computation of taxable income and tax. Prerequisite: ACCT6606 Federal Tax II: Business Entities.

#### TAX6625 3 Credits Estate and Gift Taxation

The study of transfer taxes during life and death. Concepts such as gross and taxable estate and gifts will be explored in detail. The course covers inclusions, deductions, valuations, exemptions, credits and tax computations for gifts and estates.

## TAX6670 3 Credits **Tax Accounting**

The study of tax law as it pertains to the timing and treatment of tax items. Topics will include the cash and accrual method for income tax, installment sales, inventories (including unicap), changes in accounting methods, the tax benefit rule, accounting periods, time value of money and the annual accounting period.

#### TAX6850 3 Credits Tax Research

A study and implementation of tax research techniques, including internet and proprietary research databases. Through a variety of written projects, oral presentations and class material, the student will develop the ability to identify, research and communicate the solutions to a variety of tax issues that are encountered in practice. Emphasis will be on the development of sound research and writing skills. Prerequisites: TAX6621 Advanced Federal Tax I: Individual Income Taxation, TAX6622 Advanced Corporate Tax I and TAX7724 Tax Practice and Procedure I.

#### TAX7705 3 Credits U.S. International Corporate Taxation

A comprehensive course for corporate tax practitioners who do not choose to specialize in international tax. The course is an intensive course limited in scope. Certain topics, such as foreign tax credit and Subpart F, are covered in the same depth as they are in specialist courses, but offer only limited, if any, coverage of other specialist topics. The goal is to teach those operating in a large corporate environment what they need to know to function as an international tax person. This course covers topics such as the foreign tax credit, sourcing of income, deemed paid credits, separate limitation categories, allocation and apportionment rules and Subpart F. Prerequisite: TAX6622 Advanced Corporate Tax I. TAX7725 Advanced Corporate Tax II recommended. Waivers may be granted by the program director in consultation with the course professor.

#### TAX7708 3 Credits International Tax I: Sourcing and Inbound

This first of three courses for international tax specialists provides in-depth coverage of the source-of-income rules and U.S. taxation of foreign persons. The course also explains the rules for U.S. taxation of international assignees, provides an overview of income tax treaties and covers withholding taxes.

## TAX7710 3 Credits

## International Tax II: Outbound

This second course for international tax specialists covers foreign tax credits for corporations and related topics. Included are creditable taxes, separate limitation categories, deemed paid credits, allocation and apportionment, Subpart F, PFIC rules and the various international tax implications of the American Jobs Creation Act of 2004. Prerequisites: TAX6622 Advanced Corporate Tax I and TAX7708 International Tax I: Sourcing and Inbound or TAX7705 U.S. International Corporate Taxation or permission from the director of the tax program in consultation with the course professor.

## TAX7711 3 Credits

## **International Tax III: Special Topics**

This third course for international tax specialists provides a comprehensive review of international structuring and reorganizations, including use of hybrid entities. In addition, there is coverage of the U.S. transfer pricing rules and sourcing rules related to produced inventory. Prerequisites: TAX7710 International Tax II: Outbound and TAX7725 Advanced Corporate Tax II.

#### TAX7723 3 Credits Estate and Gift Tax Planning

This course explores estate planning for gifts and other transfers by use of various techniques. Planning for business and other wealth transfers among family members will be highlighted. Topics will include marital deduction, split gifts, life insurance, charitable gifts, use of trusts and planning for estate liquidity. Prerequisite: TAX6625 Estate and Gift Taxation.

# TAX7724 3 Credits

## Tax Practice and Procedure I

A study of Subtitle F of the Code, dealing with tax procedures applicable to individuals and businesses. Topics include IRS organization, tax aspects of returns, administrative rulings and position statements, civil litigation in tax and district court, statutes of limitations, various types of assessments, waivers, overpayment and refunds, interest and civil penalties. The course also will include a study of Circular 230, professional responsibility and penalties that apply to practitioners.

#### TAX7725 3 Credits Advanced Corporate Tax II

A continuation of TAX6622 Advanced Corporate Tax I, this course covers corporate acquisitions and dispositions, including both taxable transactions and nonrecognition reorganizations. The course examines acquisitive reorganizations in depth, followed by reorganizations within a single corporation and divisive reorganizations. Topics include the judicial doctrine of business purpose, step transaction and continuity of interest. The course ends with a study of the transfer and survival of corporate tax attributes after reorganization. Prerequisite: TAX6622 Advanced Corporate Tax I.

## TAX7726

**3 Credits** 

#### Compensation: Executive Compensation and Nonqualified Plans

A study of the tax aspects of various forms of executive and employee compensation. The major focus of the course will be on nonqualified plans. The course covers various compensation techniques, including traditional deferred compensation arrangements, nonqualified stock options, stock appreciation rights, phantom stock plans, stock awards, restricted stock plans, excess benefit arrangements, rabbi trusts, split-dollar plans and severance-pay plans.

## TAX7727

#### 3 Credits Advanced Federal Tax: Property Transactions

This course concentrates on the tax aspects of acquisitions and dispositions of property. Topics will include like-kind exchanges, involuntary conversions, assignment of income doctrine, disposition of residence, cancellation of indebtedness and limitation on losses, such as at-risk rules and passive activity rules, hobby losses, home office and net operating losses (NOL). Prerequisite: ACCT6605 Federal Tax I: Individual.

#### TAX7728 3 Credits Partnership Taxation

The study of the federal taxation of partnerships and partners. The course covers formation, operation and liquidation of a partnership, including the acquisition of partnership interests, compensation of a service partner, treatment of partnership distributions, basis, allocations, liquidations and problems associated with the disposition of partnership interests or property by sale. Prerequisites: ACCT6606 Federal Tax II: Business Entities, TAX6621 Advanced Federal Tax: Individual Income Taxation and TAX7727 Advanced Federal Tax: Property Transactions.

#### TAX7730 3 Credits Income Taxation of Estates and Trusts

A study of the federal income taxation of estates and trusts (grantor, simple and complex). The course analyzes tax consequences to fiduciaries, beneficiaries, grantors and other parties from inception through termination. Topics include general rules for taxation, fiduciary accounting income, distributable net income, income distribution deduction, computation of taxable income, various distributions and income in respect of a decedent.

## TAX7732 3 Credits

#### **Tax Practice and Procedure II**

A complete review of procedures and strategies involved in the audit, appeal and collection process. Other topics include liens and levies, offers in compromise, installment agreements, closing agreements, summons enforcement, IRS investigatory powers and criminal aspects of the tax laws. Prerequisite: TAX7724 Tax Practice and Procedure I or permission from the director of the tax program.

#### TAX7734 3 Credits **Consolidated Returns**

This course covers in depth the most important aspects of the current consolidated return regulations. Topics include intercompany transactions with a detailed study of both the matching principle and acceleration rules, loss disallowance rules, consolidated Section 382, investment adjustments in the basis of the stock of subsidiaries, excess loss accounts and allocation of consolidated tax liability to members of an affiliated group. Class discussions emphasize working through important examples contained in the regulations. Prerequisites: TAX6622 Advanced Corporate Tax I and TAX7725 Advanced Corporate Tax II.

#### TAX7735 3 Credits **Tax-exempt Organizations**

This course covers the formation, operation and taxation of tax-exempt organizations. Emphasis will be placed on the qualification process for tax exemption, the unrelated business tax and the special "excise" taxes on private foundations. Compliance requirements also are reviewed.

#### TAX7736 3 Credits State and Local Taxation: Constitutional Issues

This foundation course examines the constitutional limits on states' rights to impose various forms of taxation on income, capital and transactions of individuals and multistate businesses. Topics include nexus, constitutionally acceptable income-allocation methods and strategies for avoiding unnecessary taxation by nondomiciliary states.

## TAX7738

#### **3** Credits

#### **Compensation: Qualified Pension and Profit-sharing Plans**

A study of qualified compensation arrangements, including pension and profit-sharing plans. The course covers plan selection, qualification requirements, limitations on contributions, benefits, deductions and funding, nondiscrimination, taxation of distributions, rollovers, minimum distributions, incidental benefits, spousal rights, multiple-entity structure, reporting and disclosure, prohibited transactions and fiduciary responsibility.

## TAX7750

## **3** Credits

# State and Local Taxation: Corporate and Individual Income Taxation

A study of the major income and franchise tax issues confronting nonresident individuals, passthrough entities, nonresident shareholders of S corporations and multistate and multinational corporate businesses covered in the context of current litigation and rule-making at the state and local levels. The course also explores taxplanning opportunities for the multistate business and the use of transfer pricing in state and local income tax matters. Individual income taxation and the interaction between the state and federal systems also are discussed. Special attention is paid to tax systems used in New York and New Jersey.

#### TAX7752 3 Credits

# State and Local Taxation: Sales, Use and Property Taxes

This course examines the sales, use and property tax schemes prevailing in the United States. Sales and use tax constitutes roughly 33 percent of all state tax collections, whereas property tax constitutes about 50 percent. The course examines the definition of a sale, the nuances relative to a manufacturing and construction, the power of the states to assert jurisdiction over aspects of a transaction occurring beyond their borders and exemptions. Relating to property tax, the course examines State Constitutional Principles of Uniformity and Equal Protection, approaches to valuation, exemption and incentives. Special attention is paid to tax systems used in New York and New Jersey. Other common levies also may be covered.

#### TAX8840 3 Credits

### Taxation of S Corporations: Selected Studies

This course undertakes an in-depth study and analysis of the tax laws that apply to S corporations and their shareholders. Topics will include eligibility, election, revocation and termination, stock and debt basis, losses, distributions, various corporate level taxes, subsidiaries, fringe benefits and comparisons to other forms of business entities. Prerequisites: ACCT6606 Federal Tax II: Business Entities and TAX6622 Advanced Corporate Tax I.

## TAX8850

# 3 Credits

## **Taxation of Financial Products**

This course focuses on the taxation of financial instruments, products and transactions. It begins by covering basic principles, including financial terminology, types of market participants, as well as the tax concepts of timing, character and source. It then proceeds with a study of the detailed rules regarding tax treatment of financial instruments including stocks, bonds, options, forward contracts, futures contracts, convertible and contingent payment instruments, swaps, as well as hybrid instruments. Tax issues that will be addressed include wash sales, constructive sales, short-sale rules, straddles, market discount, original issue discount, Section 1256 and notional principal contract regulations. International tax and reporting issues will also be covered.

## TAX8860

**3** Credits

#### Accounting for Income Taxes (ASC 740/FAS 109/FIN 48)

This course provides an in-depth analysis of the financial accounting for income taxes under U.S. Generally Accepted Accounting Principles (GAAP). The course begins with a conceptual framework and then discusses such practical applications as computing the tax provision, effective tax rate, quarterly and annual reporting and financial disclosures for income taxes. All major elements of ASC 740 (FAS 109) are considered, as are related pronouncements such as (pre-codification) FIN 48, APB 28, FIN 18 and other accounting guidance. Emphasis will be given to practical application of the accounting standards to "real-world" situations.

# Chemistry (M.S.)

This program is offered at both the Florham Campus, Madison, New Jersey, and the Metropolitan Campus, Teaneck, New Jersey. These programs are listed by campus on this page through 95.

# **Chemistry (M.S.)**

## Florham Campus

The Master of Science in chemistry program provides training for those who wish to advance their careers in research, industry, government service or teaching. In addition to advancing students toward a doctoral program, the program also provides courses of interest to industrial chemists who already may hold advanced degrees. In addition to full-time faculty, the department of chemistry and biochemistry draws part-time faculty from local industries, allowing a broader range of offerings.

This program is offered under the auspices of the department of chemistry and biochemistry, Maxwell Becton College of Arts and Sciences, Florham Campus, Madison, New Jersey.

## **Admission Requirements**

1. Graduation from an accredited college or university.

2. Satisfactory completion of a minimum of 24 credits in undergraduate chemistry with laboratory work, including physical and organic chemistry, a working knowledge of calculus and one year of physics with laboratory.

3. Submission of an official score report for the Graduate Record Examinations (GRE) General Test taken within the last five years. (The GRE requirement is waived for applicants who have completed a master's degree.)

4. Three letters of recommendation.

Applicants who have not completed all requirements for admission to the degree program may be permitted to enroll in classes for credit on a nonmatriculated or nondegree basis.

## Requirements for the Master of Science Degree

1. Satisfactory completion of a minimum of 32\* credits in courses prescribed or approved for the degree of Master of Science in chemistry.

2. Compliance with the minimum course requirements listed in the this column.

Core Courses	Credits
CHEM6613	
Advanced Inorganic Chemistry	3
CHEM6673	
Physical Organic Chemistry	3
CHEM6781	
Biochemistry	3
CHEM6805	
Graduate Seminar	1
CHEM7771	
Advanced Organic Synthesis	3

## Two of the following three courses:

CHEM6641
Quantum Chemistry
CHEM6651
Chemical Thermodynamics3
CHEM7751
Chemical Kinetics

## **Other Courses**

CHEM6801, CHEM6802
Research and Thesis (Optional)*
3 credits each semester6
CHEM6803
Thesis Seminar (Optional)*1
Minimum of 6 credits in additional
chemistry courses approved by adviser.**

\*A student may substitute 9 credits of additional chemistry courses for the CHEM6801, CHEM6802 Research and Thesis and CHEM6803 Thesis Seminar (total 7 credits) requirements. This makes a minimum of 34 credits in courses for the Master of Science degree when a student elects the nonthesis option. The thesis option is not open to the pharmaceutical chemistry concentration student.

\*\*Up to 6 credits of graduate courses in a single area outside of chemistry to be approved by adviser may be substituted.

## **Course Offerings**

Courses offered fall, spring and/or summer are so noted. To determine availability of courses not so designated, please check with appropriate department chair.

## Chemistry

Department of Chemistry and Biochemistry

## CHEM5242 3 Credits

## **Physical Chemistry II**

Introduction to the principles of kinetics, quantum mechanics, spectroscopy and molecular structure. *Spring* 

#### CHEM5803 2 Credits Foundations in Chemical Analysis

Instrumental methods, including electrochemical methods, spectroscopy (UV/Vis, IR, NMR) and chromatography (GC-MS, HPLC). Computer handling of data and report writing. Corequisite: CHEM7733 Instrumental Analysis.

CHEM6605 3 Credits Chemical and Pharmaceutical Statistics

This class presents applied statistical procedures and research designs in pharmacology research contexts. The major techniques and methods of analyzing research results commonly published in pharmacology are highlighted. Note: FDU NetID (formerly Webmail) account required.

## CHEM6613 3 Credits

# Advanced Inorganic Chemistry

Modern theories of bonding, structure, stability of molecules, complexes and reaction mechanisms, using examples drawn from the current literature. *Spring* 

## CHEM6631

**3** Credits

#### **Theories of Analytical Chemistry**

Theoretical principles and applications of selected modern methods of analysis.

# CHEM6641 3 Credits

# Quantum Chemistry

Fundamental theories of quantum chemistry applied to chemical bonding and molecular structure.

#### CHEM6651 3 Credits **Chemical Thermodynamics**

Principles of classical thermodynamics and an introduction to statistical thermodynamics.

#### CHEM6663 3 Credits

## **Introductory Medicinal Chemistry**

This course is based on all branches of chemistry, but especially organic chemistry. Its focus is on improving a drug's therapeutic effect while minimizing its undesirable side effects.

# CHEM6673 3 Credits

## **Physical Organic Chemistry**

Current theories of structure and reactivity of organic compounds.

#### CHEM6685 3 Credits

## Pharmacology

A study of drugs, their history, sources, physical and chemical properties, compounding, biochemical and physiological effects, mechanism of action, absorption, distribution in the body and therapeutic uses.

# CHEM6757 3 Credits

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# Neuropharmacology

This course studies the functional neuropharmacology and receptology of the mammalian central nervous system, focusing on the neurochemistry of precursors, synthesis, release and second messenger systems for various neurotransmitter systems as well as the mechanism of action of psychoactive drugs and medications used to treat pain, mental illnesses and disorders such as Parkinson's disease, Alzheimer's and epilepsy.

#### CHEM6759 3 Credits Radiochemistry

A presentation of radioisotope production, detection and application in chemistry. Statistical and safety aspects of radiation also are included.

#### CHEM6768 0–3 Credits Engaging Students in Physical

# Science Classroom

Students will participate in an interactive workshop course to discuss and explore effective ways to excite and engage students in areas of chemistry, physics and earth science. Note: For Institute for the Enhancement of Teaching Science and Math (IETSM) teachers only.

#### CHEM6769 0-3 Credits Curricular Change in Physical Science

The course is offered to support teachers currently involved within the Institute for the Enhancement of Teaching Science and Math.

#### CHEM6773 3 Credits

## **Polymer Chemistry**

A study of natural and synthetic polymers derived from free radical, cationic and anionic polymerizations.

## CHEM6775

**3 Credits** 

## **Chemistry of Natural Products**

Chemical and biochemical transformations of selected natural products.

## CHEM6781

## 3 Credits

## **Biochemistry**

Structure and function of biological molecules. (Equivalent to HSCI6781 Biochemistry for the Medical Sciences.) *Fall* 

## **CHEM6800**

#### 1–3 Credits Graduate Independent Study: Chemistry

An in-depth independent study of a problem in chemistry.

## CHEM6801, CHEM6802

#### 6 Credits (3 Credits Each Semester) **Research and Thesis**

Individual research investigation in an area of chemistry under the supervision of a faculty adviser. Approved thesis must be submitted.

## CHEM6803

## 1 Credit

## Thesis Seminar

An oral presentation and defense of thesis before a departmental committee. Prerequisites or corequisites: CHEM6801, CHEM6802 Research and Thesis.

#### CHEM6805 1 Credit

## **Graduate Seminar**

Chemical literature is reviewed through lectures, library assignments and student seminars. *Spring* 

## **CHEM6806**

#### 0–3 Credits Graduate (Nonthesis) Research in Chemistry

Graduate level, nonthesis research with an adviser in the chemistry and pharmaceutical science department. Prerequisite: undergraduate degree in chemistry.

CHEM6830, CHEM6831, CHEM6832, CHEM6833 3 Credits Special Topics in Chemistry

#### CHEM7733 3 Credits Instrumental Analysis

Applications of spectroscopy, electrochemistry and chromatography to chemical problems, with particular emphasis on comparison of methods and interpretation of experimental data. *Fall* 

#### CHEM7735 3 Credits Pharmaceutical Analysis

## Pharmaceutical Analysis

The analytical chemistry unique to pharmaceutical compounds from the viewpoint of a pharmaceutical scientist.

## CHEM7747 3 Credits **Protein Chemistry**

The chemistry and physical properties of amino acids, peptides and proteins; the threedimensional structure of proteins; protein function in enzymes, biological membranes, connective tissues, oxygen transport and storage; biosynthesis of proteins in muscle contraction, membrane transport, sensory systems, hormones and the immune response.

#### CHEM7751 3 Credits Chemical Kinetics

Theory of homogeneous and heterogeneous reactions, factors influencing reaction rates, theory of absolute rates, chain reactions, catalysis. Prerequisite: CHEM5242 Physical Chemistry II.

#### CHEM7753 3 Credits **Pharmacokinetics**

The study of the rate of change of drug concentration in the body. Understanding the absorption, distribution, biotransformation and excretion of drugs is used in the design and optimization of drug formulations and dosage regimens.

## CHEM7765 3 Credits

## **Heterocyclic Chemistry**

A discussion of the preparation and chemical properties of mono- and polycyclic compounds containing oxygen, nitrogen and sulfur atoms. Those of biological interest also will be discussed.

## CHEM7771 3 Credits

## **Advanced Organic Synthesis**

A study of selected synthetic organic reactions. (Equivalent to HSCI7771 Advanced Organic Synthesis.)

#### CHEM7783 3 Credits **Biochemistry II**

Continues the study of the molecular basis of life. Topics include more details and discussions of current research: structure of biological molecules, mechanisms of enzyme action, metabolism with emphasis on energy production and use, the expression of genetic information and cellular signaling and signal transduction.

#### CHEM7785 3 Credits Physical Biochemistry

The physical chemistry of biological macromolecules and systems of biochemical interest.

#### CHEM7891 1–3 Credits Internship/Laboratory Work Experience

Provides on-the-job education and training in the concepts presented in the graduate pharmaceutical chemistry curriculum. Students must submit for the University's approval a proposal from the employer detailing the nature of the intended work. Weekly contact must be maintained with the University's adviser to confirm the quality of the work experience. A report at the conclusion of the working experience is required, detailing both the educational and training aspects of the job. Prerequisite: students must have been enrolled in the graduate pharmaceutical chemistry program for at least 18 graduate chemistry credits.

# Chemistry (M.S.)

# Metropolitan Campus

The School of Natural Sciences, University College: Arts • Sciences • Professional Studies, Metropolitan Campus, Teaneck, New Jersey, offers a Master of Science in chemistry with concentrations in informatics and pharmaceutical chemistry. This focused concentration is designed to fulfill the practical and intellectual needs of chemists pursuing research and development careers within the pharmaceutical industry. For those without industrial experience, the programs can help launch a career in the pharmaceutical industry. It is also geared to current technologists aspiring to supervisory roles in the laboratory or plant. To accommodate part-time students who are already working in the industry, classes are offered in the evenings.

# **Admission Requirements**

1. Graduation from an accredited college or university with a baccalaureate degree in an allied science (biology, chemistry, biochemistry or pharmacy).

2. Satisfactory completion of a minimum of 24 credits in chemistry including a two-semester sequence of organic and physical chemistry.

3. Submission of the general Graduate Record Examinations (GRE) scores and three letters of recommendation.

4. A minimum score of 550 (paperbased) or 213 (computer-based) or 79 (internet-based) on the Test of English as a Foreign Language (TOEFL) is required for all applicants whose native language is not English.

Note that financial assistance in the form of teaching assistantships and research scholarships is not available.

## **Informatics Concentration**

This concentration is an interdisciplinary program including training not only in chemistry but also in applied statistics and computer science. Students will complete graduate course work in chemistry, biology and mathematics.

Graduates of this concentration will be able to use information technology to improve productivity and success rates in pharmaceutical research. They will develop and evaluate new chemical research strategies by analyzing or mining large amounts of data available in drug

# Chemistry

discovery, public health, clinical research and genomics databases. Since informatics is a rapidly evolving field, there are career opportunities in the pharmaceutical industry as well as in academic research.

To accommodate part-time students already working in the industry, classes are offered on an evening schedule.

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# Chemistry Core Requirements (12 credits)

Credits
CHEM6525
Physical Chemistry3
CHEM6673
Physical Organic Chemistry3
CHEM6781
Biochemistry
or
CHEM6733

Enzymology3
CHEM7713
Structural Inorganic Chemistry3

## Informatics Concentration Requirements (21 credits)

BIOL6743
Topics in Bioinformatics3
BIOL6744
Lab: Topics in Bioinformatics 0
CHEM6751
Pharmaceutical Discovery
Informatics3
CHEM6752
Drug Design and Discovery 3
CHEM6755
Medicinal Chemistry3
CHEM7737
Chemical Analysis of
Pharmaceuticals3
MATH6729
Statistical Programming3
MATH6737
Applied Statistics I3

## Pharmaceutical Chemistry Concentration

This focused concentration is designed to fulfill the practical and intellectual needs of chemists pursuing research and development careers within the pharmaceutical industry. For those without industrial experience, the programs can help launch a career in the pharmaceutical industry. It is also geared to current technologists aspiring to supervisory roles in the laboratory or plant. To accommodate part-time students who are already working in the industry, classes are offered in the evenings.

# Chemistry Core Requirements (12 credits)

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Credits
CHEM6525
Physical Chemistry3
CHEM6673
Physical Organic Chemistry
CHEM6781
Biochemistry
or
CHEM6733
Enzymology 3
CHEM7713
Structural Inorganic Chemistry3

# Pharmaceutical Chemistry Concentration Requirements (12–13 credits)

BIOL6758
Advances in Pharmacology3
BIOL6845, BIOL6846
Molecular Biology Techniques
(Lecture and Laboratory) 4
or
CHEM7737
Chemical Analysis of
Pharmaceuticals3
CHEM6752
Drug Design and Discovery
or
CHEM6755
Medicinal Chemistry
CHEM6754
Drug-delivery Systems

## Free Electives (9 credits)

## **Course Offerings**

Courses offered fall, spring and/or summer are so noted. To determine availability of courses not so designated, please check with appropriate school director.

## Chemistry

School of Natural Sciences

# CHEM6525

#### 3 Credits Physical Chemistry

Principles of thermodynamics, kinetics, quantum chemistry, statistical mechanics, spectroscopy and molecular structure. Assumes prior knowledge of MATH2202 Calculus II or equivalent.

## CHEM6526 3 Credits

## **Product Development**

Principles of research and development of new products from ideation to market distribution. An overview of the product-development process from the perspective of the cosmetic chemist, from project inception through manufacturing.

## CHEM6529

## **3** Credits

## **Microtoxicology and Biochemistry**

Relationships between microorganisms, toxicity and cosmetic products. The application of principles of biochemistry and toxicology as they relate to and impact on both microorganisms and human metabolism. *Fall* 

## CHEM6546

3 Credits

#### Lecture Perfumerv

The history, raw materials, development and marketing of fragrances.

# CHEM6613

## 3 Credits

## **Advanced Inorganic Chemistry**

Modern theories of bonding, structure, stability of molecules, complexes and reaction mechanisms, using examples drawn from the current literature.

# CHEM6631

# 3 Credits

# Advanced Analytical Chemistry

Physicochemical methods used to effect separations prior to analytical measurements and a study of matter and energy-matter interactions.

## CHEM6641

#### 3 Credits Quantum Chemistry

Fundamental theories of quantum chemistry applied to chemical bonding and molecular

# Chemistry

structure. Prerequisite: one year of calculus including differential equations.

### CHEM6651 3 Credits Chemical Thermodynamics

Principles of classical thermodynamics and statistical thermodynamics.

#### CHEM6673 3 Credits Physical Organic Chemistry

Current theories of the structure and reactivity of organic compounds, including dipole moments, stereochemistry and modern mechanisms.

#### CHEM6697 1 Credit Introduction to Research

An individual research investigation in a selected area of chemistry is planned under the supervision of a faculty mentor. Preliminary readings are assigned, and a report outlining the proposed investigation is submitted to the department at the conclusion of the course. Prerequisite: 12 graduate credits in chemistry.

#### CHEM6751 3 Credits Pharmaceutical Discovery Informatics

This course introduces how information systems and computer technology interrelate to collect, manipulate and disseminate data and information within the context of pharmaceutical and biotechnology industries. The course examines the concepts, techniques and methods used in the description and analysis of data and in statistical inference.

#### CHEM6752 3 Credits Drug Design and Discovery

#### Drug Design and Discovery

Structure and mechanism of drug action, rational drug designing on basis of structureactivity relationship and biotechnology approaches for drug discovery.

#### CHEM6754 3 Credits Drug-delivery Systems

Theoretical and practical considerations in the

development and design of drug-delivery systems.

#### CHEM6755 3 Credits Medicinal Chemistry

Principles of absorption, distribution, metabolism and excretion (ADME); drugprotein interactions; concepts of drug targets; and toxicology.

## CHEM6761 3 Credits

# **Advanced Organic Chemistry**

Advanced topics in organic chemistry, stereochemistry, organophosphorous-, organoboron-, organosilicon-, organometallic chemistry, significant current developments.

#### CHEM6773 3 Credits **Polymer Chemistry**

Polymerization of vinyl monomers by free radical, cationic and anionic mechanisms; polymerization kinetics; copolymerization; stereospecific polymerization; condensation polymerization; chemistry and properties of vinyl, diene and condensation polymers and rubbers; natural and inorganic polymers.

## CHEM6775 3 Credits

## **Chemistry of Natural Products**

Structural and biogenetic relationships of natural products, chemical transformations, stereochemistry and synthesis.

### CHEM6781 3 Credits **Biochemistry**

Chemistry of substances of biological significance, structures and mechanisms of hydrolytic and respiratory enzymes, biosyntheses of proteins, bio-oxidations and molecular structures of complex molecules.

## CHEM6830

**3** Credits

## **Special Topics in Chemistry**

Topics of current interest in theoretical and applied chemistry. Prerequisite: permission of the department. Course may be repeated in successive years for credit with the permission of the department.

### CHEM7713 3 Credits **Structural Inorganic Chemistry**

Structural patterns of inorganic molecules and crystals, emphasizing symmetry concepts and the group theory of symmetry operations, with applications of this theory to metal complexes and other compounds.

#### CHEM7733 3 Credits Instrumental Analysis

Applications of spectroscopy, electrochemistry and chromatography to chemical problems, with particular emphasis on interpretation of experimental data.

## CHEM7735 3 Credits

## **Pharmaceutical Analysis**

The analytical chemistry unique to pharmaceutical compounds from the viewpoint of a pharmaceutical scientist.

#### CHEM7737 3 Credits Chemical Analysis of

## Pharmaceuticals

Analytical chemistry, techniques and methods most commonly used in the pharmaceutical industry.

## CHEM7747 3 Credits

# Protein Chemistry

Chemistry and physical properties of amino acids, polypeptides and proteins; sequence and structure determination; correlation of structure and biological properties; protein biosynthesis.

## CHEM7771

**3 Credits** 

## Advanced Organic Synthesis

Modern synthetic techniques and procedures, emphasizing the theoretical background of the procedures and preparing the student for advanced research.

### **CHEM7785**

### 3 Credits

## **Physical Biochemistry**

The physical chemistry of biological macromolecules: osmometry, light scattering, viscosity, ultra centrifugation, electrophoresis and X-ray diffraction. Thermodynamics, electrostatics and acid-base equilibria, with reference to biochemistry. Structure and function of nucleic acids, bioinorganic chemistry.

## CHEM8000

1 Credit

## **Curricular Practical Training**

A Curricular Practical Training (CPT) requirement for work-experience course/independent study registration in most academic programs at FDU. The training experience is integral to the course and the detailed course objectives will be on a separate independent study proposal form. The student's work or training experience will be: part-time (20 hours or less per week) or full-time (more than 20 hours per week). A non-letter grade of P for Pass or NC for No Credit will be applied to degree audit as this course will be excess credit and not counted toward a degree requirement.

## PHYS6753

# 3 Credits

# **Applied Colloid and Surface Science**

The technical aspects of emulsions, solubilized systems, foams and dispersions. Structure and dynamics of complex systems. Polyphase equilibrium, phase transitions and kinetic distributions. The physics of interfaces and effects of surface structure. Principles of colloid science along with practical procedures as applied in cosmetic formulations, including examples.

# Clinical Mental Health Counseling (M.A.)

The clinical mental health counseling program, accredited by the Council for Accreditation of Counseling and Related Educational Programs (CACREP), prepares its graduates for the professional practice of counseling in a variety of work settings such as universities, community agencies, clinics, hospitals, drug abuse centers, child protective services, private practice, business and industry. The program also prepares highly competent counseling professionals - including entry- and advanced-level counselors. counseling researchers and counseling administrators - to have a significant impact on the mental health field as counselors, program directors, researchers, grant writers and policy makers on the local, state and national levels. With those goals in mind, the curriculum focuses on a broad spectrum of issues including: assessing, treating or working to ameliorate a disability, problem or disorder; the antecedent conditions that predispose people to developmental. emotional, personality or relationship problems experienced by individuals, couples, families or groups; the nature and treatment of those disorders, crisisintervention strategies; and the influence of various family and group dynamics, gender differences, cultural diversity, social problems and age on the emergence of various problems and symptoms.

Students will be trained to conduct intake and assessment interviews, to develop treatment plans and counseling interventions and to function as an ethical and competent counselor. Students also will acquire a knowledge of research and assessment techniques and the pragmatic concerns (e.g., managed care and budget constraints) facing the mental health field today.

In order to apply what they have learned in the classroom, students will, in consultation with and with the approval of the coordinator of practicum/internship, procure a practicum and internship site and complete 100 hours of practicum and 600 hours of internship at a mental-health counseling site. Experiences will be arranged with the coordinator of practicum/internship, and the student will be supervised both "on-site" and on campus by licensed personnel.

The M.A. in clinical mental health counseling is a 60-credit degree. To meet the requirements of New Jersey licensure as a **licensed professional counselor** (LPC), students must complete 60 credits. To meet the requirements for the **student assistant coordinator (SAC)**, students must complete 24 graduate credits.

This program is offered under the auspices of the department of psychology and counseling, Maxwell Becton College of Arts and Sciences, Florham Campus, Madison, New Jersey.

## **Admission Requirements**

1. Graduation from an accredited college or university.

2. If a person's undergraduate degree was in psychology (with a minimum of 12 credits in psychology), he/she must have completed at least one course in statistics and experimental psychology, and have a minimum grade point ratio (GPR) of 3.30 in the psychology major and a 3.00 overall GPR.

3. If a person's undergraduate degree was *not* in psychology, he/she must successfully complete an undergraduate general psychology course or a graduate advanced general psychology course with a grade of B or better.

4. Submission of undergraduate transcripts.

5. Submission of three letters of recommendation.

6. A written personal statement of professional goals.

7. Completion of a Fairleigh Dickinson Graduate School application form.

8. A personal interview, which will be scheduled after the application is submitted, is required.

## **Requirements for the Master of Arts Degree**

## Required Professional Core Courses in Counseling

0	Credits
COUN7700	
The Counseling Profession: Histor	ry
and Theories	3
COUN7701	
Counseling Skills and Practices	3

## Credits

## **Clinical Course Sequence**

COUN9701
Practicum
COUN9702
Internship I3
COUN9703
Internship II3
COUN9704
Internship III (for students unable to
complete 600 hours in
two semesters or who opt
for additional fieldwork)3

## **Comprehensive Exam**

COUN9900
Comprehensive Exam**0
COUN9901
Comprehensive Exam II: Electronic
Portfolio Review0

\*See Education Course Offerings.

\*\*The student will register for the comprehensive exam in the next to final or final semester of the program.

# **Clinical Mental Health Counseling**

## **Course Offerings**

Courses offered fall, spring and/or summer are so noted. To determine availability of courses not so designated, please check with appropriate department chair.

## **Clinical Mental Health Counseling**

Department of Psychology and Counseling

#### COUN7700 3 Credits The Counseling Profession: History and Theories

This course will acquaint students with the profession of counseling. This is the introductory graduate course in counseling which provides a general overview and survey of the profession. Students will explore their personal motivation and interest in a counseling profession as well as integrate professional concepts with personal style. Emphasis is placed on the development of professional identity, standards in the profession, accreditation and credentialing, counseling theory, application and ethics. Roles and responsibilities of counselors across a variety of settings will be addressed. The course should be taken concurrently with COUN7701 Counseling Skills and Practices.

# COUN7701 3 Credits

# **Counseling Skills and Practices**

This is a competency-based course with experiential emphasis which addresses basic skills and techniques of counseling. Students will be able to demonstrate basic counseling skills, techniques and professionally ethical and legal behavior: accurately critique one's own level of skills development; explain how one's life experiences have led him/her to the profession of counseling; and increase one's selfawareness of interpersonal dynamics. The student is required to demonstrate proficiency in counseling skills, concepts and techniques before proceeding to COUN7705 Group Counseling, COUN7709 Multicultural Counseling and COUN9701 Practicum. The course should be taken concurrently with COUN7700 The Counseling Profession: History and Theories.

#### COUN7702 3 Credits Diagnosis/Treatment Planning (in Counseling)

A consideration of the etiology, treatment and prevention of psychopathology. An exploration of the most frequently appearing abnormal behaviors in American culture, such as psychosomatic disorders, alcoholism, drug addiction, character disorders, psychoses and disorders associated with brain pathology. Recent research in this area and its practical applications will be emphasized.

## COUN7703 3 Credits

## **Development Across the Life Span**

This course is an introduction to theories and patterns of development from conception through late adulthood, emphasizing early childhood and adolescence. The focus is on growth and development of sensory, motor, language, cognitive, emotional and social processes. Individual, family and environmental factors which affect development throughout the life span are explored.

## COUN7704 3 Credits Crisis Intervention

A form of brief therapy, focusing on stressinduced reactions studied in historical and theoretical contexts. Course will cover treatment of family conflicts, child abuse, divorce, illness, substance abuse and national disasters. Prevention techniques and evaluation of services also are discussed.

### COUN7705 3 Credits Group Counseling

This course covers the therapeutic nature of the group process by drawing from counseling, social, psychological and psychotherapeutic literature. The many approaches to counseling, ranging from encounter to more traditional methods, are discussed in depth. Classroom process is used as a demonstration of group process.

## COUN7706 3 Credits

#### Lifestyle and Career Counseling

This course introduces strategies for career planning and counseling (e.g., skills and interest assessment and values clarification). The course provides an understanding of careerdevelopment theories, lifestyle and career decision-making and career-development program planning. It includes important components such as enhancing the client's sense of self-esteem and self-efficacy and career and leisure counseling.

#### COUN7707 3 Credits Family Systems and Counseling

This course will examine the broader context of a client's life to include families, schools, work groups, religious institutions and other significant organizations. Its primary goal is to promote an understanding of familydevelopment structure, history and process to aid in the assessment, intervention and treatment of psychological problems and other dysfunctional behaviors. Emphasis will be on understanding the family, forming a therapeutic system, exploring areas of dysfunction and initiating a change process.

# COUN7708 3 Credits

#### Appraisal of Individuals: Assessment and Measurement

A critical survey of the philosophy and techniques of measurements and appraisal, with emphasis given to the administration, interpretation and evaluation of intelligence, achievement, interest, aptitude and objective personality instruments.

#### COUN7709 3 Credits

## **Multicultural Counseling**

This course builds on previous assessment and counseling skills to consider the systemic and cultural issues that influence an individual's world view and life experience. An in-depth exploration of cultural heritage and multidimensional (racial/gender/class/religious) identify development in relation to the therapeutic relationship. The goal is to develop the skills of a culturally competent counselor.

#### COUN7710 3 Credits

## Behavioral Research

The goals of this course are to acquaint the student with the basic premises of scientific investigation, the major methods of conducting psychological research and the statistical procedures employed in analyzing data. The methodological section includes experimental design, questionnaire construction and interviewing strategies, field projects, evaluation research and survey techniques.

## COUN7711

#### 3 Credits The Professional Counselor: Ethical Issues

This course will focus on issues that counselors and supervisors face due to their professional roles. It includes topics such as ethics, ACA (American Counseling Association) guidelines, supervisory challenges and the pressures from public policy and managed-care decisions.

## COUN7713

#### **3** Credits

#### **Addictions Counseling**

This course is designed to review the etiology, diagnoses and treatment of alcohol and drug addiction. Ethical considerations and philosophy of treatment are discussed. The physiology and pharmacology of alcohol and drugs are also covered.

### COUN7714 3 Credits

## Psychopharmacology

Study in the relationship between drugs and behavior, especially maladaptive behavior, and research in human biochemical changes.

# **Clinical Psychology • Clinical Psychopharmacology**

### COUN8700 3 Credits

#### Program Planning and Evaluation: Prevention and Education

The course provides an overview of the approaches to the planning, formulation and evaluation of programs in various community and industrial settings, principles and applications of needs assessment and use of research findings to inform programs and policylevel decision making. The course also covers the issues that must be addressed in designing effective prevention and education programs. Planning of realistic service delivery with builtin evaluation components, survey research.

#### COUN8706 3 Credits Counseling: Sexual Issues

This is an advanced counseling course that focuses on the diagnosis and treatment of sexual issues. The range of topics include psychosexual issues and the gay, bisexual and transvestite/ transsexual client. Dealing with sexual dysfunction for the individual and in a relationship is explored.

# COUN9701

## **3** Credits

#### Practicum

A course designed to be a transitional experience from the graduate counseling classroom to the professional-counselor role in a mental health setting. Students engage in a clinical experience appropriate to their level of professional development. Class includes didactic and experiential activities and supervision of field experience. Requires 100 hours with 40 direct-client contact supervised by on-site mental health professionals.

#### COUN9702 3 Credits Internship I

Following successful completion of their practicum, students complete a supervised 300hour field experience in a clinical setting. Interns are supervised by an on-site mental health professional and on campus in weekly group supervision by University faculty. The goal is integration of intake assessment, case conceptualization, treatment planning, case management and counseling skills as a professional counselor. Course will be pass/fail. Prerequisite: COUN9701 Practicum.

#### COUN9703 3 Credits Internship II

This course is the second half of an already established course of field placement for counseling students. The student must complete a minimum of 300 hours in the field for the course. Course will be pass/fail. Prerequisites: COUN9701 Practicum and COUN9702 Internship I.

### COUN9704 3 Credits Internship III

This course is for students who are unable to complete their 600 hours of internship in two semesters or for those students who wish to obtain additional clinical experience. Prerequisites: COUN9701 Practicum, COUN9702 Internship I and COUN9703 Internship II.

## COUN9800

**3 Credits** 

# Fundamentals of Supervision in Counseling

This course will provide a summary and critique of the literature in counselor supervision. The course will focus on defining and conceptualizing various supervision models; the dynamics of supervisory relationship and counselor development; supervision methods and techniques; and multicultural and ethical concerns. Prerequisites: COUN9701 Practicum, COUN9702 Internship I, COUN9703 Internship II and permission of the department chair.

### COUN9900 0 Credits Comprehensive Exam

The student will register for the comprehensive exam in the final semester of the program.

#### COUN9901 0 Credits Comprehensive Exam II: Electronic Portfolio Review

Capstone requirement for M.A. in clinical mental health counseling program. The student will present a portfolio representative of learning objectives throughout the clinical mental health counseling program.

# Clinical Psychology (Ph.D.)

See Psychology, Clinical Psychology, pages 223–227.

# Clinical Psychopharmacology (Postdoctoral M.S.)

See Clinical Psychopharmacology (Postdoctoral M.S.), pages 227–229.

# Communication

# Communication (M.A.)

The M.A. in communication is offered by the department of communication studies in the Maxwell Becton College of Arts and Sciences at the Florham Campus, Madison, New Jersey. The program offers continuing students and returning professionals a theory-based curriculum that incorporates communication principles and practices into applied learning in cultural, interpersonal and public contexts. The program's mission is to produce critically informed and creative graduates who will be competitive contributors to a challenging global workplace. Courses emphasize the development of skills in critical thinking, collaboration, leadership, ethics, interpersonal relations and cultural intelligence, as well as enhancing students' professional writing and presentation skills.

## **Admission Requirements**

1. A bachelor's degree from an accredited college or university.

2. A cumulative undergraduate grade point ratio (CGPR) of at least 3.00 on a scale of 4.00.

3. An essay articulating the prospective student's goals and expectations and the relationship of those goals and expectations to the program.

4. Two recent letters of recommendation.

Students may be admitted on a nonmatriculated or probationary status with full matriculation upon maintaining a minimum CGPR of 3.00 and no grade

below B in the first 9 credits. Admission to the five-year B.A./M.A. program requires an undergraduate CGPR of 3.00 or higher.

## **Requirements for the Master of Arts Degree**

1. The completion of a minimum of 30 credits.

2. The completion of the six required courses with a minimum grade of B in all six.

3. Students must complete three context courses, one each in the cultural, interpersonal and public contexts.

4. A minimum overall CGPR of 3.00.5. The successful completion of the

5. The successful completion of the capstone experience.

## **Basic Requirements**

## Required Courses (18 credits)

Credits
MCOM6001
Principles and Practices
of Communication 3
MCOM6002
Professional Writing and Editing3
MCOM6003
Presentation Methods
MCOM6004
Executive Lectures
MCOM6005
Group Communication and
Leadership3
MCOM6006
Research Methods3

Cradita

## Capstone Experience (3 credits)

MCOM6099

## Context Courses (9 credits)

The following courses will provide students with experience applying principles they learn to communication practices in cultural, interpersonal and public contexts. Students must take one course in each context.

Cultural Context

MCOM7001

Communication, Culture and Change....3 MCOM7002

International Communication and Culture (at Wroxton College).....3 MCOM7003

Communication and Globalization......3

Interpersonal Context

MCOM7101

Narrative Communication......3 MCOM7103

Language and Communication......3

Public Context

MCOM7201

## **The Global Experience**

The M.A. program offers a unique, intensive, 12-day seminar in international communication and culture, held at Wroxton College, Fairleigh Dickinson University's campus in Oxfordshire, England (MCOM7002 International Communication and Culture). The seminar includes panel discussions and lectures conducted by recognized international experts from business, academia, politics and the media and offers unique insight into professional communication experiences in other parts of the world.

## **Course Offerings**

Courses offered fall, spring and/or summer are so noted. To determine availability of courses not so designated, please check with appropriate department chair.

## Cormmunication

Department of Communication Studies

MCOM6001

## 3 Credits

#### Principles and Practices of Communication

This course introduces new graduate students to foundational theories and essential concepts of communication studies and their application to everyday problems and unique practices they are likely to encounter in their professional lives. Course activities include introduction to the communication studies faculty and their areas of specialization, familiarization with key sources in the discipline and application of course materials to contemporary discourses and interactions. *Fall* 

MCOM6002 3 Credits

## **Professional Writing and Editing**

This course introduces students to writing techniques in the academic, professional and workplace settings. Students will be required to communicate with clarity of thought and appropriate tone and style. Students will demonstrate their professional writing and editing skills in a variety of assignments. The goals of this course are to acquaint students with professional writing practices, editing and revision procedures and methods for polishing their professional and scholarly writing skills. *Fall* 

## MCOM6003 3 Credits

### **Presentation Methods**

This course emphasizes the design and delivery of oral presentations by and for communication professionals. Lectures, discussions and workshop sessions will consider such topics as brainstorming, audience analysis, gathering and organizing data, citing sources, integrating media, presentation techniques and managing questions and answers. *Fall* 

#### MCOM6004 3 Credits Executive Lectures

The Schering-Plough Executive Lecture Series is a forum in which communication experts and students explore skills such as collaboration, creativity and problem-solving relevant to a wide range of professional settings. Theories and their application to practice will be presented through readings, case studies, lectures and discussions. Students will actively engage in exercises and projects to develop and demonstrate comprehension of course content. *Spring* 

#### MCOM6005 3 Credits Group Communication and Leadership

Organizations function and survive according to the ability of their members, and in particular their leaders, to communicate effectively. This course is an in-depth study of current theories of message-processing in organizations: leadership and followership communication, service leadership, innovation and creativity and more. Course work includes experiential learning that allows students to explore practical applications of theory. The course is as much about developing personal leadership as organizational leadership. *Spring* 

# MCOM6006

#### 3 Credits Research Methods

This is a survey course examining both quantitative and qualitative approaches to investigating communication problems, practices and phenomena. The course provides students with an introduction to and experience in a diverse range of principles and methods appropriate for conducting research in a variety of professional communication contexts. *Spring* 

#### MCOM6099 3 Credits

# The Capstone Experience: Principles into Practice

The capstone experience seeks to blend knowledge/theory and application/action. Students will be expected to apply concepts learned during the course of the program toward the completion (i.e. action) of a communication-based project of suitable scope within their own workplace or within another appropriate professional site. In addition to integrating knowledge gained from course work, capstone students must be able to conduct research to determine the viability of the projects they elect to undertake, and in presenting their project, must demonstrate the oral and written communication skills expected of those nearing the completion of a Master of Arts degree in communication. The capstone

experience is taught as a blended, three-credit course, and students complete their projects under the supervision of the course instructor. All graduate faculty will be involved in the review of project proposals and final projects. *Fall, Spring* 

## MCOM7001

#### **3** Credits

### **Communication, Culture and Change**

This course analyzes the relationship among communication, change management and organizational culture. Discussions and lectures include: definitions and types of organizational culture, methods for the study of corporate cultures, the essence and functions of organizational culture, diagnosis of corporate culture, managing and auditing communication and culture and perpetuating or reshaping cultures. In addition, the connection between effecting organizational change by transforming the culture is a dominant theme throughout the course.

## MCOM7002

#### 3 Credits International Communication and Culture

This 12-day seminar is offered at Wroxton College, England, each summer and consists of invited speakers, case studies, site visits and leisure trips to London, Stratford-upon-Avon and Oxford. The objective of the seminar is to make students familiar with the cultural, historical and political contexts in which professional and other interactions take place from a U.K. and European perspective. Students will also examine case studies conducted by U.K. media, advertising and public relations practitioners which show how issues of culture, history, politics and theory play out in actual corporate communication practice. *Summer* 

## MCOM7003 3 Credits

## **Communication and Globalization**

This course examines communication in intercultural contexts, both domestic and international. The course focuses on (a) how culture influences the communication process and the development of relationships, (b) the dynamics of intercultural encounters and c) the impact of globalization on intercultural communication.

# MCOM7101 3 Credits

## **Communication and Technology**

This course gets students to think critically about how digital innovations are shaping our communication and aims to help students gain some perspective on the influences that the rapid transition to the digital age have on almost every aspect of society. The class will discuss where society is today technologically speaking (and ask how it got there), but students will spend most of their time trying to figure out what impacts emerging communication technologies have and are likely to have on the essentials of the human condition: on sense of identity as individuals, on how they form and regulate their communities (on- and offline) and on how the nation and world function politically, socially and economically.

#### MCOM7102 3 Credits

## **Narrative Communication**

This seminar explores a variety of forms narrative communication takes in institutional and professional contexts and considers the multiple functions they may serve for individuals and institutions working in various professions. Students are guided through a selection of theory and methodology offered in required readings and the application of them to exercises. The course culminates with a research project analyzing narrative communication addressing a contemporary problem or crisis.

## MCOM7103

#### 3 Credits

### Language and Communication

This course draws on contemporary theories of language and social interaction to examine how practices of human communication are designed and used to accomplish the work that people do in a variety of professions. Readings, exercises and assignments train students to analyze how language is used to constitute certain roles, relationships, activities and responsibilities. The approach of the class is pragmatic, microanalytic and highly interactive.

# MCOM7201

### **3 Credits**

### **PR** in the Modern Organization

This course will focus on theories, strategies and techniques for organizational public relations. This course specifically examines the dynamic practice of public relations on the organizational level, with particular focus on the publics that organizations serve. Organizations must be proactive and reactive in their public relations practices. The class will cover a variety of topics throughout the course. Each week the class will engage in scholarly readings that deal with a specific topic in public relations.

## MCOM7202

## 3 Credits

# **Crisis Communication**

This course specifically examines the dynamic practice of crisis communication on the organizational level. It seems that people live in a culture of crisis — organizations must be proactive and reactive in their public relations practices. Topics discussed will include imagerepair strategies, options available to organizations facing crisis, crisis-management teams, crisis management as a form of public relations and examinations of case studies. Using the most recent scholarship, students will learn about this timely topic in an interactive and engaging environment.

#### MCOM7203 3 Credits Public Communication

This course examines practices of communication that are goal-oriented, deliberate or purposive. Cases will be studied in which communication is designed and targeted to achieve goals such as running a campaign; building or repairing a reputation; or bringing about social, cultural or institutional change. Course work will explore ways of dealing with real-world challenges in domestic and global contexts of professional communication.

# Computer Engineering (M.S.)

Fairleigh Dickinson University's Master of Science in computer engineering program is designed to train and educate students to work as computer engineers who understand the design tradeoff and the interdependency between hardware and software in computers, computer-based systems, computer communications and computer networks. Computer-based systems are widely used in data acquisition, signal processing and conditioning, instrumentation, communications, control, automation and manufacturing. The curriculum provides students with design skills, theoretical concepts and a solid foundation in both hardware and software design in an integrated manner, as well as competency in advanced computer technology. The program emphasizes practical applications of computer engineering.

This program is offered under the auspices of the Lee Gildart and Oswald Haase School of Computer Sciences and Engineering, University College: Arts • Sciences • Professional Studies, Metropolitan Campus, Teaneck, New Jersey.

## **Admission Requirements**

1. A Bachelor of Science degree in electrical engineering, computer engineering or computer science from an accredited university. This should include courses or equivalent experience in the following areas: introductory computer programming, digital system design, microprocessor system design and data structures. These courses can be taken at Fairleigh Dickinson University but will not count toward the 30-credit master's degree requirement. Students with a Bachelor of Science degree in technology or other areas of science and engineering may be admitted if they complete undergraduate prerequisites as determined by an adviser of the school.

2. Submission of an official score report for the Graduate Record Examinations (GRE) General Test taken within the last five years. The GRE may be waived if the applicant enrolls initially as a nonmatriculating student and completes 9 graduate credits in computer engineering

with a minimum grade point ratio (GPR) of 3.00 and no grade below C or is a graduate of Fairleigh Dickinson University's computer science, electrical engineering or closely related programs with an undergraduate GPR of 3.00 or is a graduate of computer science, computer engineering or electrical engineering programs from other institutions with an undergraduate GPR of 3.50. This GREwaiver policy is only applicable to applicants who graduated from a regionally accredited college or university in the United States. (The GRE requirement also is waived for applicants who have completed a master's degree from a regionally accredited college or university in the United States.)

3. Three letters of recommendation.

Applicants who have not completed all requirements for admission to the degree program may be permitted to enroll in classes for credit on a nonmatriculated or nondegree basis.

## Requirements for the Master of Science Degree

Students must successfully complete 30 credits, including 12 credits of core requirements and 18 credits of electives as described below:

## Core Requirements (12 credits)

CSCI6620	Software Engineering
CSCI6638	Operating Systems
EENG7701	Logic System Design
EENG7702	Microprocessor Design*

## Electives (18 credits)

6 credits fro	m the following:
CSCI6623	Database Systems
CSCI6730	Advanced Network: TCP/IP
	and Routing
CSCI6731	Computer Networks**
CSCI6732	Local Area Networks
CSCI7645	Systems Programming
CSCI7871	Unix Shell Programming
6 credits from	m the following:
	Computer-aided Analysis and
	Design
EENG6633	Digital Signal Processing
EENG6747	Digital Communications
EENG7706	Robotics Engineering
EENG7707	Neural Networks and Fuzzy
	Logic Systems

\*Students may substitute EENG7709 Embedded Systems.

\*\*Either EENG7737 Conputer Communication Networks or CSCI6731 Computer Networks may be taken, but not both.

# **Computer Science**

EENG7737 Computer Communication Networks\* EENG7773 Digital Image Processing

6 additional credits from computer science or electrical engineering courses (6000-level and higher) must be taken.

Students may register for CSCI8891 Internship/Work Experience or EENG8891 Internship/Work Experience only after completing 18 graduate credits.

## Telecommunications and Networking Certificate

Admissions requirements and requirements for the certificate are provided in the Computer Science section (page 104).

## **Course Offerings**

See Computer Science and Electrical Engineering course offerings pages 104–110 and 156–158.

\*Either EENG7737 Conputer Communication Networks or CSCI6731 Computer Networks may be taken.

# **Computer** Science (M.S.)

The graduate program in computer science prepares students for the direct pursuit of productive careers in industry and for continued graduate study. The program's orientation is toward educating professionals to become leaders in various areas of computer science ranging from software engineering to computer design, and from systems analysis to the management of information systems.

The M.S. in computer science program is offered under the auspices of the Lee Gildart and Oswald Haase School of Computer Sciences and Engineering, University College: Arts • Sciences • Professional Studies, Metropolitan Campus, Teaneck, New Jersey. The program is offered full-time at the Metropolitan Campus, Teaneck, New Jersey, and part-time at the Florham Campus, Madison, New Jersey.

## **Admission Requirements**

1. Graduation from an accredited college or university with a satisfactory academic record.

2. Submission of an official score report for the Graduate Record Examinations (GRE) General Test taken within the last five years. The GRE may be waived if the applicant enrolls initially as a nonmatriculating student and completes 9 graduate credits in computer science with a minimum cumulative grade point ratio (CGPR) of 3.00 and no grade below C, or is a Fairleigh Dickinson University computer science graduate with an undergraduate CGPR of 3.00 or is a non-Fairleigh Dickinson University computer science graduate with an undergraduate CGPR of 3.50. This GRE-waiver policy is only applicable to applicants who graduated from a regionally accredited college or university in the United States. (The GRE requirement also is waived for applicants who have completed a master's degree.)

3. Three letters of recommendation.

Applicants who have not completed all requirements for admission to the degree program may be permitted to enroll in classes for credit on a nonmatriculated or nondegree basis.

## Requirements for the Master of Science Degree

1. Students must complete 42 credits in approved graduate courses. The 42 credits are distributed as follows: 12 credits of prerequisite courses, 15 credits of core requirements and 15 credits of electives. Students with backgrounds in the field may reduce the number of required credits by having some, or all, of the prerequisite courses waived. In any event, a minimum of 30 credits will be required for the degree. Requests for waivers must be made in writing to the department prior to the student's first semester.

2. Students must earn a cumulative grade point ratio (CGPR) of at least 2.75 for the prerequisite courses if required or be subject to dismissal from the program. Students may take no more than 6 credits of core or elective courses before completing all of the prerequisites.

3. Students must earn a CGPR of at least 2.75 for the 30 credits beyond the prerequisite courses.

## Prerequisite Courses (12 credits)

## Core Requirements (15 credits)

The required core courses for the M.S. in
computer science are:
CSCI6603
Computer Architecture3
CSCI6620
Software Engineering
CSCI6623
Database Systems
CSCI6638
Operating Systems
CSCI7645
Systems Programming3

# **Computer Science**

## Elective Courses (15 credits)

Elective courses in computer science are listed with course numbers ranging from CSCI6617 to CSCI8891. Students may register for CSCI8891 Internship/Work Experience only after completing 18 graduate credits.

Students may take up to 6 credits in non-CSCI prefixed courses with the permission of their adviser. An additional 3 to 6 credits of non-CSCI prefixed courses may be taken in electrical engineering with the permission of an adviser.

## Advanced Computer Programming Certificate

The certificate program in advanced computer programming provides individuals with comprehensive experience in program development in several languages, including C/C++, assembly language, Java, ASP.NET, C#, VB.NET, Unix Shell and systems programming.

## Admission Requirements

Admission to the certificate program requires a baccalaureate degree from a regionally accredited college or university with a satisfactory academic record.

## Requirements for Certificate in Advanced Computer Programming

18 credits (six courses) are to be chosen	
from the following: C1	redits
CSCI5505	
Introduction to Computer	
Programming	3
CSCI5555	
Data Structures	
or	
CSCI5565	
Assembly Language	3
CSCI6617	
Computer Game Programming	3
CSCI6723	
Database Project with Visual Basic	3
CSCI6810	
Java and the Internet	3
CSCI6844	
Programming for the Internet	3
CSCI7645	
Systems Programming	3
CSCI7871	
Unix Shell Programming	3
Students must satisfy the prerequis	sites
of the courses that they will take.	

Academic Credits: Courses with numbers 6000 or higher completed through this certificate can be credited toward the **M.S. in computer science** program. Other courses may be substituted with prior approval of the student's academic adviser.

## **Computer Security Certificate**

The certificate program in computer security provides individuals with expertise in hardening computer systems, as well as in establishing information security policies and business-continuation planning in organizations.

## Admission Requirements

Admission to the certificate program requires a baccalaureate degree from a regionally accredited college or university with a satisfactory academic record.

## Requirements for Certificate in Computer Security

18 credits (six courses) are to be chosen
from the following: Credits
CSCI5525
Introduction to Computer Science3
CSCI6731
Computer Networks
CSCI6869
Network Security3
CSCI6873
Firewalls and Intrusion-detection
Systems3
CSCI7741
Disaster Recovery
CSCI7783
Information Security3
Students must satisfy the prerequisites
of the courses that they will take.
Academic Credits: Courses with
numbers 6000 or higher completed
through this certificate can be credited
toward the M.S. in computer science
program. Other courses may be
substituted with prior approval of the

student's academic adviser.

## Database Administration Certificate

The certificate program in database administration provides expertise in the development, maintenance and supervision of databases.

## Admission Requirements

Admission to the certificate program requires a baccalaureate degree from a regionally accredited college or university with a satisfactory academic record.

## Requirements for Certificate in Database Administration

18 credits (six courses) are to be chosen from the following:

Credits
CSCI5505
Introduction to Computer
Programming
or
CSCI5525
Introduction to Computer Science3
CSCI6623
Database Systems
CSCI6882
Data Warehouse and Data Mining3
CSCI7741
Disaster Recovery
CSCI7781
Advanced Database Systems 3
CSCI7783
Information Security
CSCI7785
Distributed Database Systems
Students must satisfy the prerequisites
of the courses that they will take.

Degree Options or Academic Credits: Courses with numbers 6000 or higher completed through this certificate can be credited toward the **M.S. in computer** science program. Other courses may be substituted with prior approval of the student's academic adviser.

## Internet Programming Certificate

Internet programming is a contemporary field of computer programming. It refers to network communication, distributed computing and web applications. The certificate program in internet programming provides expertise in computer-programming fundamentals, web programming and internet-based application software development.

# **Computer Science**

## Admission Requirements

Admission to the certificate program requires a baccalaureate degree from a regionally accredited college or university with a satisfactory academic record.

## Requirements for Certificate in Internet Programming

18 credits (six courses) are to be chosen from the following:

e
Credits
CSCI5505
Introduction to Computer
Programming3
CSCI5555
Data Structures3
CSCI6731
Computer Networks
CSCI6735
Client-server Computing3
CSCI6810
Java and the Internet
CSCI6844
Programming for the Internet
Students must satisfy the prerequisites
of the courses that they will take.
Academic Credits: Courses with

Academic Credits: Courses with humbers 6000 or higher completed through this certificate can be credited toward the **M.S. in computer science** program. Other courses may be substituted with prior approval of the student's academic adviser.

## Telecommunications and Networking Certificate

The certificate program in telecommunications and networking provides expertise in the development, maintenance and supervision of telecommunications systems and computer networks.

## Admission Requirements

Admission to the certificate program requires a baccalaureate degree from a regionally accredited college or university with a satisfactory academic record.

## Requirements for Certificate in Telecommunications and Networking

 15 credits (five courses) are to be chosen from the following:

cicato
CSCI6730
Advanced Network: TCP/IP and
Routing 3
CSCI6732
Local Area Networks
CSCI6736
Wireless LANs
CSCI6844
Programming for the Internet
CSCI6869
Network Security3
EENG6747
Digital Communications3
EENG7738
Wireless Communication3
EENG7748
Advanced Digital Communications3
Students must satisfy the prerequisites
of the courses that they will take.
Degree Options: Courses appropriately
selected and completed for this certificate
program under the direction of the
student's academic adviser can be credited

student's academic adviser can be credited toward the M.S. in computer science, M.S. in computer engineering or M.S. in Electrical Engineering (specialization in digital signal processing and communications) program. Other courses may be substituted with prior approval of the academic adviser.

## **Course Offerings**

Courses offered fall, spring and/or summer are so noted. To determine availability of courses not so designated, please check with appropriate school director

## **Computer Science**

Lee Gildart and Oswald Haase School of Computer Sciences and Engineering

## **CSCI5505**

**3** Credits

#### Introduction to Computer Programming

Use of computers in problem solving. Algorithm development using stepwise refinement. Structured programming techniques. Top-down design and modularity. Readability and documentation techniques. Programming in a high-level language, such as Java. Fall

#### CSCI5525 3 Credits

### **Introduction to Computer Science**

Introduction to computer hardware and software, interactions and tradeoffs. Essentials of computer organization and arithmetic, data manipulation, operating systems, computer networks and computer theory. Foundation for more advanced courses. Corequisite: CSC15505 Introduction to Computer Programming. *Fall* 

#### CSCI5526 3 Credits

**Introduction to Computer Science II** 

Advanced C++ programming constructs and features will be covered including structured data, file operations, advanced objects and classes, exceptions and templates. Prerequisite: CSCI5525 Introduction to Computer Science.

## CSCI5551

# 3 Credits

# Mathematics for Computer Science and MIS

Introduction to basic mathematical concepts and how they relate to computer science; formal logic, set theory, functions, relations, Boolean algebra, graph theory and combinatorics. *Fall* 

## CSCI5555 3 Credits

## Data Structures

Organized collections of data and their use. Arrays, records, linear lists, trees, graphs. Sorting and searching. Sequential and linked memory allocation. Prerequisite: CSCI5505 Introduction to Computer Programming. *Fall* 

# CSCI5565 3 Credits

## Assembly Language

Assembly language programming and discussion of assembly systems. Numerical and symbolic applications. Prerequisites: CSCI5505 Introduction to Computer Programming and CSCI5525 Introduction to Computer Science. *Fall* 

# CSCI6603

3 Credits

## **Computer Architecture**

Study of the relation between the structure and functional behavior of computer systems. Data representation and instruction sets. Control function, memory hierarchy, input-output processors and devices. Micro- and multiprocessors. Prerequisite: CSCI5525 Introduction to Computer Science. *Fall, Spring* 

#### CSCI6605 3 Credits **Combinatories**

Arrangements, selections and distributions. Generating functions, partitions and recurrence relations. Inclusion-exclusion principle. Graph models and isomorphisms. Planarity, Euler and Hamilton circuits. Graph coloring. Trees and graphs algorithms. Applications particularly to computer science. Prerequisite: CSCI5551 Mathematics for Computer Science and MIS.

#### CSCI6617 3 Credits

### **Computer Game Programming**

Introduction to computer-game development. Topics include fundamentals of Microsoft DirectX game and graphics libraries, 2D graphics and animation, audio output, keyboard/ mouse handling and fundamentals of 3D modeling and programming. Prerequisite: CSCI5505 Introduction to Computer Programming.

#### CSCI6618 3 Credits Cloud Computing

This course covers critical cloud topics such as cloud-service models (IaaS, PaaS, SaaS); elastic computing; cloud storage; cloud databases; cloud security; and architecting, developing and deploying apps in the cloud. Prerequisite: CSC15505 Introduction to Computer Programming.

## CSCI6620 3 Credits

## Software Engineering

Creation of reliable software. Software development life-cycle models. Requirements of engineering object-oriented analysis and design. Documentation of development with Unified Modeling Language (UML). Software quality assurance. A project-oriented course. Prerequisite: CSCI5555 Data Structures. *Fall, Spring* 

## CSCI6623 3 Credits

## Database Systems

A survey of the current technology available in database systems. Relational, hierarchical and network models. Role of the data administrator. Levels of abstraction. Schema and subschema. Prerequisite: CSCI5505 Introduction to Computer Programming. *Fall, Spring* 

#### CSCI6638 3 Credits **Operating Systems**

**Operating Systems** 

An introduction to the fundamental principles of operating systems in terms of resource

management and machine virtualization. Topics include system services, process management, synchronization, threads, CPU scheduling, memory, device, file management and security. Integrated lab. Prerequisite: CSCI5565 Assembly Language or CSCI6603 Computer Architecture. *Fall, Spring* 

#### CSCI6689 3 Credits Human-Computer Interaction

#### Human-computer interaction integrates the fields of computer science, cognitive psychology, arts and design. This course covers the principles of human-computer interaction, user interface design and usability analysis of systems. Students will learn about the user-experience process lifecycle, contextual inquiry, contextual analysis, design thinking, ideation, sketching, design production, low and high fidelity prototyping, empirical evaluation and feedback and affordances. They will apply these principles in weekly activities, assignments and a final project. Students will also read research papers and write a term paper.

## CSCI6702 3 Credits

#### **Programming Languages**

Theory and implementation of high-level programming languages. Information hiding, storage management, sequence control, data abstraction, generics, exception handling, concurrency, imperative and functional languages. Implementation in various languages. Prerequisite: CSC15555 Data Structures.

#### CSCI6720 3 Credits

## Management Information Systems

Role and structure of information systems in an organization. Components of MIS: human resources, software, hardware, files and databases, telecommunications. Levels of MIS. Decision-making process. Cognitive and behavioral aspects of MIS. Concepts of information and systems. Organizational planning and control with information systems. Prerequisite: CSCI5525 Introduction to Computer Science. *Fall, Spring* 

## CSCI6723 3 Credits

## **Database Project with Visual Basic**

This course will study the methodology of database design within a total project framework. Students will learn how to develop a database design and how to plan for a total program development and then implement the plan. The database will be implemented in Access while the program's user interactions will be programmed in Visual Basic.

#### CSCI6729 3 Credits **Statistical Programming**

This course gives a thorough introduction to using statistical analysis software (SAS) for statistical analysis. Topics include importing and exporting files; output formatting; predictive data modeling and exploration (mixed-models analysis, multivariate statistical analysis, longitudinal analysis and survival analysis); and a programming approach to report writing. Prerequisite: elementary knowledge of a programming language. (Equivalent to MATH6729 Statistical Programming.)

#### CSCI6730 3 Credits Advanced Network: TCP/IP and Routing

This course is on internet work design and architecture. It covers addressing, binding, routing, internet and application protocols, principles and architecture of the global internet. The focus is on the TCP/IP internet protocol suite.

#### CSCI6731 3 Credits

#### **Computer Networks**

Introduction to the theory and practice of computer networking. Protocol design and analysis. Topics include layered protocol architectures, packet and circuit switching, multiplexing, routing, congestion and flow control, error control, sequencing, addressing and performance analysis. Examples from current data networks. Prerequisites: CSCI5505 Introduction to Computer Programming and CSCI5525 Introduction to Computer Science. *Fall* 

#### CSCI6732 3 Credits Local Area Networks

This course will cover the topics of local area networks (LANs). The major topic areas include the evolution of local area networks; an overview of LAN applications; LAN models; five taxonomic variables that can be used to classify LAN technology; the IEEE 802 LAN Standard; repeaters, bridges, brouters, routers and gateways; and an overview of major LAN products. Prerequisites: CSCI5525 Introduction to Computer Science and CSCI5551 Mathematics for Computer Science and MIS.

#### CSCI6733 3 Credits Decision Support Systems

Characteristics of decision support systems (DSS) within the management information systems (MIS) framework; requirements for effective DSS; normative and behavioral

theories of decision making; dialog, database and model management; classes of models; DSS development: tools and methodologies. Prerequisite: CSCI6720 Management Information Systems.

#### CSCI6734 3 Credits **Expert Systems**

The evolution of knowledge-based expert systems, system structure, knowledge representation schemes, quantifying uncertainty, exact and inexact inference, survey of current systems, languages and tools for building expert system's life cycle, knowledge-acquisition techniques, incremental development, testing and evaluation methods and applications of expert systems. Prerequisite: CSC15555 Data Structures.

#### CSCI6735 3 Credits Client-server Computing

An introduction to the theory and technology of client-server computing. Course material includes general software architecture and component-based software system development, n-tier architecture, sockets, PRC, Java remote method invocation (RMI), CORBA, MS COM/DCOM and their applications. Prerequisite: CSCI5555 Data Structures.

#### CSCI6736 3 Credits

#### Wireless LANs

Introduction to wireless local area networks (LANs) and their technology and use. Topics include design, installation and troubleshooting, security, 802.11 frames. Prerequisite: CSCI6731 Computer Networks.

#### CSCI6737 3 Credits

## **Advanced Switching Internet Routing**

This course focuses on advanced switching and internet routing protocols. Topics include switch design and operation, VLANs, port security 802.1x, trunking, port aggregation, high availability and redundant switched network design, advanced IP addressing architectures, routing algorithm concepts and routing protocols: RIP, OSPF, BGP, multicasting, protocol tunneling and routing security. Prerequisite: CSCI6730 Advanced Network: TCP/IP and Routing or CSCI6731 Computer Networks.

#### CSCI6738 3 Credits **Cybersecurity**

This course deals with the application and management of mechanisms for cybersecurity and information assurance in computing, communication and organizational systems. Projects are structured to assist in the use of analytical skills in developing policies and assessing threats and vulnerabilities. Topics include malware and social engineering, vulnerability assessments, network security, authentication, intrusion detection, basic cryptography, data obfuscation and network forensics. A detailed analysis will be conducted on specific vulnerabilities that are exploited in various types of attacks, such as buffer overflow and virus infection. Prerequisite: CSCI6731 Computer Networks.

#### CSC16739 3 Credits Computer Performance and Evaluation

Methods used for evaluation of computersystem design strategies, such as number of servers, communication architecture and database operations. Analysis of models to assess performance of alternate implementation strategies. Evaluation of existing systems. Prerequisites: CSCI5551 Mathematics for Computer Science and MIS and a reading knowledge of a high-level programming language.

## CSCI6740 3 Credits Applied Cryptography

This course introduces cryptographic algorithms, protocols and their uses in the protection of information in various states. Topics include block ciphers, data encryption standard (DES), advanced encryption standard (AES), secret and public key encryption (RSA), cryptographic hash functions (e.g., MD5, SHA-3), digital signatures and the key distribution (PKI) problem. Types of attacks and application of cryptography in secure sockets layer (SSL), virtual private networks, secure storage and other security issues are also discussed.

#### CSCI6741 3 Credits Modeling and Simulation of Continuous Systems

Classification and construction of continuoussystems models. Simulation of systems arising in management practice using the system-dynamics modeling strategy. Design and validation of simulation experiments. Interpretation of experimental results. Laboratory. Prerequisite: knowledge of a high-level programming language.

#### CSCI6743 3 Credits IBM System i Enterprise Computing

Students will study the architecture and software of the IBM i computers. This includes the hardware, middleware, system software, application software, interfaces to other systems and software products. Students will also study the security and network communications capabilities of the System i computers. Special emphasis is placed on the control language, unique file system, application programming languages and data-management services. Prerequisites: CSCI5505 Introduction to Computer Programming and CSCI5525 Introduction to Computer Science.

## CSCI6744

#### 3 Credits Enterprise Computing for the IBM zSeries

Students will study the architecture and software of the IBM zSeries computers (mainframe). This includes the hardware, middleware, system software, application software, interfaces to other systems and software products. Students will also study the security and network communications capabilities of the zSeries computers. Special emphasis is placed on the control language, unique file system, application programming languages and data-management services. Prerequisites: CSC15505 Introduction to Computer Programming and CSC15525 Introduction to Computer Science.

## CSCI6745

#### **3** Credits

## **Computer Graphics**

Computer analysis of two- and three-dimensional line drawings and halftone images. Capabilities of modern hardware, picture-processing algorithms, image enhancement, pattern recognition, scene analysis, interactive graphics. Prerequisites: linear algebra and knowledge of a high-level programming language.

## CSCI6750

## 3 Credits

Advanced Quantitative Analysis Mathematical programming techniques and optimization methods. Goal, integer, nonlinear and dynamic programming. Regression analysis for planning and forecasting. Construction of models with the use of a modeling language. Laboratory. Prerequisite: CSCI5551 Mathematics for Computer Science and MIS.

## CSCI6751

## 3 Credits

## **Artificial Intelligence**

A general introduction to the ideas and methods that will enable computers to be intelligent. Topics include natural language parsing, search, predicate calculus, representation of common sense knowledge, expert systems, managing plans of action, language comprehension. Programming projects. Prerequisite: CSCI5555 Data Structures.

## CSCI6753

#### 3 Credits Machine Learning

This course covers the key concepts of machine learning. The topics covered are data and data mining, supervised learning, Bayesian decision theory, decision trees, clustering, reinforcement

learning and nonsupervised learning. Students will learn machine learning algorithms and apply them to some big data problems in industry. This is a project-oriented course. Each student is required to complete a project. Prerequisite: prior knowledge of statistics and probability.

#### CSCI6758 3 Credits Electronic Commerce

Scope and structure of electronic commerce. Business-to-consumer, business-to-business and intraorganizational e-commerce. Technological infrastructure, intranets and extranets. Market structures, business relationships, enabling services and transaction support. Web entrepreneurship, business models and innovation. Supply-chain management and auction methods. Collaboration and coproduction. Security and protection of digital property. Launching an e-business. Two projects: analytical and entrepreneurial.

#### CSCI6761 3 Credits Automata Theory

Formal languages. Finite automata, push-down automata and Turing machines. Relationship between formal languages and automata. Undecidability. The halting problem, the Post correspondence problem and their relation to other undecidable problems. Prerequisite: CSCI5551 Mathematics for Computer Science and MIS.

## CSCI6767 3 Credits

#### **Object-oriented Programming**

Object-orientated programming in C++. Elements of the C++ language: classes, inheritance, operator overloading, templates, exception handling and real-time type information. An introduction to object-oriented design.

#### CSCI6803, CSCI6804 2–5 Credits Each Semester **Research and Thesis**

A program of selected research, tailored to the interest and capabilities of the individual student, under the guidance of a school graduate adviser.

## CSCI6805

#### **3 Credits**

## **Graduate Research (Nonthesis)**

Graduate-level, nonthesis research with a faculty member in computer science.

## CSCI6806 3 Credits Computer Science Graduate

## Capstone Project

Students each develop an independent computer science capstone project under the

guidance of a faculty adviser. They utilize their past course work, modern tools, techniques and the proper methodology; follow professional practice; and exercise sound judgment in researching, analyzing, designing, developing, testing, documenting and managing a real-world computer science project. Prerequisite: Completion of at least 18 credits.

## CSCI6807 3 Credits

#### Cybersecurity and Information Assurance Graduate Capstone Project

Students each develop an independent cybersecurity and information assurance capstone project under the guidance of a faculty adviser. They utilize their past course work, modern tools, techniques and the proper methodology; follow professional practice; and exercise sound judgment in researching, analyzing, designing, developing, testing, documenting and managing a real-world cybersecurity and information assurance project. Prerequisite: Completion of at least 18 credits.

#### CSCI6810 3 Credits Java and the Internet

#### This course is designed for students who have object-oriented programming experience. It focuses on advanced Java programming features. The main topics are Java event model, event-driven programming, graphical user interface design, Java Swing components, graphics and media processing, exception handling, multithreading, Java applet and servlet, web-based applications, I/O streams and data files, Java database connectivity (JDBC), Java networking programming, remote method invocation (RMI) and Java beans. Prerequisite: CSC15555 Data Structures or CSC16844 Programming for the Internet.

#### CSCI6811 1-3 Credits Each Semester Advanced Special Projects

Advanced computer projects of special interest to individual students. *Fall, Spring* 

## CSCI6820 3 Credits J2EE Programming

This course is designed for students who are interested in learning how to build or maintain enterprise applications based on the J2EE architecture. Students are expected to have a good understanding of web technology and server-side programming for dynamic web content. The main topics are Servlet and JSP programming, EJB programming and the debugging of J2EE applications. Prerequisite: CSCI6810 Java and the Internet.

#### CSCI6830 1-3 Credits

## **Special Topics in Computer Science**

A detailed study of some special area in computer science. The area is chosen by the instructor and will be different each time. For this reason, the course may be taken for credit more than once.

## CSCI6836

## 3 Credits

## **Computer Algorithms**

An introduction to algorithm development. Topics include complexity analysis, practical algorithm development and common algorithm methods, including recursion, greedy algorithms, dynamic programming, backtracking and branch-and-bound. The course will include programming assignments implementing the algorithms discussed in class. Prerequisite: CSCI5555 Data Structures or permission of instructor.

#### CSCI6837

## 3 Credits

#### Mind-controlled Devices with Robotics

This course teaches people to model the programming needs, create prototypes in the C++ programming language and build an application. The application uses a cyberlink mental interface as an input device. The resulting efforts control a robotic arm.

## CSCI6841

## 3 Credits

#### **Cybersecurity Systems Engineering**

This course covers advanced systems engineering concepts related to embedded Linux programming and cybersecurity. Students will gain experience in setting up the embedded Linux operating system and support software, programming in assembly language, writing device drivers and adding functions to the Linux Kernel. Other activities include creating a network stack, providing a presentation layer for application programs and developing a sophisticated and complex application program written in C for use in encryption and decryption of network traffic. Prerequisites: CSCI6638 Operating Systems and CSCI7645 Systems Programming.

## CSCI6844 3 Credits

#### **Programming for the Internet**

This course introduces students to the fundamentals of Microsoft.NET framework, the ASP.NET web development environment and C# programming. It also covers XML web services, SQL Server database and Microsoft web server IIS (Internet Information Services). Students study how to develop powerful websites and web applications that access databases using dynamic, server-side programming in C#. They also will learn how to

deploy such applications over various servers. Prerequisite: CSCI6623 Database Systems.

#### CSCI6846 3 Credits Advanced Programming for the Internet

This second-semester course will build on the technologies and programming techniques taught in CSCI6844 Programming for the internet. The course will cover the Extensible Hypertext Markup Language (XHTML) Version 1.0, which superceded HTML in January 2000 as the standard for marking up web pages. XHTML is the joining of the HTML and Extensible Markup Language (XML) standards. Additional topics on XML will be presented to increase student knowledge and programming expertise. Practical Extraction and Report Language (PERL) and its use in Common Gateway Interface (CGI) scripts to process HTML forms will be discussed. Two additional scripting languages will be covered: Visual Basic Script (VBScript) and PerlScript. The use of Dynamic HTML and DHTML scriptlets in web pages will be covered. Unified Modeling Language (UML) will be discussed and used in the design, development and implementation of a team project. Prerequisite: CSCI6844 Programming for the Internet.

## CSCI6851 3 Credits

## **Parallel and Fault-tolerant Systems**

This course will include the evolution of computer systems, parallel processing systems, principles of pipelining and vector processing, array processors, multiprocessor architectures, data flow computers, very-large-scale integration (VLSI) systems, fault-tolerant systems and programming in the parallel processor environment. Prerequisites: CSC15551 Mathematics for Computer Science and MIS, CSC15555 Data Structures and CSC16603 Computer Architecture.

#### CSCI6860 3 Credits Secure Software Development and Analysis

The course introduces the characteristics of secure programs and methods of implementing programs that are free from vulnerabilities. Topics include robust and defensive programming, input validation, buffer overflows, data obfuscation and protection, secure software development life cycle, security assessment, threat modeling and architecture security, design and testing methodologies, fuzz testing, static and dynamic analysis, source and binary code analysis tools and methods. The course will include assignments on analyzing software, either in source code or binary form, to find any vulnerability. Prerequisites: CSCI5505 Introduction to Computer Programming and CSCI6738 Cybersecurity.

#### CSCI6863 3 Credits Supply Chain

### Supply Chain Security and Systems Certification

The course deals with the security issues associated with building complex (software and/or hardware) systems out of third-party components of unknown (and potentially unknowable) origin. Topics covered include elements that impact the supply chain, provider security review, storage and distribution, supply chain security program compliance, security auditing and assessments, resources and technology (GPS, RFID). The course additionally introduces the DoD processes and regulations associated with the certification and accreditation of operational systems and the authorities and processes for the approval of their operation.

#### CSCI6869 3 Credits Network Security

Coverage of potential threats to a stand-alone or networked computer. The course includes strategies to analyze system vulnerabilities and to harden the system against threats. Integrated lab. Prerequisite: CSCI6731 Computer Networks or CSCI6732 Local Area Networks.

## CSCI6870

#### **3** Credits

#### Penetration Testing and Vulnerability Analysis

The course provides an overview of system vulnerabilities and methods of discovering ways of exploiting vulnerabilities to gain access to a system. Topics include identifying flaws and vulnerabilities, vulnerability-assessment tools, vulnerability scanning, exploiting scanner findings, web application penetration testing, network privilege escalation, social engineering attacks, patch management, configuration management. Projects on planning, organizing and performing penetration testing on a simple network will be pursued. Prerequisites: CSCI6638 Operating Systems, CSCI6731 Computer Networks and CSCI6738 Cybersecurity.

## CSCI6873

## 3 Credits

#### Firewalls and Intrusion-detection Systems

This course covers the theoretical and practical aspects of firewalls and intrusion-detection systems. Some aspects of virtual private networks (VPNs) and routers will also be covered. Prerequisites: CSCI6638 Operating Systems and CSCI6731 Computer Networks.

#### CSCI6880

## 3 Credits

#### **Data Mining**

This course introduces the fundamental concepts of data mining. Students will gain an in-depth

understanding of algorithms in the field, and will learn how to prepare data for learning and classification. Topics covered include data preprocessing, classification, cluster and outlier analysis and text mining. Students will work on projects applying the theory learned. Prerequisites: CSCI6836 Computer Algorithms, MATH3300 Statistics I or permission of department chair.

#### CSCI6881

#### **3** Credits

#### **Machine Learning**

This course introduces the fundamental concepts of machine learning. Topics covered include vector machines, kernel methods, boosting, online learning, multiclass learning, ranking, repression and reinforcement learning. Students will work on projects implementing algorithms discussed in class. Prerequisite: CSCI6880 Data Mining.

## CSCI6882

#### 3 Credits

#### **Data Warehouse and Data Mining**

Study of the concepts, design and architecture of the data warehouse. Study of decisionmaking process using the data warehouse and techniques like online analytical processes and data mining. Topics also include the relationship between data mining and data warehouse, supporting more complex queries than regular structured query language (SQL) and historical and summary transformations and tools to make crucial business decisions. Prerequisite: CSCI6623 Database Systems.

#### CSCI6885

**3** Credits

## Big Data Analytics with Hadoop and R

The growth of Big Data presents a great challenge for academia and various industries. New technologies are emerging for storing data, information retrieval and knowledge discovery in large unstructured data sets. This course presents core paradigms of Big Data analytics along with cutting-edge tools and techniques. Hands-on training will be provided with NoSQL databases, the Hadoop family of Big Data analytics, scalable cloud computing and the R tool. Prerequisite: CSCI6623 Database Systems.

#### CSCI7645 3 Credits

#### Systems Programming

Introduction to operating systems software. Topics chosen from process management interprocess communication, interrupt handling and file systems. Students will develop software that will implement and use operating systems primitives. Prerequisites: CSCI5555 Data Structures and CSCI6638 Operating Systems. *Fall, Spring* 

#### CSCI7740 3 Credits Introduction to Real-time Systems

## Real-time languages and concurrent

programming. Design of real-time kernels, context switching and memory allocation. Reliability, fault-tolerance and exceptions. Verification and validation of real-time software. These topics will be illustrated through examples and projects. Prerequisites: CSCI5555 Data Structures and CSCI6638 Operating Systems.

## CSCI7741

#### 3 Credits Disaster Recovery

Students will learn how to prepare and implement a disaster-recovery plan, which includes assessing risks, prioritizing system functions, developing procedures and establishing organizational relationships. Students will also test and then evaluate the disaster-recovery plan. Prerequisite: CSCI6623 Database Systems.

## CSCI7771

#### **3** Credits

#### **Compilers and Translators**

Introduction to language translators. Compilers vs. interpreters. Structure of a compiler. Compiler-writing tools. Lexical analysis: language tokens, state tables, regular expressing scanner generators. Syntax analysis: grammers, Backus-Naur Form (BNF), parsing methodologies, parser generators. Symbol table maintenance. Students will develop scanner and parser for a high-level language. Prerequisites: CSCI5551 Mathematics for Computer Science and MIS and CSCI5555 Data Structures.

#### CSCI7773 3 Credits Digital Image Processing

A treatment of the techniques used in image enhancement and restoration. Topics will include image modeling and geometry, image transforms, fast Fourier transform (FFT), histogram modification, spatial and frequency domain filtering, image encoding. Some discussion of pattern recognition will be included.

#### CSCI7775 3 Credits Pattern Recognition

Introduction to pattern recognition, feature detection and extraction, Bayes Classification theory, Fisher discriminant theory, templatebased recognition, eigenvector analysis, linear discriminant/perception learning, k-nearestneighbor classification, K-means clustering, non-parametric classification, density estimation, applications such as fingerprint identification, handwriting signature verification, face recognition will be discussed.

## CSCI7781 3 Credits

## **Advanced Database Systems**

Database performance, database reorganization, integrity and concurrency, transaction analysis, recovery database aspects, logical database design and physical database design. Prerequisites: CSCI6623 Database Systems and SQL programming ability.

#### CSCI7783 3 Credits Information Security

This course will study the important area of information security. It will cover both security management and the technical components of security. Topics will include many of these areas: security analysis, logical security design, physical security design, implementation of security systems and security maintenance. Prerequisite: CSCI6623 Database Systems.

#### CSCI7785 3 Credits Distributed Database Systems

Theory of distributed databases and comparison to centralized databases. Topics include location transparence, locking, deadlock, data sharing and time-stamping. A project to implement a small distributed database system is of prime importance to the course. Prerequisite: CSCI6623 Database Systems.

## CSCI7788

## **3 Credits**

# Advanced Oracle SQL Performance and Tuning

Performance measurement and tuning of Oracle SQL applications. Analysis of Oracle database architecture with regard to optimizer modes. Interaction of SQL language and database engine. Prerequisites: CSCI6623 Database Systems and SQL programming ability.

#### CSCI7795 3 Credits Building Electronic Commerce Systems

This course covers constructing complete clientserver systems for e-commerce. Object-oriented programming, website design, scripting, advanced markup language features, internet database programming, multimedia programming and other techniques will be deployed as necessary to create and document a realistic e-commerce offering. Semester-long team projects will be completed. Prerequisites: CSCI6623 Database Systems, CSCI6758 Electronic Commerce, CSCI6810 Java and the Internet and CSCI6844 Programming for the Internet. *Fall* 

#### CSCI7838 3 Credits

#### **Introduction to Computer Telephony**

Telephone Application Interface (TAPI); active and telephony components; application of Visual C++ to make online telephone calls via mouse or headset (electrode placed on forehead). Prerequisites: CSCI5555 Data Structures and CSCI6638 Operating Systems.

#### CSCI7839 3 Credits

#### **Voice-over IP Technologies**

This course gives an introduction of voice-over IP technologies. Topics include the Public Switched Telephone Network (PSTN), signaling specifications, modulation and compression of voice, Quality of Service (QoS), H.323 architecture and protocol suite, Session Initiation Protocol (SIP), gateway protocols and voice and data network convergence. Prerequisite: CSCI6731 Computer Networks or CSCI6732 Local Area Networks.

#### CSCI7870

## 3 Credits

#### Linux System Administration

This course introduces the concepts of system administration as they apply to the Linux operating system. Topics include servers and data centers; virtualization; directories and file systems; access control; Linux and Windows; regular expressions and scripting; processes and services; network, network software and the internet; security policy and ethics; change management, backup and restore; database security and installation. Secure configuration of Linux systems will be pursued.

## CSCI7871

## 3 Credits

## **Unix Shell Programming**

To enable students to derive maximum benefits from using shell, the course will cover shell for the novice, shell programming for results and shell programming for mastery. It describes the basic skills to create whole applications, together with the steps into the world of software developers and system administrators. Prerequisite: CSCI5525 Introduction to Computer Science or permission of instructor.

#### CSCI7874 3 Credits

## Unix System Administration

A detailed introduction to Unix system administration starting with the basics and advancing to scriptwriting concepts, commands and packages that are needed to manage a Unix system. Prerequisite: CSCI7871 Unix Shell Programming.

#### CSCI7877 3 Credits Development of E-business Applications

Introduction to e-business; e-business methodology; process modeling and documentation; selected SML technologies; Simple Object Access Protocol (SOAP); Web Service Definition Language; Universal Description Discovery and Integration. Prerequisites: CSCI5505 Introduction to Computer Programming and CSCI5555 Data Structures, CSCI6623 Database Systems and CSCI6844 Programming for the Internet.

#### CSCI7881 3 Credits Operating Systems Audit and Hardening

The course is an introduction to Unix and Windows operating systems security audits (with major emphasis on Unix/Linux and minor on Windows). It is based on students' understanding of operating systems and shell programming skills. Major topics include: compliance audits, authentication security and defense against privilege escalation, role-based digest functions and defense against Rootkits and internal break-in forensics, log analysis, system hardening, patching compliance, virus and worm protection. Prerequisites: CSCI5505 Introduction to Computer Programming, CSCI6638 Operating Systems and CSCI7871 Unix Shell Programming.

#### CSCI8891 1-3 Credits

#### Internship/Work Experience

The course provides on-the-job education and training in the concepts presented in the graduate computer science, electronic commerce, management information systems and cybersecurity and information assurance curricula. Students must submit, for the school's approval, a proposal from the employer detailing the nature of the intended work. Weekly contact must be maintained with the school's adviser to confirm the quality of the work experience. A report at the conclusion of the work experience is required, detailing both the educational and training aspects of the job. Prerequisite: students must have been enrolled in the computer science, electronic commerce, management information systems and cybersecurity and information assurance programs for at least nine months.

## Mathematics

The following graduate courses in mathematics are offered under the auspices of the Lee Gildart and Oswald Haase School of Computer Sciences and Engineering, University College: Arts • Sciences • Professional Studies, Metropolitan Campus, Teaneck, New Jersey.

#### MATH6630 0–3 Credits Special Topics in Mathematics Education

A study of topics of current interest in mathematics education.

#### MATH6729 3 Credits **Statistical Programming**

This course gives a thorough introduction to using statistical analysis software (SAS) for statistical analysis. Topics include importing and exporting files, output formatting, predictive data modeling and exploration (mixed-models analysis, multivariate statistical analysis, longitudinal analysis and survival analysis) and a programming approach to report writing. Prerequisites: CSCI1201 Computer Programming I and CSCI1202 Computer Programming II. Corequisite: MATH6737 Applied Statistics I. (Equivalent to CSCI6729 Statistical Programming.)

#### MATH6737 3 Credits Applied Statistics I

This course is an introduction to statistical methods of data analysis emphasizing examples drawn from the biological and life sciences. Topics include probability, descriptive statistics, point and interval estimation, hypothesis testing, statistical design and sampling, linear regression and Chi-square testing.

#### MATH6738 3 Credits Applied Statistics II

As a continuation of MATH6737 Applied Statistics I, this course covers more advanced statistical methods including analysis of variance (ANOVA), analysis of covariance (ANCOVA), factor and cluster variance, multiple linear regression, nonparametric tests, categorical data analysis, logistics and survival analysis. Time permitting, additional topics include Monte Carlo methods, mixed models and classification and regression trees. Prerequisite: MATH6737 Applied Statistics I.

## MATH6775 3 Credits

**Mathematics of Operations Research** 

This course is an introduction to mathematical programming using the simplex method and transportation algorithms. Additional topics will be selected from decision analysis, nonlinear programming, Markov process, queuing models and forecasting.

#### MATH6830 3 Credits

#### **Special Topics in Mathematics**

A detailed study of some special area in mathematics. The area is chosen by the instructor and will be different each time. For this reason, the course may be taken for credit more than once. Prerequisite: MATH2203 Calculus III.

## MATH6837

## 3 Credits

#### **Probability and Statistics I**

This calculus-based course is the first part of a two-semester sequence which serves as a comprehensive introduction to the concepts, definitions, theory and practice of probability and statistics. The topics covered include the fundamentals of probability, discrete and continuous random variables (including binomial, poisson, normal, Chi-square, etc.), functions of random variables, momentgenerating functions, sampling distributions and applications. Prerequisite: MATH2202 Calculus II.

#### MATH6838 3 Credits Probability and Statistics II

As a continuation of MATH6837 Probability and Statistics I, this course covers hypothesis testing, regression and correlation in one and several variables, analysis of variance, nonparametric tests, multivariate statistics as well as other advanced topics selected from the design of experiments, Markov processes, Bayesian models selection, neural network and/or time-series analysis. Prerequisite: MATH6837 Probability and Statistics I.

#### MATH6841 3 Credits **Higher Geometry**

Axiomatics, groups of transformations and invariants. Erlanger Program, Euclidean and Lobachevskain geometry, special topics.

# **Cosmetic Science**

# Cosmetic Science (M.S.)

To serve the needs of the large population of cosmetic science professionals in the New York metropolitan area, Fairleigh Dickinson University's School of Natural Sciences offers a Master of Science in cosmetic science.

This program, the first of its kind in New Jersey, was introduced in 1982 as an M.A. in science with a concentration in cosmetic science. The current name, M.S. in cosmetic science, more accurately reflects its scientific content. This program continues to fulfill the needs of those responsible for creating commercial products in the cosmetics, toiletries and fragrance industries. It enables practitioners to learn the latest advances in their field and helps students to develop the skills necessary for senior assignments in the cosmetics industry. It is also geared to technologists aspiring to supervisory roles in the laboratory or plant. For those without industrial experience, the program can launch a career in the cosmetic industry.

This program is offered under the auspices of the School of Natural Sciences, University College: Arts • Sciences • Professional Studies, Metropolitan Campus, Teaneck, New Jersey.

## **Admission Requirements**

1. Graduation from an accredited college or university with a baccalaureate degree in an allied science (biology, chemistry, biochemistry or pharmacy). This baccalaureate degree must include a twosemester sequence of organic chemistry.

2. Submission of scores on the Graduate Record Examinations (GRE) General Test.

3. Three letters of recommendation.

4. A minimum score of 550 (paperbased) or 213 (computer-based) or 79 (internet-based) on the Test of English as a Foreign Language (TOEFL) or its equivalent is required for applicants whose native language is not English.

Note: Financial assistance in the form of teaching assistantships and research scholarships is not available.

## Requirements for the Master of Science Degree

## Required Courses (20 credits)

Credits
BIOL6756
Dermal Pharmacology and
Immunology
CHEM6526
Product Development
CHEM6529
Microtoxicology and Biochemistry3
COSC6543
Hair-care Raw Materials and
Formulations3
COSC6547
Skin-care Raw Materials and
Formulations3
COSC6548
Cosmetic Science Laboratory 2
PHYS6753
Applied Colloid and Surface Science3

## Cosmetic Science Electives (6 credits minimum)

BIOL6728	
Bioethics	3
CHEM6546	
Perfumery	3
CHEM6773	
Polymer Chemistry	3
CHEM6781	
Biochemistry	3
COSC6542	
Claims Substantiation	3
COSC6549	
Color Cosmetics	3

## Free Electives (6 credits maximum)

## **Course Offerings**

Courses offered fall, spring and/or summer are so noted. To determine availability of courses not so designated, please check with appropriate school director.

## **Cosmetic Science**

School of Natural Sciences

#### COSC6542 3 Credits

## Claims Substantiation

Discussion of claim types including efficacy, safety and consumer with construction of solid claims support packages through the knowledge of basic skin physiology, noninvasive bioinstrumentation, proper claims support study design and SOPs for claims substantiation (EEMCO guidelines).

## COSC6543

## **3 Credits**

#### Hair-care Raw Materials and Formulations

Surfacants, proteins, polymers, preservatives, toxicology, performance, theoretical concepts, preparation methods and analytical procedures for shampoos and conditioners, including fixatives, test methods, safety and stability.

#### COSC6547

#### **3** Credits

#### Skin-care Raw Materials and Formulations

Structure, function, use chemistry and application of emulsifiers, emollients, silicones, thickeners, colorants, chelators, preservatives and other ingredients in skin care products.

## COSC6548

2 Credits

#### **Cosmetic Science Laboratory**

Hands-on experience creating and evaluating hair and skin products. Emulsions including creams and lotions and surfactant systems including shampoos and gels. Prerequisite: COSC6543 Hair-care Raw Materials and Formulations or COSC6547 Skin-care Raw Materials and Formulations.

## COSC6549

#### 3 Credits

## **Color Cosmetics**

Worldwide cosmetic color regulations, formulations including fillers, conventional colorants and specialty pigments, as well as the manufacture of all types of makeup products. Prerequisite: COSC6547 Skin-care Raw Materials and Formulations.

#### COSC6551 3 Credits Sensory Evaluation of Cosmetic Products

Techniques, methods and statistics used for the sensory evaluation of cosmetic products; the interaction between product functionality and raw materials selection. Prerequisite: COSC6543 Hair-care Raw Materials and Formulations or COSC6547 Skin-care Raw Materials and Formulations.

#### PHYS6753 3 Credits Applied Colloid and Surface Science

The technical aspects of emulsions, solubilized systems, foams and dispersions. Structure and dynamics of complex systems. Polyphase equilibrium, phase transitions and kinetic distributions. The physics of interfaces and effects of surface structure. Principles of colloid science along with practical procedures as applied in cosmetic formulations, including examples.

Fall

# **Creative Writing** (M.F.A.)

The Master of Fine Arts (M.F.A.) in creative writing is a low-residency program in which students work closely with published authors who serve as their mentors and teachers. During the 10-day residencies held twice each year, students participate in workshops; they meet with their mentors and fellow students; and they attend readings and interviews with visiting writers as well as a variety of literary events. During the rest of the academic year, each student works one-on-one with members of the faculty and participates in workshops online. This program gives students access to an international community of acclaimed and awardwinning writers.

The M.F.A. degree is offered in five disciplines — poetry, fiction, creative nonfiction, writing for young adults and children's literature and literary translation.

The program offers a **60-credit singleconcentration M.F.A. degree** as well as an **88-credit dual-concentration M.F.A. degree**. The specific details about each program are explained separately on this page and on page 113.

The program is arranged into modules (8-week courses) and residencies (10 days of study on one of FDU's campuses). Two residencies are offered each year, one in late July at the Florham Campus in Madison, New Jersey, and another in early January at the Wroxton, England campus. The residencies offer individual conferences with mentors, group workshops, readings and instruction by distinguished visiting writers, presentations by publishing professionals, faculty lectures, student readings and other literary-related activities. Students must attend all scheduled events, as the residency is part of the course work.

There are no letter grades. All courses operate on a Pass/Fail system. Academic work is completed during the online writing modules and the residencies, rather than in traditional courses. Each academic year, four online writing modules, each eight weeks long, taken consecutively (rather than simultaneously) are offered, two in the spring and two in the fall. A faculty mentor directs each module. In addition to producing their own original creative and critical work, students are expected to actively participate in peeroriented online writing workshops throughout each module.

This program is offered under the auspices of the School of the Arts, Maxwell Becton College of Arts and Sciences, Florham Campus, Madison, New Jersey.

## **Admission Requirements**

1. Students must have a bachelor's degree from an accredited college or university with a satisfactory academic record.

2. Students must submit a writing sample. In admissions decisions, the greatest weight will be given to the writing sample.

3. All incoming students must begin their first semester of the program by attending a residency and registering for two modules.

## Requirements for Singleconcentration M.F.A. Degree

Sixty credits (eight modules and three residencies) are required to complete the **single-concentration M.F.A. degree** as follows:

5 modules in the chosen genre,

1 module in an elective genre other than the student's own,

1 module in craft essay (taken in the 5th module),

1 thesis module in chosen genre (last module) and

3 fully attended residencies (ideally completed before completion of the thesis module).

