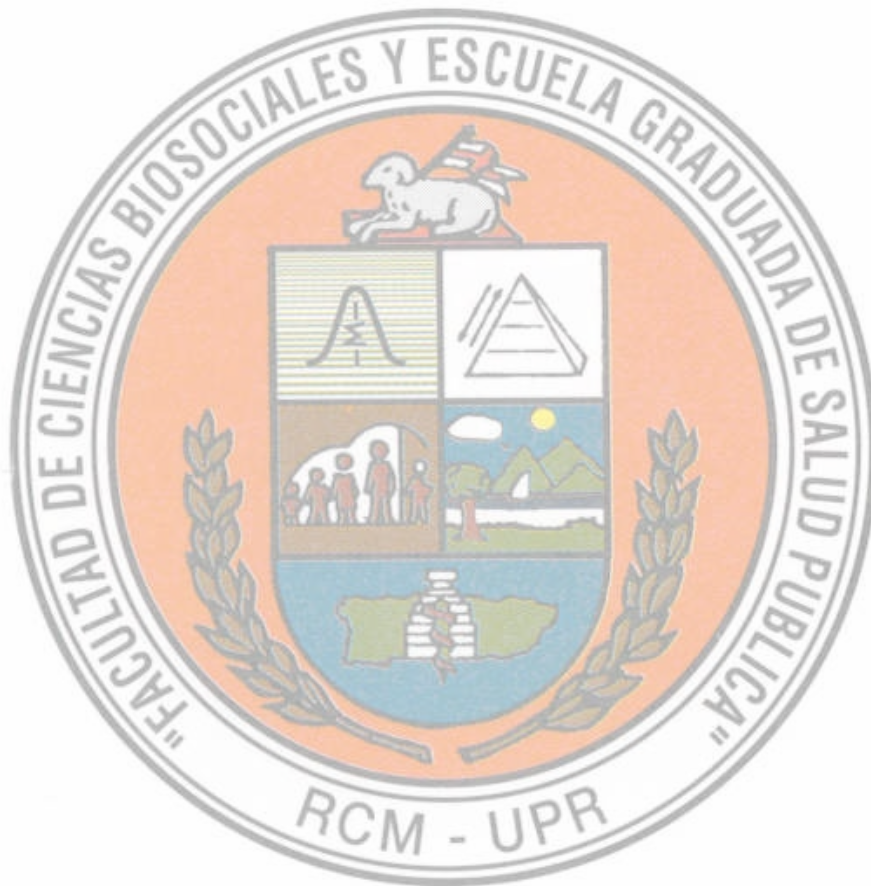


**UNIVERSITY OF PUERTO RICO
MEDICAL SCIENCES CAMPUS
FACULTY OF BIOSOCIAL SCIENCES AND
GRADUATE SCHOOL OF PUBLIC HEALTH**



SCHOOL CATALOG

2019-2024

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Graduate School of Public Health
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The University of Puerto Rico Medical
Sciences Campus offers equal opportunity
to all without regard to sex, marital status,
age, national origin, race, creed, or
disability.

The information in this Bulletin is accurate and up-to-date at the time of publication. The Graduate School of Public Health reserves the right to make such changes as circumstances demand with reference to admissions, registration, attendance, curriculum requirements for each of its educational programs. The student is responsible for informing himself/herself of such changes in order to satisfactorily meet all requirements of his/her program of studies.

Last update: NOVEMBER 2022

ACCREDITATION

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**FACULTY OF BIOSOCIAL SCIENCES
AND
GRADUATE SCHOOL OF PUBLIC HEALTH**

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**Council on Education for Public Health
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The Medical Sciences Campus of the University of Puerto Rico is an Equal Employment Opportunity Employer. We do not discriminate against any university employee or candidate because of sex, sexual orientation, color, place of birth, age, physical or mental handicap, origin or social condition, political or religious beliefs. The Medical Sciences Campus curricula are dynamic and are regularly revised in accordance to the educational needs of the students and new trends and advances in the various disciplines. Such revisions follow the guidelines of accrediting bodies. Curricular revisions are ongoing at the Medical Sciences Campus and all programs are subject to changes, termination, or relocation within the system. Prospective students are advised to contact the Office of the Dean or the director of the program of their interest in order to receive updated information. The information in this Catalog does not constitute a contract, express or implied, between any applicant, student, or faculty member and the Medical Sciences Campus, or the University of Puerto Rico System. The student is responsible for obtaining updated information and meeting all the requirements of his/her program at the Medical Sciences Campus. The Medical Sciences Campus reserves the right to make changes as to requirements for admission, registration, tuition and fees, calendar, curricula, attendance, conduct, academic standing, promotion, and graduation.

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RAMOS-VALENCIA, GILBERTO - *Professor*; DrPH, 1990, University of Pittsburgh.

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RODRÍGUEZ-FIGUEROA, LINNETTE - *Professor*; 2008, University of Michigan.

ROSARIO-ROSADO, ROSA V. - *Professor*; DrPH, 2004, University of North Texas.

ENVIRONMENTAL HEALTH DEPARTMENT

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MÉNDEZ-LÁZARO, PABLO A. - *Associate Professor*; PhD, 2010, University of Salamanca - Spain.

NORAT-RAMÍREZ, JOSÉ A. - *Professor*; PhD, 1989, University of Michigan.

ORTA-ANÉS, LIDA - *Professor*; PhD, 1991, University of Michigan.

RODRÍGUEZ-SIERRA, CARLOS J. - *Professor*; PhD, 1995, University of Wisconsin.

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HEALTH SERVICES ADMINISTRATION DEPARTMENT

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TORRES-CINTRÓN, MARIELA – Assistant Professor, DrPH, 2016, University of Puerto Rico, Medical Sciences Campus.

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HUMAN DEVELOPMENT DEPARTMENT

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SALAS-PAGÁN, CAROL – Associate Professor, PsyD, 2007, Carlos Albizu University – Puerto Rico

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PUERTO RICO TITLE X FAMILY PLANNING PROGRAM

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INSTITUTE ON DEVELOPMENTAL DISABILITIES – PUERTO RICO UNIVERSITY CENTER FOR EXCELLENCE IN EDUCATION, RESEARCH AND SERVICE

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FACULTY OF BIOSOCIAL SCIENCES AND GRADUATE SCHOOL OF PUBLIC HEALTH

HISTORY

The Faculty of Biosocial Sciences and Graduate School of Public Health is the unit of the Medical Sciences Campus dedicated to teaching, research, and service in the areas of public health and biosocial disciplines as they relate to the health sciences. Besides offering its own master's and doctoral's degree programs in core areas of public health, the School is responsible for the teaching of public health and biosocial contents to medical students and students in other schools of the Medical Sciences Campus.

The School of Public Health had its origin in the School of Tropical Medicine, which was founded in 1926 with support from the Rockefeller Foundation and under the auspices of Columbia University. The School of Tropical Medicine soon became a renowned center for research and postgraduate studies.

In 1941, at the request of the Department of Health, the School of Tropical Medicine developed graduate courses in the field of public health. These were primarily courses in sanitary engineering leading to a Master of Sanitary Sciences developed as a response to the need for specialized personnel in that area. Subsequently, programs toward the Master of Public Health, Master of Health Education, and Master of Nursing were developed.

On May 15, 1949, the Puerto Rico Legislature approved Public Law No.378 authorizing the creation of a School of Medicine at the University of Puerto Rico. The School began operations in the fall of 1950. The Department of Preventive Medicine and Public Health was part of the School of Medicine from its inception. It offered courses in preventive medicine and public health to medical students. In 1955, the Department of Preventive Medicine and Public Health was accredited by the American Public Health Association, a function carried by APHA until 1974 when the Council on Education for Public Health was created. In 1956, the School (still a department of the School of Medicine) assumed an important role in the regionalization of health services in the Island, a plan by which primary, secondary, and tertiary care services were delivered in a coordinated fashion throughout the Island in order to maximize utilization of resources. The School's primary role was and continues to be to train the necessary human resources to deliver many of those services, and one of assessing health needs in the community in order to respond with relevant curricular changes.

Due to the outstanding contribution of the Department of Preventive Medicine and Public Health and its teaching programs in the development and organization of health care services in the Island, and due to the growth of its programs, the Academic Senate of the Medical Sciences Campus recommended the creation of the Graduate School of Public Health. On January 27, 1970, the Council on Higher Education authorized, through Certification 42, the creation of the Graduate School of Public Health of the Medical Sciences Campus, which comprised 13 programs. The School thus gained independent status. In 1972, the Medical Sciences Campus moved from the old building of the School of Tropical Medicine in San Juan to a new 10-story building near the University Hospital and other health institutions within the Puerto Rico Medical Center in Río Piedras. That same year the Graduate School of Public Health moved to its facilities within the new building. In 1976, the Council on Higher Education, authorized a total reorganization of the Medical Sciences Campus. As part of that reorganization, the School became the Faculty of Biosocial Sciences and Graduate School of Public Health.

In 1981, following the recommendation of the faculty, the School was reorganized into five departments: Health Services Administration, Biostatistics and Epidemiology, Environmental Health, Human Development, and Social Sciences.

This new organization reflected more adequately the School's mission, goals, its interdisciplinary character, and commitment to train a new type of public health professional. The eighties were a decade of growth and strengthening of the School's programs in response to social needs and areas of concern in the field of public health. It was a period of development of the biosocial sciences, as evidenced by the creation of the Center for Census Data, the Center for Sociomedical Research, and the Center for Demographic Research. In keeping with the needs of an aging population, the School also created a graduate certificate in Gerontology. It was also involved in outreach efforts through continuing education, extension and extramural courses and programs. In 1984 and 1985, it began offering Master of Science with specialty in Environmental Health, currently an MPH with specialty in Environmental Health, and a Master of Public Health evening programs. An extramural program with the University of Cádiz, Spain, began in 1986. Through this collaborative effort, the faculty offered courses at the University of Cádiz leading to the Master of Public Health and a Master of Science with specialty in Environmental Health.

In 1993, the School established the Child Development Center as an exemplary service center, practicing inclusion of infants and toddlers from two months to three years of age. New additions to the School's academic offerings in the 1990s included a graduate certificate in Developmental Disabilities-Early Intervention, offered by the Center for Developmental Disabilities through the Human Development Department, and an MPH program with a specialty in Gerontology and a program leading to a Master of Public Health Education, both offered as evening programs. In 1996, the Occupational Health Program became a Master of Science with specialty in Industrial Hygiene. In 1998-1999 the Department of Human Development added two new programs, a Master of Public Health with specialty in Nurse Midwifery and a Graduate Certificate in Nurse-Midwifery. These programs prepared professionals in the women's health care area, particularly in the processes of pregnancy and childbirth, as well as, in family planning and newborn care.

In 1999-2000, the School began offering the Doctor of Public Health with a specialty in Environmental Health degree. A second DrPH program in Health Systems Analysis began in 2010-2011 and a third one in Social Determinants of Health began in 2011-2012. The School is currently working on the creation of a doctoral degree in Biostatistics and Epidemiology.

VISION

Be the leading institution in public health for the development and integral well-being of the population at the community, national and international levels.

MISSION

Advance public health through the development of leaders, the creation of new knowledge and the offering of services that contribute to the sustainable well-being of society.

VALUES

Graduate School of Public Health is guided by universal human values of Social Justice and Equity. Its commitment is with the following core values identified through the strategic planning process:

- Recognition of health, as an inalienable right of every human being.
- Respect for the dignity, diversity, and integrity of the human being.
- Solidarity with and sensitivity towards vulnerable populations.
- Responsibility, honesty, and professionalism in our academic work.
- Interdisciplinary and interprofessional teamwork.
- Continuous and responsible improvement.
- Commitment with socio-cultural values of the Puerto Rican nation.

ORGANIZATION AND ADMINISTRATION

The School is headed by the Dean, who is assisted by the Associate Dean for Academic Affairs, the Assistant Dean for Student Affairs, the Associate Dean for Research and administrative personnel. Five departments offer academic programs in basic areas of public health. These are the Departments of Health Services Administration, Biostatistics and Epidemiology, Environmental Health, Human Development, and Social Sciences.

The Division of Continuing Education and Professional Studies, the Curriculum and Evaluation Office, and the Office of the Dean for Student Affairs, as well as several research and service programs, are other significant components of the School.

ADMISSIONS, REGISTRATION, AND GRADUATION PROCEDURES

ADMISSIONS

Admissions

The Medical Sciences Campus encourages all applicants to seek the broadest intellectual and cultural formation prior to their training in the health professions. Candidates are admitted on a competitive basis. They must present evidence of successful completion of all admission requirements for the program in which they are interested. In most programs, an admissions committee will also consider nonacademic factors as additional criteria in evaluating applicants. An application fee has been established for each academic program. Applicants should submit their electronic application available in the campus webpage: <http://sistemas.rcm.upr.edu/admisiones>. Documents required upon submission of the application must be sent to:

UPR-Medical Sciences Campus
Central Office of Admissions
P.O. Box 365067
San Juan, Puerto Rico 00936-5067

Transfers

A student from another institution of higher learning who applies for admission to the University of Puerto Rico, or a student who has previously been enrolled as a transient student and meets the admission requirements for a given program, will be considered a transfer student. The Office of Admissions in consultation with the admissions committee of the different faculties will process applications of transfer students. Applicants must have satisfactorily completed the requirements established by the program they are applying to and should submit their electronic application available in the campus web page, as indicated above.

Internal Transfers/Articulated Transfer

Internal transfers or in-transfers refer to those students who transfer from one unit of the University of Puerto Rico System to another. All programs leading to an associate or bachelor's degree accept most students as in-transfers. Students take introductory courses at various units of the University of Puerto Rico System and then transfer to the Medical Sciences Campus to pursue their professional education. Only the School of Health Professions and the School of Nursing accept in-transfer students. For specific information, please refer to the admissions section of each program.

The selection of students from the University of Puerto Rico System who apply for in-transfers is made based on an academic average formula determined by the program. All applicants must comply with application deadlines and meet the following requirements*:

- File an application at the Registrar's Office of their unit of origin, which will submit the application to the registrar of the appropriate unit. Applications sent directly by students will not be considered.
- Have approved the minimum number of credits required by the specific program. Meet the general academic index requirements of the unit to which transfer is being requested, as well as other requirements of the unit, college, or department.
- Pay a nonrefundable \$20.00 fee plus \$5.00 for the cost of transcripts, \$30.00 plus \$20.00 for late applications, \$30.00 plus \$30.00 for readmission-transfer of inactive students, and \$49.50 plus \$45.00 for late readmission-transfer of inactive students.

Applications for in-transfers will be considered only for the first term of each academic year unless otherwise announced for a particular degree program.

Transfer regulations are established in Certification No. 115, 1996-97 of the Board of Trustees.

*This information is subject to constant change due to updates.

Readmissions

Students who interrupt their studies may apply for readmission by filing an application for readmission at the Office of the Registrar before the deadline set for the academic term. The Office of the Registrar will send the application to the corresponding school or division for the Dean's consideration. The Dean will make a decision considering, among other things, previously established time limits for each program. The Registrar will be notified of the decision within thirty days prior to the academic session for which the student is seeking readmission.

The school will notify the student of the decision made by the Dean or Program Director. Readmission of candidates will be governed by the following regulations:

- First year students who interrupt their studies before the end of the first academic session must comply with the admission requirements in effect during the year in which they apply for readmission.
- First year students who complete the first academic session but who do not register for the second one, or who have withdrawn their registration before completing the session, must comply with the minimum grade point average required of first year students at the end of the academic year. If this requirement is not fulfilled, readmission, if granted, will be provisional.
- Students who satisfactorily complete their first year of studies or beyond, and graduate students who interrupt their studies voluntarily, may apply for readmission to any academic session subject to all general regulations.
- Students suspended for disciplinary reasons may apply for readmission for the academic session following the end of the suspension period. The school dean, upon recommendation of the Dean of Students, will decide as to the student's readmission.
- Readmission may not be granted if the student has violated institutional regulations during the period in which he/she was suspended.
- Students from other accredited institutions who have previously been admitted as transient students may only apply for readmission as special students. They must submit authorization letters from the Dean of their school and the Registrar of their institution of origin. They should also submit official academic transcripts from all university level institutions they have attended. The Dean of the school will decide as to readmission in these cases. Students who wish to be classified as regular students must meet all requirements for admission by transfer and submit their admission application form to the program selected.
- Students who have been suspended for poor scholastic standing may apply for readmission after the minimum waiting period established by the department. The Dean of the school will decide as to readmission in those cases.
- The Registrar (or the Director of Admissions in some cases) will be responsible for compliance with the rules hereby established.

Norms for Course Validation, Substitution, and Exemption of Courses

The Registrar's Manual describes the norms for the validation of courses taken at other universities. It is important to refer to this manual for specific information on the norms and procedures applicable to validation of courses. Criteria for validation of courses, as established by the UPR System are level, content, and duration of the course. In order to graduate from the Medical Sciences Campus, all transfer students are required to complete at least the last year before graduation as regular students at the MSC. The analysis and determination of which courses are validated, is performed at faculty level. This process should be completed at the beginning of the first academic session in which the student is enrolled. All validation cases are processed by the Registrar's Office once the Program Director and the school Associate Dean for Academic Affairs approve them.

Norms and procedures for course substitution apply to courses taken in other units of the UPR system. These are stated the MSC Registrar's Manual. Criteria for validation of courses, as established by the UPR System are level, content, and duration of the course. At the undergraduate, first professional, and graduate level, there is a minimum grade required for substitution of a course. The Associate Dean for Academic Affairs of the school authorizes, in consultation with the department or Program Director, the substitution of courses before the student begins studies in

the program to which he/she has been admitted. All validation cases must be processed by the Registrar's Office once the Program Director and school Associate Dean for Academic Affairs approve them.

Exemption from the requirement to take a course may be granted when the student provides evidence of having approved the content as part of a previous degree of the same level, obtained at the UPR System or at another accredited institution of higher education. In exemption cases, the student must replace the course credits with another course or courses that the Program or Department Director determines is/are appropriate to strengthen or supplement the student's education. The specific norms regarding grade requirements, grade point average calculation, and other relevant matters are covered in Section VIII-L of the MSC Registrar's Manual.

Norms regarding the acceptance of courses when the student has approved the course as part of a previous degree of the same level and obtained at the UPR System are available in the MSC Registrar's Manual. Students must replace the course credits with another course or courses that the Program or Department Director determines is/are appropriate to strengthen or supplement their education. Courses approved through this mechanism are registered in the student's academic record, taken into account for the calculation of the cumulative general grade point average, but not considered for the graduation index. Particular norms have been established for students of the Doctor of Dental Medicine program. Please refer to the MSC Registrar's Manual at <http://daa.rcm.upr.edu/registrars-office/>.

REGISTRATION

The following rules govern registration procedures:

- The Registrar is responsible for the enforcement and implementation of all rules and procedures, which govern the registration process.
- The Registrar will only validate class programs.
- Students must comply with the registration deadlines established for the academic year.
- The Registrar may allow a person authorized by the student to process his/her registration. The person will present written authorization from the student and personal identification. In such cases, the student identification card will be validated after registration is completed.
- Late registration carries a penalty of \$20.00.
- The student is responsible for completing all the required registration forms.
- Registration will not be complete until all tuition, special fees, and deposits are paid.
- In order to be eligible for registration, the student must pay all debts previously contracted with the University.
- The Associate Dean of the school to which the student belongs must recommend late registration to the Registrar.

Tuition and Fees

Tuition, fees, and other charges applicable to programs in the Medical Sciences Campus are described as approved by the Board of Governors at the date of publication of this Bulletin. Additional expenses may be incurred, depending on the program. All amounts and fees are subject to change. Tuition and fees are to be paid by the student at the time of registration.

Self-financing programs at the MSC include, but are not limited to:

School of Medicine

Master of Science with specialty in Biochemistry (MS) - Evening Program (non-thesis option)

School of Pharmacy

Master of Science in Pharmacy with specialty in Industrial Pharmacy Master of Science in Pharmacy with specialty in Pharmaceutical Sciences

Faculty of Biosocial Sciences and Graduate School of Public Health

Doctor of Public Health with Specialty in Health Systems Analysis and Management

Doctor of Public Health with Specialty in Social Determinants of Health
 Master of Public Health with Specialty in Environmental Health - Evening Program
 Master of Public Health General Option - Evening Program
 Master of Public Health with Specialty in Gerontology - Evening Program
 Master of Public Health Education - Evening Program
 Graduate Certificate in Gerontology
 Graduate Certificate in Developmental Disabilities Early Intervention
 Graduate Certificate in School Health Promotion

School of Health Professions

Doctoral Program in Audiology (AuD)
 Master of Science in Clinical Laboratory Sciences (with Emphasis in Molecular Diagnostics)

School of Nursing

Doctor of Nursing Science

Joint Degree Program

Master of Science in Clinical and Translational Research

Tuition Fees for New Students Admitted During Academic Year 2022-2023*

(US Citizens Residents of Puerto Rico)

First Professional/Doctorate degree

Medicine Doctor (MD) degree	\$17,500.00/year
Doctor of Philosophy (PhD) in Biomedical Sciences degree	\$215.00/credit
MD-PhD concurrent degree	\$290.00/credit
School of Dental Medicine	\$17,000.00/year
International Students.....	\$60,000.00/year
Doctor in Public Health with Specialty in Environmental Health (DrPH)	\$290.00/credit
Doctor in Public Health with Specialty in Health Systems Analysis and Management (DrPH).....	\$290.00/credit
Doctor in Public Health with Specialty in Social Determinants of Health	\$290.00/credit
Doctor of Philosophy in Nursing	\$7,500.00/year
Doctor of Nursing Practice with specialty in Anesthesia	\$500.00/credit
Doctor of Pharmacy	\$13,000.00/year
Doctor of Philosophy in Pharmaceutical Sciences	\$290.00/credit
Doctor of Audiology	\$290.00/credit
Doctor of Physical Therapy	\$290.00/credit

Graduate Programs and Graduate Certificates

Semester and Trimester Courses	\$205.00/credit
Master of Public Health with Specialty in Gerontology	\$200.00/credit
Post-Bachelor Certificate in Cytothecnology	\$2,405.00/year
Post-Bachelor Certificate in Dietetic Intership.....	\$2,405.00/year
Master of Science in Clinical Laboratory Sciences	\$5,600.00/year

Undergraduate Programs

Baccalaureate programs	\$157.00/credit
Associate Degree programs	\$157.00/credit

Additional Fees

Summer Maintenance Fee	\$50.00
Laboratory Rights	\$100.00
Graduation Rights	\$80.00
Other Maintenance Rights	\$67.00
Admission Application	\$30.00
Re-Admission	\$35.00
Fees for late tuition.....	\$20.00
Transfer to other Institutions.....	\$50.00
Transfer from other universities	\$50.00
Transfer with the UPR Units.....	\$25.00
Transcripts and Certificates	\$ 5.00
Document Duplicates.....	\$ 5.00
Change of Faculty or Reclassification.....	\$20.00
Identification Card	\$10.00
Fees for partial drop in courses.....	\$10.00
Fees for full drop in courses.....	\$15.00
Repetition of Courses.....	\$20.00

Maintenance and Technology Fees*Undergraduate programs*

Maintenance fee \$100.00

Technology Maintenance fee \$50.00

Graduate programs

Maintenance fee \$175.00

Technology Maintenance fee \$75.00

Annual graduate programs

Maintenance fee \$350.00

Technology Maintenance fee \$150.00

Special Fees for Annual Graduate programs	1er año	2do año	3er año	4to año
Maintenance and Technology Fees	\$ 500.00	\$ 500.00	\$ 500.00	\$ 500.00
School of Medicine	\$ 6,168.00	\$ 5,303.00	\$ 5,308.00	\$ 4,614.00
School of Dental Medicine				
Virtual Library	\$ 1,639.00	\$ 1,021.00	\$ 1,332.00	\$ 1,317.00
Educational Resources	\$ 2,900.00	\$ 2,900.00	\$ 2,900.00	\$ 2,900.00
Instrumentation and Materials	\$ 10,630	\$ 14,408.00	\$ 500.00	\$ 500.00
International Students & Advanced Programs-Virtual Library	-----	-----	\$ 2,335.00	\$ 1,951.00
International Students & Advanced Programs-Educational Resources	-----	-----	\$ 2,900.00	\$ 2,900.00
International Students & Advanced Programs-Instrumentation	\$ 9,310.00	\$ 500.00	-----	-----
School of Pharmacy-doctorate	\$ 2,600.00	\$ 3,100.00	\$ 3,100.00	\$ 3,100.00
School of Nursing				
PhD	\$ 500.00	\$ 500.00	\$ 500.00	\$ 500.00
DNP-SA	\$ 2,000.00	\$ 2,000.00	\$ 2,000.00	-----

*This information is subject to constant change due to updates, please be aware of updates, check with the Campus Collection Office. There may be additional or different charges for programs, courses or services.

