



Sistema Universitario Ana G. Méndez  
Universidad Metropolitana  
San Juan, Puerto Rico

# GRADUATE CATALOG

2010-2012



Universidad Metropolitana Graduate Catalog 2010-2012

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Universidad Metropolitana is a private post secondary educational institution and a member of the Ana G. Méndez University System (AGMUS), a non-profit organization. The AGMUS, is governed by a fifteen-member Board of Directors. Five members of the board are permanent and ten are appointed by the Board to four-year terms.



Dr. Federico M. Matheu, Chancellor

The Executive Officers of the Central Administration are: the President, the Executive Vice-President, the Vice-President for Human Resources the Vice-President for Financial Affairs, the Vice-President for Planning and Research, the Vice-President for Administrative Affairs, the Vice-President for Academic Affairs, the Vice-President for Marketing and Student Affairs, and the Vice-President and General Manager for Channel 40. They are selected by the Board of Directors.

The by-laws of the Ana G. Méndez University System stipulate the objectives, powers, officers, committees, meetings and financial affairs of the Institution. They also specify the way in which the by-laws and regulations of each one of the autonomous institutions will be approved.

The University does not reject or deny the legitimate rights, or discriminate against any person for reason of race, sex, physical handicap, social condition, nationality, age, political affiliation, religious, social or trade union beliefs.

## History

Six decades ago, three distinguished educators, Ana G. Méndez, Florencio Pagán Cruz, and Alfredo Muñiz Souffront recognized the need for new approaches in education to keep pace with social and economic changes in Puerto Rico. In 1949, they laid the groundwork for the creation of modern, flexible institutions of higher education.

The first of three such institutions, Puerto Rico Junior College, opened its doors in 1949. It started with a campus in Río Piedras, and in 1959 moved to new facilities in Cupey. In 1969, the founders organized the Ana G. Méndez Educational Foundation (AGMEF) in order to extend their twenty years of experience in higher education to a broader population.

As part of this ongoing development, the Colegio Universitario Metropolitano was established in the Cupey campus in 1980, and became Universidad Metropolitana in 1985.

## Mission and Vision

### Mission

Universidad Metropolitana's mission is to provide its students with an atmosphere of academic freedom and intellectual challenge, the necessary resources to help them develop high cultural and ethic values, critical thinking, intellectual curiosity, linguistic and technological skills as well as personal and professional skills required for success in their professions and their daily lives. The academic experience is supported by modern technologies applied to teaching, learning, and process assessment. UMET's distinctive institutional features are marked by the commitment to the quality of learning, undergraduate and graduate scientific research, local and international internship opportunities and student and faculty exchange with prestiged Institutions, and community service. UMET is highly committed to environmental resources preservation and their sustainable development.

Universidad Metropolitana subscribes to a flexible admissions policy that provides open channels of communication between the academic community and the administration to simplify administrative procedures and directly involve the academic community in the decision-making process within a traditional hierarchy of rules and regulations. This policy is supported by a highly qualified faculty, committed to academic excellence. Students' support services are integrated and geared towards the achievement of their academic, social and cultural goals. Universidad Metropolitana recognizes its responsibility to offer "face-to-face", as well as distance learning services to expand higher education options in Puerto Rico.

UMET is a learning community that responds swiftly to the needs and interests of its students, faculty and administrative personnel set in adequate, safe and attractive facilities. Team work and a deep sense of belonging between groups is favorable to the personal and professional development of its human resources. Universidad Metropolitana recognizes that education is a lifelong process and values adult education as a contribution to non traditional forms of higher education.

UMET promotes individual and collective commitment with excellence in all aspects of the post-secondary education realm in an environment of great intellectual challenge with ample opportunities for the development of human talent and potential.

### Vision

- To place UMET as a university community of scholars that constantly evaluates the challenges imposed by social, economic and political changes that occur in our country and in the world and responds to them through the creation of innovative programs that facilitate the personal and professional development of its undergraduate and graduate students in Liberal Arts, Allied Health Sciences, Education, Business Administration, Environmental Affairs, and Sciences and Technology.
- To project itself as an institution that prepares its graduates with the skills and competencies that are necessary for their successful participation in today's society: excellent oral and written communication skills in Spanish and English, technology literacy, team work and decision-making skills as well as a sense of responsibility for the decisions taken.
- To be recognized as a university that promotes current knowledge of learning and research as a means to achieve student satisfaction and retention.

- To be recognized for its commitment with all aspects of environmental affairs and for its contribution to the community.
- To be distinguished for its leadership in science and technology through the creation of opportunities for the development of its students.
- To be recognized as an avant-garde institution in educational technology through the use of telecommunications and distance learning.
- To continue in its joining efforts to remain as an institution of excellence in the fulfillment of its mission and goals.
- To be distinguished by upholding its continuous search for initiatives towards achieving high levels of retention within a flexible admissions policy.

### **Statement of Policy**

The catalog contains the major points of the current agreement between the students and Universidad Metropolitana. Regardless of the date on which the agreement shall become effective, the Institution will maintain its right to admit, re-admit or register a student only for a semester, part-of-term or session, separately. The Institution will also limit its agreement to the semester, part-of-term or session in which the student has properly enrolled and has paid the corresponding fee.

It is the student's responsibility to know and comply with the instruction expressed herein, which coincide with by-laws and regulations of the Institution, the administrative instructions, and the federal laws on civil rights.

Norms and regulations contained in this document are subject to institutional and/or administrative changes without previous notification.

### **Board of Directors and Administration of AGMUS**

Lcdo. Antonio J. Colorado, Presidente de la Junta  
 Dra. Florabel G. Mullick, Vicepresidenta de la Junta  
 Dr. José F. Méndez, Presidente del Sistema  
 Ing. José Domingo Pérez  
 Lcda. Zoraida Fonalledas  
 Lcdo. Juan R. Melecio  
 Dr. Víctor Hernández  
 Dr. Félix R. Schmidt  
 Ing. Daneris Fernández  
 Sr. José F. Méndez, Jr.  
 Sr. Héctor Jiménez Ramírez  
 S.E. René A. León Rodríguez

### **Administrative Staff**

José F. Méndez, Jr., Acting Executive Vice President  
 Alfonso L. Dávila Silva, Vice President for Financial Affairs  
 Jorge L. Crespo Armáiz, Vice President for Planning and Academic Affairs  
 Francisco J. Bartolomei, Vice President for Marketing and Student Affairs  
 Victoria de Jesús, PhD, Vice President for Human Resources  
 Jesús A. Díaz Ortiz, Vice President for Administrative Affairs  
 Luis J. Zayas Seiyo, Vice President for National and International Affairs  
 John Navarro Ferreira, CPA, CIA, Director, Internal Audit  
 Margarita T. Millán, Esq., Vice President and General Manager, TV Stations WMTJ/WQTO

Migdalia Torres Rivera, PhD, Chancellor, Universidad a Distancia Ana G. Méndez  
Federico M. Matheu, PhD, Chancellor, Universidad Metropolitana  
Dennis Alicea Rodríguez, PhD, Chancellor, Universidad del Turabo  
Alberto Maldonado Ruiz, Esq., Chancellor, Universidad del Este

## **Administration and Staff of Universidad Metropolitana**

### **Office of the Chancellor**

Federico M. Matheu, Ph.D., Chancellor  
María de P. Charneco, M.A., Vice Chancellor for Administrative Affairs  
Zaida Vega, Ed.D., Vice Chancellor for International and Corporate Affairs  
Carmen Rosado León, M.B.A., Vice Chancellor of Student Affairs  
Carlos Fuentes, B.A., Acting Vice Chancellor of Information Resources  
Jaime Dominguez, Eng., Manager of Physical Facilities  
Gladys L. Cora, M.A., Vice Chancellor for External Resources  
Belissa Aquino, BA, Assistant Vice Chancellor for Institutional Development and Alumni Affairs  
Yvonne Guadalupe, M.A., Director of Public Relations  
Elizabeth Cancel, M.B.A., Director of the University Center of Bayamon  
Irma del Pilar Cruz, J.D., Director of the University Center of Jayuya  
Luis A. Ruiz, M.A., Director of the University Center of Aguadilla

### **Office of the Vice Chancellor**

Omar Ponce Rivera, Ph.D., Vice Chancellor  
Mildred Arbona, Ph.D. ©, Associate Vice Chancellor for Administrative Affairs and Faculty Evaluation  
Adanid Prieto, Ed.D. ©, Associate Vice Chancellor for Licensing and Accreditation  
Awilda Perez, M.B.A., Associate Vice Chancellor for Student Retention and Development  
Gregorio Villegas, M.A., Associate Vice Chancellor for Outreach  
Nellie Pagán, Ph.D., Assistant Vice Chancellor for Institutional Assessment  
Pedro Hernández, M.B.A, Dean of the School of Business Administration  
Carlos Padín, Ph.D., Dean of the School of Environmental Affairs  
Lourdes Maldonado, Ed.D., Dean of the School of Health Science  
Rebecca Fruge, Ph.D., Director of the Graduate Program of Nursing  
Judith González, Ed.D., Dean of the School of Education  
Ángel Canales, Ed.D., Associate Dean, Graduate Program of Education

### **Accreditation, Licensing and Memberships**

Middle States Commission on Higher Education  
3624 Market Street, Philadelphia, PA 19104  
Phone: (267) 284-5000

Puerto Rico Council on Higher Education  
P.O. Box 19900, San Juan, PR 00910-1900  
Phone: (787) 724-7100

National League for Nursing Accrediting Commission  
3343 Peachtree Road NE  
Suite 500  
Atlanta, GA 30326  
Phone: (404) 975-5000

Puerto Rico General Council for Education  
P.O. Box 195429  
San Juan, PR 00919-5429  
Phone: (787) 764-0101

Commission for Independent Education  
Florida Department of Education  
2650 Apalachee Parkway  
Suite A  
Tallahassee, Florida 32301  
Phone: (850) 245-3200

International Association for Continuing Education and Training (IACET)  
8405 Greensboro Drive  
Suite 800  
McLean, VA 22102  
Phone: (703) 506-3275

**Universidad Metropolitana is a member of the following organizations:**

American Association for Adult and Continuing Education  
American Association of Collegiate Registrars and Admissions Officers  
American Association for Higher Education  
American Council on Education  
American Library Association  
American Physical Plant Association  
Asociación Universitaria de Programas de Honor de Puerto Rico  
Association of Caribbean University and Research Libraries  
Association for Educational Communication and Technology  
Association of English Departments  
College Entrance Examination Board  
Communication and Educational Technology Association  
Council for Continuing Education Units (CEU)  
Consortio Recursos Universitarios Sembrando Alianzas en Contra de las Drogas y Alcohol  
Consortio Interuniversitario de Acción Contra el SIDA  
Consortio Interuniversitario Estudiantil Nacional  
International Facility Management Association  
Learning Resources Network  
National Collegiate Honors Council  
National League for Nursing  
National University Continuing Education Association (NUCEA)  
Physical Education and Recreation Association  
Puerto Rican Association for Higher Education  
Puerto Rican Association of Honors Programs  
Puerto Rico Association for Counseling and Development  
Puerto Rico Chamber of Commerce  
Puerto Rico Library Association  
Puerto Rico Association of Colleges Registrars and Admissions Officers  
Puerto Rico Association of Financial Aid Administrators  
Puerto Rico Association for Professional Counseling  
Service members Opportunity Colleges (SOC)

### **Academic Board**

The Academic Board of Universidad Metropolitana regulates all academic aspects of the Institution. It recommends relevant regulations regarding faculty, curricula, educational projects and other educational innovations.

The Academic Board consists of the Vice-Chancellor, the Director of the Library, one Associate Dean of each School, two Student Representatives, one Full-Time Faculty for each School or Department, and as many Faculty required to obtain absolute majority.

### **Administrative Council**

The Administrative Council of Universidad Metropolitana is the legislative body that establishes the Institutional policy of the college in accordance with the statutes of the Ana G. Méndez University System, as established by its Board of Directors.

The Administrative Council is constituted by the Chancellor, the Vice-Chancellors, the Deans and the Manager of Physical Facilities; five Faculty Representatives of the Schools and two Students' Representatives.

## **Admission and Financial Aid Office**

### **Admission Requirements**

Students who apply to the Graduate Program must comply with the requirements determined by each corresponding School.

### **Readmission**

1. An applicant for readmission is a student who has interrupted his/her studies for at least one semester, and who wishes to continue studying.
2. The applicant must meet the academic requirements established by the Institution that include:
  - A completed application for admission.
  - A non-refundable application fee of \$25.00 payable to Universidad Metropolitana.

### **Special Students**

Students having a Master's Degree who wish to take courses to fulfill a professional requirement or complete another Master's Degree may apply as Special Students. The following documents must be submitted with the application form:

- Official transcript with certification of the degree obtained.
- A non-refundable application fee of \$25.00 payable to Universidad Metropolitana

### **Transitory Students**

Students who come to the Universidad Metropolitana with a written authorization from the institution or university they attend as regular students to take courses not leading to a degree.

The following documents must be submitted with the application form:

- An official permit from the institution.
- A non-refundable application fee of \$25.00 payable to Universidad Metropolitana

## **Foreign and International Students**

Foreign and International Students that apply as new students must submit the following documents:

- Official transcript of last studies
- Certificate of Equivalence of the academic credentials
- EXADEP (PAEG) o GRE scores.
- Completed Affidavit of Support form (I-134) provided by the Admissions and Financial Aid Office authorization.
- Evidence of Visa (F1), Card of Resident permanent or evidence of card that indicates to study.
- A non-refundable application fee of \$25.00 payable to Universidad Metropolitana

Foreign Students applying as transfer students must bring the following documents:

- Official transcript of last studies.
- A copy of the Catalog of the University attended in the country of origin.
- Evidence of Visa (F1), Card of Resident permanent or evidence of card that indicates to study.
- A non-refundable application fee of \$25.00 payable to Universidad Metropolitana.

\*The student has 45 days to deliver the credit transcript, if the students do not comply with this term, his registration will be cancel.

## **Expiration of Documents**

Upon student request, the Admissions and Financial Aid Office may extend the validity of the admission granted for one additional semester of the same academic year for which he/she was admitted.

## **Reserved Rights**

In order to safeguard its goals and objectives, Universidad Metropolitana reserves the right to admit, readmit or register any student in any semester, session or class. For the same reasons, the University reserves the right to suspend a student temporarily or permanently.

## **Student Financial Aid for Graduate Students**

### **LOAN PROGRAMS**

#### **Federal Family Education Loan Program (FFELP)**

Federal Stafford Loans are offered at a variable interest rate, with a cap of 6.80%. For "Subsidized-Loans", the government pays the interest while the student is in school; for "Unsubsidized Loans" the student is responsible for paying the interest while you are in school. If the student chooses not to pay the interest, it will accrue and be capitalized (added on to the principle).

### **Alternative Loans**

The Alternative Loans is a private loans designed to cover educational cost of the students that are beyond the reach of most Federal Aid Program. The interest rate is variable and students can use this loan to cover one hundred percent of their total cost of attendance, less other aid received.

## **Academic Information**

### **Registration and other Related Procedures**

The Registrar's Office is responsible for the maintenance of all official academic students' records and for issuing transcripts, certifications, pre-registration, diplomas and graduation certificates, as well as submitting or mailing the grade reports to students.

### **Pre-registration**

Pre-registration is the process by which active students have the opportunity to select the courses for which they will officially register during the registration process.

The pre-registration period takes place during the second semester.

### **Registration**

The Vice-Chancellor for Student Affairs determines the registration procedures. No program of studies is considered valid without his/her approval or that of his/her delegate.

Candidates for admission will not be able to register until they have received an official statement of admission. Detailed information explaining the registration procedures will be distributed in advance.

Students are required to register on the dates and during the hours assigned to their respective groups according to the registration schedule announced by the University.

### **Late Registration**

Late registration will be held, if possible, before classes officially begin. Students who do not go through the pre-registration process, or who fail to attend registration on the assigned date, may register during the late registration period, provided there is space in the course sections they select. No student will be able to register after the period determined for late registration.

After the registration period, all courses will become a permanent part of the student's record. Students may ask the Registrar to cancel their registration by filling the appropriate cancellation request forms and turning them in at the Registrar's Office before the first day of class.

Registration is not complete until the student has:

1. Paid all charges and fees required by the Office of the Bursar,
2. Obtained the official seals of the Bursar on his/her official registration form,
3. Signed a declaration binding the student to abide by the rules and regulations of the Institution,
4. Delivered and completed all documents requested by the Institution at admission.

### **Classification of Students**

#### A. By credit -hours enrolled

1. Full time Students – Those who have fulfilled the admissions requirements of the Institution and are carrying a program of six or more credits hours per semester in a program leading to a degree, diploma or certificate.
2. Part time Students – Those who have fulfilled the admissions requirements of the University and are taking a program leading to a degree, diploma or certificate, but who are carrying three to five credit hours of work per semester.
3. Less than half time- Those who have fulfilled the admission requirements of the University and are taking a program leading to a degree, diploma or certificate but who are carrying one to two credit hours of work per semester.

#### B. By credit hours leading to a degree

### **Graduate student**

1. First-year Students - Those who have a completed minimum of 3 to 12 credit hours at the University
2. Second-year Students - Those who have completed a minimum of 13 to 24 credit hours.
3. Third-year Students - Those who have completed a 25 or more credit hours at the University.

#### C. By grade-point average (See Student Academic Status section)

1. Students on Academic Probation
2. Students on Academic Suspension
3. Honor Students

### **Special Conditions and Regulations**

1. Students who have registered with the maximum academic load permitted and need three more credits to complete the graduation requirements in the same semester will be allowed to take three additional credits with the written authorization from the appropriate Dean or Associate Dean of the School.
2. No student will have an academic load greater than 18 credits. The maximum academic load in the summer will be six (6) credits. An academic load of eighteen (18) credits will be permitted to students who are graduation candidates in the summer and have the written authorization from the appropriate Dean or Associate Dean of the School.
3. All students will be given a reasonable time to graduate or complete their notified area of concentration. The University will reserve the right to admit, readmit or

register any student in any semester, session or class. For the same reasons, the University reserves the right to suspend a student temporarily or permanently.

#### 4. Changes in Programs or Schedules

A student may change his/her program of study in accordance with the following rules:

- a. The student must have written authorization of the Dean or Associate Dean of the School in order to be processed by the Registrar's Office.
- b. The Institution will make every reasonable effort to offer courses as announced, but it reserves the right to change the time schedule or to withdraw a course or courses.

#### 5. Relocation of Students

At the end of the period for late registration the Registrar may relocate students where elimination or re-scheduling of courses has taken place. Changes of courses will be allowed with the written recommendation of the Dean or Associate Dean of the School. Such changes should take place on the dates appointed for such purposes in the academic calendar.

#### **Official Admission to Classes**

At the beginning of regular classes each student should present his/her registration program to each one of his/her instructors.

Students should attend classes and/or sections where they enrolled, and instructors should admit to their classes only those who have been officially registered in their corresponding courses and sections. The Registrar's Office is not responsible for recording grades of students who attended classes and/or sections in which they were not officially registered.

#### **Withdrawals**

1. Total or partial withdrawals are allowed during a regular part of term or summer session as specified in the academic calendar in order to be processed by the Registrar's Office.
2. Any student who is officially registered, and completes the required procedure for withdrawal, will receive a withdrawal (W) grade.
3. Any student, who fails to complete the required procedure for dropping a course before the stipulated date and whose absences exceed the maximum allowed, will receive a withdrawal failure (WF) grade.
4. Total withdrawal is allowed at any moment before the last day of classes in the semester or summer session.
5. Total withdrawal is considered in the case of a registered student who drops a 100% of his total course load. This does not include the two summer sessions.

6. The deadline for voluntary total withdrawals will be the last day of attendance in the part of term or summer session.
7. The institution reserves the right to require a student to withdraw from any course or from the University, temporarily, for any of the following reasons:
  - a. Possibility of hazard to the health of the student or that of other students, if enrollment were continued.
  - b. Refusal to obey regulations or serious misconduct on the part of the student.
  - c. Deficient academic work (below required scholastic standards).
8. Students who withdraw from the Institution or finish their studies without settling their financial obligations graduation certificates transcripts or diplomas.

### **Changes in Name, Address or Social Security Number**

Students should notify the Registrar's Office of any change of address. The same procedure should be followed with corrections or changes in the names or social security numbers of students. In these cases, the students should present evidence of the changes.

### **Class Attendance**

1. Class attendance is mandatory. The students will be responsible for work missed.
2. If a student enrolled in a course never attends each and every class, the professor will identify him/her as a non-attending student (N/A). The Registrar's Office, then, will adjudicate a withdrawal for non-attendance (WN). Adjustments in Financial Assistance benefits or total cancellation of Financial Aid and the payment of 1/3 of the total cost of enrollment, as pertinent, will also be in effect.
3. Those students whose absences exceed the minimum of consecutive ten hours allowed and do not have authorization of the professor, or have not processed official withdrawal, will receive a "WF" classification as penalty. This classification has a value of 0 and affects the grade point average.

### **Student Evaluation Procedures**

1. Graduate students must have at least one partial exam and one final exam. These partial grades may consist of tests or any other kind of evaluation activity chosen by the instructor.
2. An instructor may grant an opportunity to make up a test or quiz which had been previously announced to any student having a valid excuse.
3. Students must complete any work required for a partial grade before the end of the semester; otherwise, they will be given a zero (0) for that particular assignment.
4. It is the student's responsibility to clarify any questions about partial grades before the date scheduled for the final evaluation activity of the course.

### **Student Evaluation Procedures**

1. Instructors are required to provide a minimum of three partial grades and one final evaluation activity with the value of a partial grade, during every given semester. These partial grades may consist of tests or any other kind of evaluation activity chosen by the instructor. Graduate students must have at least one partial exam and one final exam.

2. An instructor may grant an opportunity to make up a test or quiz which had been previously announced to any student having a valid excuse.
3. Students must complete any work required for a partial grade before the end of the semester; otherwise, they will be given a zero (0) for that particular assignment.
4. It is the student's responsibility to clarify any questions about partial grades before the date scheduled for the final evaluation activity of the course.

### Grading System

1. The unit of measure for determining the course value is the credit, which is equivalent to one hour of class work per week during a given semester, or two hours of class per week during a summer session.
2. The credit equivalents for laboratory work have been determined according to the rules of each School.
3. Scholastic standing is indicated by the following letter grades:

### Graduate

A	(4.00-3.50)	=	excellent
B	(3.49-2.50)	=	good
C	(2.49-2.00)	=	satisfactory
D	(1.99-1.00)	=	deficient
F	(Less than .99)	=	failure

4. To determine the grade point average the following values will be used:

A	=	4
B	=	3
C	=	2
D	=	1
F	=	0

5. In special cases, the following annotation system will apply:

W	=	withdrawal
WF	=	excessive unjustified absences from courses
I	=	student absent from final examination
WN	=	student was enrolled but

never attended

P	=	passed
NP	=	not passed
IP	=	in progress

### Standards for Satisfactory Academic Progress

Satisfactory Academic Progress will be understood as the status of a student that has maintained the required percentage of credits with the corresponding Grade Point Average.

The purpose of the Standards for Satisfactory Academic Progress is to evaluate that students approve the credits percentage required, with an accumulated academic

index equal or higher to the retention index, according to their program of studies. It also establishes a formal process through which students that are encountering academic difficulties can be identified and the necessary help can be provided.

The student has a right to appeal the institutional determination regarding his/her status if he/she understands that there is academic progress and that the institution's determination is due to an administrative error or that, during the academic year, a critical situation existed that prevented him/her from obtaining satisfactory academic progress as established by the Institution.

## **Definitions**

### **Attempted Credits**

Attempted credits are the number of credits of all registered courses, independently of the grades received. This includes accepted transfer credits.

### **Approved Credits**

Approved Credits are the number of credits of all courses in which the grades of A, B, C, D, or P, including transfer credits, are obtained.

The student should approve the courses according to the Standard of Academic Progress for the type of academic program in which he/she is enrolled: Master's, Doctor's, and Graduate certificate, according to the number of accumulated credits and the cumulative academic grade point average, as established in the following tables:

**Required Credits and Retention  
Index per Program**

**Bachelors-Masters Degree**

<b>Bachelor- Master of 153 credits</b>		
<b>Attempted Credits</b>	<b>% Credits Required</b>	<b>Retention Index Required</b>
1-33	50%	1.50
34-66	53%	1.75
67-99	56%	2.00
100-132	59%	2.50
133-165	62%	3.00
166-198	65%	3.00
199-230	67%	3.00

<b>Bachelor- Master of 156 credits</b>		
<b>Attempted Credits</b>	<b>% Credits Required</b>	<b>Retention Index Required</b>
1-33	50%	1.50
34-66	53%	1.75
67-99	56%	2.00
100-132	59%	2.50
133-165	62%	3.00
166-198	65%	3.00
199-234	67%	3.00

**Masters Degrees**

<b>Masters of 33 credits</b>		
<b>Attempted Credits</b>	<b>% Credits Required</b>	<b>Retention Index Required</b>
1-10	50%	2.50
11-20	55%	2.70
21-30	60%	2.90
31-40	65%	3.00
41-50	67%	3.00

<b>Masters of 36 credits</b>		
<b>Attempted Credits</b>	<b>% Credits Required</b>	<b>Retention Index Required</b>
1-10	50%	2.50
11-21	55%	2.70
22-32	60%	2.90
33-43	65%	3.00
44-54	67%	3.00

<b>Masters of 39 credits</b>		
<b>Attempted Credits</b>	<b>% Credits Required</b>	<b>Retention Index Required</b>
1-12	50%	2.50
13-24	55%	2.70
25-36	60%	2.90
37-48	67%	3.00
49-59	67%	3.00

<b>Masters of 42 credits</b>		
<b>Attempted Credits</b>	<b>% Credits Required</b>	<b>Retention Index Required</b>
1-12	50%	2.50
13-24	55%	2.70
25-36	60%	2.90
37-48	65%	3.00
49-63	67%	3.00

<b>Masters of 44 credits</b>		
<b>Attempted Credits</b>	<b>% Credits Required</b>	<b>Retention Index Required</b>
1-12	50%	2.50
13-24	55%	2.70
25-36	60%	2.90
37-48	65%	3.00
49-66	67%	3.00

**Doctorate Program**

<b>Doctorate of 54 credits</b>		
<b>Attempted Credits</b>	<b>% Credits Required</b>	<b>Retention Index Required</b>
1-16	50%	3.00
17-24	53%	3.00
25-36	56%	3.00
37-48	59%	3.00
49-60	62%	3.00
61-71	65%	3.00
72-81	67%	3.00

<b>Doctorate of 63 credits</b>		
<b>Attempted Credits</b>	<b>% Credits Required</b>	<b>Retention Index Required</b>
1-16	50%	3.00
17-24	53%	3.00
25-36	56%	3.00
37-48	59%	3.00
49-60	62%	3.00
61-71	65%	3.00
72-95	67%	3.00

### Professional Certificate Post BSN

Professional Certificate of 15 credits		
Attempted Credits	% Credits Required	Retention Index Required
1-9	50%	2.50
10-16	60%	3.00
17-23	66%	3.00

### Student Academic Status

There will be five types of students based on the cumulative academic grade point average: honor students, students in progress, students on academic probation, students on academic suspension and student in academic warning.

1. Honor Students - Those students carrying not less than twelve credit hours with a grade point average of 3.50 or more and who fulfill the requirements of the Vice-Chancellor for Student Affairs.
  - a. The Vice-Chancellor for Student Affairs will announce the names of all honor students, the Department to which they belong, their status, and their area of concentration.
  - b. Honor students are eligible to serve as tutors and as assistants to faculty members.
2. Students in Progress - Those whose grade point average is equal to or greater than the minimum retention grade point average.
3. Students on Academic Probation - Those students with a grade point average, earned credit hours, or both, below the Standards for Satisfactory Academic Progress for this category.
4. Students on Academic Suspension - Those students who have been on extended academic probation and not been able to overcome their academic deficiencies.
5. Academic Warning-Those Students that are at risk of being classify as Academic Probation or have their financial aid suspended due to his grade point average or credit hours.

### Grade Reports

Semester grade reports will be mailed to each student by the Registrar's Office at the end of each academic term, summer session and part of term.

The grade point average is obtained by dividing the total number of honor points by the total number of credit hours in which the student has received a final grade, even those where an F or WF is final. The credits taken at the University will be the only ones used to compute the student's grade point average.

### **Incomplete Courses**

1. An annotation of Incomplete will be reported only when a registered student fails to take the final examination, to submit a semester project, and/or is absent from the last two laboratory meetings.
2. Incompletes will be removed after the student completes the required work under the following conditions:
  - a. Within thirty (30) calendar days following the first day of classes during a second semester, if the incomplete belongs to the first semester, or
  - b. Within thirty (30) calendar days following the first day of classes during a first semester, if the incomplete belongs to the second semester or to the summer session.
3. It is the student's responsibility to make all the necessary arrangements with the instructor to remove the incomplete within the specified time.
4. It is the professor's responsibility to submit to the School a signed list with the names of the students receiving incompletes as well as a copy of the final exam that will be offered to decide the student's final grade.
5. If a graduate student fails to complete the requirements of any of the thesis courses, an annotation of IP will be reported. Two opportunities to fulfill the requirements of the thesis will be granted.

### **Student Suspension for Academic Reasons**

Students who fail to meet the academic standards are subject to suspension from the University for one (1) academic year. A suspended student may qualify for academic probation if recommended by the Vice-Chancellor of Student Affairs or the Satisfactory Academic Progress Appeals Committee.

### **Academic Probation**

A suspended student may qualify for academic probation if recommended by the Satisfactory Academic Progress Appeals Committee, upon completion of the following procedure:

1. The student must submit a written request for probation to the Satisfactory Academic Progress Appeals Committee.
2. The Satisfactory Academic Progress Appeals Committee will consider only situations related to students' personal affairs, economic problems or dysfunctions in family relations.
3. The probation period will last two semesters.
4. Students who do not reach the minimum academic average for retention during the probationary period will be suspended. If the student is placed on a second probationary period and again does not meet the minimum academic average for retention, he/she will be permanently suspended.