Each module is worth 6 credits (8 modules = 48 credits) and each residency is worth 4 credits (3 residencies = 12 credits) for a total of 60 credits.

The degree is conferred upon successful completion of eight writing modules, three residencies and a craft essay and thesis manuscript. The degree may be completed in as little as two years but must be completed within five years. Specific requirements are:

1. Five modules in the students' chosen discipline.

2. One module in craft in the student's chosen discipline. The craft module is the fifth module. During these eight weeks, students will work closely with their mentors to explore matters of craft, and by the end of the module, they should complete an essay on craft of 3,500–5,000 words. The topic and approach are the

student's choice, but must be approved by the mentor.

3. One module that is an elective (completed at any time during their studies) in a discipline other than their own.

4. During the eighth module, students complete and polish the thesis in their discipline, working closely with their mentor. The thesis should reflect a culmination of all the work the student has completed during the program, and as such, it should represent the student's best possible writing. The thesis may be comprised of poems, short stories, essays, a novella, the beginning portion of a novel or the beginning portion of a memoir. The length should be approximately 25,000 words for prose. For poetry, the thesis should include approximately 375 lines. The thesis must be in the student's declared genre. During the thesis module, the thesis is written and revised by working closely with a mentor. Each thesis will undergo a formal evaluation and critique by the thesis mentor and second reader.

5. Three residencies must be completed. These 10-day intensive residencies are part of the course work. Students must attend every scheduled event in order to receive credit for the residency.

## Requirements for Dualconcentration M.F.A. Degree

Eighty-eight credits (12 modules and four residencies) are required to complete the **dual-concentration M.F.A. degree** as follows:

5 modules in the primary genre,

1 craft essay module in the primary genre (taken in the fifth module),

1 elective module in the secondary genre,

1 thesis module in the primary genre, 3 additional modules in the secondary genre,

1 thesis module in the secondary genre and

4 fully attended residencies.

Each module is worth 6 credits (12 modules = 72 credits) and each residency is worth 4 credits (4 residencies = 16 credits) for a total of 88 credits.

The degree is conferred upon successful completion of 12 writing modules, four residencies and two thesis manuscripts. The degree may be completed in as little as three years but must be completed within five years. Specific requirements are: 1. Five modules in the students' primary discipline.

2. One module in craft in the student's primary discipline. The craft module is the fifth module. During this eight-week module, students will work closely with their mentors to explore matters of craft, and by the end of the module, they should complete an essay on craft of 3,500–5,000 words. The topic and approach are the student's choice, but must be approved by the mentor.

3. One module in the student's secondary genre before taking their eighth module (primary thesis module).

4. During the eighth module, students complete and polish the primary-genre thesis, working closely with their mentor. The thesis should reflect a culmination of all the work the student has completed during the program, and as such, it should represent the student's best possible writing. The thesis may be comprised of poems, short stories, essays, a novella, the beginning portion of a novel or the beginning portion of a memoir. The length should be approximately 25,000 words for prose. For poetry, the thesis should include approximately 375 lines. The thesis must be in the student's declared genre. During the thesis module, the thesis is written and revised by working closely with a mentor. Each thesis will undergo a formal evaluation and critique by the thesis mentor and second reader.

5. Three modules in the secondary genre and the final, 12th, thesis module in the secondary genre.

6. Students must attend four residencies. These 10-day intensive residencies are part of the course work. Students must attend every event, lecture, mentor meeting and workshop.

#### **Modules**

The first module starts at the beginning of the following semester after the residency and the second module follows the first. The modules require a measure of independence on the student's part and a disciplined writing schedule. In each module, the student will have completed the amount of work specified and assigned by the mentor. Generally, work in any module consists of: 1) creative work submitted at three points each module; 2) active, thoughtful, constructive contributions to the online workshop; and 3) two close readings/reviews of relevant texts. Mentors respond to creative work within a week of submission. Other work may be required according to the wishes of the mentor. At the end of the module, the mentor will prepare a final assessment, evaluating each student's work and progress.

## Electives

The requirement of one module in a genre other than the student's chosen area may be fulfilled through completion of an outof-genre module in poetry, fiction, creative nonfiction, literary translation or writing for young adults and children's literature.

## **Craft Module**

Students must complete the module in craft for their genre of concentration during the fifth module of their work in the M.F.A. program.

Working closely with a mentor, the student will research and write an essay devoted to craft. The essay on craft must include: 1) a clear presentation of a central idea (or a sufficient articulation of a specific domain of exploration), fluent and correct syntax and a coherent organization: 2) logical thinking grounded in close readings of the texts; and 3) textual substantiation for the ideas put forth. The essay on craft should be (approximately) between 3,500 to 5,000 words. The mentor must approve the topic and approach, but the essay on craft may be an academic essay, a personal reflection on texts, a profile of an author that includes close readings or it may take another form, so long as it meets the above requirements and the mentor approves. Although the craft module does not contain the program's traditional peer-oriented workshops, there will be opportunities for students to share drafts and discuss ideas at the residency and online.

## Thesis Module

During the eighth module of the single concentration and in the eighth and 12th module of the dual-concentration degree, students complete and polish the thesis, working closely with their mentor. The thesis should reflect a culmination of all the work the student has completed in the genre during the program, and as such, it should represent the student's best possible writing. The thesis may be comprised of poems, short stories, essays, a novella, the

# **Creative Writing**

beginning portion of a novel or the beginning portion of a memoir. The length should be approximately 25,000 words for prose. For poetry, the thesis should include approximately 375 lines. The thesis must be in the student's declared genre. During the thesis module, the thesis is written and revised by working closely with a mentor. Each thesis will undergo a formal evaluation and critique by the thesis mentor and second reader.

## **Course Offerings**

*Courses are offered in the fall and spring. Students will be registered by the M.F.A. coordinator.* 

## **Creative Writing**

School of the Arts

#### CRWR7500 6 Credits Fiction Writing

In the fiction writing concentration, students will generate and revise works of fiction, receive constructive guidance from a faculty member and participate in online discussions with their fellow workshop partners. Students will also be required to write two short essays in which they closely explore an aspect of narrative craft in two works of fiction.

#### CRWR7501 6 Credits Craft and Form in Fiction

Matters of craft and form and specific examples of work in the genre will be discussed. Under the guidance of the instructor, the student will write about specific aspects of their craft and genre. This module is taken in the fifth module in a student's sequence.

#### CRWR7502 6 Credits Creative Nonfiction Writing

In the creative nonfiction writing concentration, students will generate and revise works of creative nonfiction, receive constructive guidance from a faculty member and participate in online discussions with their fellow workshop partners. Students will also be required to write two short essays in which they closely explore an aspect of narrative craft in two works of creative nonfiction.

## CRWR7503 6 Credits

## **Craft and Form in Nonfiction**

Matters of craft and form and specific examples of work in the genre will be discussed. Under the guidance of the instructor, the student will write about specific aspects of their craft and genre. This module is taken in the fifth module in a student's sequence.

#### CRWR7504 6 Credits **Poetry Writing**

In the poetry writing concentration, students will generate and revise works of poetry, receive constructive guidance from a faculty member and participate in online discussions with their fellow workshop partners. Students will also be required to write two short essays in which they closely explore an aspect of craft in two collections of poetry.

#### CRWR7505 6 Credits **Craft and Form in Poetry**

Matters of craft and form and specific examples of work in the genre will be discussed. Under the guidance of the instructor, the student will write about specific aspects of their craft and genre. This module is taken in the fifth module in a student's sequence.

#### CRWR7509 6 Credits Writing for Young Adults and Children's Literature

In the writing for young adults concentration, students will study the particular craft consideration in writing for young adult readers — voice, pacing, structure and the idea of the "high concept" young adult story. Through workshops, discussions, close readings of young-adult novels and other works of fiction and one-on-one study with their mentors, students will produce stories or chapters of fiction for young adults.

#### CRWR7511 6 Credits Literary Translation

In the literary translation concentration, students study the art of translating literary works from other languages into English. Through discussion, workshops and one-on-one study with their mentors, students will produce translations from the language or languages in which they specialize.

## CRWR7512

6 Credits

# Craft and Form in Young Adult and Children's Literature

Matters of craft and form and specific examples of work in the genre will be discussed. Under the instructor's guidance, the student will write about specific aspects of their craft and genre in preparation for a final lecture presentation. This module is taken in the fifth module in a student's sequence.

#### CRWR7513 6 Credits Speculative Fiction

The concerns of science fiction and fantasy include those of mainstream fiction, with

additional questions about world building and suspension of disbelief. The discussions in this workshop will allow students working on speculative fiction to discuss in greater depth issues of craft specific to science fiction and fantasy. This course can substitute as a fiction module.

#### CRWR7524 3 Credits Teaching Composition: Theory and Practice

This course will explore current and longstanding theoretical perspectives and pedagogical practices for teaching writing in a first-year composition program. Students will consider curricular, social, political, pedagogical and theoretical ideas and practices that shape the teaching of writing. The course is free to FDU creative writing students taking two modules. Pass/no credit. Note: Students must take CRWR7525 Practicum for Teaching Composition: Theory and Practice and two additional creative writing courses.

#### **CRWR7525**

1 Credit

#### Practicum for Teaching Composition: Theory and Practice

Required practicum for CRWR7524 Teaching Composition: Theory and Practice. Composition theory in a classroom setting. In order to observe, evaluate and apply composition theory studied in CRWR7524 Teaching Composition: Theory and Practice. Course is free to FDU creative writing students taking two modules. Pass/no credit. Prerequisite: CRWR7524 Teaching Composition: Theory and Practice.

#### CRWR7530 6 Credits

#### **Craft and Form in Translation**

Matters of craft and form and specific examples of work in the genre will be explored and discussed. Under the instructor's guidance, the student will write about specific aspects of their craft and form in preparation for a final lecture presentation. This module is taken in the fifth module in a student's sequence.

## CRWR7540 6 Credits

## **Fiction Writing 1**

M.F.A. fiction module 1 course for undergraduates in their senior year in the B.A./M.F.A. in creative writing program.

#### CRWR7541 6 Credits Fiction Writing 2

M.F.A. fiction module 2 course for undergraduates in their senior year in the B.A./M.F.A. in creative writing program.

#### CRWR7542 6 Credits Nonfiction Writing 1

M.F.A. nonfiction module 1 course for undergraduates in their senior year in the B.A./M.F.A. in creative writing program.

## CRWR7543 6 Credits

## Nonfiction Writing 2

M.F.A. nonfiction module 2 course for undergraduates in their senior year in the B.A./M.F.A. in creative writing program.

#### CRWR7544 6 Credits

## Poetry Writing 1

M.F.A. poetry module 1 course for undergraduates in their senior year in the B.A./M.F.A. in creative writing program.

#### CRWR7545 6 Credits **Poetry Writing 2**

M.F.A. poetry module 2 course for undergraduates in their senior year in the B.A./M.F.A. in creative writing program.

## **CRWR7546**

6 Credits

## Writing for Young Adults 1

M.F.A. young adult writing module 1 course for undergraduates in their senior year in the B.A./M.F.A. in creative writing program.

#### CRWR7547 6 Credits

## Writing for Young Adults 2

M.F.A. young adult writing module 2 course for undergraduates in their senior year in the B.A./M.F.A. in creative writing program.

#### CRWR7548 6 Credits

#### **Literary Translation 1**

M.F.A. literary translation module 1 course for undergraduates in their senior year in the B.A./M.F.A. in creative writing program.

#### CRWR7549 6 Credits Literary Translation 2

M.F.A. literary translation module 2 course for undergraduates in their senior year in the B.A./M.F.A. in creative writing program.

#### CRWR7600 4 Credits **M.F.A. Residency**

M.F.A.10-day residency course for the fulfillment of the M.F.A. degree. These reidencies are required to graduate.

# Creative Writing and Literature for Educators (M.A.)

The M.A. in creative writing and literature for educators is the first graduate program in the nation to focus on the needs of middle- and high-school teachers who teach both creative writing and literature. Its primary goal is to enhance graduates' abilities to teach through a better understanding of the issues and practices facing writers and readers and the connections between both areas.

Teaching creative writing requires an understanding of the creative and analytical processes of both the writer and the reader. FDU's program examines how writers create and revise with a focus on how meaning is created (the "writerly" process) and combines it with exposure to critical analysis from the readers' point of view (the "readerly" process). By combining and connecting writerly and readerly approaches, the M.A. program enhances educators' abilities to teach both creative writing and literature. After a three-day weekend residency, students complete the remaining course work online, working with a renowned creative writing and literature faculty.

Students in the M.A. in creative writing and literature program learn from an accomplished faculty of literary experts and published poets and authors. Faculty members include a finalist for the National Book Award and a winner of the National Magazine Award.

The program is offered under the auspices of the department of literature, language, writing and philosophy, Maxwell Becton College of Arts and Sciences, Florham Campus, Madison, New Jersey.

## **The Curriculum**

It is recommended that all students begin with the foundation course CWLT8001 Reading Like a Writer, which runs in early May and introduces the practice of writerly exegesis with a focus on how meaning is created. Subsequent writing courses are designed specifically to provide both a creative and writerly/analytical experience in the major genres educators are likely to see in student work. The literature courses offer greater breadth and enriched understanding and connection to the advanced readerly aspects of the literature often taught in high school, including traditional literature (Irish literature, Chaucer, young adult literature); non-Western literature (African literature, world literature); and intercultural literature (ethnic American literature).

## Requirements for the Master of Arts Degree

To earn the M.A. degree, students must attend the beginning residency and complete these seven courses:

Foundation Course	Credits
CWLT8001	
Reading Like a Writer	4

# Writing and Critiquing Courses (one from each genre)

CWLT8101
Writing and Critiquing Fiction4
CWLT8102
Writing and Critiquing Poetry4
CWLT8103
Writing and Critiquing
(Creative) Nonfiction4
CWLT8104
Writing and Critiquing Dramatic
(and Cinematic) Writing4

## Literature Courses (two required)

CWLT8121
Comedy, Satire and Parody 4
CWLT8201
Ethnic-American Literature4
CWLT8203
Chaucer in Our Time4
CWLT8204
Reading Contemporary African
Writers4
CWLT8206
Contemporary World Literature4
CWLT8207
Young Adult Literature: Beyond
Harry Potter4
CWLT8209
International Short Story4
CWLT8211
Modern Poetry4
CWLT8216
Contemporary American Drama4
CWLT8217
Irish Literature4
CWLT8218
Graphic Novels 4
CWLT8220
Contemporary American Poetry4
CWLT8221
Fantasy, Myth and the Medieval4

# **Creative Writing and Literature for Educators**

## **Residency Requirement**

The M.A. program includes a three-day weekend residency requirement in late June. Students live on FDU's Florham Campus in Madison, New Jersey, where they meet with instructors and participate in such activities as lectures, critical workshops, generative workshops, panel discussions, analysis seminars and readings. Subsequent course work is completed through online correspondence with instructions and instructor-led online workshops and discussions.

The program's low-residency requirement allows students to enroll whose work and family obligations would otherwise prevent them from attending a traditional, full-time graduate program. The online component provides additional flexibility and enables students to receive individual feedback from fellow students as well as readers and writers throughout the country.

## **For Information**

For more information go to http://gradwriting.fdu.edu or contact the Office of the M.A. in creative writing and literature for educators, department of literature, language, writing and philosophy, Fairleigh Dickinson University, 285 Madison Avenue, M-MS3-01, Madison, New Jersey 07940, at (973) 443-8632.

## **Course Offerings**

Courses offered fall, spring and/or summer sessions. Check Coursefinder at www.fdu.edu to see which courses will be offered each semester.

# *Creative Writing and Literature for Educators*

Department of Literature, Language, Writing and Philosophy

## CWLT8000 2 Credits

#### Creative Writing and Literature for Educators Residency

Three-day residency for M.A. in creative writing and literature for educators.

## CWLT8001 4 Credits

### **Reading Like a Writer**

This course focuses on reading in a writerly way — exploring how meaning is created from a writer's perspective. The emphasis is on close reading and careful analysis of the bones of the text — structure (narrative, poetic, dramatic); point of view; style; tone; diction; sound, etc.

#### CWLT8101 4 Credits

## Writing and Critiquing Fiction

In this course, students will create and revise a short work of fiction. The emphasis is not on the completed product but rather on the strategies of critiquing and revision that are developed through common readings and discussions. To that end, students and instructor will comment on both the writing and critiques in online workshops. Critiques of the writing use close readings to focus on writerly issues of structure, point of view, style, tone, diction, etc. Commentary on the critique will focus on usefulness to the writer and to work.

## CWLT8102 4 Credits

## Writing and Critiquing Poetry

In this course, students will create and revise two poems. The emphasis is not on the completed product but rather on the strategies of critiquing and revision that are developed through common readings and discussions. To that end, students and instructor will comment on both the writing and critiques in online workshops. Critiques of the writing use close readings to focus on writerly issues of structure, prosody, line, style, tone, diction, etc. Commentary on the critiques will focus on usefulness to the writer and to work.

## CWLT8103 4 Credits

#### Writing and Critiquing (Creative) Nonfiction

Students create and revise a short work of nonfiction. The emphasis is not on the completed product but rather on the strategies of critiquing and revision that are developed through common readings, discussions and critiques in online workshops. Critiques of the writing use close readings to focus on writerly issues of structure, point of view, style, tone, diction, etc.

## CWLT8104

#### 4 Credits

# Writing and Critiquing Dramatic (and Cinematic) Writing

Students create and revise a short screenplay or a stage play. The emphasis is not on the completed product but rather on the strategies of critiquing and revision that are developed through common readings, discussions and critiques in online workshops. Critiques of the writing use close readings to focus on writerly issues of dramatic structure, point of view, visual storytelling, dialog, style, etc.

#### Literature Electives (two required)

#### CWLT8121 4 Credits Comedy, Satire and Parody

An approach to a range of comic genres, from the perspective of the writer and performer: everything from American standup, comic skits and situation comedy to classic literary satire, parody and farce from around the world. The class will look at joke structure, creation of comic personae and the evolution of comic technique, with students trying their hand from time to time at writing within the various comic genres themselves.

#### CWLT8201 4 Credits Ethnic-American Literature

This course focuses on the latter half of the 20th century and examines different racial and ethnically hyphenated groups through fiction, autobiography, poetry and film. Discussion of texts by Jewish-Americans, African-Americans, Indian-Americans, Native Americans, Mexican-Americans and others will combine close textual analysis with attendant theories of identity and multiculturalism.

#### CWLT8203 4 Credits Chaucer in Our Time

The course examines Chaucer's oeuvre in the context of its critical and creative reception; considers Chaucer's contemporary relevance in and out of the classroom.

#### CWLT8204 4 Credits **Reading Contemporary African** Writers

This course focuses on how contemporary African writers challenge or redefine their societies; conventional values, usages and beliefs. Online discussions — through a close reading of poems, stories, plays, novels and memoirs — explore the ways language both carries and subverts cultural assumptions. Interpretations of primary texts focus on the aesthetic choices African writers make in response to very different social realities.

## CWLT8206

## 4 Credits

## **Contemporary World Literature**

This course examines changing literary conceptions of the world from perspectives influenced by race, class, gender and sexuality, through contemporary post-colonial fiction from India, Indonesia, Jamaica and Zimbabwe. The course also analyzes how the narrative techniques employed in these novels fuse the political with the aesthetic in constructing national identities.

#### CWLT8207 4 Credits Young Adult Literature: Beyond Harry Potter

Survey of young adult literature of the mid- to late-20th century. Examines how this relatively new genre reflects growing changes within culture and society. Students will read classics and novels that are standard in high-school curricula and consider issues including transition to adulthood, sexuality, conflicts between youth and parents, fantasy, responsibility and authority.

#### CWLT8209 4 Credits International Short S

## International Short Story

Focusing on short stories written in the last few decades, the course will emphasize unique features of the form along with elements of craft that it shares with other narrative genres. Students will study works from a variety of national traditions, in English and translation, asking how cultural identity affects setting, character, conflict and theme.

#### CWLT8211 4 Credits Modern Poetry

The course will focus on recent work by living American poets, mostly written within the last 15 or 20 years, with one exception, the poems of Anne Sexton (which the class will look at to establish a base for comparison). Students will primarily read complete volumes by individual poets, rather than scattered single poems in anthologies, focusing on how poets create identifiable voices, a unique poetic language and poetic landscape that is undeniably their own. The class also will focus particularly on the craft and form of the featured poets. Poets studied will include, among others (in addition to Sexton), C.K. Williams, Kim Addonizio, Paul Muldoon, Rita Dove and Billy Collins.

## CWLT8216 4 Credits

## Contemporary American Drama

This course focuses on American drama from the 1960s through the first decade of the new millennium, both as literary texts and and in performance. Students read plays by a variety of playwrights, focusing on what makes them uniquely American, uniquely contemporary and uniquely dramatic in their structure, stagecraft and means of conveying character, conflict and theme.

## CWLT8217 4 Credits Irish Literature

This graduate course surveys the literature of Ireland: a millennium-and-a-half of multilingual production often characterized by eccentricity and genius. Special topics include the use of traditional materials for contemporary creative writing.

#### CWLT8218 4 Credits Graphic Novels

The course will focus on recent work by comic book writers and graphic book novelists, mostly written within the last 30 years, with two exceptions, the early work of Rodolphe Töpffer (the 19th-century parent of this medium) and the first work by Siegel and Schuster (1938). These two works will be used as a basis for understanding the evolution of this medium and its genres. Students will primarily read complete comic compendia and graphic novels, rather than scattered, single issues or anthologies, focusing on how graphic novelists and comic writers craft both plot and dialogue while operating within a framework which assumes that the text will be indivisibly complemented with images. The writers studied will include, among others, Alan Moore, Brian Michael Bendis, Alison Bechdel, Marjane Satrapi, Marguerite Abouet, Gene Luen Yang and Art Spiegelman.

#### CWLT8220 4 Credits

## **Contemporary American Poetry**

Study of work written within the last 20 years by seven living American poets, focusing on how they create an identifiable voice, a unique poetic language and a poetic universe undeniably their own. Students will read a volume of poetry by each of the featured poets, concentrating particularly on how craft and form generate meaning.

#### CWLT8221 4 Credits

## Fantasy, Myth and the Medieval

This course looks at modern and contemporary fantasy along with older stories: myth, folklore and medieval literature. Sometimes this old material is an immediate source - as in Tolkien or CS Lewis, who were both professional medievalists - and sometimes the relationship is more diffused, but still instructive. The class will trace the emergence of the fantasy genre, and look at major fantasy phenomena (Lord of the Rings, Harry Potter, "Game of Thrones," "Dungeons & Dragons" and its derivatives some familiarity with these will be expected) as well as lesser-known works that present a particular interest. The class will also discuss relevant issues in theory. The goal is to develop practices for teaching the new through the lens of the old, and vice versa, and to equip students more richly to craft their own works of fantasy.

# **Criminal Justice** (M.A.)

Fairleigh Dickinson University's School of Criminal Justice, Political Science and International Studies offers a Master of Arts in criminal justice. The program is designed to skillfully integrate theory and practice into a holistic, engaging and challenging course of study that provides students with advanced knowledge and understanding of the United States criminal justice system. Designed to position graduates for success, the program focuses on developing appreciable knowledge and understanding of crime and the criminal justice system, as well as developing discernable skill sets and competencies necessary for pursuing and/or advancing one's professional career, emphasizing the importance of critical thinking, problem solving, decision making, effective communications, social research and professional development.

The program's core curriculum provides a foundation in the concepts of social order and control, the legal and philosophical principles of the United States Constitution, the legislation of criminal laws, the theoretical causality of criminal behavior, crime prevention, the treatment and remediation of criminality, the analysis of society's changing response to crime, the development and influence of public policy on the administration of justice and the scientific methods for conducting social research and statistical analysis.

Recognizing student's needs and interests for professional development and acquiring specialized knowledge and understanding, the curriculum provides students the option to select from a wide array of courses in fulfilling 18 of the 36credit program. Such courses examine the role and influence of politics within the criminal justice system, ethics, public policy, policy analysis, social justice and victimization, risk reduction, comparative criminal justice systems, transnational crime, leadership and emerging issues in crime and justice. Students can also select courses that focus on a host of specializations that include leadership, social service advocacy, learning theory and practice, college instruction and professional development. The final course in the curriculum, CRIM8000 Critical Analysis of Criminal Justice, affords students the opportunity to conduct independent research in areas of particular

interest and application or take a comprehensive exam.

Two areas of particular interest to students is the opportunity to study abroad at Wroxton College, the University's campus in Oxfordshire, England, where students work closely with renowned British criminal justice professionals and academicians. Another feature of the curriculum is its Advanced Internship Program, which gives students the opportunity to gain credit and valuable experience working in the field. The program features approximately 200 different venues within local, state and federal criminal justice agencies, as well as many private and nonprofit organizations that serve and support the criminal justice system.

The 36-credit program can be completed in less than 18 months for fulltime students, and between 18–24 months for part-time students. The program is available through traditional, campusbased courses offered in late afternoon and evening hours during the fall, spring and summer semesters. Many courses are also available online.

The program is offered under the auspices of the School of Criminal Justice, Political Science and International Studies, University College: Arts • Sciences • Professional Studies, Metropolitan Campus, Teaneck, New Jersey.

## **For Information**

For information, contact Dr. James Kenny, professor of criminal justice and graduate program coordinator, at kenny@fdu.edu or (201) 692-2461.

## **Admission Requirements**

Admission to the program is based on an applicant's demonstrated interest, aptitude and motivation to successfully undertake and complete master's-level studies. This will be determined by the following minimal requirements and indicators:

1. A bachelor's degree from an accredited college or university.

2. Official transcripts from all institutions of higher learning attended.

3. A cumulative undergraduate grade point ratio of at least 3.00 on a 4.00 scale.\*

\*Waivers for applicants who do not meet the grade point ratio or standardized test scores will be considered on an individual basis. 4. Performance on the Graduate Record Examinations (GRE), which may be waived.\*

5. A 250- to 500-word personal essay expressing one's interest for applying to the program.

6. Two letters of recommendation attesting to the applicant's interest and ability to undertake graduate-level studies.

7. Personalized interviews may be considered by the school's Admissions Committee.

8. Applicants under consideration may be required to complete an abbreviated research paper that demonstrates their ability for effective writing.

#### **Requirements for the Master of Arts Degree**

## Required Courses (15 credits)

Credits
CRIM6000
Professional Seminar in Criminal
Justice3
CRIM6005
Advanced Criminological Theory 3
CRIM6010
U.S. Constitution, Public Policy
and Criminal Justice3
CRIM6025
Social Science Research Methods
CRIM8000
Critical Analysis of Criminal Justice 3 Total15

## **Elective Courses (18 credits)**

Choose six courses from below:
CRIM6015
Research Methods in Criminal
Justice and Criminology 3
CRIM6020
Statistics and Data Analysis 3
CRIM7020
Ethics, Politics and Justice
CRIM7025
Comparative Criminal Justice Systems3
CRIM7030
Principles of Leadership3
CRIM7060
Social Justice Advocacy3
CRIM7065
Crime, Victimology and Risk
Reduction

\*Waivers for applicants who do not meet the grade point ratio or standardized test scores will be considered on an individual basis.

redits
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18

## **Online Application**

To apply online, go to

http://view2.fdu.edu/admissions/graduateadmissions/apply-for-graduate-admissionat-fdu/.

## **Tuition and Financial Aid**

Information on tuition costs and any applicable financial support is available by going to http://www.fdu.edu.

#### **Course Offerings**

Courses offered fall, spring and/or summer are so noted. To determine availability of courses not so designated, please check with appropriate department chair.

#### **Criminal Justice**

School of Criminal Justice, Political Science and International Studies

#### **CRIM6000**

**3** Credits

#### Professional Seminar in Criminal Justice

This course provides a comprehensive review, critique and analysis of the United States criminal justice system in context to examining the concepts of social order and control, the philosophical underpinnings of the United States Constitution and the influence of public policy. Emphasis will be placed on examining the independent and causal relationships of police and law enforcement, courts and adjudications and the correctional system.

#### CRIM6005 3 Credits Advanced Criminological Theory

This course will take a vertically integrative perspective on criminological theory, to include examining crime and crime theory and various forms of criminal behavior. Taking an implicitly systems-theoretical look at crime and delinquency, it will provide tools for determining which theories provide the most explanatory power in specific criminal contexts. The course will also examine criminological thought in areas such as cyber crime, terrorism, human trafficking, environmental crime, hate crimes and other current and thematic emerging issues.

#### CRIM6010

#### **3** Credits

#### U.S. Constitution, Public Policy and Criminal Justice

This course examines emerging issues as they influence the United States Constitution, public policy and the criminal justice system. Topics such as criminal procedure, individual rights, gun control, decriminalization of drugs, social justice, crime prevention, juvenile justice, sentencing policies, incarceration and capital punishment will be addressed.

#### CRIM6015 3 Credits Research Methods in Criminal Justice and Criminology

This advanced course in social research exposes students to the methods and techniques associated with conducting theoretically based research. It addresses processes associated with identifying and defining problems and developing hypotheses, experimental design, surveys, testing instruments, gathering and analyzing data and preparation of reports.

#### CRIM6020 3 Credits Statistics and Data Analysis

This course addresses the basic concepts and methods of statistics applied within criminal justice and social science research. Topics covered include basic statistical methodology; exploratory data techniques; experimental design; sample distributions; interval estimation; inference; comparative analysis by parametric, nonparametric and robust procedures; analysis of variance (one-way); linear and nonlinear regression; analysis of covariance; correlation and regression; and an introduction to statistical analysis using Statistical Package for the Social Sciences (SPSS).

## CRIM6025 3 Credits

### **Social Science Research Methods**

This course will emphasize the conceptual foundations and methodological approaches used in social science research. This course

introduces tools of quantative reasoning and statistics that can be used to address problems in basic research and policy within social sciences, particularly in the criminal justice field. The primary objectives of the course are to build familiarity with the fundamentals of probability and statistical analysis, central concepts of research design and norms of ethical behavior in research.

### CRIM7020 3 Credits Ethics, Politics and Justice

This course examines classical and contemporary theories and philosophies relevant to ethical thought and behavior in relationship to the administration of justice and navigating politics within the workplace. Ethical issues confronting criminal-justice practitioners, to include the role and influence of politics, are explored through the use of case studies and critical incidents, and examining appropriate and applicable strategies.

## CRIM7025

#### 3 Credits Comparative Criminal Justice Systems

This course will conduct a comparative analysis between the criminal justice system of the United States with those of other major countries throughout the world. The similarities and differences between the policing, adjudication and penal systems will be discussed. Issues such as alternatives to incarceration, technologies utilized and legal mandates will be examined.

#### CRIM7030 3 Credits **Principles of Leadership**

The objective of this course is to examine the principles, practices and complexities of effective leadership. The course will also examine the skills and competencies needed to be an effective leader. The benefits of effective leadership and the consequences of ineffective leadership in an organization will be studied.

#### CRIM7060 3 Credits Social Justice Advocacy

Practitioners in the criminal justice system are often placed in the position of ensuring that their clients have access to services and proper treatment as they move through the system. Working and aspiring probation and parole officers, social workers, victim advocates and others will receive practical guidance in creating access to justice and services for their clients in criminal, social and service-oriented contexts.

#### CRIM7065 3 Credits Crime, Victimology and Risk Reduction

This course will focus on crime victims in terms of factors leading up to and consequences of criminal events. It will examine victimization patterns, typologies, resources, consequences, the criminal justice response, restorative justice and legal rights. It also will analyze the dynamics of various violent crimes for warning signs, criminal purpose/selection and strategies to reduce the risk of victimization.

#### **CRIM7070**

#### **3 Credits**

# Contemporary Issues in Crime and Justice

This course provides a critical examination and analysis of contemporary issues related to crime, criminal justice and public policy. Examples of topics include juvenile justice, police operations, sentencing, community corrections, capital punishment, decriminalization of drugs, transnational crime, terrorism, cyber crime and the implications of emerging technologies in the administration of justice.

#### CRIM7080

#### **3** Credits

#### Politics and Policies of Criminal Justice

Topics will include the Constitution of the United States and how the safeguards in the Bill of Rights have evolved over time. The course will also focus on how laws and criminal justice policies are formulated, as well as why certain acts are considered serious crimes and others are not. Issues of how money and power affect policies in criminal justice will be examined. Topics of victims' rights, police brutality, court process, sentencing, prisoner treatment and other policy matters in the criminal justice system will be reviewed. Prerequisite: CRIM6000 Professional Seminar in Criminal Justice.

## CRIM7081

## 3 Credits

#### Civil Rights and the Administration of Justice

This course aims to help students develop a firm understanding of the approaches used by the U.S. Supreme Court to define the boundaries of civil rights and liberties through its interpretation of the United States Constitution. It will examine the nature, application and extent of a special group of protections under the U.S. Constitution, including the freedom of expression, privacy, freedom of religion, equal protection under the laws, due process and the rights of the accused. Prerequisite: CRIM6000 Professional Seminar in Criminal Justice.

# **Cyber and Homeland Security Administration**

#### CRIM7082 3 Credits Crime and Punishment

The U.S. has the highest incarceration rate in the world. This course confronts mass imprisonment and examines the key social forces shaping penal practice in the U.S. such as morality, economics and politics. Topics include prison violence, penal state, overcrowding and the efficacy of penal institutions. In addition, the course encompasses an analysis of the emergence of alternative systems of punishment and control. Prerequisite: CRIM6000 Professional Seminar in Criminal Justice.

#### CRIM7084 3 Credits Transnational Crime and Global Issues

This course will examine the systemic problem of crime that transcends international borders that capitalize on the use of violence and corruption in a technologically advancing global society. Transnational crime includes, but is not limited to, gambling; money laundering; human smuggling; prostitution; cybercrime; terrorism; and the trafficking of humans, drugs, weapons, endangered species, body parts and nuclear materials. The course will examine the legal, economic, tactical, technological and geopolitical dynamics to combat transnational crime with a specific focus on coordinating domestic and international public policy.

#### CRIM7085 3 Credits Advanced Internship in Criminal Justice

The course provides individually designed internships within federal, state and local police/law enforcement agencies, courts and adjudication, corrections and probation, private security, juvenile justice, crime victims' advocacy and child protection. Students develop hands-on experience in all facets of the respective agency that they select. The internship provides the students with insight, experience and an available network of professional colleagues.

#### CRIM7086 3 Credits Religion and Terrorism

This course is designed to have the student understand working definitions of the terms terrorism and religion and how these are applied by groups using said terms for personal and group agendas often through violent means. The course further seeks to examine the various interpretations of religion within major faiths and delve into perceived justifications for the use of terror. It will provide students with examples of organizations and terror groups that have and continue to employ religion as the basis of terrorist action through case study and determine the means for countering religious ideology as a pretext for violence.

## CRIM7090 3 Credits

#### **Professional Development Seminar**

This course addresses key thematic areas critical to recognizing and developing one's professional effectiveness. Topics covered include effective communications, emotional and social intelligence, negotiations and conflict management, problem solving, decision making and strategic planning.

#### CRIM7800 3 Credits Independent Studies

Students are afforded the opportunity to conduct independent studies in collaboration with and under the direction of a faculty member after consultation with the school's director.

#### CRIM8000 3 Credits

#### **Critical Analysis of Criminal Justice**

This course represents a synthetic and critical analysis of key concepts and principles addressed within the criminal justice graduate program. Topics covered include, but are not limited to: social order and control, social contract theory, social justice and crime, statistics and social research, the U.S. Constitution and government, politics and public policy, crime prevention and analysis, criminological theory, victimization, criminal law, police and law enforcement, the courts and adjudication system and correctional system. The course culminates with successful completion of a master's research project or comprehensive examination. Details and requirements for both are addressed at the beginning of the course. Prerequisites: CRIM6000 Professional Seminar in Criminal Justice, CRIM6005 Advanced Criminological Theory, CRIM6010 U.S. Constitution, Public Policy and Criminal Justice, CRIM6015 Research Methods in Criminal Justice and Criminology and CRIM6020 Statistics and Data Analysis.

#### CRIM8050 3 Credits Master's Research Project

This course is designed to provide research of a contemporary issue within the study of criminal justice. Students are expected to design and complete an original research project under the supervision of a faculty member of the School of Criminal Justice, Political Science and International Studies.

# Cyber and Homeland Security Administration (M.S.)

The Master of Science (M.S.) in cyber and homeland security administration degree was offered beginning in January 2008. It is the first graduate degree in homeland security offered in the state of New Jersey.

The M.S. in cyber and homeland security program is a 36-credit off-campus and online graduate program which focuses on practical and theoretical aspects of enforcing and ensuring homeland security. The curriculum provides three areas of study that provide master's-level studies for nontraditional students already involved in homeland security. In addition, the program encourages the development of high-quality, applied research for practitioners in the field of homeland security. The degree is particularly suited for working adults who are interested in enhancing their credentials.

The M.S. in cyber and homeland security degree offers concentrations in: homeland security — terrorism and security studies; homeland security emergency management; and homeland security leadership. Students who complete six courses in a particular area of concentration will be awarded a certificate that signifies completion of that course of study.

Courses in the M.S. program are offered in person and online. The online program is designed to meet the needs of police, firefighters, first responders, military personnel and others who are unable to attend classes in person because of their work demands. Students have the ability to take courses in a specialization that focuses on their specific areas of responsibility. The online program is offered in an asynchronous mode, which fits the work schedules of many in government and the emergency services community.

The M.S. in cyber and homeland security program is designed for individuals who are working in the field of homeland security. Events throughout the world have increased those employed in the discipline, and new demands in the jobs have required students to increase their level of education.

This program is offered under the auspices of the School of Administrative Science, Anthony J. Petrocelli College of Continuing Studies, at the Florham Campus, Madison, New Jersey; at the Metropolitan Campus, Teaneck, New Jersey; and locations throughout New Jersey.

## **Admission Requirements**

Candidates for admission to the Master of Science in cyber and homeland security degree must be highly motivated individuals who have work experience in the area of homeland security as well as a bachelor's degree from an accredited institution with at least a cumulative grade point ratio of 3.00. Care will be taken to ensure a diversity of philosophies and academic backgrounds in the classes.

Students seeking admission to the program will have to submit:

1) A completed application;

2) Transcripts from all previous undergraduate, graduate and post-graduate studies;

3) A written statement of 1,000 words on current job responsibilities, duties and management philosophy; and

There is no Graduate Record Examinations (GRE) or Graduate Management Admission Test (GMAT) requirement although there is a requirement for Test of English as a Foreign Language (TOEFL) scores for international students.

# Requirements for the Master of Science Degree

1. Completion of a minimum of 36 graduate credits.

2. Cumulative grade point ratio of 3.00 for the degree program of study.

3. Cumulative grade point ratio of 3.00 in the core curriculum.

4. Minimum of 30 credits completed at Fairleigh Dickinson University.

5. Maximum of six years to complete the master's degree requirements.

Up to six credits of graduate course work may be transferred from another college or university if completed within the six-year period. Courses submitted for transfer credit will be reviewed and evaluated by the director of the Master of Science in cyber and homeland security program. In assessing requests for transfer credits, the M.S. in cyber and homeland security faculty may require students to complete additional course work to update knowledge and skills to meet master's degree requirements.

The following are the specific program requirements for the master's degree. These curriculum areas and credit-distribution requirements are designed to provide students with flexibility in planning a program of study within a focused framework of professional development.

It is important to note that since homeland security is such a broad area with many different components, a number of areas of specialization are being proposed. The four required courses (CHSA7601 Homeland Security and Constitutional Issues; CHSA7602 Research and Policy Analysis; CHSA7603 Weapons of Mass Destruction/Terrorism Awareness; and CHSA7604 Strategic Planning, Implementation and Evaluation, the capstone course) are M.S. in cyber and homeland security courses and account for 12 credits of the 36-credit program. To satisfactorily complete an area of specialization, the students must complete an additional 18 credits of the program in the area of specialization. The remaining six credits for the degree requirements can be chosen electives taken from other M.S. in cyber and homeland security courses. No more than six credits will be waived for previous experience that is equivalent to any course offering.

Each course will have a standardized syllabus with specific learning outcomes. Textbooks will be selected for each class based on content relative to the topics by the faculty in concert with the administrators of the program. Each course will have at least one required textbook. The nature of the courses also mandates the use of case studies that will link the practical application with theory.

## A. Required Courses

All students enrolled in the M.S. in cyber and homeland security program must complete the following:

CHSA7601	Homeland Security and
	Constitutional Issues
CHSA7602	Research and Policy Analysis
CHSA7603	Weapons of Mass
	Destruction/Terrorism
	Awareness
CHSA7604	Strategic Planning,
	Implementation and
	Evaluation (capstone and
	thesis)

## B. Areas of Specialization

The diversity of homeland security responsibilities requires various areas of specialization. The initial program includes the areas of specializations with their respective courses as follows:

Homeland Security — Terrorism and Security Studies (any six courses) CHSA6601 Terrorism Issues and Implications CHSA6602 Computer and Network Security CHSA6603 Cyber Forensics Issues and Impacts CHSA6604 Assessing Internal and External Threats CHSA6605 Preparing for Catastrophic Emergencies CHSA6606 Historical Perspectives of Terrorism CHSA6607 Border Security: Policies, Actions and Implications CHSA6608 Terrorism and Disaster Management CHSA6609 The Face of Terror CHSA6610 Bio-terrorism Preparedness and Response Homeland Security — Emergency Management (any six courses) CHSA6611 Emergency Management CHSA6612 GIS in Emergency Management CHSA6613 Organizational Planning for **Emergency Situations** CHSA6614 Effective Risk Analysis CHSA6615 Managing Responses to Environmental Emergencies CHSA6616 Stress Awareness and Management CHSA6617 Sociological Effects of Disasters CHSA6618 Emergency Management Policies, Analysis and Implications Homeland Security Leadership (any six courses) CHSA6619 Collaborative Leadership CHSA6620 Organizational Leadership CHSA6621 Human Resource Management CHSA6622 Effective Team Building CHSA6623 Implementing Organizational Change CHSA6624 Effective Decision Making for Organizations CHSA6625 Organizational Communication

# **Cyber and Homeland Security Administration**

CHSA6626 Resolving Conflict in

Organizations CHSA6627 Values and Ethics for

Decision Making Additional courses will be developed in concert with appropriate faculty at the University.

Note: Students who successfully complete an area of specialization will also receive a graduate certificate in the appropriate program.

## **Graduate Certificate Programs**

Students who successfully complete an area of specialization will also receive a graduate certificate in the appropriate program.

## Homeland Security – Emergency Management

This 18-credit, six-course certificate focuses on the area of emergency management. Homeland security requires that the first-responder community and citizens develop the capability to prepare for, protect against, respond to, recover from and mitigate all hazards that may impact anytime and anywhere. The field of emergency management is a broad area of study, which includes natural disasters, accidents or acts of terrorism.

## Homeland Security Leadership

This 18-credit, six-course certificate focuses on the critical area of leadership in homeland security. Leadership is essential for successfully carrying out programs or tasks. This certificate is designed to meet the personal and professional development goals of those individuals in the broad field of homeland security, such as first responders, law enforcement, emergency management, various security personnel, health and hospital workers and the military.

## Homeland Security – Terrorism and Security Studies

This 18-credit, six-course certificate focuses on terrorism and security studies. The Post-9/11 world has made many sectors of the public, private and not-for-profit sectors involved in preventing and combating terrorism as they try to ensure a safe and secure nation. The knowledge provides both historical and current information to add to the knowledge of various threats posed by terrorist organizations, whether domestic or international, and to provide organizations to prepare for the risks associated with such activities.

## **Course Offerings**

**Cyber and Homeland Security Administration** School of Administrative Science

#### **Required Courses**

#### CHSA7601 3 Credits Homeland Security and Constitutional Issues

This required course provides an overview of constitutional issues, statutes and case law that govern homeland security professionals at the local, state and federal levels. Social, ethical and political implications of actions intended to preserve the safety and security of the citizens are studied in relationship to the legal constraints placed on the systems. This course will utilize case studies.

## CHSA7602 3 Credits

## **Research and Policy Analysis**

This required course is designed to develop critical-thinking skills that students need for completion of their academic work as well as in their professional lives. The course will assist students in understanding the research process, develop a research question, assess relevant literature to support the research, select and use an appropriate research methodology, conduct the research and evaluate the results. The end result will be a well-written research report.

#### CHSA7603 3 Credits

#### Weapons of Mass Destruction/ Terrorism Awareness

This required course will explore the use of weapons of mass destruction (WMD) and the link to terrorist activities. Included in the course are: definitions of effects of nuclear, chemical, biological and radiological weapons; types and characteristics of biological- and chemicalwarfare agents; potential modes of nuclear and radiological terrorism; use of improvised nuclear devices (INDs) and radiological dispersal devices (RDDs); Large Vehicle Borne Improvised Explosive Devices (VBIEDs); the motivations, capabilities, techniques and practices of terrorist groups to acquire and use WMD; and the use and attempted use of WMD against countries by internal and external groups.

#### CHSA7604 3 Credits Strategic Planning, Implementation and Evaluation

This required course will link strategic planning with strategic management. This is the capstone course of the program and requires the completion of a thesis. Strategic planning links the vision, mission and guiding principles with the internal and external environment in which the organization exists. The course will explore security formulation, the drivers of homeland security issues for the historical and emergency issues and the results of such policies. Organizations need to understand how strategic plans are implemented and then reviewed and evaluated as part of a continuous improvement process.

#### Areas of Specialization

#### CHSA6601 3 Credits

#### **Terrorism Issues and Implications**

This course will investigate the concepts, ideologies, goals, strategies, tactics and methods used by terrorist groups in the current and historical perspectives. The terrorists' motives and their actions will be studied in relation to historic and current national and international policies. Terrorist organizations will be studied based on their specific criteria to better understand their influence on other nations. Also included will be the concepts of the media and terrorism, law and terrorism, the military response to terrorism, counterterrorism and antiterrorism approaches and governmental responses to terrorism as well as how the intelligence community categorizes and prioritizes resources to target groups and issues.

#### CHSA6602 3 Credits

#### **Computer and Network Security**

This course will investigate advanced topics in computer security and forensics. Included are topics such as cryptography, automatic-intrusion detection, firewalls, vulnerability scanning and advanced pattern matching as well as statistical techniques.

#### CHSA6603

#### **3 Credits**

#### **Cyber Forensics Issues and Impacts**

This course will investigate cyber terrorism and cyber crime, and how these differ from computer security. Technological advancements that are on the cutting edge present opportunities for terrorists, and it is necessary to explore the current domestic and international policies relative to critical infrastructure protection and methods for addressing issues.

# **Cyber and Homeland Security Administration**

#### CHSA6604 3 Credits Assessing Internal and External Threats

This course will investigate the usefulness of threat assessment in various contexts, such as the workplace, infrastructure protection and public safety. Included in the course will be basic methods for examining vulnerabilities to attack, evaluating capacities of the potential attackers as well as their motivations and the role of the intelligence community in these actions. The course will link strategic analysis with priority setting and accountability.

#### CHSA6605 3 Credits Preparing for Catastrophic Emergencies

This course will investigate a wide range of natural and manmade disasters, and develop appropriate plans for mitigating the problems. Natural disasters include a wide range of issues from outbreak of diseases, floods, earthquakes, fires and tornados. Manmade disasters include emergencies such as chemical spills, nuclear incidents, terrorist threats, transportation accidents and power outages.

## CHSA6606 3 Credits

## **Historical Perspectives of Terrorism**

This course will examine the social basis of fear and terrorism and the related consequences on society. Factors such as race/ethnicity, class, religion, politics, local and international policies and gender will be studied in the historical context of terrorism. Case studies will include terrorist techniques that have been used in the past.

#### CHSA6607 3 Credits Border Security: Policies, Actions and Implications

Immigration policies and terrorism threats have increased the focus on national borders. This course will investigate issues relative to border security — from economic security to social and cultural integration or separation. The costs of attempting to maintain a secure border are discussed as are the implications of border security on free-trade agreements.

#### CHSA6608 3 Credits

## Terrorism and Disaster Management

This course will focus on planning and preparing for terrorist acts as well as the area of disasters. It also focuses on the legal and ethical issues that surround planning for acts of terrorism or disasters and a study of the National Response Plan and its implications. The need for and how to develop interagency collaborative agreements from civilian, military and governmental entities will be explored.

#### CHSA6609 3 Credits **The Face of Terror**

This course will examine various characteristics of terrorism — from left-wing terrorism to nationalist terrorism to religious terrorism to group dynamics to secret societies and cults and charismatic leadership. Also included are identification of underground terrorist cells, both domestic and foreign, state-supported and nonstate-supported, as well as methods for dealing with the separate groups.

#### CHSA6610 3 Credits **Bio-terrorism Preparedness and Response**

This course will investigate options to address the threat of a biological attack. Options for identifying a bio-attack and potential responses for addressing these issues will be included in the course. Case studies of actual incidents will be included in the course.

## CHSA6611 3 Credits

## **Emergency Management**

This course will explore the nature and rationale for emergency-management policies and processes. Included will be preparedness for natural and manmade hazards, optional strategies for dealing with such issues, appropriate planning modalities, public awareness techniques to assist in the process and stakeholder communication. Legal and ethical issues that impact emergency management also will be studied.

#### CHSA6612 3 Credits GIS in Emergency Management

This course will provide an introduction to the basic concepts of geographic information systems (GIS) as well as their application to specific issues.

#### CHSA6613 3 Credits Organizational Planning for Emergency Situations

This course will provide an overview of planning and management principles that can be utilized to address operational issues when an emergency situation arises as well as how to resume operations once the emergency is over. The course will also focus on how to minimize the impact of disasters on business operations.

## CHSA6614 3 Credits

## **Effective Risk Analysis**

This course will examine the natural and manmade disasters from a risk-assessment perspective. Development of plans to prepare for each type of disaster as well as control processes will be part of the course work.

#### CHSA6615 3 Credits Managing Responses to Environmental Emergencies

This course will examine the theory and practices in terms of incident-command systems and emergency operating centers.

## CHSA6616

## 3 Credits

## **Stress Awareness and Management**

Stress is part of everyone's life, but in emergency situations, stressors may adversely impact the individual as well as those being served. Leaders need to be aware of the impact of stress on the individual's ability to perform at peak levels as well as the ability to make the best decisions. This course will investigate stressors and how these factors can be mitigated.

## CHSA6617

## **3 Credits**

## **Sociological Effects of Disasters**

This course will explore how various populations respond to the various phases of disasters. Included in the course are: response to warnings, reaction to evacuation orders and civilian disobedience to orders as well as the development of strategies for the organization, individuals and groups.

#### CHSA6618

#### **3** Credits

#### Emergency Management Policies, Analysis and Implications

This course will investigate management of complex emergency-management operations using incident-management systems. The role of the emergency-management operation centers as well as current policies in reacting to disasters will be explored. Case studies of emergencymanagement policies and their implications will be analyzed to determine areas in need of improvement.

#### CHSA6619 3 Credits **Collaborative Leadership**

This course will investigate the concept of leadership exhibited by a group that is acting collaboratively to resolve issues that all feel must be addressed. Since the collaborative process ensures that all people that are affected by the decision are part of the process, the course will explore how power is shared in the process and how leadership is developed.

#### CHSA6620 3 Credits Organizational Leadership

This course will investigate examples of past and present leadership models. The moral framework for leadership and decision making in organizations will provide the basis for exploring current organizational leadership models as well as assisting the students in assessing their own leadership roles.

# **Cybersecurity and Information Assurance**

#### CHSA6621 3 Credits Human Resource Management

This course addresses the challenges of managing human capital in organizations focusing on homeland security. Current issues in recruiting, selecting and moving individuals through the organization will be studied. In addition, team building, problem solving, decision making and human resource-planning skills will be explored as will the leadership skills of mentoring, advising, counseling and disciplining individuals in the organization.

#### CHSA6622 3 Credits

## **Effective Team Building**

As organizations move to empower employees to work in a team setting with a high degree of autonomy, it is necessary to develop highperformance teams. This course investigates what makes teams effective. Various methodologies that have resulted in exceptional teams and team results will be studied.

## CHSA6623

## 3 Credits

## Implementing Organizational Change

This course will explore the issues of resistance to change and obstacles to change in relationship to organizations. Theories relative to change will be studied in terms of the restructuring process, leadership roles and the settings in which the work is done.

#### CHSA6624 3 Credits

#### Effective Decision Making for Organizations

This course explores the process for effective decision making using decision analysis theory, appropriate mathematical processes, evaluating inputs for applicability and applicable quantitative and qualitative methods. The course will utilize "what if" challenges and will consider individual and organizational preferences as well as environmental certainty and uncertainty.

#### CHSA6625 3 Credits Organizational Communication

An introduction to communication in organizations includes relevant theories, leadership, diversity, teamwork and ethics. Included in the course are definitions of organizational culture, leadership, teamwork, diversity, ethics and informal and formal communication as well as how they influence and impact organizational communication. The course will also investigate organizational communication systems and their relevant theories as well as comparing and contrasting the major theories.

## CHSA6626 3 Credits

## **Resolving Conflict in Organizations**

This course will investigate the sources of conflict in organizations, the sources of such conflict and various modalities for resolving these conflicts. Conflict in organizations can be manifested in various ways, such as interpersonal conflict, intragroup conflict, intergroup conflict and interorganizational conflict. Resolving conflict includes compromise, collaboration, negotiation and addressing individual sources of conflict.

#### CHSA6627 3 Credits Values and Ethics for Decision

## Making

Personal and organizational ethics and values guide decision making. There are times when two or more ethical principles are in conflict. This course will explore how to maximize the basic elements that form the context for ethical decision making.

# Cybersecurity and Information Assurance (M.S.)

Hardly a day goes by without some news on cyberattacks. As the number of cyberattacks keeps increasing every day, clearly more cybersecurity professionals will be needed to plan, implement, upgrade, maintain and monitor security measures to protect the information infrastructure, computer networks and systems and digital data of business organizations and local, state and federal agencies. Consequently, the cybersecurity profession offers excellent career opportunities, outstanding average starting salary, excellent median long-term salary, good job-growth projection and great career fulfillment including protecting the nation's information infrastructure.

Fairleigh Dickinson University is officially designated as a National Center of Academic Excellence in Cyber Defense Education (CAE-CDE) institution by the National Security Agency (NSA) and the Department of Homeland Security (DHS). FDU's Master of Science in cybersecurity and information assurance (CSIA) degree program is created in response to meet the challenges in the field of CSIA. The program prepares its graduates for employment or further advanced study, including doctorates, in this field and other related areas. The program is facilitated and supported by the creation of a state-ofthe-art Cyber Defense and Digital Forensics Lab and the recent enhancement of several computer and networking labs.

Students in the program will learn the fundamentals of operating systems, computer networks, cybersecurity, applied cryptography, penetration testing and vulnerability analysis. With the foundational courses as stepping blocks, students move on to take advanced courses in one of the two focus areas: network security administration and secure software development, satisfying the requirements of CAE-CDE knowledge units of those focus areas as specified by NSA and DHS. In particular, students will learn to establish information security protocols, build firewalls and defend against security intrusions, use encryption and protect information, regulate access to

data, establish virus-protection systems, implement business continuity and disaster-recovery plans, conduct penetration tests and analyze system vulnerabilities, develop secure software and help resolve information technology (IT) issues related to security. As a culmination of their studies, students are encouraged to work on a project under the supervision of a faculty adviser or to undertake internship to obtain practical work experience.

The program is offered under the auspices of the Lee Gildart and Oswald Haase School of Computer Sciences and Engineering, University College: Arts • Sciences • Professional Studies, Metropolitan Campus, Teaneck, New Jersey.

## **Admission Requirements**

1. Graduation from an accredited college or university with a satisfactory academic record.

2. Submission of an official score report for the Graduate Record Examinations (GRE) General Test taken within the last five years. The GRE may be waived if the applicant enrolls initially as a nonmatriculating student and completes 9 graduate credits in CSIA with a minimum cumulative grade point ratio (CGPR) of 3.00 and no grade below C or is a graduate of FDU's computer science, electrical engineering, information technology or closely related programs with an undergraduate CGPR of 3.00 or is a graduate of such programs from other institutions with an undergraduate CGPR of 3.50. This GRE waiver policy is only applicable to applicants who graduated from a regionally accredited college or university in the United States. (The GRE requirement also is waived for applicants who have completed a master's degree from a regionally accredited college or university in the United States.)

3. Three letters of recommendation. Applicants who have not completed all requirements for admission to the degree program may be permitted to enroll in classes for credit on a nonmatriculated or nondegree basis.

## Requirements for the Master of Science Degree

1. Students admitted to the program may be required to fulfill a set of prerequisite courses, which can be waived based on their academic credentials. They must earn a CGPR of at least 2.75 for the prerequisite courses if required or be subject to dismissal from the program. They may take no more than 6 credits of regular graduate (core or elective) courses before completing all of the prerequisites.

2. Students must successfully complete 30 credits, including 15 credits of core requirements, 3 credits of a Master's project and 12 credits of electives, beyond any required prerequisites. In consultation with an academic adviser, students can choose four courses (12 credits) from a list of approved electives based on their interests and career goals. Alternatively, they are encouraged to concentrate on one of two focus areas. network security administration and secure software development, each with three courses (9 credits), and to choose one more course (3 credits) from the list of approved electives. Students must earn a CGPR of at least 2.75 for the 30 credits beyond the prerequisite courses.

## Prerequisite Courses (12 credits)

The prerequisite courses for the M.S. in cybersecurity and information assurance program are:

1.

Credits
CSCI5505
Introduction to Computer
Programming3
CSCI5525
Introduction to Computer Science3
CSCI5555
Data Structures3
CSCI5565
Assembly Language 3
Additional prerequisite courses may be
required if the students did not graduate
from a Science Technology Engineering

required if the students did not graduate from a Science, Technology, Engineering Mathematics (STEM)-related baccalaureate degree programs. STEM refers to science, technology, engineering and mathematics. Prerequisite courses will be determined through faculty review of students' undergraduate transcripts of records.

## Core Requirements (15 credits)

The required core courses for the M.S. in cybersecurity and information assurance program are:

1 - 0	Credits
CSCI6638	
Operating Systems	3
CSCI6731	
Computer Networks	3
CSCI6738	
Cybersecurity	3
CSCI6740	
Applied Cryptography	3
CSCI6870	
Penetration Testing and	
Vulnerability Analysis	3

## Project (3 credits)

## Electives (12 credits)

Students are encouraged to take three courses (9 credits) from one of the following two focus areas and one more course (3 credits) from the list of approved electives as provided below. Alternatively, students can also take any four courses (12 credits) from the approved electives based on their interests and needs.

## Electives for Network Security Administration Focus

3
3
3

# *Electives for Secure Software Development Focus*

CSCI6620
Software Engineering3
CSCI6836
Computer Algorithms3
CSCI6860
Secure Software Development
and Analysis3

# **Education • Education for Certified Teachers**

## Approved Electives

Credits
CSCI6620
Software Engineering
CSCI6623
Database Systems 3
CSCI6811
Advanced Special Projects
CSCI6836
Computer Algorithms
CSCI6860
Secure Software Development
and Analysis3
CSCI6863
Supply Chain Security and
Systems Certification 3
CSCI6869
Network Security3
CSCI6873
Firewalls and Intrusion-detection
Systems3
CSCI7783
Information Security3
CSCI7870
Linux System Administration3
CSCI8891
Internship/Work Experience3

## **Course Descriptions**

See "Course Offerings," Computer Science pages 104–110 and Management Information Systems pages 177–178.

# Education

Education for Certified Teachers (M.A.) See this page.

**Educational Leadership (M.A.)** See page 132.

*Learning Disabilities (M.A.) See page 133.* 

*Mathematical Foundations (M.A.) See page 136.* 

Teaching (M.A.T.) See page 137.

Teaching English as a Second/Foreign Language TESL/TEFL (M.A.) See page 140.

These programs are offered under the auspices of the Peter Sammartino School of Education, University College: Arts • Sciences • Professional Studies, Metropolitan Campus. Programs are available at the Florham Campus, Madison, New Jersey; the Metropolitan Campus, Teaneck, New Jersey; and off-site locations, see individual programs for specific locations.

At times, the New Jersey State Department of Education regulations change. Students are advised to check the New Jersey State Department of Education website http://www.state.nj.us/education/ for current requirements.

# Peter Sammartino School of Education

The Peter Sammartino School of Education offers master's degrees in various specialties within education, allowing working teachers to further their careers. Persons with a bachelor's degree but no teaching certification are given the opportunity to earn certification and enter the teaching profession through the M.A.T. program (see page 137). Already certified teachers may continue their professional development through one of several master's degree programs. The School is part of University College: Arts • Sciences • Professional Studies.

# Education for Certified Teachers (M.A.)

The Master of Arts in education for certified teachers (MACT) is a 36-credit program that allows certified teachers to pursue specializations while attaining their master's degrees. Each program is unique in that teachers can graduate with an 18or 21-credit specialization certificate or state certification including the 12 credits leading to a New Jersey Supervisor License. Certified teachers with a New Jersey Standard Teaching License who complete the master's degree and have the designated approved 12 credits with three years of successful teaching experience will be eligible to apply for the New Jersey Supervisor License. The areas of specialization that a certified teacher can choose from are:

• Bilingual/Bicultural Education Specialist Certificate — 12-credit approved New Jersey State Teacher Certification in bilingual/bicultural education as a second certificate, plus 12credit Supervisor License and 12 credits to complete a master's degree.

• English as a Second Language (ESL) FDU Certificate and New Jersey Certification (ESL) — 18-credit FDU Certificate or 18-credit approved New Jersey State Certification in ESL as a *second* certification, plus 12-credit Supervisor License and 6 credits to complete a master's degree.

• Instructional Technology Specialist Certificate (ITC) — 18-credit FDU Certificate plus 12-credit Supervisor License and 6 credits to complete a master's degree.

• Literacy/Reading Specialist (LRS) and New Jersey Reading Specialist Certification — 18-credit FDU Certificate, an additional 12 credits to complete the 30-credit approved New Jersey Reading Specialist Certification/Endorsement plus 6 credits to complete the master's degree embedded with the 12-credit Supervisor License.

• Dual Program in Literacy/Reading and Multisensory Reading — 18-credit FDU Certificate and additional 18 credits to complete the 36-credit master's degree. This program includes the 12-credit Orton-Gillingham Dyslexia Specialist Certificate.

## • Professional Studies Concentration (PROST) — 36-credit selection from generalist options in all MACT programs with required 3-credit Master's Seminar

with required 3-credit Master's Seminar and may include 12-credit Supervisor License.

#### • Teacher of Students with Disabilities (TSD) — 21-credit approved New Jersey Certification as a *second* certification with 12-credit Supervisor License and 3-credit Master's Seminar to complete the master's degree.

The M.A. in education for certified teachers is offered under the auspices of the Peter Sammartino School of Education, University College: Arts • Sciences • Professional Studies, Metropolitan Campus, Teaneck, New Jersey, and is available at the Metropolitan Campus and selected off-site locations and selected community colleges. Cohort groups may be established in school districts with sufficient enrollment and are open to teachers in local districts.

The School had an aggregate pass rate of 100 percent on the HEOA-Title II Reporting for the 2017–2018 academic year. The corresponding statewide pass rate for the same period was 97 percent.

## **Program Information**

• All programs incorporate standardsbased teaching methods that address the Interstate Teacher Assessment and Support Consortium (InTASC), New Jersey Core Curriculum Content Standards (NJCCCS) and the Common Core State Standards.

• An approved 12-credit sequence of courses within the 36-credit M.A. degree will prepare the candidate to apply for a New Jersey Supervisor's License with a complete master's degree and three years of successful teaching experience.

• Instructional technology is integrated into all teaching strategies. Web-based courses and other distance-learning modalities are utilized, as appropriate, to diversify course delivery and model the use of various technologies for instruction.

• The FDU Certificates and the New Jersey Certifications and Endorsements may be taken without completion of the M.A.

• Each of the 18-credit certificate programs are offered in a two-year sequence of courses. Students take an average of 9 credits per year and can expect to complete the 18-credit certificate portion of the program within a two-year cycle.

• Candidates are accepted for fall, spring and summer semesters. Applicants must specify specialization program or select the professional studies program, a generalist degree.

• There is a one-time application fee of \$40.00 required. This fee may be waived if the candidate meets with an admissions adviser or department faculty member.

• Tuition rate is reduced with no hidden fees.

• Admission to the M.A. in education for certified teachers (MACT) is subject to approval by the School of Education pursuant to the admissions policy for the University that may apply.

• Admission packages are available online or from the Graduate Admissions Office, (201) 692-2553.

• For specific program information, contact the School of Education at (201) 692-2862 or email milton3@fdu.edu.

## **Admission and Matriculation**

## Admission Process

All candidates who meet the following general criteria will be accepted as prematriculated students in the M.A. in education for certified teachers (MACT) program:

1. Application and interview. 2. Transcripts, official or unofficial, from all undergraduate and graduate institutions showing an undergraduate grade point ratio (GPR) of 3.00; if lower, provisional acceptance until a 3.25 GPR is achieved and maintained in the first 9 credits taken at FDU.

3. Standard Teacher License or Certificate of Eligibility with Advanced Standing (CEAS).

4. Two letters of recommendation from individuals familiar with the candidate's recent performance; one should be from an immediate supervisor.

5. Official transcripts from all undergraduate and graduate institutions.

6. A cumulative GPR of at least 3.25 in the first 9 credits of the M.A. program, which must be maintained at the same level to complete the program.

# Requirements for the Master of Arts Degree

Core Courses (18 credits)	Credits
EDUC6584	
Computers as a Teacher's Aid:	
Curriculum and Instruction	
(except in TSD and ESL	
programs)	
EDUC6702	
Curriculum and Instruction: The	ory
and Practice*	
EDUC6703	
Supervision of Instruction:	
Personnel and Evaluation*	3
EDUC6704	
Change: Curriculum Developmer	nt
and Program Improvement*	3
EDUC6718	
Curriculum/Program Evaluation	
and Student Assessment*	3
EDUC7674	
Master's Seminar: Research in	
Specialization	3
*	

# Specialization Programs (18 credits)

Candidates select from one of the following programs described in detail on the following pages:

- Bilingual/Bicultural Education (BBE) requires 12 credits
- English as a Second Language (ESL)
- Instructional Technology Specialist (ITS)
- Literacy/Reading Specialist (LRS)Professional Studies Concentration

(PROST)
Teacher of Students with Disabilities
(TSD) — requires 21 credits

## Bilingual/Bicultural Education (BBE) Specialist Certificate Program

The bilingual/bicultural education programs require teachers who can provide content-specific instruction in an environment that promotes student bilingual/bicultural development. Course work that leads to the bilingual/bicultural education New Jersey teacher endorsement provides certified teachers with the knowledge and skills they need to meet this dual responsibility.

\*These four courses lead to a New Jersey Supervisor License. Fairleigh Dickinson University's Bilingual/Bicultural Education Certification Program was developed as a 12-credit concentration covering the essential topics of applied linguistics, language acquisition, biliteracy development, pedagogical theory and teaching methods of content areas in bilingual/bicultural settings. The Bilingual/ Bicultural Education teacher certification is not a stand-alone endorsement but must be paired with a standard co-certificate in the subject or grade level to be taught.

## Bilingual/Bicultural Education Specialist Certificate Program Required Courses (12 credits)

Credits
EDUC6550
Methodology in Bilingual/
Bicultural Education3
EDUC6551
Language Acquisition in Bilingual/
Bicultural Contexts
EDUC6574
Applied Linguistics for Language
Teachers
EDUC6654
Literacy Development for
Second-language Learners
The 12-credit certification program
may be applied toward a 36-credit M.A. in
education for certified teachers degree.

## English as a Second Language (ESL) Specialist Certification Program

The field of teaching English to speakers of other languages requires highly specialized training. The primary focus of Fairleigh Dickinson University's English as a Second Language Specialist Certification Program is on the language and culture of the United States and effective secondlanguage methodology.

Fairleigh Dickinson's ESL Specialist Certification Program for certified teachers provides an 18-credit concentration that may be applied toward a 36-credit M.A. in education for certified teachers and includes the 18 credits required for a second New Jersey certification as Teacher of ESL.

At the end of the English as a Second Language Specialist Program, teachers will have completed courses having:

• a focus on second-language acquisition, research and methodology, addressing the diverse needs of students, first- and second-language acquisition and development of literacy skills for second-language learners; and

• a concentration on curriculum development and authentic assessment practices aligned with WIDA and TESOL Standards for ESL instruction in New Jersey and Common Core State Standards (CCSS); and

• a strong emphasis on field experiences in school settings with secondlanguage learners.

The New Jersey Department of Education requires a demonstration of oral and written language proficiency in English and the desired second language for bilingual certification. Candidates may meet this requirement by taking the Oral Proficiency Interview (OPI) and Writing Proficiency Test (WPT) in both English and their second language of choice.

## Required Courses for a Second New Jersey Certification in ESL (18 credits)

Credits
EDUC6565
Second Language Acquisition:
Methods and Curriculum3
EDUC6574
Applied Linguistics for Language
Teachers
EDUC6584
Computers as a Teacher's Aid:
Curriculum and Instruction 3
EDUC6631
Assessment in the Second-language
Classroom3
EDUC6654
Literacy Development for
Second-language Learners
EDUC6661
The Multicultural Classroom3

## Instructional Technology Specialist Certificate (ITSC) Program

The School of Education offers the K–12 Instructional Technology Specialist Certificate (ITSC) Program for educators interested in specializing in the integration of technology throughout the curriculum. Candidates may elect to take only the 18 credits leading to the FDU Certificate or may apply these credits to the 36-credit M.A. in education for certified teachers program.

ITSC candidates learn to:

• create cutting-edge curricula featuring seamless technology integration;

• strategically plan for the continuous growth of technology integration in the school and classroom; and

• take a leadership role in the initiation and assessment of new learning strategies which support state and national technology standards.

The ITSC curriculum is designed to accommodate both K–12 teachers as well as educators who have technology leadership roles in their schools or districts.

An option is available for offering the ITSC off-campus program in school districts with appropriate technology facilities. Special provisions are made to support and enhance K–12 technology initiatives in those districts choosing this option.

## Instructional Technology Specialist Certificate Program Required Courses (18 credits)

Credits
EDUC6584
Computers as a Teacher's Aid:
Curriculum and Instuction
EDUC6673
Integrating Literacy and Technology
Across the Curriculum
EDUC7784
Multimedia Production 3
EDUC7785
Internet for Educators
EDUC7790
Seminar in Instructional Technology3
EDUC7796
Projects Based on the Web3
EDUC7798
Special Topics in Instructional
Technology
Note: Other instructional technology
accuracy that are offered may be achetituted

Note: Other instructional technology courses that are offered may be substituted for a required instructional technology course, with the adviser's approval.

# Literacy/Reading Specialist (LRS) Certification Program

This program is designed to develop teachers to become leaders in the field of literacy and reading. This 30-credit Literacy/Reading Specialist program is approved by the New Jersey Department of Education for a second Endorsement/ Certification license as a reading specialist with a master's degree and two years of successful teaching. Candidates can take the 6 additional credits to complete the 36credit M.A. in education for certified teachers including the 12 credits leading to a New Jersey Supervisor License.

A reading specialist is one who conducts in-service training of teachers and administrators, coordinates instruction for individuals or groups of pupils having difficulty learning to read, diagnoses the nature and causes of individuals' difficulties in learning to read, plans developmental programs in reading for pupils, recommends methods and materials to be used in district reading programs and contributes to the evaluation of the reading achievement of pupils.

In addition, the candidate with three years of successful teaching may select the four courses leading to a New Jersey Supervisor License.

Finally, for individuals who do not need state endorsement but want to learn more about current literacy research, balanced reading approaches and specific reading strategies, there is an alternative 18-credit FDU Certificate that will provide K–12 classroom teachers with a concentration of courses that will extend their knowledge and skills in language arts, literacy and reading.

## *New Jersey State Literacy/ Reading Specialist Certification/ Endorsement and Supervisor Certification (36 credits)*

Credits

EDUC6582	
Distance Learning: Children's	
Literature	3
EDUC6605	
Foundations in Reading I	3
EDUC6606	
Foundations in Reading II	3
EDUC6607	
Diagnosis of Reading Problems	3
EDUC6609	
Supervised Practicum in Reading	3
EDUC6666	
Supervised Practicum in Correction	
of Reading Problems	3
EDUC6673	
Integrating Literacy and Technology	
Across the Curriculum	3
EDUC6702	
Curriculum and Instruction: Theory	
and Practice*	3

Credits
EDUC6703
Supervision of Instruction:
Personnel and Evaluation
EDUC6704
Change: Curriculum Development
and Program Improvement* 3
EDUC6718
Curriculum/Program Evaluation
and Student Assessment
EDUC7674
Master's Seminar: Research in
Specialization
(Literacy/Reading)3

## Dual Program in Literacy/ Reading and Multisensory Reading

This 36-credit program is designed for those who have completed, or wish to complete, the 12-credit Orton-Gillingham Dyslexia Specialist Certificate. In this program, candidates will hone their own literacy/reading knowledge by learning what research says about a balanced reading approach, including: 1) phonological, phonemic awareness and the importance of automaticity; 2) selection of appropriate, real literature and leveled texts to motivate, instruct and create lifelong readers; 3) development of specific reading comprehension skills, vocabulary and fluency development; and 4) exploration and use of informal alternative assessment instruments and multiple measures to inform instruction. In addition, students will learn how to assess learners' progress and differentiate instruction based upon each learner's developmental needs by participating in supervised practicum in reading.

This program does not lead to the New Jersey Department of Education endorsement/certification as a reading specialist. For individuals who wish to obtain this endorsement, they must take an additional 6 credits. For New Jersey Literacy/Reading Specialist Certification, candidates must have a current standard teacher license, two years of successful teaching experience and a master's degree. For those individuals who wish to obtain a Fairleigh Dickinson University certificate, there is an option to take just the 18 credits required for the certificate.

## Courses for FDU Literacy/Reading Certificate (18 credits)

Credits
EDUC6582
Distance Learning: Children's
Literature3
EDUC6605
Foundations in Reading I3
EDUC6606
Foundations in Reading II3
EDUC6607
Diagnosis of Reading Problems3
EDUC6666
Supervised Practicum in Correction
of Reading Problems3
EDUC6673
Integrating Literacy and Technology
Across the Curriculum

## *Courses for Orton-Gillingham Dyslexia Specialist Certificate* (12 credits)

EDUC6601
Multisensory Reading I3
EDUC6602
Multisensory Reading II3
EDUC7603
Multisensory Reading III3
EDUC7604
Multisensory Reading IV3

# *Courses for Master of Arts in Education (6 credits)*

EDUC6609	
Supervised Practicum in Reading	
EDUC7674	
Master's Seminar: Research in	
Specialization	
(Literacy/Reading) 3	

For New Jersey State Certification in Reading/Literacy, students must take EDUC6703 Supervision of Instruction: Personnel and Evaluation and EDUC6718 Curriculum/Program Evaluation and Student Assessment for a total of 42 credits.

**Requirements:** For New Jersey Literacy/ Reading Specialist Certification, candidates must have a current standard teacher license, two years of successful teaching experience and a master's degree.

\*Candidates who already hold a master's degree have the option not to take this course to obtain a Supervisor's Certification and, in turn, complete the program in 30 credits.

\*Course leads to a New Jersey Supervisor License — 12 credits with a master's degree and three years of teaching.

## **Professional Studies Concentration (PROST)**

The professional studies concentration is designed for New Jersey Provisional Teacher candidates and certified teachers who want a generalist master's degree. The New Jersey Provisional Teacher candidates who are in the process of completing the state-required 200 hours of instruction may select from the three identified courses, 9 credits, which parallel the course content. During this time, provisional candidates will be nonmatriculated students and, upon completion of these courses and receipt of a standard teaching certification from the New Jersey Department of Education, the candidates may proceed to elect a sequence of courses from the remaining 21 credits leading to the M.A. in education for certified teachers.

Certified teachers may select from the 18 core courses and 18 credits from the specialization courses listed. This program will allow candidates to match their professional goals with the programs offered in the M.A. in education for certified teachers. The candidates can select from several specializations to fulfill their program requirements.

Embedded within the 36-credit master's degree are the 12 credits leading to a New Jersey Supervisor License with a master's degree and three years of successful teaching.

An adviser will work closely to monitor all candidates' program selections.

The professional studies concentration will allow teachers to develop their educational knowledge and skills to become more effective teachers.

#### Professional Studies Concentration Course Requirements (15 credits) Credits

EDUC6584
Computers as a Teacher's Aid:
Curriculum and Instruction3
EDUC6669
Advanced Field Placement*3
EDUC6835
Effective Teaching and
Effective Schools*
EDUC6893
Evaluation and Measurement in
Education*3
EDUC7674
Master's Seminar: Research in
Specialization (required course)3

\*Courses provided off-site by the New Jersey State Provisional Training Program.

#### Supervisor License Option (Some or all of 12 credits below)\* Credits

## Alternative Options to 12 credits for Supervisor License\*\*

EDUC6661
The Multicultural Classroom3
EDUC6740
Introduction to Students with
Disabilities and Autistic
Spectrum Disorders3
EDUC7763
Human Relations and Conflict
Resolution for Educators3
EDUC7785
Internet for Educators

# *Course Options for Generalist Educational Program (18 credits)*

Select 18 credits either from one section below or from several sections.

#### \*Courses for Supervisor License — 12 credits, master's degree plus three years of teaching. \*\*Other courses may be substituted after approval of adviser.

Teacher of Students with Disabilities Options without Certificate or State Endorsement

Credits
EDUC6740
Introduction to Students with
Disabilities and Autistic
Spectrum Disorders
EDUC6744
Foundations: Historical,
Philosophical and Legal Issues
Related to Disabilities3
EDUC6745
Principles and Practices of
Collaboration and Inclusion
EDUC6746
Learning Environment and
Effective Management of
Teaching and Learning 3

Multimedia Production 3
EDUC7785
Internet for Educators
EDUC7796
Projects Based on the Web3

## **Education • Education for Certified Teachers**

## **Courses for Second New Jersey** Certification

Select one entire program listed below leading to state certification. These courses may ONLY be taken after first state certification has been granted to the candidate.

Literacy/Reading Specialist — 30 Credits, Plus Two Years Teaching and Master's Degree Credits EDUC6582 Distance Learning: Children's EDUC6605 Foundations in Reading I......3 EDUC6606 Foundations in Reading II......3 EDUC6607 Diagnosis of Reading Problems......3 EDUC6609 Supervised Practicum in Reading......3 EDUC6666 Supervised Practicum in Correction of Reading Problems......3 EDUC6673 Integrating Literacy and Technology EDUC6703 Supervision of Instruction: Personnel and Evaluation\*......3 EDUC6718 Curriculum/Program Evaluation EDUC7674 Master's Seminar: Research in Specialization (Literacy/Reading)...... 3 English as a Second Language — 18 credits EDUC6565 Second Language Acquisition: EDUC6574 Applied Linguistics for EDUC6584 Computers as a Teacher's Aid: EDUC6631

Assessment in the Second-language 

prerequisite or corequisite for all courses.

\*EDUC6745 Principles and Practices of Collaboration and Inclusion or EDUC6746 Learning Environment and Effective Management of Teaching and Learning are prerequisites for EDUC7623 Diagnosis of Learning Disabilities and EDUC7624 Correction of Learning Disabilities \*EDUC6740 Introduction to Students with \*\*EDUC6740 Introduction to Students with Disabilities and Autistic Spectrum Disorders is a Disabilities and Autistic Spectrum Disorders is a prerequisite or corequisite for all courses.

EDUC6654

EDUC6661

21 credits

EDUC6740

EDUC6744

EDUC6745

EDUC6746

EDUC6747

EDUC7623

EDUC7624

Literacy Development for Second-

Teacher of Students with Disabilities -

Introduction to Students with

Disabilities and Autistic

Philosophical and Legal Issues

Foundations: Historical,

Principles and Practices of

Learning Environment and

Effective Management of

Multisensory Reading Instruction

for Students with Reading

**Teacher of Students with** 

(Nondegree Program)

**Disabilities (TSD) Certification** 

This is a nondegree program for certified,

general-education classroom teachers who

seek to develop expertise in working with

students with exceptionalities in grades K-

12. Candidates who successfully complete this program will be eligible for New Jersey

Department of Education certification as

license is required for teaching students

with disabilities in settings such as

self-contained classrooms.

Teacher of Students with Disabilities. This

inclusive classrooms, resource centers and

Teaching and Learning\*......3

Diagnosis of Learning Disabilities......3

Correction of Learning Disabilities...... 3

#### Credits M.A. Core Courses (15 credits) Credits EDUC6702 language Learners......3 Curriculum and Instruction: Theory and Practice......3 EDUC6703 Supervision of Instruction:

EDUC6704

EDUC6718

LDCCCTTC
Curriculum/Program Evaluation
and Student Assessment
EDUC7674
Master's Seminar: Research in
Specialization3
Teacher of Students with

Change: Curriculum Development

## Disabilities Courses (21 credits)

EDUC6740
Introduction to Students with
Disabilities and Autistic
Spectrum Disorders
EDUC6744
Foundations: Historical,
Philosophical and Legal Issues
Related to Disabilities3
EDUC6745
Principles and Practices of
Collaboration and Inclusion3
EDUC6746
Learning Environment and
Effective Management of
Teaching and Learning
EDUC6747
Multisensory Reading Instruction
for Students with Reading
Disabilities3
EDUC7623
Diagnosis of Learning Disabilities*3
EDUC7624
Corrections of Learning Disabilities*3
Total 36

## **Course Descriptions**

See "Course Offerings," pages 141-154.

\*EDUC6745 Principles and Practices of Collaboration and Inclusion or EDUC6746 Learning Environment and Effective Management of Teaching and Learning are prerequisites for EDUC7623 Diagnosis of Learning Disabilities and EDUC7624 Correction of Learning Disabilities.

# Educational Leadership (M.A.)

The Master of Arts (M.A.) in educational leadership requires a total of 36 credits of specific course work in the field of educational leadership and management. Students in the program will participate in cohort and mixed-study groups as they engage in a multiyear sequence of courses and field experiences that will emphasize the following areas:

1) The development of human relations skills to optimize the educational leadership graduate student's ability to interact with teachers, colleagues, parents, students and other members of the school community;

2) Knowledge of effective strategies that promote higher student achievement;

3) Development of the skills and knowledge for creating a vision for effective schools and engaging the learning-community stakeholders in the process of creating and implementing an educational vision;

4) Assumption of the role of a leader in promoting systemic growth and utilizing available resources;

5) Development of the management skills required to effectively utilize available resources; and

6) Engaging the community and profession in the advocacy of public policy that promotes the success for all students in the learning community.

The program's design and curriculum are based on the demands facing today's schools, with a focus on developing a vision of a school as a community of learners. Graduates of the program develop competencies in the administrative strategies and skills that engage all stakeholders in the decision-making process and promote the true sense of a community of learners. To accomplish these goals, student learning will rely heavily on small-group interaction, simulations and problem-based learning activities. During the second year of the program, students will be able to apply the educational theory learned in formal course work through an intensive field experience in schools of outstanding practitioners.

Completion of the 36-credit M.A. program will qualify students to sit for the PRAXIS Examination in School Leaders Licensure Assessment (SLLA) and to apply for a **certificate of eligibility** required for appointment as a **principal** in the state of New Jersey. Individuals who have three years of teaching experience, an M.A. and the four-course sequence in supervision and curriculum offered in the program will be eligible to apply for a **supervisor's certificate** under New Jersey Administrative Code requirements.

At times, the New Jersey State Department of Education regulations change. Students are advised to check the New Jersey State Department of Education website http://www.state.nj.us/education/ for current requirements.

A post-master's principal certification program is offered, see this page.

These programs are offered under the auspices of the Peter Sammartino School of Education, University College: Arts • Sciences • Professional Studies, Metropolitan Campus, Teaneck, New Jersey. The program is available at the Florham Campus, Madison, New Jersey; the Metropolitan Campus; and satellite campus locations.

## **Admission Requirements**

#### Admissions Process

All candidates who want to be considered for admission must meet the following criteria:

1) Submit a professional portfolio, which includes evidence of:

• a standard teaching certificate,

- successful teaching and
- a writing sample.

2) Submit an undergraduate transcript indicating that the student has maintained a cumulative grade point ratio (CGPR) of 3.00. Students who have not maintained a 3.00 CGPR in undergraduate work may be accepted provisionally. Those students will be matriculated if they maintain a 3.25 CGPR through the first 9 credits of the M.A. program.

3) Submit two letters of recommendation (one from a supervisor) that address the following:

• quality of teaching and evidence of commitment to the field of education and • potential for leadership.

• potential for leadership.

4) Provide evidence of successful completion of PRAXIS and have an appropriate number of years of successful teaching experience.

5) Students must maintain a 3.00 CGPR to graduate from the program.

## Requirements for the Master of Arts Degree

Creatis
EDUC6701
Leadership in Learning Community
and School3
EDUC6702
Curriculum and Instruction: Theory
and Practice*3
EDUC6703
Supervision of Instruction:
Personnel and Evaluation*3
EDUC6704
Change: Curriculum Development
and Program Improvement*3
EDUC6706
Advanced Leadership Seminar3
EDUC6716
School Finance, Facilities and
Scheduling
EDUC6717
School Law
EDUC6718
Curriculum/Program Evaluation and
Student Assessment*
EDUC6720
Educational Leadership Field-based
Internship Seminar I
EDUC6721
Educational Leadership Field-based
Internship Seminar II
EDUC6722
Educational Leadership Field-based
Internship Seminar III
Final Project: School-based Research 3
rinai rioject: School-Dased Research 5

#### Post-master's Principal Certification Program

This 30-credit, 10-course sequence is designed for teachers who hold a master's degree, have at least five years of successful educational experience under a valid New Jersey certificate and wish to take courses solely for the purpose of obtaining a principal's certificate. Students who have a New Jersey supervisor's certificate would need only 18 credits (six courses) and a passing score on the School Leaders Licensure Assessment (SLLA). Evaluation of previous graduate school transcripts must be completed by an adviser, and a special program is planned that will achieve the sequence of courses of instruction required for certification as a principal.

\*Required for Supervisor's Certificate.

## Requirements (30 credits)

nequilements (50 cieutis/
Credits
EDUC6701
Leadership in Learning
Community and School*3
EDUC6702
Curriculum and Instruction: Theory
and Practice3
EDUC6703
Supervision of Instruction:
Personnel and Evaluation3
EDUC6704
Change: Curriculum Development
and Program Improvement3
EDUC6706
Advanced Leadership Seminar*
EDUC6716
School Finance, Facilities and
Scheduling3
EDUC6717
School Law3
EDUC6718
Curriculum/Program Evaluation
and Student Assessment3
EDUC6720
Educational Leadership
Field-based Internship Seminar I3
EDUC6721
Educational Leadership
Field-based Internship Seminar II3
EDUC6722
Educational Leadership
Field-based Internship Seminar III3

## **Course Offerings**

See "Course Offerings," pages 141-154.

\*Students may subsitute EDUC6706 Advanced Leadership Seminar for EDUC6701 Leadership in Learning Community and School.

# Learning Disabilities (M.A.)

The following degree and certificate programs in learning disabilities are available at FDU. Each takes into consideration the student's educational background and career goals.

• Master of Arts in Learning Disabilities/ Teacher of Students with Disabilities Certification, see this page.

• Teacher of Students with Disabilities Certification, see page 134.

• Master of Arts in Learning Disabilities/ Learning Disabilities Teacher Consultant Certification, see page 134.

• Learning Disabilities Teacher Consultant Certification, see page 135.

• Dyslexia Specialist Certificate and other Orton-Gillingham certificate programs, see pages 135–136.

These programs are offered under the auspices of the Peter Sammartino School of Education, University College: Arts • Sciences • Professional Studies, Metropolitan Campus, Teaneck, New Jersey.

## **Admission Requirements**

1. A bachelor's or a master's degree from an accredited college or university with a minimum grade point ratio of 3.00 (out of a possible 4.00) in undergraduate or graduate work. Retention in the program is contingent upon maintaining a 3.25 academic average.

2. For students without a master's degree, submission of the scores of the Graduate Record Examinations (GRE), the Miller Analogy Test or the PRAXIS Examination.

3. Two letters of recommendation.

4. A New Jersey Instructional Certificate is required for students seeking second certification as Teacher of Students with Disabilities or Learning Disabilities Teacher Consultant (LDTC).\*

5. Candidates for LDTC certification also are required to have three years of successful, full-time teaching experience by the end of the program and to have experience teaching special populations.

\*Master's degree programs, as well as special programs of a short-range nature, are available to candidates holding undergraduate or graduate degrees in a related field. Applicants who have not completed all requirements for admission to the degree program may be permitted to enroll in classes for credit on a nonmatriculated or nondegree basis.

### Master of Arts in Learning Disabilities/Teacher of Students with Disabilities Certification

A 38-credit Master of Arts in learning disabilities is offered for licensed teachers seeking to develop expertise in working with pupils with learning disabilities or other exceptionalities. Teachers who successfully complete this program will be eligible for certification as Teacher of Students with Disabilities, the license required by the state of New Jersey for teaching pupils with learning disabilities or other disabilities in inclusive classrooms, resource centers or self-contained classrooms (see Teacher of Students with Disabilities Certification [nondegree] page 134).

## Requirements

Basic Core (12 credits) EDUC6627	Credits
Orientation to School Testing	3
EDUC6740	
Introduction to Students with	
Disabilities and Autistic	
Spectrum Disorders	3
EDUC6746	
Learning Environment and Effect	tive
Management of Teaching and	
Learning	
EDUC6792	
Assistive Technology for the	
Inclusive Classroom	
Total Con	re12
Specialization (15 credits)	
EDUC6744	
Foundations: Historical, Philosoph	
and Legal Issues Related to Disabi	ilities3
EDUC6745	
Principles and Practices of	-
Collaboration and Inclusion	
EDUC6747	for
Multisensory Reading Instruction Students with Reading Disabilitie	
EDUC7623	J
Diagnosis of Learning Disabilities	* 3
EDUC7624	
Correction of Learning Disabilitie	es*3
*EDUC6745 Principles and Practices of	Logming

Collaboration and Inclusion or EDUC6746 Learning Environment and Effective Management of Teaching and Learning are prerequisites.

## **Education • Learning Disabilities**

Electives (9 credits)	Credits
EDUC6694	
Introduction to Autism	
Spectrum Disorders	3
EDUC6793	
Education of Students with	
Moderate to Severe Disabiliti	es3
EDUC6797	
Multisensory Mathematics	
Instruction for Students with	
Disabilities	3

#### **One-credit Electives (2 credits)**

Reading Comprehension
Multisensory Mathematics
Skills
Study Skills
Diagnosing Mathematics
Disabilities and Strategies
for Remediation
Understanding Asperger
Syndrome
Updating LDTC Diagnostic
Skills
Phonemic Awareness
Understanding IQ Testing

#### Teacher of Students with Disabilities Certification (Nondegree Program)

This is a nondegree program for licensed, regular classroom teachers who seek to develop expertise in working with students with exceptionalities in grades K–12. Teachers who successfully complete this program will be eligible for certification as Teacher of Students with Disabilities, the license required by the state of New Jersey's Department of Education for teaching children with disabilities in settings such as inclusive classrooms, resource centers or self-contained classrooms.

## Requirements

Credits
EDUC6746
Learning Environment and Effective
Management of Teaching
and Learning 3
EDUC6747
Multisensory Reading Instruction for
Students with Reading Disabilities 3
EDUC7623
Diagnosis of Learning Disabilities*3
EDUC7624
Correction of Learning Disabilities*3
_
Master of Arts in Learning

## Disabilities/Learning Disabilities Teacher Consultant (LDTC) Certification (Suspended)

This 38-credit master's degree in learning disabilities is for licensed teachers with experience in special-education settings who wish to develop skills for diagnosing learning difficulties and planning instructional programs for pupils from preschool through grade 12. Teachers with three years of full-time teaching experience with special populations who successfully complete this program will be eligible for certification as Learning Disabilities Teacher Consultant (LDTC). This license is required by the state of New Jersey for serving in the LDTC capacity on a Child Study Team.

#### Requirements

#### Basic Core (15 credits)

EDUC6626
Neurophysiological Basis of Learning
Problems
EDUC6627
Orientation to School Testing
EDUC6740
Introduction to Students with
Disabilities and Autistic
Spectrum Disorders3
EDUC6746
Learning Environment and
Effective Management of Teaching
and Learning*
EDUC6747
Multisensory Reading Instruction
for Students with Reading
Disabilities
Total15

\*EDUC6745 Principles and Practices of Collaboration and Inclusion or EDUC6746 Learning Environment and Effective Management of Teaching and Learning are prerequisites.

•
EDUC6745
Principles and Practices of
Collaboration and Inclusion*
EDUC7623
Diagnosis of Learning Disabilities
EDUC7624
Correction of Learning Disabilities3 EDUC8623
Practicum in Diagnostic and
Remedial Techniques I**
EDUC8628
Practicum in Diagnostic and
Remedial Techniques II**
Clinical Practicum
Total17
Electives (6 credits)
Electives to be chosen from the courses
below:
EDUC6660
Diagnosic Mathematics
Disabilities and Strategies
for Remediation1
EDUC6668
Understanding Asperger Syndrome 1 EDUC6694
Introduction to Autism Spectrum
Disorders
EDUC6792
Assistive Technology for the
Inclusive Classroom
EDUC6793
Education of Students with
Moderate to Severe Disabilities3
EDUC6797
Multisensory Mathematics
Instruction for Students with
Disabilities3
EDUC6845
Understanding IQ Testing1
Total6
Total38

Specialization (9 credits)

Credits

Note: It is preferable to complete EDUC6740 Introduction to Students with Disabilities and Autistic Spectrum Disorders in the first or second semester of course work.

\*EDUC6745 Principles and Practices of Collaboration and Inclusion or EDUC6746 Learning Environment and Effective Management of Teaching and Learning are prerequisites. \*A minimum of B+ in both EDUC7623 Diagnosis of Learning Disabilities and EDUC7624 Correction of Learning Disabilities is required for admission to EDUC8623 Practicum in Diagnostic and Remedial Techniques I. A minimum of a B+ in EDUC8623 Practicum in Diagnostic and Remedial Techniques I is required for admission to EDUC8628 Practicum in Diagnostic and Remedial Techniques II.

## Learning Disabilities Teacher Consultant Certification (Nondegree Program)

This is a nondegree program leading to certification as Learning Disabilities Teacher Consultant (LDTC). It is designed for certified teachers (who hold a Teacher of Students with Disabilities certificate or its equivalent master's degree and have three years of teaching experience with special populations) who wish to develop skills for diagnosing learning difficulties and planning instructional programs for students with disabilities. Students who successfully complete this program will be eligible for certification as Learning Disabilities Teacher Consultant, the certification required by the state of New Jersey's Department of Education for serving in the LDTC capacity on a Child Study Team.

## Requirements

Students who have a Master of Arts in education degree or a degree in a related field are required to complete graduate course work specified under the basic core and specialization area. Students who have earned the Master of Arts in learning disabilities/Teacher of Students with Disabilities Certification at Fairleigh Dickinson University are required only to take EDUC6626 Neurophysiological Basis of Learning Problems, EDUC8623 Practicum in Diagnostic and Remedial Techniques I and EDUC8628 Practicum in Diagnostic and Remedial Techniques II and to meet the certification requirements for LDTC.

## **Dyslexia Specialist Program**

The Dyslexia Specialist Program is tailored for general-education classroom teachers and teachers of special education who wish to develop expertise in Orton-Gillingham — a structured, phonic, rulebased multisensory approach to teaching reading, spelling and handwriting. This program provides teachers with a basic framework within which they can make decisions about adapting instructional sequences to the specific needs of individual students.

## Dyslexia Specialist Certificate Requirements

Foundation (13 credits)	Credits
Required (7 credits)	
EDUC6610	
History of Multisensory Instruct	ional
Methods for Students with	
Learning Disabilities/Dyslexi	a 1
EDUC6616	
Language Acquisition and Lang	uage
Disorders	
EDUC7623	
Diagnosis of Learning Disabilitie	es3
The remaining 6 credits should be cho	
EDUC6626	-
Neurophysiological Basis of	
Learning Problems	3
EDUC6740	
Introduction to Students with	
Disabilities and Autistic	
Spectrum Disorders	
EDUC6746	
Learning Environment and	
Effective Management of	
Teaching and Learning	3
Тс	otal13
Specialization (12 credits)	

## Specialization (12 credits)

EDUC6601		
Multisensory Reading I3		
EDUC6602		
Multisensory Reading II3		
EDUC7603		
Multisensory Reading III3		
EDUC7604		
Multisensory Reading IV3		
Total12		
A student must achieve a grade of B+ or		
better in the clinical component of each		
multisensory reading course to proceed to the		
next course.		
Workshops (3 credits)		
Three 1-credit workshops offered		
through the Center for Dyslexia		
Studies must be taken		
Total3		

## Electives in Reading (2 credits)

Liectives	<u> </u>
Total2	2
Total30	)

## Orton-Gillingham Dyslexia Specialist Training Course

The Orton-Gillingham Dyslexia Specialist Training course consists of programs tailored for regular classroom teachers and teachers of special education who wish to develop expertise in the Orton-Gillingham approach to reading instruction. Accredited by the International Multisensory Structured Language Education Council (IMSLEC) and the International Dyslexia Association (IDA), these programs provide teachers with a basic framework within which they can make decisions about adapting instructional sequences in reading to the specific needs of individual students.

The following certificates are offered:

## Orton-Gillingham Teacher (Program Accredited at the IMSLEC Teaching Level)\*

Requirements Crew	dits
EDUC6601	
Multisensory Reading I	3
EDUC6602	
Multisensory Reading II	3
EDUC7603	
Multisensory Reading III	3
EDUC7604	
Multisensory Reading IV	3
Total	12

## Orton-Gillingham Teacher Trainer (Program Accredited at the IMSLEC Trainer of Teaching Level)

Requirements

All courses required for Dyslexia
Specialist Certificate
EDUC8609
Multisensory Reading V 3
EDUC8610
Multisensory Reading VI 3
Total36

\*A student must achieve grades of B+ or better in the clinical component of each course to proceed to the next course.

## Orton-Gillingham Therapist (Program Accredited at the IMSLEC Therapy Level)

Requirements	Credits
All courses required for Dyslexia	
Specialist	
EDUC8612	
Advanced Orton-Gillingham	
Practicum I	3
EDUC8613	
Advanced Orton-Gillingham	
Practicum II	3
7	Fotal36

## Orton-Gillingham Therapist Trainer (Program Accredited at the IMSLEC Trainer of Therapy Level)

Requirements

All courses required for Orton-Gillingham
Teacher Trainer program
EDUC8612
Advanced Orton-Gillingham
Practicum I 3
EDUC8613
Advanced Orton-Gillingham
Practicum II3
Total42

## **Center for Clinical Teaching**

FDU's Center for Clinical Teaching, located on the Metropolitan Campus, provides an on-site setting where students in the Orton-Gillingham Teacher Program can learn and practice the skills of clinical teaching under faculty supervision. Students are trained to provide reading instruction that is individualized to accommodate learners' needs, styles and interests.

At the center, students are taught to monitor learners' progress continuously and adjust instructional plans accordingly. They work to establish supportive relationships with learners to boost selfconfidence and improve attitudes toward learning. An inventory of current diagnostic and instructional materials is maintained at the center.

## **Course Descriptions**

See "Course Offerings," pages 141-154.

# Mathematical Foundations (M.A.)

The M.A. in mathematical foundations is designed for teachers who wish to gain a deeper insight into the nature, fundamentals and history of mathematics. The program is specifically designed for elementary, middle-school and special-education teachers seeking to meet the New Jersey state requirements to teach mathematics at the middle-school level and to upgrade their mathematical skills. The courses focus on upper-primary and middle-school mathematics and may not be an appropriate option for those with an undergraduate degree in mathematics.

**Online Course Delivery**: FDU offers New Jersey's only 100 percent online graduate mathematics degree for educators. The online course format lets students pursue their studies at their convenience, offering convenient access for adult learners. There is no residency requirement for the online program.

The program's competitive tuition and fee rate is comparable to that of a public university. No additional tests are required for admission but may be required for New Jersey State certification.

## **Admission Requirements**

1. A baccalaureate degree in any subject area from an accredited college or university.

2. All official transcripts of undergraduate degrees and graduate courses/degrees. Students must have earned a 3.00 GPR or higher.

3. Two letters of recommendation.

4. Copies of PRAXIS scores, GRE scores or a copy of the New Jersey Teaching Certificate.

## Requirements for the Master of Arts Degree Credits

MATH6507
World of Mathematics: Number 3
MATH6508
World of Mathematics: Algebra3
MATH6509
World of Mathematics: Geometry 3
MATH6512
World of Mathematics: Seminar3
MATH6513
World of Mathematics: Mathematics
in Science3
MATH6516
World of Mathematics: Data
Analysis and Probability 3
MATH6517
World of Mathematics:
Applications in the Real World3

## Elective Courses (9 credits)

Remaining credits for the M.A. in mathematical foundations may be taken from either courses in Supervision (towards the New Jersey Supervisor's Certificate) or other courses with permission of mathematical foundations adviser if not seeking New Jersey Department of Education Supervisor Certificate.

## **Course Descriptions**

See "Course Offerings," pages 141–154.

## Teaching — Master of Arts in Teaching (M.A.T.)\*

The Master of Arts in Teaching (M.A.T.) program is a graduate program in teacher preparation for the individual who has a baccalaureate degree in the liberal arts or sciences and a desire to enter the teaching profession. This program was designed to build upon a sound undergraduate academic foundation, as well as the student's other educational and workrelated experiences to provide an efficient path to state teacher licensure. The program is rigorous in its curriculum and expectations, yet flexible in its scheduling to ensure optimum benefit to the graduate student who typically must balance formal course work with other demands.