Health Insurance - May vary on an annual basis according to negotiations with insurance companies and type of coverage.

Nonresident Students: U.S. Citizens and Foreign Citizens

Undergraduate Programs, Master Programs and Doctoral Programs

In Certification No. 77, 2019-2020, amended by Certification No. 72, 2022-2023 of the Governing Board of the University of Puerto Rico, it was established that as of the academic year 2020-2021 the cost of tuition, at the University of Puerto Rico, for Non-Resident Students and International Students will be equal to the cost of tuition for Local or Resident Students, with the exception of the cost of credit for non-resident students of the School of Medicine, School of Dental Medicine, School of Pharmacy and Doctor of Nursing Practice with specialty in Anesthesia (DNP-SA) Program of the Medical Sciences Campus.

*There may be additional or different charges for programs, courses or services.

Honor Registration

Honor registration is an economic aid that offers the by the University. This financial aid applies only to undergraduate students. The rules are established in Certification 4, 2019-2020 of the Governing Board of the University of Puerto Rico "*Política Institucional sobre la Otorgación de Ayudas Económicas para Estudiantes con Distinciones Académicas en la Universidad de Puerto Rico*".

Student Classification

Students are classified as follows:

Full-time Student

One who has fulfilled admission requirements, has the express authorization from the Dean, and is registered in any of the regular academic programs of the Medical Sciences Campus for at least the number of credits established as full-time load for the particular program. The student may be a candidate for a degree, diploma, or certificate as long as he/she maintains the retention index established by the school or division.

Part-time Student

One who has fulfilled admission requirements, is a candidate for a degree, diploma, or certificate, and carries less than the number of credits established as full-time load for the particular program.

Transient Student (Special Permit)

One who is a student from another accredited university or college, who applies for the first time, and who takes courses with the intention of transferring the credits to his/her institution.

Visiting Student (Audit)

One who has not fulfilled admission requirements and is not a candidate for a degree, diploma, or certificate. A visiting student audits classes with the consent of the Department Director and pays applicable fees, but may not receive a grade for the course.

Special Student

One who has already received a degree and is enrolled in a course of his/her interest, not seeking an academic degree.

Exchange Student

An exchange student is a student from another institution that maintains formal student exchange arrangements with programs on campus. Exchange students pursue studies for a pre-established period.

Grading System

Unit of Instruction

In the Medical Sciences Campus, the credit is the basic unit of academic accountability of learning experiences of students (unit of instruction). It can be expressed in semester credits or trimester credits. In the Medical Sciences Campus, the semester has a duration of 17 weeks, while the trimester is 14 weeks. The Medical Sciences Campus uses semester or trimester credit hours as the unit of instruction in the following schools: Faculty of Biosocial Sciences and Graduate School of Public Health, School of Pharmacy, School of Nursing, School of Dental Medicine (only in residency programs), School of Medicine (only in Biomedical Sciences Graduate Programs) and School of Health Professions.

The first professional degree programs at the School of Medicine (MD) and Dental Medicine (DMD), and the Dietetic Internship Post-baccalaureate Certificate Program (School of Health Professions) use the total hours per calendar year as the unit of instruction for granting credit for work done towards a degree.

Attendance and Evaluation Procedures

Professors are responsible for implementing the necessary mechanisms to verify the attendance of students and how this is to be taken into consideration for the final grade.

Final summative assessment or written final examinations must be given in all courses unless other evaluation instruments are designed. Professors must evaluate the work rendered by the student using the method they deem most appropriate, provided the use of rubrics that warrants their objectivity in determining grades.

Grades

The Medical Sciences Campus programs use the following grading system:

- A** Excellent
- B** Good
- C** Fair
- D** Deficient
- F** Failed
- P** Passing but not considered in computing the grade point average
- W** Withdrawal
- I** Incomplete
- EP** In progress
- NP** Not passed
- NR** No grade reported
- W*** Unofficial withdrawal
- H** Honor
- S** Satisfactory

The grade point average is calculated on a 0 to 4 scale in which A = 4.

For Graduate School of Public Health, the following modalities are included in grading system are:

System	Numerical Value
<i>Letters –Traditional System</i>	
<i>A</i>	90 to100
<i>B</i>	80 to 89
<i>C</i>	70 to 79
<i>F</i>	≤ 69
<i>Letters – Special System</i>	
<i>P-Approved</i>	N/A
<i>NP-Not Approved</i>	N/A
<i>EP-In progress</i>	N/A

According to Certification #77-179(a) of Medical Sciences Campus-Academic Senate, D as qualification in the grading system is not awarded in the Graduate School of Public Health. Passing required courses with the minimum passing grade “C” does not insure the fulfillment of academic program graduation requirements. Although students can pass a course with a “C” grade, graduation requirements for academic programs require that students reach a 3.00 GPA in their concentration courses.

For thesis, dissertation, practice experiences and other approved courses in specific programs, the grading system is “P” (Approved) and “NP” (Not Approved). Courses that use a P/NP grading system appear in student’s transcript but are not used in computing student’s Grade Point Average (GPA). In the cases of thesis, dissertations and other approved courses (such as some practice experiences) students can obtain an “EP” (In-Progress) notation. Requirements for receiving “EP” in a term is determined by program requirements in the course syllabus or experience manual (dissertation/thesis/practice).

For students who repeat a course, the highest grade will be used in calculating the GPA but the grades of each time the student registered the course will appear in the student’s transcripts records.

Incomplete

A student may receive an incomplete when the professor considers there was a justifiable reason for the student’s failure to comply with all course requirements. If the student does not make up the deficiency before the end of the following academic session, or if special arrangements are not made in programs operating in other time units, an F will be recorded.

Grade Point Average

The grade point average is the measure of the student’s academic achievement. It is computed by dividing the total number of honor points by the total number of credit units in those courses in which the student has received a final grade. When computing the graduation average, only required and elective courses in a program of study will be considered. Honor points for each grade are as follows: A=4, B=3, C=2, D=1, and F=0.

Courses marked W, NP, EP, I, H, S, or NR are not counted. Grades for the summer session are considered for the grade point average of the following year.

Withdrawals

Students may withdraw from courses during the period established by the Registrar after officially notifying the professor and obtaining permission from the Department Director and the Dean. The Registrar will post a “W” on the student’s permanent record and no grade will be given for any work performed in the course.

A student may totally withdraw from the University of Puerto Rico at any time up to the last day of classes. He/she must obtain written permission from the Dean. The Registrar will post a “W” on all courses for that session.

Policies on registration cancellation and refund are available in Section VII 8b of the *Registrar’s Manual* available in the webpage Student Portal.

Refund Regulations

Criteria for refund of registration fees are described in the *MSC Registrar’s Manual*. It is important to consult this manual for specific information on partial and full withdrawal processes including cancellation of registration. Students are entitled to a refund of 100%, 50%, or 25% of the basic registration fee (except for other regular and special charges) depending on the date of withdrawal. Specific dates for each amount of refund are published in the *Academic Calendar*.

Student Promotion

The Promotions Committee, or any other body charged with this responsibility at the particular school, evaluates the student’s academic performance. Students who meet all criteria and requirements stated in the promotions rules and regulations of their school will be promoted.

If the student does not meet the established criteria and/or requirements, the Committee will make specific recommendations to the Dean. These may include a probationary period, retaking courses, or suspension due to academic deficiencies.

Study benefits for veterans will cease once the student completes the minimum number of required credits.

GRADUATION

The University of Puerto Rico reserves the right to make changes in program and degree requirements. As a rule, a student is entitled to graduate when he/she meets the curriculum requirements in effect at the time of his/her admission to the institution. Students who do not satisfy the graduation requirements within the period established for their program of study and students who reenroll after a period of absence will be governed by the requirements applicable to the class with which they graduate.

In order to receive a degree, diploma, or certificate from the University of Puerto Rico, candidates must satisfy the following general requirements:

- Candidates must have completed the program of study with the minimum grade point average established for the particular program.
- Remedial courses are not considered regular courses of a program and are not considered towards earning a degree.
- Undergraduate students and students from the School of Dental Medicine, School of Medicine, and Doctor of Pharmacy Program with a grade point average of 3.30 to 3.49 inclusive, graduate “Cum

Laude”, with 3.50 to 3.99 they graduate “Magna Cum Laude”, and those with a grade point average of 4.00 graduate “Summa Cum Laude”. Only courses required for graduation at the Medical Sciences Campus will be considered in computing the grade point average.

- Candidates must have taken the final 28 credits for the degree, diploma, or certificate at the University of Puerto Rico, with the understanding that these credits are required for the last phase of their program of studies. In exceptional cases, this requirement may be waived by authorization of a committee composed of the Dean of the school or division, the Dean for Academic Affairs, and the Registrar.
- Studies towards the degree, diploma, or certificate must be completed within the maximum time limit established by the particular program. If the student exceeds these limits, the University may require him/her to retake those courses, which, according to his /her Dean, require reviewing. In these cases, the student must obtain a written authorization from the Dean that should include the list of courses, which are to be retaken. The Registrar must confirm this.
- Graduating students must have satisfied all financial obligations with the University of Puerto Rico.
- An application for a degree, diploma, or certificate must be filed at the Office of the Registrar during the registration period of the session in which academic requirements are to be completed and in no case later than the date established in the academic calendar. This also applies to summer session candidates. The application will only be valid if the student has paid diploma fees to the Bursar's Office.
- The Dean of the school must recommend students for the degree, diploma, or certificate.
- The student will receive the degree during the academic year in which the requirements are completed and graduation is requested.

ALL RULES AND REGULATIONS OF THE REGISTRAR'S OFFICE MAY BE EVALUATED BY THE ACADEMIC SENATE AND ARE SUBJECT TO CHANGE.

STUDENT SERVICES

STUDENT SERVICES

DEANSHIP FOR STUDENT AFFAIRS

The Deanship for Student Affairs has the responsibility to oversee the activities and support services offered to the student community. The Deanship comprises the following offices: Admissions, Student Center for Counseling and Psychological Services, Financial Aid, Student Health Services, Quality of Life, Services for Students with Disabilities, Promotions and Student Recruitment Program, and Extracurricular Activities. Specifically, the Deanship provides, coordinates, and supervises the following:

- Admission processes and procedures to the campus academic programs
- Student financial aid programs
- Student health services
- Student counseling and psychological services
- Promotion of the Medical Sciences Campus academic offerings among potential students, faculty, and counselors of public and private universities, high schools and colleges throughout the island, for recruitment and retention purposes
- Quality of life activities
- Student election processes, such as student councils, student representatives to the University and Administrative Boards and to the Academic Senate
- Official recognition and support services to the various student organizations
- Social, cultural, and sports activities
- Services for Students with Disabilities
- Compliance with the student rules, bylaws, institutional policies, and applicable legislation such as the Campus Security or Jeanne Clery Act, among others

Student Rights and Responsibilities

The Medical Sciences Campus and the University of Puerto Rico policies on student rights and responsibilities are included in the *General and Academic Policies* section of this catalog.

Central Office of Admissions

The main responsibility of the Central Office of Admissions is to offer information regarding admission requirements and procedures, process admissions applications, pre-screen completed applications, and refer them to the six campus schools' admissions committees for consideration. The admissions officers give individual attention to all applications in order to facilitate the process.

The Central Office of Admissions is located temporarily in the third floor of the Pharmacy School building. Office hours are Monday thru Friday from 7:30 am to 4:00 pm. For more information, please call: (787) 758-2525 extension 5215.

For details on admissions procedures, refer to the *Admissions, Registration, and Graduation Procedures* section in this catalog.

Financial Aid Office

The Financial Aid Office is in charge of providing financial aid to qualified students whose financial resources are not sufficient to cover their educational expenses.

There are three types of financial aid programs available to Medical Sciences Campus students: scholarships, work-study, and loans. Scholarships provide students financial aid and require no repayment. In the work-study program, students work at available jobs on or off-campus, receiving payment for the services rendered. Students who receive loans must repay all monies received, although favorable repayment conditions are available. Some of the financial aid programs are:

Financial Aid Programs for Undergraduate Students

- Federal Pell Grants
- Federal Supplemental Educational Opportunity Grants (SEOG)
- Legislative Scholarships
- Subsidized and Unsubsidized Federal Direct Loans
- College-Work Study Program
- Certification #4, 2019-2020, UPR Board of Governors

Financial Aid Programs for Graduate Students

- Legislative Scholarship/Loans for Medical, Dental Medicine, and Veterinary Students
- Private scholarships and grants
- Unsubsidized Federal Direct Loans
- STEM
- Certification #4, 2019-2020, UPR Board of Governors
- College-Work Study Program

The Financial Aid Office is located temporarily in the third floor of the Pharmacy School building. Office hours: Monday to Friday from 7:30 am to 4:00 pm. For more information, please call: (787) 758-2525 extensions 5205/5206.

Student Center for Counseling and Psychological Services (CECSI, for its Spanish acronym)

CECSI services are directed to support student's adaptation to campus, help them to manage personal and academic life span situations, define professional goals, and to promote self-knowledge and healthy lifestyles. The Center has professional counselors and a psychologist. This staff offer a variety of services, such as: Psychotherapy, individual and group counseling, career counseling, meetings and workshops on topics related to student interests. Some of them are Time Management, Decision Making, Diversity, Healthy Relationships, eating healthy, among others. The Psychological and counseling services is offered to all active students who request it. Services may be accessed directly at the office by the student, or by referral from professional counselors, professors, other staff, or fellow students. In addition, we have online information for the career decision making in health professions at <http://preguntame.rcm.upr.edu/>.

CECSI serves as liaison with the Student Affairs Offices of the six Medical Science Campus Schools, which also offer counseling services. The Center also coordinates orientation sessions for incoming students, and other activities to serve the student population or specific needs of a particular group. Information and guidance on graduate and undergraduate studies, workshops to develop job search strategies, interviewing skills, and resume preparation are also provided. All services are available upon request. The center is located temporarily in the second floor of the School for Health Professions, office 205. Office hours: Monday through Friday from 7:30 am to 4:30 pm. For more information, please call: (787) 758 2525 extensions 5209/5210 or go to <http://cecsi.rcm.upr.edu/>.

Student Health Services

Health care services are provided to all students in the Student Health Services Office of the Deanship for Student Affairs. The office provides a walk-in, outpatient service. A primary physician provides medical care, with the assistance of a registered nurse. Services include medical evaluation, first aid assistance, orders for laboratory tests and diagnostic studies, short-term rest, and observation. After regular office hours, or if urgent or emergency care is required, students can be transferred to the Emergency Room of the Puerto Rico Medical Center or to any of the urgent care units in the affiliated hospitals, based on individual care required.

Upon admission to the Medical Sciences Campus, students are required to present proof regarding health status and immunization record, which is kept as part of their medical record. Admitted students are required to have health insurance to cover hospitalization. The insurance may be through a private carrier, the state sponsored health plan ("Mi Salud"), or the UPR system health insurance, offered upon registration. The UPR insurance offers basic coverages, dental care, pharmacy, and major medical coverage may be obtained for an additional fee. These costs may vary annually. The UPR-sponsored Health Insurance has a **family plan coverage for those who need the inclusion of spouse and children.*

Health maintenance and preventive services are strongly emphasized through the immunization protocols, universal precautions, and promotion and surveillance of blood borne pathogens occupational exposure protocols. The initial dosis of antiviral medications are offered free of cost in cases of HIV occupational exposure.

The Student Health Services facilities are officially located on the third floor of the Guillermo Arbona Building Suite B-349. Service hours are Monday to Friday 7:30 a.m. - 4:00 p.m. For more information, please call at (787) 758-7910 ext. 234 or visit the office's web page at: <http://de.rcm.upr.edu/servicios-medicos-a-estudiantes/>.

**Optional*

Office of Services for Students with Disabilities, (OSEI, for its Spanish acronym)

The Office of Services for Students with Disabilities, OSEI, has as its main objective, to promote the development of uniform practices and procedures based on equity. This contributes to breaking interpretations and possible unequal practices that could affect students with disabilities on the enjoyment of equal opportunities to which they are entitled. Among other functions, OSEI is responsible for:

- ✓ Inform students with disabilities, including those in their admission process, about the availability of reasonable modifications and academic services in the RCM.
- ✓ Receive, evaluate and coordinate the reasonable modifications and academic services requested by students with disabilities.
- ✓ Attend the situations or complaints that the student with disabilities have when a contradiction arises about the reasonable modification and the academic services.
- ✓ Carry out actions to ensure compliance with the rules and regulations of the UPR, in addition to the state and federal laws that protect students with disabilities.

Reasonable modification is a change or adjustment to the academic setting that allows the student with a disability to participate in equal conditions of the same benefits, programs or activities as other students without disabilities. However, providing reasonable modifications does not mean creating different standards, but tempering the student's needs with the curricular requirements of the academic program.

Reasonable modifications are valid for one academic year (July 1 to June 30 of next year) so they will preferably be requested at the beginning of each academic year or when the student acquires knowledge of their condition. REASONABLE MODIFICATIONS WILL NOT BE OF A RETROACTIVE CHARACTER.

The Office of Services for Students with Disability is located on the third floor of the Guillermo Arbona, Office B-349, and Telephone - 758-2525 exts. 4006, Service hours 7:30am – 4:00pm Monday through Friday (services available outside working hours by agreement).

Promotions and Student Recruitment Program

The Promotions and Student Recruitment Program plans, coordinates, and develops activities designed to promote the academic offerings and student services on campus. Its main objectives are the recruitment of top qualified students, thus increasing the number of applications to the different programs and improving student retention. The program designs recruitment strategies that target university students as well as high school and younger students of both public and private institutions. Candidates receive orientation about academic offerings, admission requirements, student aid, and academic programs costs. At the same time, teachers and counselors receive valuable information for their orientation and counseling activities.

The office is located temporarily in the third floor of the Pharmacy School building. Office hours: Monday through Friday from 8:00 am to 4:00 pm. For more information, please call (787) 758-2525, ext. 2016).

Quality of Life Office

The Deanship for Student Affairs promotes quality of life and wellness among students. Most initiatives are coordinated by the Quality of Life Office, which encourages healthy lifestyles and promotes secure environments on campus. Educational and extracurricular activities coordinated during the academic year are special interest conferences, participatory training, quality of life fairs, aerobic and dancing sessions, among other educational and social activities and services. All seek to foster a balanced lifestyle. Services and activities programmed by the office are offered free of charge to the campus student community.

The Quality of Life Office is also responsible for promoting compliance with university policies related to the prevention of alcohol and drug abuse on campus, security, violence, sexual assault, and sexual harassment. It collaborates actively to ensure compliance with Federal Regulations such as the Drug Free School and Campuses Act, the Campus Security Act (Jeanne Clery Act), and the program against sexual assault of the U.S. Department of Education (Title IX). It also coordinates activities with the campus Security Office.

The office is located temporarily at the third floor of the Pharmacy School Building. Office hours: Monday through Friday from 7:30 - 3:30 pm. For more information, please call (787) 758-2525, ext. 5228).

Cultural Activities Office

The Cultural Activities Office sponsors events for the cultural development of students and the campus community. These include concerts, conferences, dances, lectures, films, variety shows, and plays offered throughout the academic year.

Other Services and Activities

Medical Sciences Campus Choir

The Medical Sciences Campus Choir brings together members of the academic community, professors, students, and staff. The choir participates in official institutional activities on and off campus and in the community.

Athletic Activities Office

Athletic activities are scheduled throughout the year. These include volleyball, basketball, and indoor soccer, as well as yearly marathons and other competitions. The facilities are located on the second floor of the Deanship for Student Affairs Building. Services are offered Monday through Friday, according to scheduled activities and tournaments. For more information, please call: (787) 758-2525 extensions 5208/5218.

Student Center

The Student Center is located on the upper level of the parking building adjacent to the Guillermo Arbona Building. There is a multipurpose area for relaxation, study, and for social and religious activities.

Fitness Center

The membership to the Fitness Center is available for a nominal fee. It provides a specialized workout setting to achieve individual fitness goals. The Fitness Center has licensed trainers available at all times. Trainers evaluate the customer's fitness condition and design personal exercise routines. The facilities are on the second floor of the Deanship for Student Affairs Building. It operates Monday through Thursday, 5:30 am to 9:00 pm and Friday 5:30 am to 7:00 pm.

Government and Student Organizations

Each year, Medical Sciences Campus students meet for the purpose of electing class boards, school student

councils, and the General Student Council, as well as for appointing representatives to institutional bodies and committees.

- *Class Boards*
Students elect class boards to serve as liaisons between the students and the administration. They also organize social, athletic, and other activities.
- *School Student Councils*
School student councils are elected on a yearly basis. Their members are the official student representatives and spokespersons.
- *General Student Council*
The General Student Council is composed of its President, two members from each school student council, the student representatives to the Academic Senate, and the student representative to the Administrative Board and University Board.
- *Disciplinary Board*
Students select two representatives to the Disciplinary Board through the General Student Council, thus insuring student representation in disciplinary actions.
- *Faculty Meetings*
Students in each school have the right to elect a number of representatives to faculty meetings. This number may not exceed 10 percent of the total number of faculty members at the school.
- *Faculty Standing Committees*
There are some standing committees in which students have representation, including curriculum, admissions, and books and instruments. Representation may vary at each school depending on existing committees.
- *Academic Senate*
Students from each school elect a student representative to the Academic Senate. The President of the General Student Council is also a student representative in this body.
- *Administrative Board*
Students elect a representative to the Administrative Board through the General Student Council.
- *University Board*
Medical Sciences Campus students elect one student representative to the University Board.