The decisions reached by the Satisfactory Academic Progress Appeals Committee will be put in writing and will be final.

### **Minimum Grade Average Required for Readmission**

1. Readmission to the University will be based on the norms established by the Institution.
2. Readmission to the University must be approved by the Satisfactory Academic Progress Appeals Committee. As a condition for readmission, the student must reach the minimum grade point average required, based on the number of credits in a term of two academic semesters: Otherwise, the student will be dismissed for a period of one academic year. If the student is suspended for a second time, he/she will be permanently dismissed.
3. Universidad Metropolitana will not give credit for courses taken by the students at other institutions during the time of their suspension.

Students dismissed for academic deficiency cannot be registered.

### **Family Rights and Privacy Act Information Statement**

In accordance with Public Law 93-380, FAMILY EDUCATIONAL RIGHTS AND PRIVACY ACT, students have the right at Universidad Metropolitana to inspect educational records, and correct such records if warranted. The student protects students from release of information open for inspection and review unless he or she waives this right. The parent(s) of U.S.C.S. s. 152 Internal Revenue Code also has the right to inspect records, which are maintained by the University on behalf of the student.

There are two distinct categories of records: (1) Directory Information Records, (2) Limited Access Records.

(1) **Directory Information**, which may be made public, includes the student's name, last known address, telephone number, date and place of birth, major field of study, participation in officially recognized activities and sports, weight and height of members of athletic teams, dates of attendance, degrees and awards received, and the most recent previous educational agency or institution attended by the student. This information will only be released by the office of the Vice-Chancellor for Student Affairs or a representative after the petitioner has demonstrated a legitimate need to have such information. Students who do not wish release of "directory information" must complete a statement in the Office of the Registrar no later than the last day of each term. Otherwise, directory information may be disclosed by the University for legitimate purposes.

(2) **Limited Access Records** include to the permanent academic records of the student, disciplinary records, financial information, and testing data. This category also includes all records maintained officially by the Institution which do not come under the categories of Directory Information or Sole Possession Records. The Institution will not release information in Limited Access Records except after written permission of the student or parent.

### **Student Right-to-Know and Campus Security Act**

The common intention of the three major parts of this 1990 Act is to enhance the choice of the potential consumer, the postsecondary student, by reporting statistics about the "performance" of higher education institutions.

- Section 103 covers disclosures about the graduation or completion rate and other postsecondary outcomes of all students.
- Section 104 covers disclosures about the comparative academic "success" of students who receive financial assistance contingent upon participation in intercollegiate sports. Section 105 concerns institutional revenues and expenditures for intercollegiate athletic activities.
- Sections 203 and 204 concern disclosures, reports, and publications about campus security policies and crime statistics.

### **Graduation Requirements**

Students at UMET are eligible to receive their degrees after the completion of the following requirements:

1. The candidacy application form, completed by the date established in the academic calendar.
2. Courses at the academic department of their preference at UMET.
3. The prescribed number of credit hours with a grade point average of 3.00 or more for undergraduate students.
4. Transfer students must have taken the last thirty (24) credits at UMET prior to graduation to be eligible for the degree. From this total of credits, twelve (9) credits should be from the specialization courses. In order to be eligible to honors, the student must have taken 24 credits prior to graduation at UMET.
5. Graduation applicants must have satisfied all their financial obligations to the Institution.
6. Graduation applicants must submit themselves to the rules and graduation requirements in the catalog of the year they expect to graduate.
7. Students with a grade point average 4.00 will graduate with honors.

Commencement exercises are held once, during the academic year, at the end of the second semester. Students who fulfilled the requirements for a degree at the end of the first (1st) semester or the summer session must apply for a statement from the Registrar's Office, confirming the completion of requirements.

Graduates must claim their diplomas at the Registrar's Office not later than one year after graduation. The Institution will not be responsible for diplomas after that date.

## **TUITION, FEES AND RELATED INFORMATION**

### **Tuition and Fees**

Once a year the Vice-presidency for Financial Affairs publishes a circular letter with information about tuition costs for all academic programs and other fees for all institutional services. This circular letter is available at the Bursar's Office.

Average Annual Tuition and Fees    \$5,674

Costs are estimated and are subject to change.

Please note that in attending any university, students will have to allow for other expenses, such as books and supplies, transportation, meals and other personal needs. A variety of financial aid packages are available.

Tuition, fees and service charges must be paid in full during registration or at the time services are requested by the student. Payments can be made in cash, or by certified or manager's checks, money orders, or credit cards such as American Express, Visa or Master Card. Receipts for all transactions must be retained, and presented with any claim or adjustment requested. The Bursar's Office will not accept claims without receipts.

### **Tuition Option Payment Plan (TOPP)**

The University has a convenient method for paying educational expenses through scheduled payments over the period of enrollment.

The TOPP will only allow a due balance of \$150.00 that may be paid through a SUAGM's payment plan.

### **Invoices**

The Bursar's Office will mail four invoices during the regular semester. The approximate dates for the mailing of such invoices are: September 15, October 15, February 15, and March 15.

If the invoice is not received in the mail, it is the student's responsibility to request it personally from the Bursar's Office.

## **ADJUSTMENTS AND REFUNDS FOR ACTIVE AND NEW STUDENTS**

### **Refund Policy**

#### **A. Total Withdrawal**

Students that totally withdraw from their classes during or before completing 60% of the academic term, will be charged or refunded if applicable, according to the formula\* that guides this policy. The formula determines the balance due to the Institution and the corresponding reimbursement, if applicable. Total withdrawal after this period, will make the student responsible for 100% of the term cost.

The amount due or to be reimbursed is determined by dividing the number of days from the beginning of the term up to the total withdrawal date, by the number of days in the corresponding academic term, the percentage will be multiplied by the total cost paid for the term.

Student that submits a completed total withdrawal form within the academic term will be refunded according to the following formula:

$$\frac{\text{Total of days to the application dates}}{\text{Total of days of the academic term}} = \% (x) \text{ Enrollment} = \text{Debit balance Total cost}$$

This formula does not apply to general fees which will be reimbursed 50% of all students of low total. All institutional break of five days or more will be deducted from the calculation of the total days in the academic term

Financial aid from federal, state or institutional programs accredited to the student's account that is not used, will be reimbursed to the original program or to the student, as it corresponds. The amount will depend on the total withdrawal date.

Institutional recess of five or more working days will be subtracted from the number of days used to determine the period of study.

Note: This policy was made in compliance with the dispositions that rule Title IV Financial Aid programs.

#### B. Partial Withdrawal

Students who partially withdraw during the five (5) days, starting the first day of classes of each semester, and within the first two days of classes during the summer sessions, will be refunded 88% of tuition costs. After this period, the System will charge 100% tuition costs.

#### C. Non Attendance

Students who do not attend their registered courses will be marked N/A by the professors, given an administrative withdrawal, and refunded 88% the cost of the course. The student will be held responsible for 12% of the cost, as financial aid programs do not cover it.

## **Student Services, Organizations and Activities**

### **Quality of Life and Students' Well-Being**

The Vice Assistant Chancellor of Quality of Life and Students Well-Being provide a set of comprehensive services to promote personal, vocational, occupational and optimal academic development of the students. Our mission is to provide integral services to the university community, aimed to develop proactive changes in the environment and healthful styles of life. We offer to the students counseling services by a team of professionals' counselors and psychologists. We provided the following services:

### **Career and Placement Office**

The Career and Placement Office provides assistance to students, seniors, graduate students, alumni and the community. We provide to our students with the tools and skills that they need to reach successful job searches and to assist them to develop and implement successful job search strategies. Some of our services include job listings, information and techniques to improve the skills in the area of interviews, resume and cover letter assistance, on-campus interviews, job fairs, workshops, etc.

### **High Way Safety and Alcohol Instructional Program (PISTA)**

PISTA is a university and community based program processing on healthy and safe lifestyle concerning impaired driving prevention. The mission of the Program is to promote and disseminate effective strategies that better help the campus and community and advocate for campus and community health and safety issues.

PISTA is affiliated to the Highway Traffic Commission.

### **Title X Family Planning**

Title X Family Planning is a community base and college student program when orientate about sexual health issues and develop valuable sexual responsibility campaigns.

Our clinic offer contraceptive services and education that prevent unintended pregnancy, testing and treatment for sexually transmissible infections, and other primary reproductive health care. Title X requires that all participants receive confidential care.

Sexual health programs are important part of a comprehensive campus prevention program to maintenance retention.

### **Campus Organizations**

Participation in campus organizations provides the student with opportunities for valuable experiences in group interaction outside the classroom. Such participation fosters personal growth and provides leadership training by encouraging mutual understanding and cooperation and by emphasizing the ideals of service, good citizenship and respect for human values.

All students' area urged to join or create those clubs and organizations that best meet their needs and interests. All clubs and student organizations related to the University must apply to the Office of the Vice-Chancellor of Students Affairs for recognition.

Each group or club has a faculty or administrative advisor who counsels its members and help them promote the activities of the group.

#### College Students with Special Needs Service Office

The College Students with Special Needs Office works with people with disabilities of the Metropolitan University. This office provide "reasonable accommodation" services, personal and vocational counseling, rehabilitation counseling, orientation about people with disabilities legislation, references, "architectonic" barriers identification and educative conferences and trainings.

### **Students Health Services**

#### **Cupey Campus**

The Health Services provides a basic health care service offer by Licensed Graduate Nurse (BSN). In the event of an emergency, the student's parents will be immediately notified. If it is necessary to refer the student to a hospital, an ambulance from the metropolitan area will be provided.

The department of Health Services offers preventive medicine and medical material, free of charge for all students.

The health education program provides information on a variety of health-related topics which include medical clinic sessions. Personal health care education is also offered.

Medical information on students' medical records are strictly confidential and may not be released without the expressed consent and written permission from the student.

A doctor is available to serve the student population.

### **Associate Vice-Chancellor of Scholarships and Internships**

Offers academic and occupational opportunities and honor scholarships to the students of the Universidad Metropolitana. The internships could be done with a private or a public institution in Puerto Rico or abroad. These experiences compliment the academic preparation and promote the students to the workforce.

The program offer orientations about the available internships, the requirements of each program and provide support to the students in the process of applying to such programs. The internships could be evaluated for the acquisition of credits.

Those students that demonstrate a high academic performance and the economic need are eligible to apply for the Honor Scholarships. This aid includes partial monetary assistance to pay for tuition fees and stipends to cover books cost. Also, monthly stipends are available for students that meet all requirements and criteria in each program.

The Vice-Chancellor of Scholarships and Internships encourages students to apply for aid with external organizations that are known to provide financial support for college education, professional trips and internships.

The scholarships program promotes the development of leadership, skills and the sense of civic responsibility to those students participating in seminars, associations and in labor community activities.

### **Social and Cultural Activities**

In order to enhance classroom offerings, the Social and Cultural Activities Program offers the students and the community the opportunity to watch films as well as live performances by local and touring concert artists, classical and popular musicians, and theatrical companies.

### **Sports and Recreation Program**

The Sports and Recreation Program offers intramural and extramural activities to the community.

Through this program, students are encouraged to get involved in extracurricular activities that help to enhance their development and quality of life.

The Intramural Component sponsors tournaments and competitions in the following sports: basketball, volleyball, tennis, cross-country, table tennis, and chess, among others. In addition, the program includes other physical fitness and recreational activities such as aerobic exercise, sports exhibitions, and invitational tournaments.

The extramural program organizes teams for men and women in the following sports: basketball, volleyball, softball, table tennis, chess, tennis, cross country, track and field, weight lifting, and baseball.

These teams participate in intercollegiate activities, organized by the LAI (Liga Atlética Interuniversitaria) together with other universities.

The following athletic facilities are available: an outdoor court setting for multiple sports (volleyball and basketball), dressers, bathrooms for athletes, exercise and weight lifting room, and a passive recreation center.

### **Vocational Rehabilitation Program**

The Department of Labor in coordination with the AGMUS provides the services of the Vocational Rehabilitation Program.

Students with any physical or mental condition that substantially limits their capabilities to achieve their vocational goals are eligible to receive the services of a vocational rehabilitation counselor.

Services include: medical evaluations to determine the rehabilitation potential, physical restoration to minimize the limitations caused by the handicap, student registration, interpreters, readers, tutorial services, books, transportation, and monthly stipends, among others. The vocational rehabilitation counselor also offers personal and career development counseling.

The services include the coordination of other services such as access to classrooms, parking permits, library services, and consultation with faculty members.

The program also helps students in the process of job searching and job placement.

### **Veteran's Services**

The Veterans' Services Office, located at the Registrar's Office, is primarily directed toward the motivation of veterans and their dependents in order that they may effectively exercise their rights to an education.

Veterans are helped in the completion and processing of required documents for the purpose of establishing eligibility, certification of service, and academic progress. These services are offered in close coordination with the Veterans Administration Office of Puerto Rico.

### **Veterans and Their Beneficiaries**

Veterans and their beneficiaries must complete their program of studies within the time established by their curriculum. Veterans that extend their studies beyond the time established by the program cannot continue to receive the Veteran's benefits. If the student is a recipient of the Pell Grant, he may resort to the 150% additional time, established by the Standard for Satisfactory Academic Progress of the Institution. Veterans should be evaluated utilizing both Veteran's benefits and Pell Grant criteria, if they are beneficiaries of these.

### **Veterans Required Credits and Minimum Index Required**

#### **Graduate Programs**

<b>33-44 Minimum Credits</b>	<b>Index Required</b>
0-12	2.70
13-24	2.80
25-32	2.90
33-44	3.00

## MACC Programs

133-156 Minimum Credits	Index Required
0-33	1.50
34-66	1.75
67-99	2.00
100-132	2.50
133-156	3.00

## Doctored Programs

61-63 Minimum Credits	Index Required
0-12	2.50
13-24	2.60
25-36	2.70
37-48	2.80
49-60	2.90
61-63	3.00

### Child Development Center

The Child Development Center is located within the facilities of Universidad Metropolitana (UMET). The purpose of the Center is to offer child care services from 8:00 AM to 10:00 PM to children 2 to 5 years of age whose parents are eligible students and employees of Universidad Metropolitana. Activities at the Center are designed to foster the integral development of the children by providing them with fun and recreation. The aim is to contribute to the children's self-sufficiency and emotional stability in a safe, loving environment where they can learn to take care of themselves.

From 8:00 AM to 2:00 PM, an educational program sponsored by the San Juan Head Start Program and the Quintana Baptist Church is offered. From 2:00 PM to 10:00 PM the day care services are sponsored by SENDEC.

## **Student Responsibility**

Student rights include but are not limited to expect an education of the highest quality. The student must know and observe the established University policies presented in official University publications. The student rights and responsibilities are included in the General Student Regulations of Conduct. Copies of these documents are available in the Office of the Vice-Chancellor of Student Affairs.

## **Disciplinary Regulations**

The students at Universidad Metropolitana must know, obey and respect the rules and regulations of the University in their entirety. These rules and regulations are clearly specified in the bylaws of the University, the Academic Norms Manual, in the Student Regulations and in the Student Manual, as well as in the other regular publications or newspapers of the Institution, or in orders or verbal instructions transmitted officially by professors, employees or officers of the Institution.

## **Graduate Programs**

### **School of Business Administration**

#### **Main Campus – Cupey**

- Master of Business Administration with majors in
  - Accounting \*
  - Finance \*
  - Human Resources \*
  - International Business
  - Management \*
  - Marketing \*
  - Technology and Information Systems

#### **Aguadilla University Center**

Master of Business Administration with majors in

- Human Resources
- Management
- Marketing

#### **Bayamón University Center**

- Master of Business Administration with majors in
  - Accounting
  - Human Resources
  - Management
  - Marketing

#### **Jayuya University Center**

- Master of Business Administration with majors in
  - Human Resources

## **School of Education**

#### **Main Campus – Cupey**

- Master of Education with major in
  - Curriculum and Teaching \*
  - Educational Administration and Supervision \*
  - Management of Leisure Services

- Preschool Centers Administration
- Preschool Education
- Special Education
- Teaching of Physical Education
- Doctor of Education in Teaching (Ed.D.)
- Doctor of Philosophy of Education in Teaching (PhD.)

#### **Aguadilla University Center**

Master of Education with majors in

- Curriculum and Teaching
- Educational Administration and Supervision
- Management of Leisure Center
- Special Education
- Teaching of Physical Education

#### **Bayamon University Center**

Master of Education with majors in

- Curriculum and Teaching
- Educational Administration and Supervision
- Preschool Education
- Teaching of Physical Education

#### **Jayuya University Center**

- Master of Education in Curriculum and Teaching

#### **School of Environmental Affairs Main Campus-Cupey**

- Master of Science in Environmental Management
  - Conservation and Management of Natural Resources
  - Environmental Planning
  - Environmental Risk Management and Assessment
- Master of Arts of Environmental Studies in Environmental Education
- Master of Planning in Environmental Planning

#### **School of Health Sciences**

##### **Bayamón University Center**

- Master's in the Science of Nursing with majors in
  - Critical Care of Adults
  - Critical Care of Children
  - Case Management

\*Also in Accelerated Modality (AHORA)



The University reserves the right to revise or change rules, charges, fees, schedules, courses, requirements for degrees, and any other regulation affecting students whenever considered necessary or desirable.

Registration by students means that there is an agreement to comply with all regulations of the University whenever approved.

The University reserves the right of admission, readmission or registration for each semester or session, separately.

The University reserves the right to cancel any course for insufficient enrollment and to phase out any program.

Universidad Metropolitana  
Apartado 21150  
Río Piedras, P.R. 00928

We hereby certify that this is the current edition of the Institution Catalogue of UMET for the academic years 2010-2012.

August, 2010

A handwritten signature in dark ink, appearing to read 'Federico M. Matheu'.

Federico M. Matheu  
Chancellor  
Universidad Metropolitana

## **SCHOOL OF ENVIRONMENTAL AFFAIRS**

### **Administrative Staff**

**Padín Bibiloni, Carlos Manuel, Ph.D.**

Dean

### **FACULTY**

#### **GARCIA VAZQUEZ, EVELYN**

Associate Professor

BSN, University of Puerto Rico

MPH in epidemiology, Medical Science Campus, UPR

Ed.D in Educative Administration, Interamerican University

#### **MUSA WASIL, JUAN CARLOS**

Professor

BS Forestry Engineering, Universidad de Córdoba, Argentina

MS Ecology, University of Puerto Rico at Mayaqüez

PhD Marine Sciences, University of Puerto Rico at Mayaqüez

#### **ORTIZ RIVERA, MARÍA CALIXTA**

Associate Professor

BS in Natural Sciences, University of Puerto Rico

MS in Environmental Management, Universidad Metropolitana

#### **PADÍN BIBILONI, CARLOS MANUEL**

Professor

BS University of Puerto Rico

MP Environmental Planning, University of Puerto Rico

MS Environmental Sciences, Southern Illinois University

PhD Geography, Environmental Planning, Southern Illinois University

#### **VILCHES NORAT, MARÍA**

Professor

BA Language & Literature, Boston University

MA Language & Literature, Boston University

#### **ZAYAS RIVERA, BEATRIZ**

Associate Professor

BS Biology, University of Puerto Rico

MS Epidemiology, Medical Sciences Campus, UPR

PhD Molecular Toxicology, University of Pittsburgh, Penn

Post Doctoral Fellow: Breast Cancer and DNA Repair, University of Pittsburgh, Penn

Post Doctoral Fellow: Biomarkers of Exposure to Environmental Carcinogens and

Anticancer drugs, MIT, Mass

## **MASTER OF SCIENCES IN ENVIRONMENTAL MANAGEMENT (MSEM)**

The Master of Sciences in Environmental Management (MSEM) with specializations in: Environmental Risk Management and Assessment; and Conservation and Management of Natural Resources offer an outstanding and updated curriculum which prepares students to assume management responsibilities required by today's environmental field. The academic and field experiences of the School allow students to develop the competences in the area of environmental management which will enable them to assume leadership positions in the public and private sectors. The main goal of this program is to prepare an educated and skilled professional that contributes to solving the environmental problems of the world to achieve a sustainable development.

### **Program Objectives**

The MSEM has been structured considering the following highlights:

1. To understand the population dynamics, the use of natural resources and environmental pollution.
2. To develop managerial skills that allows the quality control of the environmental programs.
3. To know and apply the scientific planning strategies required for environmental problem analysis.
4. To analyze the fundamentals of cost-benefit, environmental planning and economic development.
5. To evaluate the environmental laws that regulates the economic and social development in Puerto Rico.
6. To train outstanding professionals that will promote a positive relationship between the use of our natural resources and the sustainable development.

### **Admission Requirements**

The students interested in our program should comply with the following requirements:

- a. Have earned a Bachelor's Degree in Natural Sciences, Biology, Geology or Engineering from an accredited university.
- b. Submit an application containing:
  - Official transcripts of all university studies
  - Three letters of recommendation from qualified persons about the candidate's academic and/or professional profile and aptitude for success in Graduate Studies.
- c. Submit the results of the "Prueba de Admisión a Estudios Graduados" (EXADEP) or Graduate Record Examination (GRE).
- d. Be interviewed by the Program Admission Committee that includes the creation of a written conceptual essay on an environmental subject.
- e. GPA of no less than 2.75 on the science bachelor level. Conditional admission will be considered for students who do not meet some of these requirements, but has professional experience in the environmental field. The Admissions Committee may recommend courses to cover pre-requisites.

### **Transfer Credits**

A maximum of nine (9) graduate credits will be accepted from other institutions provided that the courses are equivalent to courses offered at UMET. These credits should have been taken in an accredited institution no more than five (5) years prior to admission, and approved with a grade of A or B.

### **Credit Load**

From three to six credits per part of term is considered a complete credit load. The maximum number of credits students may take per part of term is six (6). In exceptional circumstances, students may, with the approval of their advisor, seek the written authorization of the Dean of the School of Environmental Affairs to take a maximum of (9) credits.

### **Graduation Requirements**

To be considered a candidate for earning a Master's degree of Science in Environmental Management, the student should comply with all the following requirements:

1. have completed all courses with A or B. Courses approved with C or less must be repeated and approved with A or B.
2. have submitted and approved the thesis courses (ENMG 721 y 723). The thesis must be approved by the members of the thesis committee and the Dean of the School of Environmental Affairs.
3. have completed the candidacy application form.
4. have no debts with the University.

## **MASTER OF ARTS IN ENVIRONMENTAL STUDIES (MAES) IN ENVIRONMENTAL EDUCATION**

The main goal of this M.A. is to prepare an Environmental Educator, capable of developing a sense of responsibility and compromise towards the environment, within itself and those around him/her. This educator will collaborate with solutions to local environmental issues and will provide alternatives to enhance a global vision for a sustainable future.

### **Program Objectives**

1. Understand the characteristics of the discipline of the Environmental Education.
2. Value Environmental Education as a strategy to deal with the current environmental issues we face.
3. Reflect about the practices of an environmental educator throughout professional and context strands.
4. Analyze the factors that affect the communication and outreach of environmental information from an ethic and educative point of view.
5. Apply strategies or methodology in environmental education to the context in Puerto Rico
6. Comprehend and analyze the complexity of nature and the human interaction on its systems.
7. Analyze the diverse paradigms and conceptions about the learning process that have been the foundations to the practice of teaching throughout history.

8. Understand and valorize the respect and credibility among Environmental Professionals.
9. Apply technological, oral and writing skills to the environmental education documents and presentations that have been produced.

### **Admission requirements**

- Have earned a Bachelor Degree in any discipline of an accredited institution with an overall General Point Average, (GPA), no less than 2.75.
- Understanding in basic computer courses (3 credits), Oral and written communication skills (9 credits), Environmental Literacy (8 credits).
- Experience as a communicator or as a formal or informal educator in Environmental Education.

Submit application for admission that contains:

- Official transcripts
- Three letters of recommendation from professors of its major or from supervisor of employment.
- EXADEP or GRE scores.

*It is also required to complete an oral interview with the Program Admissions Committee that includes the creation of a written conceptual essay on an environmental subject.*

To applicants that do not possess the required bachelor courses, will be presented with the following alternatives:

- Environmental Literacy courses: Environmental Sciences (ENSC 101, ENMG 101) or General Biology (BIOL 203, 204)
- Computer courses: COMU 105, COIS 201, COSC 111
- Oral and Written communication: COMU 101 -102, SPAN 215

To foreign students that complete the admission requirements, the School of Environmental Affairs will condition the admission to the enrollment in the following undergraduate courses as a special student:

- Cultural Elements of Puerto Rico (HUMA 204)
- Political Systems of Puerto Rico (POSC 253)
- Economy of Puerto Rico (ECON 300)

### **Transfer Credits**

A maximum of nine (9) graduate credits will be accepted from other institutions provided that the courses are equivalent to courses offered at UMET. These credits should have been taken in an accredited institution no more than five (5) years prior to admission, and approved with a grade of A or B.

### **Credit Load**

From three to six credits per part of term is considered a complete credit load. The maximum number of credits students may take per part of term is six (6). In exceptional circumstances, students may, with the approval of their advisor, seek the

written authorization of the Dean of the School of Environmental Affairs to take a maximum of (9) credits.

### **Graduation Requirements**

To be considered a candidate for earning a Master's degree of Arts in Environmental Studies in Environmental Education, the student should comply with all the following requirements:

1. Have completed all courses with A or B. Courses approved with C or less must be repeated and approved with A or B.
2. Have submitted and approved the thesis courses (ENMG 721 and 723), or have approved the Environmental Internships courses (ENST 724 and 726). The members of the research committee and the Dean of the School of Environmental Affairs must approve research document or thesis.
3. Have completed the candidacy application form.
4. Have no debts with the University.

### **MASTER OF PLANNING (MP)**

The Master of Planning in Environmental Planning includes conceptual tools and methodologies for problem diagnostics, strategies for development and evaluation, and program and plan design. This discipline promotes the management of natural resources, the protection of the environment and sustainable development.

#### **Program objectives**

The goal of the program is to develop theoretical and practical environmental planners.

The MP has been structured considering the following highlights:

1. Contribute to the professional development of the environmental planner in theoretical, tools and methodological aspects.
2. Provide the knowledge and technological base needed for the formulation of an integral planning, taking into consideration the environment, the sustainability and the socioeconomic aspects.
3. Offer an academic alternative with technical and innovative tools, and in this form contribute to the market needs of planners in Puerto Rico.

#### **Admission Requirements**

The students interested in MP program should comply with the following requirements:

- a. Have earned a Bachelor's Degree in science from an accredited university.
- b. GPA of no less than 2.75 on the bachelor level.
- c. or Bachelor Degree in any discipline of an accredited institution with an overall General Point Average, (GPA), no less than 2.75 and the following courses: Mathematics (8), Biology (8), Chemistry (8), Physics (8), Environmental Sciences (3).
- d. Knowledge in introductory courses of computer literacy (3), economy (3), sociology (6) and Statistics (3)
- e. Submit an application containing:

- Official transcripts of all university studies
  - Three letters of recommendation from qualified persons about the candidate's academic and/or professional profile and aptitude for success in Graduate Studies.
- c. Submit the results of the "Prueba de Admisión a Estudios Graduados" (EXADEP) or Graduate Record Examination (GRE).
  - d. Be interviewed by the Program Admission Committee that includes the creation of a written conceptual essay on an environmental subject.

Conditional admission will be considered for students who do not meet some of these requirements, but can demonstrate evidence of at least two years work experience in a field relevant to planning and continue educational courses. The Admissions Committee may recommend courses as pre-requisites.

To applicants that do not possess the required bachelor courses, UMET will offer the following alternatives:

- Environmental Sciences (ENSC 101, ENMG 101), General Biology (BIOL 203-204), General Physics (PHYS 203-204), General Chemistry (CHEM 203-204)
- Computer courses: COIS 201, COSC 111
- Other courses: ECON 121-122, SOCI 203, ENMG 115, MATH 384 or STAT 201, MATH 111-112, QUME 250, MATH 153

To foreign students that complete the admission requirements, the School of Environmental Affairs will condition the admission to the enrollment of the following undergraduate courses as a special student:

- Cultural Elements of Puerto Rico (HUMA 204)
- Political Systems of Puerto Rico (POSC 253)
- Economy of Puerto Rico (ECON 300)

### **Transfer Credits**

A maximum of nine (9) graduate credits will be accepted from other institutions provided that the courses are equivalent to courses offered at UMET. These credits should have been taken in an accredited institution no more than five (5) years prior to admission, and approved with a grade of A or B.

### **Credit Load**

From three to six credits per part of term is considered a complete credit load. The maximum number of credits students may take per part of term is six (6). In exceptional circumstances, students may, with the approval of their advisor, seek the written authorization of the Dean of the School of Environmental Affairs to take a maximum of (9) credits.

### **Graduation Requirements**

To be considered a candidate for earning a Master's degree of Science in Environmental Management, the student should comply with all the following requirements:

1. have completed all courses with A or B. Courses approved with C or less must be repeated and approved with A or B.

2. have submitted and approved the Planning Project courses (ENPL 721 y 723). The Planning Project must be approved by the members of the Project committee and the Dean of the School of Environmental Affairs.
3. have completed the candidacy application form.
4. have no debts with the University.