This program is offered under the auspices of the Peter Sammartino School of Education, University College: Arts • Sciences • Professional Studies, Metropolitan Campus, Teaneck, New Jersey. This program is offered at the Metropolitan Campus, Teaneck, New Jersey, and the Florham Campus, Madison, New Jersey. In addition, this program is offered at the following community colleges: Rowan College at Gloucester County (previously Gloucester County College), Sewell, New Jersey; and Cumberland County College, Vineland, New Jersey.

The Master of Arts in Teaching (M.A.T.) program offers New Jersey state-approved teaching certification programs in:

• Preschool to grade 3, see page 138;

• Elementary education (grades K–6), see page 138;

• Secondary education content area (grades K–12) in English, social studies, mathematics, art, biological sciences, chemistry, physics, earth science, physical science, see page 138.

All graduate credits earned in teacher certification programs can be applied to a Master of Arts in Teaching (M.A.T.) degree.

Students may choose between two M.A.T. program models (the Apprenticeship Teaching Model, this page,

\*Fairleigh Dickinson University's Peter Sammartino School of Education had an Aggregate Pass Rate of 100 percent on the HEOA-Title II reporting for the 2017–2018 academic year. The corresponding statewide pass rate for the same period was 97 percent. and the Practicum Model, see page 139), each of which is designed to enable a student to meet state eligibility requirements for teacher certification in elementary or K-12 content areas after completing the required graduate courses. Students may complete eligibility requirements for state certification with either program option without completing the M.A.T. degree, which requires a total of 36 credits. Upon completion of teacher certification eligibility requirements (see this page), students are eligible for fulltime paid employment as elementary or secondary teachers and must successfully complete two full years of successful teaching to obtain permanent certification.

Persons out of college for some time, who seek a teaching career, as well as recent graduates, may apply. Students who cannot attend full time may study part time and complete the program not later than five years from the initial registration.

## **For Information**

For further information, contact the Fairleigh Dickinson University Peter Sammartino School of Education at the location nearest you:

Metropolitan Campus 1000 River Road Teaneck, New Jersey 07666 (201) 692-2862

Florham Campus 285 Madison Avenue Madison, New Jersey 07940 (973) 443-8385

Community College Partnership Program 1000 River Road Teaneck, New Jersey 07666 (201) 692-7310

## New Jersey Teacher Certification

There are two avenues of earning state certification: the Certificate of Eligibility with Advanced Standing (CEAS) and the Certificate of Eligibility (CE). Both require two provisional years of teaching. Upon successful completion of the provisional years, the state issues the Standard (lifelong) certification.

In New Jersey, the State Department of Education grants certificates of eligibility for teacher certification. Please check the NJDOE website for minimum requirements to obtain a Certificate of Eligibility.

# *Certificate of Eligibility with Advanced Standing*

The Certificate of Eligibility with Advanced Standing (CEAS) will be issued to students who successfully complete their programs, pass the edTPA and are recommended by Fairleigh Dickinson University for certification. The CEAS is valid for the lifetime of its holder. It authorizes the holder to seek and accept offers of employment in New Jersey public schools. New Jersey has reciprocity with other states to accept the CEAS as evidence of completion of an approved college education program. Students must undergo two induction years before receiving a standard certificate.

## **Provisional Certificate**

The Provisional Certificate will be issued to students who receive and accept documented offers of employment from districts that comply with induction requirements.

## Standard Certificate

The Standard Certificate will be issued to those students who serve for two years under the Provisional Certificate and who are recommended as "approved" by their school principal based on evaluations of the provisionally certified teacher's classroom performance, conducted by the principal and other certified evaluators.

## Apprenticeship Teaching Model

The M.A.T. Apprenticeship Teaching Model requires 22–23 credits for a Certificate of Eligibility with Advanced Standing. In fall 2018, additional credits will be required.

To obtain a Certificate of Eligibility with Advanced Standing in preschool–grade 3, elementary education or secondary education, the following requirements must be met:

• Successful completion of the required credits in the M.A.T. program (additional credits in fall 2018);

• A passing score on the state-required Praxis I Core Academic Skills Exam;

• A passing score on the state-required appropriate Praxis II exam; and

• Submission of an edTPA portfolio (starting fall 2018 a passing score on the edTPA is required).

New Jersey Teacher Certification becomes permanent after two full years of

## **Education • Teaching — Master of Arts in Teaching**

successful teaching with a support team. Students may go on to earn the M.A.T. degree (total of 36 credits) by completing additional credits.

## The Apprenticeship Model:

Preschool Through Grade 3

The required program of study for each certification area consists of the following courses.

Required Courses for Certification*
Credits
EDUC6575
Apprenticeship Teaching 6
EDUC6818
Language Development and
Literacy I 3
EDUC6824
Teaching Laboratory and
Field Experience I1
EDUC6825
Apprenticeship Teaching Seminar2
EDUC6828
Teaching Laboratory and
Field Experience II1
EDUC6851
Child Development from Birth
to Age 8**
EDUC6852
P–3 Curriculum and Assessment
EDUC6853
Family and Community in Education3 Total22
Additional Required Courses for
Completion of M.A.T.
EDUC6584
Computers as a Teacher's Aid:
Curriculum and Instruction
EDUC6820
Problem-based Strategies for
Elementary Mathematics
EDUC7812

Electives	$(3_4$	credits)
Electives	(3-4)	creans)

Total Credits Required for Graduation......36

Final Project.....2–3

Total....8-9

#### Elementary Education

Required Courses for Certification\* Credits EDUC6575 EDUC6818 Language Development and Literacy I..... 3 EDUC6820 Problem-based Strategies for Elementary Mathematics...... 3 EDUC6824 Teaching Laboratory and Field Experience I.....1 EDUC6825 Apprenticeship Teaching Seminar.....2 EDUC6828 Teaching Laboratory and Field Experience II.....1 EDUC6835 Effective Teaching and Effective Schools...... 3 EDUC6893 Evaluation and Measurement in Education..... 3 Total.....22 Additional Required Courses for *Completion of M.A.T.* EDUC6584 Computers as a Teacher's Aid: Curriculum and Instruction...... 3 EDUC6819 Language Development and EDUC7812 Final Project...... 2 Total.....8

*Education Electives/Courses in Discipline (6 credits)* 

Total Credits Required for Graduation......36

#### Secondary Education (Art, Biological Science, Chemistry, Earth Science, English, Mathematics, Physical Science, Physics and Social Studies) Required Courses for Certification\*

EDUC6575	
Apprenticeship Teaching	5
EDUC6818	
Language Development and	
Literacy I	3

\*Starting in fall 2018, the minimum required credits for initial certification will increase with the addition of EDUC6585 Advanced Clinical Practice (2 credits) and EDUC6740 Introduction to Students with Disabilities and Autistic Spectrum Disorders (3 credits). All candidates will be required to pass the edTPA to obtain certification.

Credits
EDUC6820
Problem-based Strategies for
Elementary Mathematics 3 EDUC6824
Teaching Laboratory and
Field Experience I1
EDUC6825
Apprenticeship Teaching Seminar
EDUC6828
Teaching Laboratory and
Field Experience II1
EDUC6835
Effective Teaching and
Effective Schools 3 EDUC6893
Evolution and Measurement
in Education
Total22
Additional Required Courses for Completion of M.A.T.
Appropriate methods course in discipline
(ÊDUĈ) secondary only which includes:
EDUC6562
Standards-based Curriculum and
Methodology: Secondary English
or EDUC6563
Standards-based Curriculum and
Methodology: World Languages or
EDUC6566
Standards-based Curriculum and
Methodology: Secondary Science
or
EDUC6568
Standards-based Curriculum and
Methodology: Secondary Social Studies
or
EDUC6569
Standards-based Curriculum and
Methodology: Visual Arts
or
EDUC6570
Standards-based Curriculum and
Methodology: Secondary
Mathematics
Computers as a Teacher's Aid:
Curriculum and Instruction
EDUC7812
Final Project2
Total8
Education Electives/Courses in

Discipline (6 credits)

Total Credits Required for Graduation......36

<sup>\*</sup>Starting in fall 2018, the minimum required credits for initial certification will increase with the addition of EDUC6583 Advanced Clinical Practice (2 credits) and EDUC6740 Introduction to Students with Disabilities and Autistic Spectrum Disorders (3 credits). All candidates will be required to pass the edTPA to obtain certification.

<sup>\*\*</sup>EDUC6584 Child and Adolescent Development may be substituted for EDUC6851 Child Development from Birth to Age 8.

#### English as a Second Language

Required Courses for Certification*
Credits
EDUC6565
Second Language Acquisition:
Methods and Curriculum
EDUC6574
Applied Linguistics for
Language Teachers 3
EDUC6575
Apprenticeship Teaching
EDUC6584
Computers as a Teacher's Aid:
Curriculum and Instruction
EDUC6631 Assessment in the Second-
language Classroom
EDUC6654
Literacy Development for
Second-language Learners
EDUC6661
The Multicultural Classroom
EDUC6824
Teaching Laboratory and Field
Experience I1
EDUC6825
Apprenticeship Teaching Seminar2
EDUC6828
Teaching Laboratory and
Field Experience II1
EDUC6835
Effective Teaching and
Effective Schools
Total31
Additional Required Courses for

Additional Required Courses jo	r
Completion of M.A.T.	
EDUC7812	
Final Project	
-	Total2
Education Electives/Courses in	
Discipline (6 credits)	

Total Credits Required for Graduation......36

## **Practicum Model**

The M.A.T. Practicum Model is a six- to eight-week accelerated and concentrated graduate student-teaching experience for those who have had previous teaching experience in a class but are not certified; it leads to a Certificate of Eligibility. Please see a School of Education adviser for more information about this model.

## Admission and Matriculation Requirements

Admission to the M.A.T. program occurs after a formal application is submitted and program entrance requirements are fulfilled. All teaching candidates must maintain a cumulative grade point ratio (CGPR) of at least 3.00 in their course work to be certified.

1. Applicants must hold a bachelor's degree from an accredited college or university.

2. Applicants must have an undergraduate CGPR of at least 3.00 on a 4.00 scale.

3. Applicants for subject-specific certification (secondary education) must have obtained a 30-credit concentration in the area of certification.

4. Applicants of Preschool–Grade 3 and Elementary Education certifications must have obtained 60 credits in liberal arts or sciences.

5. Applicants must have passed the Praxis I Core Academic Skills Exam in reading, writing and mathematics. Students may be exempt from taking this test if they meet the minimum required scores on the SAT, ACT or GRE. Please see an adviser to obtain those scores. An applicant may be admitted conditionally and allowed to take 9 credits until they pass the Core Academic Skills Exam.

6. Applicants are required to take the Praxis II in the content area of their certification before admission to the program. Students are admitted conditionally and allowed to take 9 credits until they pass the appropriate Praxis II test.

7. Applicants must have a personal interview with an adviser or program director prior to registration for any courses.

8. Applicants for English as a Second Language (E.S.L.) must take the Oral Proficiency Interview (OPI) and the Writing Proficiency Test (WPT) in English. Applicants for world languages must pass the OPI in the language for which they seek certification.

9. The New Jersey Department of Education requires a demonstration of oral and written language proficiency in English and the desired second language for bilingual certification. Candidates may meet this requirement by taking the Oral Proficiency Interview (OPI) and Writing Proficiency Test (WPT) in both English and their second language of choice.

## Requirements for a Master of Arts in Teaching Degree First Certification Program in Teaching English as a Second Language

Degree candidates must succesfully complete 36 credits, of which 33 are taken in courses required by the New Jersey Administrative Code for teacher certification.

## **Courses Required for Certification**

(33 credits)	Credits
Apprenticeship Model	
EDUC6565	
Second Language Acquisition:	
Methods and Curriculum	3
EDUC6574	
Applied Linguistics for	
Language Teachers	3
EDUC6575	
Apprenticeship Teaching	6
EDUC6583	
Advanced Clinical Practice	2
EDUC6584	
Computers as a Teacher's Aid:	
Curriculum and Instruction.	
EDUC6631	
Assessment in the Second-	
language Classroom	3
EDUC6654	
Literacy Development for	
Second-language Learners	
EDUC6661	
The Multicultural Classroom	3
EDUC6824	
Teaching Laboratory and Field	
Experience I	1
EDUC6825	
Apprenticeship Teaching Semin	ar2
EDUC6828	
Teaching Laboratory and Field	
Experience II	1
EDUC6835	
Effective Teaching and	_
Effective Schools	3

<sup>\*</sup>Starting in fall 2018, the minimum required credits for initial certification will increase with the addition of EDUC6583 Advanced Clinical Practice (2 credits) and EDUC6740 Introduction to Students with Disabilities and Autistic Spectrum Disorders (3 credits). All candidates will be required to pass the edTPA to obtain certification.

# Education • Teaching English as a Second/ Foreign Language

# *Course Required for Graduation (3 credits)*

	creans
EDUC7812	
Final Project	

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## Requirements for Master of Arts in Teaching Degree Certification Program: Middle School Endorsment

Those individuals desiring to teach on the middle-school level (5, 6, 7 and 8) must qualify for elementary-school certification with subject-matter specialization. In order to do so, the following requirements must be met, according to N.J.A.C. 6A:9.2:

1. Hold an elementary school Certificate of Eligibility (CE), Certificate of Eligibility with Advanced Standing (CEAS) or standard certificate with an elementary-school endorsement;

2. Complete a course in adolescent development;

3. Pass the appropriate Middle School PRAXIS test in content-area specialization for middle school;

4. Complete 15 credits in the subject fields of mathematics, science, social studies and language arts/literacy; and

5. Secondary-education candidates may also secure a middle-school endorsement in a content area other than their initial certification by:

i. Passing the appropriate PRAXIS II in the content area for middle school,

ii. Taking a course in adolescent development and

iii. Completing a minimum of 15 credits in the content area (can be included in undergraduate courses).

## Requirements for a Master of Arts in Teaching Degree Certification Program in Teacher of Students with Disabilities

The program requires all courses for initial certification in an area above and the following 21 credits:

- EDUC6740 Introduction to Students with Learning Disabilities and Autistic Spectrum Disorders\*
- EDUC6744 Foundations: Historical, Philosophical and Legal Issues Related to Disabilities
- EDUC6745 Principles and Practices of Collaboration and Inclusion
- EDUC6746 Learning Environment and Effective Management of Teaching and Learning
- EDUC6747 Multisensory Reading Instruction for Students with Reading Disabilities

EDUC7623	Diagnosis of Learning
	Disabilities**
EDUC7624	Correction of Learning
	Disabilities**
EDUCT010	E' 1 D ' (***

EDUC7812 Final Project\*\*\*

## **Course Descriptions**

See "Course Offerings," pages 141-154.

# Teaching English as a Second/ Foreign Language (TESL/TEFL) (M.A.)

The master of arts degree in teaching English as a second/foreign language (TESL/TEFL) is designed for (a) international students who want to teach English in their own countries; and (b) domestic\* students who want a master's degree to teach English as a second language or as a foreign language, but do not seek New Jersey certification.

This degree program gives students the opportunity to explore:

• dimensions of language instruction and curriculum development,

• the relation of language to culture,

• assessment and alternative assessment in second-language instruction,

• techniques for addressing ethnic diversity

• second-language instruction through content areas and

• technology in language instruction. For further information, contact the Peter Sammartino School of Education, Fairleigh Dickinson University, Metropolitan Campus, 1000 River Road, Teaneck, New Jersey, 07666-1914 at (201) 692-2079.

This program is offered under the auspices of the Peter Sammartino School of Education, University College: Arts • Sciences • Professional Studies, Metropolitan Campus, Teaneck, New Jersey.

## **Admission Requirements**

## International Students

1. A bachelor's degree from an accredited college or university.

2. TOEFL score of 550 (paper-based), 213 (computer-based) or 79 (internet-based) or better.

3. Two letters of recommendation.

\*\*EDUC6745 Principles and Practices of Collaboration and Inclusion and EDUC6746 Learning Environment and Effective Management of Teaching and Learning are prerequisites. \*\*EDUC7812 Final Project is required to complete the 45-credit M.A.T./Teacher of Students with Disabilities certification program.

\*EDUC6740 Introduction to Students with Learning

Disabilities and Autistic Spectrum Disorders is a

prerequisite for all courses.

\*U.S. citizens and legal residents.

## **Domestic Students**

1. A bachelor's degree from an accredited college or university.

2. Two letters of recommendation.

## Requirements for the Master of Arts Degree

This program requires 22 credits selected from foundation courses and 9 credits selected from approved electives. A 2credit research project related to language instruction is required as the culminating exercise, for a total of 33 credits for the master of arts degree.

## Required Courses (22 credits)

Credits EDUC6565 Second Language Acquisition: Methods and Curriculum......3 EDUC6574 Applied Linguistics for Language EDUC6584 Computers as a Teacher's Aid: Curriculum and Instruction......3 EDUC6635 Clinical Practice in Language EDUC6650 Behavioral Science for Teachers: Language and Culture in the Classroom or EDUC6649 Introduction to United States Culture... 3 EDUC6654 Literacy Development for EDUC6661 The Multicultural Classroom......3

## Approved Electives (9 credits)

## Final Requirement (2 credits)

EDUC7812	,
Final Project	2
	Total33

# TESL/TEFL Specialist Certification Program

The Peter Sammartino School of Education offers an 18-credit TESL/TEFL (Teaching English as a Second/Foreign Language) Specialist Certificate for those who wish to earn a certificate without completing a master of arts degree. The program offers a strong 18-credit specialization in linguistics, language teaching, language proficiency and U.S. culture. Note: The TESL/TEFL Specialist Certificate is not a New Jersey state teaching certificate.

## Required Courses (18 credits)

Credits
EDUC6565
Second Language Acquisition:
Methods and Curriculum
EDUC6574
Applied Linguistics for Language
Teachers
EDUC6584
Computers as a Teacher's Aid:
Curriculum and Instruction3
EDUC6650
Behavioral Science for Teachers:
Language and Culture in the
Classroom
or
EDUC6649
Introduction to United States Culture3
EDUC6654
Literacy Development for Second-
language Learners
EDUC6661
The Multicultural Classroom3

## **Course Descriptions**

See "Course Offerings," pages 141-154.

# **Course Offerings**

Courses offered fall, spring and/or summer are so noted. To determine availability of courses not so designated, please check with appropriate school director.

# Education

Peter Sammartino School of Education

### EDUC5001

## 0 Credits

## Health and Hygiene Exam

This health and hygiene exam is given to graduate students prior to their first teacher certification to fulfill the health/hygiene/nutrition requirement for teacher certification. Required only of candidates who do not have a biology/health/nutrition class on their transcript Must have adviser's approval. Pass/fail grading.

# EDUC5720

## 0 Credits

## Field-based Internship Seminar I

EDUC5720 is the first of a three-course sequence for the field-based internship and a companion course to EDUC6720 Field-based Internship Seminar I. The field-based internship provides individual candidates with the opportunity to apply, over the course of a complete year and under the guidance of a certified school administrator, the theoretical knowledge and skills acquired during graduate study to an educational/institutional setting. This approach relies on a strong conceptual base of knowledge and understanding of professional practices. The shared resources of the field settings will enable students to participate in a closely supervised experience involving the intern, cooperating administrator and course professor. Prerequisites: EDUC6701 Leadership in Learning Community and School, EDUC6702 Curriculum and Instruction: Theory and Practice, EDUC6703 Supervision of Instruction: Personnel and Evaluation, EDUC6704 Change: Curriculum Development and Program Improvement and EDUC6718 Curriculum/Program Evaluation and Student Assessment. Corequisite: EDUC6720 Fieldbased Internship Seminar I.

#### EDUC5721 0 Credits

## Field-based Internship Seminar II

EDUC5721 is the second of a three-course sequence that attempts to integrate into a structured practicum or internship experience the various theories, concepts, dispositions, standards and understandings introduced and developed in the student's formal course work. As such, this course addresses all 10 of the PSEL Standards. EDUC5721 is the field-based internship and a companion course to EDUC6721 Educational Leadership Field-Based Internship Seminar II. The field-based internship provides individual candidates with the opportunity to apply, over the course of a complete year and under the guidance of a certified school administrator, the theoretical knowledge and skills acquired during graduate study to an educational/institutional setting. Prerequisite: EDUC5720 Field-based Internship Seminar I. Corequisite: EDUC6721 Educational Leadership Field-based Internship Seminar II.

## EDUC5722 0 Credits

## Field-based Internship Seminar III

EDUC5722 is the third of a three-course sequence that attempts to integrate into a structured practicum or internship experience the various theories, concepts, dispositions, standards and understandings introduced and developed in the student's formal course work. As such, this course addresses all 10 of the PSEL Standards. EDUC5722 is the field-based internship and a companion course to EDUC6722 Educational Leadership Field-Based Internship Seminar III. The field-based internship provides individual candidates with the opportunity to apply, over the course of a complete year and under the guidance of a certified school administrator, the theoretical knowledge and skills acquired during graduate study to an educational/institutional setting. Prerequisite: EDUC5721 Field-based Internship Seminar II. Corequisite: EDUC6722 Educational Leadership Field-Based Internship Seminar III.

#### EDUC6500 3 Credits

#### **Special Topics in Education**

This course will focus on special topics especially designed to enhance graduate study in education. Topics may vary each time this course is offered.

#### EDUC6550 3 Credits Methodology in Bilingual/Bicultural Education

This course introduces students to current principles and methods of K–12 bilingual/ bicultural education against the backdrop of its historical, legal and societal foundations. Through course readings, classroom activities, projects and field experiences, students build their competence to design bilingual/bicultural education methodology that is student-centered and culturally responsive. Particular attention is given to the development of academic language in bilingual/bicultural environments.

#### EDUC6551 3 Credits Language Acquisition in Bilingual/Bicultural Contexts

This course introduces students to current theories of language acquisition in bilingual/ bicultural contexts. It explores current understandings of language development for emerging bilingual/bicultural individuals in K–12 educational settings.

## EDUC6561 6 Credits

## **Instructional Theory and Practice**

Practicum consists of six to seven weeks schoolteaching experience preceded by orientation and classroom observations. The practicum experience prepares teaching candidates in state-prescribed studies under supervision of a master-teacher and professional support team members for provisional teaching certification. *Spring, Summer* 

## EDUC6562

**3** Credits

#### Standards-based Curriculum and Methodology: Secondary English

This course integrates research into effective teaching of English language and literature. Students learn different instructional strategies to enhance the teaching of English/language arts. State and national standards such as the New Jersey Student Learning Standards will be addressed through curriculum development and assessment.

## EDUC6563

**3** Credits

### Standards-based Curriculum and Methodology: World Languages

Standards-based instructional and assessment practices are introduced in this course utilizing the New Jersey Student Learning Standards and the Standards for Foreign Language Learning for the 21st Century (ACTFL Standards). The effective implementation of these standards will be demonstrated through the development of model lessons, unit plans and authentic assessment practices including use of rubrics and student portfolios.

#### EDUC6565 3 Credits Second Language Acquisition: Methods and Curriculum

This course is designed to offer the student the opportunity to explore various methods, techniques and approaches to the teaching of a second language. Knowledge derived from the linguistic sciences about the nature of language and how it is learned will serve as the criteria of evaluation when examining various approaches. The information acquired from this endeavor will serve as a foundation for using a method that is eclectic in nature and considers both the cognitive and affective needs of second-language learners.

### EDUC6566 3 Credits Standards-based Curriculum and

# Methodology: Secondary Science

This course integrates research into effective teaching of science. Students learn different instructional strategies to enhance the teaching of science. State and national standards such as the New Jersey Student Learning Standards and the Next Generation Science Standards will be addressed through curriculum development and assessment.

#### EDUC6568 3 Credits Standards-based Curriculum and Methodology: Secondary Social Studies

This course integrates research into effective teaching of social studies. Students learn different instructional strategies to enhance the teaching of social studies. State and national standards such as the New Jersey Student Learning Standards will be addressed through curriculum development and assessment.

## EDUC6569 3 Credits

### Standards-based Curriculum and Methodology: Visual Arts

This course integrates recent research into effective teaching practices in the visual arts. Students learn different instructional strategies to enhance the teaching of art for grade levels K–12. National and state standards such as the New Jersey Student Learning Standards will be addressed through curriculum development and assessment. Students will develop visual-art learning units with relevant teaching-support materials organized around specific art concepts and modes of inquiry, produce assessment instruments for the evaluation of art programs and student art products and engage in the review and analysis of art-education literature for research.

## EDUC6570

## **3** Credits

#### Standards-based Curriculum and Methodology: Secondary Mathematics

This course integrates research into effective teaching of mathematics. Students learn different instructional strategies to enhance the teaching of mathematics. State and national standards such as the New Jersey Student Learning Standards will be addressed through curriculum development and assessment.

## EDUC6571

#### 1–2 Credits Clinical Teaching Internship and Seminar I

First-semester teaching interns undergo clinical supervision by a college faculty member with the support of a school-based professional support team. Observations are followed by critique sessions. Consequently, first-semester teachers attend three seminars where problems arising in professional practice are addressed.

# **Education • Course Offerings**

#### EDUC6572 1–2 Credits Clinical Teaching Internship and Seminar II

Second-semester teaching interns undergo clinical supervision by a college faculty member with the support of a school-based professional support team. Observations are followed by critique sessions. Concurrently, the secondsemester teachers attend three seminars where problems arising in professional practice are addressed.

#### EDUC6573 3 Credits Comparative Phonology for Language Teachers

This course focuses on the phonology of American English in comparison with European, Asian and other languages. Students will examine implications and methodologies for teaching pronunciation. Initial reading/writing instruction in a second/foreign language is addressed through the introduction of the transfer from phoneme to grapheme.

#### EDUC6574 3 Credits Applied Linguistics for Language Teachers

This course examines knowledge derived from linguistic sciences about the nature of language, how it is acquired and the practical application of linguistic knowledge to the teaching of a second language. The lexicon and grammar of American English in comparison with other languages and resultant implications for teaching both in a second/foreign language are the foci of this course.

#### EDUC6575 6 Credits **Apprenticeship Teaching**

This full-semester student teaching experience is offered in the spring or fall following completion of field experiences and prescribed courses. This experience exposes the preservice teacher to the functions of teaching under the mentorship of a cooperating teacher and clinical supervision of a School of Education faculty member. The responsibilities of the student teacher increase during the apprenticeship until she/he is conducting the class with full teaching responsibilities. Note: Students must submit passing score on PRAXIS exam prior to registration.

#### EDUC6576 2 Credits Second Language Acquisition: Internship I

First-year teachers undergo clinical supervision by a college faculty member with the support of a school-based professional team. Each observation is followed by a post-observation critique session. Concurrently, the first-year teachers attend three seminars each semester where problems arising in professional practice are addressed. Prerequisite: EDUC6561 Instructional Theory and Practice.

#### EDUC6577 1–2 Credits Second Language Acquisition: Internship II

First-year teachers undergo clinical supervision by a college faculty member with the support of a school-based professional team. Each observation is followed by a post-observation critique session. Concurrently, the first-year teachers attend three seminars each semester where problems arising in professional practice are addressed. Prerequisite: EDUC6561 Instructional Theory and Practice.

### EDUC6578 4 Credits Assistantship

Assistant teachers are placed in the classroom under the supervision of a mentor teacher for six to eight weeks. They also undergo clinical supervision by a University faculty member. Each observation is followed by a postobservation critique session. Concurrently, teaching assistants attend three seminars each semester where problems arising in professional practice are addressed. Prerequisite: EDUC6561 Instructional Theory and Practice.

#### EDUC6580 3 Credits

## Discourse Analysis for Language Teachers

This course surveys the applications of discourse analysis to the field of education. Students are apprenticed into the concepts and techniques of discourse analysis through a combination of assigned readings, in-class discussions and practical-application assignments. The course is designed primarily with current and future language educators in mind but is of value to all education-related fields.

## EDUC6582

#### 3 Credits Distance Learning: Children's Literature

This online course emphasizes how to use children's literature in the classroom. Teachers learn how to integrate children's literature into the curriculum of all subjects and across all grade levels. Students learn how to use technology to enrich the study of children's literature.

#### EDUC6583 2 Credits

## **Advanced Clinical Practice**

Guided observation and clinical experience of 125 hours in an educational setting. Program assessment and design. Supervised practical experiences in the classroom, increasing in intensity and duration. Orientation to the certification-required portfolio to be submitted at the completion of student teaching and required videotaping of classroom experiences. Intense preparation and analysis of acceptable lesson planning, instruction and engagement of students and assessment of student learning.

#### EDUC6584 3 Credits

## Computers as a Teacher's Aid: Curriculum and Instruction

The computer is treated as a foundational tool integrated into a teacher's daily professional work and classroom activities. Topics covered include the authoring and use of standard software packages and the initiation and development of a professional electronic portfolio site for use both in current graduate studies and professional school-based activities.

## EDUC6586

#### 1 Credit

#### Neurodevelopmental/Medical Conditions Associated with Learning Disabilities

The course will cover medical conditions such as low-birth weight, premature birth, Attention Deficit Hyperactivity Disorder (ADHD), lead poisoning, etc., that affect learning in the school-age child. Prerequisite: EDUC6740 Introduction to Students with Disabilities and Autistic Spectrum Disorders.

## EDUC6587

#### 1 Credit

## Smartboards in the Classroom

This course will provide the basics on how to use the Smartboard in the classroom. It will cover how to access resources to increase interactivity in the classroom and utilize the tools available to enhance the curriculum.

# EDUC6590

# 1 Credit

## Teaching and Learning with iPad

The aim of this course is to help students understand and acquire the skills to use the iPad mobile device in an educational setting. An emphasis on hands-on activities and the sharing of relevant strategies will be the focus of this course. Students will be guided through the use of a range of applications considered essential for educators. Strategies focus on creativity, writing, image-processing, mind-mapping, virtual whiteboards, productivity and organization.

#### EDUC6591 1 Credit Web 2.0 Tools and Educational Applications

The course will explore current Web 2.0 community, presentation, formative assessment and multimedia tools and their applications in the classroom.

## EDUC6592 1 Credit

## **Cloud Computing and Social Media**

This course will cover what cloud computing is and explore free applications such as Google tools. It will explore how social media can be used in the classroom.

## EDUC6600 3 Credits

## **Technology in the Science Classroom**

Use of computers and technology as applied to the operation of an elementary science classroom. Includes interfacing for data sensing with probes, selected software and hardware accessories.

#### EDUC6601 3 Credits Multisensory Reading I

An introduction to teaching beginning reading, spelling and handwriting (up to fourth-grade level), focusing on the Orton-Gillingham approach to teaching basic language skills. Teachers plan, present and evaluate instructional sequences for students with dyslexia. Consists of lectures followed by supervised practicum in which teachers provide individual Orton-Gillingham-based instruction to students with dyslexia. Also includes group seminars and individual conferences between teacher and practicum supervisor. *Fall, Spring, Summer* 

#### EDUC6602 3 Credits Multisensory Reading II

Continuation of training in the Orton-Gillingham techniques taught in EDUC6601 Multisensory Reading I. Includes testing procedures and data collection to evaluate student growth and effectiveness of instructional approach. Consists of lectures, supervised practicum, group seminars and individual conferences as described for EDUC6601 Multisensory Reading I. Prerequisite: B+ or better grade in clinical component of EDUC6601 Multisensory Reading I.

Fall, Spring, Summer

#### EDUC6605 3 Credits Foundations in Reading I

Recent research and findings in language development and literacy and their application in elementary education are the focus of this course. Literacy skills in reading and language arts across grade levels also are included.

#### EDUC6606 3 Credits Foundations in Reading II

Research and findings in language development and literacy and applications in social studies and science in the elementary and secondary schools are the focus of this course. Literacy across the curriculum also is emphasized.

## EDUC6607 3 Credits

## **Diagnosis of Reading Problems**

This course includes a systematic study of the selection, administration and interpretation of formal and informal techniques and instruments used to assess phonological and phonemic awareness, word recognition, vocabulary development and reading comprehension. Students practice writing reports of reading evaluations and state-required Individual Student Improvement Plans (ISIPs). Prerequisites: EDUC6605 Foundations in Reading I and EDUC6606 Foundations in Reading II.

# EDUC6608 3 Credits

## **Correction of Reading Problems**

This course includes survey research of reading instructional approaches, programs and materials that have been proven to work with the struggling reader. Effective classroom practices as well as clinical settings, including reading recovery, will be reviewed. Emphasis is placed on interpretation of test data as bases for planning Individual Student Improvement Plans (ISIPs) including establishment of goals and objectives and selection of appropriate strategies and materials.

## EDUC6609 3 Credits

## **Supervised Practicum in Reading**

This course places teachers with a mentor/University clinical teaching supervisor in a classroom/school or University clinical reading program for 45 hours of supervised clinical experience in which the knowledge and skills from previous course work will be reinforced and extended. The reading program may be part of an after-school or summer-school program operated by a university or school. A University clinical teaching supervisor will observe the participants and provide support and mentoring. Prerequisites: EDUC6607 Diagnosis of Reading Problems and EDUC6666 Supervised Practicum in Correction of Reading Problems.

#### EDUC6610 1 Credit History of Multisensory Instructional Methods for Students with Learning Disabilities/Dyslexia

A historical perspective of multisensory teaching techniques in the areas of reading, spelling and writing. Various curricula are compared and contrasted.

#### EDUC6611 1 Credit

## Advanced Language Structure

Sessions review topics in advanced alphabetic orthography (including roots and suffixes) and methodology for teaching upper-level language skills (including error analysis). Presentation of case histories, exercises in formulating advanced lesson plans and a survey of curriculum materials are included.

## EDUC6612 1 Credit

# Reading Comprehension

Presents a direct, systematic, multisensory approach for teaching reading comprehension to students. Training in concepts and skills necessary for students to gather and organize information from factual, fictional and procedural types of reading materials is provided. Prerequisite: EDUC6601 Multisensory Reading I.

#### EDUC6613 1 Credit Written Expression

Techniques are explored for teaching written expression in a structured format to the student with learning disabilities/dyslexia. Includes an introduction to the writing process, as well as the production of expository writing pieces and proofreading/editing skills. Prerequisite: EDUC6601 Multisensory Reading I.

## EDUC6614

## 1 Credit

## **Multisensory Mathematics Skills**

Presents multisensory techniques for teaching basic mathematics concepts and computation to students with learning disabilities/dyscalculia. Topics include the acquisition of basic mathematics facts, word problems, fractions, decimals and percentages.

## EDUC6616

#### 3 Credits Language Acquisition and Language Disorders

An introduction to language development. The relationship of oral language to written language. The identification of language disability and language-based approaches to the remediation of literacy deficits.

## EDUC6617

## 1 Credit

## **Study Skills**

Techniques are reviewed for teaching students with learning disabilities/dyslexia how to study effectively for content mastery. Topics include acquisition of critical-thinking skills, vocabulary development, organization of time and materials, test-taking, memory and note-taking strategies.

## EDUC6618

#### 1 Credit

### Students with Learning Disabilities: Social and Emotional Needs

Students will survey contemporary research regarding the social and emotional issues in relation to students with learning disabilities, including dyslexia. Techniques, variables and research, as well as theories supporting the

# **Education • Course Offerings**

development and maintenance of positive selfregard and other proactive aspects of working with students with learning disabilities are addressed.

#### EDUC6619 1 Credit Multisensory Approach to Teaching in the Content Areas

Tailored to meet the needs of subject-area middle school and secondary teachers, this course emphasizes vocabulary development, comprehension and study skills as they relate to reading in English, social studies, history and science.

## EDUC6620 3 Credits

## Introductory Course in Dyslexia

Critical issues regarding individuals with dyslexia are explored in this course, including its definition, current research, legal rights, general classroom strategies and accommodations. Includes the study of diagnostic approaches for identifying dyslexia and related disorders. An overview and history of Orton-Gillingham as the preferred method for remediating students with dyslexia also are featured.

#### EDUC6624 1–6 Credits Orton-Gillingham Topics

Study of one particular topic regarding dyslexia or one particular treatment of individuals with dyslexia using the Orton-Gillingham approach. Course may be repeated, but with different topics.

#### EDUC6626 3 Credits

## Neurophysiological Basis of Learning Problems

Introduction to the anatomy and physiology of the human nervous system. Emphasis on sensorimotor and higher-order functions and dysfunctions basic to understanding school learning problems and the effects of exceptionalities on the atypical learner.

#### EDUC6627 3 Credits **Orientation to School Testing**

Surveys tests used to evaluate students' performances. Includes study of testconstruction criteria, methods for assessing students' progress and evaluation of teaching effectiveness.

#### EDUC6631 3 Credits

# Assessment in the Second-language Classroom

This course provides the theoretical as well as the practical bases for the study, analysis and creation of appropriate strategies to evaluate language acquisition. Practical procedures and theoretical issues relevant to the measurement and evaluation of language proficiency will allow teachers of English as a Second Language (E.S.L.), English as a Foreign Language (E.F.L.) and World Languages to understand and apply the techniques required for the assessment of language learning in the classroom.

# EDUC6635 4 Credits

### **Clinical Practice in Language** Instruction

Field participation in a variety of languageteaching settings. Opportunity for guided observation, demonstration and micro-teaching with clinical analysis.

## EDUC6636 1 Credit **Phonology, Reading and Spelling**

Participants will learn the sound system of English, how children's processing of the sound system governs early spelling and reading development and how phonological skills can be enhanced through direct, informed teaching.

### EDUC6639 1 Credit Incorporating Children's Literature into Orton-Gillingham Program

This course will focus on how to maximize the use of literature when using an Orton-Gillingham program in grades K–8. Emphasis will be placed on 1) how to find literature that correlates with a child's level of decoding and comprehension, 2) how to look at readability levels through Orton lenses and 3) how to infuse fluency practice into appropriate literature.

## EDUC6641

1 Credit

### Orton-Gillingham for Resource Center Teaching Workshop

Teachers will explore techniques for using the Orton-Gillingham approach in reading, spelling and handwriting instruction for individuals or small groups within the resource center or the inclusive classroom. Coordination with regular classroom curriculum also will be covered.

# EDUC6643 1 Credit

## Fluency: A Bridge to Comprehension

This course will focus on two essential components of effective reading instruction. The theoretical basis, related strategies and critical connections between fluency and comprehension will be addressed.

## EDUC6648

#### 1–6 Credits Assistive Technology for Students with Dyslexia

Overview of strategies to provide assistive technology for students with dyslexia.

Presentation of major apps, electronic tools and software for students' use in compensating for reading, writing, spelling and organizational difficulties. Hands-on experience in implementing programs and selecting appropriate strategies for individual students. The course may be repeated but with different topics.

## EDUC6649 3 Credits

## **Introduction to United States Culture**

Analysis of major patterns of American culture in contrast with other cultures based on observations, readings and field research. This course is intended for international students in the Master of Arts in teaching English as a second/foreign language (TESL/TEFL) program only.

EDUC6650

## 3 Credits

#### Behavioral Science for Teachers: Language and Culture in the Classroom

This course examines human culture as a general phenomenon and the human capacity for culture as the major mechanism that renders the individual capable of internalizing various types of educational messages. Students will explore the relationship between language and culture with implications for materials selection and curriculum development.

## EDUC6651

**3** Credits

## **Effective Reading Instruction**

An introduction to current theory, strategies and practices designed to meet the reading and language arts needs of students of varying abilities and cultural and linguistic backgrounds. Students will acquire a knowledge of techniques and materials used in the development of reading and language-arts skills.

## EDUC6654

#### **3** Credits

#### Literacy Development for Second-language Learners

This course explores the process of acquisition of literacy skills in a second language. Reading theories and second-language acquisition theories, as well as transferability of literacy skills from L1 to L2, will be reviewed. The impact of these theories on instructional practices will be emphasized.

#### EDUC6658 3 Credits

## Science, Technology and Society

The impact of science as a way of knowing and a component of western culture and technological advancement on society. Historical and philosophical perspectives on the role of science in culture. New directions for scientific literacy, reasoning and problem-solving skills.

#### EDUC6660 1 Credit

## Diagnosing Mathematics Disabilities and Strategies for Remediation

Overview of diagnostic techniques used to diagnose mathematics disabilities in the areas of calculation, word problems and automatically of basic problems. Introduction of strategies to address weaknesses in identified areas.

#### EDUC6661 3 Credits **The Multicultural Classroom**

This course focuses on understanding how biases at the institutional, individual and societal levels impact the educational context and academic achievement of all students, and covers different teaching strategies on topics related to cultural differences with respect to race, ethnic class, gender, sexual orientation, religion and English-language learners in schools. Current topics such as the achievement gap and bullying are addressed.

#### EDUC6662 2 Credits Behavioral Science for Teachers: The Learning Process

Examination of the physiological bases and psychological theories of learning, including cultural, cognitive and behaviorist theories as applied to instructional and behavioral classroom management.

#### EDUC6666 3 Credits Supervised Practicum in Correction of Reading Problems

This 45-hour course places candidates with a collaborating teacher and a University clinical teaching supervisor in a clinical reading setting for a minimum of 30 hours of supervised clinical practicum experiences, in which the knowledge and skills from previous course work will be reinforced and extended. A University clinical supervisor will observe the candidates, interview the collaborating teacher and provide support and mentoring. Prerequisite: EDUC6607 Diagnosis of Reading Problems.

#### EDUC6667 3 Credits A Behavioral Science: An Introduction to Multicultural Studies

This course examines the historical and contemporary goals, assumptions and strategies of multicultural education. Through the use of critical pedagogy, students in the course will apply a multicultural analysis to historical events from the inception of the United States through the time of reconstruction to the Industrial Revolution through the Great Depression and World War II to contemporary America. Particular attention will be paid to state and federal legislation. The course is intended to prepare teachers to effectively apply theories of equity to their classroom and teaching practice by familiarizing them with the dynamics of oppression at different points in American history as well as in the different levels of contemporary American society.

# EDUC6668

1 Credit

## **Understanding Asperger Syndrome**

Asperger Syndrome is a pervasive developmental disorder which is characterized by significant difficulty in social interactions as well as restricted and often unusual patterns of interest. This course will provide an examination of the incidence of Asperger Syndrome (AS) among school-age children, the characteristics of students with AS, the challenges they present to educators and ways with which to assist them in the school setting.

#### EDUC6669 3 Credits

## **Advanced Field Placement**

Clinical supervision by a college faculty member with the support of a school-based professional support team. Observations are followed by critique sessions. For those students enrolled in M.A. in education for certified teachers or teachers only. This course runs for two semesters.

#### EDUC6671 3 Credits Teachers as Researchers and Educational Leaders

This course focuses on developing and enhancing the skills of the in-service teacher as a professional, instructional expert and educational leader. Topics include human relations, organizational behavior, effective communication, leadership development, action research, school improvement planning, curriculum development and use of technology to enhance instruction and facilitate school effectiveness.

## EDUC6672

## **3 Credits**

# Curriculum Development for Diverse Learners

Students learn the principles of curriculum development and evaluation for diverse populations. Students choose specific grade levels K–12 and learn how to select and develop curricular materials that address diverse learners' needs. Students learn how to incorporate content standards such as the New Jersey Core Curriculum Content Standards and national standards into curricular materials. This course is aligned with the New Jersey Professional Standards for Teachers, and students learn how instructional staff should be trained to comply with them.

#### EDUC6673 3 Credits

## Integrating Literacy and Technology Across the Curriculum

Techniques are examined which promote the integration of literacy and technology across the curriculum. Teachers explore the definition of literacy based on state standards and develop examples of effective technology-integration literacy lessons. Emphasis is placed on using the internet to explore and share specific instructional strategies resulting in a curriculum project presented as part of the teacher's web folio site.

#### EDUC6675 3 Credits Gender Issues in Education

This course examines heterosexism and homophobia in K–12 schools. It considers the historical, legal, social and political trends that have affected schools' ability to address these issues; examines connections among heterosexism, homophobia and sexism; and explores the specific concerns of lesbian, gay and bisexual students, parents and educators in the classroom and school society.

## EDUC6676

#### 3 Credits Language, Culture and the Community

This course will focus on the strong connection between language and culture, including nonverbal communication, humor, formal and informal language. Cultural differences related to family structures, celebrations, food, religions and educational systems will be discussed. The contributions of various cultural groups with an emphasis on the most commonly taught languages in grades K–12 will be incorporated in the course. Further emphasis will be placed on the ways culture can be introduced in the world-language class and how members of the community representing these cultures can enrich the classroom experience.

## EDUC6688

#### 3 Credits Integrating Technology in the Second-language Classroom

The incorporation of technology tools in the second-language classroom will be explored and modeled in this course. Activities will include the use of multimedia equipment and materials for developing listening, speaking and viewing skills. The importance of providing comprehensible input will be part of these demonstrations. The use of the internet to access world-languages resources and research other countries and cultures and the use of email for communication with other countries also will be emphasized. Software and various multimedia applications designed to enhance world-language instruction will be reviewed and explored.

#### EDUC6694 3 Credits Introduction to Autism Spectrum Disorders

This course will present a comprehensive overview of the characteristics of children and adults on the autism spectrum, including autism disorders, Asperger Syndrome (disorder) and Pervasive Developmental Disorder, Not Otherwise Specified (PDD-NOS). Through study and project-based learning, students will compare/contrast the accepted methodologies used to support and instruct children and adults with autism.

#### EDUC6701 3 Credits Leadership in Learning Community and School

Students will study the theoretical and conceptual basis of organizational leadership, with emphasis placed on contemporary theories and applications for successful leaders. Students will examine the roles of school leaders and what they must think about and be able to do to be effective under conditions of change. Emphasis will be placed on self-reflection and analysis of personal strengths and weaknesses as a future school leader.

### EDUC6702 3 Credits Curriculum and Instruction: Theory and Practice

Students will study and analyze the historic and philosophic roots of contemporary curriculum theory and development. New Jersey Core Curriculum Content Standards and alignment will be addressed in this course, and the implication on New Jersey Administrative Code requirements on program, assessment and graduation requirements.

#### EDUC6703 3 Credits Supervision of Instruction: Personnel and Evaluation

Students will study and analyze the various models of supervision and evaluation with a special emphasis on the development of the skills necessary to promote effective instruction in the classroom. Formative and summative staff evaluation strategies, as well as effective coaching and mentoring techniques necessary for success in a diverse school community, will be investigated. The implication of the New Jersey Administrative Code requirements on professional behavior, student growth objectives, student growth percentiles, PARCC testing and schoolwide improvement of program and state assessment of pupil performance will be reviewed.

#### EDUC6704 3 Credits Change: Curriculum Development and Program Improvement

Students will examine current research on educational change and collaborative strategies for increasing communication and engaging stakeholders in the change process. A primary focus of the course is to provide students with the skills needed in assessing the school culture; developing a vision and plan for school improvement. The course will focus on several change models and strategies, strategic planning and the communication of the change process within the learning community.

#### EDUC6706 3 Credits Advanced Leadership Seminar

The seminar is designed as a problem-based course that focuses on current educational problems that incorporate the behaviors informed by the Interstate School Leaders Licensure Consortium (ISLLC) Standards and New Jersey Professional Standards for School Leaders (NJPSSL). Students will develop skills related to building leadership capacity in themselves and others by working in professional work groups focused on finding solutions to educational problems that have no defined solution set. Prerequisites: EDUC6701 Leadership in Learning Community and School, EDUC6702 Curriculum and Instruction: Theory and Practice, EDUC6703 Supervision of Instruction: Personnel and Evaluation and EDUC6704 Change: Curriculum Development and Program Improvement.

## EDUC6715 1 Credit

## **Updating LDTC Diagnostic Skills**

This course will focus on an introduction of recently updated standardized tests frequently used by learning disability teacher consultants (LDTCs). Emphasis will be placed on administration, interpretation and inclusion of results into report writing. Prerequisites: EDUC7623 Diagnosis of Learning Disabilities and EDUC7624 Correction of Learning Disabilities.

#### EDUC6716 3 Credits School Finance, Facilities and Scheduling

This course will focus on the principal as an instructional leader and manager of the educational enterprise. The course curriculum is structured to assist future school leaders in acquiring the knowledge and skills necessary to ensure that the management of the school educational program, facility and its resources produces a safe, efficient and effective learning environment for the success of all students. The concepts learned during this course will be applied during the concurrent full-year, fieldbased internship.

#### EDUC6717 3 Credits School Law

This course is structured to assist future school leaders in acquiring the knowledge and skills necessary to ensure that the school educational program, facility and its resources produce a safe, efficient and effective learning environment for the success of all students. The course focuses on law related to education, legislation and court decisions that may impact the rights and responsibilities of administrators, teachers, students and parents. Specific attention is given to New Jersey statutes, administrative code and administrative decisions affecting the school community.

#### EDUC6718 3 Credits Curriculum/Program Evaluation and Student Assessment

This course focuses on basic measurement concepts, the role of measurement in education, construction of teacher-made tests and other classroom assessments, interpretation of standardized tests and fundamental descriptive statistics for evaluating student performance, school-improvement efforts and various designs for process and outcome evaluation of curricula. In addition, the course will provide a comprehensive understanding of the purposes and the logic of various testing programs, including classroom testing and state and national testing programs. Data analysis of New Jersey Statewide Tests that measure student performance will be used to assist in developing skills in data-based decision making that lead to the construction of school improvement plans and determining school goals for professional development and instructional emphasis.

## EDUC6720

### **3** Credits

### Educational Leadership Field-based Internship Seminar I

This first phase of a school-based internship is part of a 9-credit course sequence focusing on school leadership and management activities with an experienced practitioner in school leadership. The participants in the internship program enroll in three consecutive semesters (summer, fall and spring) during the second year of the M.A. in educational leadership program to complete 120 hours of field experience with an assigned mentor and adviser. Corequisite: EDUC5720 Field-based Internship I.

## EDUC6721

**3** Credits

### Educational Leadership Field-based Internship Seminar II

This second course in a sequence of three courses dedicated to the field-based internship is part of a 9-credit course sequence focusing on school leadership and management activities

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with an experienced practitioner in school leadership. The participants in the internship program enroll in three consecutive semesters (summer, fall and spring) during the second year of the M.A. in educational leadership program. Students will have an opportunity to apply their learning in an authentic school setting while working with a current school administrator who also serves as a mentor for the educational leadership program. Prerequisite: EDUC6720 Educational Leadership Field-based Internship I. Corequisite: EDUC5721 Field-based Internship Seminar II.

# EDUC6722

## **3 Credits**

### Educational Leadership Field-based Internship Seminar III

This third course in a sequence of three courses dedicated to the field-based internship is part of a 9-credit course sequence focusing on school leadership and management activities with an experienced practitioner in school leadership. The participants in the internship program enroll in three consecutive semesters (summer, fall and spring) during the second year of the M.A. in educational leadership program. Students will have an opportunity to apply their learning in an authentic school setting while working with a current school administrator who also serves as a mentor for the educational leadership program. Prerequisites: EDUC6720 Educational Leadership Field-based Internship Seminar I and EDUC6721 Educational Leadership Fieldbased Internship Seminar II. Corequisite: EDUC5722 Field-based Internship Seminar II.

## EDUC6723 3 Credits

## Final Project: School-based Research

This course emphasizes the supervisor's and principal's roles in conducting school-based research as a means of school improvement and professional development. Research-based strategies will be used to develop an instructional plan focused on school improvement and student achievement.

#### EDUC6732 2 Credits **Project Read: Phonics**

Systematic phonics using multisensory strategies. The sequence of concepts and skills from awareness, sound/symbol correspondence, syllabication and, ultimately, context. Designed for primary-level students but basic for any age person at a beginning level.

#### EDUC6733 3 Credits The Oral Language Reading Connection

An examinatin of the nature of oral-language problems and their impact on upper-level

reading skills. Differentiating instructional strategies to align with oral-language profiles of students with reading disabilities.

## EDUC6735

## **3 Credits**

### Orton-Gillingham Resources for Administrators

Understanding dyslexia and the characteristics of students who benefit from the Orton-Gillingham approach. Content and strategies of Orton-Gillingham lessons. Administrative procedures including scheduling, program and teacher evaluation and creating professional development. Serves as a resource for teachers and parents.

### EDUC6736 0–2 Credits **Literacy Topics**

# Study of literacy topic(s). The course can be taken again but specific topics may not be repeated.

## EDUC6737 1 Credit

## Phonemic Awareness

Theoretical framework and research. Developmental stages and related tasks. Assessment as a basis for individualized instruction. Guidelines for selection of published materials and teacher-made materials.

## EDUC6740

#### 3 Credits Introduction to Students with Disabilities and Autistic Spectrum Disorders

Overview of normal growth and development as a basis to identify developmental delays and learning differences. Characteristics of different disabilities and their effects on how children learn. Review of federal, state and local regulations and their effects on local policies, procedures and placement. Transition planning, resources and assistive technology to enhance the performance of students with disabilities and autistic spectrum disorders.

### EDUC6741 1 Credit Response to Intervention (RTI): Strategies for Struggling Readers

Presentation of screenings/assessments, strategies and program options to enhance and monitor reading achievement within the multitier RTI model.

#### EDUC6742 2 Credits Innovations in Effective Teaching in Special Education

An analysis of the literature on studies of teacher effectiveness and their implications for teaching students with learning disabilities. Methods for reading and interpreting research reports in educational journals are covered.

# EDUC6743 3 Credits

## Introduction to Students with Disabilities in School and Community

Introduction to the student with disabilities. Overview of normal growth and development as a basis to identify developmental delays and learning differences. Characteristics of different disabilities and their effects on how children learn. Review of federal, state and local regulations and their effect on local policies, procedures and placement. Transition planning, resources and assistive technology to enhance the performance of students with disabilities.

## EDUC6744

#### **3** Credits

#### Foundations: Historical, Philosophical and Legal Issues Related to Disabilities

Foundations of special-education practice. Learning environments that are culturally responsive. Ethical responsibility of special educators to advocate for the highest quality of life potential for students with exceptional needs. Special educators' role in the healing process.

# EDUC6745

#### **3** Credits

#### Principles and Practices of Collaboration and Inclusion

This course addresses the prerequisite knowledge and skill set necessary to create collaborative teaching/learning environments essential for inclusion. Students will examine effective teaching practices for whole-class instruction and the adaptations and modification necessary to meet the needs of students with high- and low-incidence disabilities. Students will learn strategies that prompt acquisition and application of core curriculum competencies. Prerequisite: EDUC6740 Introduction to Students with Learning Disabilities and Autistic Spectrum Disorders.

EDUC6746

#### 3 Credits

#### Learning Environment and Effective Management of Teaching and Learning

Review of psychological, social and emotional characteristics of individuals with learning disabilities. Exploration of teacher attitudes and behaviors that influence behavior of students with diverse learning needs. Classroom management theories and strategies for individuals with learning disabilities. Collection and interpretation of performance data to develop behavior management plans for individuals with learning disabilities.

#### EDUC6747 3 Credits

## Multisensory Reading Instruction for Students with Reading Disabilities

Causes, characteristics and intervention for students with reading disabilities with special emphasis on students with dyslexia. Strategies and related materials for assessing and instructing students in phonological awareness, word attack, word recognition, fluency, spelling, vocabulary and comprehension.

### EDUC6749 1 Credit Syntax: Its Role in Writing and Comprehension

Syntax, the arrangement of words within a sentence, plays an important role in a student's reading comprehension and written expression. Syntax and various ways to teach it will be covered in this course.

#### EDUC6750 3 Credits Teaching in an Inclusive Classroom

The focus of this course will include identifying differing ways of learning of individuals with exceptional learning needs including those from culturally diverse backgrounds. Strategies for addressing these differences, methods for ensuring individual academic success in various settings and the use of research-supported methods for academic and nonacademic instruction of individuals with learning disabilities will be addressed. Topics will include collaborating with families, professional and community agencies in culturally responsive ways; assistive technology; and language issues impacting student learning.

## EDUC6752 1 Credit

## **K-4 Literature for Struggling Readers**

The focus of this course will include finding appropriate and exciting literature for the struggling reader, using picture books effectively for listening comprehension and vocabulary instruction and analyzing traits of literature beneficial to children with dyslexia.

## EDUC6753 2 Credits

## Written Expression Practicum

Supervised practice teaching written expression and syntax to individual students and small groups. Includes experience with managing peer revising, sharing written pieces and conducting brainstorming sessions for the struggling writer.

## EDUC6772

# 1 Credit

## Technology to Support Reading and Writing Instruction

This course explores assistive technology tools that enhance reading and writing instruction, for compensation or remediation. It highlights understanding of devices such as iPads, Chromebooks, laptops, Google Apps for Education, iOS apps and effective web tools.

## EDUC6777

## 3 Credits

#### English Language Education: Grammar for Teachers of English and E.S.L.

This course examines grammatical theories underlying the teaching of English to native and non-native English speakers. All language skills — listening, speaking, reading and writing are addressed.

## EDUC6778 3 Credits Methods ELL Content Areas

This course focuses on educational approaches that synthesize language-learning objectives with content-area objectives. Informed by the findings of current research, the course surveys the variety of ways K-12 programs tie together language and content instruction. Course assignments are designed to provide students with practical training in the design and implementation of lesson plans that integrate both language and content objectives. Special attention is given to the SIOP (Sheltered Instruction Observation Protocol) and CALLA (Cognitive Academic Language Learning Approach) models. This course is appropriate for all students in education programs, regardless of their area of intended certification.

## EDUC6780

## 1 Credit

#### Using Technology to Enhance Learning for Students with Dyslexia

Overview and application of new technologies and discussion of their applications for students with dyslexia. Discussion of technological tools to permit nonprint alternatives for student learning. Demonstration of tools to help students make web research more efficient. Approaches to evaluating website content.

#### EDUC6784 1 Credit

## **Developing Metacognitive Skills**

Presents a standard format of instruction to help students develop reading-comprehension strategies. Demonstrates listening comprehension, transitional metacognition and guided metacognition lessons. Provides predesigned lessons that extend throughout the curriculum.

#### EDUC6792 3 Credits Assistive Technology for the Inclusive Classroom

This course introduces teacher candidates to technologies that enhance the learning of all students. Assistive technology will be explored to increase access to the general-education classroom. Strategies and technologies to address diverse learning needs will be introduced.

### EDUC6793 3 Credits

# Education of Students with Moderate to Severe Disabilities

This course examines major historical trends, legal mandates and current philosophical issues influencing the education of students with moderate/severe disabilities. Students will develop knowledge regarding the learning, communication, behavioral, social and physical characteristics of these students and the implications of these characteristics on program planning. Evidence-based practices for modifying curriculum, aligning instruction to the general education curriculum, designing and supporting instruction in general education programs and facilitating social skill development will be emphasized. Students will develop the knowledge and skills related to the use of augmentative and assistive technology, community-based instruction, positive-behavior supports, transition planning and home-school collaboration.

## EDUC6795

## **3** Credits

## Teaching Strategies for the Secondary/Post-secondary Students in Learning Disabilities

Training to instruct secondary and postsecondary students in the use of learning strategies. Instruction on integrating technologybased accommodations into content-based teaching. Includes a hands-on practicum with college-bound students with learning disabilities.

## EDUC6797

#### 3 Credits Multisensory Mathematics Instruction for Students with Disabilities

Causes, characteristics and intervention for students with mathematics disabilities. Strategies and instructional materials for assessing and instructing students in calculations, word problems and fluency.

## EDUC6804

### 3 Credits

#### Integrating Science/Mathematics/ Technology in the Classroom

Utilizing a project-based approach, preservice and in-service teachers will become familiar with an integrated approach for the delivery of science and mathematics using technology tools. In-depth understanding of the appropriate use of technology (i.e., MBL[s], sensors and probes, robotics, LEGO/LOGO) in and out of a classroom setting to deliver science and mathematics content aligned with New Jersey Core Curriculum Content Standards (NJCCCS).

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#### EDUC6806 3 Credits Language Development Through Mathematics/Science

Student-centered mathematics and science instruction can be harnessed to enhance firstand second-language acquisition on the part of language minority students. Underlying theory of language acquisition will be reviewed along with a presentation of methodologies for teaching language through mathematics and science. Students will be called upon to apply theory and strategies learned to the production of instructional resources and experiences that encompass course teachings.

## EDUC6810

## 3 Credits

#### Schools, Communities and Substance Abuse

One of eight courses required for substance abuse coordinator certification, this course addresses curriculum issues, models of implementation for programs to prevent substance abuse, school policies and methods of implementing effective programs as well as historical context from which current mandates have arisen.

#### EDUC6818 3 Credits Language Development and Literacy I

Recent research and findings in language development and literacy and its application in elementary education will be the focus of this course. Literacy skills in reading and language arts across grade levels for students with varying abilities and cultural and linguistic backgrounds will be included.

#### EDUC6819 3 Credits Language Development and Literacy II

Recent research and findings in language development and literacy and applications in social studies and science in the elementary school will be the focus of this course. Literacy across the curriculum will be emphasized.

#### EDUC6820 3 Credits Problem-based Strategies for Elementary Mathematics

Recent findings in critical thinking, quantitative reasoning and problem solving as they apply to all elementary subjects and grades is the focus of course content. Special emphasis is given to mathematical problem solving using manipulative materials.

#### EDUC6824 1 Credit Teaching Laboratory and Field Experience I

Guided observation and clinical analysis in an education setting. Program assessment and design. Supervised practical experiences in the classroom, increasing in intensity and duration.

## EDUC6825 2 Credits

#### **Apprenticeship Teaching Seminar**

The seminar will provide an opportunity to review current theories and practices in education as they directly relate to the students' teaching experiences. This course is taken as a corequisite with EDUC6575 Apprenticeship Teaching. Corequisite: EDUC6575 Apprenticeship Teaching.

#### EDUC6827 1 Credit Field Project

# Field Project Seminar

Seminar concentrating on observations and experiences in the field. Emphasis on adapting theory to classroom practice with various age groups.

#### EDUC6828 1 Credit Teaching Laboratory and Field Experience II

Guided observation and clinical analysis in an educational setting. Program assessment and design. Supervised practical experiences in the classroom, increasing in intensity and duration. Prerequisite: EDUC6824 Teaching Laboratory and Field Experience I.

#### EDUC6829 1 Credit Teaching Laboratory and Field Experience III

Guided observation and clinical analysis in educational settings. Program assessment and design. Supervised practical experiences in the classroom, increasing in intensity and duration. Prerequisite: EDUC6828 Teaching Laboratory and Field Experience II.

#### EDUC6835 3 Credits

# Effective Teaching and Effective Schools

Students will acquire and demonstrate skills in effective teaching for students with varying abilities and cultural and linguistic backgrounds. Essential skills as identified by the New Jersey Department of Education for beginning teachers will be emphasized. Presentations of research findings, demonstrations of essential teaching skills by faculty, microteaching, peer coaching and audiovisual instructional materials will be used to impart skills. Students also will acquire a thorough knowledge of effective school management and operations that relate to successful classroom instruction.

#### EDUC6845 1 Credit **Understanding IQ Testing**

This course for teachers, reading specialists and learning consultants will provide a comprehensive review of the Wechsler Intelligence Scales as a basis for understanding diagnosis, remediation and strategy instruction for students with learning disabilities,

## EDUC6849

#### 1-3 Credits

## **Advanced Special Project**

particularly students with dyslexia.

Students are supervised while working with children in the field, using materials and methods studied in the academic section of the courses in diagnosis and correction of learning disabilities and remediation in basic school subjects. Each credit hour represents 30 hours of fieldwork.

## EDUC6851

#### 3 Credits Child Development from Birth to Age 8

This course is designed to foster the understanding of the development and learning of children from birth through age eight. It examines the current information concerning the development of the child through the various stages of childhood. Educators will gain knowledge based on the growth, development and learning of children from birth through eight years old. The class will explore the crucial role that communities, families and teachers play in the lives of young children. Students will engage in observations of children at various ages to gain a deeper knowledge of the integration of theory of child development into practice.

## EDUC6852

# 3 Credits

## **P-3 Curriculum and Assessment**

This course examines the current literature on developmentally appropriate curriculum, classroom management and assessment for the Pre-K through third-grade classrooms.

# EDUC6853

## 3 Credits

**Family and Community in Education** This course examines the current research on parent, school and community influences on children's lives. It addresses effective familyengagement activities in classrooms, schools and communities. Educators will gain more knowledge and skills to work collaboratively to work with families. Contemporary issues of bullying, diverse family lifestyles, social media and children with differing abilities will be explored.

#### EDUC6854 3 Credits Child and Adolescent Development

This course is designed to foster the understanding of the development and learning of children from birth through adolescence. It examines the current information concerning the development of the child through the various stages of childhood and adolescence. The class will explore the crucial role that communities, families and teachers play in the lives of children. Students will engage in observations of children at various ages to gain a deeper knowledge of the integration of theory of child development into practice.

#### EDUC6862 1 Credit Project Read: Reading Comprehension (Report Form)

This course presents the Report Form section of the reading comprehension strand of the Project Read program. It teaches students how to collect, organize and analyze information from expository text (report form).

#### EDUC6864 1 Credit The Montessori Approach to Learning

Overview of Montessori methods for teaching oral and written language, as well as mathematics in preschool through grade 12.

#### EDUC6870 3 Credits Standards-based Strategy: Elementary Science

In-depth program on teaching science to elementary school children through a hands-on, process-oriented and problem-solving approach. Lesson design, management of the students and materials, safety and cross-curricular teaching are integral to the instruction activities in the life and physical sciences.

#### EDUC6871 3 Credits Seminar: Practice of Elementary Science Education

Analysis of the design and construction of instructional units; application of research in cooperative learning, learning styles, effective teaching and peer coaching in clinical practice of elementary science.

#### EDUC6880 1 Credit Teaching Vocabulary to Students with Learning Disabilities

Current research on vocabulary-development strategies for enhancing reading comprehension and word choice in writing for students with learning disabilities. Application for instruction in inclusion and special-education classrooms.

#### EDUC6893 3 Credits Evaluation and Measurement in Education

This course emphasizes the use of multiple methods to assess student learning in K–12 classrooms; development and assessment of portfolios and performance-based tasks; and objective and standardized tests. Analysis of assessment information and self-/peer assessments to enhance teaching and address individual student-learning needs is integral to the course. Strategies for evaluation and grading and the use of rubrics are addressed. Emphasis is placed on standards-based instruction and assessment using the New Jersey Core Curriculum Content Standards and statewide assessments as reference points.

## EDUC6910 3 Credits Race, Immigrat

## Race, Immigration and Education in Contemporary America (1960s to the Present)

This course focuses on contemporary America (1960s to the present) through the analysis of key historical events in America such as the civil rights movement. Specifically, the course examines post-1965 immigration patterns and other current issues, events and themes related to contemporary America such as globalism and transnationalism. The reshaping of America's racial geography is explored. One of the primary objectives of this class is for students to understand that historical cohorts of different ethnic groups have parallel experiences of Americanization. From this realization can grow a greater understanding of and ability to cross American racial/ethnic lines and focus on the needs and experiences of the newest Americans, particularly in the educational context.

## EDUC6912 3 Credits

### Sociology of Multicultural Identity Development

This course is designed to equip educators with appropriate skills and knowledge for the effective teaching of culturally and socioeconomically different students. The course focuses on multicultural cognitive and psychosocial development as it bears on teaching and learning within different social and cultural populations (gender, race, ethnicity, sexual orientation) and contexts (homes, schools). It examines research related to the identity development of racial/ethnic minority students and to the societal and school experiences of these students. While special attention is given to ethnic and racial identity development of African-American, Latino/a and Asian-American students, identity development of Caucasian-American students will also be discussed.

## EDUC6914 3 Credits

## **Developing Multicultural Curricula**

This course is designed to help teachers better understand the school's role in the multicultural education of students and acquire the insights, understandings and skills needed to design and implement curricular and instructional strategies that reflect ethnic diversity. Topics include philosophy and principles of multicultural education; racial and cultural influences on education: the impact of teaching and learning on instruction and assessment; alternative assessment theories; and the relationship of instruction to classroom management. This course is designed to help educators identify content and materials, devise methods for incorporating multicultural content into regular K-12 social studies, language arts and humanities curricula. Prerequisite: EDUC6661 The Multicultural Classroom.

EDUC6916

3 Credits

### Foundations of Modern America: African-Americans

The course briefly reviews the post-Civil War to pre-civil-rights-era history of African-Americans, with a particular focus on education; examines the goals, achievements and legacies of the modern civil rights movement; and evaluates progress and changes in African-American social, political and economic status during the last quarter of the 20th century. By applying critical thinking skills to competing views of historical and current events, students explore the impact and meaning of these developments for African-American students and their teachers.

#### EDUC6918 3 Credits Foundations of Modern America: Asian-Americans

This course answers the questions: Who are Asian-Americans? What has been their role in American history? By applying critical-thinking techniques to competing views of historical and current events, the course explores issues of ethnic identity development, religion, gender and sexuality, language, Americanization and the sociopolitical climate as they affect Asian-Americans. The class will focus on secondgeneration Asian-Americans whose families arrived in the United States in 1965 as immigrants and refugees. The Asian-American experience and the factors affecting it including the civil rights and women's movements, immigration patterns and policy and the current War on Terrorism - will be used to examine the role of cultural heritage in how one views oneself, one's ethnic group(s) and the dominant culture.

# **Education • Course Offerings**

#### EDUC6920 3 Credits Foundations of Modern America: Latino/a

This course presents a sociohistorical and cultural analysis of the diversity within Latino/a groups, particularly as represented in educational settings. In this context, the class examines global, political, economic and social changes in the 20th century, including rapid population growth, increasing urbanization and globalization. Applying critical thinking skills and historical analysis, the class explores how all these factors affect the goals, achievements and legacies of Latinos/as in the United States today. This course will prepare educators to respond to the diversity within Latino/a groups by developing an awareness of the relationships among different Latino/a groups — including the different demographics, linguistic factors and sociological perspectives among Latinos/as.

#### EDUC6921 1 Credit Clinical Teaching Internship and Seminar III

Second-year teaching candidates undergo clinical supervision by a college supervisor who is a member of a school-based professional support team. Observations are followed by critique sessions; problems arising in professional practice are addressed. Prerequisites: EDUC6571 Clinical Teaching Internship and Seminar I and EDUC6572 Clinical Teaching Internship and Seminar II.

#### EDUC6923 1 Credit Clinical Teaching Internship and Seminar IV

Second-year teaching candidates undergo clinical supervision by a college supervisor who is a member of a school-based professional support team. Observations are followed by critique sessions: problems arising in professional practice are addressed. Prerequisites: EDUC6571 Clinical Teaching Internship and Seminar I, EDUC6572 Clinical Teaching Internship and Seminar II and EDUC6921 Clinical Teaching Internship and Seminar III.

#### EDUC7603 3 Credits Multisensory Reading III

Focuses on skills for teaching upper-level language skills (fourth-grade level and above) involved in teaching reading, spelling and handwriting, using the Orton-Gillingham approach. Topics include roots, prefixes and suffixes. Consists of lecture followed by supervised practicum in which teachers are assigned upper-level students with dyslexia. Group seminars and individual conferences between teacher and supervisor also are included. Prerequisite: B+ or better grade in the clinical component of EDUC6602 Multisensory Reading II. *Fall, Spring, Summer* 

# EDUC7604 3 Credits

## **Multisensory Reading IV**

Continuation of training in the Orton-Gillingham techniques taught in EDUC7603 Multisensory Reading III, with continued study of upper-level language skills. Consists of lecture, supervised practicum, group seminars and individual conference between teacher and supervisor, as described in EDUC7603 Multisensory Reading III. Prerequisite: B+ or better grade in the clinical component of EDUC7603 Multisensory Reading III.

Fall, Spring, Summer

## EDUC7620 1–2 Credits Diagnosis of Dyslexia

Advanced study of diagnosis of individuals with dyslexia. Integrates current research, theory and assessment approach. Prerequisite: New Jersey Learning Disabilities Teacher Consultant (LDTC) Certification or equivalent.

## EDUC7623 3 Credits

## **Diagnosis of Learning Disabilities**

Research on characteristics, uses, advantages and limitations of formal and informal assessment techniques and instruments used to assess educational strengths and weaknesses. Students will learn how to gather background information, select assessment measures, interpret results and practice writing learning evaluations and Individual Education Plans (IEPs) based on evaluation results. Prerequisites: EDUC6740 Introduction to Students with Disabilities or EDUC6743 Introduction to Students with Disabilities in School and Community and Autistic Spectrum Disorders and EDUC6745 Principles and Practices of Collaboration and Inclusion or EDUC6746 Learning Environment and Effective Management of Teaching and Learning.

#### EDUC7624 3 Credits Correction of Learning Disabilities

Selection, adaptation and use of research-based instructional strategies and materials to plan and modify the curriculum for students with learning disabilities in remedial and replacement settings. Interpretation of formal and informal test data as the basis for planning Individualized Education Programs (IEPs), including writing goals and objectives and selecting appropriate strategies and materials to facilitate maintenance and generalization of learning across environments. Prerequisites: EDUC6740 Introduction to Students with Disabilities or EDUC6743 Introduction to Students with Disabilities in School and Community and Autistic Spectrum Disorders and EDUC6745 Principles and Practices of Collaboration and Inclusion or EDUC6746 Learning Environment and Effective Management of Teaching and Learning.

#### EDUC7674 2–3 Credits Master's Seminar: Research in Specialization

This course serves as a capstone experience that extends and reinforces the teachers' knowledge, skills and competencies related to professional and educational practice through research and completion of a culminating project in their relevant area of specialization. The course reviews research methodologies and various research models. The teacher will prepare a research study on a topic/problem of his/her choice (subject to approval by an adviser) under the direction of a mentor. The teacher will be required to submit a written report and action plan in an approved format, subject to approval of the mentor in accordance with School of Education policy. (Only for M.A. in education for certified teachers students.)

## EDUC7675

#### 2 Credits Master's Seminar in Early Childhood Education

This course reviews research methodologies in early childhood education. The student will choose a research topic and write a written report in an approved format under the guidance of a mentor. It will be a culminating research project in the area of early childhood education.

### EDUC7718 2 Credits

## Final Project: Second Language Acquisition

Application of linguistic and pedagogical knowledge in the development of one or two units of language study rooted in appropriate New Jersey Core Curriculum Content Standards as well as appropriate language standards (either New Jersey English Language Proficiency Standards or Standards for Foreign Language Learning in the 21st Century) for age/grade level cited and for the target language addressed.

## EDUC7721 3 Credits

## **Philosophy of Education**

An introduction to educational philosophy, emphasizing modern theories and their origins, development and application to present problems. *Fall, Spring, Summer* 

#### EDUC7723 3 Credits Principles of Curriculum Construction

Emphasis on recent curriculum materials and evaluation of planning process. Procedures in supervision, design and implementation of innovative curriculum. Implications for public education of recent curriculum trends.

#### EDUC7763 3 Credits Human Relations and Conflict Resolution for Educators

This course provides a theoretical and practical framework for decision making, social problem solving, conflict resolution and mediation in the classroom and school environment for both students and adults. The theoretical knowledge base emphasizes the sociological and psychological aspects of human behavior. Varied learning activities will develop skills and techniques that address preventative measures to minimize conflict and mediate conflict situations when they occur. The course emphasizes conflict-resolution strategies as an intervention, and learning experiences that promote development of character and social responsibility, productive social interactions and collaboration.

## EDUC7779 1-3 Credits

#### Computer-based Programming for Gifted Children

This course is designed to introduce regular classroom teachers, teachers of the gifted and talented and supervisors to the use of computers in instructing gifted children. Review of existing software and techniques, planning and integration with traditional instruction.

## EDUC7782 3 Credits

## Technology in the Reading/Writing Process

This course examines how technology can support the reading and writing process in the classroom. Basic research in the field is covered. Word processing and software programs are examined. The impact of technology on the reading/writing process will be examined and discussed.

#### EDUC7783 3 Credits Telecommunications and Distance Learning

This course examines two-way interactive television to present courses to remote locations via fiber-optic networks. Emphasis is on using this technology to deliver courses and learning techniques that increase interactivity. Distancelearning programs such as Blackboard will be introduced. Students will be asked to create a lesson using Blackboard.

#### EDUC7784 3 Credits **Multimedia Production**

Techniques for the application of visual, audio and animation file formats to curriculum activities are explored. Teachers use a professional multimedia-authoring tool to design and author an interactive curriculum module for use in the classroom which is designed for placement and curriculum delivery within the teacher's web folio site. Prerequisite: EDUC7785 Internet for Educators.

## EDUC7785 3 Credits Internet for Educators

The internet is treated as a dynamic curriculum delivery, authoring and collaborative medium. Teachers use professional web-authoring tools to design and author the structure of a comprehensive shell for their web-based folio site. Design principles are emphasized which support regular use of the site in classroom and school activities. Prerequisite/Corequisite: EDUC6584 Computers as a Teacher's Aid: Curriculum and Instruction.

#### EDUC7786 3 Credits Technology in the Social Science/Humanities Classroom

This course focuses on integrating computers and technology into the social sciences/ humanities classroom. New products will be evaluated and model school districts using technology in social studies and English classrooms will be reviewed, along with strategies to use technology in the classroom. Students will create many different projects they can use in a social studies or English classroom.

## EDUC7790 3 Credits

## Seminar in Instructional Technology

Research and techniques in the field of instructional technology are explored in a seminar setting. Topics investigated include state and district technology plans and the implications of national policy initiatives. A research project is presented as part of the teacher's web folio site. Prerequisite: EDUC7784 Multimedia Production.

## EDUC7795 3 Credits Advanced Internet for Educators

This is an advanced internet course which will build upon knowledge of how to design a web page using more advanced tools. It will continue to explore how the internet can be a valuable classroom resource for educators. Prerequisite: EDUC7785 Internet for Educators. *Fall, Spring, Summer* 

## EDUC7796 3 Credits

## **Projects Based on the Web**

A major multimedia module featuring interactive content and incorporating techniques and work from the instructional technology program is authored as a capstone project for the teacher's web folio site. Prerequisite: EDUC7784 Multimedia Production.

## EDUC7797

#### **3** Credits

## **Technology in Visual/Performing Arts**

Explores the exciting role computers can take in bringing the visual and music arts alive in the classroom. Students develop their own visual and music projects which model classroom activities that might be used to support New Jersey Core Curriculum Content Standards. No prerequisite "arts literacy" or "art background" are required. Prerequisite: EDUC6584 Computers as a Teacher's Aid: Curriculum and Instruction.

## EDUC7798

#### 3 Credits Special Topics in Ins

### Special Topics in Instructional Technology

Current issues related to the growing movement toward technologies which support schoolwide networking are emphasized. Topics focus on current technology trends and developing strategic plans for change and technology implementation strategies for schools and districts. A module is authored as part of the teacher's web folio site. Prerequisite: EDUC7785 Internet for Educators.

## EDUC7810

#### 1–3 Credits Advanced Special Projects: Field

## Experiences

Guided observation and clinical analysis in an educational setting. Program assessment and design. May be taken with EDUC7811 Research in Curriculum Development, in preparation for EDUC7812 Final Project.

## EDUC7811

## 1 Credit

## **Research in Curriculum Development**

Survey of literature in curriculum followed by development of a research project in a specific discipline.

# EDUC7812

#### 2–3 Credits Final Project

The fundamentals of educational research and the link between theory and practice are explored. Students develop a research proposal that is specific to their needs and interests as practitioners. This course explores the fundamentals of educational research, its value and the links between educational research and

# **Education • Course Offerings**

practice. Students will conduct a survey of the literature on a selected topic and use higher-order thinking skills to develop a research question or series of questions and research proposal. Signature of adviser required.

### EDUC7813 3 Credits Applied Field Project

Applied field project as culmination of program of study. Project to be related to elementary-, secondary- or college-level instruction.

## EDUC8609

### 3 Credits

#### **Multisensory Reading V**

Techniques for teacher training and supervision of the Orton-Gillingham approach to instruction are offered. Students plan, present and evaluate training sessions. Includes supervision in providing instruction and feedback to individuals in training. Prerequisite: EDUC7604 Multisensory Reading IV.

#### EDUC8610 3 Credits Multisensory Reading VI

Techniques for teacher training and supervision of the Orton-Gillingham approach to instruction are offered. Students plan, present and evaluate training sessions for teachers who are enrolled in EDUC7603 Multisensory Reading III and EDUC7604 Multisensory Reading IV. Includes supervision in providing instruction and feedback to individuals in training. Prerequisite: EDUC8609 Multisensory Reading V.

#### EDUC8612 3 Credits Advanced Orton-Gillingham Practicum I

Focuses on provision of comprehensive instruction, including decoding, encoding, written expression, reading comprehension and study skills using multisensory strategies. Consists primarily of a supervised practicum working with students with dyslexia. Prerequisite: EDUC7604 Multisensory Reading IV.

#### EDUC8613 3 Credits Advanced Orton-Gillingham Practicum II

A continuation of the training provided in EDUC8612 Advanced Orton-Gillingham Practicum I and includes training in syntax and written-expression instruction. Consists of lectures and a supervised practicum working with students with dyslexia.

#### EDUC8614 3 Credits Orton-Gillingham Internship

Applied field experience in private practice, schools or clinical settings to meet hours required for the Orton-Gillingham Therapist Certificate. Instruction using the Orton-Gillingham approach is tailored to the individual/group and includes decoding, encoding, fluency, handwriting, vocabulary, comprehension, narrative and expository writing. The course includes 10 of the observations required for certification at the therapy level. Prerequisite: EDUC8612 Advanced Orton-Gillingham Practicum I and EDUC8613 Advanced Orton-Gillingham Practicum II.

#### EDUC8623 3 Credits Practicum in Diagnostic and Remedial Techniques I

Students administer tests, analyze results and interview parents and teachers of children with learning problems. Includes a 45-hour supervised practicum and problem-solving seminar. Prerequisites: A B+ or better grade in EDUC7623 Diagnosis of Learning Disabilities and in EDUC7624 Correction of Learning Disabilities. *Fall* 

### EDUC8628 3 Credits Practicum in Diagnostic and Remedial Techniques II

Emphasizes the development and implementation of detailed educational plans to remediate learning problems of children. Includes a 45-hour supervised practicum and problem-solving seminar. Prerequisite: A B+ or better grade in EDUC8623 Practicum in Diagnostic and Remedial Techniques I. *Fall or Spring* 

## Mathematics

## MATH6507 3 Credits

#### World of Mathematics: Number

Investigations of numbers utilizing a physical modeling, problem-solving approach to show its development and use.

#### MATH6508 3 Credits

## World of Mathematics: Algebra

An investigation of algebra through a hands-on, process-oriented, problem-solving approach.

### MATH6509 3 Credits World of Mathematics: Geometry

An investigation of the world through geometry and its application via a hands-on, processoriented, problem-solving approach.

### MATH6512 3 Credits

### World of Mathematics: Seminar

The practice of mathematics and the analysis of the impact of mathematics on the world in its use and understanding. Numeracy, with its many facets, will draw students to aspects of how mathematics is understood by people.

### MATH6513

#### 3 Credits World of Mathematics: Mathematics in Science

An investigation of the role of mathematics in the fields of biology, chemistry, earth science and physics with an emphasis on the meaning and interpretation of data and statistics and its relevance to the real world.

## MATH6514

#### 3 Credits World of Mathematics: Discrete Mathematics

An investigation into the deeper understanding of topics from discrete mathematics such as counting methods, graph theory, trees, networks, Pascal's Triangle, the binomial theorem, sequences, set theory and recursion and problem-solving techniques.

MATH6516

### **3** Credits

# World of Mathematics: Data Analysis and Probability

This course is designed to explore topics from probability and statistics tools in the problemsolving process. Investigations will center on the basics of collection, summarization and interpretation of data and the fundamental ideas of probability.

MATH6517

#### 3 Credits World of Mathematics: Applications in the Real World

This course is designed to explore how mathematics is applied in real-world scenarios. The course will emphasize real-world problem solving using 21st-century tools and giving students a better understanding of how mathematics functions.

## MATH6600

#### 3 Credits Advanced Special Projects

Studies in the area of mathematical foundations.

#### **MATH6630**

#### 0–3 Credits Special Topics in Mathematics Education

A study of topics of current interest in mathematics education.

# • Education for Certified Teachers Educational Leadership • Electrical Engineering

# Education for Certified Teachers (M.A.)

See Education, page 126.

# Educational Leadership (M.A.) See Education, page 132.

# Electrical Engineering (M.S.E.E.)

Electrical engineering is one of the most dynamic areas of modern technology. The graduate program in electrical engineering provides students with broad scientific knowledge, current information about technological advancement, exposure to modern mathematical techniques and the ability to formulate and meet objectives that are necessary in the successful practice of electrical engineering. Numerical analysis and computer-aided design methods are used in all courses where relevant. The courses are updated frequently to keep pace with new technological developments and to meet the needs of the industry.

Online M.S.E.E. Option: This program is also available through the internet with the same admission requirements, academic standards and evaluation processes as the traditional classroom program. Lecture notes are posted weekly on the program's website (www.fdu.edu/onlinemsee). Homework assignments also are provided regularly to determine student performance. Assignments may be submitted by mail, email or fax. Ongoing communications and guidance via the electronic forum, email, fax and telephone are provided by the faculty. The M.S.E.E. program can be completed entirely online or in combination with traditional classroom instruction.

The program, on-campus or online, is offered under the auspices of the Lee Gildart and Oswald Haase School of Computer Sciences and Engineering, University College: Arts • Sciences • Professional Studies, Metropolitan Campus, Teaneck, New Jersey.

## **Admission Requirements**

1. A Bachelor of Science degree in electrical engineering from an accredited university. Students with a Bachelor of Science degree in science, engineering (other than electrical) or technology may be admitted if they complete undergraduate prerequisites determined by the school.

2. Submission of an official score report for the Graduate Record Examinations (GRE) General Test taken within the last

five years. The GRE may be waived if the applicant enrolls initially as a nonmatriculating student and completes 9 graduate credits in electrical engineering with a minimum grade point ratio (GPR) of 3.00 and no grade below C or is a Fairleigh Dickinson University electrical engineering graduate with an undergraduate GPR of 3.00 or is a non-Fairleigh Dickinson University electrical engineering graduate with an undergraduate GPR of 3.50. This GRE waiver policy is only applicable to applicants who graduated from a regionally accredited college or university in the United States. (The GRE requirement also is waived for applicants who have completed a master's degree from a regionally accredited college or university in the United States.)

3. Three letters of recommendation.

Applicants who have not completed all requirements for admission to the degree program may be permitted to enroll in classes for credit on a nonmatriculated or nondegree basis.

## Requirements for the Master of Science in Electrical Engineering Degree

Students must earn a total of 30 credits with a grade point ratio of at least 2.75. All courses are 3 credits.

## Core Requirements (15 credits)

Credits
EENG6633
Digital Signal Processing3
EENG6747
Digital Communications3
EENG7701
Logic System Design
EENG7709
Embedded Systems3
EENG7725
Automatic Control Systems I3

# Specialization Elective Courses (9 credits)

Select three courses from the areas of specialization shown. Any course may be selected, although it is recommended that they are in the same area.

Digital Signal Processing and Communications Specialization EENG6629 Random Processes in

Credits
EENG7738
Wireless Communication3
EENG7748
Advanced Digital Communications3
EENG7753
Applications of Digital Signal
Processing
EENG7773
Digital Image Processing
EENG7852
Digital Signal Processing with C
and DSP Processors3
Computers Specialization
EENG6610
Computer-aided Analysis and Design 3
EENG7702
Microprocessor Design3
EENG7707
Neural Networks and Fuzzy
Logic Systems3
EENG7737
Computer Communication Networks3
EENG7773
Digital Image Processing3
Devices and Systems Specialization
EENG6601
Linear Systems I3
EENG6610
Computer-aided Analysis and Design 3
EENG7706
Robotics Engineering3
EENG7715
Integrated Circuit Devices
EENG7755
VLSI Systems (Digital)
EENG7775
Optics
EENG7830
Special Topics in Electrical
Engineering (Power Systems)3

# Additional Elective Courses (6 credits)

Electives may include any graduate electrical engineering courses. Students have the option of registering for a 3-credit internship after completing 18 graduate credits. A 6-credit thesis option is also available in consultation with electrical engineering faculty. Courses in other technical programs such as computer science may be taken with adviser permission.

## Telecommunications and Networking Certificate

Admissions requirements and requirements for the certificate are provided in the Computer Science section (page 98).

## **Course Offerings**

Courses offered fall, spring and/or summer are so noted. To determine availability of courses not so designated, please check with the school.

## **Electrical Engineering**

Lee Gildart and Oswald Haase School of Computer Sciences and Engineering

EENG6601 3 Credits **Linear Systems I** 

State equations, time domain solutions, matrix functions, Laplace solutions, discrete time state equations and solutions, z-transforms, z domain solutions, controllability and observability of linear systems.

EENG6602 3 Credits Linear Systems II

#### Time varying systems, sampled systems, bilateral Laplace transforms, real and complex convolution integrals, distributed parameter systems. Prerequisite: EENG6601 Linear Systems I.

## EENG6606

**3** Credits

#### Electromagnetic Radiation and Transmission

Transmission lines, waveguides, antennas, wave propagation in anisotropic media.

#### EENG6610 3 Credits

#### **Computer-aided Analysis and Design**

Study of simulation packages for engineering problem solving. Transient and steady-state analysis of passive circuits. Signal processing, circuit and system modeling. Digital circuit and system simulation.

### EENG6629 3 Credits Random Processes in Communications

Probability and random variables. Random processes and spectral analysis. Modulation, introduction to noise and linear systems with random input.

EENG6633 3 Credits Digital Signal Processing Discrete-time signal and systems, z-t

Discrete-time signal and systems, z-transform, discrete-time Fourier transform, discrete Fourier

transform, fast Fourier transform, circular convolution, block convolution, basic and advanced filter structures, design of finite impulse response and infinite impulse response filters, applications, introduction to DSP processors.

#### EENG6747 3 Credits

# Digital Communications

Source coding, channel capacity and coding, error-detection and error-correction codes, communication signals and systems, optimum receiver, digital-signal detection and performance, digital modulation.

#### EENG7701 3 Credits Logic System Design

Review of combinational and sequential logic. Memory and programmable logic. Register transfer and computer operations. Control logic design. Computer instructions. CPU design. Input/Output and communication. Memorymanagement hardware. Prerequisite: undergraduate course in logic design.

# EENG7702

#### 3 Credits Microprocessor Design

This course covers 80x86 instruction set architecture: registers, memory organization, data types and instructions: assembly language programming, relation between high-level language and assembly language and the impact on performance and code size; application optimization and tuning, evolution of 80x86 microarchitecture from 80386 through Pentium 4: CISC, RISC, VLIW, execution pipeline and pipelining; issues affecting performance: data and control dependencies, cache, simple and complex instructions, static and dynamic scheduling, parallel instruction execution. Prerequisite: EENG7701 Logic System Design.

## EENG7703

#### 3 Credits Computer Applications in Engineering

Use of computers for design, analysis, control and decision. Engineering applications in circuits electronics, signal processing and numerical analysis. Use of systems interfaces such as assembly-language subroutines, memory video displays, ports and interrupts.

#### EENG7704 3 Credits

## **Computer-based Instrumentation**

Fundamentals of data acquisition and instrument control. Applied instrumentation automation. Analysis and modeling tools.

# **Electrical Engineering**

#### EENG7706 3 Credits **Robotics Engineering**

Introduction, robot kinematics, system modeling, control and motion, vision, manufacturing system applications.

#### EENG7707 3 Credits Neural Networks and Fuzzy Logic Systems

Structure of neural network and fuzzy logic systems with applications in signal processing, pattern recognition, process control and optimization. Topics include learning algorithms, perceptron learning rule, adaptive linear neurons, back propagation training, pattern association, competitive neural nets, fuzzy sets and algebra, fuzzy digital devices and control systems, design of fuzzy systems, neuro fuzzy systems and MATLAB simulation.

#### EENG7708 3 Credits Itanium Processor Application Architecture

A thorough study of the application software architecture of the Itanium processor. Data types, organization of data and code in memory, register set, instruction set architecture and parallel instruction dispersal mechanism. Prediction, speculation, parallel compares, software pipelining and fused floating-point multiply divide.

#### EENG7709 3 Credits Embedded Systems

Introduces system hardware and firmware design for embedded applications. Hardware Design Language (HDL)-based combinational and sequential logic design. Software modeling and embedded C-program development. Realtime operating system (RTOSI) and task management. Top-down design methodology using a processor-based development platform. Prerequisite: EENG7701 Logic System Design or equivalent background.

#### EENG7711, EENG7712 6 Credits (3 Credits Each Semester) Active Circuits Analysis and Design I, II

BJT and FET circuits, transistor amplifier frequency response, wide-banding, tuned amplifiers, oscillators, feedback amplifiers, operational amplifiers, linear wave-shaping circuits, logic circuits, multivibrators, sweep circuits, synchronization.

#### EENG7715 3 Credits Integrated Circuit Devices

Solid-state physics (review); pn junctions in integrated circuits. Bipolar junction transistors. Ebers-Moll model. Field-effect transistors.

## EENG7725 3 Credits Automatic Control Systems I

Integrated-circuit fabrication.

Analysis and design of both continuous and digital control systems. Stability criteria, frequency response, state variable method. Digital filtering.

# EENG7732 3 Credits

### **Statistical Communication Theory**

Signal detection in noise. Hypothesis testing and likelihood ratio. Estimation. Kalman filtering. Prerequisite: EENG6629 Random Processes in Communications.

#### EENG7734 3 Credits Engineering Applications in Medicine

A seminar-type course, surveying current advances in the field of biomedical engineering, including artificial organs, automated instrumentation, noninvasive diagnostic techniques such as ultrasonics and computerized axial tomography.

# EENG7735 3 Credits

## **Biomedical Instrumentation Design**

Signal processing, transducers, microcomputers in medical instrumentation, cardiac monitors, ultrasonic scanning, medical-imaging systems, electrical safety.

#### EENG7736 3 Credits Microwave and Optical Communications

Microwave and optical sources. Modulation techniques for microwave and optical frequencies. Transmission media, atmosphere, waveguides, antennas and optical fibers. Design of microwave and optical transmitters and receivers. Prerequisite: EENG6606 Electromagnetic Radiation and Transmission.

## EENG7737 3 Credits

## **Computer Communication Networks**

Data transmission and encoding, multiplexing, circuit and packet switching, error detection and correction, switching systems, bridging, IP, routing concepts and forwarding, quality of service, traffic shaping and policing, foundations of cryptography and network security.

## EENG7738 3 Credits

## **Wireless Communication**

Cellular concept. System architectures. Mobileradio propagation characteristics. Modulation techniques. Diversity. Multiple-access methods. Wireless systems and standards. Channel equalization.

## EENG7748

#### 3 Credits

#### **Advanced Digital Communications**

Signal-space concept and signal design. Fading channels. Diversity and multiple-antenna systems. Multicarrier modulation. Spread spectrum. Multi-user communication.

# EENG7749

## 3 Credits

## **Telecommunications Engineering**

Signals and channels. Modulation, transmission and noise. Analog and digital telephone systems. Transmission lines and antennas. Packet switching. Satellite and mobile communications.

## **EENG7753**

#### 3 Credits Applications of Digital Signal Processing

Applications of multirate signal processing, applications of adaptive signal processing, speech processing and coding, random signals, linear prediction and optimum filters, power spectrum estimation, DSP processor architecture, implementation of FIR, IIR and adaptive filters on a DSP processor. Prerequisite: EENG6633 Digital Signal Processing or permission of the instructor.

## EENG7755 3 Creits

## VLSI Systems

Introduction to microelectronics. MOS Logic families. Memories. Logic design with ROMs. Computer-aided design, simulation and analysis.

## EENG7757

## **3** Credits

## Coding Theory

Communication and coding. Properties of codes. Efficiency and redundancy. Fundamental algebra. Linear block codes. Binary cyclic codes. Error trapping decoding. BCH and convolutional codes.

## EENG7758

### **3** Credits

## **Introduction to Digital Transmission**

Analog telecommunications networks. Digital networks. Voice digitization. Digital transmission and multiplexing. Digital switching. Network synchronization.

#### EENG7773 3 Credits Digital Image Processing

A treatment of the techniques used in image enhancement and restoration. Topics will include image modeling and geometry, image transforms, FFT, histogram modification, spatial and frequency domain filtering, image encoding. Some discussion of pattern recognition will be included.

#### EENG7774 3 Credits **Optical Signal Processing**

Optical techniques applied to signal processing. Particular emphasis given to Fourier processing and Fourier plane filtering. Acousto-optical signals. Prerequisite: course in linear systems or permission of the instructor.

#### EENG7775 3 Credits **Optics**

Maxwell's Equations and propagation of light. Diffraction, interference, polarization and birefringence. Coherent and incoherent light. Interaction of light with matter, spontaneous and stimulated emission. Optical properties of metals, semiconductors, insulators and crystals. Thin films and multilayer dielectric and metaldielectric filters. Light sources including lasers, optical systems, electro-optical effects and fiber optics. Prerequisites: undergraduate courses in optics and electromagnetic theory.

#### EENG7776 3 Credits Lasers

The spectra of atoms, molecules, liquids and solids. Cavity modes, interaction of radiation and atoms, black body radiation. Inversion, laser threshold and conditions for laser operation. Steady state and pulsed lasers including gas, ion, solid state, semiconductor and dye lasers. Q-switching, mode locking and very short pulse operation. Application of lasers. Prerequisites: undergraduate courses in optics and electromagnetic theory or permission of the instructor.

#### EENG7777 3 Credits Infrared Optics

Optical phenomena in the infrared and farinfrared/submillimeter regions of the spectrum. Topics include infrared-radiation sources, detectors, interferometers and resolution considerations, diffraction grating and Fourier transform spectrometers. Infrared imaging, twolens systems, optical materials, aberrations, matrix method for laser cavities and imaging systems. Radiometry, atmospheric effects, uniaxial crystals and their use as electro-optical devices. Prerequisites: undergraduate courses in optics and electromagnetic theory or permission of the instructor.

#### EENG7778 3 Credits Electro-optical Properties of Materials

Material properties of matter as needed for optical and electro-optical applications. Optical properties of dielectrics, metals and semiconductors; dispersion theory. Transmittance, reflectance and absorptance of light. Light modulation; Kerr, Pockels and Faraday effects. Light sources, display devices and photodetectors. Fiber-optic waveguides and optical communication system. Prerequisites: undergraduate courses in electromagnetic theory, optics and modern physics.

## EENG7779 3 Credits **Optical Imaging**

A discussion of the principles and techniques needed to design and analyze optical imaging systems. Topics will include paraxial system layout, stops and pupils, geometric and wavefront aberration theory and resolution of imaging system. Computer design exercises will be an integral part of the course. Prerequisite: an optics course or permission of the instructor.

#### EENG7780 3 Credits Current Topics in Optics

An in-depth study of one or more current topics of importance in optical research. The problem to be treated will be selected to meet the needs and interest of the class.

#### EENG7803, EENG7804 6 Credits (3 Credits Each Semester) **Research and Thesis**

A program of selected research, tailored to the interest and capabilities of the individual student, under the guidance of a school graduate adviser.

#### EENG7810, EENG7811 1–3 Credits Each Semester Advanced Special Projects: Electrical Engineering

Studies in an area of electrical engineering.

## EENG7820 3 Credits Electrical Engineering Seminar

Research in recent developments in electrical engineering. Presentations of seminars by members of the faculty and students.

### EENG7830–EENG7870 1–3 Credits Each Semester **Special Topics in Electrical Engineering**

Topics of current interest in electrical engineering. Consult the electrical engineering department for details.

#### EENG7850 3 Credits Adaptive Signal Processing

Adaptive signal processing, stationary processes and models, spectrum analysis, Wiener filters, Method of Steepest Descent, Least-Mean-Square algorithm, frequency-domain adaptive filters, adaptive FIR filters, adaptive IIR filters, applications. Prerequisite: EENG6633 Digital Signal Processing or permission of the instructor.

#### EENG7851 3 Credits

## **Multirate Systems and Filter Banks**

Discrete-time systems, digital filters, multirate systems, maximally decimated filter banks, paraunitary perfect reconstruction filter banks, linear phase reconstruction QMF banks, cosine modulated filter banks, Wavelet transform and its relation to multirate filter bank, applications. Prerequisite: EENG6633 Digital Signal Processing or permission of the instructor.

## EENG7852

**3** Credits

# Digital Signal Processing with C and DSP Processors

DSP programmable processors, analog-to-digital signal conversion, C language, TMS320C6X architecture, instruction set and assembly language, DSP development tools, interrupt data processing, fixed-point and floating-point processors, code optimization, circular buffering, frame processing, applications. Prerequisite: EENG6633 Digital Signal Processing or permission of the instructor.

#### EENG8891 1-3 Credits

## Internship/Work Experience

Provides on-the-job education and training in the concepts presented in the graduate electrical engineering curriculum. Students must submit, for the school's approval, a proposal from the employer detailing the nature of the intended work. Weekly contact must be maintained with the student's adviser to confirm the quality of the work experience. A report at the conclusion of the working experience is required, detailing the educational and training aspects of the job. Prerequisite: completion of 18 graduate electrical engineering credits. *Fall, Spring, Summer* 

# Electronic Commerce (M.S.)

The goal of the program is to provide graduate education that imparts a coherent body of managerial and technological knowledge centering on e-commerce. Graduates will acquire the educational background necessary to become performing e-commerce professionals, as well as obtain a solid foundation for lifelong learning necessary in a field that is certain to evolve very rapidly.

The total number of credits to be taken will be 42: of these, 18 are required courses, 12 are elective courses and 12 are prerequisites (some of which may be waived).

This program is offered under the auspices of the Lee Gildart and Oswald Haase School of Computer Sciences and Engineering, University College: Arts • Sciences • Professional Studies, Metropolitan Campus, Teaneck, New Jersey.