Student Membership in Professional and Fraternal Organizations

The Student Regulations of the Medical Sciences Campus, provide in Article 33, that student organizations are indispensable organisms for the development of an active and vigorous student life, both with the physical, artistic and intellectual aspect, and the ethical aspect of a fruitful life in community conducive to love and respect among human beings. The Medical Sciences Campus has about 65 recognized student organizations. Each of the six schools has its own organizations, according to the academic programs and interests of its students. For the full list of organizations, please access the following link: <https://de.rcm.upr.edu/organizaciones-estudiantiles>

Deanship for Student Affairs Faculty

AMORÓS-RIVERA, BLANCA - *Counselor III*; EdD, 2012, University of Puerto Rico - Rio Piedras Campus

CAÑUELAS-PEREIRA, CARLOS - *Counselor III*; EdD, 2010, University of Puerto Rico - Rio Piedras Campus

HERNÁNDEZ-MALDONADO, MARÍA - *Psychologist II*; PhD, 2000, University of Puerto Rico - Rio Piedras Campus

PAGÁN-DELGADO, MARIBEL - *Counselor II*; MA, 1998, Rollins College-Florida Campus

STUDENT SERVICES AT SCHOOL LEVEL

The Office of Student Affairs is staffed by the Assistant Dean for Student Affairs, a licensed professional counselor, a recruitment officer, and a secretary. This office works closely with students, offering comprehensive services within flexible hours. The licensed professional counselor supports students' adaptation to campus life and helps them define personal and professional goals. Counseling services are available to both day and evening students. Referrals to campus services are provided as needed.

The mission of the office is to contribute to the integral development of our student body via the planning, the lending and the systemic evaluation of student services of excellence. The services offered are integrated with the educational component of the school to provide an academic environment and of general wellness that facilitates the teaching-learning process. In this way, facilitating that students achieve a better adjustment to university life, participate actively in university system decision-making processes, achieve optimal personal development, preparing each and every one for a more effective participation in life and society.

CAMPUS GOVERNMENT AND STUDENT ORGANIZATIONS

Each year, Medical Sciences Campus students meet for the purpose of electing class boards, school student councils, and the General Student Council, as well as for appointing representatives to institutional bodies and committees.

• Class Boards

Students elect class boards to serve as liaisons between the students and the administration. They also organize social, athletic, and other activities.

• School Student Councils

School student councils are elected on a yearly basis. Their members are the official student representatives and spokespersons.

• General Student Council

The General Student Council is composed of its President, two members from each school student council, the student representatives to the Academic Senate, and the student representative to the Administrative Board and University Board.

• Disciplinary Board

Students select two representatives to the Disciplinary Board through the General Student Council, thus insuring student representation in disciplinary actions.

• Faculty Standing Committees

There are some standing committees in which students have representation, including curriculum, admissions, and books and instruments. Representation may vary at each school depending on existing committees.

• Academic Senate

Students from each school elect a student representative to the Academic Senate. The President of the General Student Council is also a student representative in this body.

• Administrative Board

Students elect a representative to the Administrative Board through the General Student Council.

• **University Board**

Medical Sciences Campus students elect one student representative to the University Board.

Student Associations at the Graduate School of Public Health

Association of Public Health Students (APHS)

The purpose of the Association of Public Health Students is to promote the participation of the Master of Public Health students in activities related to health community and advocacy within the Medical Sciences Campus and outside the campus, also encourage the knowledge of Public Health in our community.

Association of Health Education Students (AHES)

The purpose of the Association of Health Education Students is to encourage student participation in activities related to health promotion and health education, within and outside the university community, to enhance their knowledge and life skills in different environments.

Objectives include: enhancing the image of the health education profession, encouraging recruitment of the best candidates for the study of health education, offering ongoing professional development training to health educators, and strengthening the leadership of members of the association through professional development activities.

Epidemiology and Biostatistics Students Association (EBSA)

The Epidemiology and Biostatistics Students Association (EBSA) promotes the disciplines of epidemiology and biostatistics on and off campus, their relationship with other disciplines, the exchange of knowledge between students and faculty, studies in epidemiology and biostatistics performed at the Graduate School of Public Health, and encourages the effective participation of Graduate School of Public Health students in EBSA activities. In addition, the association fosters cooperation with other student organizations on campus.

Gerontology Students Association (GSA)

The Gerontology Student Association (GSA) addresses and encourages the development of knowledge regarding gerontology in and outside the academic environment, and offers the elderly community of Puerto Rico humanitarian services.

Association of Students of Demography and Population Studies (ASDPS)

The purpose of ASDPS is to promote the knowledge of the science of demography and population studies, which comprises the study of the state and dynamics of the population through births, deaths, and migration components.

Environmental Health Students Association (EHSA)

The Environmental Health Students Association of the Graduate School of Public Health recognizes students' concerns regarding environmental health sciences. In response to these concerns, the association promotes communication on improvement and environmental conservation through active participation in research and dissemination activities that contribute to the members' intellectual improvement. The goal of the association is not only to guide the education of the student community regarding environmental issues, but also to create awareness on the importance of finding viable alternatives to prevent deterioration of the environment and its resources.

American Industrial Hygiene Association of Puerto Rico, Student Chapter (AIHAPR)

The purpose of the American Industrial Hygiene Association is to develop various types of academic and community activities to acquaint the students with their future profession and work environment. Students are kept abreast of current developments in the area of Industrial Hygiene.

Other Organizations

Catholic Student Association

The Catholic Student Association promotes the spiritual and intellectual formation of students and other members of the academic community. It offers counseling services, spiritual direction, and orientation. It also offers formative activities in health related areas that not only work with the disease, but also with the human aspects. The association sponsors a weekly mass on campus.

Christian Interdenominational Fraternity

The Christian Interdenominational Fraternity offers spiritual and emotional support to those in need. It promotes spiritual growth and a harmonious environment among students.

Health through Education (HTE)

The purpose of HTE is to educate the community regarding health conditions and issues.

GENERAL AND ACADEMIC INSTITUTIONAL POLICIES

GENERAL AND ACADEMIC INSTITUTIONAL POLICIES

General Bylaws of the University of Puerto Rico

The *General Bylaws of the University of Puerto Rico* was amended on November 30, 2016 (Board of Trustees Certification No. 160 (2014-2015)). It establishes the rules and regulations applicable to the University System governance and organization, which are necessary for the attainment of the goals of the University of Puerto Rico. It includes general provisions about the composition and governance of the system, including those that apply to academic and non-teaching personnel. Copy of the General Bylaws of the UPR is available at <https://juntagobierno.upr.edu/reglamentos-mas-utilizados/>.

University of Puerto Rico General Student Bylaws

The *University of Puerto Rico General Student Bylaws* was amended on March 16, 2017 (Board of Trustees Certification No. 70 (2016-2017)). It establishes the rights and duties of students as members of the academic community and fosters their responsible participation in academic life <https://juntagobierno.upr.edu/reglamentos-mas-utilizados/>.

Medical Sciences Campus General Student Bylaws

The *Medical Sciences Campus General Student Bylaws* establishes the rights and responsibilities of MSC students and addresses particular issues as they apply to them <http://de.rcm.upr.edu/politicas/>. The *University of Puerto Rico General Student Bylaws* supersedes the bylaws established by the units.

Language of instruction

Spanish is the language of instruction in most courses; students are required to have a working knowledge of English as well.

Equal opportunity

The Medical Sciences Campus abides by the University of Puerto Rico non-discrimination policy as it does not discriminate against any person for reasons of sex, race, color, place of birth, age, physical or mental handicap, origin or social condition, political or religious beliefs, sexual preference, gender, ethnicity, veteran status, or for being a victim or perceived as a victim of domestic violence, sexual assault, or stalking. The University of Puerto Rico non-discrimination policy is established in the Board of Trustees Certification No. 58 (2004-2005). Applicants for academic admission or employment and students or employees, who feel they have been discriminated against for any of the reasons previously stated, may file a written complaint with the Chancellor.

In order to address reasonable accommodation requests from students, the Medical Sciences Campus has established the procedures to be followed by students and institutional officials. The document *Proceso de Tramitación de Solicitud de Acomodo Razonable para Estudiantes* is available in the Deanship for Student Affairs Office and in the Student Affairs Offices of each school. Other information on rights and services available to students with disabilities is posted in the MSC Student Portal webpage <http://de.rcm.upr.edu/>.

Privacy of educational records

The University of Puerto Rico complies with the provisions of the Buckley Amendment (Family Educational Rights and Privacy Act of 1974, as amended). This law protects the privacy of students' educational records and establishes the student's right to examine his/her files. It also provides guidelines for correcting the accuracy of the information contained in those files through informal and formal hearings. Students wishing to do so may file a request with the Family Policy Compliance Office, US Department of Education.

Office of the Student Ombudsperson

The Office of the Student Ombudsperson offers intercession, mediation, negotiation, and conciliation services and makes referrals to arbitration services, if needed. The Board of Trustees Certification No.32 (2005-2006) created the ombudsperson office. This office is committed to helping students solve situations that may affect their life on campus.

Campus Security

The Surveillance and Security Office of the Medical Sciences Campus is located on the first floor of the indoor parking of the main building. Its mission is to provide safety and security to the campus community and facilities 24/7. Emergency call boxes are located throughout the campus to provide instant communication with the Security Office. A campus-wide video camera system is also in place. Upon request, security officers provide escort service for students and staff members on campus after 6:00 pm. In an emergency, individuals should contact the office at 758-2525, extensions 1000 or 1001.

The Medical Sciences Campus complies with the 1990 Clery Act, as amended. For information concerning alert bulletins, crime statistics, and other issues, please refer to the campus webpage under *Seguridad en el Campus* <https://rcm2.rcm.upr.edu/seguridad-en-el-campus/>.

Smoking, illegal drugs, and alcohol abuse

Smoking is forbidden in all enclosed campus areas, including but not limited to classrooms, laboratories, lecture rooms, elevators, auditoriums, offices, museums, and all other places where groups of persons regularly meet. Smoking is permitted in open spaces outside the buildings.

The Medical Sciences Campus is committed to the UPR System vigorous policy to combat the manufacture, distribution, supply, possession, and use within its grounds of controlled substances and illegal drugs, as defined by the applicable laws. The policy and the procedures for enforcement are detailed in University of Puerto Rico Board of Trustees Certification No. 33 (2005-2006).

Protection of human subjects in research

The Medical Sciences Campus of the University of Puerto Rico complies with all federal regulations regarding human subjects in research. The Human Research Subjects Protection Office serves as the administrative office for the UPR MSC Institutional Review Boards (<http://irbrcm.rcm.upr.edu/>). The Institutional Review Boards, or IRBs, are the committees that must review all research involving human subjects at the UPR MSC and affiliated institutions, to assure compliance with institutional ethical standards and federal regulations, and that the rights of human subjects are protected in all investigations.

As per Assurance (FWA 00005561), the institution is committed to guaranteeing that all research involving human subjects or analysis of data gathered from human subjects, regardless of funding status, be reviewed by the IRB prior to the implementation of any research activity.

Use of animals in research

The Medical Sciences Campus complies with all applicable federal statutes and regulations concerning the use of animals in research. The Institution Animal Care and Use Committee must review all research involving the use of animals on campus and affiliated institutions to assure compliance with institutional ethical standards and federal regulations and guarantee that animals are humanely cared and protected in all ongoing investigations.

Policy on patents and inventions

UPR Board of Trustees Certification No.132 (2002-2003) establishes the policy and procedures for disclosure and assignment of patents on inventions created as part of work done at the UPR or with the use of university resources. Its requirements extend to all employees including independent contractors, full or part-time, as well as students, faculty, professionals, researchers, visiting professors, and visiting scientists.

Authorship

Faculty and students of the University of Puerto Rico will retain authorship of works created in the normal course of academic activities, unless otherwise agreed. The University of Puerto Rico will be the owner of the work if it is the outcome of academic or administrative endeavors officially commissioned and assigned by the institution, unless otherwise agreed. The policy on authorship also establishes criteria for partial copyright ownership, authorship on works produced while on sabbatical or leaves. It also establishes the responsibility of students and faculty to register and protect their author rights, procedures to resolve disputes over copyright ownership, and other issues. A student is presumed to have authorship of his/her thesis and other similar academic works unless otherwise agreed. The institutional policy on authorship is stated on Council on Higher Education, Certification No. 140 (1992-1993).

Scientific misconduct

Scientific misconduct constitutes unacceptable behavior for faculty, staff, and students, and the University of Puerto Rico prohibits it. The system-wide *Policy and Procedures on Responding to Allegations of Possible Research Misconduct* is stated in the Board of Trustees, Certification Number 45 (2006-2007). Any faculty member, student, or staff who believes in good faith that an act of research misconduct is taking place or has taken place at UPR has an obligation to report his/her concerns to UPR officials or directly to the Research Integrity Officer on campus. Institutional members will also cooperate with the Research Integrity Officer and other institutional officials in the review of allegations of research misconduct and in conducting inquiries and investigations. Institutional members, including respondents, have an obligation to provide evidence relevant to research misconduct proceedings to the Research Integrity Officer or other appropriate institutional officials. The policy on research misconduct defines research misconduct, establishes procedures for conducting and reporting the inquiry and investigation, institutional administrative actions that may be adopted if a finding of research misconduct is substantiated, reporting to the pertinent agencies (when required), appeal process, and protective measures to guarantee the rights of complainants, witnesses, and respondents.

Policy on the use of information technology

The *System-Wide Policy for the Acceptable Use of Information Technology Resources* (UPR Board of Trustees Certification No. 35 (2007-2008) at: <http://osi.rcm.upr.edu/recursos/> , grants UPR community members access to information technology resources in order to facilitate their university-related academic, research, service, and work activities. Users are required to use information technology resources effectively, efficiently, and responsibly; in a manner that does not affect the quality, timeliness, or delivery of a person's work to the University nor hamper the rest of the community's ability to conduct their work for the University. As censorship is incompatible with the goals of an institution of higher education, information accessible from available electronic sources may not be restricted through censorship, as long as this information is not constrained by law or regulations and it is used for lawful purposes. By using the University's information technology resources, users agree to abide by the institutional policy as established by UPR Board of Trustees Certification Number 35 (2007-2008), as well as to abide by all relevant university policies, norms, and procedures, and current federal and Commonwealth laws. Users should review, understand, and comply with all policies, procedures, and laws related to access, acceptable use, and security of university information technology resources. They should request from system administrators or data custodians clarification on access and acceptable use issues not specifically addressed in university policies, regulations, standards, and procedures. They should also report possible policy violations to the appropriate entities. The institutional policy also states regulations on privacy and security, consequences of violations, and rights and responsibilities of the University, among others.

Policy on sexual harassment and sex discrimination

Sexual harassment includes but is not limited to unwelcome sexual advances, request for sexual favors and other conduct (physical or verbal) of sexual nature when submission to or rejection of this conduct implicitly or explicitly affects the person's employment or education, unreasonably interferes with a person's work or educational performance, or creates an intimidating, hostile, or offensive work environment. The University of Puerto Rico does not tolerate any form of sexual harassment or sex discrimination. The University takes affirmative measures to prevent sexual harassment and sex discrimination and responds to reports of such conduct. For informal grievance procedures, students should be referred to the Student Ombudsperson. Formal procedures require the President or the Chancellor to submit the allegation to an Examining Official. Further information on this institutional policy, as well as on formal and informal procedures to pursue an allegation of sexual harassment or sex discrimination are stated by [UPR Board of Trustees Certification Number 130 \(2014-2015\)](#).

Institutional policy on uncivil conduct

Uncivil conduct is not tolerated in the Medical Sciences Campus. All members of the academic community are expected to follow civil behavior and democratic principles. Uncivil conduct creates a tense and intimidating climate where aggression and anger prevails, thus reflective learning is hampered. It also encompasses rivalry and lack of sensibility, where attitudes of power and subjugation are disguised as professionalism and rationality. The Medical Sciences Campus Academic Senate Certification No.24 (1999 2000) states the policy on uncivil behavior: <http://epsportalstu.rcm.upr.edu/Docs/Documents/Forms/AllItems.aspx?RootFolder=%2FDocs%2FDocuments%2FPolitic%20Institucionales> .

Release time to attend meetings of the Academic Senate and its committees

Student Senators will be excused from academic activities in case of conflict with the schedule of the Academic Senate and the committees of which the student is a member. The student will be held responsible for making up the course work by agreement with the professor in charge of the activity (Medical Sciences Campus Academic Senate Certification No. 068 (1996-1997): <http://senadoacademico.rcm.upr.edu/documentos/>).

Excused absence and deferment from examinations

Deferment from examinations is available to students who were absent for reasons of illness or emergency and who have received written authorization from their instructors. An application form and corresponding evidence should be submitted one week prior to the examination. The student is not excused until he and the professor sign this form. The student, a classmate, or a family member, must verbally report to the instructor requests for absence from examinations for unforeseen events or illnesses. In this situation, the application form and corresponding evidence should be submitted as soon as possible.

Applications for deferred examinations are available in the course manual, at the professor's office, course coordinator's office, Office of the Associate Dean for Academic Affairs, and Office of Student Affairs. The student should file the original signed application to the Office of Student Affairs. Medical Sciences Campus Academic Senate Certification No. 029 (2013-2014) November 7, 2018, as amended, establishes the policy on excused absences from academic activities and makeup work. This certification includes specific information on the type of evidence required, time limit for the professor to answer the petition, and due process, among others <http://de.rcm.upr.edu/politicas/>.

Excused absence and completion of academic activities

In order to facilitate participation of students in extracurricular activities such as congresses, forums, workshops, research projects, interdisciplinary initiatives, community activities and sports events at local, national or international levels, the Medical Sciences Campus Senate has established general norms to excuse students from academic activities previously established in the curriculum and to guarantee that the necessary make up of content and/or experiences is available to the student. Students should fill a specific form to excuse themselves from the academic activity as soon as possible and submit it to the coordinator or professor of the course, including the corresponding evidence. The student will also coordinate with the professor the specific activities that will substitute those for which he/she is being excused. The student to the Dean or to the Assistant Dean for Student Affairs for final approval should also submit the form, approved by the professor or coordinator of the course, and the corresponding evidence. Certification No. 040, 2004- 2005 of the MSC Academic Senate includes the document that establishes the due process to be followed by the student and faculty (<http://de.rcm.upr.edu/politicas/>).

Academic Integrity

The University of Puerto Rico promotes the highest standards of academic and scientific integrity. Article 6.2 of the University of Puerto Rico General Student Regulations (Board of Trustees Certification 154 2010-2011) in section 6.2.1 defines **Academic Dishonesty** as: "Any form of dishonesty or lack of academic integrity, including, but not limited to, fraudulent actions, obtaining grades or degrees using false or fraudulent simulations, copying in whole or in part the academic work of another person, plagiarizing in whole or in part the work of another person, to copy in whole or in part the answers to the questions of an examination from another person, making or getting another person to take any oral or written test or examination on their behalf, as well as help or facilitate that another person incurs in said behavior". Section 6.2.2. Defines

Fraudulent Conduct as: "Conduct with intent to defraud, including, but not limited to, malicious alteration or falsification of grades, records, identification cards or other official documents of the University or any other institution. Any act or action of passing or circulating as genuine and true any of the documents specified above will also be subject to disciplinary sanction, knowing that they are false or altered". Any of these actions will be subject to disciplinary sanctions in accordance with the procedure established in the current University of Puerto Rico General Student Regulations. **DISCLAIMER:** The above statement is an English Translation of certain parts Article 6.2 of the General Student Regulations of the University of Puerto Rico (Reglamento General de Estudiantes de la Universidad de Puerto Rico – Cert. JS 154 2010-2011). It was originally prepared by the Deanship of Academic Affairs of the Medical Sciences Campus, and revised and approved by the Academic Senate on March 2, 2017. In case of a discrepancy or disagreement with the original text in Spanish, the Spanish version will always prevail and be given priority. (Approved by the Academic Senate, Certification 049, 2016-2017.)

Reasonable Modification Statement

Any student who presents a condition or health situation that qualifies him / her before the law to receive reasonable modification, has the right to make his request in writing in the Office of Services for Students with Disabilities (OSEI), following the procedure established in the document Request for Services and Reasonable Modification. A copy of this document is obtained in the OSEI Office, located on the third floor of the Dr. Guillermo Arbona Irizarry building, office B-349 (next to Medical Services for Students) and on the RCM's website in the Deanship of Students portal. The application does not exempt the student from fulfilling the academic requirements of the study programs. (CIPE - Amended and Updated on 02-07-2018.)

Title IX: No Discrimination

The Medical Sciences Campus (MSC) of the University of Puerto Rico (UPR) does not discriminate in its academic offerings because of sex, race, color, age, national origin, political or religious ideas, gender, gender identity or expression, pregnancy, civil status, sexual orientation, ethnic origin or because of being a victim or be perceived as a victim of domestic violence, sexual assault, sexual harassment or stalking. This policy complies with federal statutes under Title IX, as amended, and related the institutional policies of the UPR. It is the duty of every member of the university community to notify any discrimination or complaint event before the Office of the Title IX Coordinator, telephone 787-758-2525, ext. 1368 or 1360, or accessing the web page www.rcm.upr.edu/tituloix. (Approved by the Academic Senate, Certification 035, 2018-2019, Amended.)

ACADEMIC PROGRAMS

PROGRAMS OF STUDY

The School currently offers nine professional masters' degree programs, four academic masters' degree programs, four graduate certificates and three doctoral programs. The Master of Public Health Program has five specialty options: Epidemiology, Biostatistics, Environmental Health, Gerontology, Public Health Education, and a General Option. Some of these programs are offered in day and evening schedules. The academic masters' degrees are Demography, Evaluation Research of Health Systems, Nutrition, Industrial Hygiene, and Epidemiology. The school offers a Master of Public Health equivalent degree program in Health Services Administration. A Doctor of Public Health Program began in 1999-2000 offering a specialty in Environmental Health and in 2010-2011 began the Doctor of Public Health with Specialty in Health Systems Analysis and Management. A third doctoral program of Public Health with specialty in Social Determinants of Health began in 2011-2012. **Students are encouraged to contact individual programs for updates on requirements, curricula, and new offerings.**

ACCREDITATION

The Graduate School of Public Health is the only school in Puerto Rico accredited by the Council on Education for Public Health, 1010 Wayne Avenue, Suite 220, Silver Spring, MD 20910.

Phone: (202) 789-1050

Fax: (202) 789-1895

Web: <http://www.ceph.org/>

GENERAL ADMISSION REQUIREMENTS OF THE SCHOOL

MASTER'S DEGREES AND GRADUATE CERTIFICATE PROGRAMS

Applicants for admission to the Graduate School of Public Health master degrees and graduate certificates must meet the general admission requirements of the School as listed below and specific program requirements. The general admission requirements for the School are:

- Hold a bachelor's degree or equivalent by a college or university of recognized standing with a GPA 2.85 or more.
- The Faculty of Biosocial Sciences and Graduate School of Public Health established a minimum admission index of 65% for certificate programs and 70% for the master's degrees.
- Fluency in Spanish and ability to read and understand English (Classes are conducted in Spanish).
- Personal interview.
- Submit two letters of recommendation that address the candidate's academic and professional development and performance (candidate's work and professional and/or research experience and/or service experience).
- Resume or CV that provide evidence for the evaluation of work experience in conjunction with the letters of recommendation.
- Submit an essay in the format established by the selected academic program.
- Meet the specific requirements of the student's program of choice. (See sections on individual programs).