**MASTER OF SCIENCES IN ENVIRONMENTAL MANAGEMENT**  
Environmental Risk Management and Assessment

	<b>Credits</b>
<b>42 Credits</b>	
Core Courses	15
Specialization Courses	15
Recommended Electives	3
General Electives Courses	3
Research	6
<b>Core Courses</b>	
ENMG 501 Fundamentals of Environmental Science	3
ENMG 506 Statistical Methods for Environmental Research	3
ENMG 608 Waste Management	3
ENMG 615 Environmental Legislation and Regulatory Agencies	3
ENMG 510 Principles of Environmental Technology	3
<b>Specialization Courses</b>	
ENMG 511 Environmental Risk Management	3
ENMG 515 Microbiology in the Environmental Process	3
ENMG 520 Environmental Chemistry	3
ENMG 614 Comparative Environmental Risk Assessment	3
ENMG 619 Occupational Risks Assessment and management	3
<b>Recommended Electives</b>	
ENMG 512 Environmental Communications and Writing	3
ENMG 609 Energy Sources and the Environment	3
ENMG 613 Environmental Quality Control Management	3
ENMG 617 Environmental Documents and Evaluations	3
ENMG 701 Topics in Environmental Affairs I	3
ENMG 702 Topics in Environmental Affairs II	3
ENMG 703 Climate and Atmospheric Pollution	3
ENMG 705 Environmental Toxicology	3
ENMG 707 Environmental Auditing	3
ENMG 714 Fundamentals of Hydrogeology	3
ENPL 505 Geographic Information System	3
<b>Research</b>	
ENMG 721 Thesis	3
ENMG 723 Thesis	3

**MASTER OF SCIENCES IN ENVIRONMENTAL MANAGEMENT**  
 Conservation and Management of  
 Natural Resources

			<b>Credits</b>
<b>42 Credits</b>			
Core Courses			15
Specialization Courses			15
Recommended Electives			6
Research			6
<b>Core Courses</b>			
ENMG 501	Fundamentals of Environmental Science		3
ENMG 506	Statistical Methods for Environmental Research		3
ENMG 615	Environmental Legislation and Regulatory Agencies		3
ENMG 617	Environmental Documents and Evaluations		3
ENMG 712	Tropical Ecosystems		3
<b>Specialization Courses</b>			
ENMG 531	Conservation Biology		3
ENMG 532	Conservation and Management of Forest Ecosystems and Flora		3
ENMG 533	Conservation and Management of Wild Fauna		3
ENMG 535	Marine Resource Conservation		3
ENMG 700	Integrated Natural Resources Management		3
<b>Recommended Electives</b>			
ENMG 503	Environmental and Nat. Res. Economics		3
ENMG 512	Environmental Communications and Writing		3
ENMG 515	Microbiology in the Environmental Process		3
ENMG 536	Soil properties and conservation		3
ENMG 538	Limnology, lakes and rivers ecosystem		3
ENMG 520	Environmental Chemistry		3
ENMG 530	Oceanography		3
ENMG 606	Environmental Strategic Planning		3
ENMG 608	Waste Management		3
ENMG 613	Environmental Quality Control Management		3
ENMG 701	Topics in Environmental Affairs I		3
ENMG 702	Topics in Environmental Affairs II		3
ENMG 703	Climate and Atmospheric Pollution		3
ENMG 714	Fundamentals of Hydrogeology		3
ENMG 715	Conservation and Management of Marine Vertebrates		3
<b>Research</b>			
ENMG 721	Thesis		3
ENMG 723	Thesis		3

**MASTER OF ARTS IN ENVIRONMENTAL STUDIES**  
Environmental Education

	<b>Credits</b>
<b>42 Credits</b>	
Core Courses	15
Specialization Courses	15
Recommended Electives	6
Research or Internship	6
<b>Core Courses</b>	
ENMG 501 Fundamentals of Environmental Science	3
ENMG 615 Environmental Legislation and Regulatory Agencies	3
ENST 515 Sustainable Development	3
ENMG 712 Tropical Ecosystems	3
ENMG 531 Conservation Biology	3
<b>Specialization Courses</b>	
ENST 518 Environmental Education I	3
ENST 618 Environmental Education II	3
EDUC 504 Theories of Learning and Cognitive Development	3
ENMG 512 Environmental Communication	3
ENMG 601 Education and Environmental Ethics	3
<b>Recommended Electives</b>	
ENMG 532 Conservation and Management of Forest Ecosystems and Flora	3
ENMG 506 Statistical Methods for Environmental Research	3
ENMG 503 Environmental and Natural Resource	3
<b>Economics</b>	
ENMG 606 Environmental Strategic Planning	3
ENMG 608 Waste Management	3
ENMG 701 Topics in Environmental Affairs I	3
ENMG 702 Topics in Environmental Affairs II	3
COIS 600 Computer as Instructional Resource	3
<b>Research or Internship</b>	
ENMG 721-723 Thesis	6
ENST 724-726 Environmental Education Internship	6

**MASTER OF PLANNING**  
Environmental Planning

	Credits
<b>42 Credits</b>	
<b>Core Courses</b>	<b>15</b>
<b>Specialization Courses</b>	<b>15</b>
<b>Recommended Electives</b>	<b>6</b>
<b>Environmental Project</b>	<b>6</b>
<b>Core Courses</b>	
ENPL 500 Planning Theory	3
ENPL 504 Socioeconomic Planning	3
ENMG 506 Statistical Methods for Environmental Research	3
ENPL 508 Land Use Planning	3
ENPL 640 Development, Implementation and Assessment of Plans	3
<b>Specialization Courses</b>	
ENMG 501 Fundamentals of Environmental Science	3
ENPL 505 Geographic Information System	3
ENMG 615 Environmental Legislation and Regulatory Agencies	3
ENPL 616 Urban Planning	3
ENMG 617 Environmental Documents and Evaluations	3
<b>Recommended Electives</b>	
ENST 515 Sustainable Development	3
ENPL 620 Coastal Areas Planning	3
ENPL 630 Mitigation of Natural Hazards Planning	3
ENMG 503 Environmental and Natural Resource Economics	3
ENMG 531 Conservation Biology	3
ENMG 532 Conservation and Management of Forest Ecosystems and Flora	3
ENMG 608 Hazardous Waste Management	3
ENMG 701 Topics in Environmental Affairs I	3
ENMG 712 Tropical Ecosystems	3
<b>Planning Project</b>	
ENPL 721 Planning Project Proposal	3
ENPL 723 Planning Project	3

## **COURSES**

### **ENMG 501 Fundamentals of Environmental Sciences Three Credits**

A general perspective of the environmental sciences will be discussed in this course. The analysis of subjects related to problems of population dynamics; natural resources; and pollution effects in living beings will be applied. Discussion of the current environmental problems and solutions in Puerto Rico will be analyzed.

### **ENMG 503 Environmental and Natural Resources Economics Three Credits**

Economic analysis of the natural resources and the environmental public policy applied to Puerto Rico and the Caribbean. Study of the basic elements of economic theories and the strategies used to internalize the externalities. Government actions and the economic incentives for environmental controls in Puerto Rico will be discussed.  
Requisite: An undergraduate Economy course.

### **ENMG 506 Statistical Methods for Environmental Research Three Credits**

Descriptive and statistical methods to be applied in the analysis of the uncertainties and decision-making processes of the environmental sciences will be discussed in the course.

### **ENMG 510 Principles of Environmental Technology Three Credits**

Theoretical and technical aspects of environmental controls will be studied. The physical, chemical, biological and technological processes available for the purification of water and the disposition of solid and liquid wastes will be discussed. The available technological methods of pollution control in waters, soil, atmospheric and noise contamination will be studied.

### **ENMG 511 Environmental Risk Management Three Credits**

The discussion of risk assessment and risk management processes will be studied. Emphasis on the risks, uncertainty and implications in the strategies to reduce the human health risk and the effects on ecosystems will be applied. Presentation of different database resources (IRIS Database) will be required.  
Requisites: ENMG 501, ENMG 506

**ENMG 512**  
**Environmental Communication and Writing**  
**Three Credits**

This course focuses on the application of environmental communication principles. Strategies and practices in the environmental field. Identification and analysis of the different audiences like: employees, supervisors, legislators, press and community members, and environmentalists and syndicated groups. This course attempts to enhance how communication could be used for problem solving in environmental matters.

Requisites: An undergraduate Communication course.

**ENMG 515**  
**Microbiology in the Environmental Process**  
**Three Credits**

Study of the applications of microorganisms on the environmental processes will be developed in this course. Analysis of the importance and the impact of microorganisms on the environment and the use of bacteria as pollution indicators; anaerobic digestion, effluent treatment and the biotechnology applications will be discussed. This course will be enhanced with lab practices.

Requisites: ENMG 501 and an undergraduate Microbiology course

**ENMG 520**  
**Environmental Chemistry**  
**Three Credits**

Emphasis on the different principles of the chemistry, maintenance, and enhancement of the environmental quality is applied in this course. It includes the study of the environmental components in water, air and soils, the sources, reactions, movement, and their effects under normal and polluted conditions. The course evaluates pollution problems, the biological and toxicological implications, and related mechanisms. This course will be enhanced with lab practice.

Requisites: ENMG 501, undergraduate Organic Chemistry and Analytical Chemistry

**ENMG 530**  
**Oceanography**  
**Three Credits**

Discussion at the graduate level of the different topics which compose the discipline of oceanography, including marine chemistry, geology, biology and physics is applied. In these topics, the application of core concepts with oceanographic examples of Puerto Rico and the Caribbean is emphasized.

**ENMG 531**  
**Conservation Biology**  
**Three Credits**

Presentation and discussion at the graduate level of the different topics that compose the discipline of conservation biology, including key concepts of genetics and ecology as it relates to conservation, maintenance of biological diversity, biogeography, conservation of natural resources, and conservation of endangered species. In these

topics, the application of key concepts to examples of conservation programs in Puerto Rico and the Caribbean are emphasized.

Requisites: ENMG 501/712

### **ENMG 532**

#### **Conservation and Management of Forests Ecosystems and Flora**

##### **Three Credits**

Concepts related with the management and conservation of the forests and flora in Puerto and the world are analyzed in this course. Application of the Conservation and Management Programs in Puerto Rico and the Caribbean is studied.

Requisite: ENMG 531

### **ENMG 533**

#### **Conservation and Management of Wild Fauna**

##### **Three Credits**

Presentation and discussion of the different topics which compose the discipline of conservation and management of wildlife specifically fauna are discussed in the course. Application of basic concepts of ecology, the components of wild fauna, techniques and implementation of management programs, economy of the faunal resource, laws and public policy, and wildlife ethics and animal rights. In these topics, examples from Puerto Rico and the Caribbean as well as examples from the American continent are emphasized. Requisite: ENMG 532

### **ENMG 535**

#### **Marine Resource Conservation**

##### **Three Credits**

Discussion of the different topics which compose the discipline of marine affairs, including marine political geography, international oceanic law, fisheries law, coastal zone management, and maritime transportation. The application of these topics to usage conflicts and problems present in Puerto Rico.

Requisites: ENMG 531, ENMG 533

### **ENMG 536**

#### **Soil Properties and Conservation**

##### **Three Credits**

The topics related with the properties and conservation of soils. The biological, physical, chemical properties and soil profile are discussed in the course. The rational use, management and conservation of soils and the concepts of environmental planning and management of terrestrial resource are analyzed.

Requisites: ENMG 501/ENMG 531.

**ENMG 538**  
**Limnology, River and Lakes Ecosystems**  
**Three Credits**

The topics related with the discipline of conservation of freshwater resources. The biological, physical, and chemical aspects related to the conservation of freshwater resources. The concepts of environmental planning and management of aquatic resource will be applied. Requisites: ENMG 501/ ENMG 712.

**ENMG 601**  
**Environmental Education and Ethics**  
**Three Credits**

A comprehensive and balance conceptual framework in the environmental field and ethical educational point of view. Contemporary issues and concepts will be studied. The role of science and philosophy are discussed giving particular attention to education. As a focal point the anthropogenic, individualism, egocentric attitudes will be discussed. The relation of man and nature are discussed from the multicultural Judeo-Christian perspectives. The students' interaction on different perspectives will enhance the course.

**ENMG 606**  
**Environmental Strategic Planning**  
**Three Credits**

Study and analysis of the organizational environment and how to identify the trends and changes to facilitate the formulation of strategic organizational goals are discussed in the course. The course focuses on the total quality concept and human resources administration applied to environmental issues.  
Requisites: Undergraduate Planning Course.

**ENMG 608**  
**Hazardous and Solid Waste Management**  
**Three Credits**

Study of the fundamental concepts necessary to the adequate management of solid waste (domestic, industrial, and hazardous). RCRA will be discussed, its laws, and regulation norms related to the generation, transportation, action and storage, and the final disposal of solid waste. The law describes the necessary strategies to comply, evaluate and execute the required tasks to meet the public health, environmental health, and natural resources goals.  
Requisites: ENMG 501

**ENMG 609**  
**Energy Sources and the Environment**  
**Three Credits**

The local and international energy situation specifically, its economic, environmental, social and geo-political implications will be analyzed. The energy sources, strategies, its environmental impact, and the available technology for environmental control are examined. The energy policy, its design and implementation, as an essential element for environmental planning and management is studied.  
Requisites: ENMG 501

**ENMG 613**  
**Environmental Quality Control Management**  
**Three Credits**

Development of an integrated global vision of environmental management, based on the tendencies and practices that direct it is studied in the course. Emphasis is given to the theoretical and operational phases, if the task is performed by an environmental manager, like methods, techniques and pertinent practice of management. The course discusses the environmental manager's function, roles, responsibilities and leadership. Also, the relevance of research for the control of environmental quality will be discussed. Description and application of those allied principles to the management of quality control in industrial laboratories, public agencies, municipalities, and businesses that perform environmental analysis. The student will obtain the knowledge and fundamental principles of total quality control, total quality management, as well as productivity management in high tech organizations. The theoretical aspects, case studies, and simulation applied to quality control will be presented.

Requisites: ENMG 501, ENMG 510.

**ENMG 614**  
**Comparative Environmental Risk Assessment**  
**Three Credits**

The course will evaluate and measure the health and environmental risk of human activities. The most important risk assessment techniques as well as their limitations will be covered in-depth. Additionally, the course will discuss and evaluate the importance to communicate to the public the results of risk assessment.

Requisites: ENMG 501, ENMG 511.

**ENMG 615**  
**Environmental Legislation and Regulatory Agencies**  
**Three Credits**

The course is aimed at providing a legal and normative perspective of the activities that may have an impact on natural resources and the environment. Additionally, local and federal legal framework pertaining to the use, management, and conservation of important natural resources will be analyzed. The course emphasizes the most important legal instruments from agencies such as the Environmental Quality Board and the Department of Natural and Environmental Resources. The course will be approached by in-depth case studies and real life situations. Requisites: ENMG 501.

**ENMG 617**  
**Environmental Documents and Evaluations**  
**Three Credits**

The course seeks the understanding of all aspects regarding the permit process related to the environment, and the evaluation of the environmental impacts associated with human activities. Particular attention will be given to important permit procedures such as wetland mitigation, and sedimentation and erosion control. The environmental impacts of proposed projects that may alter the well being of communities will be evaluated and discussed with community leaders and agency personnel. Additionally, participating students will prepare an environmental evaluation of a project.

Requisites: ENMG 501, ENMG 615.

**ENMG 619**  
**Occupational Risks Assessment and Management**  
**Three Credits**

The course introduces the general aspects of health and safety in the workplace. It emphasizes hazards recognition, evaluation and control of chemicals substances, biological agents, physical situations and radiological particles. It discusses the purpose, scope and applicability of federal (OSHA act, 1970), standards of OSHA -29CFR 1910 and central government law (Ley #32, 1991). In addition, it discusses the importance of developing and implementing health and safety programs and the functionality of PROSHA and OSHA Offices.

Requisites: ENMG 608 / ENMG 510

**ENMG 700**  
**Integrated Management of Natural Resources**  
**Three Credits**

The course focuses on integrated management of natural resources for the conservation of biodiversity. It will discuss the rational decision making process applied to conservation and management programs. It emphasizes the importance to involve the governmental agencies, members of the community, field technicians and scientists.

Requisite: ENMG 531, 532, 533.

**ENMG 701-702**  
**Topics in Environmental Affairs I and II**  
**Three Credits**

Current topics related with the environmental affairs and natural resources conservation in Puerto Rico and worldwide will be discussed. The courses offer the opportunity to special guests from states and federal agencies, and private corporations to discuss and analyze the recent scientific findings and the new legislation applied to the environmental fields. The main focus of these courses is to keep our students updated in the environmental topics.

**ENMG 703**  
**Climate and Atmospheric Pollution**  
**Three Credits**

The course is aimed at the evaluation of chemical, climate, economic, and other variables relevant to atmospheric pollution management and control. Scientific and technical aspects associated with climate and air pollution, strategies for pollution control, and the legal framework encompassing the problem will be studied in detail.

Requisites: ENMG 501/ ENMG 510.

**ENMG 705**  
**Environmental Toxicology**  
**Three Credits**

The course presents the principles and fundamental concepts of toxicology, including the mechanisms of toxicity produced by toxic industrial products in the environment. Specific toxic effects like carcinogenesis; mutagenesis will be discussed in depth. In

addition, frequently encountered toxicants in the environment such as the pesticides and metals and their specific effects in organs systems of the human body are discussed. The application in the human and environmental health is emphasized through the discussion of the subjects. The importance of understanding and applying these concepts as environmental managers and risk evaluators are reinforced.  
Requisites: ENMG 501 / ENMG 520.

**ENMG 707**  
**Environmental Auditing**  
**Three Credits**

This course includes tools, skills and knowledge to develop, organize and conduct an environmental compliance audit according to federal and state laws and regulations. The course includes a comprehensive discussion of professional assessment of a private property, commercial or industrial establishment in compliance with the Superfund law of US Environmental Protection Agency. Requisites: ENMG 501, ENMG 510.

**ENMG 712**  
**Tropical Ecosystems**  
**Three Credits**

The structure, physiology, taxonomy and distribution of the main tropical ecosystems in Puerto Rico and the Virgin Islands will be studied. The exotic plants and animals introduced at different ecosystems, the environmental conditions and types of soils in different zones of life will be analyzed. This course will be complemented with research field trips. The student will understand the fragility of the tropical ecosystems to make a critical judgment on the management of the tropical resources.  
Requisites: ENMG 501

**ENMG 714**  
**Fundamentals of Hydrogeology**  
**Three Credits**

The course looks into the technical and scientific principles relevant to the availability, occurrence of groundwater quality. The chemical, physical and biological characteristics of groundwater water resources will be discussed. Water flow in aquifers, hydrologic cycle, geology, the hydrological systems and the environmental issues related with the water resources on the Island are examined.  
Requisites: ENMG 501, an undergraduate hydrology course.

**ENMG 715**  
**Conservation and Management of Marine Vertebrates**  
**Three Credits**

Presentation and discussion at the graduate level of the different topics of conservation, management, biology, ecology, distribution, abundance, taxonomy, phylogeny, evolution, anatomy, physiology, natural history, development and behavior of endangered marine vertebrates. Emphasis will be given to the status and conservation programs of sea turtles, whales, dolphins, manatees and sea birds in the Caribbean.  
Requisites: ENMG 530, ENMG 535

**ENMG 721-723**  
**Thesis**  
**Six Credits**

These two courses are focused on the development of a research project that could aim current environmental problem or concern. The first course requires the development of a thesis proposal. This proposal should contain a strong background and rational, proposed objectives and methodology. The last part course includes the oral defense of the thesis and a written complete document that complies with APA method and the School requirements. These courses are final requirements to obtain the Master's Degree. Requisites: 36 credits approved.

**ENST 515**  
**Sustainable Development**  
**Three Credits**

This course will promote the development of the basic concept of sustainability and its economical, social, technological, environmental and cultural implications. It will also present the historical development of the field since its origins. Smart growth strategy will be used as an example of the optimal use of urban space and efficient consumption of raw materials. The course will assess development in a proactive way, respecting resources that belong to future generations. Requisite: ENMG 501.

**ENST 518**  
**Environmental Education I**  
**Three Credits**

The course offers an introduction to the field of environmental education. The course explores the history and evolution, the philosophical framework and guidelines of the discipline. Content includes international treaties and professional guidelines on environmental education analysis. Analysis of paradigms and evaluation of environmental education practices in Puerto Rico, the United States, Europe and Latin America.

**ENST 618**  
**Environmental Education II**  
**Three Credits**

This second part of environmental education course will emphasize the planning, design and implementation of environmental education strategies in formal and informal scenarios. The course content exposes the student to different models and frameworks for environmental education. It also analyzes curricular initiatives in government agencies and non-governmental organizations. The course offers the opportunities to prepare the learner to develop lessons or curricular units in environmental education. Requisite: ENST 518.

**ENST 724**  
**Environmental Education Internship I**  
**Three Credits**

During the first course of the Internship in Environmental Education, through research, the student will conceptualize the materials and/or project design that will be developed

during the second part of the term. This course requires 25 contact hours with the School of Environmental Affairs Faculty and 45 hours with the Internship Center selected. The course enriches the research and design skills that should be attained by a student that wishes to become an Environmental Educator. It is imperative to enhance bibliographical research about recent publications on environmental education and in content areas required by the Center of Internship. Text format and design has to respond to the Center's needs.

**ENST 726**  
**Environmental Education Internship II**  
**Three Credits**

This last Internship course includes a community presentation of the work done. Twenty contact hours with School of Environmental Affairs Faculty member for an analysis of the practice and 45 hours in the Center are required. The materials and publication copyrights will be shared between the SUAGM and the Center of Internship.  
Requisite: ENST 724.

**ENPL 500**  
**Planning Theory**  
**Three Credits**

This course will review and critically evaluate the various theoretical and normative foundations of planning thought and practice. It will also examine some of the contemporary debates in the planning theory literature. Students will review and analyze various planning perspectives from a theoretical standpoint, and will evaluate those based on the contexts of a free market economy and political democracy.

**ENPL 504**  
**Socioeconomic Planning**  
**Three Credits**

The study of socioeconomic aspects of environmental planning in Puerto Rico will be analyzed. It discusses the planning process of the social policy and services; the analysis, synthesis, and human relations skills needed in the planning process; the relationships among fields of planning. It emphasizes the socioeconomic development of the environmental movement and environmental justice as public policy.  
Requisite: ENPL 500.

**ENPL 505**  
**Geographic Information Systems**  
**Three Credits**

This course introduces the fundamental concepts underlying computerized geographic information systems (GIS). It combines an overview of the general principles of GIS with a theoretical treatment of the nature and analytical use of spatial information. The course has a laboratory component, which introduces students to the ESRI's Arc GIS 9 software package among other software. Students will be familiarized with local and federal government databases as well as several methodologies for the analysis of the environment.  
Requisite: an undergraduate Computer Literacy Course.

**ENPL 508**  
**Land Use Planning**  
**Three Credits**

This course discusses the theory, history and practice of land use in Puerto Rico. It reviews and analyzes land use public policy and the classification of lands into public and private, urban, agricultural, and the limitations of tourist, residential and commercial uses. Through the course, the student will evaluate the function of the governmental agencies that drives the land use planning in Puerto Rico. It includes the social, political and economic issues associated with land zoning.

Requisite: ENPL 500, ENPL 505.

**ENPL 616**  
**Urban Planning**  
**Three Credits**

This course discusses the theory and practice of planning for the urban space. It studies the interrelationships between the spatial planning, the environment, government and society. It will analyze economic, social and environmental data important to urban planning. It will also include the concepts of open space and how to site re-design according the permissible urban uses. It will focus on models, theory and the policy making in urban planning. It will discuss the past, present and future of downtowns and the recommendations to implement activities and strategies to solve urban problems.

Requisite: ENPL 500, ENPL 505.

**ENPL 620**  
**Coastal Areas Planning**  
**Three Credits**

This course has been designed under an integrated planning approach and offers the student the basis for coastal resources planning. The student will examine various approaches, methodologies to plan and manage coastal watersheds, water resources, and land use. The applicable legal and institutional framework of the Commonwealth of Puerto Rico for Integrated Coastal Areas Management, as well as its land uses is examined. Such island-wide uses are urban, residential, tourism, agriculture, recreation, industrial, commercial, as well as infrastructure design and construction of roads and ports. The course offers concepts, principles, methodologies, as well as international and national case studies, outreach strategies, and conflict resolution mechanisms that contribute to successful development and implementation of coastal areas plans.

Requisite: ENPL 500, ENPL 508, ENMG 501

**ENPL 630**  
**Planning for Natural Hazards Mitigation**  
**Three Credits**

The course examines natural hazards and sustainability planning. It specifically addresses natural hazards and their effects on society, economy, and the environment. It also introduces hazard mitigation and sustainable planning concepts as a way of breaking the devastating cycle of destruction-reconstruction-destruction. It works on the development of a local hazard mitigation plan. Also, describe the necessary steps to follow in developing a hazard mitigation plan and/or integrating hazard mitigation

measures and sustainable development policies into day-to-day government activities, long-term development, and land use planning.

Requisite: ENPL 500.

**ENPL 721**

**Planning Project Proposal**

**Three credits**

Development of a planning project proposal that addresses current environmental problems or concerns is required in this course. This proposal should contain a strong background and rationale, proposed objectives and methodology.

Requisite: 36 credits approved.

**ENPL 723**

**Planning Project**

**Three Credits**

The last part of the course includes the oral defense of the planning project and a written complete document that complies with APA method and the School requirements. The planning project is the final requirement to be granted for the Master's Degree.

Requisite: ENPL 721.

## **SCHOOL OF BUSINESS ADMINISTRATION**

### **Administrative Staff**

**Hernandez Lopez, Pedro**  
Dean

**Vacant, Director**  
Graduate Program

### **FACULTY**

**HERNÁNDEZ LÓPEZ, PEDRO**  
Associate Professor  
B.B.A., University of Puerto Rico  
M.B.A., Harvard University

## **GRADUATE PROGRAM IN BUSINESS ADMINISTRATION**

The Graduate Program in Business Administration of the School of Business Administration at Universidad Metropolitana offers a Master of Business Administration Degree with specializations in Accounting, Finance, Human Resources, International Business, Management, Marketing and Technology and Information Systems. The program offers an outstanding curriculum which prepares students to effectively and efficiently assume management responsibilities required by today's organizations.

The academic experience in the program permits students to develop the necessary competencies in the area of Business Administration which will enable them to assume managerial and leadership positions in the public and private sectors. The program also contributes to the student's formation as persons who are educated and skilled, capable of meeting personal and professional goals, and able and willing to assume social responsibility.

### **Program Objectives**

The Graduate Program in Business has been structured considering the following basic objectives:

- A. In terms of the needs of our society
  1. To train competent professionals so that there will be a positive correlation between the demand for and the availability of qualified personnel in the field of Business Administration.
  2. To offer opportunities for professional improvement and advancement for persons who hold a Bachelor's Degree in business or any other academic field.
  3. To foster the growth of the national economy by encouraging an entrepreneurial spirit in students and by providing them with the managerial tools needed to effectively establish their own businesses.

B. In terms of the needs of the students

1. To develop competent professionals in the field of business who can fill executive positions in the business community.
2. To offer the opportunity for professional advancement to individuals who already hold management positions in either the private or the public sector.
3. To provide students with the knowledge and skills needed to become entrepreneurs.
4. To offer opportunities for professional development and advancement to those whose undergraduate studies are in another field.
5. To qualify personnel in the field of business education.

**Admission Requirements**

1. Students with Bachelor's Degree in Business Administration should comply with the following requirements:
  - a) Possess a Bachelor's Degree from an accredited university.
  - b) Submit an application containing:
    - 1) Official transcripts of all university studies
    - 2) Three letters of recommendation from people able to offer an opinion about the candidate's chances for success in the program.
  - c) Be interviewed by the Program Admissions Committee.
  - d) Have a minimum undergraduate grade point average (GPA) of 2.50 out of a possible 4.0. Conditional admission will be considered for students who do not meet this requirement but whose professional experience demonstrates an ability to complete graduate studies.
2. Students with non-business undergraduate degrees

Students with Bachelor's Degrees in other areas, in addition to meeting the above listed requirements will have to approve the following prerequisites: ACCO 500 – Accounting Survey.

These students will be advised to register for additional undergraduate courses in business administration aligned with the discipline of the Masters' degree attempted.

3. Transfer students

Transfer students will be admitted if they meet the following criteria:

- a) Have successfully completed a minimum of six credits in an accredited university
- b) Possess a GPA of at least, 3.0.
- c) Satisfactorily complete an interview with the Program's Admissions and Evaluation Committee

**Residence**

Students will be required to take at least 24 credits at UMET.

### **Program's Admissions and Evaluation Committee**

The Admissions and Evaluation Committee will be composed of the Dean of the School of Business/Director of the Graduate Business or his representative, who presides the committee, the Graduate Program Coordinator, and a Business School faculty member. This Committee will be responsible for all procedures related to the admission and graduation of students in the Graduate Program in Business Administration.

### **Transfer Credits**

Students from other accredited universities may transfer a maximum of 18 credits. The request to transfer credits must be made during the admissions process and the grade must be at least a B in all courses.

The content of the course must be equivalent to the course for which it is being substituted. The last 24 credits must be taken at UMET.

### **Workshop Description**

In addition to the regular curriculum, students are required to attend six workshops during their course of studies. The workshops are designed to broaden and enhance students' knowledge in areas other than their area of specialization.

The workshops will be at least three hours each. Certificates will be given to each participant and records of participation will be kept. A minimum of two different workshops per quarter will be scheduled.

The community will be advised of the workshops programmed for each quarter, and the workshops will be open to participants who are not registered in the MBA program.

### **Graduation Requirements**

To be considered a candidate for graduation, a student should comply with all the following requirements:

1. Have completed core courses with a minimum of a 3.0 out of 4.0 grade point average.
2. Have completed required specialization courses with a minimum of a 3.0 out of 4.0 grade point average.
3. Have completed their mayor seminary course with a minimum grade of B.
4. Have completed their elective course with a minimum grade of B.
5. Have attended at least 6 MBA Workshops.
6. Complete the candidacy application form.
7. Have no debts with the University.

**MASTER IN BUSINESS ADMINISTRATION  
ACCOUNTING**

<b>(42 Credits)</b>	<b>Credits</b>
Core Courses	24
Specialization Courses	15
Electives	3

Required Courses for students with Bachelor Degree in other areas (3 credits)

ACCO 500	Accounting Survey	3
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**Core Courses**

MANA 501	Organizational Behavior	3
ACCO 503	Managerial and Financial Accounting	3
STAT 555	Statistics for Managerial Decision Making	3
MARK 511	Marketing Management	3
ECON 519	Managerial Economics	3
FINA 503	Corporate Finance I	3
MANA 720	Operations Management	3
MANA 600	Business Policy and Ethics	3

**Specialization Courses**

ACCO 506*	Cost Accounting	3
ACCO 605	International Accounting	3
ACCO 610	Advanced Financial Accounting and Reporting I	3
ACCO 620	Government and Non-Profit Accounting	3
ACCO 705	Taxes in Puerto Rico	3
ACCO 706	Auditing	3
ACCO 707	Federal Income Tax	3
ACCO 710	Advanced Auditing	3
ACCO 721*	Accounting Seminar	3
BUSI 600	Federal Business Law	3

**Electives**

The student will select any graduate specialization level course from any other business mayor that has no pre-requisites or an additional course from his/her specialization, as a free elective

\*Required major course.