## **Admission Requirements**

1. Graduation from an accredited college or university with a satisfactory academic record.

2. Submission of an official score report for the Graduate Record Examinations (GRE) General Test taken within the last five years. The GRE may be waived if the applicant enrolls initially as a nonmatriculating student and completes 9 graduate credits in computer science with a minimum grade point ratio (GPR) of 3.00 and no grade below C or is a Fairleigh Dickinson University computer science graduate and has an undergraduate GPR of 3.00 or is a non-Fairleigh Dickinson University computer science graduate and has an undergraduate GPR of 3.50. This GRE-waiver policy is only applicable to applicants who graduated from a regionally accredited college or university in the United States. The GRE requirement also is waived for applicants who have completed a master's degree.

3. Three letters of recommendation.

Applicants who have not completed all requirements for admission to the degree program may be permitted to enroll in classes for credit on a nonmatriculated or nondegree basis.

## **Requirements for the Master of Science Degree**

1. Students must complete 42 credits in approved graduate courses. The 42 credits are distributed as follows: 12 credits of prerequisite courses, 18 credits of core requirements and 12 credits of elective courses. Students with a background in the field may reduce the number of required courses by having some or all of the prerequisite courses waived. In any event, a minimum of 30 credits will be required for the degree. Requests for waivers must be made in writing prior to the beginning of the first semester.

2. Students must earn a cumulative grade point ratio (CGPR) of at least 2.75 for the prerequisite courses, if required, or be subject to dismissal from the program. Students may take no more than 6 credits of core or elective courses before completing all of the prerequisites.

3. Students must earn a CGPR of 2.75 for the 30 credits beyond the prerequisite courses.

## Prerequisite Courses (12 credits)

The following courses will be waived for qualified students:

## Required Courses (18 credits)

CSCI6623
Database Systems
CSCI6720
Management Information Systems3
CSCI6731
Computer Networks
CSCI6758
Electronic Commerce
CSCI6844
Programming for the Internet
CSCI7795
Building Electronic Commerce
Systems3

## E-commerce Electives (12 credits)

12 credits (four courses) are to be selected from the courses listed below. However, students have the option of registering for a 3-credit internship (which counts as one elective course) after completing 18 graduate credits.

Credits
CSCI6638
Operating Systems
CSCI6732
Local Area Networks
CSCI6810
Java and the Internet
CSCI6820
J2EE Programming3
CSCI6882
Data Warehouse and Data Mining3
CSCI7727
Development of MIS 1: Project
Management and Systems Analysis3
CSCI7781
Advanced Database Systems 3
CSCI7791
Information Systems for Competitive
Advantage3

## **E-commerce Certificate**

The certificate program in electronic commerce provides individuals with expertise in both the business and technological sides of e-commerce: doing business on the internet. The program participants will learn successful market structures and business models, as well as internet programming on the client and the server sides.

## Admission Requirements

Admission to the certificate program requires a baccalaureate degree from a regionally accredited college or university with a satisfactory academic record.

## Requirements for Certificate in E-commerce

18 credits (six courses) are to be chosen
from the following:
CSCI5505
Introduction to Computer
Programming3
CSCI5525
Introduction to Computer Science3
CSCI6735
Client-server Computing3
CSCI6758
Electronic Commerce3

Credits

## 

Academic Credits: Courses with numbers 6000 or higher completed through this certificate program can be credited toward the M.S. in electronic commerce program. Other courses may be substituted with prior approval of the student's academic adviser.

# **Course Descriptions**

See "Course Offerings," Computer Science, pages 104–110, and Management Information Systems, pages 177–178.

# English for Professional Success

Programs in Language, Culture and Professional Advancement (PLCPA) offers courses in English for Specific Purposes (ESP) for international students and any interested domestic students. These courses are called English for Professional Success (EPS), and they have taken the place of English as a Second Language (ESL) courses since fall 2006. The EPS courses have a dual purpose: to ensure the academic as well as professional success of international students. Students will be exposed to the different genres of academic and professional discourse in their different fields of study.

## **Placement Testing**

While students may have achieved the TOEFL or other proof of Englishproficiency score required for admission, further development in English proficiency may be necessary to support academic achievement and to ensure effective progress in the students' chosen academic program. All incoming graduate international students, unless exempt from testing, must be tested for placement during the orientation session. New international students should not assume that they are exempt from this English test even though they have had many years of English education in their home countries or abroad. Students will be placed into or exempted from taking an EPS course based on the result of their placement test.

Graduate students who are placed into an EPS course must take the lecture and corequisite lab and will be charged a fee upon registration. Since fall 2007 and spring 2008, respectively, graduate students who were placed into an EPS course and who matriculated into a University College: Arts • Sciences • Professional Studies or into a Silberman College of Business degree program were required to take the EPS lecture and corequisite lab. Since fall 2011, all the remaining colleges on both New Jersey campuses (Maxwell Becton College of Arts and Sciences and Anthony J. Petrocelli College of Continuing Studies) have been required to take the EPS lecture and corequisite lab.

# English for Professional Success (EPS) Courses

Students will take only one EPS course. However, to exit the program, a student must meet the learning objectives set by the curriculum. Students who fail to meet the minimum standards required to pass the course will have to repeat it. Upon exiting the program, graduate students do not need to take any other English or writing courses unless required by their own department. The credits for the EPS5109 course is not figured into the grade point ratio for graduate students but remain as a permanent record on the students' transcript.

The courses offered are:

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Cred	1	ts
0100		e.

EPS5008, EPS5018
Academic Writing Skills;
Academic Communication
Skills (required for Pre-master's
Program students)6
EPS5109, EPS5119
English for Occupational
Purposes; English for
Academic Purposes (required) 3
EPS5201
English for Professional Success:
Global Exchange — New York
City as a Classroom
(optional for non-Pre-master's
Program students) 3
EPS5209
Advanced English for
Occupational Purposes (optional) 3
EPS5219
Advanced English for
Academic Purposes (optional)1

## **Course Offerings**

Courses offered fall, spring, summer and/or winter are so noted. To determine availability of courses not so designated, please check with the unit.

## **English for Professional Success**

Programs in Language, Culture and Professional Advancement

## EPS5008

4.5 Credits Contact hours 6 **Academic Writing Skills** 

Non-native English-speaking students will be exposed to more subtle attitudes of a speaker or writer in different genres. They will recognize the difference between fact and opinion. Students will be able to write argumentatively and to read their own work objectively for editing. Students will demonstrate an understanding of the American attitude toward specificity. Students will maintain a portfolio of work and participate in self-reflection. Corequisite: EPS5018 Academic Communication Skills.

### EPS5018 1.5 Credits Contact hours 3 Academic Communication Skills

A corequisite lab for EPS5008 Academic Writing Skills where students engage in critical reading and thinking, as well as speaking activities. Class activities may include academic debates and persuasive presentations. Corequisite: EPS5008 Academic Writing Skills.

#### EPS5109 3 Credits Contact hours 2.5 English for Occupational Purposes

Non-native English-speaking students will focus on English proficiency for occupational purposes. Students will develop their skills in professional writing, oral communication, research and information literacy, group collaboration and cross-cultural competencies. Corequisite: EPS5119 English for Academic Purposes.

#### EPS5119 0 Credits Contact hours 1.5 English for Academic Purposes

A corequisite lab for EPS5109 English for Occupational Purposes, where students will focus on English proficiency for academic purposes. Students will develop their skills in academic research and writing, and proficiency with APA and/or MLA format. Corequisite: EPS5109 English for Occupational Purposes.

#### EPS5201

#### 3 Credits

#### English for Professional Success: Global Exchange — New York City as a Classroom

Perceived through the prisms of cultural ethnography and the significance of everyday experiences, this course will utilize New York City as a resource and a classroom to study cross-cultural understandings and misunderstandings. Students will study the multicultural aspects of the city in the context of modern life and situate their findings within a historical context. In addition to studying crosscultural issues in context, students will be improving their academic language skills while exploring topics of interest through a variety of activities and assignments. (Optional)

Experiential learning fees

#### EPS5209 3 Credits Advanced Engl

## Advanced English for Occupational Purposes

Students will focus on an advanced level of English for occupational purposes topics. Students will develop their skills in selfreflection as a professional and enhance their skills in oral communication, group collaboration, professional writing and crosscultural workforce competencies.

#### EPS5219 1 Credit Advanced English for Academic Purposes

Students will focus on an advanced level of English for academic purposes specifically on researching and writing a paper using the APA format and style.

## EPS5299

**3** Credits

## **Academic Research Foundations**

The course provides students with the foundational skills necessary to develop the research, academic writing and oral communication competencies appropriate to a master's-level program. Students will also develop transferable workplace communicative competencies. Topics include: effective research strategies, writing reports and literature reviews at a master's level, APA referencing and citations, delivering effective research presentations and negotiating the expectations and cultural norms in North American university and workplace settings.

# **Executive Programs**

The University offers programs designed for executives in a specific field.

## Management (M.B.A.) for Executives – General Management See page 73.

Management (M.B.A.) for Executives – Health Sector Management See page 74.

# Film (M.F.A.)

The low-residency Master of Fine Arts (M.F.A.) in film offers studies in five concentrations: screenwriting, producing, directing, cinematography and editing.

Workshops led by professionals, visits with guest artists and internships are built into the program. Situated near New York City and in the heart of a vibrant media market, FDU's M.F.A. in film will allow students to hone their skills and be well prepared to obtain work in the field.

FDU's low-residency approach to the M.F.A. in film embraces distance learning as a primary method of delivering the curriculum. The student will alternate two 8- to 9-day residencies per year, with semesters spent in online learning. The program features four residencies and four terms over a two-year period.

The M.F.A. program is housed within the School of the Arts, which offers undergraduate programs in film, animation, graphic design, theater arts and fine arts. Student advising will be conducted by the co-directors of the program and by professional mentors.

## **Admissions Requirements**

Applicants holding undergraduate degrees from an accredited four-year institution in the United States or abroad may apply. They should have a cumulative grade point ratio (GPR) of 2.75 or better on a 4.00 scale. An undergraduate degree in film, communication, writing or theater is advised but not required. Applicants who have shown significant talent or professional experience in other art forms will also be given serious consideration. Prior technical experience in film is not required.

Applicants must submit a portfolio of their work. In admissions decisions, the greatest weight will be given to the portfolio. The portfolio can consist of liveaction film material, screenplays or other written narrative work. Work from other disciplines can be submitted; be it animation, playwriting, photography, graphic design or fine arts.

All incoming students must begin their first semester of the program by attending a residency and registering for two courses.

## **Application Deadlines**

Fall application deadline: All students must begin the program with a summer residency — the deadline for attending the residency and the fall semester is May 1 Spring application deadline: All students must begin the program with a January residency — the deadline for the residency and the spring semester is November 30

## **To Apply**

**1.** Complete the FDU Graduate Application online.

• Choose a concentration: screenwriting, producing, directing, cinematography or editing.

• Official transcripts should to be sent to the Graduate Admissions Office. All undergraduate transcripts are required.

• GRE scores are not required.

• The M.F.A. program is housed on the Florham Campus in Madison, New Jersey.

**2.** Submit a portfolio or a link to a portfolio via email to gradfilm@fdu.edu.

• Applicants can submit a film work (.mov or QT file), a screenplay, stage play or creative writing document (Use PDF or MS Word format. Be sure to paginate the document and include the applicant's name on every page). Portfolios may contain live-action film material, screenplays or other written narrative work. Work from other disciplines can be submitted — be it animation, playwriting, photography, graphic design or fine arts.

• If the portfolio is too large to email, applicants will be directed to the University's server. Email gradfilm@fdu.edu for details.

**3.** Letters of recommendation are welcome but not required. They can be sent to the Graduate Admissions Office at grad@fdu.edu.

**4.** Applicants with a GPR of 3.00 or greater may apply for the University Provost's Graduate Scholarship.

**5.** Applicants should complete the Free Application for Federal Student Aid (FAFSA) online for 2019–2020 as soon as possible if they require financial aid. They do not have to accept any funds unless they choose to. Many graduate students are eligible for state and/or federal loans and aid. FDU's Financial Aid Office at the Florham Campus (973-443-8704) can assist with this.

In making admissions decisions, the greatest weight will be given to the

portfolio, screenwriting samples, completed film projects, festival and professional recognition and employer recommendations. Work-related experience will also be taken into consideration. While admission will not require the undergraduate major to have been in a film-related field, creativity demonstrated while an undergraduate or in professional work environments will be considered.

Prospective students may also arrange a meeting with one of the program directors to discuss program options and tour the film facilities.

## Curriculum

The degree takes a minimum of two years to complete. Students have up to five years to finish the program. Four on-campus residencies, eight online courses and a completed thesis are required for the degree. A total of 60 credits are required to graduate.

Below is an example of a two-year program layout for a student beginning with a summer residency and fall online courses:

## Year One

First 9-day Residency (Summer Session) — (5 credits)

## Term I

Two 8-week online courses taken consecutively (Fall Semester) — 10 credits (5 credits each)

## Second 9-day Residency

(Winter Session) – (5 credits)

## Term II

Two 8-week online courses taken consecutively (Spring Semester) — 10 credits (5 credits each)

## Year Two

## Third 9-day Residency (Summer Session) — (5 credits)

#### Term III

Two 8-week online courses taken consecutively (Fall Semester) — 10 credits (5 credits each)

## Fourth (and Final) 9-day Residency (Winter Session) — (5 credits)

## Term IV (Final Term)

Two 8-week online courses taken consecutively (Spring Semester) — 10 credits (5 credits each)

# **Finance • Forensic Psychology • General/Theoretical Psychology**

## **Course Offerings**

Courses offered fall, spring and/or summer are so noted. To determine availability of courses not so designated, please check with appropriate school director.

### FILM5000 5 Credits **M.F.A. in Film Residency**

Nine-day graduate film residency held at FDU's Florham Campus in Madison, N.J., twice a year during summer and winter sessions. Four residencies are required to complete the degree.

Students take four courses (20 credits) from below – one in each concentration outside of their main concentration

# FILM6000

## 5 Credits

## **Screenwriting Essentials**

Screenwriters are tasked with translating the story into the structure demanded by a teleplay or screenplay. Whether it is selecting what story elements to keep — and which to throw away — or how to structure a story so it is told in the most dramatic way possible, screenwriters use the opportunities provided in their chosen medium — film, television, etc., to create the blueprint of the production.

#### FILM6001 5 Credits Producing Essentials

Producers play a vital role in the selection of material, business development, legal filings and creative execution of content produced for theater, streaming or broadcast lead to that position. The producer has a role that is part business person and part creative executive. This course will present an overview of the expectations placed on the producer, and a career path which can lead to that position.

#### FILM6002 5 Credits **Directing Essentials**

Directors do not merely interpret the screenplay. They must understand how best to exploit its cinematic potential. Whether it be in the casting, the locations, in the performances or in the design of the production and camerawork to be used, the director must accept the creative responsibility of anchoring the production for the entirety of its development and execution.

### FILM6003 5 Credits **Cinematography Essentials**

Armed with the script and supported by production designers and the cast, the cinematographer must lead the talented crew on the set, to visualize and photograph the story. A creative cinematographer is not just a talented photographer, but a key collaborator in how the story is told. The role demands knowledge of the ever-changing technology of film, and the skills to obtain the best work from a large crew. There are a lot of moving parts the cinematographer must lead in order to best serve the production and allow it to move toward fruition.

## FILM6004 5 Credits

## **Editing/Postproduction Essentials**

The editor is the anchor of the film project. Relied upon and trusted by directors and producers to provide another set of "eyes," the editor not only assists in selecting the best material to use, but often decides where it should be used. Decisions about cutting scenes, moving them around as the story demands and otherwise structuring the story in ways not previously seen often fall to the editor. Artists such as Orson Welles said, "Editing isn't just a part of filmmaking. Editing is filmmaking."

#### FILM7000 5 Credits Screenwriting

Students taking the screenwriting concentration take this course four times for a total of 20 credits.

#### FILM7001 5 Credits **Producing**

Students taking the producing concentration take this course four times for a total of 20 credits.

# FILM7002

# 5 Credits

Directing

Students taking the directing concentration take this course four times for a total of 20 credits.

## FILM7003 5 Credits

#### Cinematography

Students taking the cinematography concentration take this course four times for a total of 20 credits.

### FILM7005 5 Credits **Editing**

Students taking the editing concentration take this course four times for a total of 20 credits.

#### Internship Courses can replace the main concentration courses Director's permission required

FILM8001Screenwriting 1 InternshipFILM8002Producing 1 InternshipFILM8003Directing 1 InternshipFILM8004Cinematography 1 InternshipFILM8005Editing 1 InternshipFILM8006Screenwriting 2 InternshipFILM8007Producing 2 InternshipFILM8008Directing 2 InternshipFILM8009Cinematography 2 InternshipFILM8009Cinematography 2 InternshipFILM8010Editing 2 Internship

# Finance (M.B.A.)

See Business, Finance, page 68.

# Forensic Psychology (M.A.)

See Psychology, Forensic Psychology pages 229–231.

# General/ Theoretical Psychology (M.A.)

See Psychology, General/Theoretical Psychology, pages 232–233.

# Global Affairs (M.A.)

The M.A. in global affairs comprises 30 credits (10 courses) of graduate-level course work offered primarily to consular and diplomatic staff off-campus. They are part-time students coming from around the globe, from Argentina to Zambia. They work full-time, typically taking six credits off-campus per quarter and completing the program in two to three years. Courses begin in September, January, May and July. The program seeks to broaden and deepen students' understanding of the historical, economic, cultural, diplomatic and political trends that define current affairs and drive change, stability and instability around the globe.

In addition to full-time FDU faculty, key professors include former U.N. ambassadors and consuls general who hold small, in-person classes. Students also have the option of taking a number of online courses to accelerate the program, or to complete it if they are re-posted out of the area.

## **Admission Requirements**

The credentials required for admission to the master's degree in global affairs as a matriculated student include the following:

1. A graduate application for admission and nonrefundable application fee.

2. A bachelor's degree (or corresponding post-secondary degree) from an accredited college or university with a minimum cumulative grade point ratio (CGPR) of 2.70. Applicants with a CGPR of less than 2.70 may be admitted as matriculated students on probation.

3. Official transcripts from all colleges and universities previously attended. Applicants who are unable to provide official documents at the time of enrollment may register as nonmatriculated students with a graduate faculty adviser.

Spouses and dependents may also apply, and a number of seats are held for U.S. citizens. Applicants who are not consular or diplomatic personnel must provide the following in addition to the above:

1. Two letters of recommendation.

2. A cover letter briefly outlining career ambitions. (Spouses or dependents of a consular or diplomatic employee must indicate this in their cover letter.)

## **Requirements for the Master of Arts Degree**

1. Students must complete 30 credits (10 courses) of graduate-level course work in political science or in sister disciplines, as approved, in history, economics, business or public administration or administrative science.

2. Students are strongly encouraged to engage in a thesis and use up to six credits to complete it.

3. A cumulative grade point ratio of 3.00 on a 4.00 scale is required for graduation. Students who receive more than two grades of C or lower will be dismissed from the program.

## **Certificate in Diplomacy and International Relations**

Students may earn a Certificate in Diplomacy and International Relations after completing any six courses listed for the Master of Arts in global affairs. The certificate is listed on student transcripts and students receive a paper certificate.

Students may apply for the certificate program only and later apply the credits toward a Master of Arts in global affairs.

## **Course Offerings**

Courses offered fall, spring and/or summer are so noted. To determine availability of courses not so designated, please check with the academic adviser.

## **Global Affairs**

School of Public and Global Affairs

## POLS6702 3 Credits

## Thesis Seminar

Collaborative preparation for a substantial thesis, including research questions, hypothesisconstruction, proposal-writing and the literature review.

## POLS6711

3 Credits

## Genocide

The course will examine the roots, the methods and the impact of genocide on the global community, including case studies from Armenia to Darfur.

## POLS6801 3 Credits

### **Methods of Political Analysis**

A study of fundamental concepts and materials required for political analysis. Development of techniques for hypothesis formation; collection, evaluation and presentation of data.

#### POLS6816 3 Credits World Heritage Law and

World Heritage Law and Policy

Practical thinking about ideas of "World Heritage" and sustainable development including religion, environment, warfare, destruction and ruins and rebuilding initiatives. Topics include: conversation law; case studies from the Arabian Peninsula, Asia and East Africa; heritage as sites for tourism; transportation; trade; pilgrimages; moveable collections; museums; parks; fixed relics; foods; and sounds, sights and smells in the natural landscape. A field project challenges participants to match theory with project-based goals to contribute to a digital archive or drafted policies to conserve and preserve UNESCO world heritage sites.

POLS6840 3 Credits Thesis or Project

POLS6870

3 Credits

## **Ethics in Public Affairs**

This seminar explores the use (and abuse) of moral reasoning and cost-benefit analysis in politics through the critical examination of controversial political issues, such as abortion, affirmative action, health care, welfare reform, military intervention and the death penalty.

## POLS6871 3 Credits

## Latin-American Relations

This is a study of the modern relationship between the U.S. and specific Latin-American nations.

POLS6873

## **3** Credits

## **Seminar on Globalization**

This seminar will examine globalization as an important characteristic of the new world order, which is represented by the expansion of market forces and the global transfer of sociocultural and political institutions.

## POLS6874

**3 Credits** 

## Trafficking in Humans

Examines various issues related to human trafficking with emphasis on political concerns root causes in culture, custom and law.

# POLS6875

## 3 Credits

## Seminar in International Trade

Why nations and organizations trade, what they trade, how they trade and who gains or loses. The class also examines regulations and restrictions on international trade and their effects. Topics include commodities markets, foreign direct investment, international transactions under authoritarian regimes, the role of banks and brokers, international trade

# **Global Affairs**

agreements, parallel markets and current trade policy disputes.

## POLS6876 3 Credits

## **Comparative Innovation Systems**

A collaborative survey of ecosystems at the local, national and global level that support, or do not support, a start-up economy in developing countries as well as in post-industrial societies, to include capital formation and capital deployment, understanding market opportunities, the openness of markets, market barriers, conditions for new entries, enterprise buildouts and entrepreneurship and market, legal, societal and cultural barriers to innovation.

## POLS7716 3 Credits

## **Delivery of Public Services**

This course examines the traditional organizational and institutional structures for delivering public services, including regional entities, public authorities and "mixed" approaches. In addition, more recent developments are examined, including competitive contracting; transfer of functions between sectors; and "privatization." The course covers domestic and international developments in "mixed" economies and enterprises.

#### POLS7724 3 Credits

#### Comparative Governmental and Administrative Systems

The course takes a global view of comparative governmental and administrative systems by introducing students to their background development and their essential institutional and political components. The wide diversity of such systems is highlighted by a study of such systems in six or seven nations through comparative analyses of their various approaches to policy and relative problematic issues.

## POLS7815 3 Credits

# Nationalism and Its Discontents

The political and social bases of nationalism, its relation to culture identity, ethnicity, language and ideological narrative manifesting movements for change. Selected contemporary and historical examples are examined, as well as their subcultural and subnational disidentifications

## POLS7820 3 Credits

## **Models of Political Systems**

Comparative analysis of modern democratic and totalitarian governments and institutions. With emphasis on the developing nations and their interpretations of these systems through a study of political culture, political parties and political crises.

## POLS7821 3 Credits

# **Modern Political Theory**

Traces the main developments in modern political thought from Hobbes to Mao. Emphasizes problems regarding liberty, political obligation, the common good, etc.

## POLS7822 3 Credits **The Character of Revolutionary**

# Movements

An examination of selected revolutionary movements with emphasis on cause, organization and outcome.

#### POLS7825 3 Credits

## Foreign Policy and Diplomacy

Intensive analysis of the dynamics of world politics in the independent post-World War II era; the conceptions of world order among major actors, national and global interests, transnationalism, instrumentalities of foreign policy development and diplomatic processes.

#### POLS7826 3 Credits Politics of Public Policy

Studies declared intentions and actions of elected officials in meeting human needs and resolving conflicts within society. Emphasizes agenda setting, policy-making models, policy formulation, implementation, evaluation and the role of ideology.

## POLS7830 3 Credits

## **International Organizations**

Typology of organizations: League of Nations to the United Nations, regional organizations, public and private international organizations and transnational organizations.

#### POLS7831 3 Credits

#### **International Law**

Origin of international law and its relationship to municipal law. Challenges and responses to current issues.

## **POLS7832**

#### 3 Credits International Problems and Conflict

#### Resolution

Causes and possible solutions to major international conflicts.

#### POLS7833 3 Credits

## **Modern Warfare and Global Stability**

Impact of insurrection, nonconventional warfare and terrorism on the international community.

#### POLS7834 3 Credits

### **Politics of the Global Economy**

A study of the relationship between political motivations and economic actions on the international economy. With emphasis on the interplay between the free market and planned economies.

## **POLS7835**

## 3 Credits

## **Geography and World Politics**

Examines the political ramifications of environmental decay, economic and environmental refugees and the utilization of finite resources.

#### POLS7836 3 Credits **Crisis Leadership**

The principles of leadership during times of significant stress. Various models, strategies and tactics of leadership are studied using the examples of civilian and military leaders.

## **POLS7837**

#### **3** Credits

## The Modern Balkan States

An intensive examination of the political, economic and cultural forces that shaped the modern Balkan states. The formation of national identities, intrastate institutions, modernization, stability and change and interstate relations in the region will be among the topics covered at the first level of analysis. A second level of analysis views the region within its European context and in a framework of world affairs from the 19th century to the present. Particular attention will be given to Greece and Turkey as the principal Balkan powers.

## POLS7838 3 Credits

## Political Leadership and the U.N.

Using case studies and current events, the course provides the skills and perspective to better comprehend rapid changes in the global arena, beginning with an introduction to the United Nations; its institutional structure, goals and mechanisms; its Charter; the General Assembly, Security Council, Economic and Social Council, Trusteeship Council and Secretariat; and its roles in peacekeeping, sanctions, collective security, authorizing military action, disarmament, human rights and the global war against terrorism.

#### POLS7851 3 Credits

#### Forces and Issues: Middle East

Examines the trends and political forces at work in the region, past struggles, current issues and future aspirations.

# **Health Science**

#### **POLS7853 3** Credits **The New Europe**

The state system of Europe: integration and consolidation since World War II and global implications for East-West relations.

# **POLS7854 3** Credits

# **Changing Eastern Europe**

Examines the dissolution of the Communist Bloc and the movement toward new ideologies. Emphasizes nationalism, ethnicity and economic organization.

## **POLS7855 3** Credits

## **The Modern African State**

Examines development of selected African states in terms of history, ideology and institutions. Emphasizes the region south of the Sahara, including Nigeria, Zaire and the Union of South Africa.

#### **POLS7856 3** Credits **Cities in Crisis**

The course will examine problems faced by cities: crime, housing, education and finances. It will consider causes and solutions to these problems.

## **POLS7863**

#### **3 Credits Comparative Government: Middle** East

Examines diverse systems of government among selected Middle East states. Emphasizes historical development, current ideologies, institutions and practices.

### **POLS7866 3** Credits Africa in World Politics

Examines the impact of African affairs on contemporary world issues. Emphasizes political alignments, economic integration and social diversity.

#### **POLS7867 3** Credits **Political and Economic Challenges** for Africa

Examines contemporary issues in Africa. Project trends in political development, human rights and environmental programs.

# **POLS7868 3** Credits

# **Terrorism and Insurgency**

Examines the conditions that encourage intervention, clandestine political action, demonstration of force, unconventional warfare and terrorism and their impact on the global community.

# **POLS7869 3** Credits

## **Economics of National Security**

An analysis of the economic drivers and costs of national security. Security issues include, among others, insurgency, terrorism and ethnic conflicts.

## **POLS7870 3** Credits

#### **International Implications of Middle** East Problems

Examines ways in which competing systems within the region affect international alliances and trade. Emphasizes role of Islamic fundamentalism, natural resources and political ideologies.

## **POLS7871** 3 Credits **The Modern Asian State**

Examines the development of selected Asian states with an emphasis on historical influences, ideologies, institutions and economic philosophies.

#### **POLS7872 3** Credits

## **China and Japan: Comparative Systems**

Examines the political, economic and social institutions of both nations. Emphasizes the competition for leadership in the region.

#### **POLS7873 3** Credits

### **Political and Economic Challenges:** Asia

Examines the impact of global events on Asian development. Emphasizes roles of the developing nations, the "Little Tigers," China and Japan in political and economic coordination.

#### **POLS7874 3** Credits

## **Latin America: New Challenges**

Political responses to the economic and social challenges of modernization. Focuses on democratization efforts and economic cooperation.

#### **POLS7875 3** Credits

## **Canada, Mexico and U.S. Perspectives**

Examines the growing interdependence of the North American nations. Emphasizes political, diplomatic and economic interaction and identifies future trends.

## **POLS7902 3** Credits

## **Rethinking Europe's Future**

The twin burdens of "depth" and "breadth" have reappeared in the region's political imagination and debate in the form of two fundamental questions over Europe's future: What is Europe? What Europe for which Europeans?

# **Health Science** (M.H.S.)

The Master of Health Science (M.H.S.) is a 31-33 credit blended degree program (combining online and in-person course work) designed with three tracks allowing students unique opportunities for career development and advancement. The 33credit Gateway to Professional Studies program can be completed in as little as one year, while all concentrations can be completed on a self-paced schedule that suits the needs of working professionals and seeking career advancement.

The first track in the M.H.S. is the Gateway to Professional Studies (GPS), which has a curriculum that includes foundational courses that will provide an interdisciplinary background in biomedical sciences that can be used as an advanced preparation for professional schools including medical, dental, veterinary and pharmacy schools. In addition, there are two tracks that provide the opportunity for specialization in clinical research administration and regulatory science. All students obtaining the M.H.S. will complete a health science core consisting of course work around the legal, ethical, managerial and public-health issues facing all aspects of health care.

Following completion of the core curriculum, students will have the option to pursue one of the three distinct tracks available.

The Gateway to Professional Studies track is a diverse mix of courses that will be taught online, blended and face-to-face and is intended to further prepare students for professional school. Students within this track will complete course work in biochemistry, pharmacology, communication skills, histology, anatomy, physiology and other relevant topics of study.

The other two specially designed tracks provide focused expertise in the areas of clinical research administration or regulatory science. Students in these specialized tracks will complete the initial health science core prior to moving into more advanced and specialized course work in preparation for future careers in the pharmaceutical industry, regulatory affairs, health outcomes and health-care delivery.

Courses in these tracks will be offered in person, with options for online and

hybrid course models being introduced as appropriate.

# Summary

The growth of employment opportunities within the health sciences has been marked and dramatic over the last decade, and projections indicate exponential growth for these areas by the year 2020. Careers in this area have both high earning potential and significant opportunity for growth, making these fields desirable for students. Many organizations involved in the pharmaceutical industry, health care delivery and health science-related fields place significant value on graduates with the knowledge and skills that are translational across traditional boundaries in health care. These three M.H.S. programs equip students with tangible skills that will provide them with opportunities for employment in areas that are growing much faster than the rate at which graduates can be produced.

The Master of Health Science program in clinical research administration and regulatory science also address the filling of a void that few educational institutions have addressed. Some local graduate programs provide some content within this area of study, though they are not designed to create specializations to serve particular areas of health care. The emphasis this program places on prescription-drug use, in conjunction with its affiliation with the School of Pharmacy and Health Sciences, provides unique opportunities for synergy and collaboration between the students and faculty.

The area of clinical research administration is a fast-growing and rapidly changing environment. Not only are there increasing needs for evidence to address the safety and efficacy of new medical technologies, but there is also a demand from payers for evidence as it relates to effectiveness and efficiency. Professional career opportunities in this area seem to be increasing at a faster rate than ever before, with the advent of new biotechnology corporations that are emerging throughout the world and existing corporations continually pushing forward into new areas of advanced research. In fact, the Bureau of Labor Statistics projects a 40 percent increase in demand for medical scientists within this area of work from the period 2008-2018. A critical need for scientists with the ability to conduct rigorous, ethically

grounded and credible research will continue to grow into the future.

Regulatory-science specialists are also in high demand, and the New Jersey area has greater opportunity than ever before due to the influx of biotechnology and small-market pharmaceutical companies engaged in the development of new products. These entities are constantly in need of experts who can navigate the complex regulatory pathways toward product approval. This career, chosen as one of CNNMoney magazine's "Best Jobs," has a projected job-growth rate of 25 percent. Opportunities for employment will be bolstered by a master's degree in this area, as very few programs educate and train students to attain this skill set.

These three M.H.S. tracks are described more completely on the **following pages**.

## **Requirements for the Master of Health Science Degree**

1. All graduate M.H.S. students are required to complete the program within five years. Applications for extension are subject to departmental approval.

2. For the Gateway to Professional Studies Track, students are required to maintain a minimum overall grade point ratio (GPR) of 3.00 and must not earn more than one C-level grade (C or C+) throughout graduate course work. If a student takes any course twice without achieving the equivalent of a B or higher, he/she will be subject to dismissal. Students who earn less than B- or one F grade will be subject to dismissal.

3. See specific tracks for requirements, Gateway to Professional Studies this page, regulatory science page 168 and clinical research administration page 169.

## Gateway to Professional Studies Track

NOTE: Enrollment in this program is currently offered only at FDU's Florham Campus in Madison, New Jersey. Applications are processed on a rolling admissions basis.

The primary goal of this degree track will be to transform students on the cusp of admission into professional school into more competitive and prepared applicants for subsequent admission into healthprofession programs. During this one-year intensive track, students will work on broadening their educational horizons within the biomedical sciences to assist with their application to professional school or to better prepare them for employment in the biomedical industry.

The M.H.S. basic track is 33 credits and is designed for students who have completed their bachelor's degree in chemistry, biochemistry, biology, pharmacy or a related field and who plan to attend professional school including medical, dental, veterinary and pharmacy.

This Gateway to Professional Studies (GPS) will enhance the student's application portfolio and will make the student more competitive for admission into professional school. If professional school is not desired, then this GPS track will provide the student with a solid background for a career in biomedical sciences, business and management, science teaching and pharmaceutical sales.

Upon completion of this track, students will be able to:

• Demonstrate an understanding of the role of values/ethics in human services and conduct themselves according to the appropriate professional ethics in the workplace and/or professional program.

• Demonstrate an understanding of the role of drug design, discovery and development in the health professions and the impact these things have on the individual and on public health.

• Demonstrate master's-level skills in professional writing and program planning and management.

• Demonstrate a strong knowledge base specifically in the areas of anatomy, physiology and biochemistry.

Graduates who achieve these objectives will be better prepared to apply to (or reapply to) professional schools with a more competitive portfolio. If subsequent admission is not desired or achieved, then this course of study could also be used as increased general preparation and training for employment and or advancement in the pharmaceutical or biotechnology industry.

This program is offered under the auspices of the School of Pharmacy and Health Sciences and the Maxwell Becton College of Arts and Sciences, Florham Campus, Madison, New Jersey.

## Admissions Criteria

Students in each of the specialized tracks will be considered for admission based upon the following criteria:

1. A science baccalaureate degree with a minimum science grade point ratio (GPR) of 3.00 is required in any one of the of the

# **Health Science**

following areas: chemistry, biochemistry, biology, pharmacy or related science field.

2. Students with a bachelor's degree in a different field will have the option of showing transcript evidence of successful completion of the following course work with a grade of B or higher in each course: General Chemistry I and II and Lab, Organic Chemistry I and II and Lab, Physics I and II and Lab, Biochemistry, General Biology I and II and Lab, Anatomy and Physiology I and II and Credits Lab, Calculus I, Statistics.

3. Students are expected to have an overall undergraduate GPR of 3.00. (For the Gateway to Professional Studies track, there is some flexibility concerning the 3.00 GPR requirements. For example, students who fall below the required GPR but with above-average scores on the MCAT, DAT, PCAT or GRE may be eligible for consideration.)

The application package must include:

1. A completed FDU Graduate Admissions Application;

2. Official undergraduate and graduate transcripts from all colleges and universities attended;

3. Two letters of recommendation (from a professor, employer or professional in the field familiar with the student's strengths and abilities);

4. Official test scores from one of the following standardized exams: MCAT, PCAT, DAT or GRE (if applicable);

5. Personal statement; and

6. Résumé or curriculum vitae.

Applicants who have not completed all requirements for admission to the degree program may be permitted to enroll in classes for credit on a conditional/probationary or nondegree basis.

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## Required Courses (33 credits)

# Health Sciences Courses (Core) – GPS Track

Cleuits
HSCI6200
Ethics of Health Care Research3
HSCI6250
Psychology for the Medical Sciences3
HSCI7302
Epidemiology and Study Design
Evaluation3
HSCI7401
Biostatistics
HSCI8806
Project Management3

#### GPS Requirements

Credits
BIOL6891
Histology
BIOL6892
Human Physiology3
BIOL6893
Human Anatomy3
CHEM6663
Introductory Medicinal Chemistry3
CHEM6685
Pharmacology3
CHEM6781
Biochemistry
CHEM7500
Technical and Scientific Writing 3

## **Regulatory Science Track**

The M.H.S. regulatory science track is a 31-credit program (inclusive of the 10 hours of required M.H.S. core credits) designed for preprofessional students who are seeking further specialization in regulatory sciences and for working health care professionals who are looking to enhance their standing within this growing and evolving field of study. Educational programming will provide students with a working understanding of regulatory history and theory, federal and state regulatory structures relevant to health care products and professional practices. regulatory compliance methods in the health care industry, health care product patent-licensing processes and the common research methods used in supporting product-licensing applications.

The primary goal of this degree program will be to prepare students for taking on significant roles within government agencies, pharmaceutical and biotechnological industries and health care provider organizations, as well as in other sectors of the health care industry where compliance and regulation are crucial. The program will allow students to develop a comprehensive understanding of the protocols, procedures, statistical analysis, assessment or risk/benefit, documentation and legal and ethical concerns that play a critical role in the day-to-day responsibilities of the field.

Upon completion of this program, students will be able to:

• Demonstrate the constituent elements of federal and state regulations of healthcare delivery and manufacture and distribution of pharmaceuticals and biologics in the U.S. • Compare and contrast the governmental regulatory approaches for manufacture and distribution of pharmaceuticals and biologics in the U.S., Canada, Europe, South America and Asia.

• Generate statistical analyses and reports acceptable to governmental regulatory agencies in the U.S., Canada and Europe.

• Evaluate regulatory applications for new products or professional practices against applicable regulations, standards and guidances.

• Discern the moral, legal, ethical and financial implications of research data or licensing applications for specific pharmaceutical or biological products.

• Detect legal and regulatory requirements that can pose harm to patients and undue disruption to health care operations.

• Identify conflicting regulations at local, state and federal levels and evaluate ways to reconcile them for affected constituencies.

• Identify gaps in regulatory processes for particular health care products and services and propose policy solutions.

Graduates who achieve these objectives will be prepared to assume responsibilities requiring competencies associated with Level I and Level II of the Regulatory Science Professional Development Framework produced by the Regulatory Science Professional Society. Because most of the graduates of this program will have formal education in pharmacy or other health care professions, they will bring added dimensions to the knowledge and skills they acquired in regulatory sciences. Graduates will find rewarding career opportunities in health care provider organizations, health care consultancies, health care research and manufacturing industries, insurance providers, pharmacy benefit managers and state and federal government agencies.

This program is offered under the auspices of the FDU School of Pharmacy and Health Sciences, Florham Campus, Madison, New Jersey.

## Admissions Criteria

1. A bachelor of science degree with a minimum grade point ratio of 3.00 is recommended.

2. The GRE is recommended but not required. Other standardized tests such as PCAT, MCAT and DAT may be considered as well.

The application package must include:

1. A completed FDU Graduate Admissions Application;

2. Official undergraduate and graduate transcripts from all colleges and universities attended;

3. Two letters of recommendation (from a professor, employer or professional in the field familiar with the student's strengths and abilities);

4. Official test scores from one of the following standardized exams: GRE, PCAT, MCAT or DAT (if applicable);

5. Personal statement; and

6. Résumé or curriculum vitae.

Applicants who have not completed all the requirements for admission to the degree program may be permitted to enroll in classes for credit on a conditional/probationary or nondegree basis.

# Required Courses (31 credits)

## Health Sciences Regulatory Science Core

Credits
HSCI7302
Epidemiology and Study Design
Evaluation3
HSCI7401
Biostatistics2
HSCI8806
Project Management3
HSCI8811
Ethics of Health Care Research2
PHAR6601
Health Care Systems and Policy 3
Regulatory Science Requirements
HSCI7810
Clinical Trial Design and
Regulatory Requirements3
HSCI8810
Medical and Clinical Report Writing3
HSCI8822
U.S. Regulatory New Drug
Application and Submission
and Dossier Preparation3
REGS7104
Regulatory Affairs Capstone3
REGS8812
Clinical Trial Research
Administration3
REGS8821
Regulatory Compliance for
Pharmaceuticals

# Clinical Research Administration Track

The M.H.S. in clinical research administration is a 31-credit program (inclusive of the 10 hours of required M.H.S. core credits) that will produce graduates with a wide array of knowledge encompassing various approaches to evidence generation, translation and application. Objectives for the clinical research track are drawn from competencies established by the Agency for Healthcare Research and Quality (AHRQ) for clinical research. Upon completion of the program students will be able to:

• Discern the knowledge and skill sets available from clinical research approaches needed to address specific health care issues and problems.

• Synthesize meaningful, relevant and important research questions that address important health care and public health problems that can be informed by systematic reviews of the literature, needs assessment and relevant theory and concepts.

• Select appropriate interventional, quasi-experimental or observational study designs to address specific clinical research questions.

• Collect primary health and health care data obtained by survey, qualitative or mixed methods, as well as assemble and integrate secondary data from existing public and private sources.

• Defend the ethical and responsible design, implementation and analysis of specific clinical research programs.

• Select the appropriate analytical methods to clarify associations between variables and to discern causal inferences.

• Design, construct and deliver written and verbal communication about the findings and implications of particular clinical research programs for both professional and lay audiences.

Many of the graduates will likely also have Pharm.D. degrees or degrees in other clinical or life sciences to bring a knowledge and understanding in therapeutics and health-care delivery to their clinical research course of studies. Graduates will be highly skilled, marketable scientists who can apply their knowledge and skills in an array of health care areas conducting or benefiting from clinical research.

This program is offered under the auspices of the FDU School of Pharmacy

and Health Sciences, Florham Campus, Madison, New Jersey.

## Admissions Criteria

1. A bachelor of science degree with a minimum grade point ratio of 3.00 is recommended.

2. The GRE is recommended but not required. Other standardized tests such as PCAT, MCAT and DAT may be considered as well.

## The application package must include:

1. A completed FDU Graduate Admissions Application;

2. Official undergraduate and graduate transcripts from all colleges and universities attended:

3. Two letters of recommendation (from a professor, employer or professional in the field familiar with the student's strengths and abilities);

4. Official test scores from one of the following standardized exams: GRE, PCAT, MCAT or DAT (if applicable);

5. Personal statement; and

6. Résumé or curriculum vitae.

Applicants who have not completed all the requirements for admission to the degree program may be permitted to enroll in classes for credit on a conditional/ probationary or nondegree basis.

## Required Courses (31 credits)

## Health Sciences Clinical Research Administration Core

Credits

3
2
3
2
3

# Clinical Research Administration Requirements

CLIN/104
Clinical Research Administration
Capstone3
CLIN8812
Clinical Trial Research
Administration 3
CLIN8821
Regulatory Compliance for
Pharmaceuticals

# **Health Science**

Credits
HSCI7810
Clinical Trial Design and
Regulatory Requirements3
HSCI8810
Medical and Clinical Report
Writing
HSCI8822
U.S. Regulatory New Drug
Application and Submission
and Dossier Preparation3

## **Course Offerings**

Courses offered fall, spring and/or summer are so noted. To determine availability of courses not so designated, please check with appropriate program director.

#### BIOL6891 3 Credits **Histology**

This course is designed for students to learn more about the organization of the cells of the body into tissues, organs and organ systems. Students will learn to correlate the structure of these cells, tissues and organs with their functions in the human body. Students will become familiar with examining images of stained sections of human tissue and identifying key elements distinguishing one tissue from another. Examples of diseased tissue, for example cancerous tissues, will be compared to normal tissues as well. (Equivalent to HSCI6891 Histology.)

#### BIOL6892 3 Credits Human Physiology

This course provides the student with a high level of understanding of the physiological basis of the human body. The essential concepts of physiology and mechanisms of body function are presented at various levels of organization, ranging from cellular and molecular to tissue and organ system levels. Emphasis is placed on understanding the integrated regulation of various body processes among the major systems. Cardiovascular, respiratory, urinary, endocrine and reproductive systems will be covered. (Equivalent to HSCI6892 Human Physiology.)

#### BIOL6893 3 Credits Human Anatomy

The knowledge of human variability and susceptibility to disease begins with a thorough introduction to the basic structure of the human body that occurs in this course. The goals of the course are: to introduce the fundamental organization and structure of the human body and to begin the process of clinical observation by attention to detail and honing of observational skills. (Equivalent to HSCI6893 Human Anatomy.)

### CHEM6663 3 Credits

## **Introductory Medicinal Chemistry**

Based on all branches of chemistry, but especially organic chemistry, the focus of this course is on improving a drug's therapeutic effect while minimizing its undesirable side effects. (Equivalent to HSCI6663 Medicinal Chemistry.)

#### CHEM6685 3 Credits **Pharmacology**

A study of drugs, their history, sources, physical and chemical properties, compounding, biochemical and physiological effects, mechanism of action, absorption, distribution in the body and therapeutic uses. (Equivalent to HSCI6685 Pharmacology.)

#### CHEM6781 3 Credits **Biochemistry**

Based on the chemistry of substances of biological significance, structures and mechanisms of hydrolytic and respiratory enzymes, biosyntheses of proteins, biooxidations and molecular structures of complex molecules. (Equivalent to HSCI6781 Biochemistry for the Medical Sciences.)

### CHEM7500 3 Credits

## **Technical and Scientific Writing**

This course is an introduction to learning the written and oral communication of technical information. Assignments include writing and presenting proposals, reports, standard operating procedures, technical papers and documentation. (Equivalent to HSCI7500 Technical and Scientific Writing.)

#### CLIN7104 3 Credits Clinical Research Administration Capstone

This course is a hands-on, practice-based course that provides an intensive research experience alongside a trained professional within the clinical research framework. Students will be expected to participate in an active, engaging experience that provides insight into the role of the clinical researcher within the hospital and health system, pharmaceutical, biotechnology, device or other related environment.

## CLIN8812 3 Credits

## **Clinical Trial Research Administration**

This course provides a focused overview on the logistic and operational factors in conducting and completing a clinical research study. This includes discussion on the responsibilities and relationships for each of the professionals and parties involved in bringing the study from conceptualization through implementation and into the phase of data evaluation and report writing.

#### CLIN8821 3 Credits Regulatory Compliance for Pharmaceuticals

This course will review the regulatory pathways for drugs, biologics, biosimilars, medical devices and other pharmaceutical and biotechnology areas of relevance. Discussions on compliance strategies, risks and processes within each framework will provide insight onto the challenges (financial, ethical and procedural) facing each industry and area.

#### HSCI6200 3 Credits

# Ethics of Health Care Research

The student will examine the ethical issues that confront all aspects of health care.

# HSCI6250

3 Credits

#### **Psychology for the Medical Sciences** This course is designed to help preprofessional graduate students understand the mutually interactive roles of psychological/ neuropsychological and biomedical processes. It will examine the theory and research on the neurobiological and psychological foundations

of psychological health, wellness and psychopathology. Topics will include research methods, biological, sociocultural and psychological factors in human functioning, as well as psychiatric diagnostic classifications.

HSCI6663

# 3 Credits

## **Medicinal Chemistry**

Based on all branches of chemistry, but especially organic chemistry, the focus of this course is on improving a drug's therapeutic effect while minimizing the undesirable side effects. (Equivalent to CHEM6663 Introductory Medicinal Chemistry.)

## HSCI6685

## **3** Credits

## Pharmacology

A study of drugs, their history, sources, physical and chemical properties, compounding, biochemical and physiological effects, mechanism of action, absorption, distribution in the body and therapeutic uses. (Equivalent to CHEM6685 Pharmacology.)

## HSCI6781

#### 3 Credits Biochemistr

# Biochemistry for the Medical Sciences

Based on the chemistry of substances of biological significance, structures and mechanisms of hydrolytic and respiratory enzymes, biosyntheses of proteins, biooxidations and molecular structures of complex molecules. (Equivalent to CHEM6781 Biochemistry.)

#### HSCI6833 3 Credits Special Topics Chemistry: Drugs of Abuse

Knowledge of the varieties of illegal drugs, history, mechanism of action, their toxic effects and tissue damage and an understanding of the basic drug action and pharmacological methods (selectivity, dose-response, affinity, potency, intrinsic activity, binding, absorption, distribution, tolerance, dependence, half-life, metabolism, clearance excretion, adverse reactions, lethality and drug interactions).

#### HSCI6891 3 Credits Histology

This course is designed for students to learn more about the organization of the cells of the body into tissues, organs and organ systems. Students will learn to correlate the structure of these cells, tissues and organs with their function in the human body. They will become familiar with examining images of stained sections of human tissue and identifying key elements distinguishing one tissue from another. Examples of diseased tissue, for example cancerous tissues, will be compared to normal tissues as well. (Equivalent to BIOL6891 Histology.)

#### HSCI6892 3 Credits Human Physiology

This course provides the student with a high level of understanding of the physiological basis of the human body. The essential concepts of physiology and mechanisms of body function are presented at various levels of organization, ranging from cellular and molecular to tissue and organ system levels. Emphasis is placed on understanding the integrated regulation of various body processes among the major systems. Cardiovascular, respiratory, urinary, endocrine and reproductive systems will be covered. (Equivalent to BIOL6892 Human Physiology.)

#### HSCI6893 3 Credits Human Anatomy

The knowledge of human variability and susceptibility to disease begin with a thorough introduction to the basic structure of the human body that occurs in this course. The goals of the course are to introduce the fundamental organization and structure of the human body and to begin the process of clinical observation by attention to detail and honing of observation skills. (Equivalent to BIOL6893 Human Anatomy.)

## HSCI7302 3 Credits Epidemiology and Study Design

**Evaluation** This course is designed to introduce students to

This course is designed to introduce students to basic concepts of epidemiology and study designs used in the evaluation of health care technologies. Epidemiological terminology such as risk, hazard, odds and relative risk ratios will be introduced. Further, this course will include critical evaluation of evidence-based medical literature and identification of sources of bias in published medical literature.

#### HSCI7401 3 Credits Biostatistics

A comprehensive survey of the theoretical and practical aspects of descriptive and inferential statistical procedures — z tests, t tests, analysis of variance, correlation and regression analysis and nonparametrics. Emphasis is on why and when to use the various procedures as well as on the interpretation of statistical results.

## HSCI7500 3 Credits

## **Technical and Scientific Writing**

Introduction to learning the written and oral communication of technical information. Assignments include writing and presenting proposals, reports, standard operating procedures, technical papers and documentation. (Equivalent to CHEM7500 Technical and Scientific Writing.)

#### HSCI7731 3 Credits

## Introduction to Health Systems and Policy

This course presents an integrated overview of traditional and contemporary approaches to financing and organizing the provision of health services in the United States. The course traces the evolution of the health care delivery system, with special attention given to the interplay between political, legal and socioethical dynamics in the formation of health policy at the federal and state levels of government. (Equivalent to PADM7731 Introduction to Health Systems and Policy.)

#### HSCI7751 3 Credits Insights Into Human Disease

This course will cover existing understanding and approaches to studying human disease. It will cover topics such as types of cancer, muscular dystrophy, familial hypercholesterolemia, diabetes and/or other diseases. It will address the genetics of simple and complex traits behind these diseases, genetic analysis and diagnosis and diseasetreatment strategies such as drug development.

## HSCI7771

**3** Credits

## **Advanced Organic Synthesis**

Modern synthetic techniques and procedures, emphasizing the theoretical background of the procedures and preparing the student for advanced reserch. (Equivalent to CHEM4371 Organic Synthesis and CHEM7771 Advanced Organic Synthesis.)

# HSCI7810

#### 3 Credits Clinical Trial Design and Regulatory Requirements

This course covers the principles of clinical-trial design, including determination and evaluation of study objectives; commonly used methodologies of study design; and the ethical, legal, statistical, sociological and epidemiological considerations that play a role in the design of clinical protocols.

# HSCI8403

## 3 Credits

## Introduction to Lean Six Sigma

This course introduces pharmacy students to the concepts and methods of Lean Six Sigma (LSS). LSS is a method that relies on effective teamwork to improve performance by decreasing waste and creating a lean enterprise. A framework of both Lean and Six Sigma tools will be covered providing a roadmap and diagnosis for workflow improvements and reduction in variability. The skills learned in this class will build capabilities that can help improve workflow and reduce errors in the pharmacy setting and organize processing in the pharmaceutical industry.

# HSCI8806

# 3 Credits

## Project Management

The purpose of this course is to integrate the essential components of project planning and management with health care information systems for health care leaders. The course will outline the process for developing, implementing and evaluating project plans as well as integration of communication and project life-cycle theory.

#### HSCI8810 3 Credits

## Medical and Clinical Report Writing

This course provides a basic overview of the necessary means of communication for the clinical research professional, including methods for documentation, presentation of data and reporting of results. Focused attention will be paid to developing approaches for communication that allows for effective information transfer to a broad and diverse set of audiences, including patients, physicians, nurses, pharmacists, researchers and the general public.

#### HSCI8811 2 Credits

## Ethics of Health Care Research

The student will examine the ethical issues that confront health care providers and patients. The medical, scientific, moral and socioeconomic bases of these issues and the decision-making

# **Hospitality Management Studies**

process that providers and patients engage in are analyzed. Topics include informed consent, the role of institutional review boards, euthanasia and the allocation of scarce resources. Corequisite: PHRM8802 Health Information Exchange and Security, PHRM8812 Clinical Trial Research Administration or PHRM8821 Regulatory Compliance for Pharmaceuticals. Note: only for students in Master of Health Science.

#### HSCI8822 3 Credits U.S. Regulatory New Drug Applications and Submission and Dossier Preparation

This course will review steps and consideration in preparing a New Drug Application (NDA) submission to the U.S. Food and Drug Administration (FDA). Students will become knowledgeable on terminology used in NDA submission process in an electronic (e) Common Technical Document (CTD) format, Extensive Markup Language (XML) backbone, portable document format (PDF) file, structured product labeling format (SPL) for U.S. package-insert labeling, what area and statistical analysis systems (SAS) transport files. The course will provide a fundamental understanding of the different types of NDAs to file for under Section 505 of the Federal Food and Drug and Cosmetic Act for marketing authorization in the United States and describe the components and essential documents necessary for inclusion in an NDA submission. Students will learn how to consider key sections and data within the U.S. NDA submission for consideration of global regulatory submissions outside of the U.S. by using the CTD format and International Conference on Harmonization (ICH) principles

#### PADM7731 3 Credits Introduction to Health Systems and Policy

This course presents an integrated overview of traditional and contemporary approaches to financing and organizing the provision of health services in the United States. The course traces the evolution of the health care delivery system, with special attention given to the interplay between political, legal and socioethical dynamics in the formation of health policy at the federal and state levels of government. (Equivalent to HSCI7731 Introduction to Health Systems and Policy.)

#### PHAR6601 3 Credits Health Care Systems and Policy

This course provides a comprehensive overview of the structure and operations of the United States health care delivery system. Major forces and trends that are likely to shape the external environment and linkages among industry stakeholders are identified and examined. Fundamentals of health care economics, financing, reimbursement, quality assurance and political policymaking are discussed with due regard for social and ethical implications. The spectrum of life sciences is considered in relation to the continuum of health care delivery. Students will prepare a position paper that applies course concepts to a contemporary issue of relevance to their specific career interests.

#### REGS7104 3 Credits Regulatory Affairs Capstone

This course is a hands-on, practice-based course that provides an intensive research experience alongside a trained professional within the regulatory science framework. Students will be expected to participate in an active, engaging experience that provides insight into the role of the regulatory professional within the pharmaceutical, biotechnology, device or other health-related environment.

## REGS8812 3 Credits

## **Clinical Trial Research Administration**

This course provides a focused overview on the logistic and operational factors in conducting and completing a clinical research study. This includes discussion on the responsibilities and relationships for each of the professionals and parties involved in bringing the study from conceptualization through implementation and into the phase of data evaluation and report writing.

#### REGS8821 3 Credits Regulatory Compliance for

#### Regulatory Compliance for Pharmaceuticals

This course will review the regulatory pathways for drugs, biologics, biosimilars, medical devices and other pharmaceutical and biotechnology areas of relevance. Discussions on compliance strategies, risks and processes within each framework will provide insight onto the challenges (financial, ethical and procedural) facing each industry and area.

#### REGS8822 3 Credits

## U.S. Regulatory New Drug Application and Submission and Dossier Preparation

This course will address the necessary data collection, clinical procedures, protocols and preparatory steps necessary for the successful filing of regulatory documents. This will include discussions on expectations, filing procedures and other processes within both the FDA and other international frameworks.

# Hospitality Management Studies (M.S.)

The hospitality field currently ranks as the third-largest industry in the United States, and by the end of the second decade of the new millennium, employment experts predict it will be the top-ranked industry in the world.

The International School of Hospitality and Tourism Management (ISHTM) is located in the third-largest hospitality destination in the world. Combined with eastern Pennsylvania and Atlantic City, N.J., this geographic area becomes the largest hospitality destination in the world. ISHTM is the oldest four-year school offering degrees in the area of hospitality management in the New York metropolitan region. Founded in 1942 as one of the University's original programs, it is the only program of its kind in New Jersey.

Since February 2015, ISHTM has been ranked sixth out of 300 hospitality programs nationally in TheBestSchools.org. Keeping company at the top are Cornell and Michigan State Universities and the University of Nevada at Las Vegas. Rankings for each school are based on criteria including academic quality, awards, reputation, rankings, facilities and internship opportunities. ISHTM was also rated by The Princeton Review's *The Gourman Report of Graduate Programs* as one of the top fouryear hospitality management programs in the United States.

The Master of Science degree in hospitality management studies, which consists of 33 credits, is structured to meet the educational needs of adult learners working as managers, entrepreneurs, educators or other professionals in the hospitality industry. It is designed to provide an educational alternative for working professionals with an academically rigorous, yet flexible, program of study that meets the requirements for a professional master's degree. For working adults seeking to upgrade their professional skills to enhance their careers, the degree program increases analytical, managerial and leadership competencies and provides graduates with the requisite preparation for career advancement in various hospitality-related professional areas.

# **Hospitality Management Studies**

The program offers students the opportunity to complete degree requirements by taking course work at the Metropolitan Campus, Teaneck, New Jersey; the Florham Campus, Madison, New Jersey; or by combining course work at various off-campus sites with selections from the broader array of courses that are regularly available at the University's campuses. Courses also are offered in Atlantic City, N.J.; in Parsippany, N.J., at the Wyndham Worldwide Corporation; in Jersey City, N.J.; and in West Windsor, N.J.

This program is offered under the auspices of the International School of Hospitality and Tourism Management, Anthony J. Petrocelli College of Continuing Studies, at the Florham Campus, Madison, New Jersey, and the Metropolitan Campus, Teaneck, New Jersey; various locations throughout New Jersey; and at the FDU Vancouver Campus, British Columbia, Canada.

### **Admission Requirements**

Candidates for admission to the Master of Science in hospitality management studies degree program could be managers, business owners or educators or hold other professional positions related to the hospitality industry. The credentials required for admission as a matriculated student include the following:

1. A graduate application for admission and nonrefundable application fee.

2. A bachelor's degree from an accredited college or university with a minimum cumulative grade point ratio (CGPR) of 2.75. (Applicants with a CGPR of less than 2.75 may be admitted as prematriculated students on probation.)

3. Official transcripts from all colleges and universities previously attended.

4. English-language proficiency, both written and verbal.

5. Industry work experience preferred (applicants without industry work experience may be required to take foundation courses HRTM6100 Hospitality Operations Management and HRTM6200 Tourism Destination Management upon evaluation).

6. Personal statement of 400 words explaining reasons for pursuing hospitality graduate studies.

7. Personal interview with a graduate program adviser.

Additional classes may be required as a prerequisite for acceptance into the program. Applicants who are unable to

provide official documents at the time of enrollment may register as nonmatriculated or nondegree students with the approval of a graduate faculty adviser.

## Prerequisite Program for Non-hospitality Majors

Foundation courses are required course work for students with non-hospitality degrees and limited or no prior hospitality work experience and are taken as free elective credit subjects. HRTM6100 Hospitality Operations Management and HRTM6200 Tourism Destination Management should not be taken by students with degrees in hospitality or tourism, or with prior hospitality work experience.

The below foundation courses are required for students with non-hospitality degrees and are taken as free elective credit subjects.

HRTM6100

Hospitality Operations Management\*... 3 HRTM6200

Tourism Destination Management\*......3

Credits

## **Requirements for the Master of Science Degree**

1. Completion of a minimum of 33 graduate credits.

2. Cumulative grade point ratio of 3.00 for the degree program of study.

3. Cumulative grade point ratio of 3.00 in the core curriculum.

4. Minimum of 30 credits completed at Fairleigh Dickinson University.

5. Maximum of six years to complete the master's degree requirements.

Up to three credits of graduate course work may be transferred from another college or university if completed within the six-year period. Courses submitted for transfer credit will be reviewed and evaluated by the director of the International School of Hospitality and Tourism Management. In assessing requests for transfer credits, the ISHTM faculty may require students to complete additional course work to update knowledge and skills to meet master's degree requirements.

## Course Requirements (33 credits)

## Required Hospitality Management Courses (9 credits)

Credits
HRTM7715
Special Project*0
HRTM7751
Research Methodology I**
HRTM7752
Research Methodology II***
HRTM7753
Graduate Capstone****
Total9

Cradits

## Supporting Hospitality Management

Courses (18 credits)

HRIM//08
Organizational Communication
and Conflict Management3
HRTM7710
Current Concepts in Leadership3
HRTM7713
Financial Management3
HRTM7714
Advanced Human Resource
Management 3
HRTM7716
Service Management3
HRTM7734
Global Marketing3
Total18

#### Free Electives (6 credits)

This area is to be chosen by students with approval from an adviser.

Total......6 Total Program......33

Graduate students have seven years to complete all of the course work requirements of the M.S. degree including the Special Project.

\*\*\*Taken after completing 18 credits.

\*\*\*\*Taken after completing 24 credits.

<sup>\*</sup>Must be taken in the first semester.

# **Course Offerings**

## Hospitality Management Studies

International School of Hospitality and Tourism Management

Foundation Courses for Non-hospitality Majors

#### HRTM6100 **3** Credits

## **Hospitality Operations Management**

This course must be taken in the first semester as a free-elective credit subject. Topics reviewed will include hospitality operations management, food and beverage management and managerial accounting. Students must develop a comprehensive business plan for a hospitality project that integrates these key areas to successfully complete the requirements for this course.

#### HRTM6200 **3** Credits **Tourism Destination Management**

This course must be taken in the first semester as the second of the free-elective course work subjects. Topics reviewed will include tourism, sales and marketing and human resource management. Case studies of various global destination marketing organizations will be analyzed and discussed. The term project will consist of planning and developing a tourism destination management project fo a chosen city in Canada or in the United States.

## Required Hospitality Management **Core Courses**

#### HRTM7715 **3** Credits **Special Project\***

This course provides an interactive, culminating learning project that focuses on an area related to the hospitality industry chosen by the student in line with the student's area of professional interest.

#### HRTM7751 **3** Credits **Research Methodology I**

An introduction to graduate studies with heavy emphasis on referencing and citations in APA style and research. Quantitative and qualitative research studies are explored, discussed in depth and critiqued. A comprehensive research proposal is the goal of this course.

# HRTM7752 **3** Credits

# **Research Methodology II**

This is a required course designated to supplement HRTM7751 Research Methodology I that should be taken after 18 credits have been earned in the graduate program. Students will apply the research methodologies introduced in this course to create a special project research proposal. Prerequisite: HRTM7751 Research Methodology I.

#### HRTM7753 **3** Credits **Graduate Capstone**

This class is designed to be a capstone course to the Master of Science in hospitality management studies. Students will draw on all previously taken courses to demonstrate mastery of content knowledge in hospitality management. They will receive theoretical and "real-world" application prompts to solve in written and/or oral formats. To be taken after 25 credits have been completed.

### Supporting Hospitality Management Courses

#### **HRTM7708 3** Credits

#### **Organizational Communication and Conflict Management**

Overview of theories and models of communication, examination of barriers to effective communication and techniques for improving interpersonal, group and organizational communications. Conflict resolution is studied on the individual, group and organizational levels.

### HRTM7710 **3** Credits **Current Concepts in Leadership**

Examines key theories of leadership and motivation as applied to hospitality operations; emphasis on analysis of leadership behaviors, managerial action and new servant-leadership strategies.

## HRTM7713

**3** Credits

### **Financial Management**

Review of the current cost-control strategies used to manage food-service and lodging operations including all functional areas (food and labor costs, facility maintenance and engineering, marketing, etc.).

# **HRTM7714**

#### **3** Credits **Advanced Human Resource** Management

Advanced human resources management for hospitality professionals. This course reviews

the essential functions within human resources. including selection and retention, performance and evaluation systems, training and employee development, recruitment and succession planning, compensation, employee reward systems, employment-related laws, collective bargaining agreements, diversity and communication.

#### **HRTM7716 3** Credits **Service Management**

Review of current service theories and strategies used to provide total guest satisfaction in all customer contact areas; includes methods for measuring guest satisfaction and total quality management applications.

#### **HRTM7734 3** Credits **Global Marketing**

This course provides an overview of advanced marketing strategies oriented to North American and global markets. Cultural contexts will be explored to the extent of their impact on strategy, and best practices will be reviewed. The following topics will be reviewed: strategic planning, pricing practices, international marketing, global distribution systems and advertising.

## Free Electives

HRTM7717

#### **3** Credits **Discovering the World of Wine**

This course provides an advanced analysis of various topics related to wine. These include history, production, service and distribution. Open to nonhospitality majors.

#### **HRTM7718**

**HRTM7722** 

#### 0-3 Credits Advanced Global Seminar

An eight-day trip to either Switzerland or Italy, which will include lectures by European university professors and hotel and restaurant managers on European management, environmental issues and culinary arts.

Fee

Fee

#### **3 Credits** Advanced Human Resource Management

This course is designed to develop criticalthinking, analysis, decision-making and management skills related to the needs of graduate students interested in a focus in hospitality human resource management. Group and individual projects, case studies and presentation technologies will be utilized.

# **Hospitality Management Studies**

## HRTM7723 3 Credits

# **Hospitality Education Practicum**

For students with education as their area of concentration in the M.S. in hospitality management studies program only. Students will shadow an International School of Hospitality and Tourism Management-certified hospitality educator (CHE) for a semester, and assist and observe the learning-facilitation process. A report of the experience and what learningfacilitation skills were observed and learned during the semester is due at the end of the term as well as a session-by-session journal kept by the student. Prerequisite: certified hospitality educator (CHE) training class.

#### HRTM7725 3 Credits Curriculum and Instruction for the Hospitality Educator

The emphasis of this course will be on the relationship between models in all phases of the curriculum in the hotel, restaurant and tourism industry. Curriculum design, content and integration incorporated with technology will be the focus for the individual who will have a career in the hospitality field.

#### HRTM7726 3 Credits Educational Organization for the Hospitality Educator

The emphasis of this course will be to explore, model and practice Multiple Intelligence Theory, Learning Styles Theory, cooperative grouping, teaming techniques and other organizational patterns that will prepare the individual for presentations, teaching and working in the hospitality industry. The organizational models covered will serve as a guide for access to the hospitality industry in marketing, education and all the facets of hospitality careers.

# HRTM7728 3 Credits

# Graduate Internship

This practice training is set to provide students who do not have extensive professional experience in the area of practice chosen with some field experience. A letter from the employer must be provided. Prerequisite: completion of 27 credits in hospitality management.

#### HRTM7731 3 Credits Seminar in Gaming/Casino Management

Practices and problems of casino management including security, control, entertainment, taxation, economic impact, mathematics of casino games, regulation and control and accounting are studied. Project is required.

#### HRTM7732 3 Credits Hospitality Law — Legal Issues in Hospitality

Provides the student with a review of the laws applicable to the operation of hospitality enterprises. The course of study includes a review of contracts, the uniform commercial code, torts law, franchise law and a review of the current legislation and case law relative to hospitality enterprises.

## HRTM7736 3 Credits

#### Accounting for Hospitality Managers and Administrators

This course focuses on the concepts and tools pertinent to making financial decisions in hospitality businesses. The student will acquire an understanding of financial statements, ratio analysis, pricing structure, cash management and working capital. In addition, students will develop the skill sets necessary to analyze and explain critical financial concepts, trends and results.

#### HRTM7737 3 Credits Global Tourism Development

#### This course will examine global financial institutions' perception of tourism as a foreign exchange generator for developing countries. Principles and philosophies of tourism and its impact on local cultures and economies will be examined. Nature tourism/ecotourism will also

## HRTM7740 3 Credits

be examined.

## **Advanced New Venture Management**

This is an entrepreneurial course that is designed for graduate students in the hospitality field. The course will teach the fundamental concepts of how to start and run a successful hospitality business, including the development of business plans, financial projections, valuation analysis, capital raising and legal and tax reviews. It also will focus on how to identify the market to customers as well as learn how to pitch the business plan and negotiate with banks and investors.

#### HRTM7742 3 Credits International Tourism

This course will explore tourism as generator of foreign exchange for developing countries and how it contributes to economic development. How sustainable tourism can help economic development in developing countries will also be explored as well as economic relationship between developed and developing countries and the role tourism plays in this relationship.

#### HRTM7745 3 Credits International Tourism Study Internship

Students must successfully plan and execute under International School of Hospitality and Tourism Management faculty member supervision — all travel arrangements for a study-abroad program at FDU. This internship requires students to travel with the group for which they planned all arrangements.

#### HRTM7746 3 Credits Entrepreneurship and You

An introduction to the basic components involved in establishing and operating one's own business in the hospitality/tourism industry. Topics include how to create a concept and product, how to develop a business plan, pricing, product development, advertising, distribution, logistics, market research, sales, banking (letters of credit) and organizational skills. With a hands-on approach, the course will provide students with the tools needed to succeed in establishing and running their businesses.

### **HRTM7748**

3 Credits

# Developing a Sustainability Mindset in Hospitality and Tourism

Developing the sustainability mindset through exercises and dialogue. This course will introduce the three pillars of sustainability mindset: the whole systems perspective, the innovative thinking and the being orientation. Students will identify an area of personal passion that is relevant and significant to them and develop plans to take restorative action. This will give students an opportunity to convert the course experience into an opportunity to make a difference in the world.

# HRTM7749

**3** Credits

#### Best Practices in Human Resource Management

The course provides an in-depth review of human resource management practices, with a case-study review of best practices across a wide variety of industries. Students will learn about the human resource functions and activities common in well-run companies and the critical role this function plays in the hospitality industry.

## HRTM7750

#### 3 Credits Project Management in the Service Sector

The course focuses on the practices and processes utilized to manage complex organizational projects. The class provides students with a strategic-system perspective on the management of projects utilizing modern project management tools and techniques.

# Industrial/Org. Psych. • International Business • Learning Disabilities • Management • Mgt. for Executives • Management Information Systems

#### HRTM7997 3 Credits Communications for the Casino-industry Professional

This course will help casino-industry professionals improve their communication skills. The course will first focus on writing, including essays, letters, memos and reports. Second, oral communication and public and private speaking will be emphasized. Finally, the course will consider the unique problems of communicating effectively in the casino industry, including language and communication problems unique to the culture of gambling.

#### HRTM7998 3 Credits **History of Casino Gaming**

This course will familiarize students in the gaming hospitality industry with the historical development of gaming. This will help industry professionals not only by increasing their knowledge of information about their chosen field, but by giving them a better perspective on how and why the industry evolved as it did. It will provide students with an accurate picture of current developments in the casino industry throughout the nation.

#### HRTM7999 3 Credits Casinos' Social and Economic Approach

Introduction to casino operations and management with a social and economic approach. Emphasis on the multiplying effects that casinos have on communities and social problems. *Fall, Spring*  Industrial/ Organizational Psychology (M.A.)

See Psychology, Industrial/Organizational Psychology, pages 220–222.

# International Business (M.B.A.)

See Business, International Business, page 69.

# Learning Disabilities (M.A.)

See Education, Learning Disabilities, page 133.

# Management (M.B.A.)

See Business, Management, page 69.

# Management (M.B.A.) for Executives — General Management

See Business, Management (M.B.A.) for Executives — General Management, page 73.

# Management (M.B.A.) for Executives — Health Sector Management

See Business, Management (M.B.A.) for Executives — Health Sector Management, page 74.

# Management Information Systems (M.S.)

The graduate program in management information systems is designed for present and future managers and developers of organizational information systems. Relying on computers and telecommunications networks, these systems are a source of operational efficiency, managerial effectiveness and corporate strategic advantage. The program combines learning how to use and develop information system technology with instruction in business, management and organizations.

Classes normally are scheduled during the late afternoon and evening in order to meet the needs of currently employed students.

This program is offered under the auspices of the Lee Gildart and Oswald Haase School of Computer Sciences and Engineering, University College: Arts • Sciences • Professional Studies, Metropolitan Campus, Teaneck, New Jersey.

Selected courses offered for credit toward the M.S. in management information systems also are available on the Florham Campus, Madison, New Jersey.

# **Admission Requirements**

1. Graduation from an accredited college or university with a satisfactory academic record.

2. Submission of an official score report for the Graduate Record Examinations (GRE) General Test taken within the last five years. The GRE may be waived if the applicant enrolls initially as a nonmatriculating student and completes 9 graduate credits in computer science with a minimum cumulative grade point ratio (CGPR) of 3.00 on a 4.00 scale and no grade below C or is a Fairleigh Dickinson University computer science graduate and has an undergraduate CGPR of 3.00 or is a non-Fairleigh Dickinson University computer science graduate and has an undergraduate CGPR of 3.50. This GREwaiver policy is only applicable to applicants who graduated from a regionally accredited college or university in the United States. (The GRE

# **Management Information Systems**

requirement also is waived for applicants who have completed a master's degree.)

Applicants who have not completed all requirements for admission to the degree program may be permitted to enroll in classes for credit on a nonmatriculated or nondegree basis.

## **Requirements for the Master of Science Degree**

1. Students must complete 30 credits of courses including topics in computer architecture, database systems, management, systems design, implementation and maintenance and electronic commerce.

2. Students who do not have an undergraduate degree in MIS or a cognate area, or demonstrably equivalent knowledge will take up to 12 credits of prerequisite courses. They must earn a cumulative grade point ratio of at least 2.75 for the prerequisite courses taken. Students who wish to be exempted from these courses must apply in writing to the school before the beginning of their first semester in the program.

3. Students must earn a cumulative grade point ratio of at least 2.75 for the 30 credits beyond the prerequisite courses.

## Prerequisite Courses (12 credits)

The prerequisite courses for the M.S. in management information systems are: Credits

ACCT5012
Financial Accounting: End-User
Applications2
CSCI5505
Introduction to Computer
Programming3
CSCI5525
Introduction to Computer Science3
ECON5012
Economic Analysis2
MKTG5012
Marketing Principles2

## Required Courses (18 credits)

CSCI6603
Computer Architecture3
CSCI6623
Database Systems3
CSCI6720
Management Information Systems3
CSCI6758
Electronic Commerce3

	Credits
CSCI7727	
Development of MIS 1: Project	
Management and Systems	
Analysis	3
CSCI7791	
Information Systems for	
Competitive Advantage	3

## *Elective Courses (12 credits)*

Students must select four electives from the list below. However, students have the option of registering for a 3-credit internship (which counts as one elective course) after completing 18 graduate credits. At the discretion of the school and consistent with the program objectives, other information-technology and businessoriented courses may be added to the elective list. CSCI6638 Operating Systems......3 CSCI6731 CSCI6733 CSCI6734 

### 

CSCI7781
Advanced Database Systems 3
CSCI7785
Distributed Database Systems3
CSCI7795
Building Electronic Commerce
Systems

## Management Information Systems Certificate

The certificate program in management information systems provides individuals with a broad knowledge base to assist organizations in pursuing information technology-based competitive advantage in a rapidly changing global economy.

## Admission Requirements

Admission to the certificate program requires a baccalaureate degree from a regionally accredited college or university with a satisfactory academic record.

## Requirements for Certificate in Management Information Systems

18 credits (six courses) are to be che	osen
from the following:	Credits
CSCI5525	
Introduction to Computer Science	e3
CSCI6623	
Database Systems	3
CSCI6720	
Management Information Systems	s3
CSCI6731	
Computer Networks	3
CSCI6758	
Electronic Commerce	3
CSCI7727	
Development of MIS 1: Project	
Management and Systems	
Analysis	3
CSCI7791	
Information Systems for	
Competitive Advantage	3
Students must satisfy the prerequisite	s of the
courses that they will take.	

Academic Credits: Courses with numbers 6000 or higher completed through this certificate program can be credited toward the **M.S. in management** information systems program. Other courses may be substituted with prior approval of the student's academic adviser.

## **Course Offerings**

Courses offered fall, spring and/or summer are so noted. To determine availability of courses not so designated, please check with the school. See also "Course Offerings," Computer Science, pages 104–110.

## Management Information Systems

Lee Gildart and Oswald Haase School of Computer Sciences and Engineering

## CSCI5525

## 3 Credits

Introduction to Computer Science

Introduction to computer hardware and software, interactions and tradeoffs. Essentials of computer organization and arithmetic, assemblers, I/O devices, operating systems and files. May be taken with CSCI5505 Introduction to Computer Programming or CSCI5550 Business Programming Techniques and Data Structures (management information systems course). *Fall* 

### CSCI5550 3 Credits

### Business Programming Techniques and Data Structures

Methodical development of limited-size programs with the use of a procedural language (Visual Basic). Fundamental data structures: arrays, records, lists and trees. Sorting and searching. Stress on structured development techniques, systems development life cycle, with an introduction to prototyping and program maintenance. Laboratory.

### CSCI5551

### **3 Credits**

### Mathematics for Computer Science and MIS

Introduction to basic mathematical concepts and how they relate to computer science; formal logic, set theory, functions, relations, Boolean algebra, graph theory and combinatorics. *Fall* 

### CSCI6731 3 Credits Computer Networks

Introduction to the theory and practice of computer networking. Network design and analysis, elementary queueing theory. Network protocols. Functions of the layers of ISO reference model, including routing, flow control, error control, sequencing and addressing. Prerequisite: CSCI5525 Introduction to Computer Science. *Fall* 

## CSCI6733 3 Credits

## **Decision Support Systems**

Characteristics of decision support systems (DSS) within the MIS framework. Requirements for effective DSS. Normative and behavioral theories of decision making. Dialog, database and model management. Classes of models. DSS development: tools and methodologies. Laboratory. Prerequisite: CSCI6720 Management Information Systems.

#### CSCI6750 3 Credits

## **Advanced Quantitative Analysis**

Mathematical programming techniques and optimization methods. Goal, integer, nonlinear and dynamic programming. Regression analysis for planning and forecasting. Construction of models with the use of a modeling language. Laboratory. Prerequisite: CSCI5551 Mathematics for Computer Science and MIS.

### CSCI7727 3 Credits Development of

### Development of MIS 1: Project Management and Systems Analysis

Techniques of information system project management, cost/benefit analysis, development time and cost estimation. Organization of the development process: detailed discussion and use of systems development life cycle with prototyping. Systems documentation. Students will perform feasibility study and structured systems analysis of an online application system, as well as develop a moderate-size prototype for it. Project will use a computer-aided software engineering tool. Laboratory. Prerequisite: CSCI6720 Management Information Systems. Note: This course does not carry credit for computer science majors.

### CSCI7728 3 Credits

### Development of MIS 2: Systems Design, Implementation and Maintenance

Structured software design, structured programming and multilevel testing. Team implementation of an online system. Complete documentation package for the system will be prepared. Regression tests will be developed. Maintenance of the system, including its documentation, is to be performed by modifying one of its major functional capabilities. Laboratory. Prerequisite: CSCI7727 Development of MIS 1: Project Management and Systems Analysis.

## CSCI7791

**3 Credits** 

### Information Systems for Competitive Advantage

Use of information technology as a strategic weapon. Forces, strategies and tactics in competitive markets. Value chain analysis of strategic opportunities for use of information systems. Organizational requirements for success with strategic use of information technology. Integration of MIS planning with corporate planning. Changes in industry structure due to strategic information system use. Case studies. Prerequisites: ACCT5012 Financial Accounting: End-User Applications and CSC17727 Development of MIS 1: Project Management and Systems Analysis.

# Medical Technology (M.S.)

This program is offered under the auspices of the Henry P. Becton School of Nursing and Allied Health, University College: Arts • Sciences • Professional Studies, Metropolitan Campus, Teaneck, New Jersey.

## **Admission Requirements**

1. Graduation from an accredited college or university.

2. Grade point ratio (GPR) of 3.00 or higher.

3. Bachelor of Science in medical technology or in biology.

4. Twelve- to 15-month clinical training program in the undergraduate curriculum.

5. Registration as medical technologist of the American Society for Clinical Pathology and two years of clinical experience. (The latter may be completed concurrently with course work, in which case full matriculation for the degree is not permitted until the two full years of experience are presented.)

6. Undergraduate courses in statistics (inferential and descriptive).

7. Three letters of recommendation (academic/professional).

8. An essay on one of two topics: "Why did you choose graduate education?" or "What do you plan to do with your master of science degree?"

Applicants who have not completed all requirements for admission to the degree program may be permitted to enroll in classes for credit on a nonmatriculated or nondegree basis.

# Requirements for the Master of Science Degree

1. Satisfactory completion of a minimum of 35 credits consisting of 12 credits of biology/chemistry; 6 credits of computer science; 6 credits of administration or business courses; 5 credits of research, including a research project; and 6 credits of Clinical Practicum.

2. Upon admission to the M.S. in medical technology program, a student is required to meet with the associate director of allied health from the School of Nursing and Allied Health to discuss a program plan suitable to his or her interests.

# **Medical Technology**

## **Required Courses**

Biology/Chemistry	Credits
Select 12 credits from the following:	
BIOL6240, BIOL6241	
Molecular Cell Biology	
(Lecture and Laboratory)	4
BIOL6705	
Advances in Cell Biology	3
BIOL6724	
Human Genetics	
BIOL6733	
Enzymology	3
BIOL6761, BIOL6661	
Advanced Microbiology	
(Lecture and Laboratory)	5
CHEM6525	
Physical Chemistry	3
CHEM6529	
Microtoxicology and Biochemistry	<i>y</i> 3
CHEM6673	
Physical Organic Chemistry	3
CHEM6781	
Biochemistry	3
Computer Science	
Select 6 credits from the following:	
CSCI5505	
Introduction to Computer	
Programming	3
CSCI5525	
Introduction to Computer Science	e3
CSCI6720	

Management Information Systems.......3 NURS6640 Clinical Nursing Information

Systems and Applications...... 3

## Administration/Business

Select 6 credits from the following:
MGMT5012
Foundations of Management2
PADM6602
Budgeting and Finance3
PADM6604
Human Resources Management3
PADM7731
Introduction to Health Systems
and Policy 3
Introduction to Research
NURS7701

	Advanced Research and
	Evidence-based Practice3
_	

## **Research Seminar**

NURS7752	
Master Project Seminar	2

## Clinical Practicum (I, II, III)

MEDT6623
Clinical Practicum I2
MEDT7725
Clinical Practicum II2
MEDT7731
Clinical Practicum III2
Total35

## **Course Offerings**

Courses offered fall, spring and/or summer are so noted. To determine availability of courses not so designated, please check with the school.

For Biology, Chemistry, Computer Science, Engineering and Business courses see "Course Offerings" under the respective majors.

## Medical Technology

Henry P. Becton School of Nursing and Allied Health

### BIOL5306 3 Credits

## Immunology

A study of the structure and function of the molecular and cellular components of the immune system, genetic bases of immune responses, normal and pathological responses, tumor immunology, transplantation and immunological techniques. Prerequisites: BIOL1251, BIOL1253 General Biology I; BIOL1252, BIOL1254 General Biology II; BIOL2210 Genetics; BIOL2211 Laboratory: Genetics; CHEM2261 Organic Chemistry I; CHEM2263 Organic Chemistry Laboratory I; and CHEM3281 Biochemistry I.

### BIOL6705 3 Credits Advances in Cell Biology

Molecular organization of cell. Internal membranes and synthesis of macromolecules. The cell nucleus and cell division. Control of cell cycle. Cytoskeleton and cell-cell adhesion. The extra cellular matrix and signal transduction. *Fall, Spring* 

### BIOL6721 3 Credits

### **Advances in Molecular Genetics**

Classical mechanisms of recombination in procaryote; transposition; genetic engineering; isolation and sequencing of DNA; restriction mapping; plasmid vectors; DNA cloning; molecular hybridization; regulation of genetic expression. Mutagenicity and carcinogenicity. Proteomic research: genome to proteome. Applications in research, medicine and agriculture. Prerequisites: BIOL2210, BIOL2211 Genetics. *Fall, Spring* 

### BIOL6733 3 Credits Enzymology

Credits

Enzyme sources and purification, structure, kinetics and mechanisms. Sequencing and characterization, biocatalysis, control of enzyme activity, clinical aspects of enzymology and applications in biotechnology. Use of protein data banks and molecular modeling. *Spring* 

### BIOL6767 3 Credits

### Microbiology and Infectious Diseases

The biology of infectious agents, establishment of infectious diseases and strategies to study microbial and viral pathogens. The biological basis for antimicrobial and antiviral actions. Other topics emphasized are constitutive and induced defenses of the body, microbial subversion of host defenses and bacterial toxins.

#### MEDT6623 2 Credits

### **Clinical Practicum I**

Supervised experience in the clinical chemistry laboratory will provide students with the opportunity to analyze constituents from blood, urine, spinal fluid and other body fluids. Advanced instrumentation, preventative maintenance, quality-control and assurance procedures, application of theoretical information and technical competence will be emphasized. Students also will obtain additional experience in specimen collection, processing and management.

#### MEDT7701 3 Credits

### Advanced Research

The advancement of knowledge in medical technology through research is explored. Critical analysis of selected concepts using related literature is conducted and applied to the research process. Quantitative statistical procedures and qualitative methods are examined for their appropriate use in research design. Research in medical technology and allied health is evaluated for utilization in practice cognizant of ethical issues. Prerequisite: background in statistics.

### MEDT7725 2 Credits Clinical Practicum II

Students will obtain practical experience in hematology, hemostasis and urine and bodyfluid analysis under direct supervision at various clinical sites. Correlation of theoretical studies with current practice, automation, troubleshooting, problem-solving, National Committee on Clinical Laboratory Standards (NCCLS) and College of American Pathologists (CAP) guidelines, accreditation requirements and

# Nursing

technical competence will be emphasized. Prerequisite: MEDT6623 Clinical Practicum I.

### MEDT7731 2 Credits Clinical Practicum III

Under supervision, students will observe and perform isolation, identification and susceptibility-testing procedures in microbiology. Students will gain experience in correlating theoretical knowledge with clinical practice, ensuring quality through performance and interpretation of quality-control procedures and addressing administrative and management issues of specimen acceptability, work flow, method assessment and appropriate use of interpretive guidelines. Prerequisite: MEDT7725 Clinical Practicum II.

### MEDT7752 2 Credits **Research Seminar**

The development and presentation of scholarly projects guided by faculty in selected areas of practice, administration and research. Prerequisite: MEDT7701 Advanced Research.

# Nursing (M.S.N.)

The graduate curriculum in nursing is designed to serve those who desire to study advanced nursing rooted in explicit nursing knowledge as a guide to various roles.

The Master of Science in Nursing (M.S.N.) program prepares individuals as nurse practitioners for primary care, forensic nurses, nurse information systems specialists or as nurse educators and nurse administrators.

Advanced scholarship takes place within the context of nursing as a discipline and profession and is the guiding theme of all activities encompassed within the learning environment.

This program is offered under the auspices of the Henry P. Becton School of Nursing and Allied Health, University College: Arts • Sciences • Professional Studies, at the Metropolitan Campus, Teaneck, New Jersey, and the Florham Campus, Madison, New Jersey.

## **Admission Requirements**

1. Graduation from an accredited B.S.N. program.

2. Undergraduate grade point ratio (GPR) of 3.00 or higher.

3. Registered nurse licensure in New Jersey.

4. Proficiency in spoken and written English.

5. Undergraduate prerequisites, including courses in health assessment, statistics and nursing research.

6. A personal interview may be required.

7. A minimum of one year of clinical nursing experience.

8. Two letters of recommendation.

## **Clinical Tracks**

• Adult Gerontology Nurse Practitioner\* (30 credits)

• Adult Gerontology Nurse Practitioner — Education or Administration Focus (39 credits)

• Adult Gerontology Nurse Practitioner — Forensic Focus (42 credits)

• Family Nurse Practitioner (37 credits)

• Family Psychiatric/Mental Health Nurse Practitioner\* (42 credits)

\*Offered at both the Metropolitan Campus in Teaneck, New Jersey, and at the Florham Campus in Madison, New Jersey.

## **Nonclinical Tracks**

- Nursing Administration (33 credits)
- Nursing Education (33 credits)
- Nursing Information Systems (32 credits)

## Post-Master's Certificate Programs

Individuals holding an M.S.N. degree may earn a Post-M.S.N. graduate certificate in gerontology nurse practitioner, family nurse practitioner, family psychiatric/ mental health nurse practitioner, nursing education and nursing information systems.

• Adult Gerontology Nurse Practitioner (24 credits)

• Family Nurse Practitioner (24 credits)

• Family Psychiatric/Mental Health Nurse Practitioner (24 credits)

- Nursing Education (24 credits)
- Nursing Administration (24 credits)
- Nursing Information Systems (24 credits)

Upon completion of the adult gerontology nurse practitioner, family nurse practitioner and family psychiatric/mental health nurse practitioner programs, the graduate is eligible for the Advanced Practice Nurse (APN) Certification Examination.

## Adult Gerontology Nurse Practitioner

Graduates of the adult gerontology nurse practitioner program will be qualified to diagnose and treat clients with a wide variety of illnesses. Students graduate with an M.S.N. degree and are eligible to take the adult-gerontology nurse practitioner certification exam (AANP or ANCC) to become certified in the field.

## Required Core Courses (8 credits)

Credits
NURS6600
Introduction to Advanced Nursing:
Philosophies and Theories
NURS7701
Advanced Research and Evidence-
based Practice
NURS7752
Master Project Seminar2

## Advanced Nursing Practice Courses (22 credits)

Credits
NURS6615
Advanced Pharmacology3
NURS6620
Advanced Health Assessment Theory 2
NURS6621
Advanced Health Assessment
Practicum2
NURS6682
Primary Care of the Adult
Gerontology I – Theory3
NURS6683
Primary Care of the Adult
Gerontology I Practicum1
NURS7702
Advanced Pathophysiology3
NURS7735
Advanced Adult Gerontology II
Theory 3
NURS7736
Advanced Adult Gerontology II
Practicum1
NURS7759
Primary Care of the Adult
Gerontology III – Theory 3
NURS7760
Primary Care of the Adult
Gerontology III Practicum1

## Adult Gerontology Nurse Practitioner — Education or Administration Focus

Graduates of the adult-gerontology nurse practitioner program will be qualified to diagnose and treat clients with a wide variety of illnesses. Students graduate with an advanced practice nursing (A.P.N.) degree and are eligible to to take the adult nurse practitioner certification exam (AANP or ANCC) to become certified in the field. Students select a role specialization in education or administration (9 credits).

### Required Core Courses (8 credits) NURS6600

Introduction to Advanced Nursing:
Philosophies and Theories
NURS7701
Advanced Research and
Evidence-based Practice3
NURS7752
Master Project Seminar2

## Advanced Nursing Practice

Courses (22 credits)
NURS6615
Advanced Pharmacology3
NURS6620
Advanced Health Assessment Theory2

Credits
NURS6621
Advanced Health Assessment
Practicum2
NURS6682
Primary Care of the Adult
Gerontology I – Theory
NURS6683
Primary Care of the Adult
Gerontology I Practicum1
NURS7702
Advanced Pathophysiology3
NURS7735
Advanced Adult Gerontology II
Theory 3
NURS7736
Advanced Adult Gerontology II
Practicum1
NURS7759
Primary Care of the Adult
Gerontology III – Theory 3
NURS7760
Primary Care of the Adult
Gerontology III Practicum1 Total30

## Role Specialization (9 credits)

**Education courses**: curriculum development; measurement and evaluation; educational theory/teaching strategies.

Administration courses: public and nonprofit management; human resources management; budgeting and finance. Total......39

## Adult Gerontology Nurse Practitioner — Forensic Focus

As a forensic nurse, graduates will focus on meeting the needs of victims and perpetrators of crimes, applying scientific nursing knowledge to the delivery of care for survivors of traumatic injury, victims of violence or death investigations. The nurse may specialize in such areas as domestic violence, child and elder abuse and emergency trauma. The forensic nurse may also be involved in conducting crime-scene investigations or giving courtroom testimony.

### **Required Core Courses (8 credits)** NURS6600

Introduction to Advanced Nursing:
Philosophies and Theories
NURS7701
Advanced Research and
Evidence-based Practice
NURS7752
Master Project Seminar2

## Advanced Nursing Practice Courses (22 credits)

Credits
NURS6615
Advanced Pharmacology3
NURS6620
Advanced Health Assessment Theory 2
NURS6621
Advanced Health Assessment
Practicum2
NURS6682
Primary Care of the Adult
Gerontology I – Theory3
NURS6683
Primary Care of the Adult
Gerontology I Practicum1
NURS7702
Advanced Pathophysiology
NURS7735
Advanced Adult Gerontology II
Theory 3
NURS7736
Advanced Adult Gerontology II
Practicum1
NURS7759
Primary Care of the Adult
Gerontology III – Theory 3
NURS7760
Primary Care of the Adult
Gerontology III Practicum1

# Forensic Nursing Specialization (12 credits)

Courses for the forensic nursing specialization will be selected each semester from the offerings of the School of Psychology and the School of Criminal Justice, Political Science and International Studies graduate courses in forensics, see below for examples. CRIM6005

Advanced Criminological Theory
CRIM7020
Ethics, Politics and Justice
CRIM7065
Crime, Victimology and Risk
Reduction
PSYC6231
Psychological Bases of
Criminal Behavior
Total42

## **Family Nurse Practitioner**

Graduates of the family nurse practitioner program will be qualified to diagnose and treat clients across the lifespan with a wide variety of illnesses. Students graduate with an advanced practice nursing M.S.N. degree and are eligible to take the family

# Nursing

nurse practitioner certification exam (AANP or ANCC) to become certified in the field. Also available online.

## Required Core Courses (8 credits)

Credits
NURS6600
Introduction to Advanced Nursing:
Philosophies and Theories
NURS7701
Advanced Research and
Evidence-based Practice 3
NURS7752
Master Project Seminar2

## Advanced Nursing Practice

Courses (29 credits)
NURS6615
Advanced Pharmacology3
NURS6620
Advanced Health Assessment Theory 2
NURS6621
Advanced Health Assessment
Practicum2
NURS6682
Primary Care of the Adult
Gerontology I – Theory3
NURS6683
Primary Care of the Adult
Gerontology I Practicum1
NURS7702
Advanced Pathophysiology3
NURS7735
Advanced Adult Gerontology II
Theory
NURS7736
Advanced Adult Gerontology II
Practicum
NURS7794
Family Care I Pediatrics
NURS7795
Family Primary Care I Practicum1
NURS7810
Family Primary Care II Theory
NURS7811
Family Primary Care II Practicum1 NURS7812
Family Systems3

## Family Psychiatric/Mental Health Nurse Practitioner

As a family psychiatric/mental health nurse practitioner, graduates will be qualified to diagnose and treat clients with a wide variety of mental illnesses. Students graduate with an advanced practice nursing (A.P.N.) degree and are eligible to take the family psychiatric/mental health nurse practitioner exam (ANCC) to become certified in the field.

## Required Core Courses (8 credits)

Credits
NURS6600
Introduction to Advanced Nursing:
Philosophies and Theories
NURS7701
Advanced Research and
Evidence-based Practice 3
NURS7752
Master Project Seminar2

## Advanced Nursing Practice Courses (34 credits)

NURS6501
Advanced Psychiatric/Mental
Health Nursing Theory I:
Families, Children and
Adolescents
NURS6502
Advanced Psychiatric/Mental
Health Nursing Practicum I:
Families, Children and
Adolescents 2
NURS6503
Advanced Psychiatric/Mental
Health Nursing Theory II:
Adults
NURS6504
Advanced Psychiatric/Mental
Health Nursing Practicum II:
Adults2
NURS6505
Advanced Psychiatric/Mental
Health Nursing Theory III:
Geriatrics3
NURS6506
Advanced Psychiatric/Mental
Health Nursing Practicum III:
Geriatrics2
NURS6615
Advanced Pharmacology3
NURS6620
Advanced Health Assessment Theory 2
NURS6621
Advanced Health Assessment
Practicum2
NURS6701
Psychopharmacology 3
NURS7702
Advanced Pathophysiology3
NURS7812
Family Systems
NURS7815
Advanced Practice Nursing Role
Development
Total42

## **Nursing Administration**

The master of science in nursing administation program is designed to prepare leaders of administrative teams in hospitals, clinics or other health care organizations who will influence and implement institutional policies during this period of health care reform, restructuring and changes affecting patient outcomes. Students who completed another master's degree cannot transfer any courses to complete this master's degree.

## **Required Courses**

## Nursing Core Courses (8 credits)

Credits
NURS6600
Introduction to Advanced Nursing:
Philosophies and Theories
NURS7701
Advanced Research and
Evidence-based Practice 3
NURS7752
Master Project Seminar2
5
Advanced Nursing Courses (10 credits)
Advanced Nursing Courses (10 credits) NURS7718
,
NURS7718
NURS7718 Administrative Practicum4
NURS7718 Administrative Practicum4 NURS7771
NURS7718 Administrative Practicum
NURS7718 Administrative Practicum4 NURS7771 Seminar in Nursing Education3 NURS8002

### ursing information Systems Cou

## (6 credits)

NURS6640
Clinical Nursing Information
Systems and Applications 3
NURS7741
Project Management

## Master of Administrative Science or

M.B.A. Courses (9 credits)

MADS6600
Theory and Practice of
Administration3
or
MGMT5012
Foundations of Management 2
MADS6601
Financial Administration 3
or
FIN5012
Principles of Finance2
MADS6606
Administrative Leadership in
Complex Organizations 3
or
MGMT6012
Organizational Behavior
and Leadership2
Total32

## **Nursing Education**

The nurse educator M.S.N. program prepares nurses as teachers in collegiate programs, in associate or bachelor's degree nursing education. Students acquire knowledge and skills in teaching that enable them to work effectively with students, patients and consumers. Students complete a preceptored practicum that is individually tailored to student goals and exposes them to all aspects of the faculty academic and clinical teaching role. Also available online.

## Required Core Courses (8 credits)

NURS6600	
Introduction to Advanced Nursing	g:
Philosophies and Theories	
NURS7701	
Advanced Research and	
Evidence-based Practice	3
NURS7752	
Master Project Seminar	2

## Advanced Nursing Education Courses (25 credits)

NURS6615
Advanced Pharmacology3
NURS7702
Advanced Pathophysiology3
NURS7705
Educational and Learning Theory3
NURS7706
Teaching Strategies for the Learning
Environment3
NURS7713
Curriculum Development and
Theory
NURS7714
Outcomes Assessment 3
NURS7717
Teaching Practicum4
NURS7771
Seminar in Nursing Education3 Total3

### **Nursing Information Systems**

The nursing information systems specialist is able to integrate computer science, information science and nursing science to assist in the management and process of nursing data, information and knowledge to support evidence-based practice and to improve the delivery of nursing care.

### **Required Core Courses (8 credits)** NURS6600

## NURS7701 Advanced Research and

Credits

## Nursing Information Systems Specialization (12 credits)

NUR56640
Clinical Nursing Information
Systems and Applications3
NURS7740
Nursing Informatics Role3
NURS7741
Project Management
NURS7745
Practicum in Nursing Informatics3
č

## Support Courses (9 credits)

## Elective Courses (3 credits)

## Post-Master's Certificate Program

The Post-Master's Certificate Program allows nurses who have a master's degree in nursing from an NLN/CCNE-accredited program to pursue further post-graduate study in APRN (Advanced Practice Nursing) in adult gerontology, family, family psychiatric/mental health, forensic and nonclinical areas in education and nursing information systems.

## Admissions Criteria

1. Master's degree in nursing from an

- NLN/CCNE-accredited program.
  - 2. Grade point ratio (GPR) of 3.00.

3. Current New Jersey registered nurse (RN) license or eligibility for RN licensure in New Jersey.

\*Prerequisite is CSCI5525 Introduction to Computer Science.

\*\*Prerequisite is CSCI6720 Management Information Systems.

## Adult Gerontology Nurse Practitioner Post-Master's Certificate

The adult gerontology nurse practitioner post-master's certificate program includes didactic and clinical experiences that focus on the primary-care needs of the adultgerontology population.

Designed for M.S.N.-prepared nurses who are interested in becoming adult gerontology nurse practitioners, graduates are eligible for national certification.