DOCTORAL DEGREE PROGRAMS

Applicants for admission to the Graduate School of Public Health doctoral degrees must meet the general admission requirements of the School as listed below and specific program requirements. The general admission requirements for the School are:

- A Master's degree in a discipline offered by a school of public health recognized by the international academic community. Applicants who hold a Master's degree in other disciplines must have completed a graduate course in Biostatistics or Statistics, Inferential Statistics, Epidemiology, and an Introductory Course in Public Health with A or B. It is highly recommended that they have knowledge and skills in information literacy/systems and their applications.
- It is highly recommended that applicants be fluent in Spanish and have adequate/proper comprehension of the English language.
- Grade point average of 3.00 (on a scale of 4.00) at the master's level or its equivalent. Applicants should have a composite admission score of 75% or more, as calculated by the GSPH admission formula.
- Teaching, research, or service experience in the field of public health.
- All DrPH specialties require students to approve a statistical inference course at the graduate level with A or B prior to admission to the doctoral program.
- Once students are enrolled in the doctoral program, no waivers will be granted regarding the requirement of core courses or specialty courses that pertain to the DrPH curricular sequence. This norm will be applicable to all DrPH specialties.
- Interview with the Doctoral Program Admissions Committee.

ACADEMIC PROGRAMS

MASTER OF PUBLIC HEALTH GENERAL OPTION (DAY AND EVENING PROGRAMS)

The Master of Public Health Program focuses on the study of concepts and practices related to the socio-cultural aspects of health. Its curriculum covers topics on community health problems, underscoring the identification and understanding of factors and circumstances that determine health and disease.

The study of public health requires skills in the diagnosis of community health problems and the planning, implementation, administration, and evaluation of community health programs. The field of public health seeks the integration of several areas of knowledge in order to design and implement health programs that will meet the needs of the community.

In order to promote changes in health status of population, the public health graduate will be qualified to participate in research community health issues. The graduate will also be competent to design, apply and evaluate: public health policies, health promotion and prevention interventions, and programs development and management in organizational and community initiatives. Graduates are usually employed by the government, as well as the private sector.

Specific Admission Requirements

Besides the general admission requirements of the School, the applicant should have approved a statistics or biostatistics course of higher education level.

Graduation Requirements

Upon meeting the following requirements, the student will receive a Master of Public Health degree:

- Completion of the 55-credit hour + 12 hours program (52 in required courses, and 3 in elective courses).
- Overall grade point average of at least 2.50 and 3.00 in the specialty and remain in good academic standing consistent with the Graduate School of Public Health policies.

MASTER OF PUBLIC HEALTH GENERAL OPTION CURRICULUM**Total Trimester Credit-Hours: 55 + 12 hours**

SALP 6006	Introduction to Public Health	3
ADSS 6516	Fundamentals of Health Policy and Management in Public Health	4
BIOE 6525	Statistical Analysis	5
CISO 6546	Social Determinants and Equity in Public Health	3
EPID 6523	Epidemiological Methodology	4
ADSS 6594	Public Health Program Planning and Evaluation	4
SAAM 6528	Principles of Environmental Public Health	3
SALP 6250	Applied Public Health Research Methods	3
SALP 6251	Leadership in Public Health	2
INTD 6996	Inter-professional Collaborative Practice in Public Health	0 (12 hours)
ADSS 6555	Legislative Process for Public Health Professionals	3
ADSS 6621	Financial Resources Management for Public Health Organizations	3
ADSS 6584	Health Politics and Policy	3
SALP 6005	Foundations of Health Promotion	3
ADSS 6620	Advanced Public Health Policy Analysis	3
SALP 6997	Integrative Experience in General Public Health	5
SALP 6995	Applied Practice Experience: General Public Health	1
Electives		3

MASTER OF PUBLIC HEALTH WITH SPECIALTY IN BIOSTATISTICS

The Master of Public Health with Specialty in Biostatistics develops in students the knowledge, skills, and attitudes needed to apply statistical methodologies in the planning and implementation of studies and research in the area of community health.

Specifically, the program graduate will deal proficiently with statistics in the health field, apply appropriate statistical methodology in the classification, presentation, analysis, and interpretation of health data, as well as collaborate in the design and implementation of evaluation models for health programs. Graduates also advise health agencies and organizations on the application of statistical theories and methodologies.

Specific Admission Requirements

Approve with a minimum grade of B three (3) credits in:
Introductory course in statistics, biostatistics, or their equivalent at a college level.
Approve Calculus I, MECU, or equivalent.

Graduation Requirements

Students will receive a Master of Public Health degree with Specialty in Biostatistics upon meeting the following requirements:

- Completion of the 56-credit hour + 12 hours program (56 in required courses).
- Overall grade point average of at least 2.50 and 3.00 in the specialty and remain in good academic standing consistent with the Graduate School of Public Health policies.

MASTER OF PUBLIC HEALTH WITH SPECIALTY IN BIOSTATISTICS CURRICULUM**TOTAL TRIMESTER CREDIT HOURS: 56 + 12 hours**

SALP 6006	Introduction to Public Health	3
ADSS 6516	Fundamentals of Health Policy and Management in Public Health	4
BIOE 6525	Statistical Analysis	5
CISO 6546	Social Determinants and Equity in Public Health	3
EPID 6523	Epidemiological Methodology	4
ADSS 6594	Public Health Program Planning and Evaluation	4
SAAM 6528	Principles of Environmental Public Health	3
SALP 6250	Applied Public Health Research Methods	3
SALP 6251	Leadership in Public Health	2
INTD 6996	Inter-professional Collaborative Practice in Public Health	0 (12 hours)
BIOE 6535	Statistical Inference	4
BIOE 6537	Non-Parametric Statistical Inference	3
BIOE 6545	Introduction to Sampling Theory	3
BIOE 6555	Regression and Correlation Analysis	3
BIOE 6605	Statistical Computing Applied to Public Health	4
EPID 6524	Community Health Needs Assessment	2
SALP 6999	Capstone Project in Public Health: Epidemiology and Biostatistics	5
EPID 6995	Applied Practice Experience: Epidemiology and Biostatistics	1

MASTER OF PUBLIC HEALTH WITH SPECIALTY IN EPIDEMIOLOGY

The Master of Public Health with Specialty in Epidemiology prepares students to analyze data on diseases, investigate epidemics, and collaborate with other professionals in the prevention and control of diseases. As professionals in one of the main areas of public health, epidemiologists study the distribution of disease in the population, as well as factors associated with the increase or decrease in the incidence of such diseases.

Graduates often work for government agencies and the private sector in research programs focusing on the distribution of disease in the population and on related factors. They also participate in educational activities geared to prevention.

Specific Admission Requirements

Besides the general admission requirements of the School, the applicant should have approved a statistics or biostatistics course of higher education level.

Graduation Requirements

Students will receive a Master of Public Health degree with Specialty in Epidemiology upon meeting the following requirements:

- Completion of the 56-credit hour + 12 hours program (56 in required courses).
- Overall grade point average of at least 2.50 and 3.00 in the specialty and remain in good academic standing consistent with the Graduate School of Public Health policies.

MASTER OF PUBLIC HEALTH WITH SPECIALTY IN EPIDEMIOLOGY CURRICULUM**TOTAL TRIMESTER CREDIT HOURS: 56 + 12 hours**

SALP 6006	Introduction to Public Health	3
ADSS 6516	Fundamentals of Health Policy and Management in Public Health	4
BIOE 6525	Statistical Analysis	5
CISO 6546	Social Determinants and Equity in Public Health	3
EPID 6523	Epidemiological Methodology	4
ADSS 6594	Public Health Program Planning and Evaluation	4
SAAM 6528	Principles of Environmental Public Health	3
SALP 6250	Applied Public Health Research Methods	3
SALP 6251	Leadership in Public Health	2
INTD 6996	Interprofessional Collaborative Practice in Public Health	0 (12 hours)
EPID 6528	Epidemiology of Mental Disorders	3
EPID 6529	Epidemiology of Chronic Diseases	3
BIOE 6526	Applied Statistics Methods in Epidemiology	2
EPID 6535	Epidemiology of Infectious Diseases	4
EPID 6536	Epidemiology and Pathogenesis of Cancer	3
EPID 6527	Public Health Surveillance	2
EPID 6524	Community Health Needs Assessment	2
SALP 6999	Capstone Project in Public Health: Epidemiology and Biostatistics	5
EPID 6995	Applied Practice Experience: Epidemiology and Biostatistics	1

**MASTER OF PUBLIC HEALTH WITH SPECIALTY IN ENVIRONMENTAL HEALTH
(DAY AND EVENING PROGRAMS)**

The Master of Public Health with Specialty in Environmental Health Program prepares specialists in environmental health with skills to assume responsibilities in the planning and administration of environmental health programs, conduct research, and work in numerous community programs focusing on environmental concerns.

The program graduate is familiar with social, economic, and scientific factors bearing on appropriate solutions to contemporary problems in environmental health, particularly those affecting Puerto Rico. This

entails viewing natural resources, industrial growth, energy use, and demographic factors as they affect the environment.

Students are offered the opportunity to explore several areas of environmental health including water and air pollution, food hygiene, environmental radiation, solid waste management, environmental microbiology, environmental law, and geographical information systems, among others.

Specific Admission Requirements

Applicants must have approved the following courses at the undergraduate level:

- | | |
|--|-----------|
| a) A minimum of three credits course in each of the following areas: | |
| Human Biology, General Biology, Physics, or Chemistry | 9 credits |
| b) College level Mathematics or Statistics | 3 credits |

Graduation Requirements

The student will receive a Master of Public Health with Specialty in Environmental Health degree upon meeting the following requirements:

- Completion of the 58 credit hours + 12 hours program (52 in required courses, and 6 in elective courses).
- Overall grade point average of at least 2.50 and 3.00 average in the field of specialty and remain in good academic standing consistent with the Graduate School of Public Health policies.

MASTER OF PUBLIC HEALTH WITH SPECIALTY IN ENVIRONMENTAL HEALTH CURRICULUM (DAY AND EVENING PROGRAM)

Total Trimester Credit-Hours: 58 + 12 hours

SALP 6006	Introduction to Public Health	3
ADSS 6516	Fundamentals of Health Policy and Management in Public Health	4
BIOE 6525	Statistical Analysis	5
CISO 6546	Social Determinants and Equity in Public Health	3
EPID 6523	Epidemiological Methodology	4
ADSS 6594	Public Health Program Planning and Evaluation	4
SAAM 6528	Principles of Environmental Public Health	3
SALP 6250	Applied Public Health Research Methods	3
SALP 6251	Leadership in Public Health	2
INTD 6996	Inter-professional Collaborative Practice in Public Health	(12 hours)
SAAM 6531	Aquatic Systems and Public Health	3
SAAM 6534	Air Pollution and Public Health	3
SAAM 6535	Environmental Toxicology	3
SAAM 6541	Environmental Legislation	3
SAAM 6545	Food Safety	3
SAAM 6999	Capstone Project in Public Health: Environmental Health	3
SAAM 6995	Applied Practice Experience: Environmental Health	3
Electives		6

MASTER OF PUBLIC HEALTH WITH SPECIALTY IN GERONTOLOGY (EVENING PROGRAM)

The main goal of the Master of Public Health with Specialty in Gerontology Program is to train students in the design and management of programs that meet the needs of the elderly. The program is geared to applied areas, both academically and in the community setting, stressing an interdisciplinary approach. Program graduates are expected to promote changes that will benefit the elderly by advocating for better and more adequate public policies and providing services for this segment of the population.

The curriculum has been designed to analyze the process of aging with a holistic and interdisciplinary approach. Psychological, biological, sociological, anthropological, clinical, nutritional, and administrative aspects are examined as they relate to the elderly and the aging process, and from a public health perspective. Knowledge and skills acquired are applied in a community practice activity.

Admission Requirements

Candidates for admission to the Master of Public Health with Specialty in Gerontology must comply with the general admission requirements of the School. In addition, applicants must have three credits in social sciences courses, three credits in biology, three credits in psychology, three credits in college level algebra, and 3 credits in statistic and biostatistics course of higher educational level. Applicants will also be required to present evidence of computer literacy. If the applicant does not possess these skills, arrangements will be made to provide training during the course of studies.

Graduation Requirements

Students will receive a Master of Public Health degree with Specialty in Gerontology upon meeting the following requirements:

- Completion of the 58 credit hours + 12 hours program (55 in required courses, and 3 in elective courses).
- Overall grade point average of at least 2.50 and 3.00 in the specialty and remain in good academic standing consistent with the Graduate School of Public Health policies.

MASTER OF PUBLIC HEALTH WITH SPECIALTY IN GERONTOLOGY CURRICULUM**Total Trimester Credit-Hours: 58 + 12 hours**

SALP 6006	Introduction to Public Health	3
ADSS 6516	Fundamentals of Health Policy and Management in Public Health	4
BIOE 6525	Statistical Analysis	5
CISO 6546	Social Determinants and Equity in Public Health	3
EPID 6523	Epidemiological Methodology	4
ADSS 6594	Public Health Program Planning and Evaluation	4
SAAM 6528	Principles of Environmental Public Health	3
SALP 6250	Applied Public Health Research Methods	3
SALP 6251	Leadership in Public Health	2
INTD 6996	Inter-professional Collaborative Practice in Public Health	(12 hours)
GERO 6005	Introductory Seminar in Gerontology	1
GERO 6501	Biological Aspects of Aging	3
GERO 6503	Psychological Aspects of Aging	3

GERO 6505	Clinical Aspects of Aging	3
GERO 6507	Social Aspects of Aging	3
GERO 6509	Policy and Management Aspects in Gerontology	3
GERO 6508	Planning Field Experience in Public Health Gerontology	2
GERO 6997	Integrative Experience in Public Health: Gerontology	5
GERO 6995	Applied Practice Experience: Gerontology	1
Electives		3

MASTER OF SCIENCE WITH SPECIALTY IN EVALUATION RESEARCH OF HEALTH SYSTEMS

The curriculum of the Master of Science with Specialty in Evaluation Research of Health Systems Program consists of theoretical and experiential components that prepare graduates to analyze health care delivery systems, identify problems, and propose solutions to those problems.

The systematic evaluation of programs and services is essential for the betterment of health care delivery. Program graduates analyze health systems and propose alternatives and solutions to existing problems. Specifically, program graduates assess access to health care by particular groups, examine processes at health care organizations in order to increase effectiveness, examine information used in decision-making, assess the quality of consumer communication, and the results of health services for those who have accessed care.

Specific Admission Requirements

The applicant must have 6 credits in mathematics (algebra, pre-calculus or calculus) and 3 credits in statistics at undergraduate level.

Graduation Requirements

Students will receive a Master of Science with Specialty in Evaluation Research of Health Systems degree upon meeting the following requirements:

- Completion of the 62 credit-hour program (56 in required courses, and 6 in elective courses).
- Overall grade point average of at least 2.50 and 3.00 in the specialty (EVAL courses) and remain in good academic standing consistent with the Graduate School of Public Health policies.

MASTER OF SCIENCE WITH SPECIALTY IN EVALUATION RESEARCH OF HEALTH SYSTEMS CURRICULUM

Total Trimester Credit-Hours: 62

SALP 6006	Introduction to Public Health	3
ADSS 6594	Public Health Program Planning and Evaluation	4
BIOE 6525	Statistical Analysis	5
BIOE 6535	Statistical Inference	4
BIOE 6555	Regression and Correlation Analysis	3
BIOE 6605	Statistical Computing Applied to Public Health	4
EPID 6523	Epidemiological Methodology	4
EVAL 6511	Introductory Proposal Seminar	1
EVAL 6512	Intermediate Proposal Seminar	1

EVAL 6513	Advanced Proposal Seminar	1
EVAL 6515	Conceptualization and Methodology for Evaluation Research	4
EVAL 6610	Principles of Evaluation	3
EVAL 6611	Evaluation Models	3
EVAL 6615	Development of Measurement Instruments	3
EVAL 6620	Applied Statistics for Evaluation Research Studies	3
EVAL 6628	Principles of Cost-Benefit Analysis	3
EVAL 6630	Strategies for Evaluation and Communication	3
EVAL 6650	Evaluation Practicum	1
EVAL 6700	Thesis Project	3
Electives		6

The Master of Science with specialty in Evaluation Research of Health Systems program will not accept applicants for admission because it placed in a moratorium status (Certification JG #30, 2021-2022).

MASTER OF HEALTH SERVICES ADMINISTRATION

The Master of Health Services Administration Program prepares health services administrators to be proficient in the planning, administration, operation, and evaluation of health services delivery systems.

In preparing highly qualified health services administrators to assume leadership positions in the health care field, the program emphasizes analytical research methodology focusing on an interdisciplinary approach for the solution of problems in the health care field.

Upon completion of the program of studies, graduates are eligible to apply for the licensure examination in Health Services Administration. Once they are licensed, they may serve as executive directors of health services facilities, executives or managers in the health insurance industry, consultants for pharmaceutical companies, and evaluators of health services institutions.

Specific Admission Requirements

Before admission, applicants must have completed the following courses, or their equivalents, in the areas specified below:

<u>Required Courses</u>	<u>Credit-Hours</u>
Accounting	3
Statistics or biostatistics	3
Economics	3
Mathematics (algebra, precalculus or calculus)	3
Business Finance	3

Work experience in the health care field is desirable.

Graduation Requirements

Students will receive a Master of Health Services Administration degree upon meeting the following requirements:

- Completion of the 67 credit-hour + 800 hours program (61 in required courses, and 6 in elective courses).
- Overall grade point average of at least 2.50 and 3.00 in the field of specialty and remain in good academic standing consistent with the Graduate School of Public Health policies.

MASTER OF HEALTH SERVICES ADMINISTRATION CURRICULUM

Total Trimester Credit-Hours: 67 + 800 hours

SALP 6006	Introduction to Public Health	3
EPID 6523	Epidemiological Methodology	4
SALP 6251	Leadership in Public Health	2
ADSS 6525	Introduction to Healthcare Management	3
ADSS 6635	Continuous Quality Improvement in Health Care	3
ADSS 6579	Organization Behavior	3
ADSS 6583	Legal Aspects in Health Services	3
ADSS 6584	Health Politics and Policy	3
ADSS 6585	Health Economics	3
ADSS 6586	Health Systems	3
ADSS 6591	Quantitative Decision-Making for Health Services Administration I	3
ADSS 6592	Quantitative Decision-Making for Health Services Administration II	3
ADSS 6490	Strategic Planning for Health Services Organizations	3
ADSS 6597	Administrative Residency	800 hours
ADSS 6598	Information Systems in Health Services Administration	3
ADSS 6606	Capstone Seminar in Health Services Administration	3
ADSS 6607	Health Care Cost	3
ADSS 6609	Health Care Financial Management	3
ADSS 6610	Principles of Health Insurance and Managed Care	3
ADSS 6625	Human Resources Management	4
Electives		6

MASTER OF SCIENCE WITH SPECIALTY IN EPIDEMIOLOGY

The Master of Science with Specialty in Epidemiology Program prepares professionals proficient in the utilization of epidemiological methodology in the study and solution of community health problems, and who will engage in teaching, research, and service in this area.

Program graduates are employed by government agencies and the private sector as epidemiologists, research assistants, data analysts, and coordinators of programs focusing on prevention.

Specific Admission Requirements

Students requesting admission to the Master of Science with Specialty in Epidemiology Program must have completed the following number of credits in the subjects specified below:

<u>Required Courses</u>	<u>Credit-Hours</u>
Biology	4
Psychology, Sociology or Anthropology	6
Mathematics (Including Calculus, and statistic or biostatistics in higher education level)	6

Graduation Requirements

Students will receive a Master of Science with Specialty in Epidemiology degree upon meeting the following requirements:

- Completion of the 76 credit-hour program (67 in required courses, and 9 in elective courses).
- Overall grade point average of at least 2.50 and 3.00 in the specialty and remain in good academic standing consistent with the Graduate School of Public Health policies.

MASTER OF SCIENCE WITH SPECIALTY IN EPIDEMIOLOGY CURRICULUM**Total Trimester Credit-Hours: 76**

SALP 6006	Introduction to Public Health	3
SAAM 6528	Principles of Environmental Public Health	3
DEMO 6546	Mortality	4
BIOE 6525	Statistical Analysis	5
BIOE 6535	Statistical Inference	4
BIOE 6545	Introduction to Sampling Theory	3
BIOE 6555	Regression and Correlation Analysis	3
BIOE 6605	Statistical Computing Applied to Public Health	4
EPID 6523	Epidemiological Methodology	4
EPID 6527	Epidemiologic Surveillance	2
EPID 6528	Epidemiology of Mental Disorders	3
EPID 6529	Epidemiology of Chronic Diseases	3
EPID 6535	Epidemiology of Infectious Diseases	4
EPID 6539	Epidemiological Aspects of Public Health Problems	2
EPID 6552	Seminar in Epidemiology I	1
EPID 6553	Seminar in Epidemiology II	1
EPID 6554	Seminar in Epidemiology III	1
EPID 6555	Seminar in Epidemiology IV	1
EPID 6556	Seminar in Epidemiology V	1
EPID 6561	Epidemiological Research I	4

EPID 6562	Epidemiological Research II	4
EPID 6563	Epidemiological Research III	2
Electives		9

MASTER OF SCIENCE IN DEMOGRAPHY

The Master of Science in Demography Program prepares professionals in the theoretical and methodological aspects of the study of human populations. These include population growth, distribution, and characteristics, as well as mortality, fertility, migration, population problems, and policies.

Upon completion of the program of studies, graduates may conduct research, offer consulting services, and work as teachers in demography, population analysis, and other related areas. They will also be able to participate in programs geared to the solution of problems of a collective nature.

Specific Admission Requirements

Applicants must have approved the following number of credits in the subjects specified below:

<u>Required Courses</u>	<u>Credit-Hours</u>
Statistics or biostatistics	3
College Algebra	3

Graduation Requirements

Students will receive a Master of Science in Demography degree upon meeting the following requirements:

- Completion of the 70 credit-hour program (59 in required courses, and 11 in elective courses).
- Overall grade point average of at least 2.50 and 3.00 in the specialty and remain in good academic standing consistent with the Graduate School of Public Health policies.

MASTER OF SCIENCE IN DEMOGRAPHY CURRICULUM

Total Trimester Credit-Hours: 70

SALP 6006	Introduction to Public Health	3
BIOE 6525	Statistical Analysis	5
BIOE 6535	Statistical Inference	4
CISO 6547	Population and Society	3
EPID 6523	Epidemiological Methodology	4
DEMO 6500	Introduction to Demography	4
DEMO 6546	Mortality	4
DEMO 6555	Fertility and Population Growth	4
DEMO 6560	Research Methods	4
DEMO 6565	Migration, Population Distribution, and Urbanism	4
DEMO 6602	Seminar on Demographic Studies in Puerto Rico	3
DEMO 6606	Use of SPSS Program and other Scientific Research	4

DEMO 6607	Population and Economics	4
DEMO 6615	Supervised Practice in Demography	3
DEMO 6621	Research Project I	2
DEMO 6622	Research Project II	4
Electives		11

MASTER OF PUBLIC HEALTH EDUCATION (DAY AND EVENING PROGRAMS)

The Master of Public Health Education Program trains professionals to promote the health of individuals and families through education, behavior modification, and the development of attitudes that result in the protection and maintenance of health.