**MASTER IN BUSINESS ADMINISTRATION  
FINANCE**

(42 Credits)

	Credits
Core Courses	24
Specialization Courses	15
Electives	3

Required Courses for students with Bachelor Degree in other areas (3 credits)

ACCO 500	Accounting Survey	3
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**Core Courses**

MANA 501	Organizational Behavior	3
ACCO 503	Managerial and Financial Accounting	3
STAT 555	Statistics for Managerial Decision Making	3
MARK 511	Marketing Management	3
ECON 519	Managerial Economics	3
FINA 503	Corporate Finance I	3
MANA 720	Operations Management	3
MANA 600	Business Policy and Ethics	3

**Specialization Courses**

FINA 610*	Corporate Finance II	3
FINA 620	International Finance	3
FINA 630	Investments	3
FINA 640	Public Finance & Fiscal Policy	3
FINA 650	Financial Markets	3
FINA 670	Risk Management	3
FINA 680	Mortgage Financing	3
FINA 750*	Finance Seminar	3

**Electives**

The student will select any graduate specialization level course from any other business mayor that has no pre-requisites or an additional course from his/her specialization, as a free elective

\*Required major course.

**MASTER IN BUSINESS ADMINISTRATION  
HUMAN RESOURCES**

<b>(42 Credits)</b>	<b>Credits</b>
Core Courses	24
Specialization Courses	15
Electives	3

Required Courses for students with Bachelor Degree in other areas (3 credits)

ACCO 500	Accounting Survey	3
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**Core Courses**

MANA 501	Organizational Behavior	3
ACCO 503	Managerial and Financial Accounting	3
STAT 555	Statistics for Managerial Decision Making	3
MARK 511	Marketing Management	3
ECON 519	Managerial Economics	3
FINA 503	Corporate Finance I	3
MANA 720	Operations Management	3
MANA600	Business policy and Ethics	3

**Specialization Courses**

HURE 640	Collective Bargaining	3
HURE 700	Organization Design & Structure	3
HURE 710*	Human Resources Management	3
HURE 720	Training Methodology and Design	3
HURE 725	Labor Law	3
HURE 730	Compensation & Benefits Administrative	3
HURE 750*	Human Resources Seminar	3
MANA 715	Supervision and leadership	3

**Electives**

The student will select any graduate specialization level course from any other business major that has no pre-requisites or an additional course from his/her specialization, as a free elective

\*Required major course

**MASTER IN BUSINESS ADMINISTRATION  
INTERNATIONAL BUSINESS**

<b>(42Credits)</b>	<b>Credits</b>
Core Courses	24
Specialization Courses	15
Electives	3

Required Courses for students whit Bachelor Degree in other areas (3 credits)

ACCO 500	Accounting Survey	3
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**Core Courses**

MANA 501	Organizational Behavior	3
ACCO 503	Managerial and Financial Accounting	3
STAT 555	Statistics for Managerial Decision Making	3
MARK 511	Marketing Management	3
ECON 519	Managerial Economics	3
FINA 503	Corporate Finance I	3
MANA 720	Operations Management	3
MANA600	Business policy and Ethics	3

**Specialization Courses**

INBU 600*	International Business	3
INBU 610	Economic Geography of Latin America	3
INBU 620	Puerto Rico's Economy and Foreign Trade	3
INBU 630*	Export and Import Management	3
INBU 640	Multinational Business Management	3
INBU 650	International Transportation Logistics	3
INBU 660	Doing Business In China	3
INBU 750*	International Business Seminar	3

**Electives**

The student will select any graduate specialization level course from any other business mayor that has no pre-requisites or an additional course from his/her specialization, as a free elective

\*Required major course

## MASTER IN BUSINESS ADMINISTRATION MANAGEMENT

(42 Credits)	Credits
Core Courses	24
Specialization Courses	15
Electives	3

Required Courses for students with Bachelor Degree in other areas (3 credits)

ACCO 500	Accounting Survey	3
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### Core Courses

MANA 501	Organizational Behavior	3
ACCO 503	Managerial and Financial Accounting	3
STAT 555	Statistics for Managerial Decision Making	3
MARK 511	Marketing Management	3
ECON 519	Managerial Economics	3
FINA 503	Corporate Finance I	3
MANA 720	Operations Management	3
MANA 600	Business Policy and Ethics	3

### Specialization Courses

BUSI 605	Business Research Methods	3
HURE 710	Human Resource Management	3
MANA 603	Materials Management	3
MANA 621	Business Law	3
MANA 700	Entrepreneurship	3
INBU 600	International Business	3
MANA 750*	Management Seminar	3

### Electives

The student will select any graduate specialization level course from any other business major that has no pre-requisites or an additional course from his/her specialization, as a free elective

\*Required major course

**MASTER IN BUSINESS ADMINISTRATION  
MARKETING**

(42 Credits)	Credits
Core Courses	24
Specialization Courses	15
Electives	3

Required Courses for students with Bachelor Degree in other areas (3 credits)

ACCO 500	Accounting Survey	3
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**Core Courses**

MANA 501	Organizational Behavior	3
ACCO 503	Managerial and Financial Accounting	3
STAT 555	Statistics for Managerial Decisions Making	3
MARK 511	Marketing Management	3
ECON 519	Managerial Economics	3
FINA 503	Corporate Finance I	3
MANA 720	Operations Management	3
MANA 600	Business Policy and Ethics	3

**Specialization Courses**

MARK 601	Design and Development of New Products	3
MARK 605	Consumer Behavior	3
MARK 610	Marketing Research	3
MARK 615	Advertising and Sales Promotion	3
MARK 620	Service Marketing	3
MARK 640	Sales Force Management	3
MARK 701	International Market	3
MARK 740*	Marketing Seminar	3

\*Required major course.

**Electives**

The student will select any graduate specialization level course from any other business mayor that has no pre-requisites or an additional course from his/her specialization, as a free elective

\*Required major course

**MASTER IN BUSINESS ADMINISTRATION  
Information Technology and Systems**

<b>(45 Credits)</b>	<b>Credits</b>
Core Courses	24
Specialization Courses	18
Electives	3

Required Courses for students with Bachelor Degree in other areas (9 credits)

ACCO 500	Accounting Survey	3
SITI 500	Introduction to Information Technology and Systems	3
SITI 501	Object Oriented Programming	3

**Core Courses**

MANA 501	Organizational Behavior	3
ACCO 503	Managerial and Financial Accounting	3
STAT 555	Statistics for Managerial Decision Making	3
MARK 511	Marketing Management	3
ECON 519	Managerial Economics	3
FINA 503	Corporate Finance I	3
MANA 720	Operations Management	3
MANA 600	Business Policy and Ethics	3

**Specialization Courses**

SITI 550*	Information Technologies Applications	3
SITI 610*	Design and Administration of Data Bases	3
SITI 620*	Design and Administration of Communication Networks	3
SITI 630*	Information Systems Analysis and Planning	3
SITI 710*	Information Systems Design and Implantation	3
SITI 720	Systems Administration and Information Handling	3
SITI 730	Information Systems Security, Control and Auditing	3
SITI 740	Electronic Business Creation	3
SITI 740	Technologies and Systems Integration To The Firm's Functions	3

\* Required Major Courses

**Electives**

The student will select any graduate specialization level course from any other business mayor that has no pre-requisites or an additional course from his/her specialization, as a free elective

## Master in Accounting (MACC)

The School of Business Administration offers an innovative combined program of Bachelor in Business Administration and Master's Degree in Accounting which consists of 156 credits (126 undergraduate and 30 graduate), distributed across five years of study (ten semesters). It is oriented toward students whose academic goals are pursuing graduate studies in Accounting, and/or applying to obtain the Certified Public Accounting license, and/or developing an Accounting career in private enterprise.

Besides the needed specialization skills and knowledge in accounting, this curriculum allows for the development of good communication and intellectual skills to record, measure, and analyze data. Students will develop problem-solving techniques in order to develop an expanded view of the fast-changing business world in which they will serve.

### General Admission Requirements

1. First-Year Students must:
  - a. Have a High School Diploma or its equivalent.
  - b. Submit two official transcripts of High School credits.
  - c. Have a minimum 2.5 GPA
  - d. Submit the scores results on the College Entrance Examination Board Test and take the Assessment Test of The Center for Diagnosis and Placement (CDU) of UMET.
  - e. Pay a non-refundable application fee of \$25.00.
2. Transfer students from other universities must have:
  - a. A 2.50 GPA on their collage transcript.
  - b. Approved with a minimum grade of B the following college level courses: Algebra, Spanish and English.
3. Students from UMET who apply for reclassification into this program must meet the same requirements as transfer students. All courses accepted in the reclassification process must have been approved with a minimum of C.

### Workshop Description

In addition to the regular curriculum, the students are required to attend six workshops during their course of studies. The workshops are designed to broaden and enhance students' knowledge in areas other than their area of specialization.

The workshops will be at least three hours each. Certificates will be given to each participant and records of participation will be kept. A minimum of two different workshops per term will be offered. Each term the Dean of the School will submit to the Registrar a list of the students who attended to workshops.

The community will be advised of the workshops programmed for each semester, and the workshops will be open to participants who are not registered in the M.CC. Program.

**Graduation Requirements**

1. Required graduate courses must be completed with a GPA no less than 3.0;
2. The cumulative GPA must be of 2.50 or more;
3. Evidence of attendance to six workshops must be submitted;
4. The candidacy application form must be completed;
5. The student must not have debts with the University.

## MASTER IN ACCOUNTING

154 Credits	Credits
General Education Courses	51
Business Core Curriculum	36
Major Courses (Undergraduate)	24
Free Electives	3
Specialization Courses (Graduate)	27
Electives (Graduate)	3

### General Education Courses

SPAN 103-104 or	Introductory Spanish Language Course - Intermediate Level	6
SPAN 105-106	Introductory Spanish Language Course - Advanced Level	
ENGL 103-104 or	Introductory English Language Course - Intermediate Level	6
ENGL 105-106	Introductory English Language Course - Advanced Level	
MATH 112	Intermediate Algebra	3
QUME 250	Quantitative Methods I	3
ENGL 212	Business English	3
ENGL 350	Conversational English	3
SOSC 101-102	Introduction to the Study of Social Sciences or	6
SOSC 103	Introduction to the Study of Social Sciences (Compendium)	
PSYC 123 or	General Psychology	
HUMA 101-102	World Culture	6
HIST 101	Introduction to the Study of History	6
SCIE 111-112	Integrated Science I & II	6
COIS 101	Introduction to Computers	3

### Business Core Curriculum

ACCO 111-112	Introduction to Accounting I and II	8
STAT 201-301	Introduction to Business Statistics	3
ECON 123	Introduction to Economics (Compendium)	3
ECON 325	International Business	3
MANA 230	Organizational Behavior	3
ENMA 101	Introduction to Entrepreneurship	3
MANA 210	Administrative Theory	3
BUSI 204	Business Law	4
FINA 202	Business Finance	3
MARK 133	Principles of Marketing	3

### Major Courses (Undergraduate)

ACCO 201-202	Intermediate Accounting	8
ACCO 203	Cost Accounting	4
ACCO 205	Income Taxes in Puerto Rico	3
ACCO 304	Auditing	3
ACCO 308	Contemporary Accounting	3
ACCO 250	Computerized Accounting	3
Free Elective (Undergraduate)		3

### Specialization Courses

ACCO 506	Advanced Cost Accounting	3
ACCO 605	International Accounting	3
ACCO 610	Advanced Financial Accounting and Reporting I	3
ACCO 620	Government and Non-profit Accounting	3
ACCO 707	Federal Income Tax	3
ACCO 710	Advanced Auditing	3
ACCO 721*	Accounting Seminar	3
BUSI 600	Federal Business Law	3
MANA 600	Business Policy and Ethics	3

\* Required major course.

Graduate Electives ( 3 )

The student will select any graduate specialization level course from any other business major that has no prerequisites or an additional course from his/her specialization, as a free elective

## **COURSES**

### **ACCO 500 Accounting Survey Three Credits**

Introductory coverage of financial and managerial accounting for non-business graduate students. Overview of transactions analysis and basic elements of the accounting cycle for service and merchandising business. Preparation of financial elements: income statement, balance sheet, cost of manufacturing and cash flows. Inventory costing methods.

### **ACCO 503 Financial and Managerial Accounting Three Credits**

Accounting concepts and techniques, their use in the preparation and analysis of financial statements, and management decision-making with emphasis on planning and performance evaluation. Topics included are: accounting as an information system, fundamentals of financial accounting and analysis of financial information, costing methods for products and services, budget control and analysis, inventory control and valuation. Study of cost behavior, cost-volume-profit relationships, job order, process and activity based costing, short-run and long-run decisions, budget and variance analysis. Use of electronic spreadsheet.

### **ACCO 506 Advanced Cost Accounting Three Credits**

Analysis and applications of cost accounting techniques in managerial functions of planning, control and decision making. Cost determination and internal control systems in inventory management for raw material, labor and manufacturing overhead costs. Analysis of the cost-volume-profit model, operational budget, variable costing, standard costing, variance analysis. Use of business applications software and case studies.

### **ACCO 520 Accounting Information Systems Three Credits**

Accounting information systems with emphasis on developing computer usage skills in commercial applications. Analysis, design and implementation, as well as demonstration, of the accounting software modules: general ledger, accounts receivable, accounts payable, payroll and inventory. Controls to minimize error and fraud. Applications of Excel and data-based software to accounting problems.  
Prerequisites: COIS 101, ACCO 503

### **ACCO 605 International Accounting Three Credits**

Accounting from a global perspective. Regulatory organizations on international accounting issues. Generally accepted international accounting principles Contrast of

accounting policies in the United States and other American, Asian and European countries. Value and determination of income across different countries. Presentation of financial statements for multinational business enterprises. Emphasis in the use of information for analysts, managers and other decision makers.

Prerequisites: ACCO 503, FINA 503

**ACCO 610**  
**Advanced Financial Accounting and Reporting I**  
**Three Credits**

Generally accepted accounting principles for corporations and partnerships. Emphasis in consolidations and issues related to other business combinations. Consolidated financial statements, consolidation methods, liquidation and reorganization. financial statements for partnerships; formation, operation and liquidation of partnerships.

Prerequisite: ACCO 503

**ACCO 620**  
**Government and Non-profit Accounting**  
**Three Credits**

Analysis of accounting principles for government, control and presentation of financial information for government and not- for-profit institutions. Preparation of required financial statements. Accounting principles for governmental Funds, Universities and other non-profit institutions.

Prerequisite: ACCO 610

**ACCO 705**  
**Taxes in Puerto Rico**  
**Three Credits**

The study of tax laws currently applicable to employers operating in Puerto Rico and the determination of the tax liability associated to the applicable tax laws. Includes the preparation of the employers' payroll tax returns (FICA,FUTA,SUTA,SINOT, chauffeurs' insurance, workmen's compensation); property taxes, municipal license taxes, municipal license tax. Aspects of recent changes of the income tax law. Use computerized programs, and/or electronic spreadsheets.

Prerequisite: ACCO 503

**ACCO 706**  
**Auditing**  
**Three Credits**

The study of financial statements audit, from a theoretical perspective. It includes the generally accepted auditing standards (GAAS), and attestation standards: the standards audit report and types of reports: the AICPA Code of Ethics: legal responsibility of the auditor and the effect of the Sarbanes-Oxley Act on the audit of public corporations, internal control, tests of control, substantive tests, other audit procedures, evidence, and subsequent events.

Prerequisite: ACCO 503

**ACCO 707**  
**Federal Taxation**  
**Three Credits**

The study of the income tax dispositions of the Internal Revenue Code and Regulations, as they apply to individuals, small businesses, partnerships, and corporations. Gross income exclusions and inclusions, deductions, credits and the tax determination on the tax returns of individuals and small businesses. The income tax liability and filling out of tax returns of partnerships and corporations. The tax treatment of special items: capital gain/loss; special property transactions; retirement and other tax-deferred plans and annuities.

Prerequisite: ACCO 503

**ACCO 710**  
**Advanced Auditing**  
**Three Credits**

The application of the generally accepted auditing standards (GAAS) in the performance of the external audit. This course aims to reinforce the capacity to conduct research and apply the theoretical Knowledge on the audit of financial statements. It includes the discussion of the rules interpretations of the AICPA code of Ethics, the auditor legal responsibility, the study and evaluation of internal controls, tests of control and substantive tests, other audit procedures: evidence; audit risk, and audit report. Studies of audit cases. Computerized applications and/or electronic spreadsheets.

Prerequisite: ACCO 706 or ACCO 304

**ACCO 721**  
**Accounting Seminar**  
**Three Credits**

Application of accounting principles to the solution of problems related to operational, functional, and accounting requirements of an enterprise. Intensive review of theoretical and practical aspects in accounting with emphasis in ethics critical analysis and presentation of current topics through written and oral discussion of recent publications and articles. A formal research project in an accounting area is required.

Prerequisite: Completion of the 12 specialization credits in Accounting

**BUSI 600**  
**Federal Business Law**  
**Three Credits**

State and federal business laws. Contracts, agencies, partnerships, corporations, bankruptcy, and property laws, among others, and their applications to accounting and auditing situations.

**BUSI 605**  
**Business Research Methods**  
**Three Credits**

Introduction to concepts and procedures of business research. Study of the nature and purposes of investigation, types of design, instruments of investigation and methods of data analysis and interpretation. Emphasis on the search of truth by empirical means and on the contribution of research to the business administration field.

Prerequisite: STAT 555

**ECON 519**  
**Managerial Economics**  
**Three Credits**

Use of economics tools in management decision-making to maximize the company's profit. Analysis of demand, income, production, cost, markets and the relationship and uncertainty between the companies and the public sector.

**ECON 520**  
**Managerial Macroeconomics**  
**Three Credits**

The Study of macroeconomics in terms of measurement, analysis and economic policy: National Income accounts, theory, employment, stability, economic development and international applications. Fiscal and monetary policy and its impact in the economic environment of the firm.

Prerequisite: ECON 519

**FINA 503**  
**Corporate Finance I**  
**Three Credits**

Study of the theoretical and conceptual basis of corporate finance for investment decision making, financing and capital management. It includes financial statement analysis, asset valuation, capital budgeting, working capital management, short and long term financing decisions and financial planning.

Prerequisites: ACCO 503

**FINA 615**  
**Corporate Finance II**  
**Three Credits**

Focused on financial decision making from a corporation's perspective, this course studies the advanced theory and practice of corporate finance. It includes analysis of risk and return, portfolio theory, efficient market hypothesis, cost of capital, capital budgeting decisions, capital structure, dividend policy and share repurchases, mergers and acquisitions, international financial management and introduction to option pricing.

Prerequisite: FINA 503

**FINA 620**  
**International Finance**  
**Three Credits**

Extending the valuation framework of managerial finance to include international aspects of finance. Relevant topics include: The effects of currency valuation; foreign exchange risks and economics exposure; direct foreign investment; and financing international trade.

Prerequisite: FINA 503

**FINA 630**  
**Investment**  
**Three Credits**

Covers the valuation of corporative securities of multinational and domestic corporations, portfolio performance. Emphasis is placed in the role of return and risk in valuing stocks, bonds, options, and in the construction of portfolios. Prerequisite FINA 503

**FINA 640**  
**Public Finance And fiscal Policy**  
**Three Credits**

Sources and use of government funds. Fiscal Policy and its impact for stability and development with emphasis in contemporary issues.

Prerequisite FINA 503

**FINA 650**  
**Finances Markets, Money and Banking**  
**Three Credits**

The structure and operation of money and capital markets. The monetary theory and policies required to generate markets stability and growth. The interdependence of financial variables in economic activity. Emphasis on the most recent situation and their effects on local and international markets.

Prerequisite FINA 503

**FINA 670**  
**Risk and Insurance**  
**Three Credits**

Analysis of the risk management problems in the business enterprise. Emphasizes methodology for risk analysis, techniques for risk and loss control, models for risk management decision making, and procedures for administering risk management policy relative to non speculative (insurable) risk. Includes product liability, property damage and bodily injury in the business environment.

Prerequisite: FINA 503, STAT 555

**FINA 680**  
**Mortgage Financing in Real State**  
**Three Credits**

Analysis of the mortgage market, the development and impact of public and private entities on real estate financing and capital markets, and the role of financing in real estate markets.

Prerequisite FINA 503

**FINA 750**  
**Seminar Finance**  
**Three Credits**

Integrates the principles of Finance with the discussion of contemporary issues. Emphasis in research, and case analysis. The course requires a formal research paper on a topic in Finance.

Prerequisite: Approval of 12 credits in Finance specialization.

**HURE 640**  
**Collective Bargaining**  
**Three Credits**

Emphasis is given to new forms of white-collar unionization, public sector labor relations, bargaining and quasi-bargaining. The course covers the development of American unions, unions structure and government, organization campaigns and representation elections, labor agreement negotiation and administration, public policy. Emphasis on the national labor relations act and grievance-arbitration process. Prerequisite: HURE 710

**HURE 700**  
**Organization Design & Structure**  
**Three Credits**

Maintaining a sustainable competitive advantage depends on the organization's capabilities: The way in which a firm structures its work, develops its culture, and motivates its people to achieve its aspirations and well defined strategic objectives. Creating a competitive advantage is based on the firm's human resource management plays a decisive role in the design organization architecture, which changes as strategic opportunities for the organization structure is the main topic of this course. Prerequisite: HURE 710

**HURE 710**  
**Resources Management Human**  
**Three Credits**

A study of the philosophy, techniques and policies related to the administration of personnel and as a critical responsibility of every manager. Topics included are employment planning, recruitment and selection, performance measurement, training and development, employee relations, equal employment/affirmative action, compensation and labor relations.

**HURE 720**  
**Training Methodology and Design**  
**Three Credits**

This course is designed to provide the student knowledge and administrative skills and techniques about the methodology and the processes that promote the growth and development of organizations through the design and implementation of training programs that facilitate continuous learning and synergy among human resources.

Prerequisite: HURE 710

**HURE 725**  
**Labor Law**  
**Three Credits**

Federal and State legislation pertaining to the relationship between employer and employees. The following topics are discussed in this course: development of federal and Puerto Rican labor laws; constitutional rights; minimum wage, anti discriminatory laws, unemployment.

Prerequisite: HURE 710

**HURE 730**  
**Compensation & benefits Administrative**  
**Three Credits**

Maintaining a sustainable competitive advantage depends on the organization's capabilities: the way in which a firm structures its work, develops its culture, and motivates people to achieve its aspirations and well defined strategic objectives. Creating a competitive advantage is based on a firm's human resource management plays a decisive role in the design of this organizational architecture, which changes as strategic opportunities for the organization structure is the main topic of this course.

Prerequisite: HURE 710

**HURE 750**  
**Human Resources Seminar**  
**Three Credits**

This course is a compendium of the topics selected from all the courses offered in the Human Resources Management specialization. This seminar includes the search, reading, analysis, and discussion of articles, cases, sections of new books on human resources and other sources of current information the field of human resources. The course also requires the preparation of a research paper on a topic chosen by the student and accepted by the course professor.

Prerequisite: Approval of 12 credits in Human Resources specialization.

**INBU 600**  
**International Business**  
**Three Credits**

Global study of the economic, financial and political environment in business operations. Special emphasis on the international dimension of marketing, finance, accounting, taxes, economics and human resources of corporations.

**INBU 610**  
**Economic Geography of Latin America**  
**Three Credits**

Study of Latin American geography with emphasis in the economic variables that measure performance and economic development. Topics related with the processes of economic integration of the region.  
Prerequisite: INBU 600

**INBU 620**  
**External trade and the Economy of Puerto Rico**  
**Three Credits**

The study of the different sectors in the Puerto Rican economy. Emphasis on the financial industrial and government sectors and their relation to the country's exports and Imports.  
Prerequisite: INBU 600

**INBU 630**  
**Export and Import**  
**Three Credits**

Study of practices, and procedures of export and import operations including shipping cost, risks, financing, exchange rates, contracts, law and customs regulations, and transportation among others.  
Prerequisite: INBU 600

**INBU 640**  
**Multinational Business**  
**Three Credits**

Comprehensive study of the formulation of policies and strategies by multinational business enterprises, including e-commerce. Class emphasis is placed on multicultural negotiations and international business strategies of local (U S) businesses.  
Prerequisite: INBU 600

**INBU 650**  
**International Transportation Logistics**  
**Three Credits**

Study of the contemporary transportation vehicle: air, water and land. The processes that result in the most efficient and effective utilization. Topics relation, with the creation of projects with global operation and the analysis of their distribution channels.  
Prerequisite: INBU 600

**INBU 660**  
**Business in Popular in Chinese**  
**Three Credits**

Analysis of key global trends and their impact on current business practices. Study of the cultural differences and skills required in managing cultural diversities with the objective of achieving effectively organizational goals. Identification of the critical factors

necessary for success of global managers. Discussion of Chinese topics, such as: its economy and reforms, investments and trade, industry and commerce, government politics and legislation, banking and finance, and communications, technology and internet.

Prerequisite: INBU 600

**INBU 750**  
**Seminar in International Business**  
**Three Credits**

Integrates the principles of International Business with the discussion of contemporary issues. Emphasis in research, and case analysis. The course requires a formal research paper on a topic in International Business.

Prerequisite: Approval of 12 credits in International Business.

**MANA 501**  
**Organizational Behavior**  
**Three Credits**

Study of individual behavior in organizations, group behavior in organizations, and organizational behavior in social systems. Application of organizational behavior and organizational theory to management practice.

**MANA 600**  
**Business Policy and Ethics**  
**Three Credits**

Integrating and applying the various functional and support areas of business administration. The course approaches business policy making and administration from the perspective of the general manager. Cases emphasizing economic, social, and moral problems having implications for corporate policy are examined.

Prerequisite: Approval of 18 core credits.

**MANA 603**  
**Materials Management**  
**Three Credits**

This course is designed to provide the student knowledge in the field of materials management and its functions within the planning and control of the process of production, purchasing procedures, demand measurement, storage decisions, physical inventory movement from manufacturing through the distribution channels, product specifications and the processes of quality control and the supply chain.

Prerequisite: MANA 720

**MANA 621**  
**Business Law**  
**Three Credits**

Deals with the laws pertaining to business associations, such as partnerships (limited and general), corporations, franchises and joint-ventures. Topics include rights and obligations, will contracts, mortgages, business agencies and associations, corporations,

negotiable instruments, investment and loans, bankruptcy, business laws, labor laws and jurisprudence.

**MANA 700**  
**Entrepreneurship**  
**Three Credits**

Designed for MBA'S interested in pursuing entrepreneurial careers. Primary attention given to managing a new and rapidly growing business. Alternate sources of capital examined and conditions of utilization of each source established. Various growth strategies considered along with supporting public policy and personnel requirements for entrepreneurial success.

**MANA 715**  
**Supervision and Leadership**  
**Three Credits**

The systematic study of the changes that affect the styles used to supervise employees in a competitive environment. Analysis of the transformations that have occurred in the modern organization, where the supervisor is considered a facilitator of processes, policies and the management of human resources. Emphasis is given on the supervisor's in his competencies in leadership, advisement, training, and the management of conflict. Includes the analysis of leadership styles, focusing on the different organizational settings.

**MANA 720**  
**Operations Management**  
**Three Credits**

Stresses managing the production, distribution, materials, and information functions of manufacturing and service systems. Includes capacity determination, operating procedures analysis, operating systems design, control systems development, and new technology evaluation. Uses case examples of management skills required in the operating environment.  
Prerequisite: STAT 555

**MANA 750**  
**Management Seminar**  
**Three Credits**

Historical foundations and evolutionary development of management concepts; comparative analysis of management patterns; emerging problems of management interest. Readings and research in management. Each student must present a research project for discussion and comments.  
Prerequisite: Approval of 12 specializations credits in Management.

**MARK 511**  
**Marketing Management**  
**Three Credits**

Emphasis on planning and decision-making procedures in areas such as: marketing measurements, product development, price adjustments, advertising and distribution.

Texts, case studies, readings and computer exercises are used to provide experience in managing the components of the market mix.

**MARK 601**  
**Design and Development of New Products**  
**Three Credits**

Design and development of new products and modifications. Integration of the reposition strategies in the life cycle of the product. Legal aspects for protection of new or modified products. Brand names and patent protection.

Prerequisite: MARK 511

**MARK 605**  
**Consumer Behavior**  
**Three Credits**

Study of the factors that affect the particular way consumers buy, use and dispose of products and services. Marketing strategies analysis and their impact on consumer perception. Study and development of models of consumer behavior.

Prerequisites: MARK 511

**MARK 610**  
**Marketing Research**  
**Three Credits**

Study of the nature of modern applied theories of research. Emphasizes statistical methods and research design techniques using the computer as a tool in problem solution. Requires case studies, design of a research proposal and field research.

Prerequisites: MARK 511, STAT 555

**MARK 615**  
**Advertising and Sales promotion**  
**Three Credits**

Examines the marketing promotions from a communications standpoint. Discusses advertising, sales promotion, personal selling and publicity as components of the program of an enterprise including profit and non-profit institutions marketing products and/or services. Emphasizes the planning, design, and implementation of advertising campaigns. One semester, three hours per week.

Prerequisite: MARK 511

**MARK 620**  
**Service Marketing**  
**Three Credits**

Design and application of marketing strategies in a service enterprise. Understanding the client-firm and demand-supply relationships, characteristics of the delivery systems, and the difference between products and services. Development of the concepts of interchange, marketing positioning, marketing mix and client portfolio in the service market. Emphasizes the use of technology to obtain a more competitive firm for the local and international market.