## Required Courses (24 credits)

Credits
NURS6615
Advanced Pharmacology*3
NURS6620
Advanced Health Assessment
Theory**2
NURS6621
Advanced Health Assessment
Practicum**2
NURS6682
Primary Care of the Adult
Gerontology I – Theory3
NURS6683
Primary Care of the Adult
Gerontology I Practicum1
NURS7702
Advanced Pathophysiology**3
NURS7735
Advanced Adult Gerontology II
Theory
NURS7736
Advanced Adult Gerontology II
Practicum1
NURS7759
Primary Care of the Adult
Gerontology III Theory
NURS7760
Primary Care of the Adult
Gerontology III Practicum1
NURS7813
APN Practicum
Total credits required are determined
on an individual basis after gap analysis of
prior education and certification.

Total clinical hours: 550 hours

<sup>\*</sup>NURS6615 Advanced Pharmacology must have been taken within three years of entry into the program.

<sup>\*\*</sup>NURS6620 Advanced Health Assessment Theory, NURS6621 Advanced Health Assessment Practicum and NURS7702 Advanced Pathophysiology must have been completed within five years of entry into the program.

## Family Nurse Practitioner Post-Master's Certificate

The family nurse practitioner post-master's certificate program includes didactic and clinical experiences that focus on the primary-care needs of families and communities.

Designed for M.S.N.-prepared nurses who are interested in becoming nurse practitioners, graduates are eligible for national certification.

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## **Required Courses (24 credits)**

Credits
NURS6615
Advanced Pharmacology*3
NURS6620
Advanced Health Assessment
Theory**2
NURS6621
Advanced Health Assessment
Practicum**2
NURS6682
Primary Care of the Adult
Gerontology I – Theory3
NURS6683
Primary Care of the Adult
Gerontology I Practicum1
NURS7702
Advanced Pathophysiology**3
NURS7735
Advanced Adult Gerontology II
Theory
NURS7736
Advanced Adult Gerontology II
Practicum1
NURS7794
Family Primary Care I Pediatrics 3
NURS7795
Family Primary Care I Practicum1
NURS7810
Family Primary Care II Theory 3
NURS7811
Family Primary Care II Practicum1
NURS7812
Family Systems 3
NURS7813
APN Practicum

Total credits required are determined on an individual basis after gap analysis of prior education and certification. If the

\*NURS6615 Advanced Pharmacology must have been taken within three years of entry into the program.

\*\*NURS6620 Advanced Health Assessment Theory, NURS6621 Advanced Health Assessment Practicum and NURS7702 Advanced Pathophysiology must have been completed within five years of entry into the program. student is not a nurse practitioner, he or she must complete NURS6682 Primary Care of the Adult Gerontology I – Theory and NURS6683 Primary Care of the Adult Gerontology I Practicum and NURS7735 Advanced Adult Gerontology II Theory or NURS7736 Advanced Adult Gerontology II Practicum as well as NURS7794 Family Primary Care I and NURS7810, NURS7811 Family Primary Care II.

Total clinical hours: 640 hours to be completed in the program.

## Family Psychiatric/Mental Health Nurse Practitioner Post-Master's Certificate

Upon completion of the family psychiatric and mental health advanced practice certificate program, students are eligible for family psychiatric and mental health nurse practitioner certification through the American Nurses Credentialing Center (ANCC).

## Required Courses (24 credits)

NUDS6501	cicuits
NURS6501	
Advanced Psychiatric/Mental	
Health Nursing Theory I:	
Families, Children and	-
Adolescents	
NURS6502	
Advanced Psychiatric/Mental	
Health Nursing Practicum I:	
Families, Children and	
Adolescents	
NURS6503	
Advanced Psychiatric/Mental	
Health Nursing Theory II:	
Adults	3
NURS6504	
Advanced Psychiatric/Mental	
Health Nursing Practicum	
II: Adults	2
NURS6505	
Advanced Psychiatric/Mental	
Health Nursing Theory III:	
Geriatrics	3
NURS6506	
Advanced Psychiatric/Mental	
Health Nursing Practicum	
III: Geriatrics	2
NURS6701	
Psychopharmacology	
NUR\$7812	
Family Systems	
NURS7815	
Advanced Practice Nursing	
Role Development	
1	

Total credits required are determined on an individual basis after gap analysis of prior education and certification.

Total clinical hours: 555 hours to be completed in the program.

## Accelerated D.N.P. Programs

The Henry P. Becton School of Nursing and Allied Health offers the following accelerated D.N.P. programs:

• Pre-baccalaureate Nursing to D.N.P. (109 credits and 1,565 clinical hours)

• Post-baccalaureate Nursing to D.N.P. (58 credits and 1,065 clinical hours)

• Postmaster's D.N.P. (36 credits and 500 residency hours)

For information go to Accelerated D.N.P. Programs, pages 191–192.

## **For Information**

For more information, contact Dr. Boas Yu, associate director of graduate nursing programs, at (201) 692-2881 or boas\_yu@fdu.edu.

## **Course Offerings**

Courses offered fall, spring and/or summer are so noted. To determine availability of courses not so designated, please check with the school.

## Nursing

Henry P. Becton School of Nursing and Allied Health

NURS6501

### **3** Credits

### Advanced Psychiatric/Mental Health Nursing Theory I: Families, Children and Adolescents

The focus of this course is on children and adolescents with acute and chronic mental illnesses. Interventions emphasize music therapy; play therapy; cognitive-behavior therapy; individual, family and group therapy; and residential, day and hospital treatment. Biologically based management is also addressed. Assessments and differential diagnoses are emphasized and the use of reliable and valid measurement instruments is taught. Knowledge from nursing science, psychotherapies, biological therapies and evidence-based research provide the basis for culturally competent psychiatric advancepractice nursing care to this population. Prerequisites: NURS6615 Advanced Pharmacology, NURS6620 Advanced Health Assessment Theory, NURS6621 Advanced Health Assessment Practicum and NURS6701 Psychopharmacology. Corequisite: NURS6502 Advanced Psychiatric/Mental Health Nursing Practicum I: Families, Children and Adolescents.

### NURS6502

### 2 Credits Advanced Psychiatric/Mental Health Nursing Practicum I: Families, Children and Adolescents

Students will apply knowledge from NURS6501 Advanced Psychiatric/Mental Health Nursing Theory I: Families, Children and Adolescents in providing direct care in the clinical arena to children and adolescents with acute and chronic mental illnesses. Students will carry a caseload of patients under the direct guidance of an experienced preceptor who will be certified as a family psychiatric nurse practitioner or child and adolescent psychiatrist. Weekly supervision sessions with faculty enhance students' developing clinical competence. care to this population. Prerequisites: NURS6615 Advanced Pharmacology, NURS6620 Advanced Health Assessment Theory and NURS6621 Advanced Health Assessment Practicum. Corequisite: NURS6501 Advanced Psychiatric/Mental Health Nursing Theory I: Families, Children and Adolescents.

### NURS6503

#### 3 Credits

### Advanced Psychiatric/Mental Health Nursing Theory II: Adults

The focus of this course is on adults with acute and chronic mental illnesses. Interventions emphasize one-on-one interaction from a variety of therapeutic modalities such as short-term psychotherapy, biologically based management and cognitive-behavior therapy. Group and family therapy are explored as treatment modalities. Assessments and differential diagnoses are emphasized and the use of reliable and valid measurement instruments is addressed. Knowledge from nursing science; individual, group and family theory; and evidence-based research provide the basis for culturally competent psychiatric advancepractice nursing care to this adult population. Prerequisites: NURS6501 Advanced Psychiatric/Mental Health Nursing Theory I: Families, Children and Adolescents; NURS6502 Advanced Psychiatric/Mental Health Nursing Practicum I: Families, Children and Adolescents; and NURS6701 Psychopharmacology. Corequisite: NURS6504 Advanced Psychiatric/Mental Health Nursing Practicum II: Adults.

#### NURS6504 2 Credits

### 2 Creatis

### Advanced Psychiatric/Mental Health Nursing Practicum II: Adults

Students will apply knowledge from NURS6503 Advanced Psychiatric/Mental Health Nursing Theory II: Adults in providing direct care in the clinical arena to adults with acute and chronic mental illnesses. Students will carry a caseload of patients under the direct guidance of an experienced preceptor who will be certified as a nurse practitioner or psychiatrist. Weekly supervision sessions with faculty enhance students' developing clinical competence. Prerequisites: NURS6501 Advanced Psychiatric/Mental Health Nursing Theory I: Families, Children and Adolescents; NURS6502 Advanced Psychiatric/Mental Health Nursing Practicum I: Families, Children and Adolescents; and NURS6701 Psychopharmacology. Corequisite: NURS6503 Advanced Psychiatric/Mental Health Nursing Theory II: Adults.

### NURS6505

**3** Credits

### Advanced Psychiatric/Mental Health Nursing Theory III: Geriatrics

The focus of this course is on geriatric patients with acute and chronic mental illnesses. Psychotherapeutic and biologically based therapies that are unique to this population will be addressed. Assessments and differential diagnoses are emphasized and the use of reliable and valid measurement instruments is taught. Knowledge from nursing science; individual, group and family theory; and evidence-based research provide the basis for culturally competent psychiatric advance-practice nursing care to this geriatric population. Prerequisites: NURS6501 Advanced Psychiatric/Mental Health Nursing Theory I: Families, Children and Adolescents; NURS6502 Advanced Psychiatric/Mental Health Nursing Practicum I: Families, Children and Adolescents; NURS6503 Advanced Psychiatric/Mental Health Nursing Theory II: Adults; and NURS6504 Advanced Psychiatric/Mental Health Nursing Practicum II: Adults. Corequisite: NURS6506 Advanced Psychiatric/Mental Health Nursing Practicum III: Geriatrics.

### NURS6506 2 Credits

### Advanced Psychiatric/Mental Health Nursing Practicum III: Geriatrics

Students will apply knowledge from NURS6505 Advanced Psychiatric/Mental Health Nursing Theory III: Geriatrics in providing direct care in the clinical arena to geriatric patients with acute and chronic mental illnesses. Students will carry a caseload of patients under the direct guidance of an experienced preceptor who will be certified as a nurse practitioner or psychiatrist. Weekly supervision sessions with faculty enhance students' developing clinical competence. Prerequisites: NURS6501 Advanced Psychiatric/Mental Health Nursing Theory I: Families, Children and Adolescents; NURS6502 Advanced Psychiatric/Mental Health Nursing Practicum I: Families, Children and Adolescents; NURS6503 Advanced Psychiatric/Mental Health Nursing Theory II: Adults; and NURS6504 Advanced Psychiatric/Mental Health Nursing Practicum II: Adults. Corequisite: NURS6505 Advanced Psychiatric/Mental Health Nursing Theory III: Geriatrics.

### NURS6600 3 Credits Introduction to Advanced Nursing:

## Philosophies and Theories

Philosophies of science, nursing theories and conceptual models will be analyzed as guides to nursing education, administration, research and practice.

#### NURS6615 3 Credits

### **Advanced Pharmacology**

Examines legal implications, pharmacologic action and the monitoring of drug-therapy responses of clients needing various classifications of drugs in the management of health conditions. Prerequisites: NURS6620 Advanced Health Assessment Theory, NURS6621 Advanced Health Assessment Practicum and NURS7702 Advanced Pathophysiology.

## NURS6620

### 2 Credits

### **Advanced Health Assessment Theory**

This course will focus on the comprehensive health assessment of culturally diverse adult clients. Using a system's approach, the student will synthesize and analyze data relative to the health promotion of the adult population. The course will address the health-assessment needs of select populations across the life span of the adult. Ethical and legal implications of health assessment will be addressed. Prerequisite: NURS7702 Advanced Pathophysiology. Corequisite: NURS6621 Advanced Health Assessment Practicum.

### NURS6621 1–2 Credits Advanced Health Assessment

**Practicum** Utilizing theoretical foundations, the student will perform a comprehensive health assessment across the adult life cycle. The student's clinical skills will be validated by faculty and expert preceptor(s) in supervised clinical settings that provide the student with opportunities to practice cognitive and psychomotor skills necessary to begin the advanced practice role. Prerequisite: NURS7702 Advanced Pathophysiology. Corequisite: NURS6620 Advanced Health Assessment Theory.

### NURS6640

## 3 Credits

### Clinical Nursing Information Systems and Applications

This course examines the role and practice of informatics nurse specialists, which includes studying the development, implementation and evaluation of applications, tools, processes and systems that assist nurses with the management of data in taking care of patients and supporting the practice of nursing. The course focuses on assessing, adapting, integrating and evaluating

# Nursing

informatic applications to nursing in both the clinical and nonclinical domain.

### NURS6682 3 Credits Primary Care of the Adult Gerontology I - Theory

This course will introduce the student to the health care management of adult-geriatric clients in the primary-care setting, utilizing Quality and Safety Education For Nurses (QSEN) in developing competencies in the knowledge, skills and attitudes necessary to continuously improve outcomes within the primary-care setting. Students will identify and treat common deviations in health. Using a systems approach, this course will examine those alterations in health which are frequently encountered and managed by adult nurse practitioners in primary health care settings. All aspects of the health maintenance and disease management are emphasized, including but not limited to, disease-lifestyle modifications, nutritional needs, pharmacotherapy, client education, rehabilitation and evaluation of treatment plans.

### NURS6683 1 Credit Primary Care of the Adult Gerontology I Practicum

This course introduces the student to clinical practice as an advanced practice nurse. Students will work with an approved preceptor in an actual clinical setting where they will begin to deliver primary care to adultgerontology patients. They are expected to apply theory learned in didactic course to patient-management problems. Students are expected to initiate care which involves diagnosis, treatment and management of common illness and deviations from health for an adult and aged population. Students are also expected to promote health maintenance for culturally diverse populations ranging from late adolescence to geriatric clients.

## NURS6701 3 Credits

Psychopharmacology

This course provides students with a foundation in providing pharmacotherapy for clients with psychiatric disorders. The neurobiological changes underlying psychopathology are emphasized as the basis for prescribing decisions and management. The central importance of caring within a therapeutic rapport provides the philosophic stance from which students are encouraged to develop their unique prescribing practice. Prerequisites: NURS6615 Advanced Pharmacology, NURS6620 Advanced Health Assessment Theory, NURS6621 Advanced Health Assessment Practicum and NURS7702 Advanced Pathophysiology.

## NURS6702 3 Credits

### Advanced Psychiatric/Mental Health Nursing I: Assessment and Differential Diagnoses

This course assists students to become proficient in mental health and psychiatric assessment consistent with advanced nursing practice for health promotion, restoration and rehabilitation. Students practice advanced mental health evaluation techniques including individual assessments, laboratory tests, diagnostic studies and interpretation and documentation of the findings. Differential diagnosis from/with common physical health deviations is a hallmark of the course. Corequisite: NURS6703 Advanced Psychiatric/Mental Health Nursing I: Assessment and Differential Diagnoses Practicum.

### NURS6703

2 Credits

### Advanced Psychiatric/Mental Health Nursing I: Assessment and Differential Diagnoses Practicum

The student applies theoretical foundations by conducting comprehensive mental health assessments of adults. Clinical practice is provided under the supervision of faculty and expert preceptor(s) who validate the student's competence to begin advanced practice in psychiatric nursing. Prerequisites: NURS6615 Advanced Pharmacology, NURS6620 Advanced Health Assessment Theory and NURS6621 Advanced Health Assessment Practicum. Corequisite: NURS6702 Advanced Psychiatric/Mental Health Nursing I: Assessment and Differential Diagnoses.

## NURS6801 3 Credits

### Advanced Psychiatric/Mental Health Nursing II: Individual Therapeutics

This course is focused on implementing principles for psychiatric advanced practice nursing. Knowledge from nursing science and related fields is used to assess, diagnose and treat clients with psychiatric/mental health problems. Wellness and the promotion of mental health, treatment of clients with acute mental illnesses and the prevention of further psychiatric morbidity or disability are emphasized. The context of caring is explored relative to client circumstances, resources and issues in the delivery of mental health services to individuals. Nursing research findings are applied to emphasize the link between psychotherapeutic process and outcomes which form the evidence base for psychiatric health care. Prerequisites: NURS6702 Advanced Psychiatric/Mental Health Nursing I: Assessment and Differential Diagnoses, NURS6703 Advanced Psychiatric/Mental

Health Nursing I: Assessment and Differential Diagnoses Practicum and NURS7702 Advanced Pathophysiology. Corequisites: NURS6701 Psychopharmacology and NURS6802 Advanced Psychiatric/Mental Health Nursing II: Individual Therapeutics Practicum.

### NURS6802

2 Credits

### Advanced Psychiatric/Mental Health Nursing II: Individual Therapeutics Practicum

Students apply knowledge from NURS6801 Advanced Psychiatric/Mental Health Nursing II: Individual Therapeutics to the care of acute and chronically mentally ill adults in varied psychiatric settings with the guidance of an individual preceptor in the clinical agency. Weekly supervised sessions with course faculty enhance students' developing clinical competency by encouraging self-reflection, refinement of interviewing skills, integrating primary-care concern and collaborating with colleagues. Therapeutic use of self is an essential and integral aspect of this course. Prerequisites: NURS6702 Advanced Psychiatric/Mental Health Nursing I: Assessment and Differential Diagnoses, NURS6703 Advanced Psychiatric/ Mental Health Nursing I: Assessment and Differential Diagnoses Practicum and NURS7702 Advanced Pathophysiology. Corequisites: NURS6701 Psychopharmacology and NURS6801 Advanced Psychiatric/Mental Health Nursing II: Individual Therapeutics.

### NURS6810

**3** Credits

### Advanced Psychiatric/Mental Health Nursing III: Group and Family Therapeutics

This course is focused on principles used by psychiatric advanced practice nurses to optimize group and family functioning. Knowledge from nursing science, group and family theories and research is synthesized to provide an evidence base for psychiatric advanced practice nursing. Special emphasis is placed on the ethnically diverse emotional processes experienced by groups or families. Students engage client groups and families in therapeutic relationships to change biological, psychological and/or social functioning in order to promote optimal health and/or the fullest realization of human potential. Prerequisites: NURS6701 Psychopharmacology, NURS6801 Advanced Psychiatric/Mental Health Nursing II: Individual Therapeutics and NURS6802 Advanced Psychiatric/Mental Health Nursing II: Individual Therapeutics Practicum. Corequisite: NURS6811 Advanced Psychiatric/Mental Health Nursing III: Group and Family Therapeutics Practicum.

## NURS6811 2 Credits

### Advanced Psychiatric/Mental Health Nursing III: Group and Family Therapeutics Practicum

Students apply knowledge from NURS6810 Advanced Psychiatric/Mental Health Nursing III: Group and Family Therapeutics to the care of groups and families experiencing the challenge of mental illness and dysfunction. Students continue to carry a caseload of individual adult clients under the guidance of (an) experienced preceptor(s) in one or more clinical agencies. Weekly supervised sessions with course faculty enhance students' developing clinical competence by facilitating consultation with advanced practice nurse peers and experts in related disciplines. Dealing with psychiatric emergencies, enhancing cultural competence and integrating theoretical formulations are imperatives in this course. Prerequisites: NURS6801 Advanced Psychiatric/Mental Health Nursing II: Individual Therapeutics and NURS6802 Advanced Psychiatric/Mental Health Nursing II: Individual Therapeutics Practicum. Corequisite: NURS6810 Advanced Psychiatric/Mental Health Nursing III: Group and Family Therapeutics.

### NURS7701 3 Credits Advanced Research and Evidence-based Practice

The advancement of nursing knowledge through development and research is explored. Critical analysis of selected concepts using nursing and related literature is conducted and applied to the research process. Quantitative statistical procedures and qualitative methods are examined for their appropriate use in research design. Nursing research is evaluated for utilization in advanced practice cognizant of ethical issues. Prerequisite/Corequisite: NURS6600 Introduction to Advanced Nursing: Philosophies and Theories.

#### NURS7702 3 Credits Advanced Pathonhysic

Advanced Pathophysiology

This course critically analyzes theories and research from the biological and social sciences and the humanities which explain/predict human responses to health and illness. The focus of this course is interventions that promote health, prevent disease, ameliorate pathological responses and foster quality of life.

## NURS7703 0 Credits

## Advanced Educator Role Seminar I

This course provides the opportunity for students to discuss pertinent issues, challenges and innovations in nursing education in the 21st century. The course also provides a forum for discussion of mentoring activities and exploration of the teaching associate (TA) role. Students will be supported during initial assimilation into the TA role.

### NURS7704 0 Credits

## Advanced Educator Role Seminar II

This course provides the opportunity for students to discuss pertinent issues, challenges and innovations in nursing education in the 21st century. The course also provides a forum for discussion of mentoring activities and exploration of the teaching associate (TA) role. Students will be supported during initial assimilation into the TA role. Prerequisite: NURS7703 Advanced Educator Role Seminar I.

### NURS7705 3 Credits

### **Educational and Learning Theory**

This course provides an overview of philosophies of education and examines teaching-learning processes for the nurse as educator. Emphasis is placed on the adult learner. Components of critical thinking and contexts for learning are explored. The bases for educational evaluation are appraised. Selected theories from the social sciences are analyzed for appropriateness to nursing education and advanced practice.

## NURS7706

3 Credits

### Teaching Strategies for the Learning Environment

To facilitate active learning, the educator must be able to identify the needs of the learner, as well as strategies that will involve the learner as a lively participant in the learning environment. In this course, traditional and contemporary teaching approaches will be evaluated for use with diverse populations of learners in various settings: classroom, community, health care facilities and clients' homes.

## NURS7708

0 Credits

### **Advanced Educator Role Seminar III**

This seminar follows a cohort model and must be taken in sequence. It continues to provide the opportunity for students to discuss pertinent issues, challenges and innovations in nursing education in the 21st century. The course also provides a forum for discussion of mentoring activities and exploration of the teaching role. Students will continue to develop their teaching portfolios. Prerequisites: NURS7703 Advanced Educator Role Seminar I and NURS7704 Advanced Educator Role Seminar II.

### NURS7709 0 Credits

### Advanced Educator Role Seminar IV

This seminar follows a cohort model and must be taken in sequence. It continues to provide the opportunity for students to discuss pertinent issues, challenges and innovations in nursing education in the 21st century. The course also provides a forum for discussion of mentoring activities and exploration of the teaching role. Students will refine and complete their teaching portfolios. Prerequisites: NURS7703 Advanced Educator Role Seminar I, NURS7704 Advanced Educator Role Seminar II and NURS7708 Advanced Educator Role Seminar III.

### NURS7713 3 Credits

### **Curriculum Development and Theory**

This course provides opportunities for learners to explore all that is encompassed by the educational term curriculum. From the initial work by Ralph Tyler to current theories and frameworks, learners will be guided through the application of these essentials to the creation of dynamic curricula. The major project for this course is the development of curricula for use in academic settings, staff development in clinical settings or client education necessary to improve or restore health. Corequisite: NURS7705 Educational and Learning Theory. *Fall, Spring* 

## NURS7714

**3** Credits

## **Outcomes Assessment**

This course provides opportunities for learners to explore methods of evaluation for use in teaching settings. Traditional and contemporary teaching approaches will be evaluated for use with identified populations of learners. The learner will identify, analyze and apply general theories of evaluation specific to individual performance, curriculum and staff development and continuing-education programs in nursing. Discussion of the process of accreditation and its role for quality assurance within nursing education will be highlighted. Prerequisites: NURS7705 Educational and Learning Theory and NURS7713 Curriculum Development and Theory. Corequisite: NURS7706 Teaching Strategies for the Learning Environment.

### NURS7717 4 Credits

## Teaching Practicum

This is the capstone course in the nursing education track. Learners will identify a nurse educator they would like to work with for the semester. During this experience, learners will participate in and assume many responsibilities associated with being an educator: teaching didactic, clinical in various settings, committee work and evaluation. Learners will meet every other week for a seminar with their peers to share experiences.

### NURS7718 4 Credits Administrative Practicum

## This course allows students to apply

This course allows students to apply administrative theories, research and planning in the role of the nurse administrator. Students will be placed with a nurse administrator preceptor in a nursing or health facility. The students are expected to participate in multiple aspects of the nurse administrator role. Prerequisites: NURS6600 Introduction to Advanced Nursing: Philosophies and Theories, NURS6640 Clinical Nursing Information Systems and Applications, NURS7701 Advanced Research and Evidence-based Practice, NURS7752 Master Project Seminar and NURS7771 Seminar in Nursing Education.

## NURS7735 3 Credits

### Advanced Adult Gerontology II Theory

This course will continue to examine, assess, diagnose and treat alterations in health which are frequently encountered and managed by adult-gerontology nurse practitioners using a systems approach. The student will also utilize QSEN (Quality and Safety Education for Nurses) to improve patient outcomes in the adult-geriatric population.

## NURS7736 1–2 Credits

## Advanced Adult Gerontology II Practicum

This course continues to focus on the application of theory to practice in a primary care setting for the adult-gerontology population. Students will work with an approved preceptor in an actual clinical setting where they will continue to deliver primary care to adult and geriatric patients. Students are expect to apply theory learned in the didactic course to patient to manage health problems. Students are expected to diagnose, treat and manage common illnesses and deviations from healthy for an adult aged population. Students are also expected to promote health maintenance including those from culturally diverse populations.

### NURS7740 3 Credits Nursing Informatics Role

### This course builds upon the knowledge and skills of informatics nurse specialists obtained in the prerequisite course(s). Students will cover, in more depth, various alternative roles available to the informatics nurse, emphasizing consulting and education in various nonhospital-based situations. The course focuses on assessing, adapting, integrating and evaluating informatics applications to nursing for use in broad-based situations. Prerequisite: NURS6640 Clinical Nursing Information Systems and Applications.

### NURS7741 3 Credits **Project Management**

The purpose of this course is to integrate the essential components of project planning and management with health care information systems for nursing leaders. The course will outline the process for developing, implementing and evaluating project plans as well the integration of communication and project lifecycle theory. Prerequisites: NURS6640 Clinical Nursing Information Systems and Applications and NURS7740 Nursing Informatics Role. (Equivalent to PHRM8806 Project Management.

### NURS7745 3 Credits

## **Practicum in Nursing Informatics**

Practical experience in selected agencies allows students to develop skills needed for implementation and evaluation of clinical and management information systems in nursing and health care.

## NURS7746

3 Credits

## Nursing Informatics Practicum II

This practicum builds upon the knowledge and skills of informatics that nurse specialists acquired in NURS7745 Practicum in Nursing Informatics. Students will enhance their practical experience in selected agencies. The practicum will allow students to further develop skills necessary for system implementation in nursing and health care applications.

#### NURS7752 2 Credits Master Project St

## Master Project Seminar

Learners further develop the evidence-based project proposal started in NURS7701 Advanced Research and Evidence-based Practice. In addition, learners will have handson experience with a statistical analysis software (e.g. SPSS) using "dummy" data. Learners will meet periodically with their classmates and their mentors to complete the implementation and evaluation phases of the project.

### NURS7757 3 Credits

## Primary Care III

Expanding on the principles of assessment, diagnosis and therapeutics, this course prepares an adult-gerontology nurse practitioner to formulate differential diagnoses based on the presenting client's chief complaint. Approached in this manner, the practitioner is prepared for the reality of health care management. The entire course is taught using case studies and anecdotals from actual clinical experiences and moves the student through symptom analysis, physical findings, diagnostic workup, management and follow-up. Prerequisite: NURS7735 Advanced Adult Gerontology Theory. Corequisite: NURS7758 Primary Care III Practicum.

### NURS7758 1 Credit **Primary Care III Practicum**

This clinical course requires that the student practice 16-hour weeks for 16 weeks in a primary-care facility that serves a medically diverse adult gerontology clientele. All clinical experiences will be supervised by expert preceptors who, along with the faculty instructor, will continually evaluate student performance. This course serves as a transition vehicle for future independent practice. Thus the student is supervised by a mentor, but is encouraged to assume the role of the adult gerontology nurse practitioner more autonomously. Prerequisite: NURS7735 Advanced Adult Gerontology Theory. Corequisite: NURS7760 Primary Care of the Adult Gerontology III Practicum.

### NURS7759

3 Credits Primary Care of the Adult Gerontology III – Theory

This course will continue to present the principles of disease management of adultgerontology clients in the primary-care setting. Role development of the advanced practice nurse will be integrated throughout the course. Students are expected to apply the QSEN (Quality and Safety Education for Nurses) principles and competencies in their role as advanced practice nurses in the primary-care setting. Multi-dimensions of disease states frequently encountered and competently managed by advanced practice nurses will be discussed. Prerequisite: NURS7735 Primary Care of the Adult Gerontology II - Theory. Corequisite: NURS7760 Primary Care of the Adult Gerontology III Practicum.

## NURS7760

## 1 Credit

### Primary Care of the Adult Gerontology III Practicum

Students are expected to apply their advanced practice nursing role in conducting health promotion, assessing, making clinical decisions and managing the care of adult-gerontology clients in consultation with appropriate providers in the clinical setting. Preceptorships will be arranged in the varied adult-gerontologyfocused setting. Prerequisite: NURS7736 Primary Care of the Adult Gerontology II Practicum. Corequisite: NURS7759 Primary Care of the Adult Gerontology III – Theory.

### NURS7762 3 Credits

## **Forensic Science Technology**

This course provides a brief overview of scientific crime detection and more detailed discussion of techniques for case management and documentation, the concept of proof, the impact of emergent technology on the investigative process, interacting with victims and witnesses and interviewing suspects. The process of forensic-case management and the role of the forensic nurse will be examined. Particular emphasis may be placed on the investigation of particular types of crimes, for example, homicides, sex offenses, child abuse and hate crimes.

### NURS7763 3 Credits Criminal Law and Forensics

This course studies how social diversity and inequality shape the way criminal behavior is defined and controlled through the application of the criminal law and criminal justice system. Attention is given to the disparity of criminal offending, victimization and criminal-justice processing across demographic groups as well as explanations for observed disparities. The course also explores subordinate group members as criminal justice professionals.

### NURS7765 3 Credits Violence, Ethics and Human Rights Issues

This course provides an introduction to psychological issues relating to understanding, assessing and managing criminal and other abnormal behavior. An overview of mental disorders and their relationship to criminality and violence is provided. Topics include sanity, psychopathy, criminal profiling, serial killers, stalking, women who kill and threat assessment.

### NURS7771 3 Credits Seminar in Nursing Education

# This course provides the opportunity for the students to discuss pertinent issues, challenges and incourting in surging education in the 21

and innovations in nursing education in the 21st century. Discussion will be guided by faculty mentors. Prerequisite: NURS7717 Teaching Practicum.

## NURS7794 3 Credits

### **Family Primary Care I Pediatrics**

This course is designed to introduce the family nurse practitioner student to the primary care of infants, children and adolescents. Course content includes information related to principles of health promotion, disease prevention and assessment and management of common primary health care problems in diverse pediatric populations. Content is presented within a family-centered and developmental perspective and includes content related to advanced pathophysiology, research and psychosocial factors. Cultural factors as they relate to health care needs will be examined.

## NURS7795 1 Credit

## Family Primary Care I Practicum

This course provides students with clinical experience as primary health care givers in various clinical settings under the supervision of faculty and preceptors in the nursing management of infants, children, adolescents and families. In this practicum, students apply advanced knowledge of normal physiology, pathophysiology and psychosocial concepts of nursing care of children.120 hours of clinical required.

### NURS7810 3 Credits

### **Family Primary Care II Theory**

This course is designed to introduce the family nurse practitioner student to the health care issues of women. Critical analysis of clinical strategies and interventions in health promotion, health maintenance and disease prevention, routine prenatal care in uncomplicated pregnancies and assessment and management of common health problems in the primary care of women will be studied. This course builds upon the knowledge of the health care of women in the primary care of adult's theory and practicum courses. Content related to principles of pharmacology, pathophysiology and cultural issues is integrated throughout the course. Health-education methodologies and counseling strategies pertinent to women will be explored and intervention strategies developed. Focus is on health promotion, disease prevention and the clinical management and referral of common, recurring health problems of women.

## NURS7811

1 Credit

## **Family Primary Care II Practicum**

In the women's health course practicum, students apply advanced knowledge of normal physiology, pathophysiology and psychosocial concepts to nursing care of women across the life span. This practicum includes specific components of advanced nursing practice from self-directed clinical experience with expert professional nurse/physician preceptors in a variety of settings. Students must complete 120 preceptored clinical hours in the primary care of women.

### NURS7812 3 Credits Family Systems

The purpose of this course is to broaden the students' understanding of the family unit from a systems perspective. Characteristics and functions of families and their relationship to health and illness will be analyzed. Major theoretical perspectives affecting family functioning will be evaluated.

### NURS7813 3 Credits **APN Practicum**

This course is a preceptored Advanced Practice Nurse (APN) practicum in the primary care of individuals and families. Completion of the practicum is required in order to be eligible for certification as an APN. Prerequisites: all primary care courses.

### NURS7815

### 1 Credit

### Advanced Practice Nursing Role Development

This course assists students in preparing for the role of advanced practice nurse. Students will focus on the role from a historical perspective and evaluate social, economic and political factors that have contributed to its evolution. Variables contributing to the practice environment are explored. Ethical, legal and business acumen are examined.

For course description of CSCI-prefixed courses, see "Course Offerings," pages 104–110 and 177–178. For description of EENG7704 Computer-based Instrumentation, see page 156.

# Nursing Practice (D.N.P.)

The Doctor of Nursing Practice (D.N.P.) degree program educates nurses for the highest level of clinically expert practice, including sophisticated diagnostic and treatment competencies. These competencies, combined with a focus on health promotion, disease prevention and health education, prepare D.N.P.s for leadership-practice roles on the front line of their profession. Recognizing that advanced-practice preparation requires education at the doctoral level, this program provides intra- and interdisciplinary collaboration in both the education and practice settings.

The 36-credit program offers clinical leadership and organizational leadership tracks. The clinical leadership track prepares advanced practice nurses (APNs) for leadership in practice and the organizational leadership track prepares graduates for leadership positions in organizational systems. The curriculum consists of 24 credits of core requirements and 12 credits of specialty courses. The residency requirement of 500 hours offers students the opportunity to work closely with mentors on projects that will demonstrate expanded practice and mastery of D.N.P. competencies. Full-time students may complete the program in two years; part-time students' completion is dependent on their course load each semester. All students must complete the program within five years.

Graduates of the program will be prepared as nurse executives in either a health care system or an educational system. Based on this preparation, D.N.P. graduates will assume roles as independent practitioners, senior clinical faculty members in a college or university, nursing administrators in a variety of health care organizations, deans or department chairs of schools of nursing or nursing leaders in various organizational settings.

This program is offered under the auspices of the Henry P. Becton School of Nursing and Allied Health, University College: Arts • Sciences • Professional Studies, Metropolitan Campus, Teaneck, New Jersey.

## **Admission Requirements**

1. For the organizational leadership (indirect) track, a master's degree in nursing from a Commission on Collegiate Nursing Education (CCNE)- or National League for Nursing (NLN)- accredited program and current licensure as a registered nurse (RN).

2. For the clinical leadership (direct) track, a master's degree in nursing with advanced practice specialty from a CCNE/NLN-accredited program, current licensure as an RN and advanced practice nurse and relevant experience in advanced practice.

Grade point ratio of 3.50.
 Interview and completion of a writing sample.

5. Three letters of recommendation attesting to the applicant's academic ability and potentia for doctoral study.

## **Requirements for the Doctor of Nursing Practice Degree**

### Core Courses (24 credits)

Credits
NURS8000
Research I: Research Methodology 3
NURS8001
Applied Statistics
NURS8002
Health Care Delivery Systems
and Public Policy
NURS8003
Health Disparities: Social,
Ethical, Legal Issues
NURS8004
Research II: Evidence-based Research 3
NURS8007
Scientific Basis for D.N.P. Practice3
NURS8008
Information Systems for Health Care3
NURS8009
Global Health: Epidemiology and
Genomics
T-1-1 24

Total.....24

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## Specialty Tracks (12 credits)

### **Clinical Leadership Track**

Graduates of the clinical leadership track are prepared to demonstrate practice expertise, specialized knowledge, expanded responsibility and accountability in the care and management of individuals, families and aggregates in the community. The D.N.P. is prepared to be a leader in the

formation of therapeutic partnerships and interdisciplinary collaborations to facilitate informed decision making, positive lifestyle change and appropriate self-care. In addition to direct care, D.N.P. graduates use their understanding of the practice context to document practice trends, identify potenetial systemic changes and make improvements in the care of their particular patient population in the systems within which they practice. Roles of D.N.P. clinical-leadership track graduates include: expert practitioner in various health care settings and independent practice; consultant/role model in complex care management; and designer and director of evidence-based projects.

### Specialty Courses (12 credits)

Didactic content of these courses will be the same for clinical leadership and organizational leadership students. Application will be specialized for clinical leadership and organizational leadership students.

	Credits
NURS8010	
Health Quality Assessment and	
Outcomes	3
NURS8011	
Leadership/Organizational	
Analysis	3
NURS8012	
D.N.P. Role Development and	
Entrepreneurship	3
NURS8013	
Residency I	1
NURS8014	
Residency II	1
NURS8015	
Capstone Project Advisement	1
NURS8320	
Continuous D.N.P. Matriculation	*1
Tot	al12
Total Program	m36

## Organizational Leadership Track

Graduates of the organizational leadership track are prepared to conduct comprehensive organizational, systems and/or community assessments to identify aggregate health or system needs; work with diverse stakeholders for inter- or intraorganizational achievement of healthrelated organizational goals; and design client-centered delivery systems or policylevel delivery models.

\*Students who are not actively registered for any course must register for NURS8320 Continuous D.N.P. Matriculation..

# **Nursing Practice**

D.N.P. graduates of the organizational leadership track will be prepared as leaders in one of the following areas: management and administration, health care entrepreneurship or education.

### Specialty Courses (12 credits)

Didactic content of these courses will be the same for clinical leadership and organizational leadership students. Application will be specialized for clinical leadership and organizational leadership students.

Credits

	ereance
NURS8010	
Health Quality Assessment and	
Outcomes	3
NURS8011	
Leadership/Organizational	
Analysis	3
NURS8012	
D.N.P. Role Development and	
Entrepreneurship	3
NURS8013	
Residency I	1
NURS8014	
Residency II	
NURS8015	
Capstone Project Advisement	1
NURS8320	
Continuous D.N.P. Matriculation*	۶ 1
Tota	al12
Total Program	n36
U	

## Bridge Program to the D.N.P.

The Henry P. Becton School of Nursing and Allied Health offers a bridge program to the D.N.P. for nurses who have a master's degree in a field other than nursing who would like to pursue the D.N.P. degree.

### Admission Criteria

1. Bachelor of Science in nursing from a CCNE-/NLN-accredited program;

2. Current licensure as a registered nurse; and

3. A master's degree in a field other than nursing.

#### \*Students who are not actively registered for any course must register for NURS8320 Continuous D.N.P. Matriculation.

### Requirements

### **Accelerated D.N.P. Programs**

The Henry P. Becton School of Nursing and Allied Health offers the following accelerated D.N.P. programs:

• Pre-baccalaureate Nursing to D.N.P. (109 credits and 1,565 clinical hours)

• Post-baccalaureate Nursing to D.N.P. (58 credits and 1,065 clinical hours)

• Postmaster's D.N.P. (36 credits and 500 residency hours)

### Admission Requirements

Completion of a baccalaureate degree in fields other than nursing and the following academic prerequisites on a college level with a minimum grade of B:

• Human Anatomy and Physiology\* (8 credits, with lab),

- General Chemistry\* (4 credits, with lab)
- Introductory Chemistry is not accepted;
- Microbiology\* (4 credits, with lab)

• Statistics (3 credits) — Course must include inferential and descriptive statistics

• Microeconomics or Macroeconomics\*\* (3 credits);

• Bioethics/Medical Ethics\*\* (3 credits)

## Pre-Baccalaureate Nursing to D.N.P. (ABSN–D.N.P.) with Gerontology Focus (109 credits and 1,565 clinical hours)

### Required Courses (51 credits)

NURS2003

Fundamentals of Nursing I...... 3 NURS2004 Fundamentals of Nursing II...... 3

\*Must have been taken within the last five years. \*\*Required prerequisite for one-year program; taken as corequisite for two-year program only.

Cred	its
NURS2005	
Professional Communication	
Skills: Individual, Family	
and Groups	3
NURS2007	
Pharmacotherapeutics	. 3
NURS3300	
Medical-Surgical Nursing I	. 5
NURS3310	
Psychiatric Nursing	5
NURS3320	
Women's Health Nursing	5
NURS3340	
Nursing Care of the Child and Family	5
NURS4410	
Community Health Nursing	5
NURS4420	
Health Care Management	. 3
NURS4430	
Nursing Research	. 3
NURS4440	
Medical-Surgical Nursing II	
After completing above courses, students	3

## take the R.N. licensure exam. M.S.N. Courses (22 credits)

NURS6615
Advanced Pharmacology3
NURS6620, NURS6621
Advanced Health Assessment
(Lecture and Clinical)4
NURS6682, NURS86683
Primary Care of the Adult
Gerontology I
(Lecture and Clinical)4
NURS7702
Advanced Pathophysiology 3
NURS7735, NURS7736
Advanced Adult Gerontology II
(Lecture and Clinical)4
NURS7759, NURS7760
Primary Care of the Adult
Gerontology III
(Lecture and Clinical)4
After completing above courses, students
take the APN exam.

### D.N.P. Courses (36 credits)

NURS8000
Research I: Research Methodology3
NURS8001
Applied Statistics3
NURS8002
Health Care Delivery Systems
and Public Policy 3
NURS8003
Health Disparities: Social,
Ethical, Legal Issues 3

# **Nursing Practice**

NILIDCOOO4

Credits

NUKS0004
Research II: Evidence-based
Research3
NURS8007
Scientific Basis for D.N.P. Practice 3
NURS8008
Information Systems for Health Care 3
NURS8009
Global Health: Epidemiology
and Genomics3
NURS8010
Health Quality Assessment and
Outcomes
NURS8011
Leadership/Organizationazl Analysis 3
NURS8012
D.N.P. Role Development and
Entrepreneurship3
NURS8013
Residency I2
NURS8015
Capstone Project Advisement1

## *Post-Baccalaureate Nursing to D.N.P. (M.S.N.–D.N.P.) (58 credits and 1,065 clinical hours)*

## M.S.N. Courses (22 credits)

NURS6615
Advanced Pharmacology3
NURS6620, NURS6621
Advanced Health Assessment
(Lecture and Clinical)4
NURS6682, NURS86683
Primary Care of the Adult
Gerontology I
(Lecture and Clinical)4
NURS7702
Advanced Pathophysiology3
NURS7735, NURS7736
Advanced Adult Gerontology II
(Lecture and Clinical)4
NURS7759, NURS7760
Primary Care of the Adult Gerontology
III (Lecture and Clinical)4
After completing above courses, students
take the APN exam.
DND Courses (20 and dita)

### D.N.P. Courses (36 credits)

NURS8000
Research I: Research Methodology3
NURS8001
Applied Statistics
NURS8002
Health Care Delivery Systems
and Public Policy 3
NURS8003
Health Disparities: Social,
Ethical, Legal Issues 3

Credits	
NURS8004	
Research II: Evidence-based	
Research	
NURS8007	
Scientific Basis for D.N.P. Practice 3	
NURS8008	
Information Systems for Health Care 3	
NURS8009	
Global Health: Epidemiology	
and Genomics3	
NURS8010	
Health Quality Assessment and	
Outcomes 3	
NURS8011	
Leadership/Organizational Analysis 3	
NURS8012	
D.N.P. Role Development and	
Entrepreneurship3	
NURS8013	
Residency I 2	
NURS8015	
Capstone Project Advisement 1	

## *Post-master's D.N.P.* (36 credits and 500 residency hours)

### D.N.P. Courses (36 credits)

NURS8000
Research I: Research Methodology 3
NURS8001
Applied Statistics3
NURS8002
Health Care Delivery Systems
and Public Policy 3
NURS8003
Health Disparities: Social,
Ethical, Legal Issues 3
NURS8004
Research II: Evidence-based
Research
NURS8007
Scientific Basis for D.N.P. Practice 3
NURS8008
Information Systems for Health Care 3
NURS8009
Global Health: Epidemiology
and Genomics3
NURS8010
Health Quality Assessment and
Outcomes
NURS8011
Leadership/Organizational Analysis 3
NURS8012
D.N.P. Role Development and
Entrepreneurship3
NURS8013
Residency I 2
NURS8015
Capstone Project Advisement 1

### **Course Offerings**

Courses offered fall, spring and/or summer are so noted. To determine availability of courses not so designated, please check with the school.

### **Nursing Practice**

Henry P. Becton School of Nursing and Allied Health

## NURS8000

**3** Credits

## **Research I: Research Methodology**

This course focuses on the principles and conduct of research in the health care profession. Emphasis is on techniques for the control of variables, data analysis and interpretation of results. Students will do an indepth analysis of the interrelationship of theoretical frameworks, design, sample selection, data-collection instruments and dataanalysis techniques. Content is discussed in terms of clinical-nursing research problems and application to clinical settings. Prerequisite: NURS8001 Applied Statistics.

### NURS8001 3 Credits

### **Applied Statistics**

This class is designed as an accelerated course to demonstrate applied statistical procedures in medical/nursing contexts. Students will analyze medical/nursing research using major statistical techniques. At the completion of this course, students will be able to identify experimental variables, understand and apply terminology, eyeball-estimate the descriptive and inferential statistics appropriate for data sets, determine which inferential statistics, if any, should be applied to analyze a data set, evaluate data using appropriate statistical tools, calculate all statistical tests and interpret findings.

#### NURS8002 3 Credits

### Health Care Delivery Systems and Public Policy

The course is an overview of trends in the delivery, financing and organization of health services in the United States. The American health care is analyzed and compared with health care services of other countries. Approaches to managing quality, access and costs are considered in the context of their social and ethical implications. Government policymaking is reviewed to form the foundations for discussing the political economy of health-services delivery.

### NURS8003 3 Credits Health Disparities: Social, Ethical, Legal Issues

This course explores the concepts of health disparities and social justice with particular attention to the structural causes of historical and contemporary inequalities as they relate to race and socioeconomic status. Methods of calculating different measures of health disparity will be analyzed, and strategies for creating equality in access to health care will be explored. The course will also examine legal and ethical issues affecting health care.

### NURS8004 3 Credits

### **Research II: Evidence-based Research**

Emphasis in this course is placed on methods for designing evidence-based studies and processes for obtaining and evaluating findings as scientific evidence for practice. Students will design projects to address emerging clinical problems. Methods to develop best practices and practice guidelines and to facilitate the evaluation of systems of care that will improve patient safety and outcomes will be explored.

## NURS8007

### **3** Credits

## Scientific Basis for D.N.P. Practice

The focus is on biophysical, nursing, psychosocial and organizational sciences as the basis for the highest level of nursing practice, research and health care delivery. The emphasis in this course is on translation and utilization of theory to D.N.P. nursing practice and research. Knowledge from the biophysical, psychosocial and organizational sciences are analyzed and evaluated for application to nursing research and practice.

### NURS8008 3 Credits

### **Information Systems for Health Care**

The course focuses on the application of information technology (IT) and information systems (IS) to improve health care effectiveness. It explores IS/IT concepts, models and frameworks that enhance decisions regarding implementation, planning and evaluation of information systems for use in health care. The course provides the student with the information to evaluate and utilize information technology and systems to support and improve nursing and health care systems.

### NURS8009 3 Credits Global Health: Epidemiology and Genomics

This course focuses on the principles of epidemiology and genomics and their effects on global health promotion and disease prevention in aggregates. Global health issues and their impact on individuals and communities will be explored and analyzed. Environmental health concepts, emerging infectious diseases and emergency preparedness are included. Prerequisites: NURS8001 Applied Statistics and NURS8003 Health Disparities: Social, Ethical, Legal Issues.

### NURS8010

#### **3** Credits

### Health Quality Assessment and Outcomes

This course examines leadership issues and the role of the nurse executive in quality management. The development of quality standards and benchmarking and the design and implementation of quality initiatives will be examined. The processes for collecting and analyzing appropriate data for management decisions will be discussed. Prerequisite: NURS8001 Applied Statistics. Corequisite: NURS8000 Research I: Research Methodology.

### NURS8011 3 Credits

### Leadership/Organizational Analysis

The emphasis is placed on developing the leadership competencies of the D.N.P. student. The role of the D.N.P. as a clinical and organizational leader will be explored. Organizational and change theories will be discussed and applied to organizational and clinical problems. The student will gain an understanding of grant writing as a tool for facilitating organizational change. Fifty hours of the residency will be completed in this course. Prerequisites: NURS8000 Research I: Research Methodology, NURS8004 Research II: Evidence-based Research and NURS8007 Scientific Basis for D.N.P. Practice.

### NURS8012 3 Credits **D.N.P. Role Development and Entrepreneurship**

This course provides an understanding of the theory and processes related to the making of decisions that determine the direction and success of the organization. Students will gain an understanding of strategic management and organizational design concepts, theories and techniques in order to illuminate the processes of strategy making and implementation. In addition, this course will enable students to gain insight into the concept of entrepreneurship, its importance for an organization and the challenges associated with it. Case analysis and a business plan will be used to apply theories and processes learned in the course. Prerequisite: NURS8011 Leadership/Organizational Analysis.

### NURS8013 1 Credit

## **Residency I**

Building on the planned residency experiences of NURS8011 Leadership/Organizational Analysis and under the mentorship of a doctorally prepared preceptor, students immerse themselves in the role of clinical or organizational leader. Individual contracts will be developed. Residency placements are made dependent on current experiences and students' goals. Students are required to complete 150 hours in NURS8013 Residency I. Prerequisites: all D.N.P. core and specialty courses.

## NURS8014 1 Credit

## **Residency II**

Building on the residency experiences of NURS8013 Residency I and under the mentorship of a doctorally prepared preceptor, students complete the residency requirements and the D.N.P. portfolio. Students are required to complete 150 hours in NURS8014 Residency II. Prerequisites: all D.N.P. core and specialty courses.

### NURS8015 1 Credit

### **Capstone Project Advisement**

The evidence-based project is a faculty-guided experience that provides evidence of critical thinking and aims to improve outcomes in clinical and organizational settings. Prerequisites: NURS8013 Residency I and NURS8014 Residency II.

## NURS8320

1 Credit

### **Continuous D.N.P. Matriculation\***

Students enrolled in the D.N.P. program who are not actively taking any courses must be registered in the Continuous D.N.P. Matriculation course. This course provides the opportunity for students' continued use of various University facilities, i.e. libraries, recreation facilities and advisement.

\*Students who are not actively registered for any course must register for NURS8320 Continuous D.N.P. Matriculation.

# Pharmaceutical Management Studies (M.B.A.)

See Business, Pharmaceutical Management Studies, page 70.

# Pharmacy (Pharm.D.)

The School of Pharmacy and Health Sciences has developed a program and curriculum that looks to prepare students to serve as leaders across the continuum of health care and beyond. From the foundational course work of the first semesters through the final practice experiences of the fourth professional year, students will be challenged to think, lead, implement, communicate and advocate as they expand the borders of pharmacy practice. Through the use of activelearning strategies, technology and enhanced programming including the option to pursue dual degrees, students will be provided with diverse options to prepare for opportunities inside and beyond the traditional realms of pharmacy practice.

The first-year curriculum has been designed to build a solid foundational understanding of the biological, chemical, ethical, professional and communicational aspects of pharmacy. Students will focus on gaining a core of knowledge that will prepare them for their first pharmacy practice experience, to be conducted during the first professional summer at a community setting. During the first professional year, students will also be provided insight and exposure to the expanding horizons of pharmacy, allowing them to begin to contemplate their selection of a dual-degree pathway. Qualified students will be able to select this option of study following their first year in the program, provided they have met both the minimum grade point ratio standards set forth by the School of Pharmacy and Health Sciences and the admissions standards set forth by the master's degree program.

During the second professional year, students will have the opportunity to probe deeper into all areas of pharmacy, both from the clinical and physical aspects as well as the patient-care focus. Students will cover expansive units in integrated pharmacotherapy where they will cover all therapeutic aspects of major organ systems while simultaneously learning about the pharmaceutic techniques of drug preparation and delivery. Students will begin elective course work within their areas of interest, either for the purposes of beginning their dual-degree curriculum or simply for the purpose of broadening horizons and learning more about areas related to the practice of pharmacy. During either the winter or summer intersessions, students will complete their second introductory practice experience within a hospital or hospital-related institutional setting.

The third professional year provides students with the ability to tie together and interconnect all of the concepts learned throughout the prior semesters. With a series of overview courses that provide a holistic view of pharmacy, students will be able to make connections between all of their classroom, laboratory and practice experiences. Students will continue their pursuit of elective course work toward the completion of their master's level of study, while simultaneously completing the necessary final courses in preparation for their advanced practice experiences. Students will gain an additional point of experience through their third introductory practice experience, geared toward a patient-care experience that aligns with their interests and course of study. Courses in epidemiology,

pharmacogenomics, pharmacoeconomics and outcomes and a course on the global mission of pharmacists are innovative courses that will expand the perspectives of pharmacy students beyond a traditional course structure. The expectation is that students will gain a familiarity and understanding of these significant areas that are so vital to understanding health care and the changing role of the pharmacist inside the health sciences.

The focus on the fourth professional year is the completion of nine advanced pharmacy practice experience (APPE) courses, exposing students to the wide range of options and roles for pharmacists within direct patient care, advocacy, management, public health and other areas.

This program is offered under the auspices of the School of Pharmacy and Health Sciences, Florham Campus, Madison, New Jersey.

## **Admission Requirements**

### **General Requirements Overview**

Prior to matriculation, applicants to the the FDU School of Pharmacy and Health Sciences should complete 76 semester hours of course work at any regionally accredited college or university, including the following required courses:

• 8 semester hours of general biology (with laboratory)

- 8 semester hours of anatomy and physiology (with laboratory)
- 8 semester hours of general chemistry (with laboratory)
- 8 semester hours of organic chemistry (with laboatory)
- 4 semester hours of physics (with
- laboratory)
- 3 semester hours of biochemistry
- 3 semester hours of calculus

• 3 semester hours of applied statistics

• 3 semester hours of English composition

## Standardized Testing

The Pharmacy College Admissions Test (PCAT) or Graduate Record Examinations (GRE) is recommended to make an application more competitive but is not required.

## Letters of Recommendation

Three letters of recommendation (two academic references, at least one from a science professor, and the third from a personal reference, who is not a relative). A pharmacist is highly recommended but not required.

## Academic Integrity

Students applying to the School of Pharmacy and Health Sciences must sign an affidavit of integrity, stating that all supporting portfolio or written materials submitted for application is the student's original work. Any evidence of plagiarism or academic dishonesty will result in denial of admission or removal from the program and forfeiture of any student status, tuition or fees paid while enrolled within the program.

## **Technical Standards**

For detailed information about the technical standards and requirements, visit the School of Pharmacy and Health Sciences' website at www.fdu.edu/pharmacy.

## **ACPE Accreditation Status**

Fairleigh Dickinson University School of Pharmacy and Health Sciences' Doctor of Pharmacy program is accredited by the Accreditation Council for Pharmacy Education, 135 South LaSalle Street, Suite 4100, Chicago, IL 60603; phone: (312) 664-3575; fax: (312) 664-4652; website: www.acpe-accredit.org.

## FDU School of Pharmacy and Health Sciences Outcomes

• Provide patient-centered care.

a) Formulate a patient-centered pharmaceutical care plan (new or revised) in collaboration with other health care professionals, patients and/or their caregivers.

b) Prepare and dispense medication(s) prescribed (or recommended) as part of the patient's care plan.

c) Communicate and collaborate with prescribers, patients, caregivers and other involved health care providers to engender a team approach to patient care.

Provide population-based care by developing population-specific, evidencebased, disease-management programs.
Manage human, physical, medical, information and technological resources.

a) Describe and demonstrate appropriate utilization of management principles and use of health care resources in the American health care system.

b) Manage pharmacy operations, including personnel, and optimize physical and technological resources to fulfill the practice mission.

• Manage medication distribution, control and use systems and optimize technological resources to fulfill the practice mission.

• Assure the availability of effective, quality health and disease-prevention services.

a) Communicate and collaborate with health care providers and health policy decision makers to engender a team approach to public health.

• Develop public health policy by developing strategic efforts to collaborate with policymakers, payers, members of the community, health providers and other stakeholders and decision-makers to promote public health and resolve public health problems.

Maintain professional competency in providing pharmaceutical care, managing medication-use systems and understanding various public health care needs and providing appropriate disease-prevention services by committing oneself to being an independent, self-initiated lifelong learner.
Carry out duties in accordance with legal, ethical, social, economic and professional guidelines.

# **Requirements for the Pharm.D. Degree**

1st Year Foundations in Pharmacy Education

Fall Semester Credits
PHRM6100
Foundations in Pharmaceutical
Science: Pharmacology,
Medicinal Chemistry,
Pharmacokinetics4
PHRM6101
Foundations in Integrated
Pharmacotherapy I: An
Introduction to Pathophysiology,
Genetics, Microbiology and
Delivery of Care3
PHRM6201
Pharmaceutics I: Physical Pharmacy3
PHRM6211
Pharmaceutical Calculations I1
PHRM6301
Medical Communication and
Technical Writing 2
PHRM6321
Pharmacy Practice Law2
PHRM6401
Professional Pharmacy Practice I:
Health Care Delivery3
PHRM6700
Beyond the Curriculum:
Foundations in Pharmacy
Education (1) 0
Total18
Spring Semester

PHRM6102
Integrated Pharmacotherapy II:
Gastrointestinal3
PHRM6103
Integrated Pharmacotherapy III:
Dermatology, Over-the-
Counter Remedies and Self Care3
PHRM6104
Integrated Pharmacotherapy IV:
Cardiology/Pulmonology I 3
PHRM6111
Integrated Pharmacotherapy
II-IV: Conceptual Connections
and Patient Care2
PHRM6202
Pharmaceutics II – Oral Dosage
Forms and Biopharmaceutics/
Pharmacokinetics2
PHRM6212
Pharmaceutical Calculations II 1
PHRM6402
Professional Pharmacy Practice II:
Communication in Health Care2

# **Pharmacy**

Credits		
PHRM6701		
Beyond the Curriculum:		
Foundations in Pharmacy		
Education (2) 1		
Total17		
Completed in June, July or August		
PHRM6501		
Introductory Pharmacy Practice		
Experience (IPPE) I: Community4		
2nd Year		
Expanding Horizons		
Fall Semester		
PHRM7105		
Integrated Pharmacotherapy V:		
Neurology, Psychiatry and		
Anesthesiology4		
PHRM7106		
Integrated Pharmacotherapy VI:		
Infectious Disease4		
PHRM7111		
Integrated Pharmacotherapy V–VI:		
Conceptual Connections and		
Patient Care2		
PHRM7201		
Pharmaceutics III: Dosage Form		
and Drug Delivery Systems2		
PHRM7301		
Biostatistics2		
PHRM7401		
Professional Pharmacy		
Practice III: Drug Information, Informatics and Toxicology		
PHRM7700		
Beyond the Curriculum:		
Expanding Horizons (1)		
Elective		
Total19		
Spring Semester		
PHRM7107		
Integrated Pharmacotherapy VII:		
Cardiology/Pulmonary II and		
Eye Disorders		
PHRM7108		

PHRM7108
Integrated Pharmacotherapy VIII:
Endocrine, Urinary Tract,
Renal and Reproductive Health4
PHRM7112
Integrated Pharmacotherapy
VII–VIII: Conceptual
Connections and Patient Care2
PHRM7202
Pharmaceutics IV: Sterile
Products and Biopharmaceuticals2
PHRM7302
Epidemiology and Study Design
Evaluation

	Credits
PHRM7701	
Beyond the Curriculum:	
Expanding Horizons (2)	1
Elective	3
	Total19
Completed in January, June,	July or

### August PHRM7501

Introductory Pha. macy Practice Experience (IPPE) II: Institutional....4

## 3rd Year

## **Preparing Practitioners**

### Fall Semester PHRM8109 Integrated Pharmacotherapy IX: Autoimmune Diseases, Rare Diseases and Special Population s.....3 PHRM8110 Integrated Pharmacotherapy X: Hematology and Oncology......3 PHRM8111 Integrated Pharmacotherapy IX-X: Conceptual Connections and Patient Care.....2 PHRM8302 Public Health and the Global Mission of Pharmacy.....2 PHRM8321 Health Care Ethics and Team Decision Making.....1 PHRM8700 Beyond the Curriculum/ Preparing Practitioners (1).....0 Total.....17 Spring Semester PHRM8112 Integrated Pharmacotherapy I-X: A Whole System Overview and Effecting Patient Care.....2

### PHRM8201 Pharmacogenomics and Personalized Medicine.....2 PHRM8301 Pharmacoepidemiology, Pharmacoeconomics and Health Outcomes......3 PHRM8402 Professional Pharmacy Practice IV: Pharmacy Leadership and Management.....2 PHRM8701 Beyond the Curriculum/ Preparing Practitioners (2).....1 Electives......9 Total.....19

## Credits 4th Year

## *Core Advanced Pharmacy Practice Experiences and Capstone*

## PHRM9101

FIIKW9101
Advanced Pharmacy Practice
Experience (APPE) I: Community5
PHRM9102
Advanced Pharmacy Practice
Experience (APPE) II: Institutional5
PHRM9103
Advanced Pharmacy Practice
Experience (APPE) III:
Ambulatory Care5
PHRM9104
Advanced Pharmacy Practice
Experience (APPE) IV: Acute Care 5
PHRM9900
Pharmacy Captone I1
PHRM9901
Pharmacy Capstone II2

### Elective Advanced Pharmacy Practice Experiences

Choose four

choose four
PHRM9201
Advanced Pharmacy Practice
Experience (APPE) V: Elective -
Community Practice L5
PHRM9202
Advanced Pharmacy Practice
Experience (APPE) V: Elective -
Community Practice II 5
PHRM9203
Advanced Pharmacy Practice
Experience (APPE) V: Elective –
Ambulatory Care I5
PHRM9204
Advanced Pharmacy Practice
Experience (APPE) V: Elective –
Ambulatory Care II5
PHRM9205
Advanced Pharmacy Practice
Experience (APPE) V: Elective –
Community Compounding I5
PHRM9206
Advanced Pharmacy Practice
Experience (APPE) V: Elective –
Community Compounding II5
PHRM9207
Advanced Pharmacy Practice
Experience (APPE) V: Elective –
Medication Therapy Management I5 PHRM9208
Advanced Pharmacy Practice
Experience (APPE) V: Elective – Mediation Therepy
Medication Therapy
Management II5

## **Pharmacy**

Credits **PHRM9209** Advanced Pharmacy Practice Experience (APPE) V: Elective -HIV/AIDS I.....5 **PHRM9210** Advanced Pharmacy Practice Experience (APPE) V: Elective -HIV/AIDS II.....5 PHRM9211 Advanced Pharmacy Practice Experience (APPE) V: Elective -Home Infusion I.....5 **PHRM9212** Advanced Pharmacy Practice Experience (APPE) V: Elective -Home Infusion II.....5 PHRM9301 Advanced Pharmacy Practice Experience (APPE) VI: Elective -Hospital Practice I.....5 PHRM9302 Advanced Pharmacy Practice Experience (APPE) VI: Elective -Hospital Practice II.....5 PHRM9303 Advanced Pharmacy Practice Experience (APPE) VI: Elective -Acute Care I.....5 **PHRM9304** Advanced Pharmacy Practice Experience (APPE) VI: Elective -Acute Care II.....5 **PHRM9305** Advanced Pharmacy Practice Experience (APPE) VI: Elective -Long Term Care I.....5 PHRM9306 Advanced Pharmacy Practice Experience (APPE) VI: Elective -Long Term Care II.....5 PHRM9307 Advanced Pharmacy Practice Experience (APPE) VI: Elective -Infectious Disease I.....5 **PHRM9308** Advanced Pharmacy Practice Experience (APPE) VI: Elective -Infectious Disease II......5 **PHRM9309** Advanced Pharmacy Practice Experience (APPE) VI: Elective -Oncology I..... 5 **PHRM9310** Advanced Pharmacy Practice Experience (APPE) VI: Elective -Oncology II.....5 PHRM9311 Advanced Pharmacy Practice Experience (APPE) VI: Elective -Critical Care L.....5

Credits **PHRM9312** Advanced Pharmacy Practice Experience (APPE) VI: Elective -Critical Care II.....5 **PHRM9313** Advanced Pharmacy Practice Experience (APPE) VI: Elective -Cardiology I.....5 PHRM9314 Advanced Pharmacy Practice Experience (APPE) VI: Elective -Cardiology II.....5 PHRM9315 Advanced Pharmacy Practice Experience (APPE) VI: Elective -Behavioral Health I.....5 PHRM9316 Advanced Pharmacy Practice Experience (APPE) VI: Elective -Behavioral Health II..... 5 **PHRM9317** Advanced Pharmacy Practice Experience (APPE) VI: Elective -Transitions of Care I.....5 PHRM9318 Advanced Pharmacy Practice Experience (APPE) VI: Elective -Transitions of Care II.....5 **PHRM9319** Advanced Pharmacy Practice Experience (APPE) VI: Elective -Nutrition Support I.....5 **PHRM9320** Advanced Pharmacy Practice Experience (APPE) VI: Elective -Nutrition Support II...... 5 **PHRM9321** Advanced Pharmacy Practice Experience (APPE) VI: Elective -Emergency Medicine I..... 5 **PHRM9322** Advanced Pharmacy Practice Experience (APPE) VI: Elective -Emergency Medicine II......5 PHRM9401 Advanced Pharmacy Practice Experience (APPE) VII: Elective -Drug Information I.....5 PHRM9402 Advanced Pharmacy Practice Experience (APPE) VII: Elective -Drug Information II.....5 **PHRM9403** Advanced Pharmacy Practice Experience (APPE) VII: Elective -Medication Safety I.....5 **PHRM9404** Advanced Pharmacy Practice Experience (APPE) VII: Elective -Medication Safety II..... 5

Credits
PHRM9405
Advanced Pharmacy Practice
Experience (APPE) VII: Elective –
Managed Care I5
PHRM9406
Advanced Pharmacy Practice
Experience (APPE) VII: Elective –
Managed Care II
PHRM9407
Advanced Pharmacy Practice
Experience (APPE) VII: Elective –
Specialty Pharmacy L5 PHRM9408
Advanced Pharmacy Practice
Experience (APPE) VII: Elective – Specialty Pharmacy II
PHRM9409
Advanced Pharmacy Practice
Experience (APPE) VII: Elective –
Medical Device/Patient Safety I5
PHRM9410
Advanced Pharmacy Practice
Experience (APPE) VII: Elective –
Medical Device/Patient Safety II5
PHRM9501
Advanced Pharmacy Practice
Experience (APPE) VIII:
Elective – Public Health I
PHRM9502
Advanced Pharmacy Practice
Experience (APPE) VIII:
Elective – Public Health II
PHRM9503
Advanced Pharmacy Practice
Experience (APPE) VIII:
Elective – Industry I
PHRM9504
Advanced Pharmacy Practice
Experience (APPE) VIII:
Elective – Industry II
PHRM9505
Advanced Pharmacy Practice
Experience (APPE) VIII:
Elective – Research I
PHRM9506
Advanced Pharmacy Practice
Experience (APPE) VIII:
Elective – Research II
PHRM9507
Advanced Pharmacy Practice
Experience (APPE) VIII:
Elective – Marketing I
PHRM9508
Advanced Pharmacy Practice
Experience (APPE) VIII:
Elective – Marketing II
PHRM9509
Advanced Pharmacy Practice
Experience (APPE) VIII:
Elective – Patient Advocacy I

Credits
PHRM9510
Advanced Pharmacy Practice
Experience (APPE) VIII:
Elective – Patient Advocacy II 5
PHRM9511
Advanced Pharmacy Practice
Experience (APPE) VIII:
Elective – Health Care
Organization Management I5
PHRM9512
Advanced Pharmacy Practice
Experience (APPE) VIII:
Elective – Health Care
Organization Management II5
PHRM9513
Advanced Pharmacy Practice
Experience (APPE) VIII:
Elective – Informatics I5
PHRM9514
Advanced Pharmacy Practice
Experience (APPE) VIII:
Elective – Informatics II5
PHRM9515
Advanced Pharmacy Practice
Experience (APPE) VIII:
Elective – Management I5
PHRM9516
Advanced Pharmacy Practice
Experience (APPE) VIII:
Elective – Management II 5
PHRM9517
Advanced Pharmacy Practice
Experience (APPE) VIII:
Elective – Regulatory I5
PHRM9518
Advanced Pharmacy Practice
Experience (APPE) VIII:
Elective – Regulatory II 5
Total43

### **Course Offerings**

Courses offered fall, spring and/or summer are so noted. To determine availability of courses not so designated, please check with appropriate school director.

### PHRM6100 4 Credits Foundations in Pharmaceutical Science: Pharmacology, Medicinal Chemistry, Pharmacokinetics

This survey course covers several fundamental concepts required for understanding pharmacotherapy. Pharmacology is the unified study of the properties of chemicals and living organisms and all aspects of their interaction. Medicinal chemistry will address a chemically oriented introduction to pharmacology and therapeutics, focusing on structure, pharmacophores and drug activity. The class emphasizes familiarity with drug structures and properties and an understanding of how the chemical structures and physicochemical properties of representative drugs determine their molecular mechanisms of action. The pharmacokinetics component will address how the body impacts drugs. These lectures will focus on a mathematical understanding of drug concentrations, pharmacological activity and therapy. Concepts of toxicology and toxicokinetics will also be introduced in acute and chronic settings. Corequisite: PHRM6101 Foundations in Integrated Pharmacotherapy I: An Introduction to Pathophysiology, Genetics, Microbiology and Delivery of Care.

## PHRM6101

**3** Credits

### Foundations in Integrated Pharmacotherapy I: An Introduction to Pathophysiology, Genetics, Microbiology and Delivery of Care

Integrated pharmacotherapy courses combine biological sciences, human systems and clinical sciences. As one of the two foundation courses, this course lays the foundation of subsequent integrated pharmacotherapy modules by providing students with the overview of biochemistry, human anatomy and physiology, human immune system and microbiology. Students are also introduced to genetics and molecular diagnostics, which will be revisited in their third year. Corequisite: PHRM6100 Foundations in Pharmaceutical Science: Pharmacology, Medicinal Chemistry, Pharmacokinetics.

### PHRM6102

3 Credits Integrated Pharmacotherapy II:

## Gastrointestinal

This is the second integrated pharmacotherapy module focusing on the gastrointestinal system. This course integrates basic principles of biochemistry, anatomy and physiology, pathophysiology, pharmacology, medicinal chemistry, pharmacokinetics, clinical chemistry and pharmacotherapy related to the presentation and management of gastrointestinal diseases (gastroesophageal reflux, peptic ulcer, inflammatory bowel disease, nausea and vomiting, diarrhea, constipation and irritable bowel disease, cirrhosis, drug-induced gastrointestinal disease, pancreatitis, gallbladder and viral hepatitis). Physicochemical and biological principles of dosage forms and drug-delivery strategies used to treat these conditions are discussed, as are the materials and methods used to prepare and administer the appropriate treatment. Cases and examples are used to provide the students with the skills to solve problems related to gastrointestinal diseases in an active learning environment. Prerequisites: PHRM6100 Foundations in Pharmaceutical Science: Pharmacology, Medicinal Chemistry, Pharmacokinetics and PHRM6101 Foundations in Integrated Pharmacotherapy I: An

Introduction to Pathophysiology, Genetics, Microbiology and Delivery of Care.

### PHRM6103 3 Credits Integrated Pharmacotherapy III: Dermatology, Over-the-Counter

Remedies and Self Care

This is the third integrated pharmacotherapy module focusing on over-the-counter products, dermatology and self care. This course integrates basic principles of biochemistry, anatomy and physiology, pathophysiology, pharmacology, medicinal chemistry, pharmacokinetics, clinical chemistry and pharmacotherapy related to the presentation and management of these areas(herbal/ dietary supplements, fluids/nutrition, pain, common cold/flu, dermatology, otic care, oral care and ophthalmic care, smoking cessation, obesity, sleep disorders, reproductive and genital disorders). Physicochemical and biological principles of dosage forms and drug-delivery strategies used to treat these conditions are discussed, as are the materials and methods used to prepare and administer the appropriate treatment. Cases and examples are used to provide the students with the skills to solve problems related to the use of over-the-counter and self-care medications and dermatological diseases in an active learning environment. Prerequisites: PHRM6100 Foundations in Pharmaceutical Science: Pharmacology, Medicinal Chemistry, Pharmacokinetics and PHRM6101 Foundations in Integrated Pharmacotherapy I: An Introduction to Pathophysiology, Genetics, Microbiology and Delivery of Care. Corequisite: PHRM6111 Integrated Pharmacotherapy II-IV: Conceptual Connections and Patient Care.

### PHRM6104 3 Credits Integrated Pharmacotherapy IV -

## Cardiology/Pulmonology I

This is the fourth integrated pharmacotherapy module and the first of two courses focusing on the cardiovascular and pulmonary systems. This course begins with a description of the autonomic nervous system and its critical role in the functioning of major organ systems, and discusses major drugs affecting this system. This course further integrates basic principles of anatomy and physiology, pathophysiology, pharmacology, medicinal chemistry, pharmacokinetics and pharmacotherapy related to the presentation and management of some major cardiovascular and pulmonary diseases. Physicochemical and biological principles of dosage forms and drug-delivery strategies used to treat these conditions are discussed, as are the materials and methods used to prepare and administer the appropriate treatment. Cases and examples are used to provide the students with the skills to solve problems related to cardiovascular diseases in an active learning

environment. Prerequisites: PHRM6100 Foundations in Pharmaceutical Science: Pharmacology, Medicinal Chemistry, Pharmacokinetics and PHRM6101 Foundations in Integrated Pharmacotherapy I: An Introduction to Pathophysiology, Genetics, Microbiology and Delivery of Care. Corequisite: PHRM6111 Integrated Pharmacotherapy II–IV: Conceptual Connections and Patient Care.

### PHRM6111 2 Credits Integrated Pharmacotherapy II–IV: Conceptual Connections and Patient Care

This course ties in the contents learned in Integrated Pharmacotherapy II-IV in a casebased, active-learning fashion. While Integrated Pharmacotherapy II-IV prepare students with clinical knowledge and skill set, this course is designed to provide hands-on experience of patient interaction and assessment, triage and referral and treatment formulation and recommendation. Students will practice and become competent in patient-assessment skills system-by-system, learn effective counseling techniques with regards to drug administration, familiarize themselves with New Jersey prescription regulations and acquire skills in dosing calculation, all of which are commonly encountered in community practice. Real-life cases involving self-care, gastrointestinal and cardiovascular diseases will require students to think critically in every step of the care: presentation, history-taking, assessment, treatment formulation and administration and monitoring for efficacy and toxicity. Students will be introduced to various formats of patient documentation. Prerequisites: PHRM6100 Foundations in Pharmaceutical Science: Pharmacology, Medicinal Chemistry, Pharmacokinetics and PHRM6101 Foundations in Integrated Pharmacotherapy I: An Introduction to Pathophysiology, Genetics, Microbiology and Delivery of Care. Corequisites: PHRM6102 Integrated Pharmacotherapy II: Gastrointestinal; PHRM6103 Integrated Pharmacotherapy III: Dermatology, Over-the-Counter Remedies and Self Care; and PHRM6104 Integrated Pharmacotherapy IV: Cardiology/Pulmonology I.

## PHRM6201 3 Credits

#### **Pharmaceutics I: Physical Pharmacy** This is the first of three courses in the

Inis is the first of three courses in the pharmaceutics series. This course introduces students to basic concepts (e.g., solubility, permeability, stability, etc.) in physical pharmacy and pharmaceutical sciences, and covers gas and solution properties, non-electrolyte and electrolyte solutions, pharmaceutical solids, dissolution and drug release. Mastering the basic concepts will provide the students with a sound foundation in pharmaceutical-product development (dosage forms and drug-delivery systems) as well as pharmacy practice.

## PHRM6202 2 Credits

### Pharmaceutics II – Oral Dosage Forms and Biopharmaceutics/ Pharmacokinetics

This is the second course in the pharmaceutics series focusing on oral dosage forms. This course is designed and taught using an integrated approach, covering various topics in pharmaceutics (oral dosage forms), biopharmaceutics and pharmacokinetics. The students will learn not only the fundamental aspects of oral dosage forms (solutions, suspensions and solids), but also the biopharmaceutic and pharmacokinetic aspects of oral dosage forms related to drug absorption and evaluation. The course also integrates the application of basic pharmacokinetic principles to special populations and disease states. Prerequisites: PHRM6100 Foundations in Pharmaceutical Science: Pharmacology, Medicinal Chemistry, Pharmacokinetics and PHRM6201 Pharmaceutics I: Physical Pharmacy.

### PHRM6211 1 Credit

### **Pharmaceutical Calculations I**

This course is the first part of the two-semester pharmaceutical calculations series. Accurately performing pharmaceutical calculations is a critical skill in providing patient care in every pharmacy-practice setting. This course introduces students to basic concepts and skills involved in pharmaceutical calculations. The focus of this course is on basic mathematical principles and their application to pharmaceutical calculations in pharmacy practice. The topics include correct interpretation of prescription and medical orders, pharmaceutical measurements, various expressions of concentration and strength, electrolyte and isotonic solutions.

## PHRM6212 1 Credit

### **Pharmaceutical Calculations II**

This course is the second part of pharmaceutical calculations and focuses on specific calculation skills that are important to practicing pharmacists. The students have the opportunity to apply the basic concepts and calculation skills gained in PHRM6211 Pharmaceutical Calculations I to dose and clinical calculation, IV and parenteral solutions and calculations involved in extemporaneous compounding. Prerequisite: PHRM6211 Pharmaceutical Calculations I.

### PHRM6301 2 Credits Medical Communication and Technical Writing

This course is designed to introduce pharmacy students to the concepts and methods of technical and professional communication utilized in different areas of health care. Development of professional documents including cover letters, personal statements and curriculum vitae utilized in pharmacy practice and required for student pharmacist e-portfolios is a specific focus. Additionally, oral communication skills including assembling presentation materials critical to successfully delivering a professional oral presentation to an audience will be developed. Lastly, students will be introduced to key medical terminology used throughout health care.

### PHRM6321 2 Credits Pharmacy Practice Law

This course is designed to provide pharmacy students with the basic purposes pharmacy law serves, and to prepare them to comply with laws, regulations and ethical standards in their professional and personal lives. The course will feature in-depth reading of texts and case studies, case presentations, short papers and exams.

## PHRM6401

### **3 Credits**

### Professional Pharmacy Practice I: Health Care Delivery

This course provides foundational knowledge necessary to understand the organization of the health care system and health care delivery in the United States. The various roles played by pharmacists in the U.S. are also presented. Selected international health care systems are covered for comparison purposes. A definition of health care is developed; U.S. health care financing and health economics are introduced; legislative initiatives, such as the Affordable Care Act, and alternative health care models such as the medical home are presented. The implications for both health care delivery and the evolution of the pharmacy profession with these emerging initiatives are explored. The efficient and safe use of health care and pharmaceutical resources to achieve better patient clinical outcomes and improved quality of life in a financial environment where resources are limited is a central theme. Related to this, the U.S. drug-approval process and the pharmaceutical industry are described. The increasing use of informatics and computerbased systems, including electronic medical records and databases, in pharmacy practice is described as well. Multidisciplinary aspects of health care are examined and multiple factors important to the contemporary practice of pharmacy are explored including the social, legal/regulatory, economic, public health, professional and patient-care implications of pharmacy practice. The role of the pharmacist as a member of an interprofessional team of health care professionals is introduced.

### PHRM6402 2 Credits Professional Pharmacy Practice II: Communication in Health Care

The Communication in Health Care course develops students' nonwritten professional communication skills. The course focuses on developing oral and nonverbal communications skills, an appreciation of different cultural approaches to health care (cultural competency) and health literacy in patient care as well as communication within interprofessional teams. Communication strategies for gathering information from patients, providing information and verifying understanding will be reviewed. Interprofessional communication approaches for fostering relationships with other health care professionals will be explored. This course is designed to help students gain the skills required to effectively communicate with all individuals involved in delivering and receiving health care such as patients, physicians, nurses and family members. Prerequisites: PHRM6301 Medical Communication and Technical Writing and PHRM6401 Professional Pharmacy Practice I: Health Care Delivery.

### PHRM6501 4 Credits Introductory Pharmacy Practice Experience (IPPE) I: Community

This introductory experience is an experientialeducation course enabling the student to integrate classroom knowledge with practical pharmacy experience through exposing students to the patient care, administrative, distributive and overall practice of contemporary community pharmacy. Students will be placed at an IPPE I site for four weeks totaling 32 hours per week for a final total of 128 hours experience (IPPE). The student pharmacist will observe and participate with pharmacists, fellow pharmacy students, if applicable, and other health care professionals in the provision of direct patient care. The student will become familiar with essential elements surrounding the dispensing of prescriptions including, but not limited to, interpreting a patient profile, transcribing an oral prescription, preparing a prescription label and patient counseling, in order to assist the pharmacist in dispensing prescriptions. The student pharmacist will observe and participate in assisting patients in selection of nonprescription (over-the-counter) products, monitoring devices and durable medical equipment. This course may require students to participate in an online learning component, reflective sessions in the School of Pharmacy and Health Sciences and completion of a service learning project as assigned. This course prepares students to acquire criticalthinking competencies enabling them to continually build their knowledge across the curriculum as they progress and engage in subsequent experiential-practice experiences.

Prerequisite: successful completion of first year of courses.

## PHRM6700 0 Credits

### Beyond the Curriculum: Foundations in Pharmacy Education (1)

A great deal of education happens outside of the formal course work. In this course, students will have an opportunity to engage in programs to learn more about the emerging areas of pharmacy in order to gain a deeper understanding of the evolving roles of pharmacists and the areas in which they can practice. This course will serve as a platform for students to network with industry and educational leaders to begin to develop their personal and professional networks as they prepare for their future roles in pharmacy.

### PHRM6701 1 Credit

### Beyond the Curriculum: Foundations in Pharmacy Education (2)

A great deal of education happens outside of the formal course work. In this course, students will have an opportunity to engage in programs to learn more about the emerging areas of pharmacy in order to gain a deeper understanding of the evolving roles of pharmacists and the areas in which they can practice. This course will serve as a platform for students to network with industry and educational leaders to begin to develop their personal and professional networks as they prepare for their future roles in pharmacy.

### PHRM7105 4 Credits Integrated Pharmacotherapy V: Neurology, Psychiatry and Anesthesiology

This is the fifth integrated pharmacotherapy module focusing on the nervous system. This course integrates basic principles of biochemistry, anatomy and physiology, pathophysiology, pharmacology, medicinal chemistry, pharmacokinetics, clinical chemistry and pharmacotherapy related to the presentation and management of neurological and psychiatric diseases. Basic principles and knowledge about anesthesiology will also be introduced. Physicochemical and biological principles of dosage forms and drug-delivery strategies used to treat these conditions are discussed, as are the materials and methods used to prepare and administer the appropriate treatment. Cases and examples are used to provide the students the skills to solve problems related to neurologic and psychiatric diseases in an active learning environment. Prerequisites: PHRM6100 Foundations in Pharmaceutical Science: Pharmacology, Medicinal Chemistry, Pharmacokinetics and PHRM6101 Foundations in Integrated Pharmacotherapy I: An Introduction to Pathophysiology, Genetics,

Microbiology and Delivery of Care. Corequisite: PHRM7111 Integrated Pharmacotherapy V–VI: Conceptual Connections and Patient Care.

### PHRM7106 4 Credits Integrated Pharmacotherapy VI:

**Infectious Disease** This course relates to pharmacotherapeutics and the treatment of infectious diseases and aims to integrate key concepts from medicinal chemistry, pharmacology, anatomy and physiology, pathology, clinical chemistry for infectious disease topics important to the clinical setting. Ideally, at the end of this course the student will be able to: identify likely pathogens responsible for a particular infectious-disease process; select the appropriate antibiotic(s) to provide antimicrobial coverage for these possible pathogens; select alternative antibiotics should they become necessary; and identify appropriate actions to monitor for efficacy and toxicity. Prerequisites: PHRM6100 Foundations in Pharmaceutical Science: Pharmacology, Medicinal Chemistry, Pharmacokinetics and PHRM6101 Foundations in Integrated Pharmacotherapy I: An Introduction to Pathophysiology, Genetics, Microbiology and Delivery of Care. Corequisite: PHRM7111 Integrated Pharmacotherapy V-VI: Conceptual Connections and Patient Care.

### PHRM7107

**3** Credits

### Integrated Pharmacotherapy VII: Cardiology/Pulmonary II and Eye Disorders

This is the seventh integrated pharmacotherapy module and the second of two courses focusing on the cardiovascular and pulmonary systems. It also covers selected diseases of the eye, ear, nose and throat. This course provides students with an integrated approach to understanding principles and solving problems of cardiovascular and pulmonary disorders and diseases of the eye, ear, nose and throat. The anatomy, physiology, pathophysiology, medicinal chemistry, pharmacology, pharmacokinetics and pharmacotherapy related to the presentation and management of these disorders are covered. Physicochemical and biological principles of dosage forms and drug-delivery strategies used to treat these conditions are discussed, as are materials and methods used to prepare and administer the appropriate treatment. Prerequisites: PHRM6100 Foundations in Pharmaceutical Science: Pharmacology, Medicinal Chemistry, Pharmacokinetics and PHRM6101 Foundations in Integrated Pharmacotherapy I: An Introduction to Pathophysiology, Genetics, Microbiology and Delivery of Care. Corequisite: PHRM7112 Integrated Pharmacotherapy VII-VIII: Conceptual Connections and Patient Care.

### PHRM7108 4 Credits Integrated Pharmacotherapy VIII: Endocrine, Urinary Tract, Renal and Reproductive Health

This is the eighth integrated pharmacotherapy module focusing on the endocrine, urinary tract, renal and reproductive health systems. This course integrates basic principles of biochemistry, anatomy and physiology, pathophysiology, pharmacology, medicinal chemistry, pharmacokinetics, clinical chemistry and pharmacotherapy related to the presentation and management of diseases of these systems. Physicochemical and biological principles of dosage forms and drug-delivery strategies used to treat these conditions are discussed, as are the materials and methods used to prepare and administer the appropriate treatment. Cases and examples are used to provide the students with the skills to solve problems related to endocrine, urinary-tract, renal and reproductive system diseases in an active learning environment. Prerequisites: PHRM6100 Foundations in Pharmaceutical Science: Pharmacology, Medicinal Chemistry, Pharmacokinetics and PHRM6101 Foundations in Integrated Pharmacotherapy I: An Introduction to Pathophysiology, Genetics, Microbiology and Delivery of Care. Corequisite: PHRM7112 Integrated Pharmacotherapy VII-VIII: Conceptual Connections and Patient Care.

### PHRM7111 2 Credits Integrated Pharmacotherapy V-VI: Conceptual Connections and Patient Care

This course ties in the contents learned in Integrated Pharmacotherapy V-VI in a casebased, active-learning fashion. While Integrated Pharmacotherapy V-VI prepare students with clinical knowledge and skill set, this course is designed to provide hands-on experience of patient interaction and assessment, triage and referral and treatment formulation and recommendation. Students will practice and become competent in patient-assessment skills system-by-system, learn effective counseling techniques with regards to drug administration, familiarize themselves with New Jersey prescription regulations and acquire skills in dosing calculations, all of which are commonly encountered in pharmacy practice. Real-life cases involving infectious, neurologic and psychiatric diseases will require students to think critically in every step of the care: presentation, history-taking, assessment, treatment formulation and administration and monitoring for efficacy and toxicity. Students will be certified by the American Pharmacist's Association Medication Therapy Management Program. Prerequisites: PHRM6100 Foundations in Pharmaceutical Science: Pharmacology, Medicinal Chemistry, Pharmacokinetics and PHRM6101 Foundations in Integrated Pharmacotherapy I: An Introduction to Pathophysiology, Genetics, Microbiology and Delivery of Care. Corequisites: PHRM7105 Integrated Pharmacotherapy V: Neurology, Psychiatry and Anesthesiology and PHRM7106 Integrated Pharmacotherapy VI: Infectious Disease.

### PHRM7112 2 Credits Integrated Pharmacotherapy VII-VIII: Conceptual Connections and Patient Care

This course ties in the contents learned in Integrated Pharmacotherapy VII-VIII in a casebased, active-learning fashion. While Integrated Pharmacotherapy VII-VIII prepare students with clinical knowledge and skill set, this course is designed to provide hands-on experience of patient interaction and assessment, triage and referral and treatment formulation and recommendation. Students will practice and become competent in patient-assessment skills system-by-system, learn effective counseling techniques with regards to drug administration, familiarize themselves with New Jersey prescription regulations and acquire skills in dosing calculations, all of which are commonly encountered in pharmacy practice. Real-life cases involving renal diseases, endocrine diseases, pulmonary diseases, ophthalmic diseases, otic diseases and reproductive health will require students to think critically in every step of the care: presentation, history-taking, assessment, treatment formulation and administration and monitoring for efficacy and toxicity. Students will be certified by the American Pharmacist's Association Diabetes Care Program. Prerequisites: PHRM6100 Foundations in Pharmaceutical Science: Pharmacology, Medicinal Chemistry, Pharmacokinetics and PHRM6101 Foundations in Integrated Pharmacotherapy I: An Introduction to Pathophysiology, Genetics, Microbiology and Delivery of Care. Corequisites: PHRM7107 Integrated Pharmacotherapy VII: Pulmonary, Eye, Ear, Nose and Throat and PHRM7108 Integrated Pharmacotherapy VIII: Endocrine, Urinary Tract, Renal and Reproductive Health.

### PHRM7120 3 Credits Problem-solving and Clinical Decisionmaking in Pharmacy I

This course will expand student skills and abilities in evaluating patient cases encountered in pharmacy practice. Cases may focus on calculations commonly performed in a community or institutional setting, pharmacokinetic or dosage-form consultations or clinical evaluations of drug therapy. The course will enhance students' preparedness to provide patient-centered pharmaceutical care using pharmacists' patient-care process. Emphasis will be placed on critical evaluation of clinical scenarios and decision-making and problem-solving process in pharmacy practice. Corequisite: PHRM7111 Integrated Pharmacotherapy V–VI: Conceptual Connections and Patient Care.

### PHRM7121 3 Credits Clinical Toxicology

The course is designed to give the student an overview of the management of the poisoned patient or one suffering from select druginduced diseases. The student will become familiar with general principles in managing the poisoned patient, recognize toxidromes and understand the role of the pharmacist in managing a poisoned patient and the role of the local poison center. Prerequisites: PHRM6100 Foundations in Pharmaceutical Science: Pharmacology, Medicinal Chemistry, Pharmacokinetics and PHRM6101 Foundations in Integrated Pharmacotherapy I – An Introduction to Pathophysiology, Genetics, Microbiology and Delivery of Care.

### PHRM7122

### 3 Credits

## **Natural Medicines**

This elective course will introduce students to in-depth concepts of pharmacology of natural medicines as well as specific disease states which can be treated with natural medicines. Overall philosophy of utilizing natural medicine in Western cultures will be discussed. In addition, alternative therapeutic modalities such as acupuncture, homeopathy and others will be reviewed.

### PHRM7201

### 2 Credits

### Pharmaceutics III: Dosage Form and Drug Delivery Systems

This course includes a didactic section and a compounding lab. The didactic lectures cover drug-dosage forms and drug-delivery systems commonly used in modern medicine. The emphasis is placed on understanding the basic physicochemical and biopharmaceutical principles underlining each dosage form and delivery system. The students will learn the proper use, administration and storage of various drug-dosage forms and delivery systems. The laboratory session provides the students with hands-on experience in extemporaneous product compounding. In the compounding lab, the students will have the opportunity to apply the basic concepts and calculation skills to extemporaneous compounding. The students will prepare various compounding products including syrup, suspension, ointment, gel, capsule and suppository. Prerequisites: PHRM6201 Pharmaceutics I: Physical Pharmacy and PHRM6202 Pharmaceutics II -Oral Dosage Forms and Biopharmaceutics/ Pharmacokinetics.

### PHRM7202 2 Credits Pharmaceutics IV: Sterile Products and Biopharmaceuticals

This is the is the last of the three-course series in pharmaceutics. Building upon basic concepts and calculation skills acquired in PHRM6201 Pharmaceutics I: Physical Pharmacy, PHRM6202 Pharmaceutics II - Oral Dosage Forms and Biopharmaceutics/Pharmacokinetics, PHRM6211 Pharmaceutical Calculations I and PHRM6212 Pharmaceutical Calculations II, students will have the opportunity to apply the knowledge and skills to various sterile products including (parenteral, ophthalmic, nasal and irrigation solutions). Biologics products (monoclonal antibody, vaccines and adjuvants) are also included. The course also covers various routes of administration, sterile-product preparation and quality standards. The course is accompanied by a laboratory session, which provides the students with hands-on experience in sterile-product compounding. Prerequisites: PHRM6201 Pharmaceutics I: Physical Pharmacy, PHRM6202 Pharmaceutics II - Oral Dosage Forms and Biopharmaceutics/Pharmacokinetics, PHRM6211 Pharmaceutical Calculations I and PHRM6212 Pharmaceutical Calculations II.

### PHRM7301 2 Credits **Biostatistics**

This two-credit course introduces pharmacy students to the concepts and methods of biostatistics. Descriptive statistics, inferential statistics, hypothesis testing will be covered. Simple regression techniques used in evaluating pharmacologic therapies in populations will be discussed. The skills learned in this course build the quantitative foundations that students will apply to evaluate the biomedical literature and assess its applicability to their patients.

### PHRM7302 3 Credits Epidemiology and Study Design Evaluation

This course is designed to introduce students to basic concepts of epidemiology and study designs used in the evaluation of health care technologies. Epidemiological terminology such as risk, hazard, odds and relative-risk ratios will be introduced. Further, this course will include critical evaluation of evidence-based medical literature and identification of sources of bias in published medical literature. Prerequisites: PHRM7301 Biostatistics and PHRM7401 Professional Pharmacy Practice III: Drug Information, Informatics and Toxicology.

## PHRM7321 3 Credits History of Pharmacy

This course reviews the history of the profession of pharmacy. Two main focuses will

be 1) the evolution of pharmacy as a distinct patient-care profession throughout ancient history and the Middle Ages and 2) the growth and expansion of pharmacy as a profession in the United States from colonization in the 17th century to present-day trends in pharmacy practice that will shape the future of the profession.

## PHRM7322 3 Credits

## **Drugs of Abuse**

This course reviews the history, pathophysiology, epidemiology and societal aspects of the phenomenon of drug abuse and addiction. Two main focuses will be 1) drug addiction as a recognizable disease and its impact on the patient, their caregivers and the health care system and the 2) pathopharmacology of all abused compounds including illegal and prescription drugs as well as emerging designer drugs. Corequisite: PHRM7112 Integrated Pharmacotherapy VII–VIII: Conceptual Connections and Patient Care.

### PHRM7323 3 Credits

### Substance Abuse Treatment Research: Clinical Implications for Pharmacists

This advanced course covers several fundamental concepts required for understanding substance abuse and addiction research. It provides a comprehensive overview of the chemistry and advanced pharmacology of the most common substances of abuse. The second half of the course will cover issues related to diversity in substance-abuse research treatments and the clinical applications. Current research studies on addiction treatments and the role of the pharmacist, as an integral part of the health care team, will be explored. Students will also be introduced to current measures in place for the curtailing and prevention of substance abuse from a research perspective. Concepts will also be introduced in acute and chronic settings. Prerequisites: PHRM6100 Foundations in Pharmaceutical Science: Pharmacology, Medicinal Chemistry, Pharmacokinetics and PHRM6101 Foundations in Integrated Pharmacotherapy I: An Introduction to Pathophysiology, Genetics, Microbiology and Delivery of Care. Corequisite: PHRM7302 Epidemiology and Study Design Evaluation.

### PHRM7401

### 2 Credits

### Professional Pharmacy Practice III: Drug Information, Informatics and Toxicology

This two-credit course focuses on the essential sources of drug information, pharmaceutical informatics and toxicology. It introduces the use of health-information technology in delivering health care. Topics covered include primary, secondary and tertiary sources of drug information; medication safety; an introduction to the use of drug monographs and the role of electronic medical records; e-prescribing; and computerized physician-order entry in pharmacy practice. This course provides an overview of the basic principles of toxicology and poisoning and discusses the identification and management of most commonly encountered toxicities. Prerequisite: PHRM6301 Medical Communication and Technical Writing.

### PHRM7402 3 Credits

### **Practical Politics and Pharmacy**

This elective course is designed to be interactive. Students will be introduced to the legislative process in order to develop effective advocacy skills on behalf of the profession. Students in this course will be responsible for being familiar with current pharmacy and related issues by reading professional journals, state and national association legislative updates, relevant newspaper articles, up-to-date bill listings and activities on relevant state and federal issues and utilize the internet as a navigational tool to become informed about and facile with the legislative issues directly affecting the profession. Students will learn the backgrounds of their representatives through state and federal rosters and engage them in discourse.

### **PHRM7410**

### **3** Credits

### Service Learning: Low-income Families and Homeless Population

In this course, students will have the opportunity to engage in a semester-long service commitment focused on the low-income and homeless populations. They will work alongside community partners to develop a foundational understanding of the organization's goals and outcomes in relation to their roles as volunteers. In this team-focused experience, the students will gain an appreciation for both the organization and individual team member's roles and responsibilities in a community setting. Students will communicate with members of the local underserved population through in-person, hands-on interaction, during which students will not only share their knowledge and opinions, but learn the importance of respecting and valuing the knowledge of others. While working in collaboration with other classmates and professionals, students will understand the impact an engaging, values-based and patientcentered team can have on a community. Through class participation, reflection and guided discussions, student will explore and gain a deeper understanding of the potential impact in relation to health disparities, poverty and the medically underserved.

### PHRM7411 3 Credits Service Learning: Culturally Competent Approach to Pediatric Populations

In this course, students will have the opportunity to engage in a semester-long service commitment focused on the health and wellbeing of pediatric populations. They will work alongside an organization located in Kissimmee, Fla., to develop a foundational understanding of the organization's goals and outcomes in relation to their roles as volunteers. In this teamfocused experience, the students will gain an appreciation for both the organization and individual team member's roles and responsibilities in a community setting. They will communicate with members of the pediatric population through in-person, hands-on interaction, during which students will not only share their knowledge and opinions, but learn the importance of respecting and valuing the knowledge of others. While working in collaboration with other classmates and professionals, students will understand the impact an engaging, values-based and patientcentered team can have on a community. Through class participation, reflection and guided discussions, students will explore and gain a deeper understanding of the potential impact in relation to pediatric populations, caregiver responsibility and community organizations.

### PHRM7412

### **3 Credits**

### Service Learning: Culturally Competent Approach to Geriatric Populations

A service-learning based elective course open to P2 and P3 students. In this course students will have the opportunity to engage in a semesterlong service commitment focused on the health and well-being of the geriatric population. They will work alongside a community partner to develop a foundational understanding of the organization's goals and outcomes in relation to their roles as volunteers. In this team-focused experience, the students will gain an appreciation for both the organization and individual team member's roles and responsibilities in a community setting. They will communicate with members of the geriatric population through in-person, hands-on interaction, during which students will not only share their knowledge and opinions, but learn the importance of respecting and valuing the knowledge of others. While working in collaboration with other classmates and professionals, students will understand the impact an engaging, values-based and patientcentered team can have on a community. Through class participation, reflection and guided discussions, students will explore and gain a deeper understanding of the potential impact in relation to geriatric population, caregiver responsibility and community organizations.

### PHRM7501 4 Credits Introductory Pharmacy Practice Experience (IPPE) II: Institutional

This hospital practice-experience course will develop students' awareness, knowledge and skills in various aspects of hospital-pharmacy practice and the roles and responsibilities of the pharmacists as a generalist and overseer of pharmacy management and therapeutic operations in a hospital setting. Introduction of the principles of medication-therapy management as the responsibility of the pharmacists and current topics in health care will be introduced enabling students to tangibly integrate classroom knowledge with hospitalpharmacy practice policies and procedures. Students will be placed at a site for 32 hours each week for four weeks acquiring knowledge across the curriculum as they engage in hospital health-system experiences that promote quality pharmacy operations and services, which optimize patient outcomes and promote patient safety.

### PHRM7700 0 Credits Beyond the Curriculum: Expanding Horizons (1)

A great deal of education happens outside of the formal course work. In this course, students will have an opportunity to engage in programs to learn more about the emerging areas of pharmacy in order to gain a deeper understanding of the evolving roles of pharmacists and the areas in which they can practice. This course will serve as a platform for students to network with industry and educational leaders to begin to develop their personal and professional networks as they prepare for their future roles in pharmacy. Prerequisites/Corequisites: PHRM6700 Beyond the Curriculum: Foundations in Pharmacy Education (1) and PHRM6701 Beyond the Curriculum: Foundations in Pharmacy Education (2).

### PHRM7701

### 1 Credit

### Beyond the Curriculum: Expanding Horizons (2)

A great deal of education happens outside of the formal course work. In this course, students will have an opportunity to engage in programs to learn more about the emerging areas of pharmacy in order to gain a deeper understanding of the evolving roles of pharmacists and the areas in which they can practice. This course will serve as a platform for students to network with industry and educational leaders to begin to develop their personal and professional networks as they prepare for their future roles in pharmacy. Prerequisites/Corequisites: PHRM6700 Beyond the Curriculum: Foundations in Pharmacy Education (1) and PHRM6701 Beyond the Curriculum: Foundations in Pharmacy Education (2).

## PHRM7801

## **3** Credits

## **Informatics and Information Systems**

This course provides an overview of the practical components of health care information systems, including an introduction to the capture, storage and processing of electronic medical records, the changing dynamics of the health information technology and the impact of technology, security and regulation on the transfer and storage of health information.