The program addresses today's health issues through teaching, research, consulting, and community services. The curriculum offers elective courses in areas such as patient education, school health, and human sexuality. The program seeks to promote quality of life and healthy life-styles among the population by means of an interdisciplinary and participatory approach.

Specific Admission Requirements

The applicant should have completed the following number of credits in the subjects specified below:

<u>Required Courses</u>	<u>Credit-Hours</u>
Education (or equivalent as approved by the program)	6
Statistics at biostatistics at undergraduate level	3
Social Sciences (or their equivalent as approved by the program)	6

Graduation Requirements

Students will receive a Master of Public Health Education degree upon meeting the following requirements:

- Completion of the 63 credit hours + 12 hours program (57 in required courses, and 6 in elective courses).
- Overall grade point average of at least 2.50 and 3.00 in the specialty and remain in good academic standing consistent with the Graduate School of Public Health policies.

MASTER OF PUBLIC HEALTH EDUCATION CURRICULUM

Total Trimester Credit-Hours: 63 + 12 hours

SALP 6006	Introduction to Public Health	3
ADSS 6516	Fundamentals of Health Policy and Management in Public Health	4
BIOE 6525	Statistical Analysis	5
CISO 6546	Social Determinants and Equity in Public Health	3
EPID 6523	Epidemiological Methodology	4
EDSA 6573	Assessment and Planning in Health Promotion and Health Education	3

SAAM 6528	Principles of Environmental Public Health	3
EDSA 6250	Applied Research in Health Promotion and Health Education	3
SALP 6251	Leadership in Public	2
INTD 6996	Inter-professional Collaborative Practice in Public Health	(12 hours)
EDSA 6401	Perspectives and Contexts of Health Promotion and Health Education	2
EDSA 6476	Social and Behavioral Theories and Models	2
EDSA 6405	Health Communication Programs Design	3
EDSA 6475	Intervention Approaches for Health Promotion and Disease Prevention	3
EDSA 6568	Group Facilitation Skills	3
EDSA 6567	Advocacy, Intersectoriality, and Community Mobilization	3
EDSA 6571	Health Promotion and Health Education Evaluation and Measurement	3
EDSA 6474	Managerial Considerations for Developing and Implementing Health Education Programs	2
EDSA 6997	Integrative Experience in Health Promotion and Health Education	2
EDSA 6996	Supervised Practice in Health Promotion and Health Education	4
Electives		6

MASTER OF SCIENCE IN INDUSTRIAL HYGIENE

The Master of Science in Industrial Hygiene Program trains industrial hygienists to supply the demand for this professional in Puerto Rico. The industrial hygienist deals with the anticipation, recognition, evaluation, and control of occupational health hazards in the workplace and in the community. It is expected that these professionals contribute to the reduction of occupational injuries and illnesses among Puerto Rican workers.

The curriculum in this two-year program includes 18 trimester credit-hours in public health, and 48 in industrial hygiene and related areas.

Specific Admission Requirements

Applicants must have approved the following courses:

<u>Required Courses</u>	<u>Credit-Hours</u>
Biology	6
Chemistry	8
Organic Chemistry	4
Calculus	3
Physics	6

Graduation Requirements

Students will receive a Master of Science in Industrial Hygiene degree upon meeting the following requirements:

- Completion of the 66-credit hour program (all required courses).
- Overall grade point average of at least 2.50 and a 3.00 average in the field of specialty and remain in good academic standing consistent with the Graduate School of Public Health policies.

MASTER OF SCIENCE IN INDUSTRIAL HYGIENE CURRICULUM**Total Trimester Credit-Hours: 66**

SALP 6006	Introduction to Public Health	3
BIOE 6525	Statistical Analysis	5
EPID 6523	Epidemiological Methodology	4
ADSS 6518	Organizational and Administrative Aspects of Occupational Health & Industrial Hygiene Programs	3
SAAM 6512	Physical Hazards Control	3
SAAM 6513	Physical Hazards Laboratory	1
SAAM 6524	Occupational Health Principles	3
SAAM 6526	Principles Industrial Ergonomics	3
SAAM 6528	Principles of Environmental Health	3
SAAM 6543	Industrial Hygiene	3
SAAM 6547	Basic Principles in Occupational Safety	3
SAAM 6548	Industrial Hygiene Laboratory	2
SAAM 6565	Chemical Risks Control	3
SAAM 6566	Field Studies of the Workplace	2
SAAM 6567	Management Tools for Industrial Hygienists	3
SAAM 6568	Laws and Regulations Applied to Occupational Safety	3
SAAM 6570	Response and Preparation for Emergencies and Hazardous Operations	3
SAAM 6571	Research Topics in Occupational Epidemiology and Health	3
SAAM 6572	Design of Controls in Ergonomics	3
SAAM 6573	Chemical Risk Laboratory	1
SAAM 6636	Occupational Toxicology	3
SAAM 6696	Industrial Hygiene Internship	6

MASTER OF HEALTH SCIENCES WITH SPECIALTY IN NUTRITION

The program leading to the Master of Health Sciences with Specialty in Nutrition trains health professionals in the field of public health nutrition. Graduate's plan and implement nutrition programs, conduct research, and teach nutrition at graduate and undergraduate levels.

Program graduates develop skills in the methodology of health services research as it applies to nutrition, and study nutritional problems of the population. Most find employment in public and private teaching institutions, health services agencies, food industry, and pharmaceutical companies.

Specific Admission Requirements

Applicants must have approved the following courses:

<u>Required Courses</u>	<u>Credit-Hours</u>
General Chemistry	5
Organic Chemistry	4
Biochemistry	3
Biology	8
Calculus	4
Social Sciences	6

The Graduate School of Public Health offers numerous courses in the areas of administration, biostatistics, maternal and child health, epidemiology, and social sciences that may be of interest to nutrition students. If interested, students must take those courses as electives in addition to the program outlined below.

Graduation Requirements

Students will receive a Master of Health Sciences with Specialty in Nutrition degree upon meeting the following requirements:

- Completion of the 47 credit-hour program (44 in required courses, and 3 in elective courses).
- Overall grade point average of at least 2.50 and a 3.00 average in the area of specialty and remain in good academic standing consistent with the Graduate School of Public Health policies.

MASTER OF HEALTH SCIENCES WITH SPECIALTY IN NUTRITION CURRICULUM

Total Trimester Credit-Hours: 47

SALP 6006	Introduction to Public Health	3
BIOE 6525	Statistical Analysis	5
DEMO 6606	Use of SPSS Program and other Scientific Research	4
EPID 6523	Epidemiological Methodology	4
NUTR 6521	Biochemistry and Nutrition I	2
NUTR 6523	Biochemistry and Nutrition II	2
NUTR 6528	Seminar in Public Health Nutrition	2
NUTR 6531	Human Nutrition	3
NUTR 6533	Nutrition in Public Health	3
NUTR 6535	Research Project	6
NUTR 6538	Evaluation of Nutritional Status	3
NUTR 6570	Nutritional Research Methodology	3
NUTR 6555	Quality of Life and Nutrition of Persons Fifty Years and Over	2
NUTR 6560	Planning of Nutrition Program	2
Electives		3

GRADUATE CERTIFICATE IN GERONTOLOGY (EVENING PROGRAM)

The Graduate Certificate in Gerontology Program trains professionals from diverse health professions by offering a basic content in gerontology and focusing on the biological, psychological, social, clinical, and administrative aspects related to the aging process. The program is geared to improve the professionals' knowledge, skills, and attitudes for a better understanding of the aging process, and in this way contribute to an effective service delivery to meet the health needs of the elderly population. The Graduate Certificate in Gerontology has a total of 20 credits, which emphasize a holistic perspective and an interdisciplinary health team approach in the delivery of health services to the elderly population.

Specific Admission Requirements

Applicants must hold at least a bachelor's degree and have completed a total of 3 credits in social sciences, 3 credits in biology, and 3 credits in psychology.

Graduation Requirements

- Completion of the 20-trimester credit-hour program.
- Overall grade point average of at least 3.00 average and remain in good academic standing consistent with the Graduate School of Public Health policies.

GRADUATE CERTIFICATE IN GERONTOLOGY CURRICULUM**Total Trimester Credit-Hours: 20**

GERO 6005	Introductory Seminar to Gerontology	1
GERO 6501	Biological Aspects of Aging	3
GERO 6503	Psychological Aspects of Aging	3
GERO 6505	Clinical Aspects of Aging	3
GERO 6507	Social Aspects of Aging	3
GERO 6509	Administrative Aspects of Gerontology	3
GERO 6495	Planning the Interdisciplinary Intervention in Gerontology	1
GERO 6511	Interdisciplinary Intervention	3

GRADUATE CERTIFICATE IN DEVELOPMENTAL DISABILITIES EARLY INTERVENTION (EVENING PROGRAM)

The Graduate Certificate in Developmental Disabilities - Early Intervention constitutes an innovative contribution to the academic offerings of the Medical Sciences Campus in a high priority area.

The curriculum has an interdisciplinary and transdisciplinary approach to intervention, with emphasis on prevention, rehabilitation, and family participation. It also has a strong component of hands-on experiences with a significant number of hours devoted to field experiences in programs servicing children 0 to 5 years of age who present developmental delay or who are at risk.

The program is open to professionals in the areas of health education, occupational therapy, physical therapy, speech and language pathology, audiology, special education, psychology, and social work who are currently working with children 0 to 5 years old with developmental disabilities or delay.

The program's interdisciplinary and transdisciplinary approach is achieved through curricular design, by faculty from various fields, a heterogeneous group of students, and varied field experiences. This is three trimesters and one summer program in which students are expected to complete 22 credits in core courses and four (4) credits in an area of interest (service coordination, public policy, or clinical intervention).

Specific Admission Requirements

In order to be admitted to the program, the candidates will be evaluated according to the following:

- Professional background in the fields of health, education, psychology, social work, or administration.
- License to practice a profession, when appropriate.
- Work experience (over one year).

Graduation Requirements

- Completion of the 26-trimester credit-hour program and practice activities.
- Overall grade point average of at least 3.00 and remain in good academic standing consistent with the Graduate School of Public Health policies.

GRADUATE CERTIFICATE IN DEVELOPMENTAL DISABILITIES EARLY INTERVENTION CURRICULUM

Total Trimester Credit-Hours: 26

DDIT 6505	Introduction to Public Health and Developmental Disabilities	3
DDIT 6506	Typical and Atypical Child Development from 0 to 5 Years	3
DDIT 6507	Assistance to Families with Children with Special Needs	3
DDIT 6508	Assessment of Infants and Pre-Schoolers with Developmental Disabilities	3
DDIT 6509	Community Service Delivery in Early Intervention	3
DDIT 6510	Planning, Implementation, and Evaluation of Developmental Disabilities - Early Intervention Programs	3
DDIT 6545	Interdisciplinary Practicum in Developmental Disabilities- Early Intervention	4

One (1) elective course must be selected from these options:

DDIT 6537	Service Coordination	4
DDIT 6539	Legislation and Public Policy in the Developmental Disabilities - Early Intervention Area	4
DDIT 6535	Seminar in the Management of Conditions and Specific Risks	4

DOCTOR IN PUBLIC HEALTH WITH SPECIALTY IN ENVIRONMENTAL HEALTH

The Doctor in Public Health (DrPH) with a specialty in Environmental Health develops through its curriculum, the knowledge and skills required to analyze and assess environmental health problems and risks at the community level. This DrPH Program prepares future public health leaders by broadening their applied sciences skills in order to offer solutions to environmental health problems and exercise professional

leadership in the area of community health. The DrPH with a specialty in Environmental Health provides advanced level training in decision-making analysis, leadership, and applied public health research to address and reduce environmental health problems and risks. The environmental health specialty stresses the study of environmental factors (including biological, physical and chemical) that impact the health of the community. This program prepares public health professionals for Puerto Rico and other countries to occupy upper management and leadership positions, to work in policy making, and to act as consultants in the analysis and evaluation of environmental health problems and risks.

Admission Requirements

Applicants must meet the following requirements:

- Submit an application form, including the following documents: Official transcript of graduate studies and *Curriculum Vitae*; Evidence of professional experience for the past five (5) years of employment issued by the Human Resources Department of the employer and the immediate supervisor; Three (3) letters of recommendation (One of the three letters must be from a professor in the applicant's master's program who is able to comment on the applicant's qualifications to undertake doctoral studies).
- A written essay, on the day of the interview, using a word processor. The format for this written component of the evaluation may vary.
- Applicants must have approved at least a graduate level introductory course in Environmental Health with at least a grade of "B".
- Computer literacy in MS Word, MS Excel, MS Power Point, and at least one statistical software package such as SPSS, STATA, EPI-INFO, SYSTAT or SAS is highly recommended.

Graduation Requirements

In order to be eligible for the degree, students must meet the following requirements:

- Completion of the 55 credit hours (52 in required courses, and 3 in elective courses) with a minimum grade point average of 3.00 (on a scale of 4.00) and remain in good academic standing consistent with the Graduate School of Public Health policies.
- Specialty grade point average of at least 3.00 (on a scale of 4.00).
- Successfully complete a written comprehensive qualifying examination.
- Successfully complete an oral defense of proposal for a dissertation project.
- Successfully complete and defend a dissertation project.
- Complete the 200 hours practicum experience successfully.
- Complete all requirements within an eight-year period.

DOCTOR IN PUBLIC HEALTH WITH SPECIALTY IN ENVIRONMENTAL HEALTH CURRICULUM

Total Trimester Credit-Hours: 55 and 200 Hours of Practice Experience*

BIOE 8005	Advance Methods in Biostatistics	3
EPID 8002	Advanced Methods in Epidemiology	3
CISO 8005	Culture, Social Inequity, and Community Health	3
ADSS 8011	Health Systems and Policy	3
SAAM 8027	Environmental Public Health of Urban Communities	2
ADSS 8105	Applied Public Health Leadership Seminar	2

SALP 8106	Research Design Approaches For Public Health	3
SALP 8026	Public Health Leader as Educator	3
SALP 8005	Health Promotion Seminar	2
ADSS 8008	Health Systems Planning and Strategic Management	3
SAAM 8120	Changing Climate: A Public Health Response	3
SAAM 8119	Exposure Assessment for Environmental Public Health	2
SAAM 8118	Prevention and Control of Environmental Hazards: A system thinking approach	3
SAAM 8017	Health Risk Assessment	3
SAAM 8015	Global Changes, Health, and International Law	3
SAAM 8016	Environmental Policy and Management	3
SAAM 8995	Environmental Health Doctoral Research Seminar I	1
SAAM 8996	Environmental Health Doctoral Research Seminar II	1
SALP 8006	Doctoral Applied Practice Experience in Public Health	200 hrs
SAAM 8198	Dissertation Proposal in Environmental Health	3
SAAM 8199	Doctoral Dissertation in Environmental Health	3
Electives		3

*All doctoral courses must be approved with A or B.

DOCTOR IN PUBLIC HEALTH WITH SPECIALTY IN HEALTH SYSTEMS ANALYSIS AND MANAGEMENT

The Doctor in Public Health represents advanced competency training in public health practice skills, differentiating it from the MPH. The DrPH in Health Systems Analysis and Management incorporate through its curriculum the knowledge and skills needed to facilitate the analysis and evaluation for evidence-based decisions in the public health systems among its students. The DrPH program prepares future public health leaders capable of influencing policies, programs, and institutions through their knowledge, skills and attitudes in health systems in order to maximize public health.

The doctoral program in Public Health with a specialty in HSAM provides advanced level training in decision-making analysis leadership, and applied public health research for the improvement of health systems in order to enhance public health. It is focused on understanding and learning to apply advanced knowledge and skills to complex and real-world problems in the public health field in general, and health systems and services, to assure that public health systems are capable of performing essential functions. The Program prepares public health professionals for PR, the US and other countries with the competencies to perform as advisors, consultants, and any other position that deals with analysis, design, planning, development, management, and improvement of health systems.

Specific Specialty Admission Requirements

- Applicants interested in the Health Systems Analysis and Management specialty must have completed the following requisite courses at the graduate level, prior to admission to the DrPH: (1) precalculus or equivalent, (2) finances, (3) statistical inference or equivalent, and (4) economics; each requisite course with a passing grade of at least a "B".
- Applicants interested in the Health Systems Analysis and Management specialty must have completed the precalculus or equivalent at undergraduate level with a passing grade of at least a "B".

- Computer literacy in MS Word, MS Excel, MS Power Point, and at least one statistical software package such as SPSS, STATA, EPI-INFO, SYSTAT or SAS is highly recommended.
- Write an essay using a word processor the day of the oral interview.

Graduation Requirements

Students must maintain a minimum grade point average of 3.00 (on scale of 4.00) to remain in the Program. To qualify for graduation, doctoral students must fulfill the following requirements:

- Complete the Dr PH degree in a maximum period of 8 years of study.
- Completion of the 57 credit hours (54 in required courses, and 3 in elective courses) with a minimum grade point average of 3.00 (on a scale of 4.00) and remain in good academic standing consistent with the Graduate School of Public Health policies.
- Specialty grade point average of at least 3.00 (on a scale of 4.00).
- Successfully complete a written comprehensive qualifying examination.
- Successfully complete an oral defense of proposal for a dissertation project.
- Successfully complete and defend a dissertation project.
- Complete the 200 hours practicum experience successfully.

DOCTOR IN PUBLIC HEALTH WITH SPECIALTY IN HEALTH SYSTEMS ANALYSIS AND MANAGEMENT CURRICULUM

Total Trimester Credit-Hours: 57 and 200 Hours of Practicum Experience*

BIOE 8005	Advanced Methods in Biostatistics	3
EPID 8002	Advanced Methods in Epidemiology	3
CISO 8005	Culture, Social Inequity, and Community Health	3
ADSS 8011	Health Systems and Policy	3
SAAM 8027	Environmental Public Health of Urban Communities	2
ADSS 8105	Applied Public Health Leadership Seminar	2
SALP 8106	Research Design Approaches for Public Health	3
SALP 8026	Public Health Leader as Educator	3
SALP 8005	Health Promotion Seminar	2
ADSS 8008	Health Systems Planning and Strategic Management	3
ADSS 8007	Health Policy	3
ADSS 8010	Organizational Development and Change in Health Service Organizations	3
ADSS 8006	Health Law	3
ADSS 8206	Economic Analysis for Health Systems Management in Health Systems	3
ADSS 8009	Measurement of Quality and Outcomes in Health Systems	2
ADSS 8307	Health Services Evaluation	2
ADSS 8205	Financial Management in Health Systems	3
ADSS 8305	Health Services Research	2
SALP 8006	Doctoral Applied Practice Experience in Public Health	200 hrs
ADSS 8306	Dissertation Proposal in Health Systems Analysis and Management	3
ADSS 8401	Doctoral Dissertation in Health Systems Analysis and Management	3
Electives		3

*All doctoral courses must be approved with A or B.

DOCTOR IN PUBLIC HEALTH WITH SPECIALTY IN SOCIAL DETERMINANTS OF HEALTH

The Doctor in Public Health (DrPH) with specialty in Social Determinants of Health is a graduate program with a duration of four (4) years which has as core the five disciplines of public health (Biostatistics, Epidemiology, Social Sciences/Behavior, Environmental Health and Health Services Administration), were the content and practice of public health guide the determinants of health. Its curricular content is targeted specifically to study inequities and inequality within the social determinants of health. This program directs its focus of attention to the study of social conditions related to where people live and work; therefore it is framed in the core area of public health that has to do with the Social Sciences and behavior.

Specific Specialty Admission Requirements

- Submit an updated Curriculum Vitae
- Submit three (3) letters of recommendation, one of which should be from the master's thesis advisor. If the thesis advisor is not available, the applicant must submit contact information of two professors who can comment on the applicant's qualifications for graduate studies.
- Write a 5-7 page essay describing his/her interest in social determinants of health; his/her experience in advocacy, research, teaching, and service in the promotion and protection of public health; and what kind of in-depth project he/she wishes to develop if admitted to the specialty.
- Applicants will be required to perform other tasks the day of the interview, such as reading and writing a professional article or essay as part of the admission process.
- Approve a course in statistical inference prior to admission to the doctoral program.

Graduation Requirements

Students must maintain a minimum grade point average of 3.00 (on scale of 4.00) to remain in the Program. To qualify for graduation, doctoral students must fulfill the following requirements:

- Complete the Dr PH degree in a maximum period of 8 years of study.
- Completion of the 57 credit hours (51 in required courses, and 6 in elective courses) with a minimum grade point average of 3.00 (on a scale of 4.00) and remain in good academic standing consistent with the Graduate School of Public Health policies.
- Specialty grade point average of at least 3.00 (on a scale of 4.00).
- Successfully complete a written comprehensive qualifying examination.
- Successfully complete an oral defense of proposal for a dissertation project.
- Successfully complete and defend a dissertation project.
- Complete the 200 hours practicum experience successfully.

DOCTOR IN PUBLIC HEALTH WITH SPECIALTY IN SOCIAL DETERMINANTS OF HEALTH CURRICULUM**Total Trimester Credit-Hours: 57 and 200 Hours of Practicum Experience***

BIOE 8005	Advanced Methods in Biostatistics	3
EPID 8002	Advanced Methods in Epidemiology	3
CISO 8005	Culture, Social Inequity, and Community Health	3
ADSS 8011	Health Systems and Policy	3
SAAM 8027	Environmental Public Health of Urban Communities	2
ADSS 8105	Applied Public Health Leadership Seminar	2
SALP 8106	Research Design Approaches for Public Health	3

SALP 8026	Public Health Leader as Educator	3
SALP 8005	Health Promotion Seminar	2
ADSS 8008	Health Systems Planning and Strategic Management	3
DESS 8011	Social Determinants of Health Graduate Seminar I	1
DESS 8012	Social Determinants of Health Graduate Seminar II	2
DESS 8105	Social Theory and Public Health	3
DESS 8201	Qualitative Methods in Social Determinants of Health	3
DESS 8202	Statistical Measurement and Argumentation in Social Determinants of Health	3
DESS 8206	Community Building and Action on the Social Determinants of Health	3
DESS 8208	Political Economy of Health	3
DESS 8305	Health and Social Policy Analysis	3
SALP 8006	Doctoral Applied Practice Experience in Public Health	200 hrs
DESS 8198	Dissertation Proposal in Social Determinants of Health	3
DESS 8199	Doctoral Dissertation in Social Determinants of Health	3
Electives		3

*All doctoral courses must be approved with A or B.

PROFESSIONAL STUDIES CERTIFICATION IN MATERNAL AND CHILD HEALTH (ONLINE)

The Professional Studies Certification in Maternal and Child Health prepares professionals with leadership capacity, able to analyze the determinants of the health in order to articulate a system of care based in mothers and children. The students will increase new knowledge of maternal and child health care through applied research, intercession, continuing education, the provision of technical assistance, professional advice, and information dissemination. This offer of professional studies is completely online thus allowing maximum comfort and convenience for the interested student. The curriculum is based on leadership competencies in Mother and Child Health.

The curriculum of the program includes 17 trimester credit hours in 3 trimesters with a total duration of one academic year. These will include 5 core courses in maternal and child health and one elective. The student has a minimum of one and a maximum of 3 years to complete the professional studies program.