Prerequisite: MARK 511

**MARK 640**  
**Sales force Management**  
**Three Credits**

Study of the decisions involved in designing a sales force: objectives, strategy, structure, size and compensation. The activities involved in managing the day to day activities of a firm's sales representatives: recruiting, selecting, training, motivating and evaluating them. The study of qualitative and quantitative techniques used in sales forecasting, the analysis of sales and the control process. The art of salesmanship and how it is applied in today's technological environment is also studied. Prerequisite: MARK 511

**MARK 701**  
**International Marketing**  
**Three Credits**

Study, development and implementation of marketing programs for international markets. Advertising, promotion, financing, production and the process of cultural adaptation. Compares marketing functions in different economic, political and social systems.

Prerequisite: MARK 511

**MARK 740**  
**Marketing Seminar**  
**Three Credits**

Integrates marketing concepts, decision making and its implications. Study of current issues affecting marketing. The student selects a current marketing topic for a research paper with the approval of the professor and submits paper for class presentation and grade.

Prerequisites: Approval of 12 credits of specialization in marketing.

**SITI 500**  
**Introduction to Information Systems and Technology**  
**Three Credits**

This course consists of the study of the principal technologies used by information systems with emphasis in the functional aspects and the interrelation between these technologies. It includes technologies related to equipment, communications, programming, and data. The course presents the development processes of and information systems and administrative, ethical, and professional aspects related to systems in organizations. The students practice the use of typical application such as spreadsheets and database.

This course is required for applicants to the information and technology systems MBA program that do not have previous knowledge in this area.

**SITI 501**  
**Objet Programming Oriented**  
**Three Credits**

This course consists of the study of basic programming application concepts and techniques utilizing the software tools. Study of the steps involved in software and algorithm development techniques, such as flowcharts: pseudo-codes, hierarchy diagrams, and user interfaces design. The student will study and practice typical programming operation, such as: input and output, arithmetic, control operations, sub-programming development and the use of arrays and files. The student will have extensive hands on experience on techniques and concepts discussed in class using objet oriented language.

This course is required for applicants to the Information and Technology Systems MBA program that do not have previous knowledge in this area.

**SITI 550**  
**Information Technology Applications**  
**Three Credits**

Required course for Technology and Information Systems masters degree program based on the development, distribution and installation of computer applications utilizing modern tools. This course includes the study of the processes common to information systems and the integration of such processes to applications. Examples of the studied processes include the preparation of interfaces with users, menu design, entry data validation, archive actualization and report preparation. Also studies the use of intermediate and advanced objet-oriented programming techniques like the creation and use of classes, the creation of object collections, the creation of multiple document interface operations, and the distribution and installation of these application. The latest tech techniques and tools are used in the development of these applications.

**SITI 610**  
**Data Base Design and Administration**  
**Three Credits**

Study of data bases and its management systems, with special emphasis in the Rational Model and the SQL tool. Course includes the study of data base design, normalization, referential integrity, privacy, protection, recuperation, and study of the characteristics of a data management systems based on Edward Codd's Model. Also studied are advanced topics as distributed data, client/server systems, data warehousing and object oriented databases. Students utilize a management system based on SQL data to practice management of the concepts and techniques studied in class.

Prerequisite: SITI 550

**SITI 620**  
**Communications Networks Design and Administration**  
**Three Credits**

This course studies data communication networks that serve as basis for information Systems. It studies the transmission means, the forms of transmission, the protocols the physical configurations

(typologies) and the communication equipment, both for local networks ( "LANs") as for remote networks ("Wans"). For public networks, we study the available services and their fees. For local networks, we study the operating systems and the management of network resources y its security.

Prerequisite: SITI 550

**SITI 630**  
**Information Systems Planning and Analysis**  
**Three Credits**

Consists of the study of the planning, analysis y requirement preparation y modeling of information systems. Study of the life cycle of the of a system and the process of identifying, selecting y analyzing the viability of the Systems being developed. The course also covers the recompilation and organization of data about processes being implemented in the organization. The support tools used in the process are also studied. Emphasis is given to both technical aspects and administrative considerations. Students practice the concepts and techniques for a system.

**SITI 710**  
**Systems Design Implementation and Information management**  
**Three Credits**

This course describes the design, the testing and the implantation of information Systems. Study of the design of the interface with the user (screens, reports and applications), the design of the data and processes, both manual and automated. Other studied themes include the development of programming, system testing, and different approaches for the implantation and support of the user. The support tools used in the process are also studied. Emphasis is given to both technical aspects and administrative considerations. Students practice the concepts and techniques via a project in which they design the components of a system utilizing the prototypes approach.

**SITI 720**  
**Systems Administration and Information Management**  
**Three Credits**

This course studies the different types of existing information Systems in organizations, the impact of these systems, the location of the functions of the systems on the organizational structure of an Information Systems Center, acquisition and management of the resources, training, certifications and regulatory and legal considerations. Also included is the study of the planning and the handling of systems projects, as well as the tools utilized in this process.

Students utilize a project management tool to prepare a plan for administering the project, including the activities, times and resources to be used.

**SITI 730**  
**Controls, Auditing and Security**  
**Three Credits**

Study of the controls required in the operations of an organizational system and the checking of the compliance with these controls through an auditing process. Study of the importance of the protection of technological and systems resources within an

organization, and the recovery of the technological operations in case of disasters. Students prepare a recoupment plan in case of disasters.

**SITI 740**  
**Electronic Business Creation**  
**Three Credits**

Graduate elective course for students on the creation of Internet businesses. Study of the technologies and strategies available to develop this type of businesses. Study of the legal, ethical and tax frameworks in which electronic businesses operate, as well as privacy and security aspects. Students prepare a plan for creating an electronic business

**SITI 750**  
**Enterprise Integration of Information Systems and Technologies**  
**Three Credits**

This course integrates the acquired knowledge about the technologies and information systems through the preparation of project on systems development. The project will consist on the study of the operations of a functional area within a company, the definition of a system that satisfies the needs of this area, and the preparation of a prototype for a system that meets these requirements. At the end of the course, the student will document in a report the process followed to develop this project and the final results achieved.

**STAT 555**  
**Statistics for Managerial Decision Making**  
**Three Credits**

The support tools used in the process are also studied. Emphasis is given to both technical aspects and administrative considerations. Students practice the concepts and techniques for a system.

Covers basic statistical skills for advanced work in the functional areas of business administration, including descriptive statistics, probability, probability distributions, sampling, estimation, statistical inference, and Bayesian principles. computer programs are used in obtaining solutions.

## **SCHOOL OF EDUCATION GRADUATE AND DOCTORAL PROGRAM**

### **Administrative Staff**

#### **Judith González, Ed.D.**

Dean of the School of Education

#### **Ángel Canales, Ed.D.**

Associate Dean

Graduate Program of Education

### **FACULTY**

#### **DAVILA, SONIA**

Professor

B.A., University of Puerto Rico

M.A., University of Puerto Rico

Ph.D., Pennsylvania State University

#### **DELGADO ALBINO, ANA M.**

Professor

B.A., University of Puerto Rico

M.A., University of Puerto Rico

Ph.D., Pennsylvania State University

#### **FERNANDEZ POWER, MARIA E.**

Professor

B.A., University of Puerto Rico

M.A., University of Puerto Rico

Ph.D., Fordham University

#### **PONCE RIVERA, OMAR**

Professor

B.A., University of Puerto Rico

M.A., New York University

Ph.D., New York University

#### **TORRES, MIGDALIA**

Professor

B.A., University of Puerto Rico

M.S., Bridgeport University

Ph.D., Pennsylvania State University

#### **ZAIDA VEGA**

Professor

B.A., University of Puerto Rico, Mayaguez Campus

M.A., Interamerican University

Ed.D., Vanderbilt University

## **GENERAL AND SPECIFIC REGULATIONS OF THE GRADUATE: MASTERS AND DOCTORAL PROGRAMS IN EDUCATION**

The Graduate: Masters and Doctoral Programs of the School of Education provide numerous and innovative alternatives for the development of professionals that are leaders in formal educational institutions and other related work environments.

The Mission of the School of Education is based on the principle that education is the art of achieving positive changes founded on social ethics. Our goal of excellence is manifested in that a good quality of life is the product of the holistic instruction of the student and the educational professional. Academic autonomy, respect for diversity, equality and human dignity, as well as reflective and diverse thought characterize our organizational environment.

### **Goals**

1. Enable the development of educational professionals capable of applying diverse theoretical frameworks for the progress of educational practices and policies.
2. Promote the development and academic and professional growth of the students and personnel of the public and private school systems of Puerto Rico.
3. Contribute to the holistic formative education of competent professional of education, who through their active practice and pedagogical expertise will become leaders in the content, competencies, skills and values of a quality education.

### **Objectives**

1. Provide students with an academic and experiential environment that will enable the attainment of Concepts, the development and enrichment of competencies, skills as well as the clarification of values directed to become competent educational professionals.
2. Contribute to preparing professionals that are capable of becoming agents of change and learning facilitators.
3. Provide students with courses, activities and authentic experiences, internships and Exchange projects in their respective interest and specialization fields.
4. Facilitate students' preparedness to excel and make valuable contributions guided by their humane sensibility and intellectual capacity to a demanding society described by rapid change, highly technological, economically global.
5. Develop in students a high sense of social and educational commitment with ethical and professional responsibility.
6. Offer a graduate education that addresses social realities and expectations; that is attuned with vanguard behavior and social morality.
7. Expose students to diverse educational approaches, schools of thought, innovations, models, paradigms and tendencies.

## **ADMISSION REQUIREMENTS: MASTER PROGRAM**

An applicant shall be eligible for admission if he/she complies with the following requirements:

1. Bachelor of Arts in Education or a related area from an accredited institution or a Bachelor of Arts with a Science degree in a particular field which required courses in education;
2. Admission index of 3.00 on the Bachelor Degree. If the student has a GPA of 2.50 through 2.99, must approve the PAEG or GRE educational tests.
3. Oral and written competence in English and Spanish demonstrated by means of the GRE or PAEG.
4. Completed application form and appropriate fees within the time specified in the University calendar;
5. Three (3) letters of recommendation from previous professors or immediate supervisors;
6. Evidence of undergraduate and graduate studies (official transcript).

### **Specific Admission Requirements**

Students with Bachelor's degrees in fields other than education, if qualified, will be considered for admission, but they must take the professional courses required by the Law for Teacher Certification to obtain a regular teacher's license.

### **Transfer Credits**

A maximum of nine (9) graduate credits will be accepted from other institutions if the contents of courses are equivalent to courses offered at Universidad Metropolitana. These credits should have been taken in an accredited institution no more than five (5) years prior to admission, and approved with a grade of A or B.

### **Credit Load**

From six (6) to nine (9) credits per part of term is considered a complete credit load. The maximum number of credits a student may take per part of term is nine (9). In exceptional circumstances, students may, with the approval of their advisor, seek the written authorization of the Dean of the School to take a maximum of 12 credits.

## **MASTER'S DEGREE CANDIDACY**

To be considered a candidate for graduation, a student should comply with all of the following requirements:

1. Complete all the graduate credits required in the aimed specialization program, with a GPA of no less than 3.00
2. Complete the candidacy application form

Graduation Requirements: Master Degree

1. Successful completion of all required courses;
2. A grade point average of not less than 3.00;
3. Approval of a thesis or a special research project;
4. Submit three (3) copies of the final approved thesis or project document;
5. None outstanding debts with the University

### **Admission Requirements: Doctoral Program**

Each student applying for admission to the doctoral program will be required to:

1. Present evidence of three years of satisfactory experience in the field of education certified by the appropriate authority.
2. If the student graduated from other schools and/or is working outside of the field of education, he/she will be required to have approved a graduate level statistics course with a minimum grade of B.
3. Submit recent results of (EXADEP) or of the Graduate Record Examination (GRE), taken within the twelve months prior to the date of submission of the application for admission to the doctoral program.
4. Present evidence of a master's degree from an accredited institution. Must present evidence of graduate studies-official transcript.
5. Submit two (2) letters of recommendation of persons related to the student in non academic working environments and one (1) letter of recommendation of a person related to the student in an academic environment.
6. Attend an interview with the Admissions Committee and be recommended favorably.
7. Have a grade point average of no less than 3.00 at the master's degree level.
8. Demonstrate competency in oral and written communication in both English and Spanish. Candidates must write a short essay in English and a short essay in Spanish as part of the interview.

Note: Each of these criteria have a perceptual weigh for determining eligibility for admission in the doctoral program.

### **Admission Process**

1. The applicant will submit an application before June 15 for the August-October and October-December terms and before December 15 for the January-March and March-May terms. These deadlines are subject to change upon decision of the School of Education. There may be no opening for admissions in a particular academic term.
2. The applicant will request an official transcript from each institution where he/she has studied. These documents must be sent directly to UMET.
3. The applicant will request that the three recommendation letters be sent directly to UMET.
4. The applicant will make arrangements to take the EXADEP or GRE and will request that official scores be sent directly to UMET. Incomplete applications will not be considered. Test results are mandatory for admission.

### **Transfer Credits**

A maximum of nine (12) doctoral level credits will be accepted from other institutions if the contents of courses is equivalent to courses offered at Universidad Metropolitana. These credits should have been taken in an accredited institution no more than five (5) years prior to admission, and approved with a grade of A or B. Decisions upon transfer admissions will rely upon the Faculty of the School of Education.

### **Credit Load**

From six (6) to nine (9) credits per part of term is considered a complete credit load. The maximum number of credits a student may take per part of term is nine (9). In exceptional circumstances, students may, with the approval of their advisor, seek the written authorization of the Dean of the School to take a maximum of 12 credits.

## **DOCTORAL DEGREE CANDIDACY**

To be considered a candidate for graduation, a doctoral student should comply with all of the following requirements:

1. Complete all the doctoral credits required in the specialization program in which admitted, with a GPA of no less than 3.00 (B); including the final requirements (approval of the comprehensive test and of the doctoral dissertation).
2. Complete the candidacy application form and pay the required fees.

### **Good Standing**

In order to maintain good standing in the program, every student, upon completion of the academic year, should have a grade point average that fulfills the norms of academic progress.

\*If the student, one particular year, does not fulfill the minimum required, he/she will be given one semester to raise his/her GPA to the level established by the program.

### **Maximum Time Allotted for Completing Degree**

Every student will have a maximum of eight (8) years to complete the doctoral degree (Ph. D. or Ed. D.). If the student, by the end of the eighth year, has not completed his/her degree, he/she will request a one year extension to the Associate Dean of the Graduate School. The Dean will evaluate the petition based on its merits

and will inform the student about his/her decision. If the request is denied, the student will leave the doctoral program. Requests for extensions will be made annually, until the student has finished his/her degree or until finally denied.

**Graduation Requirements: Doctoral Degree**

1. Successful completion of all required courses;
2. A grade point average of not less than 3.00;
3. Approval of the comprehensive test and dissertation,
4. Submission of three (3) copies of the dissertation
5. None outstanding debts with the University.

**GRADUATE PROGRAM IN EDUCATION:  
MASTER DEGREE**

The Master of Arts in Education Program (M.A.) offers several specialties in management and teaching. In management, the program offers four specialties: Educational Administration and Supervision, Preschool Centers Administration, and Managing Leisure Services. In the teaching field, the program offers specialties in Teaching of Preschool Education, Teaching of Physical Education (Elementary, Secondary, Adult & Adapted), Special Education and Curriculum and Teaching. All programs have a futuristic vision and an innovative focus based on the latest research.

**MASTER OF ARTS IN EDUCATION**  
**Area: Management**

**Educational Administration and Supervision**

A program of study that prepares the educational administrator in managerial areas, such as: legal aspects, funds management, budget preparation, human resources administration leadership, strategic planning and the latest trends in the field.

**39 Credits**

	<b>Credits</b>
Core Courses	12
Specialization Courses	18
Electives	3
Final Requirements	6

**Core Courses**

Educ 501	Principles and Systematic Development of the Curriculum	3
Educ 504	Learning Theory and Cognitive Development	3
Educ 505	Educational Research Methods	3
Educ 512	Educational Innovations and Strategies	3

**Specialization Courses**

Educ 620	Educational Administration Concepts, Processes and Principles	3
Educ 621	Educational Theory, Practice and Trends	3
Educ 622	Leadership: Future Perspectives in Educational Administration	3
Educ 623	Educational Policy, Funds and Managerial Process	3
Educ 624	Contemporary and Futuristic Supervision Practices	3
Cois 625	Computerized Systems in Educational Administration	3

**Electives**

Educ 507	Philosophy, Critical Thinking and Education	3
Educ 517	Supervision of Instruction in Student Teaching	3
Educ 541	History of Education	3
Educ 542	Comparative Education	3
Educ 543	Culture and Education	3
Educ 545	Computers and Society	3
Cois 600	The Computer as an Instructional Resource	3
Educ 610	The Education of Exceptional Children	3

**Final Requirements**

Educ 709	Thesis or Research Paper	3
Educ 702	Practicum (K-6) Elementary Level	3
or Educ 704	Practicum (7-12) Secondary Level	3

Prerequisites    12 credits core courses  
                         18 credits specialization

## Preschool Centers Administration and Supervision

A program of study for those interested in developing, implementing, managing and evaluating Preschool programs and centers in governmental agencies, municipalities and private institutions. The program brings together courses in educational administration and supervision with courses in Preschool education so that the student acquires a thorough knowledge of the educational administration and preschool education fields.

### 36 Credits

	Credits
Core Courses	12
Specialization Courses	18
Final Requirements	6

### Core Courses

EDUC 505	Educational Research Methods	3
EDUC 525	Statistics for Evaluation and Research	3
EDUC 620	Educational Administration Concepts, Processes and Principles	3
EDUC 623	Educational Policy, Funds and Managerial Processes	3
COIS 625	Computerized Systems in Educational Administration and Supervision	3

### Specialization Courses

EDUC 519	Processes and Practices of Assessment in Preschool Education	3
EDUC 527	Curriculum and Teaching Practices in Preschool Education	3
EDUC 528	Collaboration and Consultation working with students and family	3
EDUC 529	Preschool Education	3
EDUC 613	Preschool Education of the Exceptional Child	3

### Final Requirements

EDUC 708	Practicum/Internship in Administration and Supervision of Preschool Education	3
Educ 709	Thesis or Research Paper	3

## Managing Leisure Services

A program of study for those interested in developing, implementing, managing and evaluating leisure services and sports programs in governmental agencies, municipalities and private institutions.

	Credits
<b>36 Credits</b>	
Core Courses	12
Specialization Courses	12
Final Requirements	12

### Core Courses

REED 505	Interdisciplinary Studies of Leisure	3
REED 515	Measurement and Evaluation in Physical Ed. and Leisure	3
EDUC 505	Educational Research Methods	3
EDUC 525	Statistics for Research and Evaluation	3

### Specialization Courses

REED 510	Managing Leisure Services	3
REED 512	Leisure Programming	3
REED 514	Managing Leisure and Sports Facilities	3
COIS 625	Computerized Systems in Educational Administration and Supervision	3

### Final Requirements

REED 524	Research Seminar In Leisure Services	3
REED 525	Professional Seminar in Physical Education and Leisure Services	3
REED 601	Practicum in Physical Education And Leisure Services	3
Educ 709	Thesis or Research Paper	3

Prerequisites: Reed 601-Reed 525  
Educ 716 - Reed 524, Educ 525, Educ 505  
12 credits core courses  
12 credits specialization courses

**MASTER OF ARTS IN EDUCATION**  
**Area: TEACHING**

Special Education

This specialty is oriented to facilitate to the teacher of Special Education the tools that allow her/him to perform their functions effectively and efficiently in the classroom. In addition, the specialty at this level facilitates competing to her/him in the magisterial field for an associate teacher rank.

39 Credits	Credits
Core Courses	9
Major Courses	18
Electives	3
Final requirements	9

**Core Courses**

Educ 512	Educational Innovations and Strategies	3
Cois 600	The Computer as an Instructional Resource	3
Educ 610	Education of the Exceptional Child	3

**Major Courses**

Educ 611	Education of Mildly Handicapped Children	3
Educ 612	Behavior Modification for Mildly and Severely Handicapped Children	3
Educ 613	Preschool Education of Exceptional Child	3
Educ 616	Assessment, Evaluation and Measurement In Special Education	3
Educ 617	Curriculum and Teaching Methods in Special Education	3
Educ 531	Issues and Legal Trends in Special Education	3

**Electives**

Educ 532	Administration and Supervision of Special Education Programs	3
Educ 534	Teaching Reading and Writing to Children with Learning Problems	3
Educ 538	The Education of Emotionally Disturbed Children	3
Educ 576	Teaching Methods and System	3

**Final Requirements**

Educ 505	Educational Research Methods	3
Educ 618	Research Seminar in Special Education	3
Educ 709	Thesis or Research Paper	3

## Preschool Education

A program of study for those interested in becoming early childhood educators.

<b>33 Credits</b>	<b>Credits</b>
Core Courses	12
Specialization Courses	15
Final Requirements	6

### Core Courses

EDUC 504	Theories of Learning and Cognitive Development	3
EDUC 507	Philosophy, Critical Thinking and Education	3
EDUC 505	Educational Research Methods	
EDUC 525	Statistics for Evaluation and Research	3
COIS 600	The Computer as an Instructional Resource	3

### Specialization Courses

EDUC 519	Processes and Practices of Assessment in Preschool Education	3
EDUC 527	Curriculum and Teaching Practices in Preschool Education	3
EDUC 528	Collaboration and Consultation working with students and family	3
EDUC 529	Preschool Education	3
EDUC 613	Preschool Education of the Exceptional Child	3

### Final Requirements

Educ 709	Thesis or Research Paper	3
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## Curriculum and Teaching

The specialty in Curriculum and Teaching is oriented to facilitate the teacher with the tools that allow her/him to perform their functions and effectively efficiently in the classroom. The courses are directed to promote elementary level teacher professional successful.

	Credits
<b>36 Credits</b>	
Core Courses	12
Specialization Courses	18
Electives	3
Final Requirements	3

### Core Courses

EDUC 501	Principles and Systematic Development of the Curriculum	3
EDUC 504	Theories of Learning and Cognitive Development	3
EDUC 505	Educational Research Methods	3
EDUC 512	Educational Innovations and Strategies	3

### Specialization Courses

EDUC 502	Management of the Classroom and School as a Learning Community	3
EDUC 503	Evaluation of Curriculum and Instruction	3
EDUC 513	Assessment, Evaluation and Measurement	3
EDUC 526	Curriculum Design and Planning	3
EDUC 576	Teaching Models and System	3
COIS 600	Computer as a Instructional Resource	3

### Electives

EDUC 507	Philosophy, Critical Thinking and Education	3
EDUC 532	Administration and Supervision of Special Education Programs	3
EDUC 542	Comparative Education	3
EDUC 543	Culture and Education	3
EDUC 545	Informatic and Society	3
EDUC 610	Education of Exceptional Child	3
EDUC 525	Statistics for Evaluation and Research	3

### Final Requirement

EDUC 709	Thesis or Research Paper	3
Prerequisites: Educ 505		
	12 credits core courses	
	18 specialization courses	

## Teaching Physical Education -Elementary Level

A program of study for those interested in becoming physical educators in elementary public or private schools.

<b>36 Credits</b>	<b>Credits</b>
Core Courses	12
Specialization Courses	12
Final Requirements	12

### Core courses

PHED 505	Study of human behavior in their Leisure time, the implications for the Physical Education Profession	3
PHED 515	Assessment, Evaluation and Measurement in Physical Education	3
EDUC 505	Educational Research Methods	3
EDUC 525	Statistics for Research and Evaluation	3

### Specialization courses

PHED 506	Teaching Methods in Physical Education in Elementary Level	3
PHED 509	Curriculum Development in Physical Education in Elementary Level	3
REED 511	Scientific Foundations of Physical Activity	3
COIS 600	The Computer as an Instructional Resource	3

### Final requirements

PHED 524	Research Seminar in Physical Education	3
PHED 525	Seminar in Issues and Trends in Physical Education	3
PHED 600	Practicum in Physical Education in Elementary Level	3
Educ 709	Thesis or Research Paper	3

## Teaching of Physical Education Secondary Level

A program of study for those interested in becoming Physical educators in secondary public or private schools.

### 36 Credits

	Credits
Core Courses	12
Specialization Courses	12
Final Requirements	12

### Core Courses

PHED 505	Studies of human behavior in Their Leisure time, their implications for the Physical Education Profession	3
PHED 515	Assessment, Evaluation and Measurement in Physical Education	3
EDUC 505	Educational Research Methods	3
EDUC 525	Statistics for Research and Evaluation	3

### Specialization Courses

REED 511	Scientific Foundations of Physical Activity	3
COIS 600	The Computer as an Instructional Resource	3
PHED 507	Teaching Methods in Physical Education in Secondary Level	3
PHED 510	Curriculum Development in Physical Education in Secondary Level	3

### Final Requirements

PHED 524	Research Seminar in Physical Education	3
PHED 525	Seminar in Issues and Trends in Physical Education	3
PHED 601	Practicum in Physical Education In Secondary Level	3
Educ 709	Thesis or Research Paper	3

## Teaching of Physical Education for Adults

A program of study for those interested in becoming Physical educators for adults in public or private scenarios.

**36 Credits** **Credits**

Core Courses	12
Specialization Courses	12
Final Requirements	12

### Core Courses

PHED 505	Studies of human behavior in their Leisure time, the implications for the Physical Education Profession	3
PHED 515	Assessment, Evaluation and Measurement in Physical Education	3
EDUC 505	Educational Research Methods	3
EDUC 525	Statistics for Research and Evaluation	3

### Specialization Courses

REED 511	Scientific Foundations of Physical Activity	3
COIS 600	The Computer as an Instructional Resource	3
PHED 508	Teaching Methods in Physical Education for Adults	3
PHED 511	Curriculum Development in Physical Education for Adults	3

### Final Requirements

PHED 524	Research Seminar in Physical Education	3
PHED 525	Seminar in Issues and Trends in Physical Education	3
PHED 602	Practicum in Physical Education for Adults	3
Educ 709	Thesis or Research Paper	3

## Teaching Adapted Physical Education

A program of study for those interested in becoming adapted Physical educators for special populations in public or private scenarios.

### 36 Credits

### Credits

Core Courses	12
Specialization Courses	15
Final Requirements	9

### Core Courses

PHED 505	Leisure time and physical education	3
PHED 516	Assessment, measurement and evaluation in adapted physical education	3
EDUC 505	Educational Research Methods	3
EDUC 525	Statistics for evaluation and research	3

### Specialization courses

PHED 512	Principles and foundations of adapted physical activity	3
PHED513	Methods and techniques of programming and teaching in adapted education	3
PHED 514	Methods and techniques for recreational therapy	3
EDUC 532	Administration and supervision of programs for special education	3
COIS 600	The Computer as an Instructional Resource	3

### Final Requirements

PHED 524	Research Seminar in Physical Education	3
PHED 603	Practicum in adapted physical education	3
Educ 709	Thesis or Research Paper	3

\*\* PHED 500  
PHED 501  
PHED 502

\*\*THESE COURSES ARE REQUIRED FOR STUDENTS WHOSE BACHELOR DEGREES ARE FROM OTHER DISCIPLINES DIFFERENT FROM ADAPTED PHYSICAL EDUCATION THAT HAS BEEN ADMITTED TO THIS PROGRAM. THESE COURSES MUST BE APPROVED BEFORE ENROLLMENT IN SPECIALIZED COURSES.

## GRADUATE PROGRAM IN EDUCATION: DOCTORAL DEGREE

The doctoral program offers two modalities: Doctor in Education (Ed.D.) y Doctor in Philosophy in Education (Ph.D.), both in the specialization of Teaching. The components of both programs are: core courses (fundamentals), specialization, research and final requirements.

### CURRICULAR DESIGN: DOCTORAL PROGRAM

#### CREDIT CONTENT

Ed. D. (54 credits)

Ph. D. (63 credits)

#### CORE COURSES BY MODALITY

##### PH. D. (15 credits)

credits

EDFO 807	Fundamentals of Human Behavior Applied to Education	3
EDFO 810	Education, Schools, Universities and Society	3
EDFO 815	Education and Philosophy	3
EDFO 825	Ethics in Philosophical Modernism and Postmodernism: A Critical Approach	3
EDFO 910	Seminar: Contemporary Issues in Education	3
		15

##### ED. D.(15 credits)

EDFO 807	Fundamentals of Human Behavior Applied to Education	3
EDFO 810	Education, Schools, University and Society	3
EDFO 815	Philosophy and Education	3
EDFO 820	Ethics and the Education Professional	3
EDFO 910	Seminar: Contemporary Issues in Education	3
		15

#### SPECIALIZATION

##### PH D. (18 credits)

EDCO 825	Models of Teaching	3
EDCO 830	Curricular Design and Evaluation	3
EDCO 831	Development of Educational Programs and Projects	3
EDCO 836	Instructional Design and Technology	3
EDCO 960	Practicum	3
EDCO 963	Postsecondary Education: Teaching and Andragogy	3
		18

**ED.D. (15 credits)**

EDCO 825	Models of Teaching	3
EDCO 830	Curricular Design and Evaluation	3
EDCO 831	Development of Educational Programs and Projects	3
EDCO 836	Instructional Design and Technology	3
EDCO 961	Practicum I	3
		15

**RESEARCH**

**PH. D. (21 credits)**

EDRE 862	Quantitative Research	3
EDRE 863	Qualitative Research	3
EDRE 864	Combined Method Research	3
EDRE 890	Experimental Research	3
EDRE 873	Institutional Research and Assessment	3
EDRE 871	Descriptive Statistics	3
EDRE 872	Inferential Statistics	3
		21

**ED. D. (12 credits)**

EDRE 862	Quantitative Research	3
EDRE 863	Qualitative Research	3
EDRE 890	Experimental Research	3
EDRE 870	Programming Use and Data Analysis	3
		12

**FINAL REQUIREMENTS**

**PH. D. (6 credits)**

		credits
EDUC 985	Comprehensive Test	0
EDRE 900	Seminar: Writing Proposal	3
EDUC 905	Dissertation (Includes Writing Seminar)	3

**ED. D. (6 credits)**

		credits
EDUC 985	Comprehensive Test	0
EDRE 900	Seminar: Writing Proposal	3
EDUC 905	Dissertation (Includes Writing Seminar)	3

**ELECTIVES**

**PH. D. (6 credits)**

Two courses from among the following and others at graduate level recommended by the Advisor and approved by the Coordinator or Dean.

		credits
EDFO 820	Ethics and the Education Professional	3
EDFO 961	Practicum II	3
EDRE 870	Programming Use and Data Analysis	3

ED. D. (6 credits)

		credits
EDCO 963	Postsecondary Education in Puerto Rico	3
EDRE 864	Combined Method Research	3
EDFO 825	Ethics in Philosophical Modernism and Postmodernism: A Critical Approach	3
EDRE 873	Institutional Research and Assessment	3
EDRE 872	Inferential Statistics	3

## **CURRICULAR CONTENT MASTER'S DEGREE COURSES**

### **COIS 600**

#### **The Computer as an Instructional Resource Three Credits**

Basic introduction and familiarization with the computers from a pedagogical perspective through the studies of its origins, development, concepts, description, handling of the implications, roll and uses in the education. Application of the microcomputer in the educative areas and impact of the computer in our lives; as well as the use of educational materials designed by the computer. The microcomputers whose laboratory is basic with practice methods is required. In the laboratory, different programs are used to provide learning experiences related with computer software, such as word processing (Word); Excel; Power Point; Publisher and other applications and software.