### **PHRM7810**

### 3 Credits Clinical Trial Design and Regulatory Requirements

This course covers the principles of clinical-trial design, including determination and evaluation of study objectives, commonly used methodologies of study design and the ethical, legal, statistical, sociological and epidemiological considerations that play a role in design of clinical protocols.

### **PHRM8109**

### 3 Credits

### Integrated Pharmacotherapy IX: Autoimmune Diseases, Rare Diseases and Special Populations

This is the ninth integrated pharmacotherapy module focusing on autoimmune, rare and special-population diseases and medication management. This course integrates basic principles of biochemistry, anatomy and physiology, pathophysiology, pharmacology, medicinal chemistry, pharmacokinetics, clinical chemistry and pharmacotherapy related to the presentation and management of diseases of these systems. Physicochemical and biological principles of dosage forms and drug-delivery strategies used to treat these conditions are discussed, as are the materials and methods used to prepare and administer the appropriate treatment. Cases and examples are used to provide the students with the skills to solve problems related to autoimmune, rare and special-population diseases in an active learning environment. Prerequisites: PHRM6100 Foundations in Pharmaceutical Science: Pharmacology, Medicinal Chemistry, Pharmacokinetics and PHRM6101 Foundations in Integrated Pharmacotherapy I: An Introduction to Pathophysiology, Genetics, Microbiology and Delivery of Care. Corequisite: PHRM8111 Integrated Pharmacotherapy IX-X: Conceptual Connections and Patient Care.

## PHRM8110

### 3 Credits

### Integrated Pharmacotherapy X: Hematology and Oncology

This course provides students with an integrated approach to understand the principles of and

solve problems related to oncology in an active, learning-based environment. The biochemistry, anatomy and physiology, pathophysiology, medicinal chemistry, pharmacology, pharmacokinetics, clinical chemistry and pharmacotherapy related to the presentation and management of oncologic diseases will be discussed. Physicochemical and biological principles of dosage forms and drug-delivery strategies used to treat these conditions will be discussed, as will the materials and methods used to prepare and administer appropriate treatments. Prerequisites: PHRM6100 Foundations in Pharmaceutical Science: Pharmacology, Medicinal Chemistry, Pharmacokinetics and PHRM6101 Foundations in Integrated Pharmacotherapy I: An Introduction to Pathophysiology, Genetics, Microbiology and Delivery of Care. Corequisite: PHRM8111 Integrated Pharmacotherapy IX-X: Conceptual Connections and Patient Care.

### PHRM8111 2 Credits

### Integrated Pharmacotherapy IX–X: Conceptual Connections and Patient Care

This course ties in the contents learned in Integrated Pharmacotherapy IX-X, in a casebased, active-learning fashion. While Integrated Pharmacotherapy IX-X prepare students with clinical knowledge and skill set, this course is designed to provide hands-on experience of patient interaction and assessment, triage and referral and treatment formulation and recommendation. Students will develop proficiency in patient-assessment skills systemby-system, effective counseling techniques with regards to drug administration, New Jersey prescription regulations and skills in dosing calculations, all of which are commonly encountered in pharmacy practice. Real-life cases involving autoimmune diseases, rare diseases, oncologic diseases, hematologic diseases and special populations will require students to think critically in every step of the care: presentation, history-taking, assessment, treatment formulation and administration and monitoring for efficacy and toxicity. Students will work on cases focusing on patients with several co-morbidities previously covered. Prerequisites: PHRM6100 Foundations in Pharmaceutical Science: Pharmacology, Medicinal Chemistry, Pharmacokinetics and PHRM6101 Foundations in Integrated Pharmacotherapy I: An Introduction to Pathophysiology, Genetics, Microbiology and Delivery of Care. Corequisites: PHRM8109 Integrated Pharmacotherapy IX: Autoimmune Diseases, Rare Diseases and Special Populations and PHRM8110 Integrated Pharmacotherapy X: Hematology and Oncology.

### PHRM8112 2 Credits

### Integrated Pharmacotherapy I–X: A Whole System Overview and Effecting Patient Care

This course ties in the contents learned in Integrated Pharmacotherapy I-X in a casebased, active-learning fashion. While Integrated Pharmacotherapy I-X prepared students with clinical knowledge and skill set, this course is designed to provide hands-on experience of patient interaction and assessment. triage and referral and treatment formulation and recommendation. Students will demonstrate proficiency in patient-assessment skills systemby-system, effective counseling techniques with regards to drug administration, New Jersey prescription regulations and skills in dosing calculations, all of which are commonly encountered in pharmacy practice. Real-life cases representing the disease states previously covered in the integrated pharmacotherapy courses will require students to think critically in every step of the care: presentation, historytaking, assessment, treatment formulation and administration and monitoring for efficacy and toxicity. Students will work on cases focusing on patients with several co-morbidities. Students will be certified by the American Pharmacist's Association Immunization Program. Prerequisites: PHRM6100 Foundations in Pharmaceutical Science: Pharmacology, Medicinal Chemistry, Pharmacokinetics and PHRM6101 Foundations in Integrated Pharmacotherapy I: An Introduction to Pathophysiology, Genetics, Microbiology and Delivery of Care.

## PHRM8113 3 Credits

Advanced Topics in Pharmacotherapy I This course provides students an opportunity to expand their knowledge in the area of druginduced diseases, nutrition, infectious diseases and critical-care pharmacotherapy. A casebased, team-based learning approach will be utilized to foster an interactive learning experience. Students will build upon their current pharmacotherapeutic knowledge through in-depth reading, discussions and case presentations. Prerequisites: PHRM6102 Integrated Pharmacotherapy II: Gastrointestinal; PHRM6104 Integrated Pharmacotherapy IV: Cardiology/Pulmonology I; PHRM7105 Integrated Pharmacotherapy V: Neurology, Psychiatry and Anesthesiology; PHRM7106 Integrated Pharmacotherapy VI: Infectious Disease and PHRM8110 Integrated Pharmacotherapy X: Hematology and Oncology.

### PHRM8114 3 Credits

### Advanced Topics in Pharmacotherapy II – Geriatric and Pediatrics

This course will enhance the pharmacy students' skills in geriatric and pediatric pharmacotherapy

by promoting their understanding of the unique physiologic characteristics of such special populations. The course will concentrate on the pharmacotherapy management of the disease states and special-care needs as it applies to geriatric and pediatric patients. The goals of this course are to develop skills necessary to optimize the care of inpatient and outpatient geriatric and pediatric patients by utilizing evidence-based and patient-centered therapy. The course will utilize a combination of didactic lectures, class discussions, collaborative learning and field-based activities. Prerequisites: PHRM6102 Integrated Pharmacotherapy II: Gastrointestinal; PHRM6104 Integrated Pharmacotherapy IV: Cardiology/Pulmonology I; PHRM7105 Integrated Pharmacotherapy V: Neurology, Psychiatry and Anesthesiology; and PHRM7106 Integrated Pharmacotherapy VI: Infectious Disease.

### PHRM8115

### **3** Credits

### Advanced Topics in Pharmacotherapy III – Critical Care

This course provides students an opportunity to expand their knowledge in the areas of criticalcare pharmacotherapy. A care-based, team-based learning approach will be utilized to foster an interactive learning experience. Students will build upon their current pharmacotherapeutic knowledge through in-depth reading, discussions and case presentations. In this elective course, they will develop criticalthinking, problem-solving and decision-making skills that will help them effectively evaluate medication-related issues and develop appropriate pharmacotherapy recommendations as would be required of pharmacists working in an intensive care unit. Prerequisites: PHRM6102 Integrated Pharmacotherapy II: Gastrointestinal; PHRM6104 Integrated Pharmacotherapy IV: Cardiology/Pulmonology I; PHRM7105 Integrated Pharmacotherapy V: Neurology, Psychiatry and Anesthesiology; PHRM7106 Integrated Pharmacotherapy VI: Infectious Disease; PHRM7107 Integrated Pharmacotherapy VII: Pulmonary, Eye, Ear, Nose and Throat; and PHRM7108 Integrated Pharmacotherapy VIII: Endocrine, Urinary Tract, Renal and Reproductive Health.

### PHRM8116

### **3** Credits

### Advanced Topics in Pharmacotherapy IV – Infectious Diseases

This course provides students an opportunity to expand their knowledge in the area of infectious diseases including human immunodeficiency virus (HIV) infection. Students will build upon their current pharmacotherapeutic knowledge through in-depth reading, discussions, journal club and patient-case presentation. Prerequisite: PHRM7106 Integrated Pharmacotherapy VI: Infectious Disease.

### PHRM8117 3 Credits Emerging Topics in Cancer Pharmacology and Pharmacotherapeutics

This course focuses on advances in pharmacology and clinical applications of novel anticancer agents. It combines didactic lectures on the emerging topics in cancer pharmacology and pharmacotherapeutics with journal-club presentation and in-class activities. Emphasis of the presentations will be on the translation of biomedical science discoveries into therapeutic agents and implementation of novel anticancer agents into clinical practice. Students will be exposed to pharmacotherapeutics of several types of cancers not covered in the core hematology/oncology course. Prerequisite: PHRM8110 Integrated Pharmacotherapy X: Hematology and Oncology.

### PHRM8118

### **3** Credits

### Advanced Topics in Pharmacotherapy: Advanced Cardiology

This elective course will build on the foundation of knowledge of cardiovascular disease and introduce some new disease states, which are not part of the required curriculum. The students will learn/evaluate major landmark trials in cardiology that provide thereapy recommendations used in management of cardiovascular diseases today. The students will practice providing patient-specific recommendations based on evidence available from primary literature resources. The goals of this course are to develop skills necessary to optimize the care of inpatient and outpatient management of cardiovascular diseases by utilizing evidence-based and patient-centered therapy. The course will utilize a combination of didactic lectures, class discussions and collaborative learning. Prerequisites: PHRM6100 Foundations in Pharmaceutical Science: Pharmacology, Medicinal Chemistry, Pharmacokinetics; PHRM6101 Foundations in Integrated Pharmacotherapy I: An Introduction to Pathophysiology, Genetics, Microbiology and Delivery of Care; PHRM6102 Integrated Pharmacotherapy II: Gastrointestinal; PHRM6104 Integrated Pharmacotherapy IV: Cardiology/Pulmonology I; PHRM7107 Integrated Pharmacotherapy VII: Pulmonary, Eye, Ear, Nose and Throat; and PHRM7108 Integrated Pharmacotherapy VIII: Endocrine, Urinary Tract, Renal and Reproductive Health. Corequisite: PHRM8111 Integrated Pharmacotherapy IX-X: Conceptual Connections and Patient Care.

### PHRM8120 3 Credits

### Problem-solving and Clinical Decisionmaking in Pharmacy II

This course will expand student skills and abilities in evaluating patient cases encountered

in pharmacy practice. Cases will focus on application of materials covered in the curriculum, particularly application of content of P-1 and P-2 integrated pharmacotherapy courses. The students will hone skills related to pharmacotherapeutic decision-making, clinical evaluation of drug therapies, identification of drug-therapy problems, calculations commonly performed in a community or institutional setting and pharmacokinetic or dosage-form consultations. The course will enhance student's preparedness to provide patient-centered pharmaceutical care using pharmacists' patientcare process. Emphasis will be placed on critical evaluation of clinical scenarios, decision-making and problem-solving process in pharmacy practice. Prerequisite: PHRM8111 Integrated Pharmacotherapy IX-X: Conceptual Connections and Patient Care.

### PHRM8201 2 Credits

# Pharmacogenomics and Personalized Medicine

This course focuses on how genetic factors can affect the pharmacokinetic and/or the pharmacodynamic parameters of a drug ultimately impacting its efficacy and toxicity in the patient. Considerations of genomic and phenotypic information to individualize pharmacotherapy and minimize adverse events are emphasized. The underlying principles of pharmacology, pharmacokinetics and pharmacotherapeutics are reinforced. This course includes discussions on biochemical analytical methods, clinical interpretation of laboratory data, applied pharmacokinetics and therapeutic drug monitoring and principles and applications in pharmacogenomics. Economic and ethical issues in relation to the incorporation of pharmacogenomic data in the clinical decision-making process are also discussed. All concepts are discussed against the backdrop of patient-centered care. Prerequisites: PHRM6100 Foundations in Pharmaceutical Science: Pharmacology, Medicinal Chemistry, Pharmacokinetics and PHRM6101 Foundations in Integrated Pharmacotherapy I: An Introduction to Pathophysiology, Genetics, Microbiology and Delivery of Care.

### PHRM8202 3 Credits

### Current Therapeutic Targets and Their Challenges

This course will provide students with an understanding of the drug discovery and development process. The course will be developed into three sections. In the first section, topics covering drug discovery and development will be discussed, including lead finding, hit-to-lead activities, lead optimization, preclinical development and clinical development. In the second section, challenges germane to current therapeutic targets in the neuroscience, cardiovascular, oncology, inflammation and diabetes therapeutic areas will be discussed. In the final section, students will have the opportunity to research and present a current therapeutic target, exploring the potential advantages and challenges of that target. Prerequisites: PHRM6100 Foundations in Pharmaceutical Science: Pharmacology, Medicinal Chemistry, Pharmacokinetics and PHRM6101 Foundations in Integrated Pharmacotherapy I: An Introduction to Pathophysiology, Genetics, Microbiology and Delivery of Care.

### PHRM8203

#### **3** Credits

### Advanced Sterile Pharmacy Dispensing and Compounding

Building upon the knowledge gained in PHRM7201 Pharmaceutics III: Dosage Form and Drug Delivery Systems and PHRM7202 Pharmaceutics IV: Sterile Products and Biopharmaceuticals, students will learn the advanced science and art of preparing and dispensing a wide variety of Compounded Sterile Products (CSP). Emphasis is placed on a variety of aseptic technique methods and common regulatory and procedural processes employed in clean rooms. Students will learn USP 797, proposed USP 800 and Board of Pharmacy definitions, concepts and standards. This course provides advanced knowledge for compounding-dispensing techniques, standards and principles and integrates with knowledge gained and will reply upon retention of principles covered in PHRM7201 Pharmaceutics III: Dosage Form and Drug Delivery Systems and PHRM7202 Pharmaceutics IV: Sterile Products and Biopharmaceuticals. The course will have didactic and practical components. Prerequisites: PHRM7201 Pharmaceutics III: Dosage Form and Drug Delivery Systems and PHRM7202 Pharmaceutics IV: Sterile Products and Biopharmaceuticals.

### PHRM8211

### 3 Credits

### Advanced Topics in Pharmaceutical Sciences

This course provides students an opportunity to expand their knowledge in the areas of pharmaceutical sciences. A case-based, teambased learning approach will be utilized to foster an interactive learning experience. Students will build upon their current knowledge through indepth reading, discussions and case presentations. Prerequisites: PHRM6100 Foundations in Pharmaceutical Science: Pharmacology, Medicinal Chemistry, Pharmacokinetics; PHRM6101 Foundations in Integrated Pharmacotherapy I - An Introduction to Pathophysiology, Genetics, Microbiology and Delivery of Care; PHRM6202 Pharmaceutics II - Oral Dosage Forms and Biopharmaceutics/Pharmacokinetics; and

PHRM7202 Pharmaceutics IV: Sterile Products and Biopharmaceuticals.

### PHRM8212 3 Credits **Obesity**

This course will cover the broad subject of obesity from its epidemiology and associated comorbidities to its physiological underpinnings and various available treatment options. Firstly, it will provide information regarding the prevalence of obesity along with important timelines. It will cover the complex interplay of various endogenous hormones that are involved in appetite regulation (affecting hunger and satiety). The biochemistry of adipocytes and their role in energy balance will be discussed. Current pharmacotherapeutic treatment options will be discussed along with a historical perspective of prior treatments and the reasons for their failure/withdrawal, as well as potential future targets for anti-obesity drugs. This course will also discuss non-pharmacological options to treating and preventing obesity, along with other topics of relevance to pharmacists such as druginduced obesity and pharmacodynamics/ pharmacokinetic issues in obese patients. Prerequisites: PHRM6100 Foundations in Pharmaceutical Science: Pharmacology, Medicinal Chemistry, Pharmacokinetics; PHRM6101 Foundations in Integrated Pharmacotherapy I: An Introduction to Pathophysiology, Genetics, Microbiology and Delivery of Care; and PHRM6301 Medical Communication and Technical Writing. Corequisite: PHRM8111 Integrated Pharmacotherapy IX-X: Conceptual Connections and Patient Care.

### PHRM8213 3 Credits **Principles of Drug Design**

This course introduces students to the process of molecular drug design during the early stages of preclinical discovery. The focus of this course is to engage students in the drug design and discovery process. In the first half of the course, students will be educated on the fundamentals of drug design, medicinal chemistry and molecular pharmacology in order to understand rational drug design. The course will examine several cases of drugs and drug candidates that were successfully designed using medicinal chemistry, structure-based drug design and computer-aided drug design. Students will also learn molecular modeling software through tutorials in order to examine drug-target interactions. Drug-design problems such as toxicity, off-target binding, thermodynamics, ADME issues and drug resistance will also be considered and examined at the molecular level. The course emphasizes drug-design project teams; the second half of the course is devoted to team-based learning for drug case studies and completion of a group project/presentation. By

the end of the course, students will be able to use fundamental knowledge and problemsolving abilities to rationally design a hypothetical drug (or drug class) based on a proposed pharmacophore and target structure. Prerequisite: PHRM6100 Foundations in Pharmaceutical Science: Pharmacology, Medicinal Chemistry, Pharmacokinetics.

### PHRM8301 3 Credits Pharmacoepidemiology, Pharmacoeconomics and Health Outcomes

This course is designed to familiarize students with the principles of pharmacoepidemiology and pharmacoeconomics. The course focuses on major areas of the evolving fields of pharmacoepidemiology and pharmacoeconomics with an emphasis on measuring health outcomes. It builds on and extends the skills and concepts learned in previous courses within the curriculum that are focused on the effectiveness of medication use at a population level (PHRM7301 Biostatistics, PHRM7302 Epidemiology and Study Design Evaluation, PHRM7401 Professional Pharmacy Practice III: Drug Information, Informatics and Toxicology). The additional dimension of efficiency or cost relative to value of a given health benefit or outcome is introduced and developed. The role of pharmacoepidemiologic studies in postmarketing safety studies and communication of risk is covered as is the role of both pharmacoepidemiologic and pharmacoeconomic studies in the formulary process used for medication coverage by insurers. It is important for students to understand how to evaluate, interpret and apply medical research involving pharmaceutical care of individual patients and community or population health (public health) and use this information to aid their decisionmaking processes in pharmacy practice. The principles discussed and applied in this course will better prepare students to function in this capacity. Prerequisites: PHRM6301 Medical Communication and Technical Writing, PHRM6401 Professional Pharmacy Practice I: Health Care Delivery, PHRM7301 Biostatistics, PHRM7302 Epidemiology and Study Design Evaluation and PHRM7401 Professional Pharmacy Practice III: Drug Information, Informatics and Toxicology.

### PHRM8302 2 Credits

### Public Health and the Global Mission of Pharmacy

The course covers the evolution and basic principles of public health, including focus on relevant public health care issues affecting populations in the United States. Additionally, global public health issues are highlighted, particularly those unique to populations in developing and emerging countries.

Information, principles and tools introduced in previous courses (PHRM6401 Professional Pharmacy Practice I: Health Care Delivery, PHRM7301 Biostatistics, PHRM7302 Epidemiology and Study Design Evaluation, PHRM7401 Professional Pharmacy Practice III: Drug Information, Informatics and Toxicology and PHRM8301 Pharmacoepidemiology, Pharmacoeconomics and Health Outcomes) are reinforced and applied to public health topics, particularly those that pharmacists are likely to encounter in professional practice. Emphasis is given to emergency preparedness, public health improvement and disease prevention. The evolving roles of pharmacists in providing patient care and disease-management services to vulnerable populations and reducing health disparities in access to care are introduced. In particular, the role of pharmacists in improving public health, the charge for pharmacy in the United States public health service and interprofessional opportunities for pharmacists in public health initiatives such as Healthy People 2020 are explored. Prerequisites: PHRM6401 Professional Pharmacy Practice I: Health Care Delivery, PHRM7301 Biostatistics, PHRM7302 Epidemiology and Study Design Evaluation, PHRM7401 Professional Pharmacy Practice III: Drug Information, Informatics and Toxicology and PHRM8301 Pharmacoepidemiology, Pharmacoeconomics and Health Outcomes.

### PHRM8303

### **3** Credits

### **Research Methods and Data Analysis**

This course provides students an opportunity to acquire research experiences in the field of health services research. Students will build up their research projects under the supervision of the faculty. A team-based learning approach will be utilized to foster an interactive learning experience. In this elective course, students will develop critical-thinking, problem-solving and decision-making skills. Prerequisite: PHRM7301 Biostatistics.

### PHRM8321

### 1 Credit

### Health Care Ethics and Team Decision Making

This course will introduce the students to the ethical issues that pharmacists and other healthcare professionals have to consider when treating patients. Various topics related to clinical ethics, including informed consent, decisional capacity, do-not-resuscitate orders, surrogate decisionmaking, confidentiality, the distinction between research and clinical care and end-of-life care will be introduced. Ethical decision-making will be practiced in an interactive environment through case studies with teams of students from various health professions. Corequisite: PHRM8111 Integrated Pharmacotherapy IX–X: Conceptual Connections and Patient Care.

### PHRM8401 3 Credits Pharmacists' Careers in Pharmaceutical Industry

This course is designed for doctor of pharmacy students considering an internship, experiential rotation, additional degree options and/or postgraduate training, in preparation for a career within the pharmaceutical industry. Health care has undergone significant change within the past two decades with the advent of various managed-care delivery models, the growing influence of federal and state governments as purchasers, health care reform, increasing regulatory and patent complexities and dramatic innovation and adoption of technology in every facet of people's lives. In many emerging health care models, pharmacists are taking a more influential role on the health care team and this trend will likely continue. However, in some of the more traditional pharmacy-practice settings, the supply of pharmacists is outpacing demand. The result of the current employment landscape is that more student pharmacists than ever before are exploring nontraditional practice settings including the pharmaceutical industry. The pharmaceutical industry incuding all the organizations that support it offers exciting and professional challenges and opportunities for pharmacist graduates. Consistent with changing roles of pharmacists in traditional health-care practice settings, the industry has also undergone significant changes resulting in a growing diversity of positions that are being filled by pharmacists throughout the commercialization process of pharmaceutical products. This course will explore various aspects of pharmaceutical commercialization from development and regulatory approval to marketing and sales strategies through life-cycle management. Each functional department will be described and discussed with a focus on the roles, responsibilities and opportunities for pharmacists to successfully contribute and achieve high levels of professional satisfaction. Prerequisites: PHRM6301 Medical Communication and Technical Writing and PHRM6401 Professional Pharmacy Practice I: Health Care Delivery.

### PHRM8402 2 Credits Professional Pharmacy Practice IV: Pharmacy Leadership and Management

Pharmacy practice does not exist in isolation; organizational structures and cultures have an impact on the contemporary practice of pharmacy within an organization with various stakeholders taking an interest and having a voice in the professional practice of pharmacy. To be effective, pharmacists will need to be aware of a variety of managerial issues they will likely face as practitioners. As a complement to the clinical and professional expertise pharmacy students develop by completing integrated pharmacotherapy, population health and previous professional pharmacy-practice courses, this course introduces basic administrative, business, managerial and leadership principles necessary for the effective and efficient delivery of patient-care goals. Application of these principles to pharmacy practice includes budgetary and financial considerations, marketing principles, personnel management, customer service, continuous quality assessment and performance improvement related to both improved value propositions and improved patient safety, as well as the use of technology in pharmacy practice. Risk management and the impact of compliance with state and federal laws and regulations and quality standards proposed by accrediting agencies on pharmacy management and leadership are explored. Prerequisites: PHRM6401 Professional Pharmacy Practice I: Health Care Delivery; PHRM6402 Professional Pharmacy Practice II: Communication in Health Care; and PHRM7401 Professional Pharmacy Practice III: Drug Information, Informatics and Toxicology.

### PHRM8403 3 Credits

### An Introduction to Lean Six Sigma

This course introduces pharmacy students to the concepts and methods of Lean Six Sigma (LSS). LSS is a method that relies on effective teamwork to improve performance by decreasing waste and creating a lean enterprise. A framework of both Lean and Six Sigma tools will be covered providing a roadmap and diagnosis for workflow improvements and reduction in variability. The skills learned in this class will build capabilities that can help improve workflow and reduce errors in the pharmacy setting and organize processing in the pharmaceutical industry. Prerequisite: PHRM7301 Biostatistics. Corequisite: PHRM8402 Professional Pharmacy Practice IV: Pharmacy Leadership and Management.

### PHRM8404 3 Credits Medication Safety

While medication therapy has become the mainstay of disease treatment and prevention, errors involving medications can result in patient harm and death. This course expands on knowledge acquired in PHRM7401 Professional Pharmacy Practice III: Drug Information, Informatics and Toxicology and PHRM8301 Pharmacoepidemiology, Pharmacoeconomics and Health Outcomes related to medication safety and the technology and tools used in error prevention. The student will also conduct casestudy analyses of actual adverse drug events which include both medication errors and adverse drug reactions that have occurred in both the hospital and community-pharmacy settings. Prerequisites: PHRM7401 Professional Pharmacy Practice III: Drug Information,

Informatics and Toxicology and PHRM8301 Pharmacoepidemiology, Pharmacoeconomics and Health Outcomes.

### PHRM8405 3 Credits

### Medical Spanish for the Pharmacy Professional

This course prepares students to be effective listeners and communicators using the Spanish language with the objective to actively engage with Hispanic patients to facilitate medication utilization and adherence. Triage terminology and basic pharmacy vocabulary will be introduced in addition to self-care specific medical language relative to each chapter in the text Spanish for the Medical Professional (i.e. fever, cough, cold, etc). Active engagement techniques and essential competencies will be practiced via role-playing. Phrases and questions required for physical assessments in addition to aspects encompassing Hispanic Cultural Competencies will also be covered. Students will also be introduced to the National CLAS (Culturally and Linguistically Appropriate Services) Standards in order to provide a better understanding of the social and cultural aspects of the Hispanic community influencing beliefs and behaviors.

### PHRM8700 0 Credits Beyond the Curriculum/Preparing Practitioners (1)

In the first of the two-semester course sequence, students will have an opportunity to continue to engage in programs to learn more about the emerging areas of pharmacy in order to gain a deeper understanding of the evolving roles of pharmacists and the the areas in which they can practice. Assessment of readiness to enter the world of professional pharmacy and career guidance for traditional and nontraditional pharmacist roles will be introduced. Prerequisites: PHRM7700 Beyond the Curriculum: Expanding Horizons (1) and PHRM7701 Beyond the Curriculum: Expanding Horizons (2).

## PHRM8701

### 1 Credit Beyond the Curriculum/Preparing Practitioners (2)

In this course, students will have an opportunity to continue to engage in programs to learn more about the emerging areas of pharmacy in order to gain a deeper understanding of the evolving roles of pharmacists and the areas in which they can practice. Assessment of readiness to enter the world of professional pharmacy and career guidance for traditional and nontraditional pharmacist roles will be provided. Prerequisites: PHRM7700 Beyond the Curriculum: Expanding Horizons (1) and PHRM7701 Beyond the Curriculum: Expanding Horizons (2).

### PHRM8802 3 Credits Health Information Exchange and Security

This course will provide an overview of the methods, issues and challenges surrounding the transmission, storage and preservation of health information data, including an overview of the regulatory processes that oversee exchange and security of medical information (i.e., HIPAA, Joint Commission) and a discussion on the concerns around disclosure, accountability and liability involving storage and transmission of data.

### PHRM8804 3 Credits Applied Clinical Data Analytics

This course teaches methodologies and technologies used heavily in the field of clinical analytics. Data-management principles, database foundations and aspects of the data pipeline are educated didactically before students begin to learn and utilize highpowered analytical tools such as Python, R and SQL. This course will heavily feature themes in health care as each of these tools and skills will be applied to real-world problems that data analytics is poised to help solve. Prerequisites: PHRM7801 Informatics and Information Systems and PHRM8802 Health Information Exchange and Security.

## PHRM8806

## 3 Credits

**Project Management** The purpose of this course is to integrate the

essential components of project planning and management with health care information systems for health care leaders. The course will outline the process for developing, implementing and evaluating project plans as well as integration of communication and project life-cycle theory. Prerequisite: PHRM7401 Professional Pharmacy Practice III: Drug Information, Informatics and Toxicology.

### PHRM8807 3 Credits Human Factors in Informatics

Human Factors is a behavioral science with applications in almost every field, including ergonomics, software design, medical-device development and health care. By definition, this discipline is concerned with the interaction between humans and the systems with which they perform work. Increasingly, the processes that health care workers navigate are technologically laced and data-driven. This presents a perfect area for the expert informaticists to liaise. This course will investigate deeply how people interact with technology and data. Through comprehensive study, future informaticists will identify how best to apply technology to health care processes, how to manage change, best

practices in data exposition and useful instructional design techniques. While the bulk of this course deals with how people interact with technology, the class will also explore how programmatic reporting of outcomes influences the technologies and actions taken in health care. A focused exploration of mortality, readmissions and preventable harm will complement the practical use of technology students will be learning in other courses in the informatics sequence.

### PHRM8808

### 3 Credits Principles of Informatics in Population Health

Much of pharmacy and medicine is in the treatment of individual patients with specific medical needs and conditions. A major focus now and for the future is population-health management in order to prevent our populations from becoming ill and needing acute treatment. Informatics and analytics are a necessary force multiplier for providers and pharmacists to enhance decision-making and enable care for entire populations of people. Through this course students will learn the management of populations as well as the information systems and techniques to do so safely and efficiently. This integrated course will have multiple instructors covering a wide range of population and public health content areas, which may include practicing physicians, nurses, pharmacists and care-management specialists. Prerequisites: PHRM7801 Informatics and Information Systems and PHRM8802 Health Information Exchange and Security.

#### PHRM8810 3 Credits

### **Medical and Clinical Report Writing**

This course provides a basic overview of the necessary means of communication for the clinical research professional, including methods for documentation, presentation of data and reporting of results. Focused attention will be paid to developing approaches for communication that allows for effective information transfer to a broad and diverse set of audiences, including patients, physicians, nurses, pharmacists, researchers and the general public. Prerequisite: PHRM7302 Epidemiology and Study Design Evaluation. Note: For pharmacy students only.

### PHRM8811 2 Credits

### Ethics of Health Care Research

The student will examine the ethical issues that confront health care providers and patients. The medical, scientific, moral and socioeconomic bases of these issues and the decision-making process that providers and patients engage in are analyzed. Topics include informed consent, the role of institutional review boards, euthanasia and the allocation of scarce resources.

## PHRM8812 3 Credits

## **Clinical Trial Research Administration**

This course provides a focused overview on the logistic and operational factors in conducting and completing a clinical research study. This includes discussion on the responsibilities and relationships for each of the professionals and parties involved in bringing the study from conceptualization through implementation and into the phase of data evaluation and report writing.

### PHRM8821 3 Credits Regulatory Compliance for Pharmaceuticals

This course will review the regulatory pathways for drugs, biologies, biosimilars, medical devices and other pharmaceutical and biotechnology areas of awareness. Discussions on compliance strategies, risks and processes within each framework will provide insight into the challenges (financial, ethical and procedural) facing each industry and area.

## PHRM8822

### **3 Credits**

### U.S. Regulatory New Drug Application Submission and Dossier Preparation

This course will review steps and consideration in preparing a New Drug Application (NDA) submission to the U.S. Food and Drug Administration (FDA). Students will become knowledgeable on terminology used in NDA submission process in an electronic (e) Common Technical Document (CTD) format. Extensive Markup Language (XML) backbone, portable document format (PDF) file, structured product labeling format (SPL) for U.S. package-insert labeling, what area and statistical analysis systems (SAS) transport files. The course will provide a fundamental understanding of the different types of NDAs to file for under Section 505 of the Federal Food and Drug and Cosmetic Act for marketing authorization in the United States and describe the components and essential documents necessary for inclusion in an NDA submission. Students will learn how to consider key sections and data within the U.S. NDA submission for consideration of global regulatory submissions outside of the U.S. by using the CTD format and International Conference on Harmonization (ICH) principles.

### PHRM9101

### 5 Credits

### Advanced Pharmacy Practice Experience (APPE) I: Community

This is an advanced practice experience course building on the student's prior knowledge and practice in the community-care setting. The student will spend full-time hours (40 plus hours per week) for five weeks focusing on patient-centered pharmacy practice in a community-pharmacy setting. Acquisition of new knowledge and skills in providing primary patient care and development of confidence in clinical decision making and managing individual and population care is the goal of this practice course. This course prepares students to be critical thinkers who will continually build their knowledge across the curriculum as they engage in practice experiences.

## PHRM9102

### 5 Credits

### Advanced Pharmacy Practice Experience (APPE) II: Institutional

This advanced institutional pharmacy practice experience will provide students with the opportunity to apply knowledge acquired during the didactic portion of the curriculum and build upon skills and competencies gained through earlier introductory pharmacy practice experiences. With a focus on the central pharmacy and distributive areas of an inpatient pharmacy, students will participate in clinical, distributive and administrative functions of pharmacists. Throughout the experience, students will engage in all aspects of hospital/ health system pharmacy, including the medication-use process, quality assurance, medication safety, interprofessional collaboration, observation and/or participation in sterile and nonsterile product preparation and patient-care activities. Through this hands-on experience, the student will progress from the student-pharmacist level to developing the competencies necessary to become a practicing pharmacist accountable for pharmacistdelivered, patient-centered care. Students are expected to be at the site a minimum of eight hours a day, five days a week for five consecutive weeks. Students must adhere to the schedule established by the preceptor.

### PHRM9103

### **5** Credits

### Advanced Pharmacy Practice Experience (APPE) III: Ambulatory Care

This is an advanced pharmacy practice experience focusing on the application of didactic course work and acquired patient-care skills to the care of ambulatory-care patients. Students will be active participants in the delivery of high-quality care to patients through patient counseling, drug-therapy monitoring and the development of patient-education material. Students will collaborate with other health care professionals as active participants in the drug therapy decision-making process. Acquisition of new knowledge and skills in providing primary patient care and development of confidence in clinical decision making is the goal of this practice course. Students are expected to be present at the site for a minimum of eight hours a day, five days per week for five consecutive weeks. Students must adhere to the schedule established by the preceptor.

### PHRM9104 5 Credits Advanced Pharmacy Practice

## Experience (APPE) IV: Acute Care

This acute-care pharmacy practice experience will enable students to integrate skills and knowledge gained during the didactic portion of the curriculum and apply this knowledge and skills to optimize drug-therapy management and medication safety in an acute-care medical setting. Students will establish their understanding of the role of a pharmacist as a clinical provider and as an integrated member of the health care team. Students will evaluate and identify medication-related problems and formulate clinical solutions to provide care for patients in an acute-care setting. Students will contribute to effective patient-care delivery while simultaneously gaining an appreciation and respect for the roles of each health professional within an interprofessional team. Throughout the course, students will be exposed to a variety of disease states and differing levels of medical acuity. Students will utilize their knowledge of therapeutics and health disparities to communicate with patients and health care providers to positively impact patient outcomes, prevent adverse events and assure safe medication use. Students are expected to be at the site a minimum of eight hours a day, five days a week for five consecutive weeks. Students must adhere to the schedule established by the preceptor.

## PHRM9201 5 Credits

### Advanced Pharmacy Practice Experience (APPE) V: Elective – Community Practice I

The five-credit advanced community advanced pharmacy practice experience surrounds various aspects of medication dispensing encompassing the delivery patient-centered care and effective medication management. The primary focus of this experience is patient assessment, counseling and education, medication therapy, disease-state management and documentation of patient information and interventions. The Advanced **Community Advanced Pharmacy Practice** Elective Experience is a five-credit, full-time (40 hours per week for five weeks) course affording students a pharmacy-practice setting in which to further develop their skills and competencies acquired in their introductory community experience. This experience contributes to the integration of clinical knowledge and skills with the basics of medication dispensing and control.

### PHRM9202 5 Credits Advanced Pharmacy Practice Experience (APPE) V: Elective – Community Practice II

The five-credit community practice advanced pharmacy practice experience surrounds various aspects of medication dispensing encompassing the delivery of patient-centered care and effective medication management. The primary focus of this experience is patient assessment, counseling and education, medication therapy, disease-state management and documentation of patient information and interventions. This fulltime (40 hours per week for five weeks) course affords students a pharmacy-practice setting in which to further develop their skills and competencies acquired in their introductory community experience. This experience contributes to the integration of clinical knowledge and skills with the basics of medication dispensing and control.

### **PHRM9203**

### 5 Credits

### Advanced Pharmacy Practice Experience (APPE) V: Elective – Ambulatory Care I

The five-credit ambulatory care advanced pharmacy practice experience affords students the ability to enhance their skills and competencies in the provision of medicationtherapy management and pharmaceutical care in an ambulatory/outpatient clinical setting. The experience emphasizes appropriate identification, resolution and prevention of drug-related problems, as well as effective communication with patients and interprofessional allied health professionals. Competencies enhanced and acquired include patient counseling and education, drug information, written and verbal communication, assessment and documentation of interventions, patient-care services and therapy and the appreciation for the pharmacist's role in patientcentered care and promotion of rational and effective drug therapy.

### PHRM9204

### 5 Credits

### Advanced Pharmacy Practice Experience (APPE) V: Elective – Ambulatory Care II

The five-credit ambulatory care advanced pharmacy practice experience affords students the ability to enhance their skills and competencies in the provision of medicationtherapy management and pharmaceutical care in an ambulatory/outpatient clinical setting. The experience emphasizes appropriate identification, resolution and prevention of drug-related problems, as well as effective communication with patients and interprofessional allied health professionals. Competencies enhanced and acquired include

# **Pharmacy**

patient counseling and education, drug information, written and verbal communication, assessment and documentation of interventions, patient-care services and therapy, and the appreciation for the pharmacist's role in patient-centered care and promotion of rational and effective drug therapy.

### PHRM9205 5 Credits Advanced Pharmacy Practice Experience (APPE) V: Elective – Community Compounding I

The five-credit community compounding advanced pharmacy practice experience is an elective rotation in a community pharmacy specializing in compounding extemporaneous (patient-specific) drug products. In addition to the preparation and compounding of patientspecific dosage forms, the experience will also encompass the provision of medication-therapy management and individualized medication instructions to enhance medication compliance.

### **PHRM9206**

5 Credits

## Advanced Pharmacy Practice Experience (APPE) V: Elective – Community Compounding II

The five-credit community compounding advanced pharmacy practice experience is an elective rotation in a community pharmacy specializing in compounding extemporaneous (patient-specific) drug products. In addition to the preparation and compounding of patientspecific dosage forms, the experience will also encompass the provision of medication therapy management and individualized medication instructions to enhance medication compliance.

### PHRM9207 5 Credits Advanced Pharmacy Practice Experience (APPE) V: Elective –

## **Medication Therapy Management I** The five-credit medication therapy management

advanced pharmacy practice experience is an elective clinical rotation affording students the ability to acquire and enhance essential competencies and skills in the identification, prevention and resolution of medication-related problems in addition to effective methods in patient and interprofessional communication to optimize therapeutic outcomes. Medicationtherapy management skills developed encompass comprehensive medication review, patient education, written and verbal communication skills and assessment and documentation of medication-related services and therapies.

### PHRM9208 5 Credits Advanced Pha

### Advanced Pharmacy Practice Experience (APPE) V: Elective – Medication Therapy Management II

The five-credit medication therapy management advanced pharmacy practice experience is an elective clinical rotation affording students the ability to acquire and enhance essential competencies and skills in the identification, prevention and resolution of medication-related problems in addition to effective methods in patient and interprofessional communication to optimize therapeutic outcomes. Medicationtherapy management skills developed encompass comprehensive medication review, patient education, written and verbal communication skills and assessment and documentation of medication-related services and therapies.

### PHRM9209

### 5 Credits Advanced Pharmacy Practice Experience (APPE) V: Elective – HIV/AIDS I

The five-credit HIV/AIDS advanced pharmacy practice experience is a clinical elective rotation that introduces the student to the care and treatment of patients in the various stages of the disease state. Since many patients with HIV/AIDS experience numerous complications as their disease progresses, students will learn how to prevent and/or treat these complications in this specific patient population. This rotation may take place in an inpatient or outpatient setting.

### PHRM9210 5 Credits Advanced Pharmacy Practice Experience (APPE) V: Elective – HIV/AIDS II

The five-credit HIV/AIDS advanced pharmacy practice experience is a clinical elective rotation that introduces the student to the care and treatment of patients in the various stages of the disease state. Since many patients with HIV/AIDS experience numerous complications as their disease progresses, students will learn how to prevent and/or treat these complications in this specific patient population. This rotation may take place in an inpatient or outpatient setting.

## PHRM9211

### 5 Credits

### Advanced Pharmacy Practice Experience (APPE) V: Elective – Home Infusion I

The five-credit home infusion advanced pharmacy practice experience is an elective clinical rotation in a setting that provides home health care services. The student will acquire and enhance competencies and skills surrounding the pharmacist's responsibilities in preparation of home-parenteral products including home-parenteral nutrition, home chemotherapy, hospice-care products and medications and necessary medical device equipment for the patient to be managed at home. The experience will also include involvement in participation in home-infusion assessment activities, inventory and quality control of products and patient-discharge consultations along with exposure to various infusion pumps and related home-care parenteral devices utilized in the home-infusion environment.

## PHRM9212

### 5 Credits Advanced Pharmacy Practice Experience (APPE) V: Elective – Home Infusion II

The five-credit home infusion advanced pharmacy practice experience is an elective clinical rotation in a setting that provides home health care services. The student will acquire and enhance competencies and skills surrounding the pharmacist's responsibilities in preparation of home-parenteral products including home-parenteral nutrition, home chemotherapy, hospice-care products and medications and necessary medical device equipment for the patient to be managed at home. The experience will also include involvement in participation in home-infusion assessment activities, inventory and quality control of products and patient-discharge consultations along with exposure to various infusion pumps and related home-care parenteral devices utilized in the home-infusion environment.

### PHRM9301

### 5 Credits

### Advanced Pharmacy Practice Experience (APPE) VI: Elective – Hospital Practice I

The five-credit Hospital Advanced Pharmacy Practice Experience is an inpatient hospital rotation which provides a setting for the provision of pharmaceutical care encompassing medication-management process relative to medication-order entry, preparation, distribution and control of medications, medication interventions, monitoring and control affording the integration of critical thinking problem-solving clinical skills and interprofessional communication.

## PHRM9302

### 5 Credits Advanced Pharmacy Practice Experience (APPE) VI: Elective – Hospital Practice II

The five-credit Hospital Advanced Pharmacy Practice Experience is an inpatient hospital rotation which provides a setting for the provision of pharmaceutical care encompassing medication-management process relative to medication-order entry, preparation, distribution and control of medications, medication interventions, monitoring and control affording the integration of critical thinking problemsolving clinical skills and interprofessional communication.

### **PHRM9303**

### 5 Credits Advanced Pharmacy Practice Experience (APPE) VI: Elective – Acute Care I

The five-credit acute care advanced pharmacy practice experience is an elective clinical rotation providing students an opportunity to provide medication-therapy management and pharmaceutical care to adult patients in an inpatient acute-care environment. The acutecare experience prepares the student to evaluate drug-therapy problems from a patient-centered care perspective engaging in interprofessional collaboration to gain an appreciation for the wide variety of disease states and therapeutic problems encountered routinely which encompass clinical management and monitoring of patients' disease states and medication therapy.

### **PHRM9304**

### 5 Credits Advanced Pharmacy Practice Experience (APPE) VI: Elective – Acute Care II

The five-credit acute care advanced pharmacy practice experience is an elective clinical rotation providing students an opportunity to provide medication-therapy management and pharmaceutical care to adult patients in an inpatient acute-care environment. The acute care experience prepares the student to evaluate drug-therapy problems from a patient-centered care perspective engaging in interprofessional collaboration to gain an appreciation for the wide variety of disease states and therapeutic problems encountered routinely, which encompass clinical management and monitoring of patients' disease states and medication therapy.

### PHRM9305 5 Credits Advanced Pharmacy Practice Experience (APPE) VI: Elective – Long Term Care I

The five-credit long-term care advanced pharmacy practice experience is an elective clinical rotation enabling students to acquire and enhance skills and competence in the distribution of medication; provision of medication-therapy management; and consulting services to residents of nursing home facilities, subacute care and assisted-living facilities, psychiatric hospitals, hospice and home- and community-based care.

## PHRM9306 5 Credits

### Advanced Pharmacy Practice Experience (APPE) VI: Elective – Long Term Care II

The five-credit long-term care advanced pharmacy practice experience is an elective clinical rotation enabling students to acquire and enhance skills and competence in the distribution of medication; provision of medication-therapy management; and consulting services to residents of nursing home facilities, subacute care and assisted-living facilities, psychiatric hospitals, hospice and home- and community-based care.

### PHRM9307

### 5 Credits Advanced Pharmacy Practice Experience (APPE) VI: Elective – Infectious Disease I

The five-credit infectious disease advanced pharmacy practice experience is an elective clinical rotation affording students the ability to acquire and enhance competency and proficiency in the medical management of patients with infectious diseases in the hospitalized setting.

### PHRM9308 5 Credits Advanced Pharmacy Practice Experience (APPE) VI: Elective – Infectious Disease II

The five-credit infectious disease advanced pharmacy practice experience is an elective clinical rotation affording students the ability to acquire and enhance competency and proficiency in the medical management of patients with infectious diseases in the hospitalized setting.

### PHRM9309 5 Credits Advanced Pharmacy Practice Experience (APPE) VI: Elective – Oncology I

The five-credit hematology/oncology advanced pharmacy practice experience is an elective clinical rotation enabling students to acquire and enhance competencies and skills encompassing the provision of pharmaceutical care for oncology patients. The student will gain an in-depth knowledge and understanding of antineoplastics, toxicity management, supportive/palliative care and administrative oncology pharmacist functions surrounding patient-centered oncology medication management. This rotation may be completed in an acute-care setting or an ambulatory-care setting.

### PHRM9310 5 Credits Advanced Pharmacy Practice

## Experience (APPE) VI: Elective – Oncology II

The five-credit hematology/oncology advanced pharmacy practice experience is an elective clinical rotation enabling students to acquire and enhance competencies and skills encompassing the provision of pharmaceutical care for oncology patients. The student will gain an in-depth knowledge and understanding of antineoplastics, toxicity management, supportive/palliative care and administrative oncology pharmacist functions surrounding patient-centered oncology medication management. This rotation may be completed in an acute-care setting or an ambulatory-care setting.

PHRM9311

### 5 Credits Advanced Pharmacy Practice Experience (APPE) VI: Elective – Critical Care I

The five-credit critical care advanced pharmacy practice experience is a clinical elective rotation enabling students to acquire and enhance competencies in patient medical management in the intensive-care unit of a hospital. The experience will encompass experiences in pharmacotherapy management of medical, surgical and trauma patients exposing students to a multidisciplinary-team approach actively demonstrating the importance of interprofessional communication and working collaboratively with physicians, nurses and respiratory therapists and other health care professionals.

### PHRM9312

### 5 Credits Advanced Pharmacy Practice Experience (APPE) VI: Elective – Critical Care II

The five-credit critical care advanced pharmacy practice experience is a clinical elective rotation enabling students to acquire and enhance competencies in patient medical management in the intensive-care unit of a hospital. The experience will encompass experiences in pharmacotherapy management of medical, surgical and trauma patients exposing students to a multidisciplinary-team approach actively demonstrating the importance of interprofessional communication and working collaboratively with physicians, nurses and respiratory therapists and other health care professionals.

### PHRM9313 5 Credits Advanced Pharmacy Practice Experience (APPE) VI: Elective – Cardiology I

The five-credit cardiology advanced pharmacy practice experience is an elective clinical rotation that will develop and enhance the student's ability to make rational decisions surrounding proficient use of cardiovascular medications affecting the cardiovascular system. The student will acquire specialized knowledge encompassing major cardiovascular disease states, invasive and noninvasive cardiovascular diagnostic techniques and the pharmacology, pharmacokinetics and the clinical use of cardiac drugs. This rotation setting is primarily inpatient, but may be based in an ambulatory setting or a combination of both.

### PHRM9314 5 Credits Advanced Pharmacy Practice Experience (APPE) VI: Elective – Cardiology II

The five-credit cardiology advanced pharmacy practice experience is an elective clinical rotation that will develop and enhance the student's ability to make rational decisions surrounding proficient use of cardiovascular medications affecting the cardiovascular system. The student will acquire specialized knowledge encompassing major cardiovascular disease states, invasive and noninvasive cardiovascular diagnostic techniques and the pharmacology, pharmacokinetics and clinical use of cardiac drugs. This rotation setting is primarily inpatient, but may be based in an ambulatory setting or a combination of both.

### PHRM9315 5 Credits Advanced Pharmacy Practice Experience (APPE) VI: Elective – Behavioral Health I

The five-credit behavioral health advanced pharmacy practice experience is an elective clinical rotation offering students the opportunity to provide medication-therapy management to mentally ill patients in an inpatient acute care or outpatient setting. The student will collaborate interprofessionally with members of the mental health care team and engage in patient monitoring, therapeutic decisions regarding drug therapy, patientmedication counseling and provision of drug information to team members. The behavioral health APPE provides students an opportunity to actively communicate with the mental health care team and their patients in an effort to understand the impact and effects of psychiatric medication.

### PHRM9316 5 Credits Advanced Pharmacy Practice Experience (APPE) VI: Elective – Behavioral Health II

The five-credit behavioral health advanced pharmacy practice experience is an elective clinical rotation offering students the opportunity to provide medication-therapy management to mentally ill patients in an inpatient acute care or outpatient setting. The student will collaborate interprofessionally with members of the mental health care team and engage in patient monitoring, therapeutic decisions regarding drug therapy, patientmedication counseling and provision of drug information to team members. The behavioral health APPE provides students an opportunity to actively communicate with the mental health care team and their patients in an effort to understand the impact and effects of psychiatric medication.

## PHRM9317

### 5 Credits Advanced Pharmacy Practice Experience (APPE) VI: Elective – Transitions of Care I

This five-credit elective will grant students the opportunity to participate in the emerging field of transitions of care, which is intended to improve continuity of care from the inpatient setting to the home. A primary goal of this experience is to reduce 30-day readmission rates by targeting high-risk populations including patients with congestive heart failure (CHF), chronic obstructive pulmonary disease (COPD), atrial fibrillation, uncontrolled diabetes, uncontrolled hypertension, multiple medications, as well as patients with insurance issues, medication compliance and/or dietary challenges. By providing the patient with education, tools for adherence to diet and medications and helping patients and/or caregivers to coordinate social and medical necessities, the patients are enabled to remain healthy and medically stable once discharged from the hospital. Students are expected to be at the site a minimum of eight hours a day, five days a week for five consecutive weeks. Students must adhere to the schedule established by the preceptor.

### PHRM9318 5 Credits Advanced Pharmacy Practice Experience (APPE) VI: Elective – Transitions of Care II

This five-credit elective will grant students the opportunity to participate in the emerging field of transitions of care, which is intended to improve continuity of care from the inpatient setting to the home. A primary goal of this experience is to reduce 30-day readmission rates by targeting high-risk populations including patients with congestive heart failure (CHF), chronic obstructive pulmonary disease (COPD), atrial fibrillation, uncontrolled diabetes, uncontrolled hypertension, multiple medications, as well as patients with insurance issues, medication compliance and/or dietary challenges. By providing the patient with education, tools for adherence to diet and medications and helping patients and/or caregivers to coordinate social and medical necessities, the patients are enabled to remain healthy and medically stable once discharged from the hospital. Students are expected to be at the site a minimum of eight hours a day, five days a week for five consecutive weeks. Students must adhere to the schedule established by the preceptor.

### PHRM9319 5 Credits Advanced Pharmacy Practice Experience (APPE) VI: Elective – Nutrition Support I

This five-credit elective will focus on enteral nutrition (total enteral nutrition and medication administration via feeding tubes) and parenteral nutrition (clinical and compounding). By working with the interdisciplinary team, including nurses, speech-language pathologists, dietitians, prescribers and others, the student pharmacist will manage adult inpatients (medical, surgical and critically ill) receiving nutrition support enterally or parenterally. The student pharmacist may also manage NICU and pediatric patients receiving nutrition support. Note that nutrition support is NOT nutrition. This rotation is not intended for student pharmacists interested in oral nutrition, such as body building, herbal supplementation, diets and so on. The definition of nutrition support can be found online at the American Society of Parenteral and Enteral Nutrition (ASPEN) at: http://www.nutritiocare.org/About\_Clinical\_ Nutrition/What\_is\_Nutrition\_Support\_Therapy/. Students are expected to be at the site a minimum of eight hours a day, five days a week for five consecutive weeks. Students must adhere to the schedule established by the preceptor.

### PHRM9320

### 5 Credits Advanced Pharmacy Practice Experience (APPE) VI: Elective – Nutrition Support II

This five-credit electivewill focus on enteral nutrition (total enteral nutrition and medication administration via feeding tubes) and parenteral nutrition (clinical and compounding). By working with the interdisciplinary team, including nurses, speech-language pathologists, dietitians, prescribers and others, the student pharmacist will manage adult inpatients (medical, surgical and critically ill) receiving nutrition support enterally or parenterally. The student pharmacist may also manage NICU and pediatric patients receiving nutrition support. Note that nutrition support is NOT nutrition. This rotation is not intended for student pharmacists interested in oral nutrition, such as body building, herbal supplementation, diets and so on. The definition of nutrition support can be found online at the American Society of Parenteral and Enteral Nutrition (ASPEN) at: http://www.nutritioncare.org/About\_Clinical\_ Nutrition/What\_is\_Nutrition\_Support\_Therapy/. Students are expected to be at the site a minimum of eight hours a day, five days a week for five consecutive weeks. Students must adhere to the schedule established by the preceptor.

### PHRM9321 5 Credits Advanced Pharmacy Practice Experience (APPE) VI: Elective – Emergency Medicine I

This five-credit elective will focus on exposing students to the role of the clinical pharmacist in the emergency department. Under preceptor supervision, students will have the opportunity to respond to adult and pediatric emergencies, perform antimicrobial stewardship interventions, serve as a drug-information resource, provide patient counseling and medication reconciliation, review patient cases for optimization of therapy, monitor for clinical response and verify medication orders. Students are expected to be at the site a minimum of eight hours a day, five days a week for five consecutive weeks. Students must adhere to the schedule established by the preceptor.

### PHRM9322 5 Credits Advanced Pharmacy Practice Experience (APPE) VI: Elective – Emergency Medicine II

This five-credit elective will focus on exposing students to the role of the clinical pharmacist in the emergency department. Under preceptor supervision, students will have the opportunity to respond to adult and pediatric emergencies, perform antimicrobial stewardship interventions, serve as a drug-information resource, provide patient counseling and medication reconciliation, review patient cases for optimization of therapy, monitor for clinical response and verify medication orders. Students are expected to be at the site a minimum of eight hours a day, five days a week for five consecutive weeks. Students must adhere to the schedule established by the preceptor.

### PHRM9323 5 Credits Advanced Pharmacy Practice Experience (APPE) VI: Elective – Geriatrics I

This five-credit elective will focus on the elderly population, defined as patients 65 years and older. By working with the multidisciplinary team, including nurses, case managers, prescribers and others dedicated to this patient population, the student pharmacist will manage adult inpatients. Students will identify medication-related problems and formulate clinical solutions to provide optimal care for all patients that meet criteria (inpatients >65 years old). Students will contribute daily to effective patient-care delivery while developing respect for the elderly population. Students are expected to be at the site a minimum of eight hours a day, five days a week for five consecutive weeks. Students must adhere to the schedule established by the preceptor.

## PHRM9324 5 Credits

### Advanced Pharmacy Practice Experience (APPE) VI: Elective – Geriatrics II

This five-credit elective will focus on the elderly population, defined as patients 65 years and older. By working with the multidisciplinary team, including nurses, case managers, prescribers and others dedicated to this patient population, the student pharmacist will manage adult inpatients. Students will identify medication-related problems and formulate clinical solutions to provide optimal care for all patients that meet criteria (inpatients >65 years old). Students will contribute daily to effective patient-care delivery while developing respect for the elderly population. Students are expected to be at the site a minimum of eight hours a day, five days a week for five consecutive weeks. Students must adhere to the schedule established by the preceptor.

### PHRM9401 5 Credits Advanced Pharmacy Practice Experience (APPE) VII: Elective – Drug Information I

This five-credit drug information advanced pharmacy practice experience affords students the experience to acquire skills and competencies necessary to competently and efficiently receive questions, identify relevant information and provide evidence-based recommendations surrounding appropriate drug therapy to pharmacists and other health care professionals. Emphasis is placed on the overall processing of drug-information requests encompassing initial inquiries, collection of background information, systematic drug searches and provision of critical analysis of medical literature. The student will develop and enhance knowledge and understanding of relevant practice resources and the development of critical evaluation skills in the provision of drug information. Opportunities may be presented for students to become involved with drug evaluation for formulary consideration and inclusion, quality assurance/drug-usage evaluation activities, news publications, scholarly activities and Pharmacy and Therapeutics Committee support.

### PHRM9402 5 Credits Advanced Phar

### Advanced Pharmacy Practice Experience (APPE) VII: Elective – Drug Information II

This five-credit drug information advanced pharmacy practice experience affords students the experience to acquire skills and competencies necessary to competently and efficiently receive questions, identify relevant information and provide evidence-based recommendations surrounding appropriate drug therapy to pharmacists and other health care professionals. Emphasis is placed on the overall processing of drug-information requests encompassing initial inquiries, collection of background information, systematic drug searches and provision of critical analysis of medical literature. The student will develop and enhance knowledge and understanding of relevant practice resources and the development of critical evaluation skills in the provision of drug information. Opportunities may be presented for students to become involved with drug evaluation for formulary consideration and inclusion, quality assurance/drug-usage evaluation activities, news publications, scholarly activities and Pharmacy and Therapeutics Committee support.

### PHRM9403 5 Credits Advanced Pharmacy Practice Experience (APPE) VII: Elective – Medication Safety I

The five-credit medication safety advanced pharmacy practice experience is an elective rotation that will enable students to become familiar with the key principles utilized in hospitals, health systems and medical device and pharmaceutical companies to improve medication safety. The rotation is designed to expose students to medication-safety nomenclature, key principles, safety devices and available resources. Students will participate in various activities designed to improve their working knowledge and experience with medication-safety concepts. The rotation will provide the student opportunities in which to apply acquired and enhanced knowledge to reduce patient-safety risks, optimize the safe function of medication-management systems and align pharmacy services with national initiatives that measure and reward quality performance and improve medication safety for patients.

## PHRM9404

### **5** Credits

### Advanced Pharmacy Practice Experience (APPE) VII: Elective – Medication Safety II

The five-credit medication safety advanced pharmacy practice experience is an elective rotation that will enable students to become

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familiar with the key principles utilized in hospitals, health systems and medical device and pharmaceutical companies to improve medication safety. The rotation is designed to expose students to medication-safety nomenclature, key principles, safety devices and available resources. The student will participate in various activities designed to improve their working knowledge and experience with medication-safety concepts. The rotation will provide the student opportunities in which to apply acquired and enhanced knowledge to reduce patient-safety risks, optimize the safe function of medication-management systems and align pharmacy services with national initiatives that measure and reward quality performance and improve medication safety for patients.

### PHRM9405 5 Credits

### Advanced Pharmacy Practice Experience (APPE) VII: Elective – Managed Care I

The five-credit managed care advanced pharmacy practice experience is an elective clinical rotation in which the student will acquire and enhance competencies and skills in the application of managed-care pharmacy principles relative to pharmacoeconomics and cost-effective, medication-therapy management within contemporary managed-care health systems. This rotation may take place at health insurance, pharmacy benefits management (PBM) organizations as well as other sites providing formulary management and evaluation.

### PHRM9406 5 Credits Advanced Pharmacy Practice Experience (APPE) VII: Elective – Managed Care II

The five-credit managed care advanced pharmacy practice experience is an elective clinical rotation in which the student will acquire and enhance competencies and skills in the application of managed-care pharmacy principles relative to pharmacoeconomics and cost-effective, medication-therapy management within contemporary managed-care health systems. This rotation may take place at health insurance, pharmacy benefits management (PBM) organizations as well as other sites providing formulary management and evaluation.

### PHRM9407 5 Credits

## Advanced Pharmacy Practice Experience (APPE) VII: Elective – Specialty Pharmacy I

The five-credit specialty pharmacy elective is designed to offer the student experience in a specialty-pharmacy practice setting which

provides services above and beyond those typically offered at the community-practice level as part of their standard of care. The student will engage in acquiring competencies in specialty pharmacy areas encompassing adherence/compliance management, benefits investigation, interprofessional communication with prescribing physicians, dispensing of specialty pharmaceuticals and shipping coordination, enrollment in patient-assistance programs, financial assistance, patient education and medication-adverse-effect counseling, patient monitoring for safety and efficacy, payer and/or manufacturer reporting, proactive patient outreach for prescription refill and renewal, prior authorization assistance in order to collect and analyze patient information for the development of evidence-based treatment plans in the specialty-pharmacy practice settings.

### PHRM9408

### 5 Credits Advanced Pharmacy Practice Experience (APPE) VII: Elective – Specialty Pharmacy II

The five-credit specialty pharmacy elective is designed to offer the student experience in a specialty-pharmacy practice setting which provides services above and beyond those typically offered at the community-practice level as part of their standard of care. The student will engage in acquiring competencies in specialty pharmacy areas encompassing adherence/compliance management, benefits investigation, interprofessional communication with prescribing physicians, dispensing of specialty pharmaceuticals and shipping coordination, enrollment in patient-assistance programs, financial assistance, patient education and medication-adverse-effect counseling, patient monitoring for safety and efficacy, payer and/or manufacturer reporting, proactive patient outreach for prescription refill and renewal, prior authorization assistance in order to collect and analyze patient information for the development of evidence-based treatment plans in the specialty-pharmacy practice settings.

### PHRM9409 5 Credits Advanced Pharmacy Practice Experience (APPE) VII: Elective – Medical Device/Patient Safety I

The five-credit medical devices and patient safety elective is designed to offer the student various experiences within a medical-device company whose products and services encompass the provision of safe and efficacious medical devices impacting patient safety.

### PHRM9410 5 Credits

## Advanced Pharmacy Practice Experience (APPE) VII: Elective – Medical Device/Patient Safety II

The five-credit medical devices and patient safety elective is designed to offer the student various experiences within a medical-device company whose products and services encompass the provision of safe and efficacious medical devices impacting patient safety.

## PHRM9501

### 5 Credits Advanced Pharmacy Practice Experience (APPE) VIII: Elective – Public Health I

The five-credit public health advanced pharmacy practice experience is an elective pharmacy rotation which provides the students with opportunities to participate in specified public health activities with an identified public health partner. Experiences in the rotation will introduce students to and expand their knowledge of pertinent principles and practices of public health impacting pharmacist practitioners. Experiences are intended to prepare and motivate new practitioners to participate in partnerships serving the vested public health interests.

### PHRM9502

**5** Credits

### Advanced Pharmacy Practice Experience (APPE) VIII: Elective – Public Health II

The five-credit public health advanced pharmacy practice experience is an elective pharmacy rotation which provides the students with opportunities to participate in specified public health activities with an identified public health partner. Experiences in the rotation will introduce students to and expand their knowledge of pertinent principles and practices of public health impacting pharmacist practitioners. Experiences are intended to prepare and motivate new practitioners to participate in partnerships serving the vested public health interests.

### PHRM9503

5 Credits

### Advanced Pharmacy Practice Experience (APPE) VIII: Elective – Industry I

The five-credit industry advanced pharmacy practice experience is an elective rotation affording the student the opportunity to acquire knowledge and understanding of various responsibilities of the industry pharmacist. The experience will involve student observation and engagement in various activities surrounding the drug industry, such as research and development, manufacturing quality control, clinical trials, medical affairs, marketing and regulatory affairs.

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### PHRM9504 5 Credits Advanced Pharmacy Practice Experience (APPE) VIII: Elective – Industry II

The five-credit industry advanced pharmacy practice experience is an elective rotation affording the student the opportunity to acquire knowledge and understanding of various responsibilities of the industry pharmacist. The experience will involve student observation and engagement in various activities surrounding the drug industry, such as research and development, manufacturing quality control, clinical trials, medical affairs, marketing and regulatory affairs.

### PHRM9505 5 Credits Advanced Pharmacy Practice Experience (APPE) VIII: Elective – Research I

The five-credit research advanced pharmacy practice experience is an elective rotation designed to provide students opportunities to acquire and enhance experiences in research design and development, performance of experiments, data collection and analysis, peerreview processes and animal- or human-research regulations.

### PHRM9506 5 Credits Advanced Pharmacy Practice Experience (APPE) VIII: Elective – Research II

The five-credit research advanced pharmacy practice experience is an elective rotation designed to provide students opportunities to acquire and enhance experiences in research design and development, performance of experiments, data collection and analysis, peerreview processes and animal- or human-research regulations.

### PHRM9507 5 Credits

### Advanced Pharmacy Practice Experience (APPE) VIII: Elective – Marketing I

The five-credit marketing advanced pharmacy practice experience is an elective rotation affording students interested in the pharmacy marketing arena to become familiar with various marketing activities directed toward establishing, developing and maintaining successful customer and patient relationships. In the organizational setting, students will acquire knowledge surrounding promotional programs, direct mailings, customer database oversight and educational training materials. In the patient-care pharmacy setting, students will be exposed to relationship marketing relative to attracting, maintaining and enhancing patient relationships and educational materials to create mutual benefit for the pharmacist and patient.

### PHRM9508 5 Credits Advanced Pharmacy Practice

## Experience (APPE) VIII: Elective – Marketing II

The five-credit marketing advanced pharmacy practice experience is an elective rotation affording students interested in the pharmacy marketing arena to become familiar with various marketing activities directed toward establishing, developing and maintaining successful customer and patient relationships. In the organizational setting, students will acquire knowledge surrounding promotional programs, direct mailings, customer database oversight and educational training materials. In the patient-care pharmacy setting, students will be exposed to relationship marketing relative to attracting, maintaining and enhancing patient relationships and educational materials to create mutual benefit for the pharmacist and patient.

### PHRM9509 5 Credits Advanced Pharmacy Practice Experience (APPE) VIII: Elective – Patient Advocacy I

The five-credit patient advocacy advanced pharmacy practice experience is an elective rotation in which the student gains knowledge and understanding in the various beneficial medication and health-related services provided to the public positively impacting human and community health care needs. The student will work with various community organizations providing health care to clients in a variety of settings such as free clinics, community health centers, refugee/migrant health centers, homecare, senior centers, mental health programs, drug/alcohol crisis programs, health associations and homeless clinics/shelters.

### PHRM9510 5 Credits Advanced Pharmacy Practice Experience (APPE) VIII: Elective – Patient Advocacy II

The five-credit patient advocacy advanced pharmacy practice experience is an elective rotation in which the student gains knowledge and understanding in the various beneficial medication and health-related services provided to the public positively impacting human and community health care needs. The student will work with various community organizations providing health care to clients in a variety of settings such as free clinics, community health centers, refugee/migrant health centers, homecare, senior centers, mental health programs, drug/alcohol crisis programs, health associations and homeless clinics/shelters.

## PHRM9511

### 5 Credits Advanced Pharmacy Practice Experience (APPE) VIII: Elective – Health Care Organization Management I

The five-credit health care organization management advanced pharmacy practice experience is an elective pharmacy rotation that provides experience in national or local pharmacy association activities and operations, interorganizational affairs, government affairs, health and education policy, institutional research and related programmatic fields. Pharmacy students will acquire knowledge and understanding from participation in the management activities of professional organizations as they work to balance the needs of their members and simultaneously represent pharmacy to other constituencies encompassing third-party payers and governmental agencies.

PHRM9512

### 5 Credits Advanced Pharmacy Practice Experience (APPE) VIII: Elective – Health Care Organization Management II

The five-credit health care organization management advanced pharmacy practice experience is an elective pharmacy rotation that provides experience in national or local pharmacy association activities and operations, interorganizational affairs, government affairs, health and education policy, institutional research and related programmatic fields. Pharmacy students will acquire knowledge and understanding from participation in the management activities of professional organizations as they work to balance the needs of their members and simultaneously represent pharmacy to other constituencies encompassing third-party payers and governmental agencies.

PHRM9513

### 5 Credits Advanced Pharmacy Practice Experience (APPE) VIII: Elective – Informatics I

The five-credit informatics advanced pharmacy practice experience is an elective rotation which focuses on the fundamentals of pharmacy informatics such as pharmacy automation technology and information systems in a hospital setting. This rotation is beneficial to students who are interested in hospital pharmacy practice or those interested in specializing in pharmacy informatics.

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### PHRM9514 5 Credits Advanced Pharmacy Practice Experience (APPE) VIII: Elective – Informatics II

The five-credit informatics advanced pharmacy practice experience is an elective rotation which focuses on the fundamentals of pharmacy informatics such as pharmacy automation technology and information systems in a hospital setting. This rotation is beneficial to students who are interested in hospital pharmacy practice or those interested in specializing in pharmacy informatics.

## PHRM9515

### 5 Credits Advanced Pharmacy Practice Experience (APPE) VIII: Elective – Management I

The five-credit management elective is designed to offer the student advanced experience in the management of pharmacy practice in various settings. Students will be expected to apply knowledge and skills in order to manage inventory; contracts; reimbursement; information; risk; and human resources, including scheduling, salaries and performance evaluations.

### PHRM9516 5 Credits

### Advanced Pharmacy Practice Experience (APPE) VIII: Elective – Management II

The five-credit management elective is designed to offer the student advanced experience in the management of pharmacy practice in various settings. Students will be expected to apply knowledge and skills in order to manage inventory; contracts; reimbursement; information; risk; and human resources, including scheduling, salaries and performance evaluations.

## PHRM9517 5 Credits

### Advanced Pharmacy Practice Experience (APPE) VIII: Elective – Regulatory I

The five-credit regulatory advanced pharmacy practice experience is an elective rotation designed to offer the student a practice setting to learn about the regulatory processes surrounding drug discovery, development, pharmacoeconomics, biosimilars, regulatory affairs, managed markets, portfolio management and strategic marketing of a new pharmaceutical drug to better understand the issues facing the challenges of delivering a new drug on the market.

### PHRM9518 5 Credits Advanced Pharmacy Practice Experience (APPE) VIII: Elective – Regulatory II

The five-credit regulatory advanced pharmacy practice experience is an elective rotation designed to provide students opportunities to acquire and enhance experiences in research design and development, performance of experiments, data collection and analysis, peerreview processes and animal- or human-research regulations.

### PHRM9519 5 Credits Advanced Pharmacy

## Advanced Pharmacy Practice Experience (APPE) Elective – Academia

This is an advanced pharmacy practice experience designed to enhance the students' awareness of a career in academia. Students will be active participants in the creation of highquality lectures and activities to P1-P3 student pharmacists. They will collaborate with pharmacy practice faculty to develop both small and large lecture materials, patient cases, class activities and quizzes. Students will have the opportunity to shadow administration and attend faculty and committee meetings. Acquisition of new knowledge and skills, and development of a unique teaching style and confidence in presentation skills are the goals of this elective course. Students are expected to be present at the site for a minimum of eight hours a day, five days a week, for five consecutive weeks. They must also adhere to the schedule established by the preceptor.

### PHRM9900 1 Credit **Pharmacy Capstone I**

This is the first course of a two-course series. This course will focus on reviewing and integrating all knowledge and skills acquired through the didactic and experiential curriculum in preparation for licensure. Basic and clinical sciences and pharmaceutical calculations will be emphasized. Capstone assessments will be administered.

### PHRM9901 2 Credits **Pharmacy Capstone II**

This is the second course of a two-course series. The course will focus on reviewing and integrating all knowledge and skills acquired through the didactic and experiential curriculum in preparation for licensure. Pharmacy law, basic and clinical sciences and pharmaceutical calculations will be emphasized. Capstone assessments will be administered.

# Political Science (M.A.)

Fairleigh Dickinson University's School of Criminal Justice, Political Science and International Studies offers students the benefit of earning a Master of Arts degree in political science. This program provides an integration of disciplines and areas of interest in political science and international affairs. The Master of Arts in political science aims to give students a well-rounded education and understanding of the dynamic changes currently taking place in the international community. The degree requires the successful completion of 33 credits. Twelve credits comprise the required courses that every student must take. The remaining 21 credits are electives depending on the student's area of interest and concentration.

The M.A. in political science offers three areas of concentration international relations and the United Nations, international justice studies and American government and politics. Grounded in the theoretical and applied knowledge of the discipline of political science, the program's flexibility permits students to choose related and approved courses from the disciplines of criminal justice and history, as well as approved cross-listed courses in a variety of other disciplines.

International relations and the United Nations and international justice studies are multidisciplinary concentrations which invite students to further explore the meaning of global citizenship, the practice of diplomacy, relations among states, the functions of international systems and the processes of globalization, taking advantage of FDU's unique "Special Consultative Status" as a nongovernmental organization with the U.N. Economic and Social Council (ECOSOC), its membership in the U.N. Academic Impact, its accreditation by the U.N. Department of Public Affairs and its relations with numerous diplomatic missions.

## **For Information**

For more information contact Dr. Samuel Raphalides, director, School of Criminal Justice, Political Science and International Studies, at sjraph@fdu.edu or (201) 692-2413.

Credits

## **Admission Requirements**

Admission to the program is based on an applicant's demonstrated interest, aptitude and motivation to successfully undertake and complete master's-level studies. This will be determined by the following minimal requirements and indicators:

1. A bachelor's degree from an accredited college or university.

2. Official transcripts from all institutions of higher learning attended.

3. A cumulative undergraduate grade point ratio of at least 3.00 on a 4.00 scale.\*

4. Performance on the Graduate Record Examination, which may be waived.\*

5. Two letters of recommendation attesting to the applicant's interest and ability to undertake graduate-level studies.

6. Personalized interviews may be considered by the department's Admission Committee.

7. Applicants under consideration may be required to complete an abbreviated research paper that demonstrate their ability for effective writing.

# **Requirements for the Master of Arts Degree**

The Master of Arts in political science requires satisfactory completion of 33 credits. This consists of 12 credits in required courses and 21 credits in preapproved graduate electives.

The following four courses (12 credits) represent the core curriculum for the master's in political science and are required of all students in this program.

## **Required Courses**

Credits
CRIM6025
Social Science Research
Methods3
POLS6800
Graduate Independent Study3
POLS7820
Models of Political Systems 3
POLS7826
Politics of Public Policy 3

Credito

## **Elective Courses**

Students can choose from any of the following courses in fulfilling their remaining 21 credits. All elective-course selections must be made in consultation with an academic adviser. Courses are interdisciplinary, consisting of the political science, history and criminal justice fields respectively. Elective courses are also flexible to the students' particular interest(s) in international relations and the U.N., international justice studies and American government and politics.

Credits
CRIM6010
U.S. Constitution, Public
Policy and Criminal Justice
CRIM6020
Statistics and Data Analysis
CRIM7020
Ethics, Politics and Justice
CRIM7025
Comparative Criminal Justice
Systems
CRIM7030
Principles of Leadership
CRIM7080
Politics and Policies of Criminal
Justice3
CRIM7085
Advanced Internship in
Criminal Justice 3
HIST6714
U.S. and the Developing World 3
HIST7712
Constitution: Transition3
POLS6682
Diplomatic History of the U.S 3
POLS6711
Genocide: From an American
Perspective 3
POLS6753
American Culture in a Global
Perspective
POLS6871
U.SLatin American Relations
POLS7810
Constitution Issues/U.S. Foreign
Policy
POLS7815
Nationalism and Its Discontents
POLS7820
Models of Political Systems
POLS7821
Modern Political Theory
POLS7822
ruls/022

POLS7830
International Organizations3
POLS7831
International Law3
POLS7832
International Problems/Conflict
Resolution3
POLS7833
Modern Warfare/Global Stability3
POLS7834
Politics of the Global Economy 3
POLS7835
Geography and World Politics
POLS7851
Forces and Issues: Middle East3
POLS7853
The New Europe 3
POLS7854
Changing Eastern Europe3
POLS7863
Comparative Government:
Middle East
POLS7867
Political and Economic
Challenges: Africa
POLS7868
Terrorism and Insurgency
POLS7871
The Modern Asian State
POLS7874
Latin America: New Challenges
POLS7875
Canada, Mexico and U.S.:
Perspectives3

## **Course Offerings**

Courses offered fall, spring and/or summer are so noted. To determine availability of courses not so designated, please check with appropriate department chair.

## **Political Science**

School of Criminal Justice, Political Science and International Studies

### **CRIM6010**

**3** Credits

### **U.S. Constitution, Public Policy and Criminal Justice**

This course examines emerging issues as they influence the United States Constitution, public policy and the criminal justice system. Topics such as criminal procedure, individual rights, gun control, decriminalization of drugs, social justice, crime prevention, juvenile justice, sentencing policies, incarceration and capital punishment will be addressed.

# **Political Science**

### CRIM6020 3 Credits Statistics and Data Analysis

This course addresses the basic concepts and methods of statistics applied within criminal justice and social science research. Topics covered include basic statistical methodology; exploratory data techniques; experimental design; sample distributions; interval estimation; inference; comparative analysis by parametric, nonparametric and robust procedures; analysis of variance (one-way); linear and nonlinear regression; analysis of covariance; correlation and regression; and an introduction to statistical analysis using Statistical Package for the Social Sciences (SPSS).

### CRIM6025 3 Credits Social Science Research Methods

This course will emphasize the conceptual foundations and methodological approaches used in social science research. This course introduces tools of quantative reasoning and statistics that can be used to address problems in basic research and policy within social sciences, particularly in the criminal justice field. The primary objectives of the course are to build familiarity with the fundamentals of probability and statistical analysis, central concepts of research design and norms of ethical behavior in research.

### CRIM7020 3 Credits

## **Ethics, Politics and Justice**

This course examines classical and contemporary theories and philosophies relevant to ethical thought and behavior in relationship to the administration of justice and navigating politics within the workplace. Ethical issues confronting criminal-justice practitioners, to include the role and influence of politics, are explored through the use of case studies and critical incidents, and examining appropriate and applicable strategies.

### CRIM7025 3 Credits Comparative Criminal Justice

## Systems

This course will conduct a comparative analysis between the criminal justice system of the United States with those of other major countries throughout the world. The similarities and differences between the policing, adjudication and penal systems will be discussed. Issues such as alternatives to incarceration, technologies utilized and legal mandates will be examined.

## CRIM7030 3 Credits

## **Principles of Leadership**

The objective of this course is to examine the principles, practices and complexities of effective leadership. The course will also examine the skills and competencies needed to be an effective leader. The benefits of effective leadership and the consequences of ineffective leadership in an organization will be studied.

## CRIM7085 3 Credits Advanced Internship in Criminal

Justice The course provides individually designed internships within federal, state and local police/law enforcement agencies, courts at

police/law enforcement agencies, courts and adjudication, corrections and probation, private security, juvenile justice, crime victims' advocacy and child protection. Students develop hands-on experience in all facets of the respective agency that they select. The internship provides the students with insight, experience and an available network of professional colleagues.

## HIST6714 3 Credits

## **U.S. and the Developing World**

An analysis of the political and economic relationship of the United States with selected developing regions of the world in the context of growing global interdependence.

### HIST7712 3 Credits

## **Constitution: Transition**

Analyzes the impact of and process of change resulting from political, economic and social challenges to constitutional thought over the last century.

## POLS6682

3 Credits

## **Diplomatic History of the U.S.**

The course will consider the various stages of U.S. diplomatic policies with an emphasis on the United States as a major world player.

### POLS6711 3 Credits Genocide: From an American

## Perspective

The course will examine the roots, methods and impact of genocide on the global community from an American perspective. It will include selected case studies from Armenia to Darfur.

### POLS6753 3 Credits American Culture in a Global Perspective

The course examines political, economic and social themes and will emphasize dynamic encounters with ideas from other societies.

### POLS6800 1-6 Credits Graduate Independent Study

Independent study in political science at the first-year graduate level.

### POLS6871 3 Credits

## **U.S.-Latin-American Relations**

This is a study of the modern relationship between the U.S. and specific Latin-American nations. It will stress the alliance for progress, NAFTA, etc.

## POLS7810

### 3 Credits Constitution Issues/U.S. Foreign Policy

Examines the modern roles of the president, the Congress and the Supreme Court in the conduct of foreign policy.

### POLS7815 3 Credits Nationalism and Its Discontents

The political and social bases of nationalism, its relation to culture identity, ethnicity, language and ideological narrative manifesting movements for change. Selected contemporary and historical examples are examined, as well as their subcultural and subnational disidentifications.

**POLS7820** 

### 3 Credits Models of Political Systems

Comparative analysis of modern democratic and totalitarian governments and institutions. With emphasis on the developing nations and their interpretations of these systems through a study of political culture, political parties and political crises.

### **POLS7821**

3 Credits

## **Modern Political Theory**

Traces the main developments in modern political thought from Hobbes to Mao. Emphasizes problems regarding liberty, political obligation, the common good, etc.

## **POLS7822**

### 3 Credits The Character of Revolutionary Movements

An examination of selected revolutionary movements with emphasis on cause, organization and outcome.

## POLS7825

### **3** Credits

## **Foreign Policy and Diplomacy**

Intensive analysis of the dynamics of world politics in the independent post-World War II era; the conceptions of world order among major actors, national and global interests, transnationalism, instrumentalities of foreign policy development and diplomatic processes.

### POLS7826 3 Credits **Politics of Public Policy**

Studies declared intentions and actions of elected officials in meeting human needs and resolving conflicts within society. Emphasizes agenda setting, policy-making models, policy formulation, implementation, evaluation and the role of ideology.

### POLS7830 3 Credits International Organizations

Typology of organizations: League of Nations to the United Nations, regional organizations, public and private international organizations and transnational organizations.

### POLS7831 3 Credits

**International Law** 

Origin of international law and its relationship to municipal law. Challenges and responses to current issues.

### **POLS7832**

### 3 Credits International Problems/Conflict Resolution

Causes and possible solutions to major international conflicts. Topics will include superpower relations and regional problems.

### POLS7833 3 Credits Modern Warfare/Global Stability

Impact of insurrection, nonconventional warfare and terrorism on the international community.

### POLS7834 3 Credits

## Politics of the Global Economy

A study of the relationship between political motivations and economic actions on the international economy. With emphasis on the interplay between the free market and planned economies.

### POLS7835 3 Credits

## Geography and World Politics

Examines the political ramifications of environmental decay, economic and environmental refugees and the utilization of finite resources.

## **POLS7851**

## 3 Credits

## Forces and Issues: Middle East

Examines the trends and political forces at work in the region, past struggles, current issues and future aspirations.

### POLS7853 3 Credits **The New Europe**

The state system of Europe: integration and consolidation since World War II and global implications for East-West relations.

### POLS7854 3 Credits

### Changing Eastern Europe

Examines the dissolution of the Communist Bloc and the movement toward new ideologies. Emphasizes nationalism, ethnicity and economic organization.

## POLS7863

### 3 Credits Comparative Government: Middle East

Examines diverse systems of government among selected Middle East states. Emphasizes historical development, current ideologies, institutions and practices.

## **POLS7867**

### 3 Credits Political and Economic Challenges: Africa

Examines contemporary issues in Africa. Project trends in political development, human rights and environmental programs.

### POLS7868 3 Credits Terrorism and Insurgency

Examines the conditions that encourage intervention, clandestine political action, demonstration of force, unconventional warfare and terrorism. Discusses impact on the global community.

### POLS7871 3 Credits

## The Modern Asian State

Examines the development of selected Asian states with an emphasis on historical influences, ideologies, institutions and economic philosophies.

## POLS7874

**3 Credits** 

### Latin America: New Challenges

Political responses to the economic and social challenges of modernization. Focuses on democratization efforts and economic cooperation.

### POLS7875 3 Credits Canada, Mexico and U.S.:

#### Canada, Mexico and U.S. Perspectives

Examines the growing interdependence of the North American nations. Emphasizes political, diplomatic and economic interaction and identifies future trends.

# Psychology

There are a variety of psychology programs offered at the Florham Campus, Madison, New Jersey, (see page 220) and the Metropolitan Campus, Teaneck, New Jersey (see page 222). These programs are listed on the following pages by campus.

# **Psychology**

## Florham Campus

These programs are offered under the auspices of the department of psychology and counseling, Maxwell Becton College of Arts and Sciences, Florham Campus, Madison, New Jersey.

## Industrial/Organizational Psychology (M.A.) See this page.

The programs and courses offered by the department of psychology and counseling are designed to meet the needs of students who wish to prepare for a career in various professional areas of psychology and counseling such as consulting, research, teaching and working in different organizational settings. In addition, programs and courses also may be taken by those students who wish to develop a background for subsequent work leading to a doctorate.

## Requirements for Graduate Psychology Programs Leading to a Master of Arts Degree

1. Satisfactory completion of the core requirements. Students are required to complete core requirements before additional courses may be taken. However, during the semester in which core requirements are being completed, a maximum of one additional noncore course may be taken, subject to departmental approval.

2. Satisfactory completion of a minimum of 36 credits for graduate majors in industrial/organizational psychology. Students are required to maintain a minimum overall grade point ratio of 3.00 and must not earn more than one C-level grade (C or C+) throughout graduate course work. Students who earn two grades of less than B- or one F grade will be subject to dismissal.

3. A written comprehensive examination of the candidate's knowledge of his or her field of specialization is required at the end of the industrial/ organizational graduate psychology program. Students are eligible to take this exam during the semester in which they are enrolled in their last graduate courses. The comprehensive examination may only be taken twice. Failure to pass the comprehensive examination, either in part or in full, will result in dismissal from the program.

4. All graduate programs in psychology should be completed within a period of five years. Applications for extensions of this period are subject to departmental approval.

# Industrial/ Organizational Psychology (M.A.)

The graduate program in industrial/ organizational psychology is designed to provide a comprehensive background in applied psychology that will enable participants to work in organizational settings, continue their education at the doctoral level or augment their professional development as managers and leaders in organizational positions. The orientation and experience in independent research (as reflected in the optional thesis) provides a solid background for enabling them to function more independently as professionals in organizational settings, as well as compete more successfully for admission to doctoral programs.

This program is offered under the auspices of the department of psychology and counseling, Maxwell Becton College of Arts and Sciences, Florham Campus, Madison, New Jersey.

## **Admission Requirements**

1. Graduation from an accredited college or university with at least 24 credits in psychology, including at least one course each in statistics and experimental psychology.

2. A minimum grade point ratio of 3.00 in the major field of study.

3. Submission of undergraduate transcript(s).

4. Submission of an official score report for the Graduate Record Examinations (GRE) General Test taken within the last five years.

5. Students without an undergraduate major in psychology may be admitted upon successful completion of a general psychology course and an undergraduate psychology statistics course. (Neither of these carry credit toward the M.A. degree.)

6. Three letters of recommendation.

7. In some cases, a personal interview may be required.

Applicants who have not completed all requirements for admission to the degree program may be permitted to enroll in classes for credit on a nonmatriculated or nondegree basis.

## **Psychology** • Industrial/Organizational

## **Requirements for the Master of Arts Degree**

Students in the M.A. in industrial/ organizational psychology program must register for a minimum of two classes in the fall and spring semesters. Exceptions to this policy may be granted in unusual circumstances. Courses must be taken in the required sequence (see department for sequence list). A total of 36 credits is required.

creatio
COUN7706
Lifestyle and Career Counseling*
PSYC6300
Psychological Statistics3
PSYC6301
Group Dynamics and Team
Leadership3
PSYC6302
Organizational Psychology3
PSYC6303
Research Methods and Design3
PSYC6304
Personnel Selection3
PSYC6305
Psychometrics3
PSYC6306
Behavioral Consulting in
Organizations3
PSYC6308
Human Resources Development3
PSYC7700
Industrial/Organizational Internship 3
If a thesis option is selected:
PSYC7803
Research and Thesis
PSYC7804
Research and Thesis3
If a nonthesis option is selected:
PSYC6307
Techniques of Interviewing
PSYC7745
Leadership Studies

\*See Clinical Mental Health Counseling course offerings pages 97–98.

### **Course Offerings**

Courses offered fall, spring and/or summer are so noted. To determine availability of courses not so designated, please check with appropriate school director.

## Psychology

Department of Psychology and Counseling

### PSYC6300 3 Credits

Credits

## **Psychological Statistics**

A comprehensive survey of the theoretical and practical aspects of descriptive and inferential statistical procedures — z tests, t tests, analysis of variance, correlation and regression analysis and nonparametrics. Emphasis is on why and when to use the various procedures as well as on the interpretation of statistical results. Prerequisite: undergraduate statistics or permission of instructor. *Fall* 

### PSYC6301 3 Credits Group Dynamics and Team Leadership

This course focuses on how individuals come together in work teams to accomplish mutual goals. The various roles of team members and team leaders are explored in depth. Topics include team leadership behavior, building effective teams, managing and resolving conflict, quality team management and other aspects of interpersonal relationships within the corporate/ business structure. Students learn how to ensure team success as both team leaders and participants. Emphasis is placed on understanding and influencing group and team effectiveness. *Fall* 

### PSYC6302 3 Credits Organizational Psychology

A seminar on the effects of organizational variables upon individual and group behavior. Systematic theories of organizational culture, organizational structure and function will be examined and related to current organizations. *Fall* 

### PSYC6303

**3** Credits

### **Research Methods and Design**

This course is designed to explore research design in industrial/organizational psychology. It includes experimental, quasi-experimental and correlational designs; measurement issues; and the ethics of conducting research, sampling and matching the appropriate statistics to various designs. Students will learn how to understand and carry out the entire research process. *Spring* 

### PSYC6304 3 Credits

## **Personnel Selection**

A comprehensive survey of current practices in employee recruitment, selection, evaluation, compensation and development. Special emphasis is placed on the use of psychological tests and interviewing techniques. Current topics such as fair employment testing are reviewed. *Spring* 

### PSYC6305 3 Credits **Psychometrics**

A critical survey of the philosophy and

techniques of measurements or appraisal, with emphasis given to the administration, interpretation and evaluation of intelligence, achievement, interest, aptitude and objective personality instruments. *Fall* 

### PSYC6306 3 Credits Behavioral Consulting in Organizations

This course provides an overview of the role of the psychologist in organizational settings. Emphasis is on establishing relationships with organizational personnel, interpreting research results, the uses of the in-house psychologist vs. the outside consultant, the use of focus groups and surveys and the process of organizational change. *Fall* 

### PSYC6307 3 Credits

### **Techniques of Interviewing**

A comprehensive survey of the strategies and techniques necessary for conducting an effective interview. Emphasis is placed on developing an understanding of the factors that facilitate and debilitate communication in three basic types of interviewing situations: the counseling, selection and research interview. *Fall* 

### PSYC6308 3 Credits

## Human Resources Development

An overview of the processes and programs organizations use to train and develop employees and managers. Traditional methods such as role-playing and case studies are practiced and compared to techniques such as organization development practices. Students will experience the role of both trainer and trainee. Emphasis will focus on effective ways of changing actual behavior. *Spring* 

# **Psychology**

## PSYC7700 3 Credits

## Industrial/Organizational Internship

This blended course involves a semester-long internship placement related to industrial/ organizational psychology in an approved local organization. Students work a minimum of 15 hours per week in either a paid or unpaid setting and participate in the course. An onsite supervisor will provide mentoring and evaluation of the student's work in addition to the course instructor's mentoring and evalulation. The purpose of the internship is to provide practical training within the field and an opportunity to apply knowledge gained through course work. The final academic paper will be a project culminating the semester-long experience. Spring

PSYC7745 3 Credits Leadership Studies

This course reviews and integrates the research and popular wisdom on leadership through readings, films, case studies and discussions on the elements of successful management and leadership. Students examine various theories of leadership and characteristics of prominent past and current leadership in politics, business, the arts and warfare. They learn to identify and refine their own leadership styles for maximum impact. *Spring* 

### PSYC7803, PSYC7804 6 Credits (3 Credits Each Semester) **Research and Thesis**

A program of selected research tailored to the interest and capability of the individual student under the guidance of a departmental faculty member.

Fall or Spring

# Psychology

## Metropolitan Campus

These programs are offered under the auspices of the School of Psychology, University College: Arts • Sciences • Professional Studies, Metropolitan Campus, Teaneck, New Jersey.

*Clinical Psychology (Ph.D.) See page 223.* 

*Clinical Psychopharmacology* (*M.S.*) *Postdoctoral See page 227.* 

Forensic Psychology (M.A.) See page 229.

General/Theoretical Psychology (M.A.) See page 232.

**Postbaccalaureate Respecialization Program in Psychology** See below.

School Psychology (Psy.D.) See page 233.

School Psychology (M.A.) See page 238.

## Postbaccalaureate Respecialization Program in Psychology (18 credits)

The Postbaccalaureate Respecialization Program in Psychology is designed for individuals trained in other professions (e.g., law, business or natural sciences) who are interested in pursuing careers in mental health and/or applied areas of psychology. The program's goal is to provide the appropriate background necessary to seek admission to graduate programs in psychology. The course work includes undergraduate and graduate offerings and covers essential concepts and theories, psychopathology, statistics and research methods. The course content provides sufficient background to prepare for the psychology section of the Graduate Record Examinations (GRE).

## **Admission Requirements**

1. Proof of an undergraduate baccalaureate degree (diploma or undergraduate transcript from an accredited college or university),

2. An undergraduate cumulative grade point ratio of at least 3.00,

3. Three letters of recommendation and

4. A personal statement detailing the applicant's reason for respecialization and his/her interests in the field of psychology.

Application materials are kept to a minimum so that students can apply at any time. GRE scores are not necessary for acceptance. Once application materials are complete, admission decisions typically occur within two weeks. Students may begin course work in the fall or spring semester or the summer session subsequent to their admission into the track.

## **Personalized Advisement**

Upon acceptance, students will be assigned a faculty adviser who will monitor their progress and provide guidance as to specific areas of study and careers in psychology.

Upon completion of 18 credits of prescribed courses, students will be eligible to apply to a wide range of graduate programs in psychology. The adviser will assist in the application process by offering guidance as to the selection of appropriate graduate programs and will oversee the completion of application materials.

Although GREs are not necessary for application to the respecialization track, both the general and psychology GRE exams are required for most master's and doctoral programs in psychology.

## **Typical Course Sequence**

If the typical course sequence is followed, students will be in a position to apply to master's and doctoral programs within one year of admission to the track. However, if students choose to enroll on a part-time basis, registration for at least one course per semester is required.

Fall Semester Courses	Credits
PSYC1103	
General Psychology*	
(Undergraduate)	

\*Students who have already taken PSYC1103 General Psychology can substitute a different undergraduate course.

Credits

15102201	
Statistics (Undergraduate)	3
Graduate Elective*	.3

### Spring Semester Courses

DSVC2201

PSYC3202
Experimental Psychology
(Undergraduate)3
Graduate Electives*

## **Transfer Credits**

Upon acceptance to any of the School of Psychology's graduate-degree programs, students may transfer up to 9 graduate credits from the respecialization track. Transfer of credits to other universities may be possible, but will be at the discretion of the individual institution to which the student applies.

\*M.A.-level courses such as PSYC6111 Theories of Personality, PSYC6114 Psychopathology and PSYC7125 Applied Social Psychology (this list is not exhaustive).

# Clinical Psychology (Ph.D.)

This is a four-year plus internship, fulltime program that follows the scientistpractitioner model in which both internship and dissertation are combined with individualized areas of specialization. The program's goal is to prepare skilled psychologists who are capable of appreciating and conducting sound research. The program has received full accreditation from the American Psychological Association (APA).

The scientist-practitioner orientation emphasizes academic content areas of psychology and views clinical training as growing directly out of such foundations in psychological theory and research. It reflects the school's belief that a competent and effective clinician is best described as a scientist-practitioner, well-versed not only in clinical techniques and methods but also in the theoretical and research-based underpinnings of these approaches.

As an expression of the scientistpractitioner model, the sequence of courses emphasizes a thorough preparation in theoretical psychology and methodology. The sequence becomes the matrix against which students receive applied training in clinical psychology. The first year of the program exposes students to basic psychological theory of measurement prior to the course work in clinical applications. For example, foundations of clinical psychology and psychopathology are explored prior to behavioral and personality assessment.

Concurrent with the work in assessment, students will begin study of the traditional psychotherapies. The third year of course work expands students' knowledge of treatment procedures, specialized populations and related medical topics. Finally, the student will have completed four semesters of statistics and research design by the end of the third year.

By the end of the third year, students are prepared to begin writing their dissertation. Each student selects a mentor from the faculty, and that mentor serves as chairperson of the dissertation committee. Adhering to certain guidelines, the chairperson and the student select the remaining three to four members of the committee. All students will also have taught a three-credit course before they finish the program.

This program is offered under the auspices of the School of Psychology, University College: Arts • Sciences • Professional Studies, Metropolitan Campus, Teaneck, New Jersey.

# Admission Requirements and Information

To access an application to this program visit the School of Psychology website at http://view2.fdu.edu/academics/ university-college/school-ofpsychology/ph-d-program-in-clinicalpsychology/apply or call (201) 692-2315.

1. This program is open to holders of undergraduate degrees in psychology or the required number of psychology credits. The requirement of 18 psychology credits includes statistics and 15 additional credits, preferably introductory psychology, developmental psychology, experimental psychology and social psychology.

2. Students are selected from a pool of academically qualified applicants who can contribute to the diversity of the student body.

3. Acceptance decisions are based on outstanding undergraduate and (where applicable) graduate academic performance, high scores on the General Test and Subject Test in Psychology of the Graduate Record Examinations, evidence of scholarly activity such as publications and paper presentations, prior clinical experience, a personal statement, letters of recommendation and an interview (preferably in person).

4. Tuition for full-time course work (at least 12 credits but no more than 16.5 credits per semester with practicum assignment) is on a flat-fee basis of \$41,698.00\* per year as of 2019-2020. When students are on part-time status (less than 12 credits per semester), the fee is set at the regular graduate rate per credit. In addition, students authorized to begin their dissertation will be charged \$5,006.00\* per semester for two semesters. Thereafter, students will be required to register for dissertation maintenance (\$510.00\*) each semester until the dissertation is complete. Students are further charged \$260.00\* per semester for two semesters of internship.

\*This fee is a 2019–2020 fee. New tuition and fee charges for 2020–2021 will be announced in the spring of 2020. Please check with the Office of Enrollment Services for current charges.

# **Psychology • Clinical (Ph.D.)**

## Requirements for the Ph.D. Degree

### 1st Semester PSYC6112 Clinical Research Methods and Psychometrics PSYC6114 Psychopathology PSYC6116 History and Systems PSYC6118 Computer Applications in Statistics Lab PSYC6132 Developmental Issues in Clinical Psychology PSYC6180 First-year Clinical Practicum I 2nd Semester PSYC6122 Personality Assessment PSYC6131 Behavioral Assessment PSYC6133 Intellectual Assessment PSYC6160 Teaching Seminar PSYC6181 First-year Clinical Practicum II: Ethics PSYC6624 Introduction to Psychotherapy 3rd Semester PSYC7110 Research Design and Analysis I PSYC7113 Psychodynamic Psychotherapy PSYC7121 Cognitive and Behavioral Therapy PSYC7180 Second-year Clinical Practicum I PSYC Advanced Special Topics (elective)

### 4th Semester

PSYC7111	Research Design and
	Analysis II
PSYC7125	Applied Social Psychology
PSYC7130	Biological Bases of Behavior
PSYC7181	Second-year Clinical
	Practicum II
PSYC	Advanced Special Topics
	(elective)

## 5th Semester

PSYC7120	Diversity Issues in Clinical
	Psychology
PSYC7133	Learning, Cognition and
	Emotion
PSYC8129	Psychopharmacology
PSYC8180	Third-year Clinical Practicum I
PSYC	Advanced Special Topics
	(elective)

## 6th Semester

PSYC8181	Third-year Clinical
	Practicum II
PSYC9124	Advanced Research Seminar
PSYC9138	Professional Development
PSYC	Advanced Special Topics
	(elective)
PSYC	Advanced Special Topics
	(elective)

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PSYC9111	Dissertation (Clinical Psychology)
PSYC9180	Fourth Year Clinical
15109100	Practicum I (suggested)
8th Semes	
PSYC9111	Dissertation (Clinical
	Psychology)
PSYC9181	Fourth Year Clinical
	Practicum II (suggested)
9th Semes	ter
PSYC9112	Dissertation Maintenance
	(Clinical Psychology)
PSYC9113	Internship (Clinical
	Psychology) — fall
10th Seme	ster
PSYC9112	Dissertation Maintenance
	(Clinical Psychology)
PSYC9113	Internship (Clinical
	Psychology) — spring
Advanced	Special Topics in
Clinical Psy	
PSYC8114	Neuropsychology
PSYC8127	Clinical Child Psychology
PSYC8127	
PS1C6145	Advanced Cognitive
DEVC0147	Behavioral Therapy
PSYC9143	Advanced Psychodynamic
DOMODA 17	Psychotherapy
PSYC9145	Seminar in Clinical
DOLLOGAL	Psychology
DOMODALCO	<i>v cv</i>

PSYC9160 Advanced Personality Assessment

Students will be required to participate in a full-time clinical internship approved by the program faculty. The internship may begin after the student has completed the courses listed under the first six semesters and submitted an approved dissertation proposal. Usually, the dissertation will be the focus in the fourth year and internship in the fifth year.