Specific Admissions Requirements

1. Possess a baccalaureate degree or its equivalent in other countries, of a university certified as an institution of higher education with a recommended general average of 2.85 or more (of a maximum scale of 4.00).
2. Have approved a course of three credits of algebra and a course of statistics or biostatistics at university level.
3. You must have mastery of the use of your computer and be familiar with the use of basic personal computer applications.
4. Broadband internet access at home or work.

Graduation Requirements

Students will receive a Professional Studies Certification in Maternal and Child Health upon meeting the following requirements:

- Completion of the 17 trimester credit hours in required courses with a minimum of A or B.

- Overall GPA of minimum 3.0 after completion of courses and assessment strategies; and remain in good academic standing consistent with the Graduate School of Public Health policies.

PROFESSIONAL STUDIES CERTIFICATION IN MATERNAL AND CHILD HEALTH CURRICULUM

Total Trimester Credit Hours: 17

SALP 6601	Fundamentals of Maternal and Child Health	3
SALP 6602	Reproductive Health	3
SALP 6606	Seminar of Maternal and Child Health	2
SALP 6604	Bioethical Aspects of Maternal and Child Health	3
SALP 6603	Public Policy and Advocacy for Women, Children and Families	3
Elective		3

COURSE DESCRIPTIONS

This information is subject to constant change due to updates.

ADSS 6490 - Strategic Management for Health Services Organization. Three (3) credits. Pre-requisite: ADSS 6525.

This course is designed to develop a comprehensive understanding of strategic planning for health care organizations based on theory, models and methods in the health care planning and administration field. The course is targeted for Master in Health Services Administration students who will become competent at applying systemic thinking in conceptualizing strategic problems and issues, performing environmental scanning, formulating organizational mission, vision, goals and objectives, evaluating strategic and marketing options, implementing operational plans and monitoring and evaluating strategic actions. Teaching strategies include case study analysis, examinations, strategic plan oral presentations and report writing and class participation.

ADSS 6505 - Quantitative Decision Analysis. Four (4) credits. Pre-requisite: BIOE 6525.

This course introduces the student to the methods of operations research and its role in the decision making process, some topics to be covered will be: queueing theory, decisions under risk and uncertainty, decision trees, projection methods, break even and inventory analysis.

ADSS 6508 - Written and Oral Communication. One (1) credit.

Course designed for the preparation of minute, memorandum, reports, bulletins, written messages, and the different types of oral communication through analysis, discussion, and practice exercises.

ADSS 6510 - Seminar on Supervision. Four (4) credits.

This course provides the learning experiences necessary to guide the student in the development and clear understanding of the supervisor's role. The course emphasizes the development of skills necessary for supervision, such as: communication, delegation, and leadership. Different educational skills are used, giving emphasis to practical exercises and case studies.

ADSS 6516 - Fundamentals of Health Policy and Management in Public Health. Four (4) credits.

This course introduces the fundamentals of program management, leadership, and organizational dynamics. It includes understanding the role of the manager; the importance of leadership; the structure and function of organizations; selected human resources issues; and managerial skills, such as communication, problem solving, decision making, team building, and power and influence. Since the manager is critical to the organization's success, students learn how to define and measure program performance, develop plan and deal with human resources issues. Using case studies and group exercises, students are expected to demonstrate effective group management and analyzed typical management scenarios.

ADSS 6525 - Introduction to Healthcare Management. Three (3) credits.

The purpose of this course is to provide the student with a conceptual and applied vision of the organization theories and the inherent administrative processes to the field of the Administration of Health Services. Likewise, the impact in the dynamics of the health sector and the impact on the administration of the system of health care services. The administrative process is presented from a theoretical/practical perspective, considering that the essential of a certain system of health constitutes the group of services that you provide and how these services satisfy the necessities and the population's demand to serve. The objective of the course will be achieved through a series of lectures, case studies, presentations and selected readings. At the end of this course, the student will review the major aspects of management and the skills necessary to be successful as an executive in the healthcare system.

ADSS 6535 - Continuous Quality Improvement in Health Services Organizations. Three (3) credits. Pre-requisite: ADSS 6525.

The course is designed to provide the Health Services Administration students with a conceptual framework of the continuous quality improvement movement and its application to healthcare. It examines The Philosophy

of Continuous Quality Improvement (CQI) and Total Quality Management (TQM) and provides guidelines for its implementation in healthcare organizations. There are four prime components to the course: 1) Concepts, principles and theory driving the quality movement since these serve as the theoretical bases for quality requirements in health care, 2) Techniques commonly used in quality programs and strategies for its implementation through reading, discussion, and through a final project, 3) Some of the more common quality measurements used by regulatory, accrediting, or their institutions, 4) Correlation between quality and cost in healthcare.

ADSS 6548 - Hospital Administration. Three (3) credits. Pre-requisites: ADSS 6525.

Basic concepts of hospital administration, focusing the hospital as a prototype of a complex organization, with multiple and diverse objectives. The hospital is presented as an open system, capable of solving problems related to its internal and external analyze environment. The organizational structure analyze its processes and the necessary behavior to solve the problems of the hospital organization with efficiency and effectiveness.

ADSS 6549 - Problems in Hospital Administration. One to three (1-3) credit(s).

Mayor problems as well as typical situations of hospital administration are reviewed. Basic concepts are then applied using methodology and simulation models to provide the student a practical experience using updated management knowledge and techniques.

ADSS 6550 - Introduction to Health Care Management. Zero (0) credit.

The student will acquaint himself with general field of administration and in addition, according to the individual students' interest, he will be able to intensify his knowledge in any one of the following subtopics: Health Financing, Health Care Organization or Quality, and Patterns of Health Care Utilization.

ADSS 6551 - Legal Aspects in Medicine. Six and a half (6.5) credits.

This course provides the medical student an opportunity to learn the laws and jurisprudence which affects the practice of medicine as well as to learn the importance of informed consent and new medico legal trends in medicine such as abortion, family planning, euthanasia, etc.

ADSS 6555 - Legislative Process for Health Professionals. Three (3) credits.

This course introduces students to legislative process of Puerto Rico and United States as it is state in both Constitutions. Students will develop skills to analyze and evaluate health legislation addressing public health needs and determinants of health at local and federal level. Ethical issues will be addressed within each of the topics discussed. Through the use of diverse resources such as information in web sites of the Puerto Rico Legislative Services Office and the United State Congress, visits to the Puerto Rico Legislature public hearings, examine evidence base reports and articles, student will research about public health legislation. After completing this course, the student will be able to work on draft papers or legal report related to actual public health issues important in the island that improve the health and welfare of the population.

ADSS 6568 - Special Projects. Three (3) credits.

Discussion of administrative problems in the field of Public Health. Emphasis is given to hospital problems.

ADSS 6571 - Budgeting Theories and Practices. Three (3) credits. Pre-requisite: SALP 6006.

Modern budgeting concepts as instruments for the planning and programming of private and public activities in the health sector. Budgeting theories are studied and applied to the practice of designing and administering a budget.

ADSS 6576 - Comparative Health Systems. Three (3) credits.

Health system in our contemporary state as basic source of comparison and study. Analysis of the ecology of the sector with special emphasis in the relation of bureaucratic models, political, and economic systems. The course includes the study of bureaucratic and political models in development stage, with special attention given to the role of health administration in the promotion and development of emergent health systems.

ADSS 6579 - Organizational Behavior. Three (3) credits. Pre-requisites: ADSS 6525.

The course is designed for students in the Program of Health Services Administration. This course examines the nature and dynamics of organizational behavior affecting the health services administrator and other individuals. Aims to students' awareness of their own behavior and how it can affect their work within health services organizations. Behavioral patterns, organizational design, organizational development and assessment are studied in order to guide students in the decision-making process within health organizations and their role as health services administrators. At the end of the course the students will evaluate the importance of individuals characteristics of the members of the organizations and the impact in the performance of the organizations in the healthcare sector. The instructional mode includes lectures, case discussion, oral presentations and web interactions.

ADSS 6580 - Health and Development. Three (3) credits.

Structural innovations in the health sector facing the changing needs and opportunities of developing countries. Is based on the assumption that in a society with accelerated social change innovation goes further than the mere satisfaction of the additive growth of the society. To preserve its relevance the health sector must keep open the real innovative change. The economic and social structural change that occurs in the development process and the effect of this process on the health of the population is discussed.

ADSS 6581 - Labor Relations. Two to three (2-3) credits.

Comprehensive overview of the nature, origin, development, and dynamics of the labor movement, the important legal aspects and regulations that govern the labor relations; the structures and processes to channel those of unions and employers to deal in each one of those stages with special emphasis on the aspects of collective bargaining.

ADSS 6582 - Personnel Administration. Two to three (2-3) credits.

Manpower development and direction are viewed as the focal point of personnel administration. Personnel administration concepts are correlated with general administration generally in order to have a complete overview of the personnel administration spectrum.

ADSS 6583 - Legal Aspects in Health Services. Three (3) credits. Pre-requisites: ADSS 6525.

This course is designed to provide a thorough insight of the ever-expanding interface between the law and health services administration in the civil and administrative realms focusing in risk management to the health service administration students. The course familiarizes the student with the application of legislation and regulations both in the commonwealth as well as the federal scenario. Lectures will be held covering those topics of major relevance and interest to the practice of health care services. Ethical issues will be attended as part of every topic discussed in class. At the end of the course, the student will be able to interpret the basic legal principle affecting how healthcare services operate upon health policy issues.

ADSS 6584 - Health Politics and Policy. Three (3) credits. Pre-requisites: SALP 6006.

This course is designed to introduce students to health care policy and its impact on the organization, financing and delivery of health services. The students will examine the role of major actors and institutions, including government, providers, consumers and insurers, as well as professional societies, in shaping and influencing

health policy. Topics are presented from the perspective of the health care environment of Puerto Rico and the United States employing a comparative approach. The policy decision process at different levels will be discussed using political, social and economic frameworks. Through interactive lectures, documentaries and group discussions, students learn specific policy issues that are currently being debated and are of major relevance in the health care environment.

ADSS 6585 - Health Economics. Three (3) credits. Pre-requisite: ADSS 6525.

This course has the main purpose of providing the student with analytical tools of economic theory to better understand the economic forces shaping the health care sector. Emphasis is given to issues related to demand, and supply of health services cost containment measures, the role of health insurance, provider reimbursement and theories regarding health care cost inflation.

ADSS 6586 - Health Care Delivery Systems. Three (3) credits. Pre-requisite: ADSS 6525.

This course has as purpose to carry out a critical analysis of the different systems and models of health services delivery, particularly in Puerto Rico and in the United States. It discusses the organizations of government and private health services from a historical perspective and the same one is compared with the current state of these systems, especially by the light of the Healthcare Reform of Puerto Rico and the United States. Also analyzes, these systems of health in function of generally accepted approaches of accessibility, quality, effectiveness, efficiency and integrity. The course is designed for students in the Program of Health Services Administration. At the end of the course the students acquire a critical knowledge of the health systems for analysis and evaluation considering the application of the conceptual models. The instructional mode includes lectures, case discussion, oral presentations and team work experiences.

ADSS 6587 - Health Systems II. Two (2) credits. Pre-requisite: ADSS 6586.

Students spend most of the time in a health institution, service or program to become acquainted with its day-to-day operation. May be considered a pre-residency, a bridge between the theoretical framework and the intensive work experience to be provided in the residency.

ADSS 6589 - Bioethics in Healthcare Management. One (1) credit. Pre-requisite: ADSS 6583.

The purpose of this course is to provide the student a framework for addressing bioethical issues in business, medicine and health care delivery with emphasis on the role of the manager. The course approaches bioethical issues in health care from societal, institutional and individual, and clinical perspectives. To achieve the objectives of the course the student will analyze case studies from the medical, scientific, moral and socioeconomic bases and examine the decision processes involved. Students will be encouraged to use the available institutional resources in bioethics, located at The Medical Library of The Medical Sciences Campus. There will be case studies discussion, guest lectures, and final, short-essay exam designed to explore the concepts.

ADSS 6590 - Administrative Aspects in Laboratory Clinics. Two (2) credits.

Health Services Administration Theory is presented to provide student with basic fundamentals of administrative aspects of health care. Particular administrative aspects of laboratory clinics are viewed, including systems theory, quality assurance, legal aspects, and the administrative process in general.

ADSS 6591 - Quantitative Decision-Making for Health Services Administration I. Four (4) credits.

This course introduces Health Services Administration graduate students to statistical methods for decision making. Topics covered will be Operation Research, Break-Even Analysis, Probability Theory, Random Variables, Cybernetic and Statistical Process Control, Inventory Analysis, and Sampling. The applications will be on the management and control of health services. A user-friendly statistical program will be used for all calculations and estimations in order to emphasize intuitive reasoning. Students will have opportunity to work in teams.

ADSS 6592 - Quantitative Decision-Making for Health Services Administration II. Four (4) credits. Pre-requisite: ADSS 6591 or BIOE 6525.

Statistical inference applied to the Health Services Administration; operation research methods like queueing theory and linear programming will be introduced. Emphasis is on application using microcomputer software programs.

ADSS 6593 - Capstone Seminar. Three (3) credits. Pre-requisites: All the required courses for the master degree up to the First Trimester of the Second Year of Studies.

This course is designed to integrate the coursework covered in previous trimesters. The course enables students to build linkages areas of study and provides a setting for testing their own level of knowledge and analytical skills, as well as identifying the need for tutoring and advising in specific areas. The case method is used as the primary teaching tool with guidelines for completing the assignments. Grading System: Passed (P), Not Passed (NP)

ADSS 6594 - Public Health Program Planning and Evaluation. Four (4) credits. Pre-requisites: ADSS 6525, SALP 6006.

Through this course, students will gain an understanding of how to design public health programs and to evaluate their effectiveness. Interactive lectures, class discussions and applied exercises will be used to examine mainstream planning theories concepts, models and techniques, which are essential for public health service management. Emphasis is placed on community need assessment as the foundation for the public health planning process. Planning is viewed as a dynamic and continuous process aimed at the implementation of programs and projects necessary to achieve goal and objectives established in policies adopted by communities or organizations. It is expected that students will apply the acquired knowledge to elaborate a program plan with its evaluation plan included.

ADSS 6595 - Mental Health Care Utilization. Three (3) credits.

Different conceptualizations about mental health and their prevention are discussed. Specifically, we analyze different mental health problems prevalent in our society. The need for preventive programs and factors that facilitate or impede the utilization of available services are examined.

ADSS 6597 - Administrative Residency. Zero (0) credits. Pre-requisites: All the required courses of the Health Services Administration.

The course is a coordinated planned full-time field practicum, designed to integrate competencies to real world scenarios in the healthcare industry. In 800 hours conducted during daytime work hours fulltime, students attend an individually designed program in healthcare facilities where they are expected to become immersed in their daily operation and management. Total hours are divided into two programmed experiences. First part consists of a minimum of 200 hours in the summer session of the first academic year. Residents may rotate in different ambulatory care facilities, insurance companies, consulting firms and other healthcare related organizations. Second part consists of the remaining 600 required hours during the third trimester of the second academic year. In this part, students must complete **a minimum of 267 hours (33%)** in a general hospital. Participation in health service administration special trainings can be accredited toward residency hours. A preceptor will supervise the resident.

ADSS 6598 - Information Systems in Health Services Administration. Three (3) credits. Pre-requisites: ADSS 6525.

Basic concepts required to design and operate an information system.

ADSS 6600 - Management of Healthcare Organizations. Three (3) credits. Pre-requisites: ADSS 6525.

This course is designed to serve as an integrative experience of the managerial decision-making process, as viewed through different management-oriented courses of the Health Services Administration Curriculum. The course follows a lecture and discussion format in which the student is confronted with the managerial decision-making process in real world situations, brought by invited speakers. This experience is further strengthened by site visits to selected organizations that serve as a direct observation experience for the topic areas: Organized Integrated Delivery Systems; The Role of Managed Care in Different Reform Proposals; Issues of Health Care Financing, and Leadership Through Human, Capital and Information Resources Management.

ADSS 6606 - Capstone Seminar in Health Services Administration. Three (3) credits. Pre-requisites: All the required courses except ADSS 6610, ADSS 6609, ADSS 6535.

The Capstone Seminar in Health Services Administration is designed to provide the Health Services Administration student an integrative learning experience in the final trimester of the on-Campus academic experience. The course enables students to build linkages between the different curriculum content areas, by testing their level of knowledge and analytical skills through seminar and research as the main instructional strategies. Through the course students will apply team-effectiveness skills during the analysis of knowledge content areas, professional competencies, and research production.

ADSS 6607 - Health Care Cost Accounting. Three (3) credits. Pre-requisites: ADSS 6585, ADSS 6516. Co-requisite: ADSS 6586.

This course provides the student enrolled in the Health Services Administration Program the necessary analytical tools to determine the cost of the different components that intervene in the delivery of health services. The student will acquire skills in determining the human, technical, and capital resources that comprise the production of health services. These skills are of special importance in the new health care scenario, in which resources are limited, and managed care arrangements rely heavily cost data to meet extensive demands for multiple health priorities. The course will be taught through lectures and discussion.

ADSS 6609 - Health Care Financial Management. Three (3) credits. Pre-requisites: ADSS 6607.

This course is designed to develop health care financial management competencies in the Health Services Administration student, to be applied in different health care settings. The course focuses specifically on investment and financing decisions in the health care corporate and institutional levels. The course includes topics in Capital Budgeting, Uses of Capital Financing, Evaluation of Investment Projects, Financial Reporting and Statement Analysis, Rate-Setting and Negotiation, and The Effect of Managed Care on Financial Management. The course will be offered principally through lectures and class discussions.

ADSS 6610 - Principles of Health Insurance and Managed Care. Three (3) credits. Pre-requisites: ADSS 6525.

The course is designed for students seeking a working knowledge of Health Insurance and Managed Care at a time when The United States and Puerto Rico are facing a major Health Care Reform. Students will acquire a working knowledge of managed care concepts as it relates to the Puerto Rico and United States health insurance industry. Upon the completion of the course, students will be able to apply the concepts of Managed Care to their work environment and evaluate the performance and outcomes of health care organizations.

ADSS 6620 - Advanced Public Health Policy Analysis. Three (3) credits. Pre-requisites: ADSS 6584.

Through this course, students will develop critical analysis skills to formulate, implement and evaluate health policies and programs at the organizational and system level. Interactive lectures, group discussions and case studies will be used to analyze and evaluate the legislation and regulation processes of current health reforms of local and federal agencies from the perspective of Puerto Rico and the United States health policies. Students will be able to analyze the evidence for policy interventions, write briefs for proposed

legislation, give testimony to inform policy decisions, and analyze the ethical challenges in policy analysis. Students will demonstrate practical skills in policy analysis and advocacy to change public health policies, considering the creation of a promotion strategy that involves the media, the community, and other organizations.

ADSS 6621 - Financial Resources Management for Public Health Organizations. Three (3) credits.

This course introduces the basic concepts of budgeting and fiscal management in public health organizations. The student will be introduced to the planning program budgets and the management of income and expenditure, through responsible implementation of policies, practices and decisions, in order to achieve unit objectives effectively and efficiently in public health organizations. Using interactive lecture and group discussions students will employ budgeting and fiscal management techniques in order to develop decision-making skills that will result in sustainable public health organizations. Case studies will be used to practice these techniques, emphasizing budgeting and financial skills. Students will be able to apply financial basic concepts in public health management scenarios.

ADSS 6625 - Human Resources Management. Four (4) credits. Pre-requisite: ADSS 6525.

The course is designed for students undergoing graduate-level training to assume executive positions in the health care field. The course provides the student the opportunity to become familiarized with the managerial and labor legislation activities in the field of Human Resources Management and Labor Relations, and emphasizes the application of concepts and methods from this field to the healthcare scenario. It also has the purpose of generating Interpersonal and organizational skills that are critical to Human Resources Management. The course is organized in four (4) areas: 1) Concepts, Scope, and Approach to Human Resources Management, 2) Methods, Roles, and Activities in Human Resources Management, 3) The Dynamic Nature of the Labor Relations, 4) Interpersonal and Organizational Skills. The teaching methodology includes lectures, group discussions, student presentations, and practice exercises.

ADSS 6705 - Applied Research Seminar. Three (3) credits. Pre-requisites: All the required courses for the master degree except ADSS 6597. Co-requisite: ADSS 6597.

The Applied Research Seminar is a practicum investigation, focusing on particular issues and situations impacting managerial decision making in health services organizations. Students work closely with a faculty member and the residency preceptor in formulating and implementing the study. This course provides the students with the opportunity to apply the managerial skills obtained in previous courses to a research problem in their residency setting; In turn health organizations benefit from the outcomes of the research process.

ADSS 8005 - Organizational and Administrative Elements of Health Services. Three (3) credits.

This course provides a comprehensive introduction to theories and applications of organization and management in the Public Health field. The student will acquire skills that are necessary to operate effectively in normative positions at health agencies, institutions, and programs. The course focuses on subject matter related to Management, Budgeting Strategic Planning, Public Policy Making, and Community Participation. It also addresses current regulation in the health field, the design and evaluation of programs, and the monitoring of the quality of services. The course is presented mainly in a lecture format, and is augmented with case studies and guest lectures related to current health conditions in Puerto Rico.

ADSS 8006 - Health Law. Three (3) credits.

This course provides the practical knowledge to identify legal issues and to understand the legal ramifications of strategic decisions and the role of legal systems in health policy and health care systems. An overview of the PR and the US legal systems, population health and public health, access to health care, diverse regulations in the areas of contracts, Medicare and Medicaid issues, non-discrimination, quality of care, conflict of interest, and PPACA versus AHA will be discussed. Other topics such as reproduction, birth and life

and death decisions, and ethics will be discussed. Learning activities include interactive lectures, case studies and class discussion, and a written exam. Lastly, students will discuss the components of the health care system within a legal framework that will contribute to the decision-making process as health professionals.

ADSS 8007 - Health Policy. Three (3) credits. Pre-requisites: ADSS 8005.

This course is designed to provide students with the competencies to understand health policy in the health sector. The course provides a dual approach to understanding the role of government leadership in formulating and implementing public health policy and the participation of relevant community, institutional and professional actors in shaping the direction and implementation of policy, through the design, financing, and delivery of health services. Through lectures, group discussions and real-life case discussions, students will examine and discuss relevant literature in the health policy field, specifically, and health services and public health fields, in general. The course provides an applied approach to the examination of policy options through a policy memo, emphasizing policy decision making under time constraints; and a policy paper designed to compare major health system reform initiatives. It emphasizes the consumption of the results of applied research to enable evidence-based policy decisions.

ADSS 8008 - Health Systems Planning and Strategic Management. Three (3) credits. Pre-requisites: ADSS 8011.

This course is targeted to doctoral students. The course comprehensively examines health systems planning, strategic planning and management related to health care organizations at the global, regional, national and local service levels. The course content builds upon the fundamental models and methods of planning and management, with special attention paid to the problems and challenges specific to the health care industry from a systemic and strategic analysis standpoint. Emphasis is given to strategic thinking and analysis, environmental analysis, strategy formulation analysis and evaluation of alternatives and strategic choice. In-depth emphasis is also given to scenario construction and planning models and to strategy identification, evaluation and selection as applied to public health and private sector issues. Planning models and principles will be applied to public health and private sector issues.