### **COIS 625**

#### **Computerized Systems in Educational Administration and Supervision Three Credits**

Study and use of computer systems accessible to administrators with applications for the management of funds and processes. Basic concepts in computer sciences. Design, development and operation of systems of information in the field of education. One semester, three hours per week.

Prerequisite: EDUC 623

### **EDUC 501**

#### **Systematic Curriculum Development Three Credits**

Study of the principles, foundations, and practices in curriculum development. Emphasizes knowledge, competencies and standards related to the different areas of curriculum. Analysis of issues, positions, trends, and approaches related to content and structure of curriculum in Puerto Rico's educational system.

### **EDUC 502**

#### **Management of the Classroom and School as a Learning Community Three Credits**

Study and critical analysis of classrooms and schools as academic communities. Discussion of topics such as restructuring of the educational system, classrooms as laboratories, decentralization, total quality management, school autonomy, open school systems and instructional leadership.

### **EDUC 503**

#### **Evaluation of Curriculum and Instruction Three Credits**

Study of principles, theories and models of evaluation applied to the curriculum. Application of strategies; technical, analytical and statistical aspects pertaining to the implementation and evaluation of teaching. One semester, three hours per week.

**EDUC 504**  
**Theories of Learning and Cognitive Development**  
**Three Credits**

Study and analysis of the theories and models related cognitive development and learning. Emphasis on the transfer of thinking skills from teacher to student. One semester, three hours per week.

**EDUC 505**  
**Educational Research Methods**  
**Three Credits**

Introduction to the concepts and procedures of educational research. Study of the nature and purpose of research; types of design, research instruments and methods of analysis and interpretation of data. Emphasis on the contribution of research to the field of education. One semester, three hours per week.

**EDUC 507**  
**Philosophy, Critical Thinking and Education**  
**Three Credits**

Critical analysis of the ethical and philosophical foundations of education. Study of contemporary paradigms, issues, theories and practices related to the development of critical thinking. One semester, three hours per week.

**EDUC 512**  
**Educational Innovations and Strategies**  
**Three Credits**

Contemporary and futuristic trends, models and paradigms on curriculum, philosophy and changes in education. Infusion on recent reform writing and research. One semester, three hours per week.

**EDUC 513**  
**Assessment, Measurement, and Evaluation**  
**Three Credits**

This course is designed for teachers and other professionals in the educational field. Analytic study of concepts, processes and practices of assessment in the classroom. Development of instruments for the assessment process. Emphasis on the application and implementation of the assessment process in all classroom activities.

**EDUC 517**  
**Supervision of Instruction in Student Teaching**  
**Three Credits**

Theories, models and trends of the instructional process and its practical applications. Importance of the evaluations and supervision processes in student teaching. One semester, three hours per week.

**EDUC 519**  
**Processes and Practices of Assessment in Preschool Education**  
**Three Credits**

This course is designed for teachers, supervisors, administrators and other professionals in the early childhood field at the graduate level. Analytic study of the processes and practices of assessment in Preschool education. Development of instruments for the assessment process. Emphasis on the application and implementation of the assessment process to teaching in the preschool level. Analysis of case studies that explain the due process of preschool assessment. Includes teamwork, collaboration, and consultation.

**EDUC 525**  
**Statistics for Evaluation and Research**  
**Three Credits**

Descriptive and inferential statistics for evaluation and research in Graduate School.

**EDUC 526**  
**Curriculum Design and Planning**  
**Three Credits**

Study and analysis of curriculum design. Emphasis on different trends, strategies, techniques, and curricular aspects pertaining to the teaching/learning situations. Studies instructional planning as a basic tool to deal effectively with curriculum matters. Acquaint the graduate student with new theories and principles regarding curriculum design.

**EDUC 527**  
**Curriculum and Teaching Practices in Preschool Education**  
**Three Credits**

Provides the graduate student with practical experiences in curriculum and teaching practices development in preschool education. Emphasizes knowledge and competencies related to the different areas of the preschool curriculum. Study of the specialized curricula for the study of early childhood based on learning theories and human development stages. Includes the design of teaching practices, teaching materials preparation, learning activities, educational programs, individualized instruction, games, manipulation and discovery as the bases for the teaching and learning process in the preschool level.

**EDUC. 528**  
**Collaboration and Consultation working with students and family**  
**Three Credits**

This course is designed for teachers, supervisors, administrators and others professionals working with preschool education to complete graduate studies in that area. Include advance studies of all the fundamentals and components of the human diversity in the school overall. Emphasis the analysis of the nature, processes of life, processes of change, manifestations and dimensions of the human diversity. Development and application of competencies and process of collaboration and consultation for the working group with students, family and communities to promote the development of learning communities.

**EDUC 529**  
**Preschool Education**  
**Three Credits**

Skills and techniques enabling students to develop and organize educational experiences at the preschool level. Analysis of children's growth in motor, emotional, and cognitive development. Includes developmental experiences regarding thinking skills and assessment through educational research.

**EDUC 531**  
**Legal Issues and Trends in Special Education**  
**Three Credits**

Knowledge, analysis and discussion of current Federal and State Legislation in special education. Case Studies. One semester, three hours per week.

**EDUC 532**  
**Administration and Supervision in Special Education Programs**  
**Three Credits**

Theories of administration and supervision. Organization of educational agencies and institutions. Emphasis on tasks and functions of the school administrator and supervisor in special education programs. One semester, three hours per week.

**EDUC 534**  
**Teaching Reading and Writing to Children with Learning Disabilities**  
**Three Credits**

Methods and techniques for the detection of reading-writing difficulties. Practice in the analysis and problem solving of oral and written language.

**EDUC 538**  
**The Teaching of Emotionally Disturbed Children**  
**Three Credits**

Physical, emotional, social and intellectual characteristics of the emotionally disturbed child. Emphasis upon methods and instructional materials. One semester, three hours per week.

**EDUC 541**  
**History of Education**  
**Three Credits**

The development of education through time with particular attention to the great thinkers and their impact upon education. The history of schools in Puerto Rico in the social and intellectual American context. One semester, three hours per week.

**EDUC 542**  
**Comparative Education**  
**Three Credits**

Comparative analysis of the different educational systems in the contemporary world: historic and political roots and their specific mission. Emphasis upon their organization and functioning. Evaluation of Puerto Rico's Public Education System as compared with the standards of other systems. One semester, three hours per week.

**EDUC 543**  
**Culture and Education**  
**Three Credits**

Sociological and philosophical concepts with special attention to the socio-cultural contexts of education and the role of the educational institution within society. Study of society in its creative and strengthening capacity of culture. One semester, three hours per week.

**EDUC 545**  
**Informatic and Society**  
**Three Credits**

Trends, practices and effects of social-scientific and technological changes in relation to informatics. Impact of informatics upon economic and social organizations. Educational implications of informatics science in the context of the school curriculum and learning styles. One semester, three hours per week.

**EDUC 576**  
**Teaching Models and Systems**  
**Three Credits**

Analysis of teaching models and systems, traditional and innovative teaching strategies and their adaptation to student's aptitudes. Emphasizes cognitive development, learning styles, teaching models, and the application of the Deming Method (TQM) to classroom teaching.

**EDUC 610**  
**Education of the Exceptional Child**  
**Three Credits**

Requirements and legislative principles of federal and state laws that protect the exceptional child. Study of the physical, social, emotional and educational characteristics of different types of exceptional children. Instructional materials and methods for the teaching of the exceptional child. One semester, three hours per week.

**EDUC 611**  
**The Education of the Mildly Handicapped Child**  
**Three Credits**

Causes of physical, emotional, social and intellectual characteristics of the mildly handicapped child in motor, social, emotional and language skills. Study of the regular curriculum and relevant aspects of the integration of the handicapped child into the

mainstream. Emphasis on the teaching methods with particular attention to the design of individualized programs. One semester, three hours per week.

**EDUC 612**

**Behavior Modification for Mildly and Severely Handicapped Children  
Three Credits**

Different methods to be used in the education of the exceptional child. Emphasis on distinct methods: task analysis, behavior modification and the psychokinetic method. One semester, three hours per week.

**EDUC 613**

**Preschool Education of the Exceptional Child  
Three Credits**

Social, emotional, cognitive and linguistic aspects of the exceptional child of Preschool age. Early intervention to high risk children from birth to age two. Analysis of the curriculum, methods and materials for the teaching of Preschoolers. One semester, three hours per week.

**EDUC. 616**

**Assessment, Evaluation and Measurement in Special Education  
Three Credits**

This course emphasis the most important concepts of measurement, evaluation and assessment and the importance in the special education. In legal terms, responds to the public laws 94-142 and 99-457 and all the dispositions related with evaluation. Also, criterion, normalize and no normalize evaluation forms and assessments strategies use in Special Education

**EDUC 617**

**Curriculum and Teaching Methods in Special Education  
Three Credits**

In this course, the students acquire the historical perspective of the curriculum as a field of studies, and also to review some of the theories related with the curriculum design. The curricular practices of the Special Education Program are evaluated. The relationship among curriculum, assessment and the individualized educational programs are evaluated. The course provides for the analysis of strategies and instructional methods good for the handicapped population.

**EDUC 618**

**Research Seminar in Special Education  
Three Credits**

The course is geared to the study and discussion of the content, strengths, and weakness of the most recent researches in education. The content (information) of the most recent researches in the specialties of each student are examined including their assumptions, research methodologies, techniques for interpreting data and styles of presentations. It is required to conduct a review of literature from the theme the student is interested for develop the investigation for the study.

**EDUC 620**  
**Concepts, Processes and Principles of Educational Administration**  
**Three Credits**

Concepts, processes, and principles of administration. Its applications for educational institutions, organizations and agencies. One semester, three hours per week.

**EDUC 621**  
**Educational Theories, Practices and Trends**  
**Three Credits**

Introduction to the different theories, practices and trends of educational administration and their impact upon the field of education. Emphasis on the fundamentals of principalship are studied and its relationship with the diverse administrative roles and positions within the educational system. One semester, three hours per week.

**EDUC 622**  
**Leadership: Its Future Perspective on Educational Administration**  
**Three Credits**

Organization and theories of change in educational environments. Emphasis upon participant administration, problem solving, decisions making, organizational behavior, and environment. One semester, three hours per week.

**EDUC 623**  
**Educational Policy: Management of Funds and Processes**  
**Three Credits**

Analysis of Puerto Rico's school laws and regulations. Emphasis upon the analyses of political and economic aspects of the administration of educational institutions. Management of funds and decision making processes. Impact upon federal and state policies of private and public education. One semester, three hours per week.

**EDUC 624**  
**Contemporary and Futuristic Supervision Practices**  
**Three Credits**

Processes, principles and practices of supervision. Futuristic approach on the tasks and functions of the school's supervisor and administrator. One semester, three hours per week.

**EDUC 702**  
**Practicum in Administration and Supervision at the Elementary Education Level (K-6)**  
**Three Credits**

Each student is assigned to an accredited educational institution under the guidance of a school superintendent, supervising principal, or official of an educational organization who serves as a supervising administrator. The student's activities include field experiences in administration and community leadership. Students must participate in a three hour seminar, once a month, to discuss practical problems that arise in the

practice. The practice will be guided by a university supervisor. Eight hours weekly of practice will be required during a regular class semester.

**EDUC 704**

**Practicum in Administration and Supervision at the Secondary Education Level (7-12)**

**Three Credits**

Each student is assigned to an accredited educational institution under the guidance of a school superintendent, supervising principal or official of an educational organization who serves as a supervising administrator. The student's activities include field experiences in administration and community leadership. Students must participate in a three hour seminar, once a month, to discuss practical problems that arise in the practice. The practice will be guided by a university supervisor. Eight hours weekly of practice will be required during a regular class semester.

**EDUC 708**

**Practicum in Administration and Supervision of Preschool Education**

**Three Credits**

This course of supervised practicum in administration and supervision of Preschool centers/education places the graduate student in a real life environment that facilitates the development of the required competencies to be an effective Preschool administrator and supervisor. Development of the organizational theory and its implications. This practicum is developed concurrently with a practicum seminar that facilitates the integration of theory and practice.

**EDUC 709**

**Thesis: Documental Research**

**Three Credits**

Document analysis based research. Its objective is to provide deep analysis of literature experiences aligned to a special subject that represents a contribution to the research about the educational process. The course also aims to open new sources of field research in related educational themes.

**EDUC 716**

**Research Project**

**Three Credits**

Designing, conducting and presenting a basic or applied research project in leisure services.

**EDUC 717**

**Research Project**

**Three Credits**

Designing, conducting and presenting a basic or applied research project in physical fitness programs.

**PHED 500**  
**Motor Learning**  
**Three Credits**

Study of the theories and problems of motor learning related to the physical activity and the sports; elaboration of projects of study related to the conditions and practice of physical activities and the models of psychometrical.

**PHED 501**  
**Physical activity for cognitive and emotional limitations**  
**Three Credits**

Principles and practices in education of physical and sports activities for people with mental retardation, specific problems of learning, emotional disturbances, behavior problems and autism.

**PHED 502**  
**Physical activity for physical and sensorial limitations**  
**Three Credits**

Principles and practices in the teaching of physical and sports activities for people with physical handicaps, postures, orthopedics, neurological disabilities, conditions of health and limitations

**PHED 505**  
**Leisure Time and Physical Education**  
**Three Credits**

Study of the human behavior in his leisure time, the development of recreational human behavior, and the problems related to the use of human leisure time and its implications for the physical education program.

**PHED 506**  
**Teaching Methods in Elementary Physical Education**  
**Three Credits**

Theoretical and practical study of the acquisition, improvement and domain of movement skills used in the teaching of physical education at the elementary level. Study of different teaching techniques used to promote the learning of movement skills at the primary level aimed to promote the integral development of he child. It emphasizes the pedagogical theoretical bases and research and its implication to the movement world of the child in his/her early school years.

**PHED 507**  
**Teaching Methods for Secondary Physical Education**  
**Three Credits**

This course gives the student the opportunity to explore the effectiveness the teaching of physical educational objectives, observation and analysis of instruction, and the study of strategies and research particular to this field. Although, the course is designed to explore and increase the pedagogical content knowledge of the secondary level as a "biunivocal" relationship between the teacher and the student.

**PHED 508**  
**Teaching Methods for Adult Physical Education**  
**Three Credits**

Study the teaching methods for adult physical education. The emphasis of the course is on the teaching methods for the development of adults motor and cognitive skills using as a reference the similarities and differences of the teaching methods for children (i.e., elementary level) and adolescents (i.e., secondary level). As part of the course the students will be examined in the criteria to be considered in the preparation of a course for higher education level.

**PHED 509**  
**Curriculum Development in Physical Education-Elementary Level**  
**Three Credits**

Study the philosophies, principles and tendencies of curricular designs for the acquisition, improvement and domain of movement skills used in the teaching of physical education at the elementary level. Students will study and apply the different curriculum development theories to be design of the elementary level curriculum. The course will emphasize the theoretical bases used by the Department of Education of Puerto Rico to develop the physical education program for the elementary level.

**PHED 510**  
**Curriculum Development in Physical Education-Secondary Level**  
**Three Credits**

The course emphasizes the basic factors to be considered when developing or revising an established or new physical education curriculum for the secondary level. Also, in this course students will study the applications of the theory and necessary methodologies to create a dynamic curriculum, which promotes the acquisition of knowledge and skills in accordance to modern society.

**PHED 511**  
**Curriculum Development in Physical Education-Adult Level**  
**Three Credits**

Study of models, philosophies, principles, tendencies and practices in curriculum design for the acquisition, development and domain of movements skills, used in the teaching of physical education and its application to adult populations.

**PHED 512**  
**Principles and Foundations of Adapted Physical Education**  
**Three Credits**

Analysis of the physiological, psychological and sociological principles of adapted physical education. Study of appropriate practices and principles from a historical, social and ecological perspective.

**PHED 513****Methods and Techniques of Programming and Education in Adapted Physical Education****Three Credits**

Application of theories of curricular development in the programming of physical activities for people with special needs: preparation of lesson plans, unit and individualized programs of education. Analysis of strategies and styles of teaching applied to the adapted physical education

**PHED 514****Methods and Techniques of the Recreational Therapy****Three Credits**

Study of the effective practices related to the methods and techniques of intervention in the recreational therapy, including the evaluation, diagnosis, prescription and programming of recreational activities with therapeutic value.

**PHED 515****Assessment, Evaluation and Measurement in Physical Education****Three Credits**

The study of concepts of assessments, measurement and evaluation in education, and psychology applied to the field of physical education.

**PHED 516****Assessment, Measurement and Evaluation in Adapted Physical Education****Three Credits**

Discussion of methods and techniques for measurement, evaluation and assessment in the teaching of Adapted Physical Education. Includes the application of statistical data analysis and principles for evaluation purposes.

**PHED 524****Research Seminar in Physical Education****Three Credits**

Study and discussion of the content, strengths, weaknesses, validity and reliability of recent research published in the physical education field. Students will scrutinize the content (information) of recent research in their particular study field, its assumptions, research methodologies, data interpretation techniques and presentation styles. The analysis will be used as a reference for the refinement of the research proposal developed in the research methods course.

**PHED 525****Seminar: Issues and Tendencies in Physical Education****Three Credits**

Exploration and analysis of issues and tendencies in physical education. Emphasis will be given to the analysis of tendencies and dynamic social problems, political and economical, legislation and its impact in the development of physical education in Puerto Rico.

**PHED 600**  
**Practicum in Physical Education –Elementary Level**  
**Three Credits**

Students will be assigned as “practice teachers” in elementary schools of the public system of Puerto Rico. During the part of term period, the student will be in charge of a group of elementary school students. Also, a “cooperative teacher” will advise the student through his/her experience in the school.

**PHED 601**  
**Practicum in Physical Education Secondary Level**  
**Three Credits**

The course provides the student with the opportunity to plan, develop and implement the curriculum of physical education at the secondary level. Also, it gives the student the opportunity to observe, infer, participate and criticize the effectiveness of the strategies. It also gives the student the opportunity to share experiences with other student participants.

**PHED 602**  
**Practicum in Physical Education Adult Level**  
**Three Credits**

Students will be assigned to agencies, institutions or universities who develop physical education programs for adults. In this way students will have real supervised field experiences in which they can instruct, implant, direct, investigate or evaluate programs or activities related with adult physical education programs.

**PHED 603**  
**Practicum in Adapted Physical Education**  
**Three Credits**

Student-teachers or resource persons teach adapted physical education in schools, hospitals, organizations and community agencies that serve clients with special needs, for two hours daily, 5 days per week, until completing 45 hours of supervised practice/internship by cooperative teachers and their institutional practice supervisors. Includes meetings, field experiences and activities related to the adapted physical educators’ tasks.

**PHED 715**  
**Research Project in Physical Education**  
**Three Credits**

In this course the student will be able to prepare, conduct and present a theoretical or applied research in physical education.

**PHED 716**  
**Research Project in Adapted Physical Education**  
**Three Credits**

In this course the student will be able to prepare, conduct, accomplish and present a theoretical or applied research in adapted physical education.

**REED 505**  
**Interdisciplinary Studies of Leisure**  
**Three Credits**

Overview study of the field of leisure services, its philosophies, assumptions, history and trends. Emphasis on concepts of leisure, recreation, and play.

**REED 506**  
**Teaching Methods for Physical Education**  
**Three Credits**

Teaching methods and adult education principles as applied to teaching physical education. Analysis of teaching motor skills, knowledge from elementary schools to the university level. Includes the development of a university course outline.

**REED 510**  
**Managing Leisure Services**  
**Three Credits**

Overview study of management principles and practices as applied to managing leisure services and sports programs.

**REED 511**  
**Scientific Foundations of Physical Activity**  
**Three Credits**

Overview study of anatomy, kinesiology and physiology of exercise and physical activity applied to physical education.

**REED 512**  
**Leisure Programming**  
**Three Credits**

Study of concepts, foundations and models of leisure programming. Includes an analysis of the life cycle, social trends related to programming, needs analysis, and how to develop, implement and evaluate leisure and sport programs.

**REED 513**  
**Designing Health and Fitness Programs**  
**Three Credits**

Study of the health and fitness field, fitness program development, weight control, drug abuse, nutrition, stress management, and low back pain.

**REED 514**  
**Managing Leisure and Sports Facilities**  
**Three Credits**

Study of management principles as applied to managing leisure and sports facilities. Examination of aspects such as facility design, day to day operation, and legal aspects related to managing leisure and sports programs and facilities.

**REED 515**  
**Assessment, Evaluation and measurement in Physical Fitness and Recreation**  
**Three Credits**

The study of concepts of assessments, measurement and evaluation in education, and psychology applied to the field of physical fitness and recreation..

**REED 524**  
**Research Seminar in Physical Fitness**  
**Three Credits**

This course is geared to the study and discussion of its contents, weakness, strength, validity and confiability of the present investigations published in recreation and physical fitness. To examine the information (contents) of the actual investigations of the specialities of each student, assumptions, methodologies of investigations, techniques for interpreting the data and presentation styles as a framework to prepare the investigation proposal developed in the course of methods of investigation.

**REED 525**  
**Professional Seminar in Physical Education and Leisure Services**  
**Three Credits**

Analysis and discussion of current issues and trends in physical education and leisure services.

**REED 600**  
**Practicum in Physical Education and Leisure Services**  
**Three Credits**

Placement of students in agencies to participate in supervised experiences related to program development, evaluation, research, administration, or teaching.

**REED 601**  
**Practicum in Leisure Activities**  
**Three Credits**

Placement of students in agencies to participate in supervised experiences related to leisure activities and program development, evaluation, research and administration.

**REED 602**  
**Practicum in Physical Fitness**  
**Three Credits**

Placement of students in agencies to participate in supervised experiences related to physical fitness program development, evaluation, research and administration.

**EDFO 807**  
**Fundamentals of Human Behavior Applied to Education**  
**Three Credits**

Analysis of theories and principles that explain human behavior and its educational implications. Fundamentals of classical knowledge, of instrumental conditioning. Reinforcement and elective conduct programs, theories and experimental analysis of reinforcement, stimuli control and information processing. Emphasis on constructivism, brain and neurological studies, and new tendencies such as emotional intelligence and multiple intelligences, among others.

**EDFO 810**  
**Education, Schools, Universities and Society**  
**Three Credits**

This course studies the educational system as the most responsible for the transmission of cultural values and other elements that identify a culture or people. It seeks to explore the influence of culture upon the development processes of educational systems in Puerto Rico and other nations. Relevant sociological, psychological and philosophical theories on the development of a curriculum will be studied from the perspective of the disciplines and professions that have studied culture as a concept. Education focuses its attention on the purposes and application of the characteristics and practices of culture. Analysis of ethnographic studies, among others.

**EDFO 815**  
**Education and Philosophy**  
**Three Credits**

This advanced course discusses ethical and philosophical controversial issues related to education. Postmodernist positions in educational philosophy and the impact of these on contemporary society are identified, as well as their ethical influences on education. Axiological approaches in the works of Nietzsche, Sartre and Marcel are analyzed. Axiological proposals in the education of Dewey, the movement of value clarification, the theory of ethical cognitive development of Kohlberg and the philosophical tenets of Hostos are studied. The relationship between ethics, morality and education as the basis for the professional, responsible practice of social morality is emphasized.

**EDFO 820**  
**Ethics and the Educational Professional**  
**Three Credits**

Axiology. Values: transmission and clarification. How family, church, school and community intervene. The role of teachers and schools in the transmission, clarification and modification of values.

**EDFO 825****Ethics in Modernity and Postmodernism: A Critical Approach****Three Credits**

This advanced course discusses axiological and epistemological aspects of ethics from the perspective of philosophical postmodernism. It provides the opportunity to engage in a comparative analysis between the tenets y principles of the modernist and postmodern tendencies whose understandings have defined the educational scenarios, specifically, higher education. Emphasis is given to postmodernist eclectic theoretical perspectives: Derrida, Foucault, Giroux, Lyotard and Braudrillard, among others. The search for explanations and paradigms for a philosophical approach to global reality, of new power structures that can impact educational culture, reflection, and ethical teaching is suggested.

**EDCO 825****Models of Teaching****Three Credits**

Study and application of theories, principles and investigations related to teaching models; emphasis on controversies in this area. Comparative analysis and evaluation: adaptation, formulation, creation and testing of models whose socio-cultural relevance promote learning at different levels: pre-school, elementary, secondary and post secondary. Implications are derived from constructivism, investigation on brain functions, and the impact of information technology and multimedia on the effectiveness of the models that guide the learning process.

**EDCO 830****Curricular Design and Evaluation****Three Credits**

This course examines the practices of the current curricular design, planning and development of educational systems in Puerto Rico and abroad. It also seeks to evaluate different curricula and educational programs through the analysis of different theoretically established models. Through the study of this course, it is expected that students will plan, design and evaluate a curriculum for school programs in the different areas in which an educational system can be observed.

**EDCO 831****Development of Educational Programs and Projects****Three Credits**

Examination of the critical aspects, contexts, theoretical fundamentals and operational considerations related to educational planning. Different theories and types of planning are analyzed, as well as planning and program and project evaluation models. Emphasis is given to planning, programming and control. The scientific nature of planning is harmonized with the futuristic vision, the theory on the phenomenon of change, creativity and leadership of the program and project planner or designer. Aspects of accountability, the importance of identifying external funds, as well as the technical skills necessary for proposal development, are emphasized.

**EDCO 836**  
**Instructional Design and Technology**  
**Three Credits**

This advanced course is for the study and discussion of the nature, history and future perspectives of instructional theory: theorists, focuses, principles and controversies. The characteristics of this theory are highlighted: focus on design, methods and sub-methods and the probabilistic characteristic of the methods. Emphasis is given to the analysis, application, creation and evaluation of instructional design models for all educational levels, including postsecondary and higher education. Basic concepts and skills for the integration of technology into instructional design, as well as for formative and summative evaluations, are introduced.

**EDCO 960**  
**Practicum**  
**Three Credits**

Practical professional experience that places the student in educational or academic research scenarios that allow the student to discover, create and contribute on different managerial and teaching levels of education in Puerto Rico. The student will collaborate on educational research projects, contribute in the planning, design and evaluation of educational programs or modalities that contribute to strengthen education in Puerto Rico. Students in the Ph.D. program will carry out experiences guided towards research and teaching in higher education.

**EDCO 961**  
**Practicum I**  
**Three Credits**

Professional practical (infield) experience for students in the Ed.D program. Students will generate programs, professional development workshops, projects or proposals that include a variety of experiences focused on improving teaching processes and innovative approaches at both private and public educational institutions. Students will have the opportunity to carry out action research.

**EDCO 962**  
**PRACTICUM II**  
**Three Credits**

Continuation and Expansion of professional (Infield) experience for students in the Ed.D. program. That has approved the Practicum I. Students will be placed in a different scenario than the one attended in the Practicum I. Challenges and opportunities will be evidenced by writing a Self-Development Plan. Students will be exposed to field research (Action Research).

**EDCO 963**  
**Postsecondary Education, Teaching and Andragogy**  
**Three Credits**

Application of the pertinent theoretical frameworks focused on the analysis and evaluation of opportunities and access to higher education institutions; the quality of their programs, the processes and student services; their relevance, the diversity of

their programs, modalities and criteria; innovative educational methods, the comprehensive formation of their professors, the impact of the new technologies, projected impacts and local and international collaboration.

**EDRE 860**  
**Research Principles and Philosophical Foundations**  
**Three Credits**

This course includes the study of research as an approach to problem solving, methods of conducting qualitative and quantitative research, research designs, statistics used in experimental and descriptive research, principles of research interpretation, and the effective communication of research results.

**EDRE 865**  
**Surveys and Correlational Studies**  
**Three Credits**

Study of surveys and other correlational studies: naturalistic observation and archival research.

**EDRE 862**  
**Quantitative Research**  
**Three Credits**

The study of quantitative research and its impact on the field of education. The paradigms, premises and theories that support and sustain quantitative research, its strategies for collecting and analyzing data and the preparation of research reports are examined.

**EDRE 863**  
**Qualitative Research**  
**Three Credits**

The study of qualitative research and its impact on the field of education. The paradigms, premises and theories that support and sustain qualitative research, its strategies for collecting and analyzing data and the preparation of qualitative research reports are examined.

**EDRE 864**  
**Combined Method Research**  
**Three Credits**

The study of combined method research and its impact on the field of education. The paradigms, premises and theories that support and sustain combined method research, its strategies for collecting and analyzing data and the preparation of combined method research reports are examined.

**EDRE 870**  
**Programming Use and Data Analysis**  
**Three Credits**

The study of the fundamentals underlying the analysis, interpretation and presentation of quantitative and qualitative data. The most common techniques for data interpretation are examined and the computer is used as a tool for tabulation, analysis, interpretation and presentation of data.