Students will be required to pass a qualifying exam in Ethics after their first year and a comprehensive exam after their third year. Those failing the exam will be given an opportunity to retake it. Those failing three times will be discharged from the program. Should they elect, those students will be evaluated for matriculation into the master's degree program in general/theoretical psychology and, upon completion of the requirements of that program, they will be awarded the master's degree.

Students who do not enter the program with a master's degree in which they completed a thesis must complete a review paper on an approved topic before they begin the third year or produce a publication or presentation on which they are the first author.

Ongoing annual evaluations of students will be conducted by the faculty using information from practicum-site supervisors, course instructors and research mentors or his/her delegate. Students will meet with the program director to receive feedback concerning these evaluations.

### **Performance Requirements**

1. Students receiving two or more grades of C+ or lower in any combination of courses will be dropped from the program.

2. Students with a cumulative grade point ratio (CGPR) below 3.20 at the end of any year will be placed on academic probation for one year. At the end of the probation year, the CGPR must be at least 3.20 or the student will be dropped from the program.

3. Students will be dropped from the program for a proven, serious, negligent breach of the American Psychological Association Ethical Guidelines. Students also will be dropped from the program for cheating or plagiarism.

4. Students encountering serious psychological adjustment problems will be advised to seek professional counseling. If the problems are not ameliorated, the student may be asked to leave the program.

### **Forensic Track**

An optional, add-on forensic track is available to students in the Ph.D. program who fulfill the following additional requirements:

1. Completion of at least one of the required clinical practica in a forensic setting.

2. Completion of at least two additional courses: PSYC7230 Forensic Assessment and Prediction and PSYC7235 Criminal Responsibility and Competency (a third elective independent study is recommended).

3. Completion of a dissertation on a forensic topic.

Track courses may incur additional fees if they render a student's credit load for a given semester above the allowable, flatfee of 16.5. Completion of the forensic track will be noted on the student's transcript.

# **Psychology • Clinical (Ph.D.)**

## **Course Offerings**

## Clinical Psychology (Ph.D.)

School of Psychology Students who are not in the Ph.D. program may take Ph.D. program courses with permission from the program director.

### 1st Semester

### PSYC6112 3 Credits Clinical Research Methods and Psychometrics

This course covers basic topics and issues in psychometrics and clinical psychology research. Topics will include scales of measurement, norms and standard scores, reliability (including interclinician reliability), psychometric validity (including diagnostic validity), experimental design validity (internal, external, statistical, construct), test and scale construction strategies (classical true score and item response theory), current clinical research objectives and designs, major threats to valid inferences in clinical research, experimental and statistical methods of control, the design of psychotherapy efficacy studies and the identification of clinically significant client changes.

### PSYC6114 3 Credits Psychopathology

Detailed consideration of psychopathology with respect to physiological, cognitive, motivational, affective and interpersonal variables and their roles in etiology, diagnosis, treatment and prognosis.

### PSYC6116 3 Credits History and Systems

Assessment of the historic development and current status of systematic paradigms in psychology. The influence of classical and contemporary philosophy will be considered in terms of paradigmatic development and the critical evaluation of psychological theory and psychology's place as a "special science" or as a natural science.

### PSYC6118 1 Credit Computer Applications in Statistics Lab

Introduces the student to software for statistical analysis, with an emphasis on SPSS.

#### PSYC6132 3 Credits

### Developmental Issues in Clinical Psychology

Focuses on the importance and contribution of developmental factors to clinical issues: the role of cognitive, social and moral development; the effect of early learning on later development, including caregiver and child characteristics as well as the subsequent interactions; development from a life-span perspective; and family and cultural influences.

### PSYC6180 3 Credits First-year Cliv

## First-year Clinical Practicum I

Conduct intake assessments and participate in a variety of in-house clinical projects sponsored and supervised by the clinical faculty.

### 2nd Semester

### PSYC6122 3 Credits **Personality Assessment**

Introduces the student to the domain of personality assessment. This includes a discussion of basic concepts and issues in the field of assessment, such as actuarial versus clinical prediction, the clinical utility of testing and the consideration of diversity in the testing situation. The student is introduced to important measures of personality functioning, particularly the interpretation of MMPI profiles and the administration and scoring of Comprehensive System Rorschachs.

### PSYC6131 1.5 Credits Behavioral Assessment

Assumptions and principles of behavioral assessment are covered with a focus on behavioral-assessment methods and case formulation. Specific methods are taught such as interviewing, observation, self-monitoring, questionnaires, psychophysiological assessment.

### PSYC6133 3 Credits Intellectual Assessment

Expertise in administration, scoring and interpretation of WPPSI, WISC, WAIS. Integration of intellectual evaluation and neuropsychology — in particular, brain lateralization, minimal brain lateralization, minimal brain dysfunction and learning disabilities. Writing evaluations, including referral questions and describing and integrating behavioral observations.

### PSYC6160 3 Credits Teaching Seminar

Emphasis on pedagogical issues including undergraduate-course preparation, preparation of course content, evaluation of student achievement, multicultural issues and academic honesty. Students will learn to teach in both traditional classroom and online environments. They will gain experience in lecturing, leading discussions (both in-class and online), use of audiovisual aids, syllabus preparation and test construction. Videotaping will be used to give students feedback and evaluate their progress.

### PSYC6181 3 Credits First-year Clinical Practicum II: Ethics

Participation in in-house clinical projects sponsored and supervised by the clinical faculty. Ethics and the APA ethical code of conduct is covered in depth. Students are required to pass an examination covering the most recent code of ethics.

### PSYC6624 3 Credits

## Introduction to Psychotherapy

This course provides for an understanding of the principal theories of counseling and psychotherapy, an understanding of the similarities and differences in the various major theories and techniques and for a development of the ability to evaluate the need for counseling and/or psychotherapy in problem areas. Prerequisite: PSYC6114 Psychopathology or PSYC6115 Child Psychopathology.

### 3rd Semester

PSYC7010 1 Credit

### **Psychoeducational Assessment**

The primary goal of this course is to familiarize doctoral students in the clinical psychology program with background knowledge regarding conducting child psychoeducational testing, including expected child presentation during testing sessions (e.g., attention span, rapport with clinician); information regarding the home and school context; and interacting appropriately with parent, teachers and children. Students will be given opportunities to apply this knowledge through role play and case analysis.

#### PSYC7110 3 Credits

## Research Design and Analysis I

Focuses on univariate models for the analysis of data of pure experiments, quasi-experiments and observational studies. Topics include univariate analysis of variance and covariance models for designs with between-subject and/or within-subject factors, predictive and explanatory applications of simple and multipleregression analysis, path analysis. SPSS data analysis of archival data sets is demonstrated for most of the methods.

### PSYC7113 3 Credits

## **Psychodynamic Psychotherapy**

Theory and techniques of psychodynamic psychotherapy, emphasizing classical drive theory, relational/developmental and cognitive/representational perspectives. Classes

# **Psychology • Clinical (Ph.D.)**

focus on clinical techniques, research on psychodynamic processes and technical applications to specific psychopathologies.

## PSYC7121 3 Credits

## **Cognitive and Behavioral Therapy**

Extends the principles and methods of empirically based behavioral assessment to behavioral treatment in clinical settings. Treatment literature as it applies to specific psychiatric disorders and application of behavioral principles in the context of complex clinical situations.

## PSYC7180 3 Credits

## Second-year Clinical Practicum I

Interviewing, objective and projective assessment, intellectual evaluations, etc. Some therapy experience may be included. Some supervision by clinical faculty or by off-campus supervisors.

### 4th Semester

### PSYC7111 3 Credits Research Design and Analysis II

Focuses primarily on multivariate methods that have been used extensively in clinical research and on some methods whose use in clinical research has rapidly increased in the past few years. The former methods include principalcomponents analysis, factor analysis, multivariate analysis of variance and covariance, discriminant function analysis and linear classification functions. The latter methods include canonical correlation analysis, logistic regression analysis, logistic classification models. Bayesian classification. log-linear models, confirmatory factor analysis and structural equation modeling. SPSS data analysis of archival data sets is demonstrated for most of the methods.

### PSYC7125 3 Credits Applied Social Psychology

#### Applied Social Psychology Developing understanding of social

underpinnings of psychological phenomena. Topics include attitude formation, attitude change, prejudice and discrimination, altruism, attribution theory, emotions, research techniques and application of social psychology to clinical practice. Research project included.

### PSYC7130 3 Credits

### **Biological Bases of Behavior**

Functional neuroanatomy, neurophysiology and neuropharmacology, emphasizing the relationship of brain mechanisms and synaptic chemistry to behavior. Special topics include techniques for studying brain-behavior relationships; sensory and motor systems; homeostasis and regulation of internal states; emotions, aggression and stress; learning and memory; and the biological bases of mental illness.

### PSYC7181 3 Credits

### Second-year Clinical Practicum II

Interviewing, objective and projective assessment, intellectual evaluations, etc. Some therapy experience included.

### 5th Semester

PSYC7120 3 Credits

## **Diversity Issues in Clinical Psychology**

Minority issues as they affect psychological testing and psychotherapy. Women's issues, issues of color, religion, ethnicity, sexual orientation, differing physical abilities and age.

## PSYC7133 3 Credits

## Learning, Cognition and Emotion

This course provides an introduction to the cognitive and affective bases of behavior. Topics to be addressed include basic principles of learning theory and alternative theoretical perspectives on the nature of emotion. The nature of cognitive processes such as memory and decision-making will also be addressed. The course is designed to be particularly relevant to the application of these topics to clinical psychology.

### PSYC8129 3 Credits **Psychopharmacology**

An overview of the pharmacologic actions and behavioral effects of psychotherapeutic medications. Special attention to chemical theories of mental illness and the use of psychotherapeutics in the treatment of mental disorders.

## PSYC8180

3 Credits

## Third-year Clinical Practicum I

Therapy, assessment and consultation at an advanced level.

### Advanced Special Topics in Clinical Psychology

Choose one from Advanced Special Topics.

### 6th Semester

PSYC8181 3 Credits Third-year Clinical Practicum II

Therapy, assessment and consultation at an advanced level.

### PSYC9124 3 Credits Advanced Research Seminar

This course reviews and expands on intermediate and advanced-level analytic methods including tests of mediation and moderation in linear and nonlinear regression models, factor analysis, structural equation modeling and various approaches for longitudinal data. The course also covers integration of such techniques in the overall research process. Specifically, students will gain experience in reviewing and synthesizing literature to derive hypotheses, formulating study procedures and analytic plans to test hypotheses and presenting results in written and oral format. Prerequisites: PSYC7110 Research Design and Analysis I and PSYC7111 Research Design and Analysis II.

## PSYC9138

### 3 Credits

### **Professional Development**

This course will focus on the professional challenges and issues facing the rising clinical psychologist through several phases of training and professional development (e.g., internship, postdoctoral fellowships, early employment).

### Advanced Special Topics in Clinical Psychology

Choose one from Advanced Special Topics.

### 7th Semester

## PSYC9111

3 Credits

**Dissertation (Clinical Psychology)** An experimental research project required of all

Ph.D. candidates in clinical psychology.

### PSYC9180

## 0 Credits

### Fourth Year Clinical Practicum I

Advanced therapy, assessment and consultation at an external practicum site.

### 8th Semester

## PSYC9111

3 Credits Dissertation (Clinical Psychology)

An experimental research project required of all Ph.D. candidates in clinical psychology.

### PSYC9181

0 Credits

### **Fourth Year Clinical Practicum II** Advanced therapy, assessment and consultation

at an external practicum site.

### 9th Semester

### PSYC9112 0 Credits Dissertation Maintenance (Clinical Psychology)

Continuation of the experimental research project required of all Ph.D. candidates in clinical psychology.

### PSYC9113 0 Credits Internship (Clinical Psychology)

Yearlong applied clinical experience at a psychological treatment agency or institution, required for Ph.D. candidates in clinical psychology.

### 10th Semester

### PSYC9112 0 Credits

# Dissertation Maintenance (Clinical Psychology)

Continuation of the experimental research project required of all Ph.D. candidates in clinical psychology.

## PSYC9113

## 0 Credits

## Internship (Clinical Psychology)

Yearlong applied clinical experience at a psychological treatment agency or institution, required for Ph.D. candidates in clinical psychology.

### Advanced Special Topics in Clinical Psychology

### PSYC8114 3 Credits Neuropsychology

## Introduction to clinical neuropsychology.

Review of functional neuropsychology. Review of functional neuroanomy, basic neurological disorders and the assessment of the cognitive sequence of those disorders. Includes introduction to basic neuropsychological assessment batteries.

### PSYC8127 3 Credits Clinical Child Psychology

This course focuses on the diagnosis and treatment of clinical disorders first manifested in children and adolescents. Multiple modalities of treatment are introduced.

### PSYC8145 3 Credits Advanced Cognitive Behavioral Therapy

This course will cover new modalities of cognitive-behavioral therapy including cognitive therapy, motivational interviewing, mindfulness meditation and acceptance and commitment therapy. Emphasis will be placed on the theoretical underpinnings of these therapies, specific techniques, applied examples and practice through role-plays. Prerequisite: PSYC7121 Cognitive and Behavioral Therapy.

### PSYC9123 3 Credits Family The

## Family Therapy

Interventions with couples and families. Assessment through genograms. Exploration of different theoretical models of family therapy, with emphasis on systems approaches.

### PSYC9143 3 Credits Advanced Psychodynamic Psychotherapy

This course will focus on the contemporary psychodynamic treatment approaches to the personality disorders. Object relations and egopsychology perspectives will be emphasized.

### PSYC9145 3 Credits Seminar in Clinic

### **Seminar in Clinical Psychology** A seminar for advanced doctoral and clinical

master's students using actual case material and devoted to diagnostic issues, treatment planning and treatment issues.

## PSYC9160 3 Credits

## **Advanced Personality Assessment**

Psychological assessment requires a synthesis of empiricism and art. This course is intended to increase understanding of the way in which this synthesis occurs. It combines discussion of topics of testing with case material as a means of enhancing skills in the field of psychological assessment.

# Clinical Psychopharmacology (Postdoctoral M.S.)

The clinical psychopharmacology program in psychology is intended for psychologists who provide health care services and are interested in increasing their awareness of psychotropic medications. Topics covered include the anatomy and physiology of the nervous system, biological systems that may be impacted by psychotropic drugs and the practice of clinical psychopharmacology.

The program is designated as meeting the requirements for training in psychopharmacology as established by the American Psychological Association (APA). This model of training is also consistent with the APA model for didactic training in preparation for independent practice as a prescribing psychologist, should state legislatures choose to award such authority to the profession.

This program is offered online under the auspices of the School of Psychology, University College: Arts • Sciences • Professional Studies, Metropolitan Campus, Teaneck, New Jersey.

## **Admission Requirements**

1. A doctoral degree in a discipline of psychology considered appropriate for the provision of health care services or a doctoral degree in another discipline of psychology plus evidence of completion of a respecialization program at a postdoctoral level relevant to status as a health care provider. Both the doctoral transcript and the respecialization certificate, if relevant, must come from an accredited college or university.

2. Candidates must be currently licensed as a psychologist in any state or be actively seeking licensure at the time of initiating the program.

3. Classes may only be taken on a nonmatriculated basis with the permission of the program's academic director.

4. Members of other health care professions may participate with completion of a terminal degree in their discipline, licensure as a health care provider and the permission of the program's academic director.

# **Clinical Psychopharmacology**

## **Requirements for the Master of Science degree**

1. Satisfactory completion of a minimum of 30 graduate credits in the courses approved for participants in this program.

## **Required Courses**

Credits
PSYC7910
Biological Foundations of Clinical
Psychopharmacology I3
PSYC7915
Biological Foundations of Clinical
Psychopharmacology II3
PSYC7920
Neuroscience3
PSYC7925
Neuropharmacology3
PSYC7930
Clinical Pharmacology3
PSYC7935
Professional Issues and Practice
Management3
PSYC7940
Treatment Issues in Clinical
Psychopharmacology: Affective
Disorders3
PSYC7945
Treatment Issues in Clinical
Psychopharmacology: Psychotic
Disorders3
PSYC7950
Treatment Issues in Clinical
Psychopharmacology: Anxiety
Disorders3
PSYC7955
Treatment Issues in Clinical
Psychopharmacology: Other
Disorders3

## Elective

PSYC7960 Clinical Psychopharmacology

students may waive some courses. However, the final four courses cannot be waived.

3. Students receiving two or more grades below B– will be terminated from the program.

4. Upon completion of the 10-course sequence, students must complete an exit examination and achieve a passing score to receive the master's degree. This exam may be taken a maximum of three times.

5. The entire degree program must be completed within a three-year period.

6. After completion of their course work, students are eligible to participate in an elective supervised clinical experience.

## **Course Offerings**

## Clinical Psychopharmacology School of Psychology

## Required

### PSYC7910 3 Credits Biological Foundations of Clinical Psychopharmacology I

This course presents an integrated approach to the study of primary body systems as it relates to psychopharmacological practice (respiratory, cardiovascular and genitourinary) that includes anatomy, physiology and pathophysiology of a specific body system with the clinical applications (health assessment, physical examination, laboratory assessment) pertaining to that system.

## PSYC7915

### **3 Credits**

### Biological Foundations of Clinical Psychopharmacology II

This course presents an integrated approach to the study of primary body systems as it relates to psychopharmacological practice (hematologic, immunologic, gastrointestinal, endocrine, reproductive, musculoskeletal and dermatologic) that includes anatomy, physiology and pathophysiology of a specific body system with the clinical applications (health assessment, physical examination, laboratory assessment) pertaining to that system.

## PSYC7920 3 Credits

## Neuroscience

This course focuses on the anatomy and physiology of the nervous system, beginning at the cellular level. Knowledge of principles or neurochemistry, neuroendocrinology and neuropathology will serve as a foundation for the understanding of neurotransmitter systems and their role in the etiology and treatment of mental disorders.

### PSYC7925 3 Credits **Neuropharmacology**

This course introduces the knowledge bases pertaining to pharmacology and psychopharmacology. It includes advanced study of neurotransmitter systems and other factors in the psychopharmacological treatment of mental disorders, as well as an introduction to classes of psychotropic medications.

## PSYC7930 3 Credits

## Clinical Pharmacology

This course presents major classes of drugs (excluding psychotropics) and their uses in clinical settings. It includes an examination of the social, cultural and behavioral aspects of prescribing medications.

### **PSYC7935**

### 3 Credits Professional Issues and Practice Management

This course reviews issues in prescribing from the perspective of a professional health care provider. Legal and ethical issues as well as standards of care ranging from informed consent to documentation are addressed. Interprofessional relationships and aspects of collaborative practice, as well as enhancement strategies such as computer-based aids, will provide learners with a solid foundation for the continued integration of psychopharmacology into their practices.

### **PSYC7940**

### **3** Credits

### Treatment Issues in Clinical Psychopharmacology: Affective Disorders

This course addresses issues of diagnosis/ differential diagnosis; etiology/biological basis of affective disorders; and psychopharmacological treatment options, including mechanism of action, side effects, adverse reactions, polypharmacy, drug interaction and patient education. Disorders covered include major depression and the affective elements of bipolar disorder. Issues of diversity and development are considered.

### PSYC7945

### **3** Credits

### Treatment Issues in Clinical Psychopharmacology: Psychotic Disorders

This course addresses issues of diagnosis/ differential diagnosis; etiology/biological basis of psychotic disorders; and psychopharmacological treatment options, including mechanism of action, side effects, adverse reactions, polypharmacy, drug interaction and patient education. Disorders covered include schizophrenia and the psychotic elements of bipolar disorder. Issues of diversity and development are considered.

### **PSYC7950**

## 3 Credits

### Treatment Issues in Clinical Psychopharmacology: Anxiety Disorders

This course addresses issues of diagnosis/ differential diagnosis; etiology/biological basis of anxiety disorders; and psychopharmacological treatment options, including mechanism of action, side effects, adverse reactions, polypharmacy, drug interaction and patient education. Disorders covered include panic, phobias and generalized anxiety disorder. Issues of diversity and development are considered.

### **PSYC7955**

### 3 Credits Treatment Issues in Clinical Psychopharmacology: Other Disorders

This course addresses issues of diagnosis/differential diagnosis; etiology/biological basis of a variety of disorders; and psychopharmacological treatment options, including mechanism of action, side effects, adverse reactions, polypharmacy, drug interaction and patient education. Disorders covered include eating disorders, chronic pain, sleep disorders, substance abuse and childhood disorders.

### Electives

## PSYC7960 0 Credits Clinical Psychopharmacology Practicum

Field training in psychopharmacological prescriptive practice for licensed psychologists under the supervision of a licensed physician.

### PSYC7961 4 Credits

### **Emergency Medicine Rotation**

Full-time practicum experience in emergency medicine. This practicum lasts a minimum of 1.5 months, for a total practicum experience of 14 months.

### PSYC7962 4 Credits

## Family Medicine Rotation

Full-time practicum experience in family medicine. This practicum lasts a minimum of 1.5 months, for a total practicum experience of 14 months.

### PSYC7963 4 Credits Geriatrics Rotation

Full-time practicum experience in geriatrics. This practicum lasts a minimum of 1.5 months, for a total practicum experience of 14 months.

### PSYC7964 4 Credits

## Internal Medicine Rotation

Full-time practicum experience in internal medicine. This practicum lasts a minimum of 1.5 months, for a total practicum experience of 14 months.

## PSYC7965 4 Credits

## **Obstetrics and Gynecology Rotation**

Full-time practicum experience in obstetrics and gynecology. This practicum lasts a minimum of 1.5 months, for a total practicum experience of 14 months.

### PSYC7966 4 Credits **Pediatrics Rotation**

Full-time practicum experience in pediatrics. This practicum lasts a minimum of 1.5 months, for a total practicum experience of 14 months.

## PSYC7967 4 Credits

## **Psychiatric Rotation**

Full-time practicum experience in psychiatry. This practicum lasts a minimum of 1.5 months, for a total practicum experience of 14 months.

## PSYC7968 4 Credits Surgery Rotation

Full-time practicum experience in surgery. This practicum lasts a minimum of 1.5 months, for a total practicum experience of 14 months.

## PSYC7969 4 Credits Elective Rotation

Full-time practicum experience in an elective topic in medicine not covered in courses PSYC7961 through PSYC7968. This practicum lasts a minimum of 1.5 months, for a total practicum experience of 14 months.

# Forensic Psychology (M.A.)

The program is a one-and-a-half-year, fulltime graduate program designed to provide students with the skills necessary to provide treatment interventions and assessment in a forensic setting and conduct forensic research.

The specific program objectives are to:

• Prepare students to provide specialized treatment and intervention in a forensic setting.

• Provide students with training in psychopathology, interviewing, forensic assessment and evaluation, clinical forensic practice and ethics.

• Provide students with knowledge and practical experiences designed to promote the development of professional skills required in multiple areas of forensic psychology.

The program will prepare students for careers as master's-level forensic specialists in civil and criminal-justice settings, and provide students with exposure to multiple areas of forensic psychology, such as forensic assessment, criminal responsibility, interviewing and risk assessment. Secondly, the program will prepare students to pursue doctoral-level training in clinical psychology by providing numerous opportunities to participate in ongoing research projects.

This program is offered under the auspices of the School of Psychology, University College: Arts • Sciences • Professional Studies, Metropolitan Campus, Teaneck, New Jersey.

## **Admission Requirements**

1. A bachelor's degree from an accredited college or university.

2. Applicants must submit an official report for the General Test of the Graduate Record Examinations (GRE). The psychology subtest is **not** required. The schedule of testing dates can be obtained from Educational Testing Service, Princeton, New Jersey 08540.

3. Applicants must have taken introductory psychology, statistics and abnormal psychology.

4. Two letters of recommendation.

5. Students enrolling with prior graduate-level course work relevant to the curriculum may petition for waiver of up to 6 credits.

## **Psychology** • Forensic

Applicants who have not completed all requirements for admission to the degree program may be permitted to enroll in classes for credit on a nonmatriculated or nondegree basis.

## **Requirements for the Master of Arts Degree**

1. The program is a 36-credit program, including a 3-credit externship, and encompasses three content areas of study: concepts of psychology, foundations of forensic psychology and applied knowledge/practical skills in forensic psychology. Students complete courses in graduate-level statistics and psychopathology before taking core courses. The courses in each content area are noted below.

2. Students receiving a grade below B in any graduate course will be placed on academic probation with the possibility of a reduced course load for the next regular semester. Students receiving a concurrent or subsequent grade below B will not be permitted to continue in the program. A grade point ratio of at least 3.00 must be maintained at all times to continue in the program.

## Curriculum

First Trimester (Fall)	Credits
PSYC6114	
Psychopathology	3
PSYC6121	
Statistics and Research Methods.	3
PSYC6230	
Introduction to Forensic Psycholo	gy3
PSYC6231	
Psychological Bases of Criminal	
Behavior	3
Second Trimester (Spring)	
PSYC6130	
Interviewing Techniques	3
PSYC7230	
Forensic Assessment and Prediction	on3
PSYC7235	
Criminal Responsibility and	

Competency3	
Forensic Psychology Elective3	

### Third Trimester (Summer Session) PSYC6227

Clinical Practice in Forensic Context.....3 PSYC7243

Special Topics in Forensic Psychology... 3

### Fourth Trimester (Fall)

PSYC7234

Externship in Forensic Psychology.......3 All students are required to take and pass two comprehensive examinations (psychopathology and forensic psychology) at the conclusion of their course work, and only students who pass the comprehensive examinations will be admitted to the degree.

Interested students may elect to complete a master's thesis and must take PSYC7810 I.S. Master's Thesis (3 credits). These 3 credits may be substituted for one elective.

Note: PSYC7810 I.S. Master's Thesis may be taken as an elective in lieu of the comprehensive examinations.

### **Course Offerings**

Other psychology courses are described on pages 225–227, 232–233 and 236–238.

Forensic Psychology (M.A.) School of Psychology

### Required

PSYC6130 3 Credits Interviewing Techniques

Survey of interviewing principles and techniques as they relate to various counseling theories, with an emphasis on the clinical interview as a means for gathering pertinent information about a client in the context of conducting a forensic evaluation. Focuses on unique issues encountered within forensic contexts. Prerequisite: PSYC6114 Psychopathology.

## PSYC6227 3 Credits

Clinical Practice in Forensic Context

This course focuses on two main areas of clinical practice with forensic clients in secure settings and in the community. The two areas of focus are *treatment* (therapy, management and medication) with general offenders, sex offenders, juvenile offenders and offenders with major mental illness; and *testing* (structured personality tests, cognitive and neuropsychological tests, deception/malingering, diagnostic tests and trauma). Prerequisites: PSYC6114 Psychopathology and PSYC6230 Introduction to Forensic Psychology. Note: Instructor approval required for students who are not in the M.A. in forensic psychology program or the B.A./M.A. accelerated program.

### PSYC6230 3 Credits

Credits

### **Introduction to Forensic Psychology**

Introduction to the application of psychological principles to legal (civil and criminal) problems. Review of historical and contemporary issues such as the interface of the mental health system and the criminal system, civil commitment, the insanity defense, diminished capacity, sentencing, capital punishment, competency to stand trial and use of research in court. Note: Instructor approval required for students who are not in the M.A. in forensic psychology program or the B.A./M.A. accelerated program.

PSYC6231

3 Credits

### Psychological Bases of Criminal Behavior

An in-depth analysis of research on the psychological bases and dynamics of criminal, aggressive and antisocial behavior. Review of multiple theoretical and explanatory aspects of criminal behavior, with emphasis on the relationships between psychopathological states, personality disorders, psychodiagnostics and antisocial behavior. Note: Instructor approval required for students who are not in the M.A. in forensic psychology program or the B.A./M.A. accelerated program.

## PSYC7230

3 Credits

### **Forensic Assessment and Prediction**

Review of relevant measurements used in forensic assessment — assessment of risk of violence, psychopathology, malingering, personal injury, competency, disability and child custody. A focus of the course is on the heuristics/biases of risk-related decision-making under uncertainty. Note: Instructor approval required for students who are not in the M.A. in forensic psychology program, the forensic B.A./M.A. accelerated program or the clinical psychology Ph.D. forensic track.

### **PSYC7234**

**3 Credits** 

**Ethical Issues in Forensic Practice** 

This course focuses on ethical conflicts and dilemmas facing forensic psychologists when working within the legal system as evaluators, consultants or expert witnesses. Topics include standards of practice in forensic psychology, role of the expert witness, protection of rights of defendants, evaluating competency of defendants, confidentiality and duty to protect, refusal and consent to treat and more. Note: Instructor approval required for students who are not in the M.A. in forensic psychology program or the B.A./M.A. accelerated program.

# **Psychology** • Forensic

### PSYC7235 3 Credits Criminal Responsibility and Competency

This course focuses on the history of the insanity defense, procedures for assessing mental state, mental conditions that diminish capacity for "requisite intent," the complex structure and assessment of malingering and assessment of mitigation. Prerequisite: PSYC6114 Psychopathology and PSYC6230 Introduction to Forensic Psychology. Note: Instructor approval required for students who are not in the M.A. in forensic psychology program, the forensic B.A./M.A. accelerated program or the clinical psychology Ph.D. forensic track.

## PSYC7240 3 Credits

## **Externship in Forensic Psychology**

A supervised field experience in the assessment, management and treatment of patients. Students obtain an approved externship at forensic sites including prisons, special treatment facilities, hospitals or rehabilitation centers. Students have the opportunity to specialize in their externship, working with populations such as juvenile offenders or with other special populations such as criminals with alcohol or substance-abuse disorders or with sex offenders. Course is pass/fail.

#### PSYC7242 3 Credits

### **Externship in Pro-Seminar**

The pro-seminar provides group supervision around clinical, treatment, ethical and other general-practice issues that arise during externship.

### PSYC7243 3 Credits

## **Special Topics in Forensic Psychology**

This course provides focused coverage of special populations and issues in the area of forensic psychology. Examples of topics include assessment and treatment to gain an understanding of issues specific to particular populations (e.g., juvenile offenders, female offenders, offenders with psychopathic traits), contexts (e.g., assessment of law enforcement personnel) and areas of forensic practice (e.g., criminal profiling). Note: Instructor approval required for students who are not in the M.A. in forensic psychology program.

### Electives

### PSYC6228 3 Credits Mental Health Law

This course provides a general overview of mental health issues in the forensic context, including privileged communications, confidentiality, mental disorders in involuntary commitment, civil liability and competencies, diminished capacity and criminal responsibility, guardianships and conservatorships.

## PSYC6229 3 Credits

### Psycholegal Analysis of Forensic Cases

The course will introduce actual cases and facts and will probe, in depth, the presumptive underpinnings of the psychological, legal and ethical issues raised by the case. One case will be presented each week and active discussion of the psycholegal issues raised by the case will be expected. Cases have been selected to cover a broad range of challenging issues raised for forensic psychologists. Prerequisite: PSYC6230 Introduction to Forensic Psychology. Note: Instructor approval required for students who are not in the M.A. in forensic psychology program or the B.A./M.A. accelerated program.

## PSYC6232 3 Credits

## **Juvenile Offenders**

This course focuses on the etiology, assessment, classification and treatment of the juvenile offender. Emphasis is placed on developmental, cognitive-behavioral and psychodynamic explanations and treatment approaches. The use of case studies is also emphasized in this course, and part of the course is devoted to reviewing and critiquing legal and institutional responses to juvenile crime.

### PSYC6234 3 Credits Evaluation and Treatment of Sex Offenders

This course focuses on the diagnosis, classification and treatment of sex offenders as well as issues confronting psychologists when working with this population, such as the interpersonal and intrapsychic dynamics of sex offenders. Presentation of case material is utilized in this course.

### PSYC7232 3 Credits

### **Psychological Profiling**

Examines crime and the criminal mind from the perspective of psychological profiles, with an emphasis on phenomenology and psychopathology, as well as prognostication of criminal behavior. A major focus is placed on profiling through the presentation of case material and findings, with an emphasis on the homicidal offender.

### PSYC7233 3 Credits

## Evaluation and Treatment of Alcohol and Substance Abuse Disorders

This course presents theory and research on the development, assessment and treatment of alcohol and substance-abuse disorders (drug abuse and gambling), particularly as they relate to criminal behavior.

### PSYC7236 3 Credits

### **Forensic Scientific Evidence**

This course delves into the nature of scientific evidence, validity, reliability and admissibility of evidence in court and the role of science in the courtroom, including the use of science to bias, prejudice or mislead.

## PSYC7237

## 3 Credits

## **Forensic Issues in Family Court**

This course addresses the role of the mental health practitioner in family court as an expert, special master, mediator and custody evaluator. This course will focus on the impact of such complex issues as abuse, mental illness, medical problems, sexual preference and substance abuse on divorce, custody, placement and domestic-law issues.

## **PSYC7238**

### 3 Credits Women and Crime

This course explores the role of women as criminals, the capacity of women to engage in a wide range of criminal acts, including crimes that are "uniquely" committed by women and the response of the criminal justice system to women. Well-known cases are included for illustrative purposes. The etiologic role of victimization will also be addressed.

## PSYC7239 3 Credits

### **Abuse in Intimate Relationships**

The focus of this course is on domestic violence and the response of the criminal justice system to managing spouse abuse, parent abuse and child abuse.

## PSYC7241

### 3 Credits

### **Psychology and Law Enforcement**

This course covers a range of topics concerned with the interface of law enforcement and psychology, including fitness-for-duty evaluations, pre-employment screening, special ethical issues, interviewing techniques, assessment of dangerousness, behavioral pattern analysis and threat analysis.

# General/ Theoretical Psychology (M.A.)

The general/theoretical program in psychology is designed to meet the needs of students who wish to prepare for service in various scientific and professional areas of psychology and related fields or who are looking to strengthen their background in preparation for applying to doctoral programs. The program is expected to take two years to complete for full-time students, but can be completed on a parttime basis for those working full time.

This program is offered under the auspices of the School of Psychology, University College: Arts • Sciences • Professional Studies, Metropolitan Campus, Teaneck, New Jersey.

## **Admission Requirements**

1. A bachelor's degree from an accredited college or university.

2. Applicants must submit an official score report for the Graduate Record Examinations (GRE). (The Subject Test in Psychology is not required.) The schedule of testing dates can be obtained from Educational Testing Service, Princeton, New Jersey 08540.

3. Applicants must have taken general/introductory psychology, statistics and experimental psychology/research methods on either the undergraduate or graduate level.

4. Three letters of recommendation. Applicants who have not completed all requirements for admission to the degree program may be permitted to enroll in

classes for credit on a provisional, nonmatriculated or nondegree basis.

## **Requirements for the Master of Arts Degree**

1. Satisfactory completion of a minimum of 36 credits in the courses approved for a graduate major in psychology. Of the 36 credits, 6 may be allowed for a thesis, but the writing of a thesis is at the option of the student.

2. The following courses comprise the core curriculum: PSYC6121 Statistics and Research Methods and PSYC6129 Research Methods and Psychometrics. Students should complete core

requirements before progressing to other courses.

3. Students receiving two or more grades below B– in any graduate course will be placed on academic probation with the possibility of a reduced course load for the next regular semester. Students receiving a concurrent or subsequent third grade below B– will not be permitted to continue in the program. A grade point ratio of at least 2.75 must be maintained at all times to continue in the program.

### Basic Requirements (6 credits) Credits

PSYC6121

Statistics and Research Methods......3 PSYC6129 Research Methods and

Psychometrics......3

# Specialization Requirements (15 credits)

Students will elect a minimum of 15 credits from the following list of courses. **PSYC6109** Social Psychological Applications......3 **PSYC6111** Theories of Personality......3 **PSYC6114 PSYC6128** Computer Applications and PSYC7114 Learning, Motivation and Emotion......3 **PSYC7122** Developmental Psychology......3 **PSYC7130** 

Biological Bases of Behavior...... 3

## Electives (15 credits)

Students, with an adviser's approval, will elect an additional 15 credits to complete the required 36 credits. Up to 6 of these credits may consist of a master's thesis. Several courses are offered jointly with the Ph.D. program.

In addition to the course requirements, candidates for the master's degree must meet the following requirements:

1. All students are required to take and pass a comprehensive examination at the conclusion of their course work, and only students who pass the comprehensive examination will be admitted to the degree. If a student completes a master's thesis, the comprehensive examination will be waived. 2. The graduate program of studies should be completed within a period of five years.

## **Course Offerings**

Other psychology courses are described on pages 225–227.

A wide range of electives for the M.A. in general/theoretical psychology are available in consultation with the program director.

# General/Theoretical Psychology (M.A.)

School of Psychology

### PSYC6100 3 Credits Psychological Research in Substance Use and Abuse

This course will review major psychology theories and recent empirical findings regarding the use and abuse of various illicit and licit substances, with an emphasis on alcohol use. These models will provide a framework for understanding the posited antecedent and vulnerability factors that contribute to the development of normative and maladaptive substance abuse. Special emphasis is given to periods of high-risk such as young adulthood. Prevention and treatment approaches will also be covered, focusing on empirical evidence for their efficacy.

### PSYC6109

**3** Credits

### Social Psychological Applications

This course focuses on applications of social psychological theory and research techniques in understanding and alleviating problems encountered in legal, business, community and mental health domains. Topics include, but are not limited to, attitude formation, attitude change, prejudice and discrimination, altruism and attribution theory.

## PSYC6111

### 3 Credits

### **Theories of Personality**

Overview of nature of personality theory; summaries of theories of personality selected because of influence on clinical practice; psychological research. Freud, Adler, Jung, Murray, G.W. Allport, Rogers, Maslow, Fromm; some existentialists and some social, behavioral or learning approaches are included.

### PSYC6114 3 Credits

## Psychopathology

Detailed consideration of psychopathology with respect to physiological cognitive, motivational, affective and interpersonal variables and their roles in etiology, diagnosis, treatment and prognosis.

### PSYC6115 3 Credits Child Psychopathology

Examination of behavior disorders most likely to have childhood onsets or variants. Variables such as effects of age onset, treatment modalities that are age specific, approaches or techniques, recovery rates and adult correlates are considered.

### PSYC6121 3 Credits Statistics and Research Methods

Review of issues related to research design, psychometrics and descriptive and inferential statistics. Statistical topics include, but are not limited to, parametric techniques such as t-tests, analysis of variance and simple and multiple regression analysis. Heavy emphasis will be placed on application of techniques using statistical software and interpretation of results. Prerequisite: PSYC2201 Statistics.

### PSYC6128 3 Credits Computer Applications and Scientific Report Writing

This course will cover the use of SPSS (Statistical Package for Social Sciences) statistical software and related programs (e.g., Excel) for data management, analysis and graphing. Emphasis will be placed on using the graphical interface of SPSS software, but the program syntax for various applications also will be covered. This course will also cover scientific report writing (i.e., summarizing SPSS output) with emphasis placed on APA (American Psychological Association) style. Prerequisite: PSYC6121 Statistics and Research Methods.

### PSYC6129 3 Credits Research Methods and Psychometrics

This course covers basic topics and issues in psychometrics and research design. In addition to a review of basic statistical concepts, topics include: classical true score theory and scale creation; scale reliability and validity assessment; experimental design validity (internal, external, statistical, construct); major threats to valid inferences in research; and ethical issues in behavioral research. Prerequisite: PSYC6121 Statistics and Research Methods.

## PSYC7114 3 Credits

### **Learning, Motivation and Emotion** Survey of the experimental literature relating to

these constructs. Emphasis placed on integrative theory involving brain function, reward and incentive as well as human cognitive process.

### PSYC7122 3 Credits Developmental Psychology

Childhood, adolescence and early to midadulthood, including major theories of development (Piaget, Freud and social learning theories), research and application. Special emphasis on research concerning the development of prosocial behavior, internalization and sex typing.

### PSYC7125 3 Credits Applied Social Psychology

Developing understanding of social underpinnings of psychological phenomena.

Topics include attitude formation, attitude change, prejudice and discrimination, altruism, attribution theory, emotions, research techniques and application of social psychology to clinical practice. Research project included.

### PSYC7810 0-3 Credits **I.S. Master's Thesis**

An experimental research project. Can be used in place of the master's comprehensive examination.

### PSYC7811 3–6 Credits **I.S. Master's Clinical Practicum** Interviewing and assessment experience.

Interviewing and assessment experience. Some therapy experience may be included.

### PSYC7812 0–3 Credits I.S. Master's Thesis II

The continuation of an independent research project (chapters 3 and 4 of Thesis: Results and Discussion sections). Thesis can be used in place of master's comprehensive examination.

# School Psychology (Psy.D.)

The School of Psychology offers two tracks for the school psychology doctoral degree: a five-year full-time program (see this page) for applicants with a bachelor's degree in psychology or a related field and an advanced program (see page 235) for those who already have a master's degree and certification in school psychology. All classes for both programs are held late afternoon or evening.

## School Psychology (Five-year Psy.D.)

The five-year school psychology doctoral program is an integration of theoretical and foundational knowledge and applied professional training for those committed to working with children and adolescents in schools and school-related settings. The program's goal is to prepare individuals to assume leadership positions within schools, school-related and academic settings. The program prepares students for certification in school psychology and eligibility for licensure as a psychologist.

The program is a full-time program. Classroom experiences are integrated with field-based experiences in a multitude of settings, beginning in the first semester of study. Classes are held in late afternoon and evening, providing ample opportunity for practicum and research. The program's eclectic orientation and wide range of course work provide education in research, consultation, assessment, prevention, program evaluation, neuropsychology and psychopharmacology. There are opportunities for students to work closely with program faculty to develop specialized areas of interest and research. During their fourth year of study, students are expected to complete a doctoral dissertation in the form of an original clinical investigation, a program evaluation, case study or meta-analysis. Students are also expected to successfully complete a comprehensive examination and the PRAXIS exam in school psychology.

The program culminates (fifth year) in a yearlong internship in a school or related clinical setting. Students are encouraged to apply for APA-approved internships. Stipends supporting half tuition are

# **Psychology • School (Five-year Psy.D.)**

available for highly qualified students. The granting of a tuition stipend requires a commitment of 12 hours per week as a research assistant.

This program is offered under the auspices of the School of Psychology, University College: Arts • Sciences • Professional Studies, Metropolitan Campus, Teaneck, New Jersey.

# Admission Requirements and Information

To apply for the five-year Psy.D. in school psychology program, check the FDU website (www.fdu.edu), call or write to the School of Psychology, Fairleigh Dickinson University, 1000 River Road, Teaneck, N.J. 07666-1914, (201) 692-2301.

Applications for admission to the fiveyear program should be submitted no later than February 15. Applications received after that date will be considered on a space-available basis only. Should an individual not yet be qualified for the Psy.D. program, that application will automatically be reviewed for the M.A. plus certification program.

Applicants to the five-year Psy.D. program should hold an undergraduate degree in psychology or related field with at least 18 credits in psychology beyond general psychology.

Applicants to the program must submit: 1. A completed FDU Psy.D. Application

for Admission. 2. Transcripts from all academic

institutions previously attended.3. Official report of Graduate Record Examinations (GRE) scores for the General Test and the Subject Test in Psychology.

4. Three letters of recommendation from academic and/or professional references.

5. A typed statement of professional interests and goals.

6. Applicants will be selected, based on credential review, for a personal interview.

7. Transfer credits will be handled individually by the Program Committee.

# Requirements for the Psy.D. Degree

First Semester	Credits
PSYC6111	
Theories of Personality	3
PSYC6121	
Statistics and Research Method	ls3

Credits
PSYC6651
Ethics and Professional Practice in
Schools and School Psychology3
PSYC7819
Introduction to School Learning
Problems I 3
PSYC9171
Practicum in School Psychology I3
Second Semester
PSYC6115
Child Psychopathology3
PSYC6129
Research Methods and Psychometrics3
PSYC7124
D 1 1 01 11 1

## Third Semester

EDUC6743
Introduction to Students with
Disabilities in School and
Community3
PSYC7615
Child Assessment I with Practicum3
PSYC7815
Child Assessment II with Practicum3
PSYC8910
School-based Consultation with
Practicum
PSYC9173
Practicum in School Psychology III 3
Fourth Semester
PSVC7125

## Summer

PSYC8128

Child and Adolescent Psychopharmacology......3

## Sixth Semester

PSYC8112
Dissertation Seminar
(School Psychology)
PSYC8721
Seminar in Child/Adolescent
Intervention3
PSYC8930
Advanced Consultation for School
Psychologists3
PSYC8951
Administration and Supervision in
School Psychology
PSYC9176
Practicum in School Psychology VI3

## Summer

PSYC8132 Special Topics in School Psychology...... 3

### Seventh Semester

PSYC9110
School-Community Mental Health3
PSYC9150
Internship (School Psychology)*3

## **Eighth Semester**

EDUC6702	
Curriculum and Instruction:	
Theory and Practice	3
PSYC9150	
Internship (School Psychology)*	3

Note: PRAXIS Exam must be taken prior to graduation.

## **Course Descriptions**

See "Course Offerings," pages 236–238.

\*Students may choose to postpone PSYC9150 Internship (School Psychology) until the fifth year. The fourth year may be used for dissertation. The goal would be dissertation completion prior to or in conjunction with internship.

## School Psychology (Advanced Psy.D.)

The doctoral program in school psychology is an innovative, applied professional psychology program. The program builds on the master's degree training and experiences of each student. Its goal is to prepare professionals who will be leaders in the design, evaluation, provision and supervision of comprehensive mental health and psychoeducational services to children, youths and families.

The program prepares students for eligibility for licensure as psychologists. Course work can be completed in two years, including summer sessions. Classes are held in the late afternoons and evenings. Therefore, students are able to work while in the program. Upon completion of their course work, students engage in research culminating in a doctoral dissertation. The research project may be in the form of an original applied clinical investigation, program evaluation, case study, meta-analysis or validation of a test or clinical procedure.

This program is offered under the auspices of the School of Psychology, University College: Arts • Sciences • Professional Studies, Metropolitan Campus, Teaneck, New Jersey.

# Admission Requirements and Information

To apply for the Psy.D. in school psychology program, write to the School of Psychology, Fairleigh Dickinson University, Metropolitan Campus, 1000 River Road, Teaneck, N.J. 07666-1914, or call (201) 692-2301 for an application. Applications for admission should be submitted no later than March 1. Applications received after that date will be considered only on a space-available basis.

Applicants to the advanced Psy.D. in school psychology program should hold a master's degree and certification in school psychology. Candidates who are not certified school psychologists will be required to take the necessary course work and field experience to obtain certification prior to admittance into the doctoral program.

Applicants to the program must submit:

1. A completed FDU Psy.D. Application for Admission.

2. Transcripts from all academic institutions previously attended.

3. Official report of Graduate Record Examinations (GRE) scores for the General Test and Subject Test in Psychology.

4. Three letters of recommendation from academic and/or professional references.

5. A typed statement of professional goals. 6. A representative work sample of current professional skills (e.g., psychological testing report, consultation or therapy summary, etc.).

7. Applicants will be required to complete a personal interview.

8. Transfer of graduate credits to this program is handled individually by the program director.

## Requirements for the Advanced Psy.D. Degree

## **First Year**

Fall Semester	Credits
PSYC7145	
Issues and Techniques in Research and Evaluation I	
PSYC7651	
Seminar in Professional	
School Psychology Practice and	1
Ethics	3
PSYC8720	
Seminar in Child/Adolescent	
Assessment	3
Spring Semester	
PSYC7146	
Issues and Techniques in Research and Evaluation II	
PSYC8721	
Seminar in Child/Adolescent	
Intervention	
PSYC8930	
Advanced Consultation for	
School Psychologists	3
Summer Semester	
PSYC8128	
Child and Adolescent	
Psychopharmacology	3
PSYC8132	

Special Topics in School Psychology......3

## **Second Year**

### Fall Semester

Credits
PSYC8130
Pediatric Psychology3
PSYC9125
Advanced Practicum I
(School Psychology)3
Spring Semester
PSYC8112
Dissertation Seminar
(School Psychology)3
PSYC8951
Administration and Supervision
in School Psychology
PSYC9126 Advanced Practicum II
(School Psychology)
Summer Semester
PSYC6116
History and Systems
PSYC8140
Seminar in School Change3
Third Year
Fall Semester
PSYC9115
Dissertation Maintenance
(School Psychology)0
PSYC9150
Internship (School Psychology)3
Spring Semester PSYC9115
Dissertation Maintenance
(School Psychology)0
PSYC9150
Internship (School Psychology)3
Summer Semester
PSYC9152
Internship Maintenance
(School Psychology)0
The comprehensive examination is taken
during the summer of the second year.
Dissertation defense is scheduled for the

fall or spring semester of the third year. Note: For individuals pursuing Supervisor Certification, enrollment in EDUC6702 Curriculum and Instruction: Theory and Practice is required. For descriptions of education courses, refer to Peter Sammartino School of Education program, pages 141–154.

## **Course Offerings**

## School Psychology

School of Psychology The following courses were developed specifically for the school psychology programs. Other psychology courses are described on pages 225–227 and 232–233. Other listed education (EDUC) courses are described under Education in the catalog.

### PSYC6651 3 Credits Ethics and Professional Practice in Schools and School Psychology

Ethical issues, professional problems and legislation affecting the practice of school psychology are examined. American Psychological Association (APA) and National Association of School Psychologists (NASP) ethical practice guidelines are discussed. The role and function of the school psychologist as a mental health professional and educational specialist are reviewed.

## PSYC7124 3 Credits Developmental Child and Adolescent

**Psychology** Childhood through adolescence, including major theories of development (Piaget, Freud and social learning theories), research and application. Special emphasis on research concerning the development of prosocial behavior, internationalization and sex typing.

## PSYC7145

### 3 Credits Issues and Techniques in Research and Evaluation I

The first of a two-semester course that introduces the doctoral student to research methodology and exemplary research in school psychology and related fields of child mental health and special education. Students will be exposed to topics including data collection and analysis, meta-analysis methods, statistical packages (e.g., SPSS and SYSTAT), program evaluation and outcome-based school psychological services, qualitative research, case study and single-subject design. *Fall* 

### PSYC7146 3 Credits Issues and Techniques in Research and Evaluation II

The second of a two-semester course that introduces the doctoral student to research methodology and exemplary research in school psychology and related fields of child mental health and special education. Students will be exposed to topics including data collection and analysis, meta-analysis methods, statistical packages (e.g., SPSS and SYSTAT), program evaluation and outcome-based school psychological services, qualitative research, case study and single-subject design. Prerequisite: PSYC7145 Issues and Techniques in Research and Evaluation I. *Spring* 

## PSYC7615 3 Credits

## **Child Assessment I with Practicum**

Development of skills in objective testing and intellectual assessment, focusing on the WJIV, DAS-2 and Wechsler batteries. Translation of findings into reports relevant to treatment outcomes will be emphasized. Assessment of culturally diverse populations will be discussed. Practicum experience is required.

### PSYC7651 3 Credits Seminar in Professional School Psychology Practice and Ethics

This course provides an overview of the critical issues and emerging perspectives in professional school psychology. Students are reacquainted with historical, sociocultural, philosophical and fiscal issues facing the profession. Attention to role and function, with emphasis on the school psychologist in a leadership role in orchestrating a full range of prevention and intervention services to children, youth and families.

### PSYC7815 3 Credits Child Assessment II with Practicum

Development of skills in personality assessment with children and adolescents. Objective assessment of personality will be considered.

### PSYC7819 3 Credits Introduction to School Learning Problems I

The focus of this course is early identification of learning problems and their assessment with an emphasis on Curriculum-based Assessment (CBA), Functional Behavioral Assessment (FBA), Response to Intervention (RTI) and standardized measures of achievement.

### PSYC7820 3 Credits Introduction to School Learning Problems II

Theories of teaching and learning, research and methods of assessing effectiveness as related to the classroom experience. Issues of learner diversity as it affects the process are examined along with Functional Behavioral Assessment (FBA).

### PSYC7825 3 Credits Child Neuropsychology

Neuropsychology provides important underpinnings for effective assessment and planning interventions. Developmental neuropsychological approaches as they relate to child development and education will be presented together with appropriate assessment strategies. Educational and curriculum implications will be reviewed.

### PSYC8110, PSYC8112 3 Credits Each Semester Dissertation Seminar (School Psychology)

This two-semester seminar will guide students through the often difficult process of conceptualizing a dissertation topic, writing proposals and defending both the proposal and the final project. Areas covered will include, but not be limited to, the development of a research statement, review of relevant literature, the writing process, Institutional Review Board (IRB) approval and data collection and analysis. *Fall, Spring* 

### PSYC8128 3 Credits Child and Adolescent

## Psychopharmacology

This course focuses on up-to-date and practical information pertaining to the use of psychopharmacological agents in the treatment of childhood and adolescent disorders. Topics covered include general and cellular neuroanatomy, physiology and function; basic pharmacology; general principles of psychopharmacotherapy; and the use of sympathomimetic amines, central nervous system stimulants, antipsychotics, antidepressants, lithium carbonate, anxiolytics and other medications in children and adolescents.

## PSYC8130 3 Credits

### **Pediatric Psychology**

This course focuses on the relationship between physical and mental health in children and adolescents, from a biopsychosocial approach. Developmental disabilities, pervasive developmental disorders, chronic illnesses, failure to thrive and delayed development are among the topics covered. Assessment and treatment will be emphasized along with the mental-health impact of physical, developmental and medical disorders on the child, the family and schooling. *Fall* 

PSYC8132

## 3 Credits

## Special Topics in School Psychology

This course focuses on contemporary and critical topics in the school psychology field. Topics may vary from semester to semester.

PSYC8140 3 Credits

**Seminar in School Change** This advanced-level course focuses on synthesizing theoretical formulations and

# **Psychology** • School

evidence-based research findings in order to facilitate significant changes in the educational environment. Issues focusing on barriers and resistance to change as well as contributors to resilient environments will be examined.

### PSYC8720 3 Credits Seminar in Child/Adolescent Assessment

Builds upon the students' training and experience with various child and adolescent diagnostic and assessment procedures and techniques. Introduces new assessment strategies and critically reviews the strengths and limitations of commonly used assessment instruments and techniques. Students are provided an opportunity to apply advanced assessment techniques in either their work settings or at a practicum site. *Fall* 

### PSYC8721 3 Credits Seminar in Child/ Adolescent Intervention

The practice and application of empirically supported psychoeducational and psychotherapeutic interventions with children in preschool through high school. Takes a developmental and transactional perspective on children's learning and behavior problems. Students will be expected to bring case material from their field/work placement to complement lectures and discussions. *Spring* 

### PSYC8725 3 Credits Prevention and Intervention with Children and Adolescents

Methods of child and adolescent therapy are examined with an emphasis on evaluation of the appropriate treatment for children and adolescents at different stages of cognitive and emotional development. Research focusing on treatment outcome as well as clinical case material will be reviewed.

### PSYC8815 3 Credits Child Assessment III with Practicum

New directions in assessment are examined. The focus will be integration of intellectual, personality and cognitive information, resulting in meaningful data sharing. Students will be expected to complete two comprehensive psychological assessments.

### PSYC8910 3 Credits School-based Consultation with Practicum

Indirect methods of intervention are explored through different approaches to consultation which include mental health consultation, behavioral consultation and instructional consultation. Students are required to complete a project at an assigned site.

### PSYC8922 3 Credits

## Externship in School Psychology I

This is the culminating educational experience for students in the M.A./certification program in school psychology. Students are engaged in a planned sequence of field experiences in a school or other approved educational setting under the supervision of a certified school psychologist for a minimum of 1,200 hours over the course of two semesters in order to meet school psychology certification requirements.

### PSYC8923 3 Credits

### **Externship in School Psychology II** Continuation of PSYC8922 Externship in School

Continuation of PS Psychology I. *Fall, Spring* 

## PSYC8930

### 3 Credits

### Advanced Consultation for School Psychologists

This course will cover the major models of school-based consultation (e.g., mental health, behavioral, instructional and ecological). Students will develop strong background knowledge in various models of psychological consultation, strengthen their problem-solving skills as applied to indirect service provision, master specific techniques used in various consultative models and practice applying their consultative skills to sample cases. Special attention will be paid to ethical issues as well as to issues pertaining to diversity and equity in psychological practice. *Spring* 

## PSYC8951

### **3** Credits

# Administration and Supervision in School Psychology

This doctoral-level seminar introduces the student to the theory and practice of administration and supervision of psychological services. Topics will include strategic planning, budget, human resources, marketing and staff development. Students are required to supervise a master's-level school psychology student.

### PSYC9110 3 Credits

## School-Community Mental Health

Preventive science focusing on mental health services in the schools and communities is the primary focus of the course. Interdisciplinary courses in a sociocultural context are examined and model programs preventing mental illness and promoting mental health for children, adolescents and their families are reviewed and analyzed.

### PSYC9115 0 Credits

### Dissertation Maintenance (School Psychology)

Continuation of the research project required of all doctoral candidates in school psychology. *Fall, Spring* 

PSYC9123 3 Credits

## Family Therapy

Interventions with couples and families. Assessment through genograms. Exploration of different theoretical models of family therapy, with emphasis on systems approaches.

### PSYC9125 3 Credits Advanced Practicum I (School Psychology)

Supervised training experiences at FDU's Center for Psychological Services. Doctoral students are supervised by faculty on two or more child, adolescent or adult treatments and/or testing cases during the course. Practicum encompasses approximately 100 hours of training. *Fall* 

## PSYC9126

### 3 Credits Advanced Practicum II (School Psychology)

Supervised training experiences at FDU's Center for Psychological Services. Doctoral students are supervised by faculty on two or more child, adolescent or adult treatments and/or testing cases during the course. Practicum encompasses approximately 100 hours of training. Prerequisite: PSYC9125 Advanced Practicum I (School Psychology). *Spring* 

## PSYC9140

## 3 Credits

## Internship (School Psychology)

This course consists of a full-time internship in school psychology for students in the Psy.D. in school psychology program.

## PSYC9150

### **3** Credits

## Internship (School Psychology)

Yearlong applied field experience in a school system, educational agency and/or mental health facility, required for Psy.D. candidates in school psychology. *Fall, Spring, Summer* 

PSYC9152

## 0 Credits

## Internship Maintenance (School Psychology)

Continuation of applied field experience in a school system, educational agency and/or mental health facility. *Fall, Spring, Summer* 

## PSYC9171 3 Credits

## Practicum in School Psychology I

The primary goal of the practicum sequence is to provide students with incremental opportunities to acquire an understanding of the skills to implement school-related practice under supervision.

## PSYC9172 3 Credits

## Practicum in School Psychology II

The primary goal of the practicum sequence is to provide students with incremental opportunities to acquire an understanding of the skills to implement school-related practice under supervision.

### PSYC9173 3 Credits

### **Practicum in School Psychology III**

The primary goal of the practicum sequence is to provide students with incremental opportunities to acquire an understanding of the skills to implement school-related practice under supervision.

## PSYC9174

### 3 Credits Practicum in School Psychology IV

The primary goal of the practicum sequence is to provide students with incremental opportunities to acquire an understanding of the skills to implement school-related practice under supervision.

### PSYC9175 3 Credits

### **Practicum in School Psychology V**

The primary goal of the practicum sequence is to provide students with incremental opportunities to acquire an understanding of the skills to implement school-related practice under supervision.

### PSYC9176 3 Credits

### 3 Credits

## Practicum in School Psychology VI

The primary goal of the practicum sequence is to provide students with incremental opportunities to acquire an understanding of the skills to implement school-related practice under supervision.

## **PSYC9801**

### **3** Credits

### Independent Study in Psychology (Psy.D.)

Topic to be chosen by student and faculty mentor. Prerequisite: completion of required courses.

Note: For descriptions of education (EDUC) courses, refer to Peter Sammartino School of Education programs, pages 141–154.

# School Psychology (M.A.) Plus Certification

The school psychology program provides the education to become a professional school psychologist at the master's plus certification level (60 credits). The program emphasizes the development of skills to provide direct service to schoolage children and the development of competencies necessary for maximizing the educational potential of all children. Students are expected to apply the knowledge and skills acquired to foster learning and social development. The program features opportunities to develop special competencies in areas such as assessment, identifying and treating behavior problems in children and adolescents, utilizing curriculum-based measurement tools to assess school health and student progress and assisting students on the autism spectrum in strengthening academic and life skills. Offered at Fairleigh Dickinson University's Metropolitan Campus in Teaneck, New Jersey, the School Psychology program is recognized by and registered with the State Department of Education. The program holds full National Association of School Psychologists (NASP) accreditation, and graduates are able to become Nationally Certified School Psychologists upon successful completion of the PRAXIS examination and externship requirements.

This program is offered under the auspices of the School of Psychology, University College: Arts • Sciences • Professional Studies, Metropolitan Campus, Teaneck, New Jersey.

## **Professional Accreditation**

The Master of Arts in school psychology is accredited by the National Association of School Psychologists (NASP).

## **Admission Requirements**

1. Completed applications for admissions are due by March 1 for September admission.

2. Applicants must hold a bachelor's degree from an accredited college or university.

3. Applicants for the Master of Arts and certification in school psychology must

submit Graduate Record Examinations (GRE) scores for the General Test. (The GRE General Test requirement is waived for applicants who have completed a master's degree.) The schedule of testing dates can be obtained from Educational Testing Service, Princeton, N.J. 08540.

4. Applicants must have taken general psychology and statistics, and either child development, experimental psychology, abnormal psychology or theories of personality on either the undergraduate or graduate level.

5. Applicants must submit three letters of recommendation.

6. Applications are carefully reviewed, and group interviews are conducted for those applicants who meet the school's criteria.

Students are admitted either full time or part time, both requiring the completion of a minimum of two courses per semester.

Applications also will be considered from individuals holding a master's degree in psychology, education or related fields and/or certification in an allied educational area and who wish to obtain certification as a school psychologist. If such applicants meet the academic requirements of the school, a course of study will be determined on an individual basis to meet certification requirements.

## Requirements for the Master of Arts Degree and Certification in School Psychology

1. Satisfactory completion of 60 credits in the courses approved for the school psychology program.

2. Students receiving two or more grades below B– in any graduate course will be placed on academic probation with the possibility of a reduced course load for the next regular semester. Students receiving a concurrent or subsequent third grade below B– will not be permitted to continue in the program. A grade point ratio of at least 2.75 must be maintained at all times to continue in the program.

3. All students are required to take and pass a comprehensive examination at the conclusion of their course work, and only students who pass the comprehensive examination will be admitted to the degree.

4. Students must complete a total of 300 hours of practicum experiences (through course work and school-based experiences) before beginning the externship.

## **Psychology • School (M.A. Plus Certification)**

5. All students must take the school psychology Praxis examination before completion of the program.

6. Students must complete a 1,200hour externship in a school or schoolrelated setting under the supervision of a certified school psychologist.

7. Students will be dropped from the program for a proven, serious, negligent breach of the American Psychological Association Ethical Guidelines. Students also will be dropped from the program for violation of the Academic Integrity Policy.

8. Students encountering serious psychological adjustment problems will be advised to seek professional counseling. If the problems are not ameliorated, the student may be asked to leave the program.

### Curriculum

First Semester Credits
PSYC6111
Theories of Personality3
PSYC6121
Statistics and Research Methods3
PSYC6651
Ethics and Professional Practice in
Schools and School Psychology3
PSYC7819
Introduction to School Learning
Problems I3
Second Semester
PSYC6115
Child Psychopathology3
PSYC6129
Research Methods and
Psychometrics3
PSYC7122
Developmental Psychology3
PSYC7820
Introduction to School
Learning Problems II3
Third Semester
EDUC6743
Introduction to Students with
Disabilities in School and
Community3
PSYC7615
Child Assessment I with Practicum3
PSYC7815
Child Assessment II with Practicum3
PSYC8910
School-based Consultation
with Practicum

Fourth Semester	Credits
EDUC6702	
Curriculum and Instruction:	
Theory and Practice	3
PSYC7825	
Child Neuropsychology	3
PSYC8725	
Prevention and Intervention with	
Children and Adolescents	3
PSYC8815	
Child Assessment III with Practic	um 3
Fifth Semester	
EDUC7721	
Philosophy of Education	
PSYC8922	
Externship in School	
Psychology I (600 hours)	3
PSYC9110	
School-Community Mental Healt	h3

## Sixth Semester

PSYC8923 Externship in School Psychology II (600 hours)......3

### **Course Offerings**

## School Psychology

School of Psychology The following courses were developed specifically for the M.A. in school psychology programs. Other psychology courses are described on pages 225–227 and 232–233. Other listed education (EDUC) courses are described under Education in the catalog.

### PSYC6651 3 Credits Ethics and Professional Practice in Schools and School Psychology

Ethical issues, professional problems and legislation affecting the practice of school psychology are examined. American Psychological Association (APA) and National Association of School Psychologists (NASP) ethical practice guidelines are discussed. The role and function of the school psychologist as a mental health professional and educational specialist are reviewed.

### PSYC7615 3 Credits Child Assessment I with Practicum

### Development of skills in objective testing and intellectual assessment, focusing on the WPPSI, K-ABC and Weschler batteries. Translation of findings into reports relevant to treatment outcomes will be emphasized. Assessment of culturally diverse populations will be discussed. Practicum experience is required.

### PSYC7651 3 Credits

### Seminar in Professional School Psychology Practice and Ethics

For first-year doctoral students in school psychology, the course provides an overview of the critical issues and emerging perspectives in professional school psychology. Students are reacquainted with historical, sociocultural, philosophical and fiscal issues facing the profession. Attention to role and function, with emphasis on the school psychologist in a leadership role in orchestrating a full range of prevention and intervention services to children, youth and families.

### PSYC7815 3 Credits Child Assessment II with Practicum

Development of skills in personality assessment with children and adolescents. Objective assessment of personality will be considered.

### **PSYC7819**

### **3 Credits**

### Introduction to School Learning Problems

The focus of this course is early identification of learning problems and their assessment with an emphasis on Curriculum-based Assessment (CBA), Response to Intervention (RTI) and standardized measures of achievement.

### **PSYC7820**

**3** Credits

### Introduction to School Learning Problems II

Theories of teaching and learning, research and methods of assessing effectiveness as related to the classroom experience. Issues of learner diversity as it affects the process are examined along with Functional Behavioral Assessment (FBA).

### PSYC7825 3 Credits

### **Child Neuropsychology**

Neuropsychology provides important underpinnings for effective assessment and planning interventions. Developmental neuropsychological approaches as they relate to child development and education will be presented together with appropriate assessment strategies. Educational and curriculum implications will be reviewed.

### PSYC8725 3 Credits

## Prevention and Intervention with Children and Adolescents

Methods of child and adolescent therapy are examined with an emphasis on evaluation of the appropriate treatment for children and adolescents at different stages of cognitive and emotional development. Research focusing on treatment outcome as well as clinical case material will be reviewed.

## PSYC8815 3 Credits

## **Child Assessment III with Practicum**

New directions in assessment are examined. The focus will be integration of intellectual, personality and cognitive information, resulting in meaningful data sharing. Students will be expected to complete two comprehensive psychological assessments.

### PSYC8910 3 Credits School-based Consultation with Practicum

Indirect methods of intervention are explored through different approaches to consultation which include mental health consultation, behavioral consultation and instructional consultation. Students are required to complete a project at an assigned site.

## PSYC8922

### 3 Credits

### Externship in School Psychology I

This is the culminating educational experience for students in the M.A./certification program in school psychology. Students are engaged in a planned sequence of field experiences in a school or other approved educational setting under the supervision of a certified school psychologist for a minimum of 1,200 hours over the course of two semesters in order to meet school psychology certification requirements.

### PSYC8923 3 Credits

**Externship in School Psychology II** Continuation of PSYC8922 Externship in School Psychology I. *Fall, Spring* 

### PSYC9110 3 Credits

### **School-Community Mental Health**

Preventive science focusing on mental health services in the schools and communities is the primary focus of the course. Interdisciplinary courses in a sociocultural context are examined and model programs preventing mental illness and promoting mental health for children, adolescents and their families are reviewed and analyzed.

Note: For descriptions of education (EDUC) courses, refer to Peter Sammartino School of Education programs, pages 141–154.

# Public Administration (M.P.A.)

The School of Public and Global Affairs offers a curriculum leading to the degree of Master of Public Administration (M.P.A.). The school is a member of the National Association of Schools of Public Affairs and Administration (NASPAA). Part of the University's efforts to meet its public service obligations, the school seeks to provide well-trained recruits for public and nonprofit agencies and to improve the knowledge and credentials of administrators already employed in these organizations.

The curriculum is designed to provide graduates with conceptual, analytic and managerial skills for dealing with a variety of public services administration situations. Experienced administrators should be able to exchange perspectives with each other, apply job knowledge and anticipate the process of coping with ongoing change. Students new to the field will acquire a wide knowledge of public management and concept issues common to public administrators.

In an effort to broaden the educational experience of its students, the school offers specialized course work at the University's Wroxton College in England in such fields as health, emergency management and urban development.

This program is offered at the Florham Campus, Madison, New Jersey, and the Metropolitan Campus, Teaneck, New Jersey; at the Bethune Center in Jersey City, New Jersey; at Newark Liberty International Airport in Newark, New Jersey; at the Port Authority Transportation Center in Jersey City, New Jersey; at the Port Authority George Washington Bridge Training Center in Fort Lee, New Jersey; in Neptune, New Jersey; and at other locations in New Jersey.

## **Honor Society**

Students are eligible for membership in the National Public Administration Honor Society, Phi Alpha Alpha, upon the completion of 18 credits with a cumulative grade point ratio of at least 3.70.

## Certificates

The School of Public and Global Affairs offers two certificates within the Master of

Public Administration program: certificate in global transportation management and certificate in public management.

Certificates require the completion of 18 credits in the M.P.A. program, and credits may be applied toward the final M.P.A. degree. Completed certificates appear on the student's transcript.

## **Specializations**

The M.P.A. program offers various specializations: global affairs, global transportation management, health care management, public finance, public management and public policy.

## **Global Affairs**

This specialization concentrates on the administrative structure and issues in the areas of international and diplomatic relations and activities. Courses stress communication, leadership and administrative interaction in the international arena, as well as cultural perspectives. Courses include PADM7780 Diplomatic Communication for Administrators and PADM7796 International Dimensions of Public Administration.

## Global Transportation Management

This specialization concentrates on the background, administrative structure and issues, environmental components and operational aspects in the context of international transportation and commerce. Courses include PADM7749 Development of Global Transportation System and PADM7753 Issues of Security and Transportation Systems.

## Health Care Management

The specialization in health care management consists of a series of courses that are designed, in combination with the M.P.A. core curriculum, to meet the accreditation standards of the Association of University Programs in Health Administration. Students in the health care management concentration take course work such as PADM7731 Introduction to Health Systems and Policy, PADM7732 Health Finance and Control Systems, PADM7734 Managing the Continuum of Care and PADM7791 Global Health Issues.

## **Public Finance**

This specialization concentrates on the tools necessary to understand, run and supervise finance operations in public and nonprofit organizations. Courses include PADM7741 Financial Management in State and Local Government, PADM7762 Public Purchasing, PADM7795 Finance and Accounting for Public Administration and PADM7797 Corporate Finance for Public Administrators.

## Public Management

Students choosing this specialization take 15 credits of course work selected from among a series of specially designated elective courses such as PADM7713 Organizational Performance Assessment, PADM7714 Law and Administration, PADM7715 Employee Relations and PADM7716 Delivery of Public Services.

## **Public Policy**

Leaders are called on to analyze, evaluate and devise policy for others to implement. This specialization cuts across a variety of subject matter to assess problems and devise solutions.

## **Admission Requirements**

The credentials required for admission to the Master of Public Administration degree program as a matriculated student include the following:

1. A graduate application for admission and nonrefundable application fee.

2. A bachelor's degree from an accredited college or university with a minimum cumulative grade point ratio (CGPR) of 2.70. (Applicants with a CGPR of less than 2.70 may be admitted as matriculated students on probation.)

3. Official transcripts from all colleges and universities previously attended.

Applicants who are unable to provide official documents at the time of enrollment may register as nonmatriculated or nondegree students with the approval of a graduate faculty adviser.

## B.A./M.P.A. Combined Degree Program

Undergraduate students admitted to the B.A./M.P.A. combined degree program enter as matriculated students and must comply with all academic program requirements. (See *Undergraduate Studies Bulletin.*)

## Dual Degree Option: M.P.A. and Pharm.D.

Students enrolled in the University's Doctor of Pharmacy program can enhance their career trajectory by mastering nonprofit and public sector administration. Pharm.D. students can complete the M.P.A. with a specialization in health care management and graduate on time with both degrees.

## Requirements for the Master of Public Administration Degree

The M.P.A. degree is granted for a minimum of 39 credits, of which at least 30 credits must be taken at Fairleigh Dickinson University. The 39-credit total must contain:

1. Twenty-one credits of required foundation courses: PADM6600 Public and Nonprofit Management PADM6601 Organization Theory PADM6602 Budgeting and Finance PADM6603 Public Policy Administration Human Resources PADM6604 Management PADM6610 Quantitative Methods for Administrators

2. Electives:

The M.P.A. elective course offerings are designed to offer students the opportunity to pursue in-depth study in global affairs, global transportation management, health care management, public finance, public management and public policy.

3. PADM6801 Seminar in Strategic Management or PADM6802 Strategic Health Services Management Seminar. This course may be taken after completion of 27 credits, including the core curriculum.

4. An accepted M.P.A. Project Report (3 credits) or M.P.A. Thesis (3 credits).

5. A cumulative grade point ratio of 3.00 (on a 4.00 scale) is required for graduation. Students who receive more than two grades of C or lower will be dismissed from the program.

6. In addition to the 39-credit requirement indicated, an internship (3 credits) is required for students having little or no background in public service. Students will be informed of their need to complete an internship upon admission to the program.

7. Students are required to meet with their assigned academic adviser each

semester to assess overall academic performance and plan for their next semester's program of study.

Students with weak backgrounds in government, communication skills, computer literacy or other critical areas may be required to take additional work beyond the 39-credit minimum.

## **Course Offerings**

Courses offered fall, spring and/or summer are so noted. To determine availability of courses not so designated, please check with the Institute director.

## **Public Administration**

School of Public and Global Affairs

PADM6015 1 Credit

### CPT (Curricular Practical Training) Independent Study

This course fulfills the credit requirement and complements students' enrollment in a Curricular Practical Training (CPT) experience.

## PADM6600

## 3 Credits Public and Nonprofit Management

This course provides an overview of the macro and micro forces that influence public and nonprofit management. These factors include fiscal and resource scarcity, rapid technological change and obsolescence, organizational downsizing/ restructuring, information management technology and shifting employee demographics. The course focuses on the methods and strategies for efficiently and effectively managing public organizations in the face of the endemic internal and external problems and challenges.

### PADM6601 3 Credits

## **Organization Theory**

An analysis of the role of organizational theory, discussion of the major orientations in explaining organizational and administrative activities and their impact upon those who work within or are affected by organizational action. *Fall, Spring* 

## PADM6602

## **3 Credits**

## Budgeting and Finance

This course presents an overview of the major principles and concepts associated with publicexpenditure budgeting and the resource allocation decision-making process. The first part of the course focuses on the centrality of the budget process and examines the logic and process of budgeting, including various approaches to budgeting, fund accounting and financial statement analysis. The second part of the course focuses on revenue structures and

# **Public Administration**

examines the basic principles of taxation and the nature and diversity of public sector revenues.

## PADM6603 **3** Credits

## **Public Policy Administration**

The goal of this course is to introduce managers to the public policy-making process. This introduction exposes students to the economic and moral justifications for public policies and teaches the policy-analytic tools that support informed policy. The course addresses policymaking at all levels of government with an emphasis on skills that can be used by managers on a daily basis. Prerequisite: PADM6610 Quantitative Methods for Administrators.

### PADM6604 **3** Credits

### **Human Resources Management**

This course presents students with an overview of tools and techniques of human resources management and major personnel policy issues. The course emphasizes the application of specific knowledge, skills and abilities to solve management problems. Topics covered include recruitment, examination, job classification, salary and wage administration, performance management, employee development, supervision, equal employment opportunity and affirmative action.

## PADM6606

### **3** Credits **Analytic Methods/Managerial Decision Making**

The course provides an overview of the decision-making tools employed in program management and evaluation. The course begins with an overview of the principles of research design focusing on the basic methods of problem diagnosis and measurement (interviews, surveys, focus groups, archival analysis). The second part of the course emphasizes the principles and tools of program evaluation. The course develops the analytical and critical-thinking skills of students to solve common management problems.

### PADM6610 **3** Credits **Quantitative Methods for Administrators**

This course provides students with the computer and interpretation skills needed to answer quantitative questions that confront managers and policymakers. Topics covered include statistical inference, forecasting and other forms of prediction.

### PADM6680 **3** Credits

### **Information Technology Management**

This course is an overview of the various tools and technologies of information management. The fundamentals of information systems are presented, including the future impact of the

technology on society with emphasis on understanding emerging policy and ethical and managerial issues. Focus will be on the use of management information systems in decision making and performance management.

### **PADM6686 3** Credits

### Women in Leadership

A seminar exploring the breadth and depth of women's political, economic and cultural roles, deprivations, contributions and leadership in all corners of the globe.

## PADM6801

## **3** Credits

## **Seminar in Strategic Management**

This seminar is designed to involve the integration of the concepts and techniques covered in previous courses. Through use of case studies and simulations, the students will analyze the problem situations in order to identify the most strategic issues, the leverage points of action and appropriate action plans. An emphasis will be placed on collaborative problem solving and team work. The case studies will be drawn from the public and nonprofit sectors and will vary from semester to semester. Prerequisites: must have completed 27 credits of course work and have approval of the academic adviser. Fall, Spring

### PADM6802 **3** Credits **Strategic Health Services Management Seminar**

An advanced-level course oriented toward an overall view of strategy formulation and implementation from the perspective of senior management. The course is designed to serve as the capstone of the health services administration curriculum, offering students an opportunity to integrate what they have learned in their functional and specialty course work and to apply this knowledge to the analysis and resolution of general management problems. Didactic emphasis will be placed on contemporary approaches to environmental assessment, strategic planning and competitive positioning of organizations in the health care marketplace. A combination of lectures, case studies and supplemental research activities will be used in conjunction with oral presentations and class discussions. Prerequisite: completion of at least 27 credits. Spring

### PADM6803 **3** Credits **Elder Care: Legal Issues**

Examines recent legal trends in the health-care environments of the elderly and the impact of those legal trends on policy and public administration.

### PADM6810 **3** Credits **Public Management Internship**

Participation in the activities of an administrative agency, either public or quasipublic, local, state, federal or special or civic organization. Completion of a project or specific work assignment under the joint supervision of a faculty member and an agency supervisor. Prerequisites: must have completed all required courses and have permission of both the course instructor and the academic adviser. (Required for students with little or no background in public or nonprofit service. [NOTE: for those students who are required to complete an internship — the 3-credit internship is in addition to the 39-credit requirement.] This requirement may be waived through petition to the Institute for those students having sufficient professional experience.) Fall, Spring and/or Summer

PADM6811

### **3** Credits

### **Independent Study in Public** Administration

Independent study in a specialized aspect of administration selected by the student, academic adviser and instructor. Prerequisites: PADM6600 Public and Nonprofit Management and prior approval of academic adviser and instructor.

### PADM6812

### **3** Credits

### The Political Environment of Public Administration

Public administration is part of the overall governmental process. This course explores the relationship between public administration and other branches of the political system. It covers such topics as the Constitution and public administration; relations between the executive and public administration; legislative oversight; and the influence of interest groups on public administration. Prerequisite: PADM6600 Public and Nonprofit Management. Fall, Spring

## PADM6815 **3** Credits

## **Public Policy Research**

Students engage collectively in a substantive research project focused on a current social and political problem, identifying both causal and contributing factors and producing a publishable report and a press release. This interactive course requires research, demands individual contributions and interactive exchange and facilitates collaboration in the analysis of a current issue while offering recommendations for improving the quality of policy and administration in the public and nonprofit sectors.

# **Public Administration**

#### PADM6816 3 Credits World Heritage Law and

## World Heritage Law and Policy

Practical thinking about ideas of "World Heritage" and sustainable development including religion, environment, warfare, destruction and ruins and rebuilding initiatives. Topics include: conversation law; case studies from the Arabian Peninsula, Asia and East Africa; heritage as sites for tourism; transportation; trade; pilgrimages; moveable collections; museums; parks; fixed relics; foods; and sounds, sights and smells in the natural landscape. A field project challenges participants to match theory with project-based goals to contribute to a digital archive or drafted policies to conserve and preserve UNESCO world heritage sites.

## PADM6821 3 Credits

## **M.P.A. Project Report**

An analytic, written report detailing actionoriented research accomplished for a public agency. Prerequisite: must have completed 33 credits and have approval of the academic adviser. (PADM6821 M.P.A. Project Report or PADM6822 M.P.A. Thesis is required.) *Fall, Spring* 

### PADM6822 3 Credits **M.P.A. Thesis**

A major piece of written work based on research applicable to administration. Prerequisites: must have completed 30 credits and have approval of the academic adviser. (PADM6821 M.P.A. Project Report or PADM6822 M.P.A. Thesis is required.) *Fall, Spring* 

### PADM7711 3 Credits Accounting for Managerial Decision Making

This course centers on the use of accounting data in the management decision-making process in public and nonprofit organizations. Particular attention is given to evaluation of the underlying financial stability and the operating efficiency and effectiveness of public and notfor-profit organizations. The management implications of using several bases of accounting is considered. A review of financial statements is undertaken to illustrate the early warning signs of underlying fiscal distress. Prerequisites: PADM6600 Public and Nonprofit Management and PADM6602 Budgeting and Finance.

### PADM7712 3 Credits

## **Managing Organizational Change**

This course provides a conceptual framework for analyzing the dynamics and process of planned organizational change in public and nonprofit organizations. The focus is on effective techniques for diagnosing organization problems, identifying intervention strategies and implementing planned change efforts. Each student is given an opportunity to prepare an action plan to implement a significant change in his or her organization. Prerequisites: PADM6600 Public and Nonprofit Management and PADM6604 Human Resources Management.

### PADM7713 3 Credits Organizational Performance Assessment

This course, directed to public and nonprofit organizations, assesses organizational effectiveness, examining it in terms of different levels of the organization, from the individual, to the programmatic, to the institutional. The focus is on the identification of criteria assessing organizational effectiveness and on techniques available to measure effectiveness in terms of operational efficiency, outcome effectiveness and consumer/client satisfaction. Prerequisite: PADM6600 Public and Nonprofit Management.

### PADM7714 3 Credits Law and Administration

This course focuses on the constitutional-legal basis in which American public administration is set, including fundamental concepts such as separation of powers, checks and balances, federalism, regulation, delegation and discretionary authority and common law and equity. The course also seeks to familiarize students with legal reasoning, judicial process and the role of lawyers. The course introduces students to administrative agency rule making and adjudicative practice: law defining and constraining public official action and responsibility, including investigative powers, openness and public disclosure, public official tort liability and political activity; and the "basics" of primary legal research, especially in tracing the evolution of public policy. Prerequisite: PADM6600 Public and Nonprofit Management.

### PADM7715 3 Credits Employee Relations

The management of employee labor relations in both the public and nonprofit sectors is surveyed in this course. Collective bargaining practices are examined, with emphasis on the art of successful labor negotiations and contract administration. Included are discussions of the legal framework, the dynamics and effects of unionization, current issues in employee relations and the role of the grievance procedure and other workplace-dispute resolution mechanisms. Prerequisites: PADM6600 Public and Nonprofit Management and PADM6604 Human Resources Management.

## PADM7716 3 Credits

## Delivery of Public Services

This course examines the traditional organizational and institutional structures for delivering public services, including regional entities, public authorities and "mixed" approaches. In addition, more recent developments are examined, including competitive contracting; transfer of functions between sectors; and "privatization." The course covers domestic and international developments in "mixed" economies and enterprises. Prerequisite: PADM6600 Public and Nonprofit Management.

### PADM7717 3 Credits

**Planning and Marketing for Managers** 

An integrated overview of the theory and processes of modern strategic planning and marketing as they apply to the delivery of public and not-for-profit services. Contemporary strategies and techniques will be examined through formal lectures and group discussions focusing on the applications of theory to practice. This course is designed to develop the conceptual skills that will help the student understand the role of marketing within the broader scope of institutional planning. Prerequisite: PADM6600 Public and Nonprofit Management.

### PADM7718

### **3** Credits

### **Contemporary Management Issues**

An analysis of current issues and approaches to enhancing the quality of administration in the public and nonprofit sectors. Topics change; may be repeated for credit. Prerequisites: PADM6600 Public and Nonprofit Management and permission of instructor.

## PADM7721 3 Credits

### **Environmental and Sociologic Aspects of Global Transportation**

The course provides an in-depth analysis of the environmental and ecological aspects of the extent of global transportation in the contemporary era. Changes in consumption, sustainability, mobility and distribution are presented in conjunction with transitions in societal paradigms and constructs.

### PADM7724

## 3 Credits

### Comparative Governmental and Administrative Systems

The course takes a global view of comparative governmental and administrative systems by introducing students to their background development and their essential institutional and political components. The wide diversity of such systems is highlighted by a study of such systems in six or seven nations through comparative analyses of their various approaches to policy and relative problematic issues.

### PADM7726 3 Credits Development of Political and Administrative Theory

Through primary sources and materials, the course traces the development of individualism, rationalism, utilitarianism, positivism, feminism, liberalism, social Darwinism and other concepts and movements that have contributed to the evolution of modern political and administrative theory. Applications to the administrative area are made by an analysis of the writings of Hobbes, Locke, Montesquieu, Beccaria, Burke, Paine, Bentham, Mill, Marx, Spencer, Weber and others. Comparative aspects of these works are also discussed.

### PADM7730 3 Credits Health Care Project Management

Integration of the essential components of project planning and management with health care information systems for health care leaders. The course outlines the process for developing, implementing and evaluating project plans as well as integrates communication and project life-cycle theory.

## PADM7731

### 3 Credits Introduction to Health Systems and Policy

This course presents an integrated overview of traditional and contemporary approaches to financing and organizing the provision of health services in the United States. The course traces the evolution of the health care delivery system, with special attention given to the interplay between political, legal and socioethical dynamics in the formation of health policy at the federal and state levels of government. *Fall* 

## PADM7732 3 Credits

## Health Finance and Control Systems

This course focuses on the unique characteristics of the health care marketplace in relation to the challenge of financing care and controlling utilization at both the macro and micro levels of the delivery system. Topics include prospective rate-setting and reimbursement systems, capital financing, regulatory processes and utilizationmanagement techniques. *Fall* 

### PADM7733 3 Credits Quantitative Methods for Health Administration

This course introduces the student to a variety of quantitative analytic tools and their

application to planning, decision making and program evaluation. Areas covered include research design, sample survey techniques, biostatistics and cost/benefit analysis. Special attention is given to applying the concepts and methods of epidemiology to health services management. *Fall, Spring* 

## PADM7734 3 Credits

## **Managing the Continuum of Care**

This course focuses on the administrative challenges of designing and managing organizational arrangements for delivering a comprehensive array of health services spanning the continuum from wellness to extended care. Course content concentrates on the structural and integrative mechanisms required to meet the medical, mental health and social support needs of patients on an ongoing basis. Financial, marketing, human resources and legal/ethical issues also are addressed. Prerequisites: PADM6600 Public and Nonprofit Management and PADM7731 Introduction to Health Systems and Policy or permission of instructor. *Spring* 

### PADM7735 3 Credits

### **Comparative Health Systems**

This is a two-week intensive course studying the British health system, with particular reference to the National Health Service. The course analyzes the historical background, institutional framework, governing policies, financing, organization and staffing, services and operations and the roles of public and private sector services. Topics are presented through lecture, discussion and field visit methods, accompanied by selected readings. Prerequisites: PADM6600 Public and Nonprofit Management and PADM7731 Introduction to Health Systems and Policy or permission of instructor. *Spring* 

## PADM7736 3 Credits

### **Integrated Health Care Systems**

The concept of system integration has emerged as a unifying theme for the health care industry as it prepares to respond to market demands for cost containment, quality assurance and accountability. The purpose of this course is to present a comprehensive overview of contemporary strategies for achieving collaboration and coordination of hospital and physician services within the context of managed care. Alternative models for organizing and financing integrated delivery of health care will be discussed. Legal, regulatory and operational implications of health-system integration also will be addressed. *Spring* 

### PADM7737 3 Credits Ethical and Legal Issues in Health Care

The legal content of this course will focus on major elements in professional liability, risk management, patient rights, quality-of-life outcomes and rationing of care. The ethical content will address the moral foundation of the profession, ethical decision making, critical thinking and the development of an ethical perspective throughout the life span. An ongoing theme of this course is the emphasis on humanizing health care. (May be taken as an alternative to PADM7735 Comparative Health Systems.) *Spring* 

### PADM7738

### 3 Credits

### Contemporary Health Administration Issues

Course content concentrates on the technical, integrative and administrative aspects essential to the medical, social service and related services and to the needs of patients and clients in those areas.

### PADM7739

### 3 Credits Clinical Trials

Principles of clinical trial design, including determination and evaluation of study objectives, commonly used methodologies of study design, and the ethical, legal, statistical and sociological and epidemiological considerations that play a role in design of clinical protocols.

### PADM7740

### **3** Credits

### State Local Government Organization and Management

This course provides an overview of the basic functions of state and local government in conjunction with a detailed discussion of the tools and techniques of effective state and local government management and administration. A number of topics will be covered including the challenges posed by fiscal and resource scarcity, effective service delivery, privatization, downsizing organizational productivity and conflict management, among others.

### PADM7741 3 Credits

## Financial Management in State and Local Government

This course is an overview of the principles of financial management in state and local government. Subjects include the principles of taxation, revenue sources and forecasting, capital budgeting, debt management, cash management, public purchasing and pension fund management, among others.

# **Public Administration**

### PADM7742 3 Credits Government Personnel Administration

The course presents an overview of the management of human resources in state and local government. The course will present an overview of the tools and techniques of personnel management (job analysis, job evaluation, recruitment, selection, affirmative action) along with the basics of performance management and employee development.

## PADM7743 3 Credits

### **Collective Bargaining**

This course is a comprehensive overview of the principles and practice of collective bargaining. Subjects covered include contract-negotiation techniques, contract administration, grievance procedures, dispute-resolution techniques and state and national labor laws. Special emphasis will be placed on New Jersey and the critical issues and problems that affect labor management relations.

### PADM7744 3 Credits Legal Environ State/Local Government

The course takes a global view of comparative governmental and administrative systems by introducing students to their background development and their essential institutional and political components. The wide diversity of such systems is highlighted by a study of such systems in six or seven nations through comparative analyses of their various approaches to policy and relative problematic issues.

### PADM7745 3 Credits Ethical Issues in State and Local Government

This course presents an overview of the diverse ethical issues and challenges that state and local government administrators frequently face. A framework for the identification and resolution of ethical conflicts and issues is presented. Ethical issues explored include financial and non-pecuniary conflicts of interest, whistleblowing, unlawful discharge and sexual harassment, among others.

## PADM7747 3 Credits

## **Public Sector Communications**

This seminar focuses on students' lifelong professional development, including the design of a five-year plan for the individual student's personal and career development. Topics include identification of long- and short-term personal and career objectives, analysis of professional competencies and skills and development of an individual action plan.

### PADM7749 3 Credits Development of Global Transportation System

The course analyzes the various venues of transportation systems (air, land, water) in terms of the human component and materials. In particular, emphasis will be given to the effect of these systems on various international, cultural, economic and technological developments. Also, case studies will be presented which highlight each system's administrative and organizational elements.

### PADM7753 3 Credits Issues of Security and Transportation

**Systems** The course is a study of the aspects of security issues as they relate to the various components of modern international transportation systems. Issues of security and transportation administration in the 21st century will be emphasized, along with national and international governmental policies and responses.

### PADM7762 3 Credits **Public Purchasing**

The course traces the background and role of purchasing in the public sector, with emphasis on centralized purchasing, local and state contracts, cooperative purchasing in municipalities and the creation of bid specifications. Case studies and analyses will highlight each of the issues presented.

### PADM7763 3 Credits Developing Modern International Relations

The course presents the background and development of modern international relations, with an emphasis on its administrative, political and bureaucratic aspects. Selected cases from the 19th, 20th and 21st centuries will be analyzed, particularly in terms of governmental structures. The evolution of contemporary concepts and practices will also be traced.

### PADM7769 3 Credits

### **Aviation Management and Operations**

With an introduction and historical overview, the course presents and analyzes the components of transportation centers, classifications and regulations and safety. The economic role and environmental responsibility of such center management are also emphasized. Future projections for such centers summarize the course components.

## PADM7770 3 Credits

## **Global Administrative Skills**

The course will analyze the changing and interactive aspects of global administrative skills, communication and policies in the modern world. The international factors of administration in the public and nonprofit as well as the private sectors will be presented with the goal of making students aware and conversant in these areas.

## PADM7771 3 Credits

### **U.S. Transportation Systems**

This seminar examines land, sea, air and space as modes for logistical displacement from the late 18th century to the present. All major modalities are surveyed: vehicle, aircraft, ship and rail as well as all major transportation organizations with an emphasis on why these companies were started, who started them, how they were financed and marketed and the cause of their eventual failure.

## PADM7772

## 3 Credits

### Public Policy and Transportation Issues

Demand for better transportation modalities have been impacted by population changes. As the population moves from urban to suburban areas, controversy develops as individuals desire better systems to allow for faster commutes. Public policy issues arise as governments attempt to please the interests of those who want better transportation with those who want to preserve open spaces. Additionally, issues arise with air traffic and trains that impact and are impacted by public policy. This course will investigate the area of transportation and public policy making, and explore how both the needs of the public and those of the public officials are impacted by the processes.

## PADM7773

**3 Credits** 

### **Physical Distribution Systems**

The course is a study of the aspects of security as they relate to the various components of modern international transportation systems. Issues of security and transportation administration in the 21st century will be emphasized, along with national and international governmental policies and responses.

### PADM7780

### 3 Credits Diplomatic Communication for Administrators

The course will give students a working knowledge of French terminology and phrasing, applicable to public service and/or health care administration. The course seeks to meet the communicative needs of a linguistic group in the U.S., Canada and the Caribbean, as well as elsewhere globally. In that regard, the course reinforces the University's global educational mission.

### PADM7789 3 Credits Global Energy System

The course provides an in-depth presentation of the global energy resources and consumption issues. The format will be a scientific overview of diverse energy issues such as needs, fossil fuels, grown fuels, nuclear technology and natural fuels (wind, solar, etc.). Future forecasts will also be discussed and analyzed.

### PADM7791 3 Credits Global Health Issues

The course will study the effects of globalization on contemporary health care, especially in the public sector. Worldwide health organizations (WHO, NGOs) in particular will be discussed and analyzed.

### PADM7795 3 Credits Finance and Accounting for Public Administration

This course will start with a review of key terms and concepts and introduce generally accepted accounting and auditing principles. Case studies and real-world examples will be used so students can learn how to: read financial statements (i.e., balance sheet, income statement, cash flow analysis); conduct breakeven analysis; calculate cost of capital and return on investments (ROI); recognize trends and evaluate organizational performance; and use financial measures for strategic planning.

## PADM7796

**3** Credits

### International Dimensions of Public Administration

The course addresses the essential dimensions of the international and cross-cultural aspects of public administration. Social and cultural comparisons are employed with analysis of various select global models with an understanding of the varied international dimensions of administration being presented as a primary objective.

### PADM7797 3 Credits Corporate Finance for Public Administrators

An introduction to the financial management of a corporation. Students study the following broad questions: How should a firm decide whether to invest in a new project? How much debt and equity should a firm use to finance its activities? How should a firm pay its investors? How do taxes affect a firm's investment and financing decisions? What determines the value of a firm? The emphasis throughout the course is on the economic principles that underlie answers to these questions.

### PADM7810 3 Credits Airport Operations Management

The course presents and analyzes the various aspects and components of airport management and planning, which include background, legal aspects, governmental relations, as well as the financial and economic dimensions of commercial aviation. The environmental components of modern transportation are also delineated.

## PADM7811 3 Credits

## **Grant Writing and Evaluation**

The major objective of this course is to prepare students who are planning careers in public and nonprofit organizations to attain grants for their organizations' projects. For success in this area, students will learn planning attractive proposals, attaining research funding, actual proposal writing and management of the final grant. The course combines theory and practice, with emphasis on the practical.

## PADM7812 3 Credits

## **Ethics in Public Administration**

The course presents and analyzes the foundational and essential aspect of ethics and ethical principles in the realm of public administration. Applicable ethical concepts are identified and related to the various components of the public sector, with their significance and implication being related especially to contemporary institutions.

### PADM7814 3 Credits Health Policy and the Public

The course presents the various policy and administrative issues related to health care and the public, military bureaucratic structure, organization and policy-related issues.

# Public Health (M.P.H.)

The Master of Public Health (M.P.H.) is a 45-credit online degree program. The M.P.H. curriculum consists of a didactic core with practicum and capstone (30 credits) and specialization track electives (15 credits). Students may select a **generalist track** and pursue elective courses in any combination from the specialization track areas: **health analytics**, **health policy** or **population health in addiction and recovery**. The courses are offered as accelerated eight-week online modules, and the program can be completed in 18 months.

Core courses include PUBH6001 Foundations and Issues of Public Health, PUBH6002 Introduction to Biostatistics and Data Analysis, PUBH6003 Public Health Management and Policy, PUBH6004 Fundamentals of Epidemiology, PUBH6005 Principles of Environmental Health, PUBH6006 Social and Behavioral Determinants of Public Health, PUBH6101 Public Health Leadership 101 and PUBH6102 Ethics in Health Care Research, with capstone and practicum as culminating experience.

Following completion of the core courses, students will have an option of pursuing one of the four specialization tracks: generalist, health analytics, health policy or population health in addiction and recovery.

**Generalist Track**: This specialization equips public health professionals with the general knowledge and skills for effective and productive public-health practice at the professional graduate level. In addition to core courses, students will select any combination of five elective courses (15 credits) from the additional three tracks.

Health Analytics Track: Upon completion of the core courses, students will focus on the advanced biostatistics, data management, health informatics, predictive analytics, with specialized practicum and capstone seminar.\*

Health Policy Track: Upon completion of the core courses, students will study the politics and practice of public health and health policy, economic and social determinants of health policy, health disparities and culture, comparative health

\*Under development. For more information go to https://view2.fdu.edu/academics/pharmacy/ academics/mph/. care systems, with specialized practicum and capstone seminar.\*

**Population Health in Addiction and Recovery Track**: Upon completion of the core courses students will study the issues of addiction and recovery, focusing on tobacco, alcohol and drug use, on mentalhealth advocacy, issues of treatment and recovery, with specialized practicum and capstone seminar.\*

Regardless of the concentration, the M.P.H. curriculum focuses on the inclusion of active-learning pedagogies by placing the student in the center of learning through small group activities, case-study analyses, flipped classroom and social constructivism methodologies and integrated care groups that are focused on interprofessional education alongside students in pharmacy, nursing, psychology and other health-profession programs in the future. The goal is to educate current and future health professionals who are focused on collaboration, interprofessional communication, respect for other professions and ethical delivery of patient centered, team-based decision-making practice.

## Summary

With the changing and unstable climate of health-care delivery, the great increase in health disparities and access to care, and the increase of technology and data analytics as a part of the health care decision-making process, there is perhaps no greater time of need for graduates trained in public health disciplines. The Centers for Disease Control cites a significant shortage of public health workers over the next several years, with many of its estimates projecting that shortage to exceed 250,000 by 2020. Overall, the Bureau of Labor Statistics projects significant growth and increased demand for all health profession areas, including a projected 16-percent increase in demand for health educators, a 20percent increase for health service managers and a 14-percent increase in demand for biostatisticians. There is also a projection of a significant exodus of the workforce from this field, as many workers trained in public health are nearing retirement age. In fact, several studies indicate that schools of public health will need to train greater than three times the

\*Under development. For more information go to https://view2.fdu.edu/academics/pharmacy/ academics/mph/. current number of graduates to keep up with the demand for jobs and avoid a public health crisis.

The Master of Public Health program provides an opportunity for students in other health-profession programs to pursue a concurrent degree in public health. There is tremendous opportunity for pharmacists, nurses and other healthcare professionals to enter into new scopes of practice through the additional knowledge and credentialing. As the School of Pharmacy and Health Sciences continues to promote the role of many different health professionals as advocates for and implementers of many public health initiatives, creating specialists who obtain both degrees and bear both skill sets will provide both a powerful differentiator for students and an opportunity for the advancement of the profession.

There is a great opportunity for significant synergy with the School of Public and Global Affairs, leveraging strengths of both subject-matter experts and its relationships with global partners, including the United Nations and the World Health Organization. Furthermore, the United Nations Pathways, organized by the Office of Global Learning, provides multiple U.N. programs for the FDU community. In addition, focused publichealth programming and experiences would provide a meaningful learning opportunity for students pursuing their degree within this program. Similarly, the M.P.H. program also effectively complements the existing offerings within the School of Pharmacy and Health Sciences, specifically its Master of Health Science offerings in health informatics. clinical research administration and regulatory sciences, each of which have significant public health components that would provide strength of expertise and economy of scale.

This public health program is offered online by the School of Pharmacy and Health Sciences, Florham Campus, Madison, New Jersey.

## **Admissions Criteria**

The credentials required for admission to the Master of Public Health degree program as a matriculated student include the following:

1. A bachelor's degree from an accredited college or university with a minimum

cumulative grade point ratio (GPR) of 3.00. (Applicants with a GPR of less than 3.00 may be admitted as matriculated students on probation.)

2. The GRE is recommended, but not required.

The application package must include:

1. A completed FDU Graduate Admissions Application.

2. Official undergraduate and graduate transcripts from all colleges and universities attended (official transcripts must be evaluated for grade equivalency, if international applicant).

3. Two letters of recommendation (from a professor, employer or professional in the field familiar with the student's strengths and abilities).