ADSS 8009 - Quality Management and Outcomes in Health Systems. Three (3) credits.

This course introduces students the main concepts associated with health systems quality and outcomes measurement, highlighting the relevance, measurement, availability and development issues of health systems performance indicators. It describes examples of the most common indicators to assess health system performance in terms of achieving the health and well-being of the population by endorsing equitable healthcare. Students will be able to be familiar with, explain, and be able to appraise the quality and outcomes of a health system or of one of its components. Instructional strategies will be interactive lectures, journal club discussion and independent study. At the end of course, students will demonstrate their ability to identify and discuss the status of the health system's quality and outcomes in relation of a population group or healthcare sector.

ADSS 8010 - Organizational Development and Change in Health Services Organizations. Three (3) credits. Pre-requisites: ADSS 8005.

Organizations in the health service sector use organizational development strategies and interventions to enhance organizational performance. This course provides an opportunity to gain a more advanced appreciation of organizational development and change in the context of an integrated and complex environment that places new demands on accountability and innovative practice in health services organizations. Through lectures, case discussions, oral presentations and Web interactions the student develops the skills to design and facilitate strategic organizational development interventions in the health services sector. At the end of the course, students will be able to demonstrate their ability to apply knowledge of organizational development theory and practice in the appraisal of organizational changes or transformations, and their impact on the performance in the health system.

ADSS 8011 – Health Systems and Policy. Three (3) credits.

This course has the purpose of providing students with a comprehensive understanding of health systems, their organization and operation; and how politics and policy shape decisions on health priorities, stakeholder participation, and resource allocation. The course employs a combination of history, theory, and data to study health systems, the delivery of health services, and health policy, with a specific emphasis on Puerto Rico and the United States. Also, the course exposes students to models that are commonly used for the examination of policy options. A comparison of international health systems is incorporated to expand the student's view of how health systems operate within the context of different countries. The objective of the course will be achieved through interactive lectures, class discussions, and anecdotal pedagogy.

ADSS 8105 – Applied Public Health Leadership Seminar. Two (2) credits.

The purpose of the course is to distinguish principles of leadership to public health practice. The students will evaluate leadership values and skills relevant to public health practice for performing in leadership positions and critically analyze leadership applications in public health practice. It is expected that the students will maximize their leadership skills by a process of feedback, reflection, and practice. The course includes self-assessment exercises, role-play and group discussion exercises among others. During the course, students will recognize one's own strengths and weaknesses in leadership skills relevant to public health practice and will create a personal leadership action plan.

ADSS 8205 - Financial Management in Health Systems. Three (3) credits. Pre-requisites: ADSS 8005.

This course introduces students through interactive lectures, workshops, group discussion, and case studies to the theory of financial management for healthcare systems. The corporate finance theory and its application to healthcare including budgeting and cost of capital, leasing and asset financing, financial distress and agency theory are discussed. Students will learn about the key financial activities such as financial statement analysis, budget planning, projects financial evaluation, financing decision making, and cost analysis. Students are expected to be able to perform financial analyses, recommend courses of actions in public and private healthcare systems, present their results and recommendations based on the theory discussed in class.

ADSS 8206 - Economic Analysis for Health Systems Management. Three (3) credits.

This course describes and examines the various components of the Puerto Rico health care system within and economic framework. The relationship between health, human capital and economic development are discussed. It conceptualizes health as an investment in human capital, as a function of social and economic determinants, health services, private and public financing, health care markets and government policies using economic theory, tools and real-world examples. The course will discuss current public health policies related to the economic structure of healthcare system, its financing, the markets for health care services, the role of government, the impact of innovation and incentives for quality. Finally, students will be able to address the role of economic evaluation methods to improve the efficiency of the health care system in providing services and producing health for all societies.

ADSS 8305 - Health Services Research. Three (3) credits. Pre-requisites: BIOE 8005, EPID 8002.

This course describes how to apply research methods and address recurring issues in health services research. The purpose is to enable students to explain and use research methods. It presents the methods of research in health services organizations and systems, including health services research conceptualization, study design, sampling, measurement, data analysis and reporting, and research ethics. Through lectures, group discussions and independent study the course provides an overview of strategies used in the literature to translate research into practice and policy. By the end of course, the students will be able to outline their research question, provide appropriate justification for conducting additional research in this area, review the relevant literature, and formulate a study design for a research proposal.

ADSS 8306 - Dissertation Proposal in Health Systems Analysis and Management. Three (3) credits.
Pre-requisites: Graduate student must approved comprehensive exams.

The course is an Integrative Learning Experience for doctoral students of Health Systems Analysis and Management specialty. In this course, the student will demonstrate mastery in the acquired competencies by designing a research proposal that represents a theoretical and methodological contribution to influence public health practice, programs, policies or systems. The student presents the problem, research questions, and study methods as a proposal for approval of the Dissertation Committee. The dissertation can be based on program evaluation, policy analysis, development of an intervention, design, and implementation of a public health program, development of a legislative proposal, or a traditional research dissertation from a public health perspective. The student will present in writing and orally a research proposal applying theoretical and methodological principles of public health.

ADSS 8307 - Health Services Evaluation. Three (3) credits. Pre-requisites: BIOE 8005, EPID 8002.

This course introduces students to the role of evaluation in program management, with an emphasis on the types of evaluation questions that are appropriate at different stages of program history and the methods that can be applied to answer them. Students will recognize strengths and limitations of evaluation methods and will understand their applicability for decision-making, contingent on the stage of program implementation as well as on political, time ethical, and fiscal constraints. Using interactive lectures and group discussions, students are expected to understand the basic methodological tools of epidemiology and biostatistics to access the strengths and limitations of the different evaluation design and to critically read the research literature. By the end of the course, students will be able to justify a need for an external evaluation and prepare a request for applications for an evaluation of a health program or service.

ADSS 8308 - Practicum in Health Systems Analysis and Management. Zero (0) credits. Pre-requisites: Graduate student must approved comprehensive exams.

This course expose the student to the professional experience of integrating public health knowledge and skills in a real scenario. The doctoral field experience of 200 hours is required of all students, regardless of prior work experience. The practicum will be an opportunity to work during daytime hours with a professional practice leader in a public or private agency or public health institution in the community. The student will be assigned specific projects designed to have the main responsibility, among with a teamwork in the organization. The result will be a product in writing and other presentation form, which is valuable for the organization. Practicum may be carried out in Puerto Rico, the Caribbean, Latin America, United States or internationally. Grading System: Passed (P), Fail (F)

ADSS 8401- Doctoral Dissertation in Health Systems Analysis and Management. Three (3) credits.
Pre-requisites: ADSS 8306.

This course is an Integrative Learning Experience where doctoral students of Health Systems Analysis and Management specialty conclude the research dissertation. In this course, the student will demonstrate mastery in foundational and specialty competencies to generate a product designed to influence public health practice, programs, policies or systems. The students complete the implementation of a research proposal. The student will develop a research proposal that represents a theoretical and methodological contribution to influence public health practice, programs, policies or systems in the specialty area. Students will work under the guidance of the Doctoral Dissertation Committee. At the end of the course, students are expected to present the results of their research in writing and orally.

BIET 6005 - Foundations of Bioethics. Three (3) credits.

The course introduces the student to ethics as a philosophical discipline that studies moral life from the values perspective, moral duties and principles. Ethics and moral concepts, genesis of moral phenomenon and the relation between moral experiences and ethical theories are examined through the discussion of the most important theories in the western tradition. The second part of this course introduces bioethics as an ethic

applied to the field of life sciences and health professions. Also, some of the most important current theoretical paradigms are studied. The student is expected to apply studied theories to critical analysis and discussion of cases related to public health and health services delivery.

BIET 6009 - Bioethics in Research. Three (3) credits. Pre-requisites: BIET 6005.

The course introduces graduate students into the analysis and value of scientific research and its dimensions, and in the development of value judgments to correct or improve scientific activity with human beings as research subjects. Historical antecedents of ethics in scientific research, resources for the protection of research subjects and human research subject protection committees are discussed. It emphasizes the concept of scientific integrity as the investigator's commitment with honesty and correspondence towards the research subjects. The course design is mainly based on the inductive method and activities that promote active learning and critical analysis. Instructional methods such as lectures, case study analysis, group exercises and axiological evaluation of research protocols will be used. Upon completing the course, students will be able to apply bioethical considerations to the critical analysis of biomedical and biosocial research proposals.

BIET 6015 - Clinical Bioethics. Three (3) credits. Co-requisites: BIET 6005.

The course initiates the graduate student in the theory and methods of bioethics in clinical contexts. Special attention will be given to the professional-patient relationship and ethical balance in the professional-patient decision making process related to patient's health and well-being. The following concepts are examined: principles of bioethics in clinical contexts, clinical judgment and uncertainty in decision making, patient's preferences from diverse perspectives, informed consent, truth-telling communication, religious and cultural diversity, patient's quality of life, process of clinical bioethical analysis, among others. Course methodology will promote critical construction of knowledge through case and socialized discussions and utilizing exploration, conceptualization and application strategy.

BIET 6025 - Social Organizational Bioethics. Three (3) credits. Pre-requisites: BIET 6005.

The course introduces the student to decisions at the level of the macrobioethics in the field of the social, organizational and public health ethics. Organizational ethics is identified as a point of departure to discuss own matters of the commercial and professional ethics, and social bioethics. The most important ethical challenges that face the field of the public health will be analyzed critically from a social bioethics perspective: the civil ethics in the western societies, the health system in Puerto Rico, the ecology and environment, and the populations in conditions of vulnerability, among others. The course learning strategies are based to promote the active learning and the critical analysis, such as, problem based learning and the strategies of exploration, conceptualization, and application. At the end of the course is expected that the student develop a proposal to establish an organizational ethics program in a public health setting.

BIET 6035 - Teaching Methods in Bioethics. One (1) credit. Pre-requisites: BIET 6005.

The course is designed for graduate students of Health Professions. Students will have the opportunity to apply theoretical concepts and professional experience to the design of learning experiences in bioethics. The components of the systematic planning of instruction applied to bioethics content will be discussed and appropriate models for teaching bioethics will be critically analyzed. The course will promote active learning among students through seminars, oral reports and presentations, and the development of a learning experience in bioethics. Upon course completion, students are expected to apply the theoretical content studied in bioethics basic courses to design a short course of learning activity that promotes the development of the bioethics competency in the learner and that is useful in their professional scenario/context. Grading System: Passed (P), Not Passed (NP)

BIET 6037 - Special Topics in Bioethics. Three (3) credits. Pre-requisites: BIET 6005.

The course examines current ethical issues that emerge from developments in biotechnology and biomedics, and from the complexity of contemporary society. Emergent topics in the bioethics field related to global

bioethics, ethics at the beginning and the end of life, bioethics and genetics, social construction of human suffering, among others, will be presented. The course will be developed through discussion seminars and critical analysis of special topics investigated and presented by students in team work groups. Also, lectures and discussions will be presented by invited professors. During the course, student is expected to integrate and apply the theories presented in previous courses to the discussion and critical analysis of the topics.

BIET 6105 - Research Seminar in Bioethics. Three (3) credits. Pre-requisites: BIET 6005, BIET 6009, BIET 6015, BIET 6025.

The course provides an integrative experience in which the students can apply concepts acquired in bioethics theoretical courses in order to develop a research project or a practicum experience in a health services institution. The students will select a topic relevant to bioethics, to conduct a research or a service project with publishable results. Project could be on topics of student's interests, related to organizational ethics, clinical bioethics, social bioethics, research ethics, intellectual foundations of ethics, and others. The course consists of seminars, independent study, and presentations of student's projects. Students will conduct their projects with the assistance and supervision of a professor expert in the topic. At the end of the course, the student will present their projects orally and submit a written document that can be published.

BIOE 6525 - Statistical Analysis. Five (5) credits.

The purpose of the course is to provide participants with tools to identify, design, apply and explain the most appropriate qualitative, quantitative and mixed statistical methods for investigation of various Public Health issues at multiple (individual, group, organization, community and population) levels. The main topics of the course are the following: linear regression models, stratified analysis, logistic regression model, Poisson regression model and survival analysis. To facilitate statistical calculations, some statistical software will be used, such as STATA or SPSS. The course will be offered face-to-face, through interactive lectures, practical exercises, and discussions. At the end of the course, the student will be trained for the analysis and interpretation of data related to different epidemiological designs.

BIOE 6526 - Applied Statistic Methods in Epidemiology. Three (3) credits. Pre-requisites: BIOE 6525, EPID 6523. Co-requisite: SALP 6250.

This course, offered through the face-to-face modality, is intended for students enrolled in the Master's degree Program in Public Health with a specialty in epidemiology. The course will provide the statistical basis for carrying out the inferential analysis of data obtained from different epidemiologic designs using the STATA version 15 software. Through interactive lectures, group discussions, practical learning exercises, and case studies, students will be exposed to the following topics: sample size estimation and statistical power, analysis of variance, correlation and linear regression, logistic regression, Poisson regression, and Cox regression or proportional hazards regression. Finally, students will use the analytical skills acquired in the course to explain the behavior of public health problems in the population, essential information for public health planning and policy.

BIOE 6535 - Statistical Inference. Four (4) credits. Pre-requisite: BIOE 6525 or equivalent.

This course is intended to develop skills to applied inference statistics in the field of public health. Through interactive lectures and group discussion, students will learn the main topics of the course are the following: evaluation of statistical hypotheses to compare two independent samples, analysis of categorical data, analysis of variance for fixed and random effects, multiple comparisons, stratified analysis and analysis of longitudinal studies. In-class practical exercises will be use to implement inferential statistical methods on database using software like STATA, or other open source software. Students are expected to select and apply appropriate inference statistical in public health issue analysis.

BIOE 6537 - Applied Nonparametric Statistics. Three (3) credits. Pre-requisites: BIOE 6525.

This course introduces students to the wide range of useful nonparametric methods applied to public health field. Some of those methods are theoretical, others are computational using software like STATA, or other open-source software. Through interactive lectures and group discussions, students will learn notation of nonparametric inference, empirical probability distribution, Jackknife and Bootstrap methods, Hypothesis testing, Rank test, Friedman test, Mann-Whitney U-test, Kruskal-Wallis test, randomness test, Spearman Rank-order correlation coefficient, Goodness-of-fit and nonparametric regression. This course will consider a modern and classical view of nonparametric statistics. Students are expected to select and apply appropriate non-parametric statistics in public health issue analysis.

BIOE 6545 - Introduction to Sampling Theory. Three (3) credits. Pre-requisite: BIOE 6535.

The purpose of the course is to provide participants with tools to identify, design, apply and explain the most appropriate sampling and estimation methods in various Public Health issues at multiple (individual, group, organization, community, and population) levels. The course explores survey design and properties of estimators for the main design components used in probability sample: simple, systematic, stratified and cluster sampling. To facilitate sampling design, analysis and graphical illustrations, software will be used, such as: R and QGIS, or other open—source software program. Quality improvement methods will be presented. The course will be offered onsite through interactive lectures, practical exercises, and discussions. At the end of the course, the students will be able to analyze survey data, and gain experience in dealing with graphical illustrations, nonresponse and other challenges.

BIOE 6555 - Regression and Correlation Analysis. Three (3) credits. Pre-requisites: BIOE 6535.

This course aims to study the statistical association between variables with the purpose to evaluate the relationship between the expected value of a quantitative random variable and a group of predictor variables, using a linear equation. Through interactive lectures and group discussions, students will discuss linear regression models and generalized linear models, emphasizing in criteria for their model selection and validation, estimation of parameters by the maximum likelihood method, evaluation of potential confusion variables and their interaction terms, and estimation of the magnitude of the association through the odds ratio and the relative risk. Practical exercises will be use to implement regression models on database using STATA, or other open source statistic software. Students are expected to select and apply appropriate regression models in public health issue analysis.

BIOE 6575 - Basic Medical Statistic. Four (4) credits.

Study of statistical concepts and methods of current application in medical research, that enables the student to critically read medical literature and conduct and interpret common statistical tests. Reading, tutoring, and discussion sessions.

BIOE 6605 - Statistical Computing Applied to Public Health. Four (4) credits. Pre-requisites: BIOE 6525, BIOE 6535.

This course exposes the students to develop your ability to perform statistical computing in the analysis of public health databases. Through interactive lecture, and group discussion, the course will cover programming topics vectorization, data input and output, object-oriented programming, statistical and computational methods such as visualization, optimization, simulation, resampling, classification, and modern statistical methods. Practical exercises will be use to implement statistical computing using software like R, STATA, or other open source software. Students are expected to implement statistical methods using a workable software with diverse data structures.

BIOE 6615 - Applications of Epi-Info. Two (2) credits. Pre-requisite: BIOE 6525. Co-requisite: EPID 6523.

The course is designed for health professionals with interest in the analysis of epidemiologic data with the computer package Epi-Info. Themes to be covered include Creations of Questionnaires, Protection of Data

Against Errors by Setting Up Ranges and Legal Values, Data Entry and Statistical Analysis. The student is expected to develop the skills to create databases and analyze data derived from epidemiologic study designs using the computer package Epi-Info. The course will be offered as a workshop where each session features a discussion of theory and computer laboratory exercises.

BIOE 8005 - Advanced Methods in Biostatistics. Three (3) credits. Pre-requisite: BIOE 6535 or equivalent.

The purpose of the course is to provide participants with tools to identify, design, apply and explain the most appropriate qualitative, quantitative and mixed statistical methods for investigation of various Public Health issues at multiple (individual, group, organization, community and population) levels. The main topics of the course are the following: linear regression models, stratified analysis, logistic regression model, Poisson regression model and survival analysis. To facilitate statistical calculations, some statistical software will be used, such as STATA or SPSS. The course will be offered face-to-face, through interactive lectures, practical exercises, and discussions. At the end of the course, the student will be trained for the analysis and interpretation of data related to different epidemiological designs.

CISO 6099 - Special Topics in Social Sciences. One to six (1-6) credit(s).

This course will be offered by a special arrangement where the student agrees to carry out a study or research project or an independent study with a faculty member of the Social Sciences Unit. It may include the following activities: readings, literature review, field work, etc. A minimum of 24 hours are required for each academic credit, to be determined according to the type of project proposed by the student and the average time that it will require. It will be counted as an elective course.

CISO 6500 - Socio Cultural Aspects. Three (3) credits.

This course is designed for students in the masters programs in Hospital Administration and Public Health. It offers a general overview of the nature and functioning of the social system from the health systems perspective. The socio-cultural and psychological dimension of health conduct will be explored. The systems of health such as the hospital health services systems, etc., will be examined from a sociological and psychosocial perspective. This course is offered during the second trimester.

CISO 6501 - Social Structure and Social Change. Six (6) credits.

This course offers an intense and systematic analysis of the various theories of the social structures and the social processes underlying this structure. It emphasizes the systemic character of the social order and its interdependent character. The course also examines the focuses and explanatory theories of social change and analysis of various monograph of divergent theoretical orientations. This course seeks to make the student conscious of the need to analyze social facts in the light of the social context in which they originate. It will expose them to the necessary theoretical elements that will enable them to examine the dynamics of social change in its historical development. This course is designed for any graduate student in the School of Public Health. It is offered during the third trimester.

CISO 6505 - Social Psychology. Four (4) credits.

This course will intensively explore the mayor psychosocial phenomena of group behavior, most particularly those associated with change and communication, particularly processes such as motivation, perception, and cognition. The seminar utilizes the group as a vehicle for instruction. The student through this process becomes an object and subject of learning. This is designed for any graduate student in the School of Public Health. Exercise of group dynamics and conferences will be the pedagogical techniques of the course. The student will be required to present a written report at the end of the semester.

CISO 6506 - Social Environment. Four (4) credits.

This course examines the processes of human in interaction with the environment from an ecological perspective. The causes and effects of the rupture of human's ecological equilibrium are discussed emphasizing the phenomenon of human growth.

CISO 6508 - Social Anthropology. Four (4) credits.

Study of the fundamental of social dynamics and structure with special emphasis in the family and the community. Study of the values, norms, and behavioral patterns as related to health and nutrition as factors of directed social change, are also studied. The course meets four hours a week.

CISO 6538 - Culture, Society, and Complex Organizations. Two (2) credits.

The main objective of this course is to offer academic experience leading to an understanding of social, cultural, and psychological variables which affect the integration of the health organizations to the community. The course will cover the following areas: circumstances by which the organization integrates with sociocultural process of society; interorganizational variables, such as, organizational structure, complexity, communication, etc. some of the topics discussed are: Interorganizational Level; Structural Integration of the Organization to the Society; Communication within the Organization, The Community and the Clients; Decision Making Process, Mechanisms to Detect Needs and Social Indicators.

CISO 6542 - Mental Health in Puerto Rico Culture. Three (3) credits.

This course is designed for graduate students in the Master Program in Public Health Education. It will discuss some definitions, uses and abuses of the term "mental health", common notions and perceptions of the Puerto Rico concerning "mental health and mental illness" and some theoretical models that offer a vision of the health individual. Upon analyzing some of the criteria that have been utilized in the attempt to define mental health, the applications for our culture will be discussed. Some indicators of mental health will be identified. The emphasis will be upon identifying the interrelation of cultural factors at level of the family, community, and society that significantly influence the mental or emotional health of the individual. The course will be offered in the third semester and is programmed for three hours of conference and/or group discussion. The student will carry out a research project that will elaborate upon one of the indicators of mental health.

CISO 6545 - Women: A Biosocial Perspective. Three (3) credits.

This course is oriented to all graduate students at the Medical Sciences Campus. It provides an overview of the interrelationship between social and health aspects of contemporary woman, and how it affects their present situation. Emphasis is placed on women in Puerto Rico. It includes the following topics: The Social Construction of Sexual Identity, Theories of Women's Status and Roles, Gender as a Social Stratifier, Existing Differences in Female Subordination, Female Sexuality, Interrelationship between Social and Health Aspects by Age, Groups, and Women and Health Delivery System.

CISO 6546 – Social Determinants and Equity in Public Health. Three (3) credits.

The course provides the student with a background on the social determinants of health and their role in the health disparities of the population. The student will develop the knowledge and basic skills to discuss how structural bias and social inequities affect the population, producing disparities in health. Through readings, critical reflections, discussions and presentations, the inequities that arise from macro social determinants (political, economic, social and public, sociocultural values}, social stratification categories (income, class, gender, occupation, education, race/ethnicity), social environment (housing, neighborhood and work conditions), and social and collective behavior will be studied. At the end of the course the student will analyze the socioeconomic and political factors that affect the health of the population and challenge the achievement of equity in health at the organizational, community and social levels.

CISO 6547 - Population and Society. Three (3) credits.

This course offers an introduction to the study of social structure and social change and their interaction with population dynamics. The course will offer an overview of the different theoretical approaches that attempt to explain social change. It will also analyze the social structure and the social changes that have taken place in Puerto Rico and how these have affected some of Puerto Rico's demographic processes and dynamics.

CISO 6600 - Research Methods. Four (4) credits.

Basic principles about the selection, planning, and performance of research projects. Emphasis is given to the survey methodology; the basic principles of the design of forms and questionnaires is discussed, interviewing and processing statistical data is also discussed. The students meet four hours a week.

CISO 8005 - Culture, Social Inequity, and Community Health. Three (3) credits.