**EDRE 871**  
**Descriptive Statistics**  
**Three Credits**

The course is designed to enable students to develop knowledge and skills about descriptive statistics, which they will apply in the design, analysis and interpretation of studies as educational researchers. The topics to be treated in depth will be design, development and interpretation of tables, preparation of graphs, measures of central tendency, measures of dispersion, measures of position, probability concepts and correlations.

**EDRE 872**  
**Inferential Statistics**  
**Three Credits**

This course is designed to enable students to broaden their knowledge and skills on the different procedures of inferential statistics which they will apply to the educational setting with the purpose of designing and conducting studies using both parametric and non-parametric tests. In this course, the reliability interval for the average and for proportions will be determined. In addition, the analysis of two or more variants and linear regression will be conducted, along with the power of the test, covariant analysis, ji squared ( $X^2$ ), and other non-parametric tests.

**EDRE 873**  
**Research and Institutional Assessment**  
**Three Credits**

Analysis of the administrative, academic and fiscal structures of universities as the operational framework to understand the diversity of investigations and institutional assessments that are used to determine the quality and effectiveness of higher education.

**EDRE 890**  
**Experimental Research**  
**Three Credits**

Theory and practice on the design, analysis and interpretation of experimental and quasi-experimental research. Critical analysis of the methodological aspects of planning and conducting experimental and quasi experimental research in educational settings, including human, legal, and ethical aspects. Phases and processes, competencies required of the researcher.

**EDRE 900**  
**Seminar Proposal**  
**Three Credits**

Seminar to prosecute the student to identify, develop and approve the theme of his doctoral research with the aim of drafting a leaflet proposal that viable the constitution of the committee of dissertation. The seminar entails the oral defense journal of the prospectus of presentation before a committee preliminarily established.

**EDUC 905**  
**Dissertation**  
**Three Credits**

Preparation, presentation, defense and approval of the research, based on the approved proposal of EDRE 900. The student will work under the supervision of a regular full-time faculty member. Requires Writing Seminar at the beginning and integrated throughout the entire process.

**EDUC 985**  
**Comprehensive Test**

The objective of the comprehensive examinations is to provide students (candidates for a doctoral degree) with the opportunity to demonstrate their practical, theoretical and conceptual competencies, as well as their competencies, skills and axiology in their area(s) of specialization and academic fields, and in accordance with the degree to which they aspire. No credits.

**EDFO 910**  
**Seminar: Contemporary Issues in Education**  
**Three Credits**

Issues of local and international relevance that impact all educational levels in the three (3) essential organizational components (teaching, student services and administration) are explored and analyzed. These issues are examined from historical, sociocultural, political, economic and philosophical perspectives. A link is established with educational tendencies. The integration of the complexity of globalization, technology, and cybernetics and their relationship with governmental, political, economic, legal and ethical aspects provides a holistic and integrative approach. By highlighting the application of critical-reflexive thinking to the dialectic discourse, both oral and written, the basis integrative research is established. Emphasis is on practice exercises, to speed up the integration of technology into the course: multimedia, email, Internet y Geographic Information Systems.

## **SCHOOL OF HEALTH SCIENCES**

### **Administrative Staff**

**Lourdes Maldonado Ojeda, RN, EdD**

Dean  
School of Health Sciences

**Rebecca Frugé, RN, PhD**

Program Director

### **FACULTY**

**PACHECO, JOSUÉ**

Assistant Professor  
BSN University of Puerto Rico  
MSN University of Puerto Rico  
Ed.D. Interamerican University

**FRUGE, REBECCA**

Professor  
BSN Loyola University, New Orleans  
MSN Louisiana State University, New Orleans  
Ph.D Capella University, Minneapolis

**MALDONADO OJEDA, LOURDES**

Professor  
BSN Pontificia Universidad Católica de Ponce  
MSN- University of Puerto Rico Medical Sciences  
Ed.D. Interamerican University

## **MASTER'S IN THE THE SCIENCE OF NURSING (MSN)**

The Graduate Program in the Science of Nursing is committed to preparing clinical health professionals in three areas: **Case Management, Critical Care of Adults, and Critical Care of Children.** Students have the opportunity to select electives in Nursing Education, or in Nursing Administration. Graduates of this program will be prepared as Clinical Nurse Specialists, to assume leadership positions in the profession of Nursing as: Expert providers of care, managers of care, and in Nursing Research.

### **Program Objectives**

1. To foster an academic environment of analysis and reflection, where the student will experience, acquire, and develop an understanding of advanced practice nursing, as a discipline of study, the competencies to turn into an effective clinical specialist, and a professional expert in the management of nursing with individuals and families
2. To contribute to their formation as professionals of advanced practice nursing and to develop concepts of lifelong learning, to promote the role of clinical specialist, through curricular and extracurricular activities and experiences of a professional nature.
3. To offer graduate education, according to existing health policies, health management trends of the XXI century, and local and international employment market, within the context of the roles of nursing in advanced practice and leaders in nursing in and outside of Puerto Rico.

### **Admission Requirements**

1. Possess a Baccalaureate in Nursing from an accredited institution.
2. Have a Grade Point Average (GPA) of 2.50 or higher.
3. Submit results of EXADEP (PAEG) or GRE.
  
4. Have a valid permanent nursing license to practice in PR.
5. Show evidence of Colegio membership.
6. Show evidence of one year experience.
7. Show evidence of one year experience in nursing, for Case Management.
8. Complete an application for admission including the following:
  - Two letters of recommendation from employing agency or professors on forms provided.
  - Curriculum Vitae or Resume
  - Two Official Transcripts of Baccalaureate degree.
  - Certificate of good conduct (police department)
9. Interview with the graduate program admissions committee.
10. A course in Physical Examination for the Case Management specialty.

### **Transfer Credits**

Students from other accredited universities may transfer a maximum of 18 credits. The last 26 credits must be taken at UMET (Residence). The request to transfer credits must be made during the admissions process and the grade must be at least a B in all courses.

The course description (content of the course) must be equivalent to the course for which it is being submitted.

### **Graduation Requirements**

To be considered a candidate for graduation with a MSN degree, a student should comply with all of the following requirements:

1. Have completed all core (NURS) courses (20 credits) with a 3.0 on a 4.0 scale
2. Have completed required specialization courses (15 credits) with a minimum of 3.0 or a 4.0 scale
3. Have completed elective courses (9 credits) with a minimum of 3.0 or a 4.0 scale.
4. Submit two official copies of a research project in the specialty area
5. Complete the candidacy application form.
6. Have no debts with the University.

## MASTER IN THE SCIENCE OF NURSING

### Program of Study

The Masters in the Science of Nursing (MSN) program has duration of approximately two (2) years of evening classes, in the "part of term" (PT) mode. PT consists of eight (8) weeks, for a total of 44 credits, in the following manner:

Core (medular) Courses:	20 credits
Specialty courses:	15 credits
Directed Electives	<u>9 credits</u>
<b>credits total</b>	<b>44</b>

### Professional Education Component (Medular)

NURS. 649	Advanced Pharmacology	2
NURS. 650	Interdisciplinary Management in the Health Sciences	3
NURS. 651	Role Development of the Clinical Specialist	2
NURS. 652	Nursing Theory in Advanced Practice	2
NURS. 653	Statistics for the Health Professional	3
NURS. 654	Advanced Pathophysiology	3
NURS. 655	Nursing Research	3
NURS. 656	Research Project	<u>2</u>
<b>Total:</b>		<b>20</b>

### Case Management Specialty

ACMN. 660	Advanced Case Management	4
ACMN. 661	Case Management I	4
ACMN. 662	Case Management II	4
ACMN. 663	Advanced Clinical Practice in Case Management	<u>3</u>
<b>Total:</b>		<b>15</b>

### Critical Care of Adults Specialty

CCNA. 664	Advanced Nursing Assessment of the Adult	3
CCNA. 665	Advanced Care of Critically Ill Adults I	4
CCNA. 673	Advanced Care of Critically Ill Adults II	4
CCNA. 667	Advanced Clinical Practice of Critically Ill Adults	<u>4</u>
<b>Total:</b>		<b>15</b>

### Critical Care of Children Specialty

CCNP. 668	Advanced Nursing Assessment of Critically Ill Neonates and Pediatric Clients	3
CCNP. 669	Advanced Care of Critically Ill Neonates	4
CCNP. 670	Advanced Care of Critically Ill Children	4
CCNP. 671	Advanced Clinical Practice with Critically Ill Children	<u>4</u>
<b>Total:</b>		<b>15</b>

### Electives in Nursing Education

EDUC. 501	Principles of Systematic Curriculum Development	3
EDUC. 513	Appraisal, Measurement, & Evaluation	3
NUED. 672	Practice Teaching in Nursing	<u>3</u>
<b>Total:</b>		<b>9</b>

### Electives in Nursing Administration

NADM. 657	Theories & Strategies of Administration	3
NADM. 658	Essential Concepts of Administration in Nursing Service	3
NADM. 659	Practice of Nursing Administration	<u>3</u>
<b>Total:</b>		<b>9</b>
<b>Grand Total</b>		<b>44 Cr</b>

## **COURSES**

### **NURS 649 Advanced Pharmacology Two Credits**

Provides for the discussion of the basic principles of advanced Pharmacology. It gives the students the opportunity to think pharmacotherapeutically, meaning that the learner can analyze the categories of medications that are being used to treat illnesses and determine if they are accomplishing their purpose (evidence based). Physiology, Biochemistry, and Pathophysiology of the systems are discussed, as well as medications that enhance or inhibit therapeutic results. Case studies are used for the application of ethical-legal principles

### **NURS 650 Interdisciplinary Management in Health Science Three Credits**

This course introduces basic concepts of health, based on evidence. Includes new trends in health management, informatics, and in the development of health policies. Basic concepts of epidemiology and history of disease are included. Vital statistics, public health issues, environmental aspects of the health-illness continuum, nutritional aspects, genetics, environment health and other aspects are discussed.

### **NURS 651 Clinical Specialist Role Development Two Credits**

Explores essential concepts for the development of the advanced nurse practitioner, emphasizing the evidence-based clinical specialist role. The scope of this advanced practice includes the roles of collaborator, administrator, educator, researcher, and clinical expert. Discusses the history, trends, politics, and issues, related to the development of these roles, both in the United States and in Puerto Rico. Emphasizes responsibilities and interdisciplinary relationships in advanced practice nursing, including legal and ethical issues.

### **NURS 652 Nursing Theories in Advanced Nursing Practice Two Credits**

Social, behavioral, and natural sciences theories and models are discussed and related to the development and evolution of the nursing theories. The comparison of theories, underlying concepts, definition of the four meta-paradigms, and its application to the clinical specialist nursing role is established. Emphasis is placed on comparing and contrasting the various theoretical formulations and relating their major concepts to the role of the clinical nurse specialist. Students will be required to develop a conceptual framework for evidence-based nursing interventions

**NURS 653**  
**Statistics for the Health Profession**  
**Three Credits**

Designed to provide the graduate level student with the opportunity to develop knowledge and skills of statistics. Students are expected to identify and apply descriptive and inferential statistical measures. This course includes conceptualization, data processing and analysis.

**NURS 654**  
**Advanced Pathophysiology**  
**Three Credits**

Designed to present an orientation to disease, as disordered physiology. It is intended to enable advanced practice nurses to understand how and why the symptoms and signs of various conditions appear. In approaching disease as disordered physiology, this course analyzes the mechanisms of production of the symptoms and signs of different disease syndromes from a system's approach. In doing so, it recognizes the student's and practitioner's need to understand the mechanisms underlying the disease and its clinical manifestations so that rational therapies can be devised based on recent evidence. Thus, appropriate screening and diagnostic laboratory evaluative methods will also be included as they relate to nursing interventions. Emphasis is placed on clinical decision making utilizing a complete data base, consisting of physical, psychosocial, and environmental findings. Case studies are used throughout the course to refine diagnostic and treatment skills.

**NURS 655**  
**Research in Advanced Nursing Practice**  
**Three Credits**

Designed to expand the knowledge and skill of the research process, in graduate students. The ethical-legal aspects and participants rights are emphasized throughout the course. The importance of evidence based nursing research, and its implications for nursing practice is discussed. Students will identify a special area of interest and will develop a research proposal as a final outcome of the course

**NURS 656**  
**Research Project**  
**Two Credits**

Provides an opportunity for students to accomplish the evidence-based research that was proposed in the course NURS 655. The ethical-legal aspects and participants rights are emphasized throughout the course. This is an independent project under the supervision of a faculty member.

## **CASE MANAGEMENT SPECIALTY**

### **ACMN 660 Advanced Nursing in Case Management Four Credits**

This course introduces the student to the perspective and development of the case manager role. Students learn about the role of a case manager in a specialized healthcare environment as it relates to the cultural and political dynamics in healthcare organizations. Students can also analyze internal and external forces that impact resources and distribution systems. It also emphasizes community support resources, healthcare organizations as corporations, utilization management, ethical and legal issues, public policies and legislation, and discharge planning.

### **ACMN 661 Case Management I Four Credits**

In this course, the different perspectives in the management of the health services are studied and the issues among the disciplines are analyzed. Marketing strategies, financial management practices, healthcare costs, budgeting considerations - particularly reimbursement and Total Quality Management is emphasized. Students are exposed to the Case manager role and skills, such as: leadership, problem solving, and decision making, communication, teamwork, ethical-legal aspects, and negotiation skills.

### **ACMN 662 Case Management II Four Credits**

This course allows the student apply the process and models of case management through the continuing of care, its logistics, similarities and differences with patients of different conditions. It includes the screening of patient's symptoms and need for services; an estimate of the family's needs; development of intervention protocols, and the development of clinical pathways, including discharge planning. Includes patient and family education, evaluation of the patient's response to treatment and management, based on the analysis of variables. The case manager's participation related to long term conditions and terminal illness is discussed. Emphasis is on ethical-legal aspects and the relationship to advanced nursing practice.

### **ACMN 663 Advanced Clinical Practice in Case Management Three Credits**

This practicum provides the student the opportunity to explore, examine and expand the theories of case management in an organizational environment. The participants will have the opportunity to rotate through different clinical settings guided by experienced preceptors who will provide them the opportunity to analyze, synthesize and integrate their learning and to evaluate the effectiveness of the practice as future case managers. In order to develop the role of a case manager and through different strategies, the student will design his clinical experience, establishing his own objectives, planning, controlling and evaluating his learning experiences.

## **CRITICAL CARE OF ADULTS SPECIALTY**

### **CCNA 664**

#### **Advanced Nursing Assessment of the Adult Three Credits**

The purpose of this course is to offer the clinical nurse specialist the knowledge to perform an advanced physical assessment of the critically ill adult client. Knowledge necessary to perform a comprehensive assessment that guides the nurse of primary care to establish a treatment plan and make fast decisions in complex situations with critically ill clients is emphasized. Ethical legal and growth and development considerations while performing physical exam are analyzed.

### **CCNA 665**

#### **Advanced Nursing of Critically Ill Adults I Four Credits**

This course has been designed to provide the clinical specialist with the knowledge of advance nursing care of critically ill clients. All aspects related to psychosocial, growth and development, spiritual, cultural and physical are discussed. Ethical and legal issues related to the care of these clients are broadly analyzed. The role of primary care of the clinical specialist in nursing to critically ill clients with disorders of neurological, gastrointestinal, renal and endocrine systems is also detailed. Advances in medicine and technology are other factors that will be discussed. The nursing care is based on the nursing process to promote the excellence in critical care of the critically ill adult patient and his family.

### **CCNA 673**

#### **Advanced Nursing of Critically Ill Adults II Four Credits**

This course has been designed to provide the clinical specialist in nursing the knowledge of advance nursing care to critically ill clients. Ethical legal and growth and development principles are emphasized when offering primary nursing care. The focus is in the evidence base practice nursing care to critically ill adult clients with respiratory and cardiovascular disorders, trauma, burns and shock. hemodynamic monitoring, dysrhythmias and ventilatory assistance are also detailed.

### **CCNA 667**

#### **Advanced Clinical Practice in Critical Care of Adults Four Credits**

This course has been designed for the integration of the concepts acquired in other courses, for advanced practice in critical care settings. Concepts about nursing process, advance physical exam, knowledge about physiopathology of complex health conditions and ethical legal and growth and development principles, are the conceptual framework for the advance clinical practice, based on evidence. The practice will be done in different hospitals with critical care scenarios.

## **CRITICAL CARE OF CHILDREN SPECIALTY**

### **CCNP 668**

#### **Advanced Nursing Assessment of Critically Ill Neonates & Children Three Credits**

This course has been designed to assist the clinical specialist in nursing care of the critically ill child and neonate, based on evidence, to refine advance history & health assessment skills within family and cultural context. Emphasis is placed on interviewing techniques, diagnostic differentiation, interpretation and documentation of normal and abnormal findings. Knowledge about developmental and psychosocial needs of the child, as well as advanced assessment strategies for early identification of those needs is emphasized. Development alterations are discussed in order to be able to do early intervention and referrals. Physical assessment and history taking for the neonate and for the pediatric client are given separately. The course has a theory and clinical component, through which objectives are achieved in selected clinical areas such as neonatal and pediatric critical care units.

### **CCNP 669**

#### **Advanced Nursing of Critically Ill Neonates Four Credits**

Prepares the clinical specialist in caring for the critically ill and high risk neonate, and his family. Emphasis is placed on evidence based practice. It includes knowledge about biological and psychological aspects of the critically ill neonate. It integrates knowledge about genetics and the development of each system in the fetal stage. The clinical specialist will be able to apply advance knowledge of pharmacology used in critically ill neonates. This course provides the clinical specialist with skills ethical legal aspects, related to critically ill neonates and his family, based on group and individual reflection, decision making and ethical and legal principles. Laws in Puerto Rico and the US, related to the care of the critically ill pediatric client, are analyzed. Knowledge of the management of advance critical care of neonatal client and his family, based on evidence from his admission to discharge are also studied.

### **CCNP 670**

#### **Advanced Nursing of Critically Ill Children Four Credits**

Prepares the clinical specialist in advanced care of critically ill pediatric clients, from infancy to adolescence, and their families. Emphasis is placed on evidence based practice and the application of the nursing process at an advanced level. The clinical specialist will be able to apply advanced knowledge of pharmacology for critically ill neonates. Provides the clinical specialist with skills, to analyze ethical legal aspects, related to critically ill neonates and families, based on group and individual reflection, decision making, and ethical and legal principles. Laws in Puerto Rico and the US, related to the care of the critically ill pediatric client are analyzed. Knowledge of the management of advanced critical care of neonatal clients and families from admission to discharge are also studied.

**CCNP 671****Advanced Clinical Practice in Pediatric Critical Care  
Four Credits**

Focuses on the practice of the clinical specialist in advanced care of critically ill neonatal and pediatric clients, based on evidence. The student has the opportunity to integrate the roles of the clinical specialist (clinical expertise, administrator, collaborator educator and leader) to the practice. The Nursing process is an essential tool to deliver advanced nursing care. The practice focuses on the care of critically ill pediatric clients in ICU's, early identification of special growth needs and continuity care of high risk clients in the community. Ethical legal principles are integrated. Family education is emphasized. The course is divided into three areas: advanced practice with high risk neonatal clients, advanced practice with high risk clients from infancy to adolescence, and continuity of care for high risk clients in the community.

**ELECTIVES IN NURSING EDUCATION****EDUC 501****Principles and Systematic Development of Curriculum  
Three Credits**

Study of the fundamental principles and practices of curriculum development. Discussion of the processes for the development of curricula is emphasized. Analysis of structure and content in a modern education curriculum, and the application of this in the reality of the educational system of Puerto Rico.

**EDUC 513****Assessment, Measurement, and Evaluation  
Three Credits**

Differences between assessment, measurement, and evaluation, in the educational process are studied. Emphasis is placed on the planning for evaluation and in the preparation and analysis of instruments for pedagogical purposes.

**NUED 672****Practices in Nursing Education  
Three Credits**

This course has been designed as a practicum, through which the student will have the opportunity to apply knowledge and skills, in the development of the educator role in diverse nursing teaching scenarios. Practice will be complemented with weekly meetings to assure the acquisition of basic teaching concepts and evaluation strategies

## **ELECTIVES IN NURSING ADMINISTRATION**

### **NADM 657**

#### **Theories & Strategies of Nursing Administration**

##### **Three Credits**

Exposes the advance nursing student to a variety of administrative models and theories on which administrators' performance is based. The difference between leaders and administrators is established. New theories and administrative strategies based on evidence, such as TQM, leadership styles, and problem solving techniques are analyzed as it applies to the nursing profession.

### **NADM 658**

#### **Essential Concepts of Nursing Administration**

##### **Three Credits**

Provides the opportunity for students to acquire the knowledge and skills, to assume leadership positions in health agencies, nursing services, and nursing educational institutions. The administrative process is used as a tool for problem solving and decision making. Changing environments of the health care industry, according to national trends and paradigm shifts, are analyzed. The emerging role of the executive nurse is conceptualized

### **NADM 659**

#### **Practice of Nursing Administration**

##### **Three Credits**

This practicum provides for the integration of concepts of theory and practice, based on recent research. Offers the student a variety of administrative experiences, in different scenarios, under the preceptorship of a nurse administrator and the professor. The graduate student has the opportunity to assume the following professional roles: administrator, coordinator, manager of health care services, and member of the profession of nursing.

## **SCHOOL OF PROFESIONAL STUDIES ACCELERATED PROGRAM FOR ADULT MASTER DEGREE**

### **Administrative Staff**

Mildred Y. Rivera  
Dean  
School of Professional Studies

Melissa Guilliani  
Associate Dean  
School of Professional Studies

Ann Coppin  
Associate Dean in Academic Affairs  
School of Professional Studies

### **Faculty**

The School of Professional Studies has a conference faculty with professional experience, specially prepared to work with adults in an innovative way. The faculty certified by the School for Professional Studies, must possess or demonstrate evidence of:

- Doctoral degree. In absence of a Doctoral degree, a Master degree in related areas as per the course that is being offered with practical or research experience in the area.
- Teaching experience or demonstrate potential for teaching adults.
- Knowledge and participation in learning communities that facilitate building new knowledge based on and applicable to the professional and personal reality of adults, using accelerated learning and teaching strategies.
- Knowledge and appropriate utilization of assessment and evaluation techniques.
- Practice framed in constructivism learning theory.
- Demonstrate commitment with continuous and life-long learning and professional development such as: continuing education, civic and professional organizations, serving as resource and participant of workshops, seminars and conferences.
- Skills in the use of technological and support resources such as: computer programs, audiovisual resources, media, communications, Internet and the World Wide Web, among others.

- Knowledge and active practice of action research.
- Publications in academic journals, or literary production in the related field.
- Excellent skills in Spanish and English both in writing and orally.
- Willingness to work in the process of the School for Professional Studies.
- Knowledge and practice of preparing syllabus and educational activities and/or willingness to develop these skills.
- Ability and openness to recognize, respect, and integrate personal and professional experiences of students as needed to achieve course objectives.
- Interpersonal skills to work with adult students and foster their professional success.
- Ability to provide effective, timely and constructive feedback.
- Ability to facilitate effective group work.
- Leadership qualities in a constructivist and active –learning environment.

### **GENERAL INFORMATION**

Sistema Universitario Ana G. Mendez, pioneer in serving the education needs of adult students, continue this tradition through its Accelerated Program for Adults. This program is designed to meet the educational expectations of professional adults that wish to complete their university degree. In accelerated program, the students participate in a unique educational process different from traditional learning methods. Their professional experience is incorporated into the classroom in order to create an interactive, challenging, and dynamic environment. The program is specially designed for the adult students, offering a professional environment, as well as integrated, personalized and individualized services. The success of this program is the development of adult professional that value continuous learning and increase their contribution to world of employment.

### **VISION**

We aim to become local and international leaders in accelerated education for adults. We will be recognized for the excellence and pertinence of our academic programs, integrated services, the application of emerging technologies and the strengthening of high-level competencies that will allow students to be effective in a globalized work environment, becoming lifelong learners.

### **MISION**

To provide an accelerated educational process to adult students, where their professional experience is incorporated into the classroom to create an interactive challenging and dynamic environment, as well as integrated, personalized and individualized services. Faculty and staff members with professional experience, especially prepared to work with adults, are educational facilitators in an innovative way.

## **ADMISSION REQUIREMENTS MASTER PROGRAM**

An applicant shall be eligible for admission if he/she complies with the following requirements:

1. At least 23 years old
2. A bachelors degree with a minimum of 2.75 GPA in the last 60 credits
3. Three years of work experience

### **Admission Process**

All applicants are required to:

1. Attend an information session where the structure, polices and procedure of the program
2. Submit an admission application
3. Submit an official academic transcription from the university where de bachelor degree was awarded
4. Submit three letters of recommendation from your employer or supervisor. A form letter is provided
5. Admission interview

### **Transfer Credits:**

#### **MASTER IN BUSINESS ADMINISTRATION Area: Management and Strategic Leadership**

A maximum of eighteen (18) graduate credits will be accepted from other institutions if the contents of courses are equivalent to courses offered at Universidad Metropolitana. These credits should have been taken in an accredited institution approved with a grade of A or B.

#### **MASTER OF ARTS IN EDUCATION Area: Adult Education**

A maximum of nine (9) graduate credits will be accepted from other institutions if the contents of courses are equivalent to courses offered at Universidad Metropolitana. These credits should have been taken in an accredited institution no more than five (5) years prior to admission, and approved with a grade of A or B.

**MASTER IN BUSINESS ADMINISTRATION  
Area: Management and Strategic Leadership**

Credits	42
Core Courses	24
Specialization Courses	15
Electives	3

<b>Core Courses</b>	<b>Credits</b>
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MANA 501: Organizational Behavior	3
MANA 720: Operations Management	3
MANA 600: Business Policy and Ethics	3
ACCO 503: Managerial and Financial Accounting	3
STAT 555: Statistics for Managerial Decision Making	3
MARK 511: Marketing Management	3
ECON 519: Managerial Economics	3
FINA: 503: Managerial Finance	3
*ACCO 500: Accounting Survey (Only for students with Bachelor's Degrees in other areas)	

**Specialization Courses**

STMG 600: Leadership and Entrepreneurial Vision	3
STMG 601: Strategic Management	3
STMG 602: Technological Applications and Information Systems	3
STMG 603: Entrepreneurial Communication	3
STMG 604: Organizations and Global Economy	3
PRMG 530: Program Management 1: Introduction to Program Management	3
PRMG 640: Program Management II: Project Planning	3
STMG 608: Strategies for change, professional and entrepreneurial development	3
BUSG 655: Integration Seminar	3

**MASTER OF ARTS IN EDUCATION**  
**Area: Adult Education**

Credits	36
Core Courses	12
Specialization Courses	18
Electives	3
Final Requirements	3

<b>Core Courses</b>	<b>Credits</b>
EDUC 512: Educational Innovations and Strategies	3
EDUC 501: Principals and Systematic Development of the Curriculum	3
EDUC 504: Learning Theory and Cognitive Development	3
EDUC 505: Educational Research Methods	3

**Specialization Courses**

ADED 600: Adult Education: Foundations, Challenges, and Controversies	3
ADED 610: The Adult Learner	3
ADED 620: Curriculum, Methods, and New Technologies in Adult Teaching and Learning	3
ADED 630: Leadership in Adult Education Programs	3
ADED 640: Planning and Evaluation of Adult Education Programs	3
ADED 650: Reading Seminar in Adult Education	3

**Electives**

EDUC 525: Statistics for Research and Evaluation	3
EDUC 543: Culture and Education	3
COIS 600: The Computer as an Instructional Resource	3

**FINAL REQUIREMENTS**

EDUC 701: Thesis or Research Project	3
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## DESCRIPTION OF SPECIALIZATION COURSES

### LEADERSHIP AND ENTREPRENEURIAL

#### **STMG 600**

##### **Leadership and Entrepreneurial Vision**

##### **Three credits**

Analysis of roles and styles of a leader as an agent of change through the articulation and construction of the organizations' vision and mission. Human resources strategies for empowerment and its impact in the organizational culture. Application of theoretical knowledge in relation to individual, interpersonal and group behavior within the organization. The course addresses the study of leadership and organizational behavior in a continuous changing environment.

#### **STMG 601**

##### **Strategic Management**

##### **Three credits**

Analysis and application of concepts such as ethics and social responsibility. Evaluation and application of elements related to identifying opportunities and analysis of business strengths and weaknesses. Emphasis in the application of the vision, mission, goals and objectives for the development of strategies in the planning process. Development of a strategic plan that includes identification and evaluation of alternatives for its control. This course is targeted to the development and application of analytical skills related to strategic planning.

#### **STMG 602**

##### **Technological Applications and Information Systems**

##### **Three credits**

Develops analytical skills for the operational integration of different information resources. Allows for the identification, analysis and evaluation of alternatives for the improvement of the organizations' effectiveness. Emphasizes the importance of technology for strategic planning and problem solving. This course focuses in the development and application of the knowledge and skills needed to understand, evaluate and make decisions related with information systems.

#### **STMG 603**

##### **Entrepreneurial Communication**

##### **Three credits**

Analysis of effective skills for communication and presentations. Emphasis in knowledge and critical use of different techniques, means and programs. Evaluates different aspects of the communication process including audience, understanding the context, the receptor and the importance of feedback for an effective communication. This course focuses in the study of theoretical and practical concepts for effective business communication.

**STMG 604**  
**Organizations and Global Economy**  
**Three credits**

Study of the opportunities that global economy offers to management. Analyze economic principles based on problem examination and the challenges presented on a globalized economy. It includes decision making on financial, economic and stock market issues. Evaluates strategic opportunities and risks regarding organizational development in the global context.

**STMG 608**  
**Strategies for change, professional and entrepreneurial development**  
**Three credits**

Analysis of topics in the areas of power relations and resistance to change, motivation, and human behavior. Comprehension and respect for diversity and group dynamics. Evaluation and design of strategies for the development of a positive organizational culture. Emphasis in environmental and structural forces within the organization. Appraises the different variables related to the organizational capacity for managing change and the development of plans and strategies.