4. Official test scores (GRE, TOEFL or other, if international applicant).

5. Personal statement.

6. Résumé or curriculum vitae.

## M.P.H. Program Mission, Goals and Student Learning Objectives

The program's mission is to educate future public health leaders to promote, enhance and improve the health and wellness of individuals and populations in local, national and global settings. In alignment with the University's global mission of training world citizens, the M.P.H. program will focus on approaches that improve health, increase access to health care as ethical and social responsibility and minimize and eliminate health disparities through evidence-based interventions and policy efforts.

## Instructional Goals

1. Create and maintain a high-quality, bestin-class online program that attracts both high-achieving students and excellent faculty with diverse interests, backgrounds and expertise to educate current and future health professionals with a focus on collaboration, respect and ethics through student-centered, interprofessional, experiential and self-reflective pedagogies.

2. Provide students with a variety of learning opportunities in order to develop public-health practitioners with a global perspective who lead and advocate both globally and locally.

# **Public Health**

## Service Goals

1. Address the key topic areas of public health by bringing together educators, researchers and experts from within the University and across the state to build relationships, facilitate discussions and develop best-practice approaches for innovative and evidence-based interventions to improve local and global public health.

2. Work to reduce health disparities and inequalities to improve the health of the populations served.

## **Research Goal**

Provide opportunities for faculty and students to engage in scholarly research, dissemination and communication, and evidence-based practices to advance public health knowledge locally and globally.

## Student Learning Objectives

Upon completion of the program, regardless of the specialization track, students will be able to:

1. Explain public health history, philosophy and values.

2. Identify the core functions of public health and its 10 Essential Services.

3. Explain the role of quantitative and qualitative methods and sciences in describing and assessing a population's health.

4. List major causes and trends of morbidity and mortality in the U.S. or other communities relevant to the school or program.

5. Discuss the science of primary, secondary and tertiary prevention in population health, including health promotion, screening, etc.

6. Explain the critical importance of evidence in advancing public health knowledge.

7. Explain the effects of environmental factors on a population's health.

8. Explain biological and genetic factors that affect a population's health.

9. Explain behavioral and psychological factors that affect a population's health.

10. Explain the social, political and economic determinants of health and how they contribute to population health and health inequities. 11. Explain how globalization affects global burdens of disease.

12. Explain an ecological perspective on the connections among human health, animal health and ecosystem health (e.g., One Health).

## **Requirements for the Master of Public Health Degree**

1. All students enrolled in the M.P.H. program are required to graduate within five years. Application for extension is subject to program/school approval.

2. The students are required to maintain a minimum overall grade point ratio (GPR) of 3.00 and must not earn more than one "C" grade (C or C+), throughout the course work. Students who receive two or more "C" grades will be subject to dismissal.

## Core Courses (30 credits)

Credits
PUBH6001
Foundations and Issues of
Public Health3
PUBH6002
Introduction to Biostatistics and
Data Analysis3
PUBH6003
Public Health Management
and Policy
PUBH6004
Fundamentals of Epidemiology3
PUBH6005
Principles of Environmental Health 3
PUBH6006
Social and Behavioral
Determinants of Public Health 3
PUBH6101
Elective 1 – Public Health
Leadership 1013
PUBH7501
Public Health Practice and
Leadership
PUBH7505
Elective 2 – Interprofessional
Education and Practice
(IPE and IPP)3
PUBH7901
Public Health Capstone 3

## Specialization Courses (15 credits)

## **Specialization Tracks**

## Generalist (45 credits)

Core courses (30 credits) plus five courses from any listed within the below tracks (15 credits)

## Health Analytics (45 credits)\*

Health Analytics (45 credits)*
Core courses (30 credits) plus
specialization courses (15 credits)
Credits
PUBH7201
Advanced Biostatistics, Data
Management and Analysis*
PUBH7202
Population Health Research Methods3
PUBH7203
Data Management in Public
Health Systems
PUBH7204
Predictive Analytics and
Determinants of Health*
PUBH7205
Health Analytics Practice and
Leadership* 3
Health Policy (45 credits)*
Core courses (30 credits) plus
specialization courses (15 credits)
PUBH7301
Politics and Practice of Public
Health and Health Policy3
PUBH7302
Economic and Social
Determinants of Health Policy* 3
PUBH7303
Health Disparities and Cultural Issues*3
PUBH7304
Comparative Health Care Systems3
PUBH7305
Health Policy Practice and Leadership*3
Population Health in Addiction and

## Recovery (45 credits)\*

\*Under development. For more information go to https://view2.fdu.edu/academics/pharmacy/academics /mph/.

## **Course Offerings**

Courses offered fall, spring and/or summer are so noted. To determine availability of courses not so designated, please check with appropriate school director.

## Public Health

School of Pharmacy and Health Sciences

## PUBH6001

#### 3 Credits Foundations and Issues of Public

### Health

This introductory course into the program guides students through the history, philosophy, scientific and ethical issues and practices of public health. The course broadly covers the core disciplines, function, infrastructure and essential services in public health. Students will explore how the principles and practices of public health are applied in the local, state, national and global context.

### PUBH6002

#### **3** Credits

## Introduction to Biostatistics and Data Analysis

This course presents an introduction to the theory and most commonly used statistical methods in public health, epidemiological and experimental research. Students will learn how to select the most appropriate methods, how to apply selected methods to actual data and how to analyze and interpret computer output from a commonly used statistical package. Students will apply this knowledge to critique and interpret statistical concepts in the literature.

#### PUBH6003 3 Credits

## 3 Credits Public Health Management and Policy

This course is designed to provide students with knowledge and skills for better understanding of the U.S. health care system organization, financing and policy. It provides introduction to health policy and management, a multidisciplinary field of inquiry and practice concerned with the delivery, quality and costs of health care for individuals and populations. Students will engage in discussion about multiple dimensions of the policy-making process, including the roles of ethics and evidence. They will learn how to analyze and advocate for political, social or economic policies and programs that will improve health in diverse populations and be able to evaluate policies for their impact on public health and health equity. This foundational course is designed for anyone working or interested in working in government agencies, nonprofits, private health-care organizations or any entity focused on public health. Prerequisite: PUBH6001 Foundations and Issues of Public Health.

#### PUBH6004 3 Credits

## Fundamentals of Epidemiology

This course introduces the descriptive and analytic epidemiologic methods in studying disease outbreaks, distribution and determinants of health and disease in populations. It focuses on the application of knowledge and skills necessary to research, interpret and utilize epidemiologic literature in public-health practice. Students learn the history of public health, how to describe outbreaks and what the uses of epidemiology in public health are. Prerequisite: PUBH6001 Foundations and Issues of Public Health.

#### PUBH6005 3 Credits

## **Principles of Environmental Health**

The course is designed to provide graduate students with an introduction and overview of the key areas of environmental health. Using the perspectives of the individual, population and community, this course will examine factors associated with the development of environmental health problems while providing an opportunity for students to think critically about solutions to the complex issues, considering environment as one of the determinants of health and/or diseases. Prerequisite: PUBH6001 Foundations and Issues of Public Health.

## PUBH6006

#### 3 Credits

#### Social and Behavioral Determinants of Public Health

The aim of this course is to introduce the core concepts of social and behavioral determinants and how they influence the health of individuals, communities and populations. Students will analyze and compare theories and relevant research to develop understanding of those as they contribute to disease prevention and health promotion. Prerequisite: PUBH6001 Foundations and Issues of Public Health.

#### PUBH6101 3 Credits

#### Elective 1 – Public Health Leadership 101

The course introduces students to major theories and concepts of leadership, and ways of applying those to public-health issues and contexts. Students will explore models of leadership within current public health contexts at the individual, team, organizational and community levels with an emphasis on case studies and real-world analysis. The course develops leadership skills and planning for each student's ongoing development as a leader in health care.

#### PUBH7101 3 Credits Issues of Addiction and Recovery\*

## PUBH7102

#### 3 Credits Alcohol, Tobacco and Drug Use: Populations and Issues\*

### PUBH7103

**3** Credits

### **Mental Health Advocacy**

This course addresses the role of public policies in influencing the public's health; frameworks for analyzing public health policies; the role(s) and limitations of public health worker in influencing public policy for health; advocacy as a strategy for achieving social change; strategies to promote and sustain policies through legislative processes; and public health leadership principles and practices. Prerequisites: PUBH6001 Foundations and Issues of Public Health and PUBH6004 Fundamentals of Epidemiology.

## PUBH7104

#### 3 Credits Issues of Treatment and Recovery\*

### PUBH7105

3 Credits Addiction and Recovery Practice and Leadership\*

## PUBH7201

#### 3 Credits Advanced Biostatistics, Data Management and Analysis\*

## PUBH7202

**3** Credits

## Population Health Research Methods

This course provides the fundamentals of research design, methods and data collection. It serves as an introduction to quantitative, qualitative, mixed methods and communitybased participatory approaches to public health research. Students will discuss the strengths and weaknesses of each design and have hands-on experience with a number of designs. The emphasis is on the critical review of published research, to prepare students to evaluate all aspects of a research study in order to be confident and careful consumers of research and build skills for conducting independent research. Prerequisite: PUBH6001 Foundations and Issues of Public Health.

## PUBH7203

3 Credits

## Data Management in Public Health Systems

In this course students will learn about the information systems most commonly used by

\*Course under development. For more information go to https://view2.fdu.edu/academics/pharmacy/ academics/mph/.

## **School Psychology**

public health agencies, such as health registries, health information exchange platforms, regulatory submission systems, surveillance and adverse event reporting and the types of data they contain. Benefits and challenges of these systems, as well as data-integration techniques will be covered. Prerequisites: PUBH6001 Foundations and Issues of Public Health and PUBH7202 Population Health Research Methods.

#### PUBH7204 3 Credits Predictive Analysis and Determinants of Health\*

PUBH7205 3 Credits Health Analysis Practice and Leadership\*

#### PUBH7301 3 Credits Politics and Practice of Public Health and Health Policy

Successful implementation of public health programs has a foundation in understanding policy, including how it is made, influenced and shaped. Whether it is vaccinations, curbing obesity or even increasing funding, any public health issue always has politics around it. It is thus essential for a public health practitioner to understand how such topics can be influenced, and by whom. This course will focus on policy strategy, formulation and implementation both in the United States and at a global level abroad. Prerequisites: PUBH6001 Foundations and Issues of Public Health and PUBH6003 Public Health Management and Policy.

#### PUBH7302 3 Credits Economic and Social Determinants of Health Policy\*

PUBH7303 3 Credits Health Disparities and Cultural Issues\*

#### PUBH7304 3 Credits **Comparative Health Care Systems**

This course provides a comprehensive overview of the structure and operations of the United States health-care delivery system in comparison to health-care systems in other countries. Major forces and trends that are likely to shape the external environment and linkages among industry stakeholders are identified and examined both locally and in a global context. Fundamentals of health-care economics, financing, reimbursement, quality assurance and

\*Course under development. For more information go to https://view2.fdu.edu/academics/pharmacy/ academics/mph/. political policymaking are discussed with due regard for social and ethical implications. The spectrum of life sciences is considered in relation to the continuum of health-care delivery. Prerequisites: PUBH6001 Foundations and Issues of Public Health and PUBH6003 Public Health Management and Policy.

#### PUBH7305 3 Credits

#### **Health Policy Practice and Leadership\***

#### PUBH7501 3 Credits

#### **Public Health Practice and Leadership**

As a part of the culminating experience in the program, this 200-hour field practicum/ placement at a local/global public health organization should be a service-learning practical experience involving health promotion, health advocacy, health communication skills and competencies and the collection and analysis of data, as appropriate under the supervision of a public health professional to determine or assess a response to an actual public health challenge. A practicum report is completed and presented in the form of an oral presentation and scientific poster.

#### PUBH7505 3 Credits Elective 2 -

### Elective 2 – Interprofessional Education and Practice (IPE and IPP)

In this course the public health students will engage in interprofessional educational experience with students from at least one other health profession. All students will be learning with and from each other about ethics and values, roles and responsibilities, teamwork and communications in the health-care setting. The case studies will be examined, and the decisionmaking process that providers and patients engage in are analyzed in this interdisciplinary, interprofessional context.

#### PUBH7901 3 Credits

#### **Public Healh Capstone**

This capstone course is part of the culminating academic experience in the M.P.H. program. Students are expected to synthesize, integrate and apply skills and competencies acquired through the program of study to a public health problem that approximates a professional practice experience. The project has two components: written paper/proposal and oral presentation. The course is typically completed in the last semester of the program, usually in conjunction with the completion of a fieldwork practicum experience. Prerequisite/Corequisite: PUBH7501 Public Health Practice and Leadership.

\*Course under development. For more information go to https://view2.fdu.edu/academics/pharmacy/ academics/mph/.

## School Psychology (Psy.D.)

See Psychology, School Psychology, page 233.

## School Psychology (M.A.)

See Psychology, School Psychology, page 238.

## Service Innovation and Leadership (M.S.)

The degree is designed to provide master'slevel studies for traditional and nontraditional students in preparation for or advancement in the hospitality management field with a unique focus on service innovation and leadership. It has a strong foundation in the core areas of leadership, service strategies, financial systems, organizational communication and conflict management, human resource administration and marketing as they pertain to service innovation and leadership.

The 30-credit, nonthesis program consists of 27 credits of core courses and 3 credits of electives. The required courses include: MSSIL7001 Introduction to Graduate Studies and Research; MSSIL7003 Current Concepts of Leadership in the Service Industry; MSSIL7004 Service Management; MSSIL7005 Managing Service Industry Financial Systems; MSSIL7006 Human Resource Management and Development in the Service Industry; MSSIL7007 Global Marketing for the Service Industry; MSSIL7008 Organizational Communication and Conflict Management; MSSIL7009 Capstone for Service, Innovation and Leadership; and MSSIL7010 Technology in the Service Industry. There is a required master's project.

Classes are offered in-person at the Metropolitan Campus, Teaneck, New Jersey; at the Florham Campus, Madison, New Jersey; and at Wyndham Worldwide in Parsippany, N.J., where the University has a partnership to offer graduate degrees online and in-person.

The program is offered through the School of Administrative Science of the Anthony J. Petrocelli College of Continuing Studies.

## **Admission Requirements**

1. Must have completed a bachelor's degree program with a minimum cumulative grade point ratio of 3.00 from an accredited undergraduate institution. (No GMAT or GRE test score is required.)  2. Transcripts from all undergraduate, graduate and postgraduate studies.
 3. A résumé, which includes goals for a career in service leadership.

4. A completed application.

## Requirements for the Master of Science Degree

The M.S. in service innovation and leadership is a 30-credit, nonthesis program requiring completion of 27 credits of core courses, plus 3 credits of electives. A Master's Research Project is required.

## Curriculum

Whether taken in-person, blended or fully online, the M.S. in service innovation and leadership prepares students for leadership positions in the service sector. The curriculum draws upon the work experience of students to integrate theory and practice as it prepares them for positions in service leadership. The proposed required courses were developed based on need and potential demand. Students will be required to complete a noncredit Master's Research Project during the last term of study in the program as a capstone requirement. This paper and its requirements will be introduced during the early part of the degree program when the students are enrolled in the MSSIL7001 Introduction to Graduate Studies and Research course.

## Required Courses (27 credits)

All students enrolled in the M.S. in service innovation and leadership must complete the following:

Credits
MSSIL7001
Introduction to Graduate Studies
and Research* 3
MSSIL7003
Current Concepts of Leadership
in the Service Industry
MSSIL7004
Service Management3
MSSIL7005
Managing Service Industry
Financial Systems
MSSIL7006
Human Resource Management
and Development in the
Service Industry

	Juno
MSSIL7007	
Global Marketing for the	
Service Industry	3
MSSIL7008	
Organizational Communication	
and Conflict Management	3
MSSIL7009	
Capstone in Service, Innovation	
and Leadership*	3
MSSIL7010	
Technology in the Service Industry	3
Total	27

Credite

## Electives (3 credits)

Electives may be chosen from the list below or from courses offered by the Anthony J. Petrocelli College of Continuing Studies and the International School of Hospitality and Tourism Management. Electives must be approved in advance and students must meet all prerequisite requirements. Additional electives will be developed with guidance from the school's industry advisory board. MSSIL6001 Civil Law and the Service Industry...... 3 MSSIL6002 Accounting for Service-industry MSSIL6003

# Master's Research Project (Noncredit)

Students will be required to complete a Master's Research Project during the last term of study in the program as a capstone requirement. This project is a requirement for graduation. The requirements for the Master's Research Project will be introduced during the early part of the student's degree when they take MSSIL7001 Introduction to Graduate Studies and Research. Guidelines introduced in that class will include the

\*Must be taken in the first semester.

\*Must be taken in the last semester.

## **Service Innovation and Leadership**

parameters for the final project as well as specific benchmarks in the process that need to be met by the students. In addition, the research project will demonstrate understanding of competencies regarding service innovation and leadership that are developed throughout the course. This project will be evaluated by full-time faculty to determine whether it meets the requirements, and a pass/fail grade will be used.

## **Course Offerings**

Courses offered fall, spring and/or summer are so noted. To determine availability of courses not so designated, please check with the school.

## Service Innovation and Leadership

School of Administrative Science

## **Core Course Requirements**

#### MSSIL6100 0 Credits Master's Research Project

The research project is an interactive, culminating learning project that focuses on an area chosen by the student related to the service industry in line with the student's professional area of interest. This qualitative research paper should present the nature of the problem or subject investigated, its significance to the profession or larger field of study, a discussion of the relevant literature, a clearly defined method for answering or exploring the question of interest and specific conclusions or evaluations based on investigation. The length of the project depends on the subject. However, 25-40 pages are appropriate, plus appendices such as tables, charts, questionnaires, interview schedules, etc. Documentation and the bibliography must meet the standards for academic research set forth by the American Psychological Association (APA). Notes and bibliography should be consistent and follow the style of the latest edition of the APA.

#### MSSIL7001 3 Credits Introduction to Graduate Studies and Research

This course provides an introduction to graduate studies with heavy emphasis on referencing and citations in APA style. Quantitative and qualitative research studies are explored for structure, discussed in depth and critiqued. A comprehensive research proposal is the goal of this course. The Master's Research Project (MSSIL6100) and its requirements will be introduced in this course. The research paper will then be completed in the last term of study in the program as a capstone requirement.

#### MSSIL7003 3 Credits Current Concepts of Leadership in the Service Industry

This course examines key theories of leadership and motivation as applied to various serviceindustry contexts, with an emphasis on analysis of leadership behaviors, managerial action and servant leadership.

## MSSIL7004 3 Credits Service Management

This course offers a review of current service theories and strategies used to provide total customer satisfaction, including methods for measuring customer satisfaction and total quality management applications.

## MSSIL7005

**3 Credits** 

#### Managing Service Industry Financial Systems

This course focuses on the analysis, interpretation and application of financial information derived from the four major financial statements. Moreover, students will develop an understanding of the time value of money and various valuation techniques. This course also focuses on providing students with an understanding of the ways in which serviceindustry enterprises access the capital markets.

## MSSIL7006

## 3 Credits

#### Human Resource Management and Development in the Service Industry

This course provides an in-depth review of human-resource management practices, with case-study reviews of best practices across the service-industry context. Students will be introduced to essential functions including performance and evaluation systems, training and development, staffing and succession, compensation and rewards, workplace diversity, teamwork and communication.

## MSSIL7007

### 3 Credits

#### Global Marketing for the Service Industry

This course provides an overview of advanced marketing strategies and tactics. Global contexts will be explored to the extent of their impact and best practices will be reviewed. The following topics will be studied: strategic planning, pricing practices, international marketing, global distribution systems and advertising.

#### MSSIL7008 3 Credits

### Organizational Communication and Conflict Management

This course provides an overview of theories and models of communication and examination of barriers to effective communication. Techniques for improving conflict management and resolution are considered through interpersonal, group and organizational communication.

## MSSIL7009

## 3 Credits

## Capstone for Service, Innovation and Leadership

This course is designed to be a capstone experience. Students will draw on all previously taken courses in a "real-world" application toward their particular area of interest. Serviceindustry partners will pose real-world consulting dilemmas for the students to solve in teams. To be taken after 30 credits have been completed.

## MSSIL7010

### **3** Credits

## **Technology in the Service Industry**

The technical and organizational dimensions and foundations of management information systems will be studied with a focus on the management of information, technology and systems development. This class is oriented to the end-user.

## Electives

All candidates must take 3 credits of electives. The elective may be chosen from the M.S. in service innovation and leadership courses with the approval of the student's adviser.

## MSSIL6001

## 3 Credits

## **Civil Law and the Service Industry**

This course provides an overview of tort and civil law oriented to service-industry contexts.

## MSSIL6002

#### 3 Credits Accounting for Service-industry Administrators

This course emphasizes the interpretation and usage of accounting information and procedures necessary for decision making in serviceindustry enterprises. Topics include Uniform System of Accounts, budgeting and the interpretation of balance sheets, income, cash flow and retained-earnings statements.

## MSSIL6003 3 Credits

## **Distribution System Management**

This course reviews the essential elements of supply-chain management. The learning experience is focused on forecasting, planning, strategy, production, distribution procurement, quality control and process frameworks.

#### MSSIL6004 3 Credits Global Service Industry Business Management

This course examines global service business strategies with a focus on the following key issues: management process, labor, legal, finance, service delivery, marketing and government affairs.

#### MSSIL6005 3 Credits Organizational Behavior

This course examines systems-level behavior in a number of service industry contexts with an emphasis on understanding and developing the individual, team and organizational capacity for change and improvement.

#### MSSIL6006 3 Credits

### **Strategic Processes in Service Firms**

This course examines a variety of strategic constructs and processes utilized by leading global service-industry firms. The course focuses on strategic thinking and learning in relation to strategic planning.

## MSSIL6007

## **3 Credits**

## Curriculum and Instruction for Service-industry Professionals

The emphasis of this course will be on the relationship between models in all phases of the curriculum in service innovations and leadership. Curriculum design, content and integration incorporated with technology will be the focus for the individual who will have a career in the service industry as a trainer, workshop planner or instructor in the industry or academia.

## Sports Administration (M.S.A.)

The Master of Sports Administration (M.S.A.) degree was offered beginning in January 2009. It is the first graduate degree in sports administration offered in the state of New Jersey.

This 36-credit program includes 15 credits of required courses, 15 credits in a specialization and 6 credits of electives. The two areas of **specialization** are **sports administration** and **coaching theory and strategies**.

In its Occupational Employment Projections to 2012, the United States Bureau of Labor Standards provides information on projected growth in occupational groups. There is a 6.1percent increase projected for the broad category of self-employed professionals and related occupations. Athletes, coaches, umpires and related workers are found within this group. Projected growth specifically for these occupations is 18.3 percent for the period in review.

The M.S.A. program focuses on practical and theoretical aspects of the various components relative to the administration and management of sports personnel and facilities, businesses, health facilities and coaching and recreational activities in both volunteer and paid positions. There is also a strong emphasis on leadership throughout the program.

The program provides master's-level studies for the traditional and nontraditional student involved in sports and health facilities, including program planning and development. The M.S.A. program focuses on the broad view of the sports administration function by including issues such as business, marketing, recruitment and support services. The program promotes the understanding of issues that impact the success of activities such as legal, health and safety standards in sports administration. The degree also encourages the development of highquality, applied research for practitioners in the field of sports administration.

Classes are offered at convenient offcampus locations and will also be offered in a blended model, combining the traditional classroom setting with online work, and through completely online delivery.

This program is offered under the auspices of the School of Administrative Science, Anthony J. Petrocelli College of Continuing Studies, at the Florham Campus, Madison, New Jersey; at the Metropolitan Campus, Teaneck, New Jersey; at locations throughout New Jersey; and online.

## **Admission Requirements**

Candidates for admission to the Master of Sports Administration degree program must be highly motivated individuals who have work experience in the area or wish to pursue a career in sports administration. A bachelor's degree from an accredited institution with a cumulative grade point ratio of at least 3.00 is required. Care will be taken to ensure a diversity of philosophies and academic backgrounds in the classes.

Students seeking admission to the program will have to submit:

1. A completed application;

2. Transcripts from all previous undergraduate, graduate and postrgraduate studies;

3. A written statement of 1,000 words on current job responsibilities, duties and management philosophy or on the applicant's career goals; and

4. Three letters of recommendation, including at least two from former instructors/professors.

There is no Graduate Record Examinations (GRE) or Graduate Management Admission Test (GMAT) requirement although there is a requirement for Test of English as a Foreign Language (TOEFL) scores for international students.

## Requirements for the Master of Sports Administration Degree

1. Completion of a minimum of 36 graduate credits.

2. Cumulative grade point ratio of 3.00 for the degree program of study.

3. Cumulative grade point ratio of 3.00 in the core curriculum.

4. Minimum of 30 credits completed at Fairleigh Dickinson University.

5. Maximum of six years to complete the master's degree requirements.

Up to six credits of graduate course work may be transferred from another

## **Sports Administration**

college or university if completed within the six-year period. Courses submitted for transfer credit will be reviewed and evaluated by the director of the Master of Sports Administration program. In assessing requests for transfer credits, the M.S.A. faculty may require students to complete additional course work to update knowledge and skills to meet master's degree requirements.

The following are the specific program requirements for the master's degree. These curriculum areas and credit-distribution requirements are designed to provide students with flexibility in planning a program of study within a focused framework of professional development.

It is important to note that since sports administration is such a broad area with many different components, a number of areas of specialization are being proposed. The five required courses (MSA6701 Legal Issues in the Domestic and International Sports Industry; MSA6702 Sports Administration Research and Policy Analysis; MSA6703 Financial Administration in Sports; MSA6704 Internship I or Individual Job-related Project; and MSA6705 Strategic Planning, Implementation and Evaluation [capstone course]) are M.S.A. courses and account for 15 credits of the 36-credit program. To satisfactorily complete an area of specialization, students must complete an additional 15 credits of the program in the area of specialization. The remaining six credits for the degree requirements can be chosen as electives taken from other M.S.A. courses. No more than six credits will be waived for previous experience that is equivalent to any course offering.

Each course will have a standardized syllabus with specific learning outcomes. Textbooks will be selected for each class — based on content relative to the topics — by the faculty in concert with the administrators of the program. Each course will have at least one required textbook. The nature of the courses also mandates the use of case studies that will link the practical application with theory.

## A. Required Courses

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All students enrolled in the M.S.A.		
program must complete the following:		
MSA6701	Legal Issues in the Domestic and International Sports Industry	
MSA6702	Sports Administration Research and Policy Analysis	
MSA6703	Financial Administration in Sports	
MSA6704	Internship I or Individual Job-related Project	
MSA6705	Strategic Planning, Implementation and Evaluation (Capstone Course)	

## **B.** Areas of Specialization

Sports administration includes many components that range from administering professional sports teams and their facilities to fitness centers and processes to recreational facilities and operations. In addition to the required courses, the M.S.A. program will include areas of specialization as well as general electives. The initial program offerings are as follows:

Sports Administration (any five courses)

MSA6601	Organizational Leadership and Team Development
MSA6602	Facility Development, Administration and Programming
MSA6603	Sports Marketing and Promotions
MSA6604	Sports in a Social Context
MSA6605	Legal and Professional Ethics in Sports
MSA6606	Group Dynamics
MSA6607	Human Resource Administration in Sports Organizations
MSA6608	Sports Risk Assessment
MSA6609	Communications and Media Relations
MSA6610	Strategies in Fundraising and Development
Coaching T courses)	heory and Strategies (any five
MSA6605	Legal and Professional Ethics in Sports
MSA6608	Sports Risk Assessment

MSA6611	Coaching Leadership
MSA6612	Coaching Theory, Methods and Issues
MSA6613	Coaching Psychology
MSA6614	Assessing Human Performance
MSA6615	Effective Team Administration
MSA6633	Weight Training and Conditioning
Electives	
MSA6624	Organization and Administration of Sports
MSA6625	Physiological Basis of Physical Fitness
MSA6626	Nutrition for Sports and Fitness
MSA6628	Valuing Diversity
MSA6629	Motivation and Performance
MSA6630	Global Sports
MSA6634	Sports Security
MSA6635	Events Planning and Administration
MSA6636	Internship II

## Graduate Certificate Programs

Students who successfully complete an area of specialization will also receive a graduate certificate in the appropriate program.

## **Coaching Theory and Strategies**

This 18-credit, six-course certificate is designed to provide students with skills and knowledge to address coaching at all levels of sports. Coaching methodology, nutrition, conditioning, human performance and team administration are areas studied in the program.

## Sports Administration

This 18-credit, six-course certificate focuses on the skills required for a career in the administration of professional and amateur sports. This course of study can lead to employment in areas such as sports organizations, regulatory agencies, private and/or public facilities and athletic departments at the college and university level, as well as related areas.

## **Sports Administration**

## **Course Offerings**

## Sports Administration

School of Administrative Science

## **Required Courses**

#### MSA6701 3 Credits Legal Issues in the Domestic and International Sports Industry

This course will study current issues within various areas of the domestic and international sports industry including legal liability of coaches, administrators and players; potential issues for facilities and sponsored events; regulations of amateur sports; legal relationships in professional sports; antitrust aspects of sports activities; and risk management.

#### MSA6702 3 Credits Sports Administration Research and Policy Analysis

This course will explore current issues and trends relative to the administration and operation of various types of sports and recreation programs. Research into leadership models that have led to productive programs as well as the implication of policy on sports and recreation will also be studied.

### MSA6703 3 Credits

## **Financial Administration in Sports**

This course is designed to provide an understanding of different financial decisions that confront the sports industry. In addition to basic accounting skills, the course will explore financial-statement analysis, working capital and budgeting.

#### MSA6704 3 Credits Internship I or Individual Job-related Project

This is a practical experience of previously learned skills and knowledge. The internship assignment will depend on the student's background and specific goals. Although efforts will be made to match students with appropriate opportunities to enhance their learning, some students may not be able to perform such an internship due to work or family responsibilities. In those cases, a specific job-related project can be approved by the program director.

## MSA6705

#### **3** Credits

## Strategic Planning, Implementation and Evaluation

This course is the capstone course of the program. Students will be expected to develop either an operational or strategic plan, an implementation schedule and plan and an evaluation process for the plans. This course can be taken once the student satisfactorily completes 27 credits in the program.

#### Sports Administration

#### MSA6601 3 Credits

### Organizational Leadership and Team Development

This course will study how teams are organized and the role of leadership in motivating team performance. Topics to be covered include sports leadership in the sport and community, group and team development and the role of the leader in moving the organization to their vision of success.

## MSA6602

#### 3 Credits Facility Development, Administration

## and Programming

Principles and applications of planning, designing, financing, budgeting and construction in the sports field, as well as the use of facilities for sports and non-sport activities, will be explored. Facility operations, event management and planning and equipment purchasing, maintenance and inventory will be included in the course.

## MSA6603 3 Credits

## **Sports Marketing and Promotions**

This course will explore the concepts of marketing, promotions and public relations for various components of the sports industry. At the foundation of marketing and promotion are strategic planning and coordination of efforts. Marketing strategies and varying consumer behaviors in different sports venues will be analyzed as social and economic issues related to buying and selling of sports. The inclusion of sponsorships and endorsements into the marketing efforts will also be included.

#### MSA6604 3 Credits Sports in a Social Context

This course will explore the concepts of sports and their sociological impact on a nation or state as well as the impact of the role of sports organizations as well as a social institution.

#### MSA6605 3 Credits Legal and Professional Ethics in Sports

This course will investigate the moral and legal framework for those in sports. Ethical dilemmas and how personal traps may affect the individual's career will be discussed. The course will also explore the differences between law and ethics, the concept of moral theory and issues of perception as well as ethical behavior. Case studies will be included.

#### MSA6606 3 Credits Group Dynamics

This course will explore the basic nature of groups and how productive groups develop. Topics will include the various models of group development, the stages of development, informal and formal groups, team building and changing informal work groups or team norms.

## MSA6607

## 3 Credits

## Human Resource Administration in Sports Organizations

This course will explore administrative regulations; techniques, procedures and policies for effective personnel administration; and legal and ethical parameters that guide personnel in organizations. Additional topics include communication, compensation, negotiation, appraisal processes, training and development and decision making.

### MSA6608

## **3** Credits

## **Sports Risk Assessment**

This course will investigate the costs of sporting accidents, which can be a significant financial and emotional burden for an organization. Although organizations look at legal liabilities, there are other costs that organizations need to consider. Case studies and scenarios will be utilized in the class.

## MSA6609

**3** Credits

#### **Communications and Media Relations**

This course will explore practical techniques in understanding the media, how to build relationships with journalists, how to communicate messages effectively and what steps to take when faced with a crisis. The course aims to equip students with commonsense tools to properly manage their message while handling a variety of media that range from newspapers to radio and TV to the internet.

## MSA6610

#### 3 Credits Strategies in Fundraising and

## Development

This course will explore ways organizations can capitalize on fundraising activities to improve market share and visibility. Examples from private and volunteer organizations will be used in the course.

## **Coaching Theory and Strategies**

#### MSA6611 3 Credits

#### **Coaching Leadership**

This course will explore leadership skills needed for those entering into coaching positions.

#### MSA6612 3 Credits Coaching Theory, Methods and Issues

This course will explore the foundations for coaching as a profession and how coaching has influenced society and been influenced by society. Topic areas will include the psychology of coaching, coaching players and the relationship between players and coaches as well as coaches and colleagues.

## MSA6613 3 Credits

## Coaching Psychology

This course will investigate the foundations of the psychological factors related to coaching. The course will review the concepts of sports psychology and how coaches can encourage optimum performance from the players.

#### MSA6614 3 Credits

#### 5 Credits

**Assessing Human Performance** This course will explore the concepts of human performance for sports and appropriate assessment processes. As organizations seek to attain a certain performance goal, there is a need to ensure the individuals involved meet the requisite standards of performance or have the ability to do so. Various assessment tools will be reviewed as will case studies that demonstrate standards in use.

#### MSA6615 3 Credits Effective Team Administration

This course will investigate how effective teams are developed. There are a number of essential concepts that will be studied, including assessing a current team, defining team objectives and criteria of success, establishing team capabilities, defining ground rules, assessing the team culture and behavior, developing effective personal collaboration processes, conducting effective meetings and conducting good team-decision processes.

## Electives

#### MSA6624 3 Credits Organization and Administration of Sports

This course will study the fundamental skills of sports administration including planning, organizing, staffing, coordinating and budgeting in public, not-for-profit and for-profit sectors.

#### MSA6625 3 Credits **Physiological Basis of Physical**

#### **Fitness** This course will explore the pl

This course will explore the physiological basis for testing physical fitness, the range of methods for assessing power, muscular strength and endurance and flexibility. Different tests will be studied as well as methods for improving fitness in participants.

#### MSA6626 3 Credits

## **Nutrition for Sports and Fitness**

This course will study fundamental principles of nutrition and physical training for sports and exercise. The role of nutrition and physiology will be investigated as they relate to performance. Nutritional needs for specific sports and appropriate preparation for competition, the use of performanceenhancement supplements, screening procedures for various substances and legal issues will also be explored.

#### MSA6628 3 Credits Valuing Diversity

This course will explore the concepts of diversity in teams. Diversity includes various categories such as gender, age, education and nationality. As individuals work together, there is a need to understand individual differences that may influence the operations. The course will use case studies in addition to lectures.

## MSA6629 3 Credits

## **Motivation and Performance**

This course will examine the impact of motivation on performance in the area of sports administration. Various motivational theories, concepts of positive reinforcement and recognition programs and maximization of performance relative to individual and group will be studied.

#### MSA6630 3 Credits **Global Sports**

Sports extend beyond national boundaries. This course will explore sports from a global perspective by examining the similarities and differences among various national sports cultures. The course will also investigate the types of sports activities found in specific cultures in order to determine the potential for expansion of activities into other international venues.

#### MSA6633 3 Credits

## Weight Training and Conditioning

This course will explore the theory and practice behind weight training and conditioning of sports participants. Included will be assessments and exercises designed to increase strength and endurance. Assessments will range from novices to professional-level athletes.

## MSA6634 3 Credits

## Sports Security

This course will investigate the various strategies employed for major sports events. Ensuring a safe and secure environment for the players and spectators is necessary for organizational survival. The course will employ case studies and scenarios to develop potential strategies.

#### MSA6635 3 Credits

## **Events Planning and Administration**

This course will explore choosing the appropriate venue, presentations and exhibits; selecting and managing vendors; and providing onsite coordination. In addition, establishing priorities, building alliances and defining duties and responsibilities for various functional areas will be investigated.

## MSA6636

#### 3 Credits

## Internship II

This is a practical experience of previously learned skills and knowledge. The internship assignment will depend on the student's background and specific goals and must be approved by the program director.

## MSA6638

#### **3** Credits

#### **Community Relations in Sports Organizations**

This course will explore how community relations departments make a significant positive impact on both a sports team and in the community in which it resides. Course content focuses on customer/fan relations, working with nonprofit organizations, event planning, player appearances and social media. The course aims to prepare students with every aspect involved in the field and gives an inside look into one of the smallest yet most important departments in sports.

## **Student Services Administration**

## Student Services Administration (M.A.)

The Master of Arts (M.A.) in student services administration was offered beginning in January 2011. This degree is designed for individuals pursuing careers in administrative and support positions in higher education. The relationship of universities to the federal government, to states and to local communities has taken on entirely new dimensions. Until now, the only educational leadership program available at FDU focused on grades K–12.

The 36-credit, nonthesis program consists of 18 credits of core courses, which include a three-credit course in college student personnel internship and 18 credits of electives. The required courses include: MSSA6601 Research Methods; MSSA6602 College Student Development; MSSA6603 Social Issues in Higher Education; MSSA6604 Governance, Planning and Finance in Higher Education; MSSA6605 The Law and Student Affairs; and MSSA6606 Student Services Internship. There is a required master's project.

Classes will be offered online, in-person at the Metropolitan Campus, Teaneck, New Jersey; at the Florham Campus, Madison, New Jersey; at other offsite locations where the University has a partnership to offer graduate degrees; and online.

Students can **specialize** in one of four areas including: **admission and financialaid administration**, **institutional risks administration**, **intercollegiate sports administration** and **on-campus student administration**. The program is offered through the School of Administrative Science of the Anthony J. Petrocelli College of Continuing Studies.

## **Admission Requirements**

1. Must have completed a bachelor's degree program with a minimum cumulative grade point ratio of 3.00. (No GMAT or GRE test score is required.)

2. International students must take the Test of English as a Foreign Language.

## **Requirements for the Master of Arts Degree**

The M.A. in student services administration is a 36-credit, nonthesis program requiring completion of 18 credits of core courses, including a 3-credit MSSA6606 Student Services Internship plus 18 credits of electives.

## Curriculum

Whether taken in-person, blended or fully online, the M.A. in student services administration offers an outstanding degree that will prepare students for leadership positions in higher education. The curriculum integrates theory and practice with hands-on learning to provide a thorough understanding of current issues facing colleges and universities.

## **Required Courses (18 credits)**

enrolled in the M.A. in
rices administration must
e following:
Research Methods
College Student Development
Social Issues in Higher
Education
Governance, Planning and
Finance in Higher
Education
The Law and Student Affairs
Student Services Internship

## Areas of Specialization and Certificates (18 credits)

The specialization in college student services administration encompasses many different components that range from recruitment and admissions to administering financial aid, on-campus institutional risk, on-campus student administration and intercollegiate sports. Students in the M.A. in student services administration will be able to complete work in an area of specialization that will lead to a certificate. There are four certificates for the program and their order of implementation are:

*On-campus Student Administration* Students must complete the following three required courses:

MSSA6602 College Student Development MSSA6604 Governance, Planning and Finance in Higher Education MSSA6605 The Law and Student Affairs Students must select three of the following to complete the certificate: MSSA6611 Program Design and Instructional Strategies for Adults in Higher Education MSSA6612 Program Design and Strategies for Special Populations in Higher Education MSSA6613 Post-secondary Student Affairs Issues and Management MSSA6626 Mentoring Students for Success Admissions and Financial Aid Administration Students must complete the following course: MSSA6604 Governance, Planning and Finance in Higher Education Students must select the following to complete the certificate: MSSA6602 College Student Development MSSA6608 Technology Foundations in Higher Education MSSA6610 Multiculturalism, Diversity and Difference: Theory. Research and Practice in Student Affairs MSSA6614 Administration of College Financial Aid MSSA6619 Grant Writing and Administration in Higher Education Intercollegiate Sports Administration

Students must complete the following two courses: MSSA6604 Governance, Planning and Finance in Higher Education MSSA6623 Legal Issues in Domestic College Sports Students must select the following to complete the certificate: MSSA6602 College Student Development MSSA6620 Marketing and Promotion for **College Sports** MSSA6622 Financial Administration in College Sports Elective Master of Sports Administration course approved by adviser

Institutional Risks Administration Students must complete the following six courses: MSSA6604 Governance, Planning and

MSSA6604 Governance, Planning and Finance in Higher Education

## **Student Services Administration**

MSSA6605	The Law and Student Affairs
MSSA6608	Technology Foundations in
	Higher Education
MSSA6616	Threat Assessment and Risk
	Analysis in Higher
	Education
MSSA6617	Crisis Management for Higher-
	education Administrators
MSSA6618	Impact of Terrorism on College
	Safety
If students al	ready have a graduate degree

and would like to earn a post-master's certificate, 24 credits (8 three-credit courses) must be successfully completed.

## Electives (18 credits)

Students can select any six courses from Areas of Specialization and Certificates.

## Master's Capstone Project

Aspiring M.A. candidates will find the graduate capstone project to be the ultimate challenge. It requires the ability to apply the skills, methods and knowledge gained through their study of student services administration.

Students will be required to complete MSSA6100 Master Project during their last term of study in the student services administration program. Although it is required for graduation, no credit is awarded for the project. Requirements including parameters for the final project and specific benchmarks that must be met — will be introduced early in the program during the MSSA6601 Research Methods course. Full-time faculty will evaluate the project to determine whether it meets graduation requirements.

## **Course Offerings**

## Student Services Administration School of Administrative Science

## Core Course Requirements

MSSA6100 3 Credits Master Project

This noncredit course is part of the degree requirements and must be completed in order to graduate from the program.

#### MSSA6601 3 Credits **Research Methods**

This course provides an introduction to quantitative methods and procedures through the study of the logic and procedures of educational and social research. Information about the various stages of the research process with attention to measurement, sampling, design, data analysis and application will be included in the course.

#### MSSA6602 3 Credits

### **College Student Development**

This course provides an introduction to the theory and practice of college student development and focuses on the variety of noninstructional services that impact the student's growth as an individual and as a member of the campus community.

#### MSSA6603 3 Credits

### **Social Issues in Higher Education**

This course provides an analysis of the historical and current social issues that shape the experience of a college student. Topics include gender/sexual identity, ageism, racism, ethnocentrism and religious intolerance, among others.

### MSSA6604

## **3 Credits**

#### Governance, Planning and Finance in Higher Education

This course provides an overview of college governance and explores the relationship between program development, planning and budgeting to management in higher-education settings, resource acquisition and alumni/trustee relations.

## MSSA6605 3 Credits

## **The Law and Student Affairs**

This course provides an overview of relevant state/federal statutes (FERPA, ADA, etc.). In addition, the development and implementation of campus judicial models are reviewed with a focus on best practices.

## MSSA6606 3 Credits

#### **Student Services Internship**

All students will be required to complete the graduate course MSSA6606 Student Services Internship. To describe and analyze the internship experience, students will complete a portfolio, which must document what was done and explain how the student achieved the objectives. This is a practical experience of previously learned skills and knowledge. The internship assignment will depend on the student's background and specific goals and the opportunities will be in higher education. Although efforts will be made to match students with appropriate opportunities to enhance their learning, some students may not be able to perform such an internship due to work or family responsibilities. In those cases, a specific

job-related project can be approved by the program director.

## Specializations and Electives

All candidates must take 18 credits of electives. The electives may be chosen from the M.A. in student services administration with the approval of the student's adviser.

## MSSA6608

#### 3 Credits

## Technology Foundations in Higher Education

This course provides an overview of the following topics related to planning and using technology: instructional technology models; internet resources; web design; networking and database fundamentals; technology standards; technology-integration strategies; assessment and evaluation; societal, legal and ethical issues; social media and related strategies; and collaborative planning of technology programs.

## MSSA6610

#### 3 Credits Multiculturalism, Diversity and Difference: Theory, Research and Practice in Student Affairs

This course explores issues of multiculturalism, diversity and differences as they relate to work in student personnel through assignments, exercises, discussions, readings and reflection.

## MSSA6611

## 3 Credits

#### Program Design and Instructional Strategies for Adults in Higher Education

This course explores program planning, development and evaluation for adult and continuing-education programs. The course will include diagnosis of client needs; effective system of planning, development and evaluation for adult-education programs; program scheduling; and budget and resource planning.

## MSSA6612

#### **3** Credits

#### Program Design and Strategies for Special Populations in Higher Education

This course explores designing programs for the wide range of populations attending colleges. This includes students with disabilities, bilingual populations and other targeted groups that add to the diversity of institutions.

## MSSA6613

#### 3 Credits Post-secondary Student Affairs Issues and Management

This course is intended for higher-education professionals in leadership positions and includes topics such as student-affairs issues, cocurricular programming, residence life,

## Taxation • Teaching • Teaching English as a Second/Foreign Language

substance abuse, judicial issues and related public relations.

#### MSSA6614 3 Credits Administration of College Financial Aid

This course explores the current laws, rules and regulations relative to financial aid at the federal and state levels as well as the processes needed to ensure students receive the appropriate funds. Included in the course are scholarship design, work-study programs and supplemental financial-aid programs.

#### MSSA6616 3 Credits Threat Assessment and Risk Analysis in Higher Education

This course investigates approaches for maintaining a safe and secure facility through planning for possible threats. The topics include vulnerability assessments, hazard mitigation and physical-security assessments. Students will conduct a vulnerability assessment for their organization and will develop a comprehensive response plan.

## MSSA6617 3 Credits

## **Crisis Management for Highereducation Administrators**

This course explores the assessment and preparation of plans for addressing crises that may occur within a college setting. The components will include crisis-management planning, response and recovery efforts. In addition to safeguarding the students and facility, there is a need to consider the psychological impact on the students and faculty. This course focuses on the broad range of issues such as natural disasters, terrorist activity, violent students and active-shooter issues on college property.

#### MSSA6618 3 Credits Impact of Terrorism on College Safety

This course investigates the latest schoolviolence trends, including fatal and non-fatal shootings and gang activity and the threat of terrorist attacks on American schools. Case studies of incidents from throughout the world are studied and assessed to determine best practices.

#### MSSA6619 3 Credits Grant Writing and Administration in Higher Education

This course provides students with an understanding of the process of writing successful grant proposals, including responding to the Request for Proposal, letter proposals, defining needs, methodology, timelines and the budget. The essential elements of preparing a winning proposal that can secure funding for major initiatives are reviewed, and students will prepare and submit a full grant proposal relevant to their organizations.

#### MSSA6620 3 Credits

## Marketing and Promotion for College Sports

The concepts of marketing, promotions and public relations for intercollegiate sports are explored. Strategic planning and coordination of efforts are also included in the course. Marketing strategies, varying consumer behaviors and different sports venues will be analyzed as social and economic issues related to marketing sports and their related activities.

#### MSSA6622 3 Credits

## Financial Administration in College Sports

This course provides an understanding of different financial decisions that confront the intercollegiate sports industry. In addition to basic accounting skills, the course explores financial-statement analysis, working capital and budgeting.

#### MSSA6623 3 Credits Legal Issues in Domestic College Sports

This course studies current issues within various areas of domestic sports including legal liability of coaches, administrators and players; potential issues for facilities and sponsored events; regulations of amateur sports; legal relationships in professional sports; antitrust aspects of sports activities; and risk management.

### MSSA6626 3 Credits

## **Mentoring Students for Success**

The role of individuals involved in the area of student affairs is broad, and it involves counseling for academic success and future achievements. This course explores the mentoring processes as well as concepts of counseling. Case studies will be used to supplement lectures and research.

## Taxation (M.S.)

See Business, Taxation, pages 77-78.

# Teaching (M.A.T.)

See Education, Teaching, pages 137–140.

## Teaching English as a Second/Foreign Language (TESL/TEFL) (M.A.)

See Education, Teaching, pages 140–141.

# **International Studies**

## **Wroxton College**

Wroxton Near Banbury, Oxfordshire, England

Nicholas D.J. Baldwin, Dean

Wroxton College is the British campus of the University, situated in the ancestral home of Lord North at Wroxton Abbey on 56 acres of land in Oxfordshire. It is centrally located in England, lying near Banbury, between Oxford and Stratfordupon-Avon and 75 miles away from London.

## **Admission Requirements**

 A graduate studies application.
 Official transcripts from all accredited institutions of higher learning in which the student has enrolled and, if matriculating:

3. The Graduate Record Examinations (GRE) test scores.

4. Three letters of recommendation (preferably from former professors).

In addition, applicants must have an undergraduate cumulative grade point ratio of 3.00 or better (based on a 4.00 system).

Graduate courses in a variety of graduate programs are usually available at Wroxton College during the annual summer session. Reference this catalog for specific programs of interest to seek more information about applications to these courses and course details.

## **For Information**

For information contact FDU's Wroxton College/ Study-abroad Office Fairleigh Dickinson University 285 Madison Avenue Madison, New Jersey 07940 (973) 443-8086 or 1 (800) 338-8803.

## Vancouver Campus

Vancouver, British Columbia Canada

## Wilfred J. Zerbe, Campus Executive

In fall 2007, Fairleigh Dickinson University opened an international campus in beautiful downtown Vancouver, British Columbia, Canada. FDU students in New Jersey have the opportunity to study at this campus during winter and summer sessions each year. Graduate courses, which include a study-abroad component in Vancouver, are offered regularly by one or more of the colleges in New Jersey. Please consult the online class schedule on WebAdvisor (http://webadvisor.fdu.edu) each term for international courses at the University's campus in Vancouver.

## **For More Information**

For more information contact Office of Admissions Vancouver Campus 842 Cambie Street Vancouver, BC V6B 2P6 By phone at 1-877-338-8002 toll free U.S. and Canada (604) 682-8112 Email vancouver\_admissions @fdu.edu.

## Master of Administrative Science (M.A.S.)

The Master of Administrative Science (M.A.S.) graduate degree program, offered through the University's Anthony J. Petrocelli College of Continuing Studies School of Administrative Science, is a 30credit program at Vancouver.

It utilizes in-person instruction and is designed to develop and sharpen critical managerial and leadership skills among students who aspire to careers in which leadership skills are essential and who desire a degree program that offers specializations that are not commonly offered in more traditional programs. The curriculum ranges widely in scope and range of subject matter — with a core curriculum, six specializations and a capstone course.

The core and specialization courses bridge two competency areas: 1) administrative competencies and 2) analytical and decision-making competencies. Students must take a total of six courses (18 credits) in administrative competencies, three courses (9 credits) in analytical and decision-making competencies and one capstone course (MADS6612 Seminar in Strategic Management – Capstone). All core and capstone courses (18 credits) are delivered in person. Specialization courses are delivered in person.

Six specializations are offered to students in Vancouver — computer security and forensic administration, emergency management administration, global health and human services administration, global leadership and administration, global technology administration and human resources administration.

## **Admission Requirements**

Students will be admitted to the M.A.S. program on an application-deadline model, with an intake each term.

For admission, students must meet the following criteria:

1. Graduated from an accredited four-year bachelor's degree program or equivalent.

2. Maintained a cumulative grade point ratio of 2.75 ("B-") in their undergraduate studies.

## **International Studies**

3. Demonstrated proficiency in communication of the English language (for international students whose first language is not English or who did not complete their degrees in the United States or Canada).

## **Application Deadlines**

Fall Term: April 1. Admission results released up to June 15. Spring Term: August 1. Admission results

released up to October 15.

**Summer Term:** December 1. Admission results released up to February 15.

### **Required Documents**

1. Completed online application form: https://www.applyweb.com/fdu/index/ftl.

2. Copies of the documents must be submitted together with the online application: attested or official transcripts, academic records, diplomas, national examination results, certificates or degrees received from all post-secondary institutions, universities and/or professional schools. If the documents are not in English, certified translation is required.

**3**. Two recommendation letters. It is advised that at least one letter is an academic reference.

4. Answers to three essay questions in the application form outlining personal interests and career goals.

5. Proof of English proficiency if the student's first language is not English or if the students did not complete their degrees in the United States or Canada.

6. Copy of passport information page.

7. Résumé (recommended).

### **Admission Procedures**

Admission into the Master of Administrative Science program is highly competitive and is based on the deadline model. All applicants who applied for the term are evaluated and ranked. Only selected students receive admission into the program. Each intake is unique and depends on the number of seats available in the term, as well as the number and quality of applicants.

For more information, visit the Vancouver Campus graduate admission at http://view2.fdu.edu/vancouvercampus/admissions/graduateadmissions/how-to-apply/.

## Requirements for the Master of Administrative Science Degree Vancouver Campus

Pre-Master's Course (for English Placement Test Scores 11.5–14) EPS5099 Academic Writing Skills–Masters.......4.5 EPS5199 Workshop for Academic Writing Skills–Masters......1.5

### Research Strategies Courses (for English Placement Test Scores 14.5 and over)

EPS5299

Academic Research Foundations......3

#### Core Administrative Competency Courses (9 credits) MADS6600

MADS0000
Theory and Practice of
Administration3
MADS6602
Personnel Administration
MADS6604
Ethics and Public Values3

## Core Analytic and Decisionmaking Competency Courses (6 credits)

MADS6601
Financial Administration3
MADS6610
Organizational Decision Making3

## Specialization Courses (12 credits)

## **Optional Practicum Internship** (1 credit) MADS5000

Curricular Practical Training.....1

## Capstone Course (3 credits)

#### Areas of Specialization

## Computer Security and Forensic Administration

Choose any four courses

## Emergency Management Administration

Choose any four courses
MADS6617
Emergency Management and
Safety Administration3
MADS6633
GIS and Emergency Administration 3
MADS6634
Community Threat Assessment
and Risk Analysis3
MADS6636
Global Preparedness for
Catastrophic Emergencies3
MADS6647
Organizational Planning and
Risk Communications 3
MADS6648
Disaster Recovery and
Organizational Continuity3
MADS6715
Special Topics: Global Terrorism
and Emergency Management
Preparation

## **International Studies**

## Global Health and Human Services Administration

Choose any four courses

Credits
MADS6628
Building Strategic Partnerships3
MADS6642
Global Health and Human
Services Systems3
MADS6643
Community Needs Assessment and
Qualitative Analysis for Health
and Human Services3
MADS6644
Law, Ethics and Policy for Health
and Human Services3
MADS6645
Marketing Social Change 3
MADS6646
Finance and Accounting for
Health and Human Services
MADS6647
Organizational Planning and
Risk Communications
MADS6718
Special Topics: Lifestyle
Modification for Leaders
MADS6753
Special Topics: Elder Care:
Legal Issues
e e

## Global Leadership and Administration

Choose any four courses
MADS6618
Leadership Plus3
MADS6628
Building Strategic Partnerships3
MADS6640
Leading in Times of Crisis 3
MADS6653
Global Citizenship Seminar
MADS6658
Leadership: Global Advanced
Scholarship and Practice 3
MADS6676
Perspectives on Leadership
from Films
MADS6706
Collaborative Leadership3
MADS6709
Special Topics: Creativity, Change
and 21st-century Leaders
MADS6747
Relational Leadership3

## Global Technology Administration

Students are required to take the following two courses

Cuadita

Credits
MADS6605
Principles of Information Systems 3
MADS6608
Organizationl Communication
and Conflict Resolution
Choose any two courses
MADS6618
Leadership Plus
MADS6632
Technology Applications for
Not-for-Profit Management 3
MADS6638
Computer Security Administration 3
MADS6677
Planning for Change in
Information Technology
MADS6696
Building Effective Teams
MADS6700
Global Technology Project
Management*

## Human Resources Administration

Choose any four courses
MADS6607
Collective Bargaining and
Contract Administration3
MADS6608
Organizational Communication
and Conflict Resolution3
MADS6609
Productivity and Human
Performance
MADS6618
Leadership Plus**
MADS6620
Human Resources Systems:
Approaches and Techniques
for the Modern Workplace3
MADS6661
Managing Organizational Change3
MADS6662
Customer Service for Public
and Not-for-Profit Organizations3
MADS6706
Collaborative Leadership**3
MADS6709
Special Topics: Creativity, Change
and 21st-century Leaders** 3

## **Course Descriptions**

See "Course Offerings," Administrative Science, pages 44–54.

\*Mandatory course. \*\*Students are to select only one leadership course.

## Master of Science in Hospitality Management Studies (M.S.)

The Master of Science degree in hospitality management studies, which consists of 33 credits, is structured to meet the educational needs of adult learners working as managers, entrepreneurs, educators or other professionals in the hospitality industry. It is designed to provide an educational alternative for working professionals with an academically rigorous, yet flexible, program of study that meets the requirements for a professional master's degree. For working adults seeking to upgrade their professional skills to enhance their careers, the degree program increases analytical, managerial and leadership competencies and provides graduates with the requisite preparation for career advancement in various hospitality-related professional areas.

This program is offered under the auspices of the International School of Hospitality and Tourism Management, Anthony J. Petrocelli College of Continuing Studies.

## **Admission Requirements**

Candidates for admission to the Master of Science in hospitality management studies degree program could be managers, business owners or educators or hold other professional positions related to the hospitality industry. The credentials required for admission as a matriculated student include the following:

1. Graduated from an accredited four-year bachelor's degree program or equivalent.

2. Maintained a cumulative grade point ratio of 2.75 ("B-") or equivalent in their undergraduate studies.

3. Demonstrated proficiency, both written and verbal, of the English language (for international students whose first language is not English or who did not complete their degrees in the United States or Canada).

4. Industry work experience preferred (applicants without industry work experience may be required to take foundation courses HRTM6100 Hospitality Operations Management and HRTM6200 Tourism Destination Management upon evaluation).

## **Application Deadlines**

Fall Term: August 1. Spring Term: December 1. Summer Term: April 1.

## **Required Documents**

1. Completed online application form: https://www.applyweb.com/fdu/index/ftl.

2. Copies of the documents must be submitted together with the online application: attested or official transcripts, academic records, diplomas, national examination results, certificates or degrees received from all post-secondary institutions, universities and/or professional schools. If the documents are not in English, certified translation is required.

3. Two recommendation letters. It is advised that at least one letter is from an academic reference.

4. Answers to three essay questions in the application form outlining personal interests and career goals.

5. Proof of English proficiency if the students' first language is not English or if the students did not complete their degrees in the United States or Canada. For more details refer to English Proficiency page (https://view2.fdu.edu/vancouver-campus/admissions/english-proficiency/).

6. Copy of passport information page.

7. Résumé or portfolio.

8. Interview with a graduate program adviser may be required.

## **Admission Procedures**

Admission into the Master of Science is hospitality management studies program is highly competitive and is based on the "rolling" admission model.

All applicants are evaluated by both the admissions team and the International School of Hospitality and Tourism Management.

An interview with the program adviser may be required before the decision on admission can be made. The admissions team will notify applicants and schedule the interview if needed.

## **For Additional Information**

For additional information and the course outlines, admission requirements and requirements for the degree go to pages 172–173.

## **Course Descriptions**

See "Course Offerings," Hospitality Management Studies, pages 174–176.

## **Faculty and Administration**

## **Faculty**

#### Sameh Abdelazim

Assistant Professor of Electrical Engineering Technology and Electrical Engineering B.E., M.E., Ph.D., The City University of New York

#### **Catherine Acosta**

Senior Lecturer of Psychology B.A., Binghamton University, State University of New York; M.A., Teachers College, Columbia University

#### Anthony J. Adrignolo, Jr., P.E.

Professor of Global Transportation Studies B.S.I.E., Fairleigh Dickinson University; M.S.O.R., New York University

#### Joseph Agugliaro

Associate Professor of Biology B.S., The College of New Jersey; Ph.D., University of Arkansas

#### Vahid Alizadeh

Assistant Professor of Civil and Construction Engineering

B.S., Azad University, Iran; M.S., Shiraz University, Iran; Ph.D., University of Wisconsin-Milwaukee

### James G. Almeida

Associate Professor of Entrepreneurship; Interim Dean and Associate Dean for Graduate Programs, Silberman College of Business B.S., M.M.S., University of Bombay, India; M.B.A., Northeast Louisiana University; Ph.D., University of South Carolina

#### Fernando Alonso

Assistant Professor of Business; Director of Puerta al Futuro Program; Director of Latino Promise and HACER Program B.A., Holy Cross University; J.D., Pennsylvania State University

#### **Petros Anastasopoulos**

Associate Professor of Economics B.A., Graduate School of Business and Economics, Athens, Greece; M.A., Ph.D., New School University

#### **Gloria Anderle**

Associate Professor of Chemistry B.S., Fairleigh Dickinson University; M.S., Ph.D., Rutgers, The State University of New Jersey

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Associate Professor of Mathematics B.A., City College of New York, The City University of New York; M.S., Ed.D., Columbia University

### Jay Ariken

Vancouver Campus Faculty Lecturer of Administrative Science B.S., Ph.D., Kansas Wesleyan University

#### Stephen R. Armeli

Professor of Psychology; Director of M.A. Program in General/Theoretical Psychology; Director of Undergraduate Studies, School of Psychology, Metropolitan Campus B.B.A., Temple University; M.A., Ph.D., University of Delaware

#### Willy A. Aroca

Vancouver Campus Faculty Lecturer of Hospitality and Tourism Management; Associate Director of International School of Hospitality and Tourism Management, Vancouver Campus B.A., Bowling Green State University; M.A., Royal Roads University, Canada

#### Yelena Aronson

Professor of Computer Graphics B.S., Moscow Architecture, Russia; B.F.A., School of Visual Arts; M.F.A., Brooklyn College, The City University of New York

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Vancouver Campus Faculty Senior Lecturer of Administrative Science; Assistant Director of M.A.S. and B.A. in Individualized Studies, Vancouver Campus B.A., University of British Columbia, Canada; M.B.A., D.M., University of Phoenix

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Associate Professor of Chemistry; Dean of School of Pharmacy and Health Sciences, Florham Campus B.S., Fairleigh Dickinson University; M.A., Ph.D., Princeton University

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Dean of Wroxton College; British Faculty of Wroxton College B.A., The University of Hull, United Kingdom; Ph.D., The University of Exeter, United Kingdom

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Professor of Film and Animation; Director of M.A. and M.F.A. in Animation, Florham Campus

B.F.A., M.A., William Paterson University

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Senior Lecturer of Communication B.A., Fairleigh Dickinson University; M.A., Rowan University; Ed.D., Argosy University

## Svetlana Bashkova

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### Bruno Battistoli

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Associate Professor of Management B.S., Cornell University; Ph.D., State University of New York at Albany

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#### Kenneth Betz

Senior Lecturer of Economics B.S., M.B.A., M.A., Fairleigh Dickinson University

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Senior Lecturer of Mathematics B.A., Queens College, The City University of New York; M.S., Columbia University

#### Justin Bogart

Assistant Professor of Inorganic Chemistry B.A., Middlebury College; Ph.D., University of Pennsylvania

### Joshua Bornstein

Assistant Professor of Educational Leadership; Director of Educational Leadership Program B.A., Dartmouth College; M.A., University of Maryland, College Park; Ph.D., Syracuse University

#### Janet Boyd

Associate Professor of English Composition; Interim Associate Dean of University College: Arts • Sciences • Professional Studies, Metropolitan Campus; Director of School of the Humanities, Metropolitan Campus; Interim Director of School of Art and Media Studies, Metropolitan Campus B.A., Rutgers, The State University of New

Jersey; M.A., Ph.D., Columbia University

## Matthieu Boyd

Associate Professor of Literature; Chair of Literature, Language, Writing and Philosophy Department, Florham Campus B.A., Princeton University; Ph.D., Harvard University

#### Gary J. Bronson

Professor of Information Systems B.S., M.S., Ph.D., Stevens Institute of Technology

#### **Donalee Brown**

Professor of Psychology B.S.Ed., Clarion University of Pennsylvania; M.Ed., Colorado State University; M.A., Fairleigh Dickinson University; Ph.D., Seton Hall University

#### Frank Brunetti

Professor of Law and Taxation B.A., Rutgers, The State University of New Jersey; J.D., Duquesne University; LL.M., New York University

### Jaime Buenahora

*Clinical Lecturer of Political Science* B.S., J.D., Pontificia Universidad Javariana, Colombia; M.A., Université de la Sorbonne, France

#### James Bulsiewicz

Assistant Professor of Finance B.S.M.A.B., Tulane University; M.S., London School of Economics and Political Science, United Kingdom; Ph.D., University of Utah

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Professor of History B.A., University of Minnesota; M.A., University of Toronto; M.A., Ph.D., University of Minnesota

#### **Donald Buzinkai**

Lecturer of Accounting B.S., King's College; M.B.A., University of Colorado Colorado Springs

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Professor of Communication B.A., Drury College; M.A., University of Iowa; Ph.D., University of Wisconsin-Madison

#### **Constance Bygrave**

Vancouver Campus Faculty Assistant Professor of Administrative Science B.B.A., Simon Fraser University, Canada; M.B.A., Ph.D., Saint Mary's University, Canada

#### Sylvia Colon Cabassa

Clinical Assistant Professor of Nursing; Associate Director of Undergraduate Nursing Program

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### Daniel J. Calcagnetti

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### Matthew Calderisi, C.P.A.

Associate Professor of Accounting B.B.A., Iona College; M.B.A., Iona College Graduate School of Business Administration

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### Wenyun Dai

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## **David Daniel**

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## Thomas Duncan

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#### Katherine Dunsmore

Associate Professor of Communication Studies B.A., University of Portland; M.A., University of Washington State, Seattle

### Patricia Durso

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#### Anna Dushenkov

Assistant Professor of Pharmacy Practice Pharm.D., Rutgers, The State University of New Jersey

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J. Daniel Wischnevsky, Ph.D. Assistant Dean for Undergraduate Programs

Peter Caliguari, M.B.A. Director of Executive M.B.A. Programs

Ron West, J.D., C.P.A., C.F.P.® Director, Tax Program

# Accounting, Taxation and Law Department

Ron West, J.D., C.P.A., C.F.P.<sup>®</sup> Chair

Economics, Finance and International Business Department

Karen C. Denning, Ph.D. *Chair* 

Management and Entrepreneurship Department

**Gwen Jones, Ph.D.** *Chair* 

Marketing, Information Systems and Decision Sciences Department

Li Qin, Ph.D. Chair Rothman Institute of Innovation and Entrepreneurship

**Dale G. Caldwell, Ed.D.** *Executive Director* 

# Anthony J. Petrocelli College of Continuing Studies

Metropolitan Campus, Teaneck, New Jersey; Florham Campus, Madison, New Jersey; and Vancouver Campus, British Columbia. Canada

Lisa R. Braverman, Ph.D. Dean

**Prerna Dar, M.A.** *Executive Director of Marketing* 

Alexander Sperrazza, M.B.A. Executive Director of Enrollment Management

Francisco Parra, Ph.D. Assistant Director and Advising Counselor for Umdergraduate Programs

Frank Pantaleo, M.A.S. Off-campus Program Coordinator

Miranda Haines, M.A.S. Director of Student Support Services

School of Administrative Science

Katherine Zatz, Ed.D. Assistant Dean

Lorraine S. Nienstedt, M.A.S., C.P.M. Associate Director

Donna Ganley, M.A.S. Senior Coordinator for Off-campus Credit Programs

James H. Behnke, M.Ed. Director of Web, Instructional Technology and Online Learning

Jasmine Sahni, M.A., M.B.A. Coordinator of Online Programs

International School of Hospitality and Tourism Management

John Niser, Ph.D. Director

## **Division of Continuing Education**

**Deborah Fredericks, Ph.D.** Associate Dean for Continuing Education

Jacqueline Lue Raia, B.B.A. Director of Corporate Outreach and Training

Jordan Mitchell, M.A. Senior Program Director

Karen Nelson, M.B.A. Senior Program Director

Cheryl Connolly, B.A. Paralegal Program Coordinator

Christopher DeGisi Program Director

#### Korean Studies Program (MiraeRo)

**Francisco Parra, Ph.D.** *Adviser* 

## Office of Online Programs

Joanna Steiner, M.S. Director of Online Programs

## Puerta al Futuro Program

**Fernando Alonso, J.D.** *Director* 

## Latino Promise Program

Fernando Alonso, J.D. Director

## Sports Administration

Jong-Chae Kim, Ph.D. Co-director

Robyn Lubisco, Ph.D. Co-director

## University College: Arts • Sciences • Professional Studies

Metropolitan Campus, Teaneck, New Jersey; Florham Campus, Madison, New Jersey; and Vancouver Campus, British Columbia, Canada

Vicki L. Cohen, Ed.D. Interim Dean

Janet Boyd, Ph.D. Interim Associate Dean

Mutiara Mohamad, Ed.D. Director, Programs in Language, Culture and Professional Advancement (PLCPA)

## Center for Dyslexia Studies

Mary Farrell, Ph.D. Director

## School of Art and Media Studies

Janet Boyd, Ph.D. Interim Director

## Lee Gildart and Oswald Haase School of Computer Sciences and Engineering

Alfredo C. Tan, Ph.D. Director

Howard Silver, Ph.D. Deputy Director, Engineering, Engineering Technology and Information Technology

#### School of Criminal Justice, Political Science and International Studies

Samuel J. Raphalides, Ph.D. *Director* 

Katie Ingenito, B.A. Assistant to the Director

Peter Sammartino School of Education

Miriam Singer, Ed.D. Interim Director

Louis Ray, Ph.D. Deputy Director

Joshua Bornstein, Ph.D. Director, Educational Leadership Program

Sora Suh, Ph.D. Coordinator of ESL/Second Language Acquisition Program

Carol Karpinski, Ed.D. Director, Master of Arts in Teaching Program

Kathryn Spence, Ed.D. Director, QUEST/B.A.-M.A.T.

**Teresa Oettinger Montani, Ed.D.** Director, Learning Disabilities Program

Vincent Martone, M.A. Director, Field Placement and Certification

## School of the Humanities

**Janet Boyd, Ph.D.** Director

School of Natural Sciences

James Dougherty, Ph.D. Co-director

Marion McClary, Ph.D. Co-director

## Henry P. Becton School of Nursing and Allied Health

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Marycarol Rossignol, Ph.D. Associate Director of Florham Programs

Marilyn Rubin, Ed.M. Associate Director of Allied Health

Sylvia Colon Cabassa, D.N.P. Associate Director of Undergraduate Nursing Program

**Boas Yu, Ed.D.** Associate Director of Graduate Nursing Program

### **Department of Physical Education**

Bradford D. Hurlbut, B.A. Athletic Director

Catherine M. Liggett Coordinator

School of Psychology

**Robert McGrath, Ph.D.** *Director of School of Psychology* 

**Stephen Armeli, Ph.D.** Director, M.A. Program in General/Theoretical Psychology; Director, Undergraduate Studies

Robert Prentky, Ph.D. Director, M.A. Program in Forensic Psychology

Cynthia Radnitz, Ph.D. Director, Ph.D. Program in Clinical Psychology

**Stefanie Ulrich, Ph.D.** Director, Center for Psychological Services

Jamie Zibulsky, Ph.D. Director, Psy.D. and M.A. Programs in School Psychology

## School of Pharmacy and Health Sciences

Florham Campus, Madison, New Jersey (230 Park Avenue, Florham Park, New Jersey)

**Michael J. Avaltroni, Ph.D.** *Dean* 

**Anastasia Rivkin, Pharm.D.** Assistant Dean for Faculty

**Barbara Rossi, M.A.** Assistant Dean for Experiential Education

**Chadwin Sandifer, Ed.D.** Assistant Dean for Student Affairs and Programmatic Effectiveness

Yong Guo, Ph.D. Director of Research and Graduate Studies and Director of Pharmaceutical Sciences

Julie Kalabalik, Pharm.D. Director of Pharmacy Practice

Patricia Lemmerman, M.S. Director of Student Affairs and Community Engagement

Leslie McRae, M.S. Director of Technical Operations

Jennifer Olsakowski, Pharm.D. Director of Student Pharmacist Practice

**Tracy Templin, M.S.** Director of Admissions and Marketing

Ligia Westrich, Ph.D. Director of Assessment

## School of Public and Global Affairs

Florham Campus, Madison, New Jersey; and Metropolitan Campus, Teaneck, New Jersey

**Peter J. Woolley, Ph.D.** *Founding Director* 

Krista Jenkins, Ph.D. Executive Director of Fairleigh Dickinson University Poll

**Paulette M. Laubsch, D.P.A.** *M.P.A. Program Coordinator* 

## **Vancouver Campus**

Wilfred J. Zerbe, Ph.D. Campus Executive

David O'Reilly, M.B.A. Deputy Vancouver Campus Executive

Maria Elizabeth Torres Concepcion, M.D. Office Manager of Vancouver Campus; Senior Assistant to the Campus Executive

## Academic Support and Facilities

Sonali A. Hoheisel, B.A. Assistant Director and Facilities Manager

Ayten Kun, C.C.D.P. Academic Adviser

Nyarai Tawengwa, B.A. Academic Support Assistant

Ruoqi (Sydney) Shi, M.Ed. Academic Adviser

### Admissions

Natalia Kharitonova, Ph.D. Director

Juliana Fiorentino, B.A. Associate Director

Natsumi Otsubo, B.A. Admissions Assistant

Joao Passos Da Camara, M.A.S. Admissions Assistant

B.A. in Individualized Studies Program

Ajay K. Garg, Ph.D. Associate Director

Bahareh Assadi, Ph.D. Assistant Director

## B.S. in Information Technology Program

Vasudevan Janarthanan, Ph.D. Program Coordinator

## **Career Services**

**Jeffrey Lee, B.A.** *Manager* 

June Cho, M.A.S. Assistant

## **Enrollment Services**

Arlette Hernandez, M.A.S. *Director* 

Karla Enriquez Ramos, B.A. Administrative Assistant

Uyen Le, B.S. Clerk

**Soyun Kwon, B.A**. Administrative Assistant

Veronica Liu, Dip. Administrative Assistant

#### Fairleigh Dickinson University Press

James Gifford, Ph.D. Director, Editorial Committee

*Finance* Jolin Wang, B.A.

Accounting Office Clerk Global Scholars Program

Gudrun Dreher, Ph.D. Director

Human Resources

**Eoin Kennedy, M.Sc.** *Human Resources Adviser* 

## International School of Hospitality and Tourism Management

Willy A. Aroca, M.A. Associate Director

## Learning Resources and Support Program

David O'Reilly, M.B.A. Coordinator, Pre-University and Pre-Master's Programs

## Marketing and Recruitment

Amy Yan, M.A.S. Director

Gi Eun (Jeanette) Lee, M.B.A. Associate Director

Sahyra Lora Nova, B.A. Administrative Assistant and Receptionist

## Master of Administrative Science Program

Ajay K. Garg, Ph.D. Associate Director

**Bahareh Assadi, Ph.D.** Assistant Director

#### **Student Services**

Jobin Mojtabavi, M.A.S., RISIA Director

Fernanda Barros, B.A., RCIC Assistant Director

## Technology and Information Services

Jonn Martell, B.Sc. Director

**Estref Resuli, B.Eng.** Senior IT Specialist

University Core

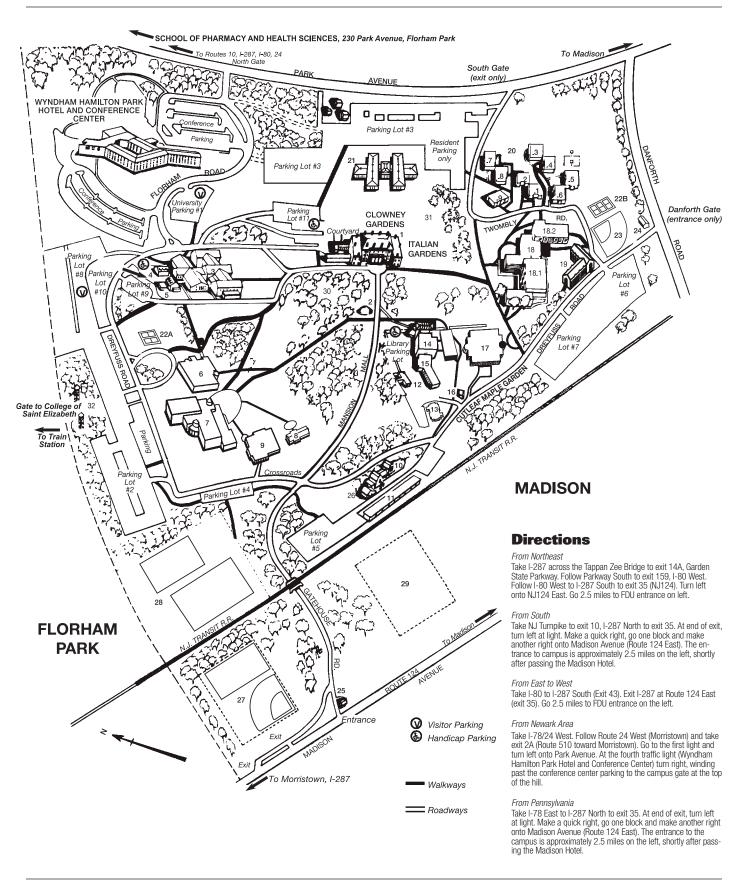
James Gifford, Ph.D. Director

## Wroxton College

Nicholas D.J. Baldwin, Ph.D. Dean and Director of Operations

## **Florham Campus**

Madison, New Jersey



## **Florham Campus**

Madison, New Jersey

## **Campus Buildings**

Hennessy Hall (Mansion)

- Reuter's Rock Science Building 3
- 4 East Cottage
- West Cottage
- Martin F. Stadler, Patrick J. Zenner, Hoffmann-La Roche Inc. Academic Building 6
- 7 Roberta Chiaviello Ferguson and Thomas G. Ferguson Recreation Center
- 8 Rothman Building-Admissions (Rothman Institute of Innovation and Entrepreneurship offices located in Hennessy Hall [Mansion], Bldg. 1)
- Dreyfuss Building Barn (Campus Safety, Campus 10
- Facilities/Maintenance, Web Lab)
- Maintenance Shops
- Maintenance Shops 12
- 13 Chaîne House
- John and Joan Monninger Center for Learning and 14 Research
- 15 Educational Opportunity Fund Office
- Public Relations Office 16
- Frank Santoloci Student Center 17
- Twombly Residence Halls 18 18.1 Florence Twombly Hall
- 18.2 Hamilton Twombly Hall
- Rutherford Hall (Residence Hall) Village Residence Halls 19
- 20
- 20.1 Stirling Hall
- 20.2 York Hall
- 20.3 Ellsworth Hall
- 20.4 Barclay Hall 20.5 Penn Hall
- 20.6 Rice Hall
- 20.7 Wilder Hall
- 20.8 Vanderbilt Hall
- 20.9 Danforth Hall
- 21 Park Avenue Residence Hall 22A BTennis Courts
  - 23 McManus Field
- Softball
- Wellness Center 24
- 25 Gatehouse
- Black Box Theater
- 27 Athletics Field
- Baseball
- Men's Soccer 28
- Robert T. Shields Athletics Field Football
- Men's and Women's Lacrosse 29 Athletics Field
- Field Hockey
- Men's and Women's Soccer Secret Garden
- Sculpture Gardens
- Gate to College of Saint Elizabeth 32

Where to Find Academic Support Center

Monninger Center, Bldg. 14 Admissions Rothman Building, Bldg. 8 Adult Education (Continuing Education) 230 Park Avenue, Florham Park Hennessy Hall (Mansion), Bldg, 1 Advisina Allied Health Science Building, Bldg. 3 Arts and Sciences. Maxwell Becton College of Hennessy Hall (Mansion), Bldg.1 Dreyfuss Building & Hennessy Hall, Arts School of the Bldgs. 9 & 1 Art Studio Florence Twombly Hall, Bldg. 18.1 Ferguson Recreation Center, Bldg. 7 Athletics ATM Machine Santoloci Student Center, Bldg. 17 Audiovisual (Instructional Media) Monninger Center, Bldg. 14 Becton College of Arts and Sciences, Maxwell Hennessy Hall (Mansion), Bldg. 1 Science Building, Bldg. 3 Biology Black Box Theater Bldg. 26 Bookstore Santoloci Student Center, Bldg. 17 Bottle Hill Room and Pub Santoloci Student Center, Bldg. 17 Hennessy Hall (Mansion), Bldg. 1 Bursa Business, Silberman College of Hennessy Hall (Mansion), Bldg. 1 Hennessy Hall (Mansion), Cafeterias Stadler/Zenner Academic Building, Santoloci Student Center, Bldgs. 1, 6 & 17 Campus Executive, Office of Hennessy Hall (Mansion), Bldg. 1 Santoloci Student Center, Bldg. 17 Campus Life Campus Ministry Florence Twombly Hall, Bldg. 18.1 Santoloci Student Center, Bldg. 17 Career Development Science Building, Bldg. 3 Chemistry/Geological Sciences Stadler/Zenner Academic Building, Bldg. 6 Communication Computer Center Peter Falley Dreyfuss Building, Bldg. 9 Computer Science/Mathematics Stadler/Zenner Academic Building, Bldg. 6 Drevfuss Building, Bldg. 9 **Computing Services** Conferences/Summer Programs Santoloci Student Center, Bldg. 17 Confrerie de la Chaîne des Rôtisseurs National Headquarters Chaîne House, Bldg. 13 Continuing Education 230 Park Avenue, Florham Park Copy Center Hennessy Hall (Mansion), Bldg.1 Core Curriculum Office Hennessy Hall (Mansion), Bldg. 1 Counseling Wellness Center, Bldg. 24 Hennessy Hall (Mansion), Bldg.1 Criminology Dean of Students Santoloci Student Center, Bldg. 17 Dean, Maxwell Becton College of Arts and Sciences Hennessy Hall (Mansion), Bldg. 1 Dean, Silberman College of Business Hennessy Hall (Mansion), Bldg. 1 Education Hennessy Hall (Mansion), Bldg. Educational Opportunity Fund (EOF) Bldg. 15 Hennessy Hall (Mansion), Bldg. 1 English **Enrollment Services** Hennessy Hall (Mansion), Bldg. 1 Entrepreneurship, Rothman Institute of Innovation and Hennessy Hall (Mansion), Bldg. 1 Facilities Department Barn, Bldg. 10 Financial Aid Hennessy Hall (Mansion) Courtyard, Bldg. 1 Fine Arts Twombly Residence Halls, Bldg. 18 Florham Institute Hennessy Hall (Mansion), Bldg. 1 for Lifelong Learning Florham Room Santoloci Student Center, Bldg. 17 Food Service Office Santoloci Student Center, Bldg. 17 Freshman Intensive Studies Program Hennessy Hall (Mansion), Bldg, 1 Hennessy Hall (Mansion), Bldg. 1 Global Learning Hartman Lounde Hennessy Hall (Mansion), Bldg. 1 Health Services Wellness Center, Bldg. 24 History/Social Sciences Hennessy Hall (Mansion), Bldg. 1 Honors Program Hennessy Hall (Mansion), Bldg. 1 Hospitality and Tourism Management, International School of Chaîne House, Bldg. 13 Santoloci Student Center, Bldg. 17 Housing Office Chaîne House, Bldg. 13 Human Resources. University Instructional Media Center Monninger Center, Bldg. 14

Interactive Television (ITV) Hennessy Hall (Mansion), Dreyfuss Building, Monninger Center, Bldgs, 1, 9 & 14, and 230 Park Avenue, Florham Park International Education. Office of Hennessy Hall (Mansion), Bldg. 1 Santoloci Student Center, International Student Services Bldg. 17 Journal of Psychology and Behavioral Science Stat Stadler/Zenner Academic Building, Bldg. 6 Languages Hennessy Hall (Mansion), Bldg. 1 Leafs and Grains Stadler/Zenner Academic Building, Bldg. 6 Learning Disabilities, Regional Hennessy Hall (Mansion), Bldg. 1 Center for Hennessy Hall (Mansion), Bldg. 1 Lenfell Hall Library Monninger Center, Bldg. 14 Literary Review, The Gatehouse, Bldg. 25 Literature Hennessy Hall (Mansion), Bldg. 1 Mailroom, University Hennessy Hall (Mansion), Bldg. 1 Barn, Bldg. 10 Maintenance Hennessy Hall, Bldg. 1 Mansion Stadler/Zenner Academic Building, Bldg. 6 Mathematics/Computer Science MBA Program Hennessy Hall (Mansion), Bldg. 1 Medical Technology Science Building, Bldg, 3 Hennessy Hall (Mansion), Bldg. 1 Modern Languages Nurse Wellness Center, Bldg. 24 Paralegal Studies 230 Park Avenue, Florham Park Parking Permits Barn, Bldg. 10 Petrocelli College of Continuing Studies, Anthony J 230 Park Avenue, Florham Park Pharmacy and Health Sciences, 230 Park Avenue, Florham Park School of Philosophy Hennessy Hall (Mansion), Bldg. 1 Physics Stadler/Zenner Academic Building, Bldg. 6 Pillar (Student Newspaper) Florence Twombly Hall, Bldg. 18.1 President, Office of Hennessy Hall (Mansion), Bldg. 1 Psychology Stadler/Zenner Academic Building, Bldg. 6 Pub Santoloci Student Center, Bldg. 17 Public and Global Affairs, 230 Park Avenue, Florham Park School of Public Relations Blda, 16 Public Safety Records/Registration Barn, Bldg. 10 Hennessy Hall (Mansion), Bldg. 1 Regional Center for Learning Disabilities Hennessy Hall (Mansion), Bldg. 1 Rothman Institute of Innovation and Entrepreneurship Hennessy Hall (Mansion), Bldg. 1 Rutherford Room Ferguson Recreation Center, Bldg. 7 Safety/Security Barn, Bldg. 10 Sammartino Room Santoloci Student Center, Bldg. 17 Silberman College of Business Hennessy Hall (Mansion), Bldg. 1 Hennessy Hall (Mansion), Bldg. 1 Snax Social Sciences/History Hennessy Hall (Mansion), Bldg. 1 Special Student Services Santoloci Student Center, Bldg. 17 Student Health Wellness Center, Bldg. 24 Student Life Santoloci Student Center, Bldg. 17 Student Newspaper (Pillar) Florence Twombly Hall, Bldg. 18.1 Student Recreational Services Ferguson Recreation Center, Bldg. 7 Hennessy Hall (Mansion), Bldg. 1 Study-abroad Programs Sullivan Lounge Hennessy Hall (Mansion), Bldg. 1 Swimming Pool Ferguson Recreation Center, Bldg. 7 Dreyfuss Building, Room 125, Bldg. 9 Teleconference Site Dreyfuss Building, Bldg. 9 Theater Santoloci Student Center, Bldg. 17 The Grill Monninger Center, Bldg. 14 University Advancement University Provost and Senior Vice President Hennessy Hall (Mansion), Bldg. 1 for Academic Affairs Stadler/Zenner Academic Building, Bldg. 6 Dreyfuss Building, Bldg. 9 Veterans Services Visual/Performing Arts Web Lab Barn, Bldg. 10 Wellness Center Bldg. 24 WFDM (Student Radio) Santoloci Student Center, Bldg, 17 Writing, College Program Monninger Center, Bldg. 14 Wroxton College (Study-abroad Programs) Hennessy Hall (Mansion), Bldg. 1 Wroxton Room Santoloci Student Center, Bldg. 17

## **Metropolitan Campus**

Teaneck, New Jersey

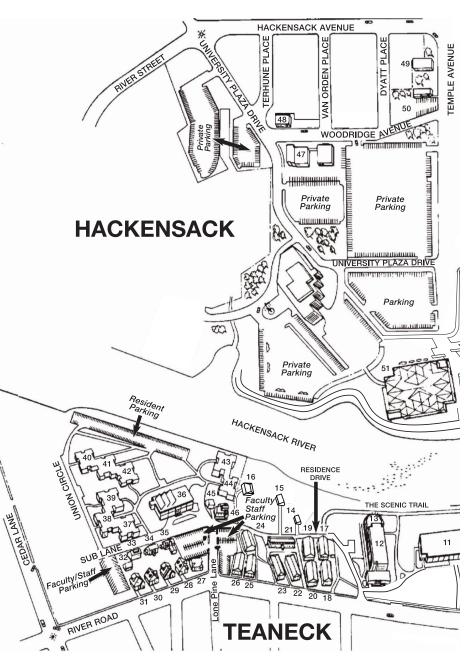
## **Campus Buildings**

- Bancroft Hall (1094 River Road, Teaneck)
- Williams Hall (1090 University Circle, Teaneck)
- Fitness Center (1080 University Circle, Teaneck) 3 4
- Northpointe (Residence Hall) Robison Hall (1040 University Circle, Teaneck) 5
- 6 Robison Hall Annex (1081 Scenic Trail, Teaneck)
- 7 Muscarelle Center for Building Construction Studies (1004 University Circle, Teaneck) Kron Administration Building
- 8 (1000 River Road, Teaneck)
- q University Hall (994 Library Circle, Teaneck)
- 10 Alumni Hall (990 Library Circle, Teaneck)
- Frank Giovatto Library (980 Library Circle, Teaneck) 11
- 12 Becton Hall (960 River Road, Teaneck)
- Becton Theater (960 River Road, Teaneck) 914 River Road, Teaneck (continuation of Lone Pine Lane) 13
- 14
- River House (888 River Road, Teaneck, 15
- continuation of Lone Pine Lane) Banta Coe House (884 Lone Pine Lane) 16 17
- University Court Residence Hall #9 (929 Lone Pine Lane, Teaneck) University Court Residence Hall #10 and 18
- WFDU-FM (920 River Road, Teaneck) 19-23 University Court Residence Halls #4-8
- (896, 906, 916 River Road and 901, 921 Lone Pine Lane, Teaneck)
- 24–26 University Court Residence Halls #1-3 (883 Lone Pine Lane and
  - 882, 886 River Road, Teaneck) Public Safety Office (870 River Road, Teaneck) 27
  - Interfaith Chapel (842 River Road, Teaneck) 28
  - 29 841 River Road, Teaneck
  - 840 River Road, Teaneck 30
  - 31 838 River Road, Teaneck
  - 32 Housekeeping
  - 835 SUB Lane, Teaneck (Programs in Language, Culture and Professional Advancement) 33
  - 839 SUB Lane, Teaneck (SUB Annex) 867 SUB Lane, Teaneck (Dean of Students) 34
  - 35 Student Union Building (SUB) 36
- -44 Linden Residence Halls #1-8 37
- 45 Knight Spot (24/7 Study Lounge)
- 46 880 Lone Pine Lane, Teaneck
- 47 10 Woodridge Ave., Hackensack
- 48 Maintenance Shop
- 49
- 139 Temple Ave., Hackensack 50 131 Temple Ave., Hackensack
- George and Phyllis Rothman Center 51
- (100 University Plaza Drive, Hackensack)
- 52 Dickinson Hall (140 University Plaza Drive, Hackensack) Edward Williams Hall (150 Kotte Place, Hackensack) 53
- Field House 54
- (1130 River Road, Teaneck)
- 1154 River Road, Teaneck
- 56 Naimoli Family Baseball Complex 57
  - Athletic Fields
  - a Softball b Soccer
  - c Tennis

## Where to Find

Academic Advisement Center Academic Affairs, Senior Vice President for	Robison Hall, Bldg. 5
and University Provost	Dickinson Hall, Bldg. 52
Academic Resource Center	Robison Hall, Bldg. 5
Administrative Science	Dickinson Hall, Bldg. 52
Admissions	
Graduate, International Kron Admini	stration Building, Bldg. 8
Undergraduate,	
Full-time, Part-time, Adult	Dickinson Hall, Bldg. 52
Adult Education (Continuing Education)	Dickinson Hall, Bldg. 52
Advisement,	
Business Graduate Students	Dickinson Hall, Bldg. 52
Advisement, Office of Professional Programs/Graduate Studies	Robison Hall, Bldg. 5
Allied Health, Nursing and	Dickinson Hall, Bldg. 52
Alumni Relations	Dickinson Hall, Bldg. 52
AIUITITI NEIAUUTIS	DICKINSULI FIAII, BIUY. 52

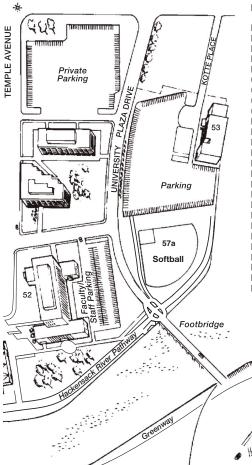
Art and Media Studies University Hall, Bldg. 9 Arts • Sciences • Professional Studies, Robison Hall, Bldg. 5 Rothman Center, 100 University Plaza Drive, Hackensack, Bldg. 51 Dickinson Hall, Bldg. 52 University College: Athletics ATM Machine Giovatto Library & Dickinson Hall, Bldgs. 11 & 52 Audiovisual (Instructional Media) **Biological Sciences** Dickinson Hall, Bldg. 52 Bookstore Alumni Hall, Bldg. 10 Kron Administration Building, Bldg. 8 Bursar Dickinson Hall, Bldg. 52 Business, Silberman College of Campus Executive, Office of Robison Hall, Bldg. 5 Giovatto Library, Bldg. 11 Career Development Certified Financial Planning Dickinson Hall, Bldg. 52 Chaplain's Office Interfaith Chapel, Bldg. 28 Dickinson Hall, Bldg. 52 Chemistry



## **Metropolitan Campus**

Teaneck, New Jersey

Communications/Speech Computer Sciences and Engineering	Robison Hall, Bldg. 5 Muscarelle Center & Becton Hall, Bldgs. 7 &12	
Computing Services	University Hall & Dickinson Hall, Bldgs. 9 & 52	
Continuing Education	Dickinson Hall, Bldg. 52	
Continuing Studies, Anthony J. Petrocelli		
College of E	dward Williams Hall, Bldg. 53	
Cooperative Education	Giovatto Library, Bldg. 11	
Copy Center	Giovatto Library, Bldg. 11	
Core Curriculum Office	Dickinson Hall, Bldg. 52	
Counseling and Psychological Services,		
Student (S-CAPS) 914 F	River Road, Teaneck, Bldg. 14	
Criminal Justice	Robison Hall Annex, Bldg. 6	
Dean of Students 867	SUB Lane, Teaneck, Bldg. 35	
Dean, Petrocelli College of Continuing Studies, Anthony J.	Edward Williams Hall, Bldg. 53	
Dean, Silberman College of Business	Dickinson Hall, Bldg. 52	



Dean, University College: Arts • Sciences	s •
Professional Studies	Robison Hall, Bldg. 5
	Iall, Student Union Building
	on Hall, Bldgs. 10, 36 & 52
	nt Union Building, Bldg. 36
Education	Bancroft Hall, Bldg. 1
Educational Opportunity Fund (EOF)	840 River Road, Teaneck, Bldg. 30
ELS Language Centers	Robison Hall, Bldg. 5
Employment Office	Dickinson Hall, Bldg. 52
	Becton Hall, Bldgs. 7 & 12
English	Robison Hall, Bldg. 5
Enhanced Freshman Experience	Robison Hall, Bldg. 5
Enrollment Management Enrollment, Planning and Effectiveness,	Dickinson Hall, Bldg. 52 Dickinson Hall, Bldg. 52
Office of	Dickinson Hall, Bldg. 52
	nt Union Building, Bldg. 36
Executive MBA Programs	Dickinson Hall, Bldg. 52
Facilities and	Van Haalvaaraali Dida 47
	Ave., Hackensack, Bldg. 47 1154 River Road, Teaneck,
Finance Division, University 1130 &	Bldgs. 54 & 55
Financial Aid Kron Adm	inistration Building, Bldg. 8
Fine Arts	University Hall, Bldg. 9
Fitness Center	Bldg. 3
Fitness Room	Rothman Center, Bldg. 51
Foreign Languages	Robison Hall, Bldg. 5
General Counsel, Office of	Dickinson Hall, Bldg. 52
Global Learning, Office of	Dickinson Hall, Bldg. 52
	Robison Hall Annex, Bldg. 6
Grants and Sponsored Projects	Dickinson Hall, Bldg. 52
Health Services, Student Stude History	nt Union Building, Bldg. 36 Robison Hall, Bldg. 5
Honors Program	Robison Hall, Bldg. 5
Hospitality and Tourism Management	Dickinson Hall, Bldg, 52
	) Lone Pine Lane, Bldg. 46
Human Resources. University	Dickinson Hall, Bldg, 52
Humanities	Robison Hall, Bldg. 5
Information Resources and Technology	Bancroft Hall, Bldg. 1
Institutional Research and Effectiveness	Dickinson Hall, Bldg. 52
Interactive Television (ITV)	Dickinson Hall, Bldg. 52
	Robison Hall Annex, Bldg. 6
International Education, Office of	Dickinson Hall, Bldg. 52
	er Road, Teaneck, Bldg. 29
Intramural Athletics	Rothman Center, Bldg. 51 nt Union Building, Bldg. 36
	nt Union Building, Bldg. 36 nt Union Building, Bldg. 36
Learning Disabilities, Regional	ni onion bulluling, blug. 30
Center for	Robison Hall, Bldg. 5

PATERSON Hittiti 56 · Himmittinnitheiten 57b Soccer Naimoli Family Baseball Complex 1-Faculty/Staff SCENIC TRAIL 6 11 1 €10 -5 1-1.1 9 μ Himmit 54 GREEN 34 255 UNIVERSITY CIRCLE . ٠ וך

	Lost & Found, Public Safety 87	70 River Road, Teaneck, Bldg. 27
		Student Union Building, Bldg. 36
		ridge Ave., Hackensack, Bldg. 47
	Mathematics/Computer Science	Becton Hall, Bldg. 12
	MBA Program	Dickinson Hall, Bldg. 52
	Metropolitan Club	Alumni Hall, Bldg. 10
	Natural Sciences	Dickinson Hall, Bldg. 52
	Nursing and Allied Health	Dickinson Hall, Bldg. 52
		70 River Road, Teaneck, Bldg. 27
	Payroll	Dickinson Hall, Bldg. 52
	Petrocelli College of Continuing	
	Studies, Anthony J.	Edward Williams Hall, Bldg. 53
	Philosophy	Robison Hall, Bldg. 5
	Physical Education	Rothman Center, Bldg. 51
	Physics	Dickinson Hall, Bldg. 52
	Political Science	Robison Hall Annex, Bldg. 6
	Preprofessional Graduate Advisem	ent Robison Hall, Bldg. 5
	President, Office of	Dickinson Hall, Bldg. 52
	Programs in Language, Culture and	d
	Professional Advancement 8	35 SUB Lane, Teaneck, Bldg. 33
	Psychological Services, Center for	131&139 Temple Ave.,
	.,	Hackensack, Bldgs. 49 & 50
	Psychological Services, Student	
		914 River Rd., Teaneck, Bldg. 14
	Psychology	Williams Hall, Bldg. 2
	Public Administration	Dickinson Hall, Bldg. 52
	Publications	Dickinson Hall, Bldg. 52
	Public Relations	Dickinson Hall, Bldg. 52
	Public Safety 87	70 River Road, Teaneck, Bldg. 27
	Radio Station (Student),	
	WFDQ-91.9-FM	University Court #10, Bldg. 18
	Radio Station, WFDU-FM	University Court #10, Bldg. 18
	Records/Registration Kro	n Administration Building, Bldg. 8
	Regional Center for Learning Disab	ilities Robison Hall, Bldg. 5
	Residence Life	880 Lone Pine Lane, Bldg. 46
	River House	888 River Road, Bldg. 15
	Riverside Café A	lumni Hall, Lower Level, Bldg. 10
	Russell H. Ratsch Experimental The	eatre University Hall, Bldg. 9
	Rutherford Room	Student Union Building, Bldg. 36
	Safety/Security 87	70 River Road, Teaneck, Bldg. 27
	Silberman College of Business	Dickinson Hall, Bldg. 52
	Sociology	Williams Hall, Bldg. 2
	Student Government	
		Student Union Building, Bldg. 36
		Student Union Building, Bldg. 36
	Student Newspaper, Equinox	Student Union Building, Bldg. 36
	Study-abroad Programs	Dickinson Hall, Bldg. 52
	Study Lounge 24/7	Knight Spot, Bldg. 45
	Teleconference Site	Dickinson Hall, Bldg. 52
	Telephone Service	Dickinson Hall, Bldg. 52
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	University Advancement, Office of	Dickinson Hall, Bldg. 52
	University College: Arts . Sciences	
	Professional Studies	Robison Hall, Bldg. 5
	University College Gallery	University Hall, Bldg. 9
	University Provost and Senior Vice	
	for Academic Affairs	Dickinson Hall, Bldg. 52
	University Systems and Security	Bancroft Hall, Bldg. 1
	Veterans Services	Dickinson Hall, Bldg. 52
-	WFDU-FM	University Court #10, Bldg. 18
-	Wilson Auditorium	Dickinson Hall, Bldg. 52
-	Wroxton College (Study-abroad Pro	ograms) Dickinson Hall, Bldg. 52

## **Directions**

From North Garden State Parkway to exit 163 to Route 17 South to Route 4 Tennis East. Exit Route 4 at River Road. Campus parking is on the right.

From South Take Garden State Parkway to exit 161 to Route 4 East. Exit Route 4 at River Road. Campus parking is on the right.

From West Follow Route 80 East to Garden State Parkway North. Proceed on Garden State Parkway to exit 161 (Route 4 East). Follow Route 4 to River Road exit. Campus parking is on the right.

From East Take the George Washington Bridge: follow signs to Route 4 West. Exit Route 4 at River Road. Campus parking is on the left, past the athletic fields.

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