**PRMG 530:**  
**Program Management 1: Introduction to Program Management**  
**Three credits**

Analysis of processes related to Program Management. Comprehension of a projects' life cycle and the importance of evaluating its different phases in the achievement of organizational goals. Emphasis in the development of skills and competencies related to planning and methodologies of the area. Study of general theoretical and practical related concepts. Contrasts between project and operations.

**PRMG 640**  
**Program Management II: Project Planning**  
**Three credits**

Analysis, action plan development and usage of effective methods in project management. Study of processes in the planning and initial phases of projects. Critical analysis of inputs, products, tools and techniques used in project management processes. Application of related terminology and definitions.

**BUSG 655**  
**Integration Seminar**  
**Three credits**

Analysis of real and simulated case studies for the appropriate application of the planning, decision making and problem solving processes. Comparative analysis of patterns and managerial problems. Seminar geared towards the application of related principles, concepts and theories. This course includes the development of an individual research project.

## **ADULT EDUCATION**

### **ADED 600**

#### **Adult Education: Foundations, Challenges, and Controversies**

##### **Three credits**

A study of the historical and philosophical foundations of adult education, including methods and approaches. Analysis of the adult education movement, from its early stages to present. Critical study of the changes which have created new learners, challenges and controversies in the contemporary practice of adult education and their future implications.

### **ADED 610**

#### **The Adult Learner**

##### **Three credits**

A study of the physical and psychological changes in the life of the adult and their implications to the learning process. Identification of adult education principles, differences between young and adult learning, and most recent research regarding adult education. Analysis of the theoretical perspectives of the adult student and its implications to the educational practice. Evaluation of the forces motivating behavior in an adult learning setting.

### **ADED 620**

#### **Curriculum, Methods, and New Technologies in Adult Teaching and Learning**

##### **Three credits**

A study of the principles and practices related to curriculum and teaching adult students. Selection and use of instructional design strategies, learning experiences, and appropriate educational materials used in a variety of contexts, audiences and situations in which adult education is offered. Selection, use, implementation, and evaluation of appropriate technologies to be used in the offering of educational opportunities for adult students. Analysis of methods, traditional and innovative approaches, preparation of lesson plans, use of learning evaluation techniques, and development of self-directed learning skills and competencies, and education in service.

### **ADED 630**

#### **Leadership in Adult Education Programs**

##### **Three credits**

A study of the leadership principles used to manage programs in adult education in a variety of contexts. Emphasis in the methods to establish effective adult education programs and the procedures in marketing, design, organization, operations management, human, physical, and fiscal resources of adult education organizations and institutions. Analysis of policy establishments and procedures to achieve the objectives of adult education programs within local and federal requirements.

**ADED 640**  
**Planning and Evaluation of Adult Education Programs**  
**Three credits**

A study of planning models and procedures, development, and evaluation of adult education programs. Critical analysis of most recent theory and real life case studies to develop necessary skills in the design and application of need studies, establishment of priorities, objectives, standards, and implementation of procedures and evaluation techniques of adult education programs.

**ADED 650**  
**Reading Seminar in Adult Education**  
**Three credits**

Integration of theory and practice in an experience in which analysis of readings and research will be analyzed within the adult education field. Application of obtained knowledge and skills to solve simulation problems regarding the improvement of the quality of educational services to the adult student.

## **SCHOOL OF SOCIAL SCIENCE, HUMANITIES AND COMMUNICATIONS**

### **Graduate Programs**

In accordance with the mission of Universidad Metropolitana, the School of Social Science, Humanities and Communications (SSSHC) is focused on developing the students' analytical, scientific, cultural, and ethical competencies through a solid array of academic programs and a wide range of co-curricular and extracurricular activities. While strengthening the students' critical awareness and the students' active insertion in the civic realm, the School aims to cultivate not only competent professionals, but also engaged citizens, capable of maximizing the quality of their own lives and that of their surrounding communities. Accordingly, the SSSHC's Graduate Programs prepare competent and engaged professionals for employment in the private or public sector. The Graduate Program consists of two programs: **a Master of Arts in Counseling Psychology and a Master of Arts in Criminal Justice with one of two concentrations, Crime Prevention and Administration of the Correctional System.**

The School has a Dean, a Director of Graduate Programs and Coordinator:

### **GORDON MORA, ELOISA, Dean of the School of Social Science, Humanities and Communications**

B.A., Rockhurst University  
M.A., University of Notre Dame  
Ph.D., University of Notre Dame

### **MAMBRÚ TAVAREZ, VILMANIA G., Director of Graduate Programs of the School Of Social Science, Humanities and Communications**

B.A., Metropolitan University  
M.A., Carlos Albizu University  
Psy. D., Carlos Albizu University

### **REBOLLO Gil GUILLERMO., Coordinator of the Criminal Justice Graduate Programs**

B. A., University of Florida  
M. A., University of Florida  
Ph. D., University of Florida  
J. D., University of Puerto Rico

### **Program Objectives**

To prepare students who:

1. Master their discipline from empirical, theoretical and scientific bases.
2. Master their particular area of concentration, inclusive of the program's specific requirements. Exemplify leadership in the field and in the development of the discipline.
3. Manifest highly developed critical and self-awareness, capacity for independent work, and an ongoing search for professional and personal growth.

4. Manifest extraordinary ethical standards in rigorous compliance with the standards that apply to Puerto Rico.
5. Integrate theoretical learning into a practice that also incorporates the particular socio-cultural needs of Puerto Rican and other Latino populations.
6. Practice compassion and exhibit a marked commitment to a more just, equitable, and peaceful society.

## **MASTER OF ARTS IN COUNSELING PSYCHOLOGY**

### **Admission Requirements**

Students interested in applying to our program should comply with the following requirements:

- a. Have earned a Bachelor's Degree from an accredited university, with no less than a 3.00 GPA.
- b. Submission of an application containing:
  - Official transcripts of all university studies.
  - Three letters of recommendation from qualified faculty or individuals establishing the candidate's academic and/or professional profile and aptitude for success in a Graduate Program.
- c. Submission of the results of the *Prueba de Admisión a Estudios Graduados* (EXADEP) or Graduate Record Examination (GRE).
- d. Completion of an interview by the Program Admission Committee, including a written conceptual essay.

### **Transfer Credits**

A maximum of eighteen (18) graduate credits will be accepted from other institutions provided that the courses are equivalent to courses offered at Universidad Metropolitana. These credits should have been taken in an accredited institution, no more than five (5) years prior to admission, and approved with a grade of A or B.

### **Credit Load**

A complete credit load consists of three to six credits per *Part of Term*, for a total of fifty-eight (58) credits. In exceptional circumstances, students may request written authorization of the Dean of the School of Social Science, Humanities and Communications to take a maximum of (9) credits per *Part of Term*.

### **Graduation Requirements**

To be considered for graduation, a candidate for a Master's Degree of Arts in Psychology should comply with all the following requirements:

1. Complete all core and specialty courses with a minimum passing grade of 3.00.
2. Complete all required seminars (APA, SPSS)
3. Complete all practical hours.
4. Approve the comprehensive examination (with a Pass grading).
5. Have no debts with the University.

## **MASTER OF ARTS IN COUNSELING PSYCHOLOGY**

### **Core courses**

**(30 credits)**

Biological Psychology	(3 credits)
Evolutionary Psychology	(3 credits)
Applied Statistics in Psychology	(3 credits)
Learning and Cognition	(3 credits)
Personality	(3 credits)
Psychopathology	(3 credits)
Advanced Social Psychology	(3 credits)
Measurement and construction of psychological testing	(3 credits)
Foundation of Research: Methods and Psychological Research Techniques	(3 credits)
Research Seminar	(3 credits)

### **Specialization Courses**

**(25 credits)**

Ethical, Legal and Professional considerations in Psychological Counseling	(1 credit)
Counseling I: Professional Issues in Counseling Psychology	(3 credits)
Counseling II: Models and Psychological Counseling Techniques	(3 credits)
Theory and Techniques of Measurement and Assessment	(3 credits)
Consulting and Supervision	(3 credits)
Programs Evaluation	(3 credits)
Practicum in Counseling Psychology I	(3 credits)
Practicum in Counseling Psychology II	(3 credits)
Practicum in Psychological Counseling III	(3 credits)

### **Elective courses**

**(3 credits)**

Hypnosis	(3 credits)
Psychological Counseling and Human Sexuality	(3 credits)
Behavior Modification	(3 credits)

## **CORE COURSES DESCRIPTIONS**

### **PSYC 600 Biological Psychology Three Credits**

In-depth overview of the relationship between physiological systems and human conduct. The course examines the influence of current biological perspectives on psychological analysis and reasoning, giving particular attention to their contributions and limitations.

### **PSYC 601 Evolutionary Psychology Three Credits**

Experimental data or the formulation of a scientific hypothesis cannot be presented outside a theoretical context. Based on this epistemological principle, the course critically examines, catalogues and analyses the scientific theories upon which the identified experimental data is being organized, as well as generally held principles on human development during childhood, adolescence, adulthood, middle and old age. The course also considers the topic of death as a vital component during the study of the final stages of life.

### **PSYC 602 Applied Statistics in Psychology Three Credits**

This course trains the student in the theoretical understanding, application and interpretation of inferential statistics. The course examines the different methods and statistical models used in psychology, utilizing computer and program applications for statistical analysis in the School's laboratory facilities.

### **PSYC 603 Learning and Cognition Three Credits**

The course examines the theories and principles that explain the processes of learning and cognition. The course places particular emphasis to the foundational premises of cognitive psychology, as well as the topics of the brain, sensation, perception and attention.

### **PSYC 604 Personality Three Credits**

Study of personality in psychology. The course examines the fundamental theoretical components of this content, including psychoanalytical, socio-humanistic, conductive and cognitive perspectives from a historical context that seeks to connect applied research and current theoretical discussions.

**PSYC 605**  
**Psychopathology**  
**Three Credits**

Examination of the distinction between what is considered normal and abnormal behavior, with reference to social, economic and cultural criteria to define both concepts. The course analyzes mental disorders and evaluates the concepts that define the field, as well as the diagnosis and treatment of mental conditions from biophysical, intrapsychic, phenomenological, behavioral, socio-cultural and integrative perspectives. The course also appraises the different disease entities of the "Diagnostic and Statistical Manual of Mental Disorders (DSM IV-TR).

**PSYC 606**  
**Advanced Social Psychology**  
**Three Credits**

Using the way people think, influence and relate to each other as a central point of departure, the course offers a critical examination of the major theoretical and methodological aspects that have emerged in social psychology from its birth in the twentieth century as a scientific discipline. The course aims to relocate the focus of study in social psychology at the micro and macro levels of phenomena. It investigates traditional theoretical notions that shaped social psychology as a discipline and the emergence, after the late 1970's, of more recent theoretical trends that resulted from the crisis of confidence in the discipline at that time.

**PSYC 607**  
**Measurement and Construction of Psychological Testing**  
**(Prerequisite PSYC 602)**  
**Three Credits**

This course trains graduate students in psychology in the use of the methods for the analysis and construction of items to estimate reliability, validity and standardization of the tests. The course offers a broad perspective of different techniques and instruments used in the field, as well as an overview of its historical development. The class will discuss some of the most commonly used psychological instruments, as well as analyze the ethical and social controversies of psychological testing in Puerto Rico.

**PSYC 608**  
**Foundations of Research: Methods and Psychological Research Techniques**  
**(Prerequisite PSYC 602)**  
**Three Credits**

Review of the different forms of research in psychology, analyzing each of its epistemological strategies, methods and techniques, beyond the classic division between quantitative and qualitative research.

**PSYC 709**  
**Research Seminar**  
**Three Credits**

In this course, students will develop a research paper to demonstrate the skills mastered in their graduate courses, as applied to the problems presented by the discipline of Psychological Counseling.

**SPECIALIZATION COURSES**

**PSYC 611**  
**Ethical, Legal and Professional Considerations in Psychological Counseling**  
**One Credit**

The course critically examines the implementation of Law 96 of the Ethical Code and all other laws and statutes that regulate the practice of Psychology in Puerto Rico. Specific topics include responsibility, confidentiality, professional standards, examination of issues and decision making, all in relation to the specific needs of psychological counseling as a field of specialization.

**PSYC 612**  
**Counseling I: Professional Issues in Counseling Psychology**  
**Three Credits**

As a field of study, Psychological Counseling has become relevant in different service scenarios. In this course, the future professional of Psychological Counseling is exposed to the philosophical and theoretical assumptions of the discipline and examines and analyzes different intervention areas and ethical issues in relation to emerging topics and new problems. Through critical analysis of the foundations of the discipline, the challenges faced by the profession in Puerto Rico are also addressed.

**PSYC 613**  
**Counseling II: Models and Psychological Counseling Techniques**  
**Three Credits**

The course applies the various models of counseling and psychotherapy pertaining to the different schools of thought. Emphasis is given to psychotherapeutic and counseling techniques and to practical work on the basis of role-playing and other methods used in model testing. The course aims to develop a level of specialized knowledge about the main intervention techniques in the field. With this foundation, contemporary directions of the field are examined critically, placing particular emphasis to issues related to conceptual, methodological approaches and proposal writing to address these problems. **(Prerequisite PSYC 612)**

**PSYC 614**  
**Theory and Techniques of Measurement and Assessment**  
**Three Credits**

This course examines the principles of assessment in the context of psychology, as applied to individual and learning differences. The course also explores the basic and fundamental issues of psychological assessment, its core concepts, its practical foundations, available evidence and critical questioning. The course will take into

account historical considerations, contemporary socio-cultural, ethical, legal and professional developments and the practice of psychometrics in Puerto Rico.

**PSYC 615**  
**Consulting and Supervision**  
**Three Credits**

This course studies the theoretical and practical basis of the consulting area of psychological counseling. The course addresses fundamental issues in consulting such as, the use of organizational resources for the resolution of problems affecting children and adolescents, methods, techniques and skills of psychological consulting.

**PSYC 616**  
**Programs Evaluation**  
**Three Credits**

Study of the theoretical and practical foundations of the evaluation of social and psychological intervention programs. The courses span the main areas of evaluation of intervention programs, such as models and design evaluation, stages of assessment and information gathering techniques.

**PSYC 711**  
**Practicum in Counseling Psychology I**  
**Three Credits**

Practice course focused in the development of psychological evaluation skills, integration and application of psychological interviewing skills, record review, drafting of personal histories, and preparing and drafting psychological, psychometric and psycho-educational evaluation reports. The course also develops the skills related to feedback techniques and the early intervention and counseling of the participant, parent, partner or other person relevant to the case.

**PSYC 712**  
**Practicum in Counseling Psychology II (Prerequisite PSYC 711)**  
**Three Credits**

Practice course focused in the development of psychological intervention skills, including the psychological interview, psycho-diagnosis, psychological counseling, development of the psychotherapeutic plan and psychotherapy. Emphasis is given to short-term psychotherapeutic models designed for prevention and the promotion of mental health and socio-emotional well-being.

**PSYC 713**  
**Practicum in Counseling Psychology III (Prerequisite PSYC 712)**  
**Three Credits**

This more advanced practice course is aimed at strengthening the skills of psychological intervention, including: the psychological interview, psycho-diagnosis, psychological counseling, psychotherapy plan development and psychotherapy. The course will strengthen the skills of counseling and psychological intervention in the family, as well as continue to strengthen the models of brief psychotherapy aimed at prevention and mental health promotion and socio-emotional adjustment.

## ELECTIVE COURSES

**PSYC 617**  
**Hypnosis**  
**Three Credits**

Study of the field of clinical hypnosis and its basic techniques. The course examines the technical basis of the field such as: hypnosis as a particular state of consciousness, neuro-psychophysiology of hypnosis, methods of hypnosis and hypnotic phenomenology.

**PSYC 618**  
**Psychological Counseling and Human Sexuality**  
**Three Credits**

Historical background of the concept of human sexuality, including topics related to human sexuality in the biological, developmental, behavioral, emotional and cultural spheres. The course reviews the diagnosis and treatment of atypical sexual behavior from the biophysical, intra-psychic, phenomenological, behavioral, socio-cultural and integrative perspectives. The course also examines the different disease entities in the Diagnostic and Statistical Manual of Mental Disorders (DSM IV-TR).

**PSYC 619**  
**Behavior Modification**  
**Three Credits**

Presentation of the historical background and theoretical foundations of the principles of behavior modification. This course integrates specific knowledge from behavioral assessment, the explanatory models of the disorders, the design and implementation of behavior modification programs and evaluation of their effectiveness. This course provides a close link between theoretical and applied aspects of behavior modification that integrate models of disorders, assessment and treatment.

### Required Workshops

**APA PUBLICATION STYLE WORKSHOP** This workshop will train students on the current use of the American Psychological Association (APA) style manual (*Publication Manual of the American Psychological Association*) to prepare students on its correct application in research papers, monographs and essays. The course provides students with the necessary tools to master the writing style approved by the American Psychological Association. Notes, writing samples, use of quotations and references, and other additional resources are offered.

**SPSS WORKSHOP** This workshop is intended to familiarize and prepare the student in the use of computer statistical packages to perform data entry of variables, assign values and allow students to perform the statistical analysis of the data entered that are part of an investigation.



## **MASTER OF ARTS IN CRIMINAL JUSTICE**

### **Admission Requirements**

Students interested in applying to our program should comply with the following requirements:

- a. Have earned a Bachelor's Degree from an accredited university, with no less than a 2.75 GPA.
- b. Submission of an application containing:
  - Official transcripts of all university studies.
  - Three letters of recommendation from qualified faculty or individuals establishing the candidate's academic and/or professional profile and aptitude for success in a Graduate Program.
- c. Submission of the results of the *Prueba de Admisión a Estudios Graduados* (EXADEP) or Graduate Record Examination (GRE).
- d. Completion of an interview by the Program Admissions Committee, including a written conceptual essay.

### **Transfer Credits**

A maximum of nine (9) graduate credits will be accepted from other institutions provided that the courses are equivalent to courses offered at Universidad Metropolitana. These credits should have been taken in an accredited institution, no more than five (5) years prior to admission, and approved with a grade of A or B.

### **Credit Load**

A complete credit load consists of three to six credits per *Part of Term*, for a total of thirty-six (36) credits. In exceptional circumstances, students may request written authorization of the Dean of the School of Social Sciences, Humanities and Communications to take a maximum of (9) credits per *Part of Term*.

### **Graduation Requirements**

To be considered for graduation, a candidate for a Master's Degree of Arts in Criminal Justice should comply with all the following requirements:

1. Complete all core and specialty courses with a minimum passing grade of 3.00.
2. Complete all required seminars (APA, SPSS)
3. Approve the comprehensive examination (with P).
4. Have no debts with the University.

## MASTER OF ARTS IN CRIMINAL JUSTICE

### Core courses (both specializations) **15 credits**

Human rights in the contemporary world	(3 credits)
Research seminar and computer use in social Investigation	(3 credits)
Methods of Social Investigation	(3 credits)
Design and evaluation of Criminal Justice Programs	(3 credits)
Criminal Justice System of Puerto Rico	(3 credits)

### Specialization courses (Administration of the Correctional System) 12 credits

Organizational Behavior	(3 credits)
Treatment and rehabilitation of the delinquent	(3 credits)
Comparative correctional systems	(3 credits)
Community Correctional Programs	(3 credits)
Seminar: Particular situations in the administration of correctional programs	(3 credits)

### Specialization courses (Crime Prevention and Delinquency) 12 credits

Basic international documents for crime prevention	(3 credits)
Crime and delinquency prevention strategies	(3 credits)
Relevant principles for effective prevention and investigation of juvenile delinquency	(3 credits)
Organizations of public and private security in crime prevention	(3 credits)

### Electives for both specializations **3 credits**

Theories of Criminologies	(3 credits)
Disturbances and mental disorders	(3 credits)
Proposal writing	(3 credits)
General Principles of Penal Law	(3 credits)
Seminar: Methods and techniques of juridical research	(3 credits)
Sexual offenders	(3 credits)
Seminar	(3 credits)

## **CORE COURSES DESCRIPTIONS**

### **CRIM 501**

#### **Human rights in the contemporary world**

##### **Three Credits**

Study of the evolution of the concept of human rights from the period of the *Declaration of the Rights of Man* and the French Revolution to the present. Emphasis will be given to the internationalization of these rights and the examination of their application in our society.

### **CRIM 502**

#### **Research seminar and computer use in Social Research**

##### **Three Credits**

In this course students will experiment with different quantitative and qualitative investigation techniques employed in the social sciences to learn how to transform that information into useful research findings. Emphasis will be given to the use of electronic media in obtaining and analyzing data.

### **CRIM 504**

#### **Methods of Social Research**

##### **Three Credits**

This course teaches students the methods, techniques, and strategies used in the social sciences, including quantitative and qualitative research methods utilized to gather and analyze data. Varied theoretical models and literature, as well as the use of electronic media in obtaining and analyzing data, are also examined. **(Prerequisite CRIM 502)**

### **CRIM 505**

#### **Design and Evaluation of Criminal Justice Programs**

##### **Three Credits**

Study of the process of designing and evaluating programs in the criminal justice system, particularly those aimed at prevention of deviant behavior, crime, delinquency and other correctional work. Students will develop their understanding and skills to determine needed services and propose innovative alternatives by examining design models and evaluating programs. **(Prerequisites CRIM 501 y CRIM 504)**

### **CRIM 507**

#### **Criminal Justice System of Puerto Rico**

##### **Three Credits**

Study and analysis of the components of the criminal justice system in Puerto Rico and the United States, as well as other criminal justice systems around the globe.

## **SPECIALIZATION COURSES IN ADMINISTRATION OF THE CORRECTIONAL SYSTEM**

### **MANA 501**

#### **Organizational Behavior Three Credits**

Study of individual and group behavior in organizations and organizational behavioral dynamics inside social systems. In the course, students will study different theories of human behavior and organizational administrative functions.

### **CRIM 605**

#### **Treatment and rehabilitation of the delinquent Three Credits**

This course is divided in two components. In the first part, the class will examine the constitutional laws that mandate the rehabilitation of the delinquent, the laws that sustain them, as well as the systematic procedures that encompass the entire correctional system, both in its public and private spheres. The second half of the course analyzes the diverse orientations and/or philosophies that uphold the intervention system utilized in the rehabilitation process. The final part focuses on the re-conceptualization of existing processes to stimulate a broader understanding and management of alternative interventions. **(Prerequisite CRIM 501 y CRIM 502)**

### **CRIM 606**

#### **Comparative Correctional Systems Three Credits**

This course exposes students to diverse existing and previous correctional systems around the world from a historical approach. Emphasis is given to philosophical perspectives as well as to the weight given to punishment and rehabilitation in the evolution of these systems. The course examines: the law and the correctional process, the rights of the imprisoned, correctional administration, correctional systems, ideologies and the different options of the prison system. **(Prerequisites: CRIM 501, CRIM 502)**

### **CRIM 612**

#### **Seminar: Specific situations in the administration of Correctional Programs Three Credits**

The main purpose of this course is to confront students with specific situations that occur in penal institutions in Puerto Rico, such as: riots, evasions, prisoner transfers to medical appointments, to courts and other institutions, deaths, as well as electoral processes inside the facilities and work-study and work programs outside the institution. Students will also have the opportunity to learn, investigate and evaluate how the Department of Corrections and Rehabilitation, through the Administration of Corrections, manages these situations to guarantee the security of the penal population, its employees and visitors. **(Prerequisites CRIM 501, CRIM 502 y CRIM 606)**

**CRIM 610**  
**Correctional System of Puerto Rico**  
**Three Credits**

Study of the origin and development of the correctional system of Puerto Rico, as mandated by Law Num. 116 of July 22, 1974 and as amended in the Reorganization Plan, No. 3 of 1993. The course will analyze the creation of the Department of Corrections and Rehabilitation, the Administration of Corrections, and the Administration of Juvenile Institutions and other related agencies, focusing on the purpose, structure and functions of each. Emphasis will be given to the Administration of Corrections, specifically, the functions conferred to its personnel, including the Administrator, correctional officers and socio-penal services technicians. The course also explores topics related to the correctional population's rights, allowances, and programs and services that promote their rehabilitation. **(Prerequisites CRIM 501, CRIM 502 y CRIM 606)**

**CRIM 611**  
**Correctional Community Programs**  
**Three Credits**

This course exposes students to different community programs that the Correctional Administration offers the penal population, some of which give the imprisoned population the opportunity to participate in free society. In the course, students will evaluate these programs in a comparative manner, as well as examine the merits of each and understand the profile of the imprisoned. **(Prerequisites CRIM 501, CRIM 502 y CRIM 606)**

**CRIM 621**  
**Mediation methods and skills**  
**Three Credits**

Comparative analysis of the development of alternative methods for conflict resolution, specifically mediation, from a systems theory-based sociological framework. The course examines the historical background of the evolutionary process of mediation as an alternative method for conflict resolution, in order for students to develop the skills and capacities to serve as formal and informal mediators at different levels of the criminal justice system.

**SPECIALIZED COURSES IN CRIME PREVENTION AND DELINQUENCY**

**CRIM 600**  
**Basic international documents for crime prevention**  
**Three Credits**

Examination of all basic international documents for the prevention of crime, emphasizing the most relevant agreements by international organizations, including state organizations, public, quasi-public or private ones. **(Prerequisites CRIM 501 y CRIM 502)**

**CRIM 601**  
**Crime and delinquency prevention strategies**  
**Three Credits**

This course encourages the student's critical thinking and criminological analysis to examine successful crime prevention public policies. The course also investigates the basic concepts of crime prevention, intervention strategies and modern techniques of criminal research. **(Prerequisites CRIM 501 y CRIM 502)**

**CRIM 602**  
**Relevant principles for effective prevention and investigation of juvenile delinquency**  
**Three Credits**

This course presents an ethical analysis of the judicial, legislative, and executive inventory upon which our society depends to confront the increasing problem of juvenile delinquency. The course examines the origins of these government structures as a particular aspect of the law, the processes that govern them, as well as society's understanding of the system itself. **(Prerequisites CRIM 501 y CRIM 502)**

**CRIM 604**  
**Organizations of Public and Private Security in crime prevention**  
**Three Credits**

Study and analysis of the different strategies of public and private crime prevention and security organizations. Emphasis is given to the functioning of these in administrative and operational areas, research findings, search for qualified personnel, productivity measurements, and performance and discipline, among others, as necessary means of crime prevention. **(Prerequisites CRIM 501, CRIM 502 y CRIM 601)**

**CRIM 623**  
**Addiction, crime and intervention**  
**Three Credits**

Study and analysis of addiction, crime and intervention in the use of legal and illegal drugs for the prevention of abnormal behavior and crime. The course includes the study of international methods of intervention of security organizations and treatment strategies for addicts and their possible application to the case of Puerto Rico. The course also includes a comparative analysis of prohibition models, as well as legalization and medication of drugs as frames of reference.

**CRIM 624**  
**International perspectives for crime prevention**  
**Three Credits**

Study of crime at the international level and the procedures which are being, or can be, adapted to our context for crime prevention. We will study international crime from different perspectives, among them, culture, migration, routine activities of transnational crime, gender, etc. We will also study the international justice process, the role of the UN, and other international organizations in prosecution and crime prevention, law compliance and crime prevention, as well as crime statistics at the

international level and the role of international crime organizations. **(Prerequisites CRIM 501 y CRIM 502)**

### **ELECTIVES FOR BOTH SPECIALIZATIONS**

**CRIM 503**  
**Theories of criminology**  
**Three Credits**

This course exposes students to the study of crime from a critical perspective. The course examines diverse theories related to the causes of crime, among them, theological, biological, psychological, ecological perspectives and others. Social phenomena, law and the applicable rights are analyzed within a historical-social frame that takes into consideration the particular reality of Puerto Rico of the last 45 years. **(Prerequisites CRIM 501 y CRIM 502)**

**PSYCH 607**  
**Disturbances and mental disorders**  
**Three Credits**

The course introduces the distinction of what is considered normal and abnormal behavior with reference to social, economic and cultural criteria that define both concepts. Students will carry out a critical analysis of disturbances and mental disorders and an evaluation of the concepts that define the field, as well as diagnosis and treatment of mental conditions from the biophysical, intra-psychical, phenomenological, conductive, socio-cultural and integrative perspectives. The class will utilize *the Diagnostic and Statistical Manual of Mental Disorders (DMS IV T-R)* as a frame of reference for study and discussion. **(Prerequisites CRIM 501 y CRIM 502)**

**CRIM 620**  
**Proposal writing**  
**Three Credits**

Study of the advancement and development of programs that respond to the needs of the criminal justice system population. The course strengthens students' awareness, capabilities and skills in proposal writing to seek funding and resources to develop programs and services that are directly related to crime prevention and rehabilitation. The course promotes the exchange of ideas and integration of other disciplines to create new alternatives in the field. The course also emphasizes the development of oral and written communication skills and the identification of resources in the provisioning of services within the system of criminal justice. **(Prerequisites CRIM 501 y CRIM 502)**

**CRIM 630**  
**General Principles of Penal Law**  
**Three Credits**

Analysis of the General Principles of Penal Law. Some of the central themes included in the course are: *Legality Principle, Certainty Principle, the Theory of Offense, Retroactive Principle, Law of Authenticity, Due Process, Guilt, and Hierarchical Order in Law in Puerto Rico*. The course will also address the topic of globalization within the penal system.

**CRIM 631****Seminar: Methods and techniques of juridical research****Three Credits**

The course studies the distinct methods and techniques used in juridical investigations with an emphasis on those most pertinent to students who will be working in Puerto Rico. The course is designed to develop the student's ability to manage distinct sources of juridical information in an integrated manner. **(Prerequisite: CRIM 502)**

**CRIM 633****Sexual offenders****Three Credits**

The course examines the emotional, psychological and sociological factors that predispose a person to respond with sexual violence to life situations and events. In addition, the problem of sexual violence is explored from cultural, social, political, legal and economical viewpoints, the impact on society in general and on the victims in particular.

**CRIM 634****Seminar of pertinent topics****Three Credits**

This seminar includes the study and critical analysis of significant and current topics related to the field of criminal justice in the process of law enforcement, the violation of the law and social reactions to these situations. The course also addresses the study of criminology is a central reference point in the general system of criminal justice, and, in particular, within the content of the major courses of the master's program.