This course, directed toward Public Health doctoral students, emphasizes the social and cultural circumstances of the health-illness continuum. The student will analyze critically the health and illness processes from the own interpretation of the individual given the social circumstances of individuals and communities. It includes concepts such as social organization, social inequity, and the manner in which these affect the health of the individual and the community. This course will also explore the social and cultural context of behaviors in health and illness; accessibility to health care services; and the diverse responses to health problems taken by communities and individuals. The course includes topics such as the need for a social and cultural approach to health and illness; culture, behavior and health; social inequality and illness; health and illness in the world's economy; social support networks; social and cultural determinants of health and illness in the different phases of human development; health care services and the cultural and social diversity of users. The course has a theoretical and an applied approach through the use of conferences, group discussions, and independent study.

DDIT 6505 - Introduction to Public Health and Developmental Disabilities. Three (3) credits.

This course provides the student the fundamental knowledge in the basic areas of Public Health such as level of prevention, ecological system, risk, health indicator, and introduction and conceptualization of team work and interdisciplinary intervention. The framework of the above will be presented using the developmental disabilities concepts as framework.

DDIT 6506 - Typical and Atypical Child Development from 0 to 5 Years. Three (3) credits. Co-requisite: DDIT 6505.

This course provides the student the fundamental knowledge in the basic areas of typical development of infants and toddlers. The course emphasizes toward the development and visualizes the development of infants and toddlers within the family and the social context. The course includes observation and participation exercises. Throughout this course the student will study the child growth and development with an integral vision. This will be in an interdisciplinary perspective, were the student will study different development theories as a frame work of the course. The course will discuss the growth and developmental stages from birth to five years old, including the factors that could affect or impact these stages, interrupting the normal development.

DDIT 6507 - Assistance to Families with Children with Special Needs. Three (3) credits. Pre-requisites: DDIT 6505, DDIT 6506. Co-requisite: DDIT 6508.

This course provides the students the fundamental knowledge in the area of family development with special emphasis on those families that have children with special needs. This course includes a perspective about the familiar ecological systems and the attention of the family as a nucleus. The course is directed to enable the professionals that works with families of children with developmental disabilities.

DDIT 6508 - Assessment of Infants and Pre-Schoolers with Developmental Disabilities. Three (3) credits. Pre-requisites: DDIT 6505, DDIT 6506. Co-requisite: DDIT 6507.

This course provides to the student knowledge and the application of assessment procedures for the identification, screening and evaluation of infants and preschoolers with developmental disabilities or high risk.

DDIT 6509 - Community Service Delivery in Early Intervention. Three (3) credits. Pre-requisites: DDIT 6505, DDIT 6506. Co-requisites: DDIT 6507, DDIT 6508.

This course offers the student fundamental knowledge and apply experiences in early intervention models of services, its legal and theoretical bases. In the course the students will discuss the agencies, and professions function in early intervention in the process of the law's implementation. Also, the course includes observation and participation exercises, using different team models as reference. The student will realize a critical analysis of these services and of the controversies related with them.

DDIT 6510 - Planning, Implementation, and Evaluation of Developmental Disabilities-Early Intervention Programs. Three (3) credits. Pre-requisites: DDIT 6505, DDIT 6506, DDIT 6507, DDIT 6508, DDIT 6509.

This course offers the student fundamental knowledge and techniques in the planning, implementation and evaluation process of early intervention services. The course content attended to describe the service program philosophy, the need assessment and the identification of appropriate models: family centered, based in less restrictive environment, in individualize approach; and the funding strategies to the implementation. It is expected that the student presented a service of program proposal at the end of the course.

DDIT 6515 - Introduction to Nutrition and Developmental Disabilities. Two (2) credits.

This elective course applies the knowledge of nutrition to the needs of people with developmental disabilities based on the practice of scientific evidence. The basic information of the main deficiencies in the development and nutrition, general requirements and dietary recommendations are discussed. Through lectures and group discussion nutritional aspects that lead to these conditions and nutritional risks as well as interactions between drugs used to treat these conditions and nutrients and nutritional status are discussed. The state of the research is discussed in relation to nutrition and developmental disabilities after completing the course the student is expected to consider the role of nutrition as an essential discipline within the interdisciplinary team of health of this population from the point of view of nutrition assessment, nutrition therapy and monitoring.

DDIT 6535 - Seminar in the Management of Conditions and Specific Risks. Four (4) credits. Pre-requisites: DDIT 6505, DDIT 6506, DDIT 6507, DDIT 6508. Co-requisites: DDIT 6509, DDIT 6510.

This course provides the conceptual and clinical framework to examine the management of conditions and specific risks of age groups from neonate to five years from a preventive perspective of early intervention. The developmental model is discussed as an interaction of constitutional, maturational, and environmental variables. The educational methodology and application activities are framed within the interdisciplinary and transdisciplinary intervention models.

DDIT 6537 - Service Coordination. Four (4) credits. Pre-requisites: DDIT 6505, DDIT 6506, DDIT 6507, DDIT 6508. Co-requisites: DDIT 6509, DDIT 6510.

This course provides integrating experiences so that the student develops competences that will enable them to link the services system for the child with developmental deficiencies and the family. The student will learn to coordinate various components at the system with the aim of attending optimal results and guarantee the continuity of services. The educational methodology and application activities will be framed within the interdisciplinary and transdisciplinary intervention models.

DDIT 6539 - Legislation and Public Policy in the Developmental Disabilities – Early Intervention Area. Four (4) credits. Pre-requisites: DDIT 6505, DDIT 6506, DDIT 6507, DDIT 6508. Co-requisites: DDIT 6509, DDIT 6510.

In this course students examine existent legislation and public policy in the area of early intervention and developmental deficiencies. It is discussed the process of formulation of public policy as well as the needed roles and skills during the process. They study strategies to influence and modify the public policy for the benefit of the population to 0-5 years and their family.

DDIT 6545 - Interdisciplinary Practicum in Developmental Disabilities - Early Intervention. Four (4) credits. Pre-requisites: DDIT 6505, DDIT 6506, DDIT 6507, DDIT 6508, DDIT 6509, DDIT 6510, DDIT 6535*, DDIT 6537*, DDIT 6539* (*Requisite according to the student selected area of interest).

This course provides experiences in the area of early intervention with children with developmental deficiencies and their family according to selected area of interest: clinical/educational intervention, service coordination, or public policy. Throughout the practicum students demonstrate conceptual and methodological competency as well as the needed attitudes, roles, and skills for the management of different conditions or situations in public and private community settings. The educational methodology and application activities are framed within the interdisciplinary and transdisciplinary intervention models.

DDIT 6547 - Core Developmental Disabilities. Four (4) credits.

This course has been designed for students, professionals, service providers who are interested in acquiring basic knowledge on developmental disabilities. This course does not substitute the specialty courses in the Graduate Certificate in Developmental Disabilities: Early Intervention. The course intends to prepare students and professionals in the field of Public Health, and other related fields in the provision of services for this population. By means of a variety of educational strategies; including immersion into the world wide web. Students will have direct and continuous access to the professor and fellow students through e-mail, bulletin boards, discussion groups. Tests and papers will be submitted electronically. Topics will be presented in class by experts in the field. Students will have access to reading materials on each topic previous to class. As part of the course requirements students will participate in a field visit and practical experience. Course subjects cover the life span.

DEMO 6500 - Introduction to Demography. Four (4) credits.

This is an introductory and required course for the students of the Master in Demography. It presents a global vision of the study of human populations from a demographic perspective. The course provides for an analysis of the dynamics and interrelation of the different demographic variables. The course is presented through conferences and discussions.

DEMO 6518 - Human Ecology. Four (4) credits.

This course is oriented to an analysis of the spatial distribution of population and institutions and the interactive relations between individuals and groups and how these influences or are influenced by specially determined forms and processes. Emphasis will be placed on the influence socio-cultural factors such as the environment, population, technology, and organization of a society.

DEMO 6545 - Introduction to Demography. Five (5) credits. This introductory course presents a global vision of the study of human population from a demographic point of view. It analyses the status of population as well as its dynamics and the interrelation between the different demographic variables.

DEMO 6546 - Mortality. Four (4) credits.

In this course the levels of mortality and the factors which explain the differences in mortality between some population groups and others are discussed. It also discusses the methods used for the analysis of mortality emphasizing the life table technique.

DEMO 6547 - Principles of Family Planning. Three (3) credits.

This course will review some aspects of the biology of human reproduction and the basic principles of family planning programs, the different types of birth control methods, their advantages and disadvantages, health implications, cost and efficiency. Also, the processes of motivation and communication in relation to family planning, the diffusion and adaptation of innovations. The investigation and evaluation of these programs will be discussed.

DEMO 6548 - Demographic Aspects of Health. Three (3) credits.

This course is designed for graduate students not enrolled in the Demography Program. It offers a global vision of the study of human population from a demographic point of view. It analyses the status of population as well as its dynamics and the interrelation between the different demographic variables. Different demographic techniques for the study of the status and dynamics of human populations are offered.

DEMO 6549 - Fertility and Population Growth. Five (5) credits.

In this course the changes which occur throughout the years in the levels of fertility and factors associated with differences in fertility between some population groups and others are discussed. It analyses the historic population growth trends and the determinants used in the analysis of fertility and population growth.

DEMO 6550 - Migration, Population Distribution, and Urbanism. Five (5) credits.

This course discusses the trends and differences observed in migration movements, population distribution, and urbanism within the context of an analysis of social change and development. Sources of data and different methods used in the analysis of each one of these demographic aspects are studied. The main current and characteristics of international and internal migration, settlement patterns and the structure and distribution of urban population in different types of societies are discussed. In addition, the development of different theoretical approaches in relation to migration, population distribution, and urbanism are studied.

DEMO 6552 - Economics and Population. Five (5) credits.

This course offers a general overview of the problem and central ideas of the contemporary sciences of economics, emphasizing its interrelation with demography in the theoretical as well as the empirical levels. In addition, the demographic transition of Puerto Rico is analyzed within the context of its socioeconomic development.

DEMO 6555 - Fertility and Population Growth. Four (4) credits. Pre-requisite: DEMO 6500. Co-requisite: DEMO 6546.

This is a graduate course in which changes in fertility levels and patterns are discussed. Techniques of demographic analysis are emphasized as well as factors associated with differences among some population groups. Theories and techniques of analysis of population growth are also presented as well as factors associated with fertility differences among some population groups. Fertility and population trends are analyzed and the most important theories developed to explain these changes are discussed. The most important techniques of fertility and population growth analysis are emphasized. Exercises to apply these changes are an important component of the course as well as discussions of some relevant readings.

DEMO 6560 - Research Methods. Four (4) credits. Pre-requisite: DEMO 6500 or DEMO 6548.

In this course, the different steps involved in the research process will be addressed, as well as those methods mostly used in Demography. Special attention will be offered to those studies based on survey data since these are very useful for demographers. It is expected that at the end of the course students will have acquired basic skills to do research in Demography. The course will be carried out mainly through conferences and discussion.

DEMO 6565 - Migration, Population Distribution, and Urbanism. Four (4) credits. Pre-requisites: DEMO 6500, DEMO 6546.

The trend and characteristics of migratory movements of population distribution and of urbanism are analyzed in this graduate course within a framework of social change and economic development through lectures, class discussion, and exercises. Development of several explanatory theories of these three processes are also analyzed, as well as the data sources and methods used in their analysis. The main internal and external migrations, the population distribution patterns and the structure of the urban communities in different types of societies are studied. It is expected that at the end of the course the student had developed analysis skills for the study of these three components as well for the evaluation of the components' trends and causes.

DEMO 6601 - Population Theories and Policies. Four (4) credits.

This course analyzes the main theories concerning population dynamics since Malthus population essay. In addition, population policies derived from the different theoretical framework are studied.

DEMO 6602 - Seminar on Demographic Studies in Puerto Rico. Three (3) credits.

This seminar is devoted to the analysis of the demographic situation of Puerto Rico considering its historical trend. Changes in mortality and fertility levels, as well as the phenomenon of emigration (between The United States and Puerto Rico) and internal migration are analyzed. In terms of this analysis, population growth, its geographic distribution and population characteristics will be studied. In addition, population policies adopted in the island are studied.

DEMO 6604 - Research Project. Six (6) credits.

This course consists of the planning and execution of a research project in the field of Demography under the close supervision of the faculty of the Demography Program. Each student will select at least two preceptors according to the interest and needs of the project he wishes to conduct.

DEMO 6606 - Use of SPSS Program and other Scientific Research. Four (4) credits. Pre-requisite: BIOE 6525 (old codification BIOE 6521).

Introduce students to programming and processing of data by means of SPSS (Statistical Package for the Social Sciences). By using this program students will learn to process data from their research, regardless of the concerned discipline. Besides, this course will provide knowledge on concepts and language used in programming so that the researcher will be able to communicate effectively with experts in this area. Students will be also initiated in the use of the software SAS.

DEMO 6607 - Population and Economics. Four (4) credits. Pre-requisites: DEMO 6500, DEMO 6546, DEMO 6555, DEMO 6565.

This course offers a general vision of the central problem and ideas of contemporary economics. It emphasizes the relationship between economics and the study of population at both, theoretical and empirical levels. In addition, this course presents the demographic transition of P.R. within its economic development. In this way we can visualize with a real example the relationship between economic and demographic variables. The principal methods used in the analysis of the economic situation of a country are discussed. It is expected that at the end of the course students will understand and could explain the demographic processes in its relation with economic development. To attain this, lectures, group discussions and exercises will be used.

DEMO 6615 - Supervised Practice in Demography. Three (3) credits. Pre-requisites: BIOE 6525, DEMO 6500, DEMO 6546, DEMO 6555, DEMO 6560, DEMO 6565.

This is a graduate course whose objective is to provide the student the opportunity to apply to real life situations the theoretical and methodological knowledge acquired in previous courses. This experience will

facilitate the student's transition from the academic to the occupational environment, since he will assume the tasks and responsibilities that a demographer can undertake at work. These will vary in terms of place as well as in content and type of problem encountered. The student will be exposed to programs at different agencies so as to become familiar with the diversity of contributions that demographers can make to the social, economic, and health life of the country. He will undertake a demographic analysis as demanded by the different institutions. In this practice, the student will be assigned to a specific agency depending on his particular interest. He or she will be directly supervised by the chosen persons at the agency and by faculty from the Demography Program.

DEMO 6621 - Research Project I. Two (2) credits. Pre-requisites: BIOE 6525, DEMO 6500, DEMO 6546, DEMO 6555, DEMO 6560, DEMO 6565.

This course is a graduate course in which students will plan and develop the proposal of their research project in Demography under close supervision of at least one faculty member of the program. During the course, students will select their research theme, will present an annotated bibliography, will write the objectives of the research, and will submit the complete proposal in typewriting. They will make also an oral presentation of the proposal. The course will be offered as a workshop. Meetings and discussion will be held with the student in order to develop his/her proposal.

DEMO 6622 - Research Project II. Four (4) credits. Pre-requisites: BIOE 6525, DEMO 6500, DEMO 6546, DEMO 6555, DEMO 6560, DEMO 6565, DEMO 6621.

This is a graduate course which comprises the development of a research project in some demographic topic under the supervision of a dissertation committee. During the course the students will: collect the needed data, create data files, process and analyze the data and will produce a written document with the results. Students will make, also an oral presentation. Periodic meetings with the members of the thesis committee will be held so as to monitor student's progress.

DEMO 6990 - Reading Course Seminar. One to five (1-5) credit(s).

This course will offer students the opportunity to carryout research in an area in which they are most interested. Once the student selects a topic, the faculty provides a bibliography about the topic selected and the student has to prepare a report to the faculty of the course.

DESS 8011 - Social Determinants of Health Graduate Seminar I. One (1) credit.

This is the first graduate seminar in Social Determinants of Health with the goal of providing students with the skills and tools necessary for research and practice on the social determinants of health. It also provides a guided process that help students towards achieving their dissertation proposal from the beginning of their studies. The seminar centers on exposing to contemporary issues in Social Determinants of Health that can aid in conceptualization of their research topic. Program faculty and other invited guests (policy-makers, community advocates, etc.) Present and share their ideas, projects and work with the students, thereby providing them concrete ideas for framing research topics and questions, which they can explore and develop throughout their studies. At the end of course, students will identify their research interest in social determinant of health.

DESS 8012 - Social Determinants of Health Graduate Seminar II. Two (2) credits. Pre-requisites: DESS 8011.

This second seminar has the goal to continue providing students with skills and tools necessary for research and practice on the social determinants of health. Also provides students with a guided process toward the completion of their dissertation proposal. The seminar centers on the development of an annotated bibliography for the student's dissertation topic of interest which may serve as the basis for the comprehensive exams and the development of the proposal. The seminar focuses on workshops and class discussion of annotated bibliographies on specific areas of their research topic and sharing resources and

literature, and nurturing inter-disciplinary exchanges on social determinants of health topics while receiving feedback from the instructor and peers. At the end of the seminar, students will be able to analyze critically issues of their research interest in the social determinants of health.

DESS 8013 - Social Determinants of Health Graduate Seminar III. Two (2) credits. Pre-requisites: DESS 8012.

The third seminar has the goal of continuing provide students with the skills and tools necessary for research and practice on the social determinants of health. Also provides the students with a guided process that helps students toward the completion of their dissertation proposal. This seminar centers on the development of skills that foster multidisciplinary and multi-sectorial cooperation in the social determinants of health. It also serves as a guided process where students can start identifying stakeholders, institutions, organization and/or communities that can serve as partners and resources for the planning and coordination of their dissertation projects. At the end of course, students will be able to promote multidisciplinary and multi-sectorial cooperation in discussion, analyze and actions in social determinants of health.

DESS 8105 - Social Theory and Public Health. Three (3) credits.

This course will examine a variety of social science theories and concepts approaching health, illness, public health and health care and their evolution through history. Drawing mainly from diverse perspectives in the sociology and anthropology of health, the course will discuss public health issues with concepts, models and methods at the individual, interpersonal, organizational, community, national and global levels of interaction. Through lectures and discussion-driven, students will emphasize the analysis of theoretical approaches of the social sciences and their contribution to our understanding of health and sociological approaches to health systems from local to global levels. At the end of the course, students will be expected to evaluate the underpinnings of diverse sociological traditions of inquiry in explaining the distribution of health and illness in populations and its implications for action in public health practice.

DESS 8198 – Dissertation Proposal in Social Determinants of Health. Three (3) credits. Pre-requisites: Have approved comprehensive exams.

This course is an Integrative Learning Experience for doctoral students of Social Determinant of Health specialty. In this course, the student will, generate a field based written proposal to appraise and address the impact and plausible pathways by which conditions in the social, cultural, economic and political structures impinge on the possibilities of living a healthy life for all. The student will design a project that advances the practice of public health within the social determinant of health perspective for approval of the Dissertation Committee. The proposal must demonstrate the student's mastery in areas of public health such as leadership, social determinants of health, and the application of state-of-the-art knowledge and approaches to addressing public health problems. It is expected that student present in writing and orally a research proposal applying theoretical and methodological principles of public health.

DESS 8199 – Doctoral Dissertation in Social Determinants of Health. Three (3) credits. Pre-requisites: DESS 8198.

This course is an Integrative Learning Experience for doctoral students of Social Determinant of Health specialty. The course embodies a praxis directed to problem solving in a specific social determinant area and its relation to the health of a specific population, specific health outcomes or social policy. In the course, the student will demonstrate mastery in foundational and specialty competencies in the design of a research proposal that represents a theoretical and methodological contribution to influence public health practice, programs, policies or systems in the specialty area. students will work under the guidance of the Doctoral Dissertation Committee. At the end of the course students are expected to present the results of their research in writing and orally.

DESS 8201 - Qualitative Methods in Social Determinants of Health. Three (3) credits.

This course provides students with the foundations of qualitative research designs and methods. Students will acquire the basic skills and principles needed to conduct effective, original, and responsible qualitative evaluation and research applied to public health issues. Selection of research design, study site, and population; issues and methods of data collection; participatory research strategies; qualitative analysis and the use of available software; use of systematic reviews and triangulation; and the dissemination of research results are studied. Through group discussions, case studies and laboratory exercise the students will conduct a small qualitative research or evaluation project on social determinants of health issue. At the end of the course, students will be expected to implement a qualitative research design to produce relevant information in the social determinants of health inequalities.

DESS 8202 - Statistical Measurement and Argumentation in Social Determinants of Health. Three (3) credits. Pre-requisites: DESS 8201

Evidence in social determinants of health is generated by multiple disciplines, research designs and methodological traditions. This course explores research questions, determinants, study-design, measurement, and analytic issues applicable to research into the social conditions and processes impacting health according to the social determinants of health model chosen. Among lectures, group discussion and workshops will cover including basics in social epidemiology, sociology, ethics, and economy. At the end of course students will be able to design and justify a conceptual framework to examine the relationship between social process and inequalities in social determinant of health.

DESS 8205 - Social Determinants of Health Frameworks. Three (3) credits.

This course is a detailed introduction to key concepts and theoretical frameworks synthesizing the evidence pointing to the unequal distributions of societal resources as the root causes of ill health, suffering and disease. Different approaches in social determinant of health will be analyzed. Through lectures, group discussions, and review of key literature will examine the impact on equity in health and the role of the health sector in address social inequities in health. A variety of loci of action at the societal level are presented as opportunities in which public health practitioners can act to effect positive change to promote and protect collective health. At the completion of the course, students will be expected to analyze health issues from the social determinants of health.

DESS 8206 - Community Building and Action on the Social Determinants of Health. Three (3) credits.

The course provides students the opportunity to study community building and organization approaches as a strategy to improve health and increase community capacity to organize around action on the social determinants of health. Special emphasis is given to the concepts, models and process of community organization and action and the techniques and methods it involves. Through lectures, in-class and field exercises students will learn the main public health theories, models and approaches that underlie community development and organization; and methods for engaging communities, advocacy, and for the building of partnerships. Also, students will apply knowledge for community building techniques. At the end of course, students will be expected to critically assess the use of community building and organization strategies utilizing real community case study to address determinant issues.

DESS 8208 - Political Economy of Health. Three (3) credits. Pre-requisites: DESS 8105.

The course proposes that politics and economics are interconnected, and that the primary determinants of the unequal distribution of material resources condition people's health opportunities. The students critically examine the evidence of these influences on social stratification; identify institutions and groups involved; and weight the evidence of taking action on these determinants to produce supportive physical and social environment for the reversal of social inequities in health. Group discussions and case studies will be used to illustrate the relative effectiveness of supporting and advocating for healthy public policies in other sectors beyond the conventional health sector. At the end of the course, students will be expected to evaluate

economic policies that influence health and the financing and delivery of health-related services for propose courses of action for the reversal of inequities.

DESS 8305 - Health and Social Policy Analysis. Three (3) credits. Pre-requisites: DESS 8201.

The course provides knowledge and skills for public policy development and analysis on the social determinants of health from an equity perspective. Basic concepts in policy development and analysis; overview of theories and methods in public health policy; process of public policy development and implementation; methods of impact assessments of policies; social determinants of health criteria for policy equity evaluation; and perspectives of policy analysis will be studied. Through lectures, small group discussions, and practical exercises students will learn to write and present a policy paper based on the social determinants of health with implications for public health in which the integration of concepts and methods will be evidenced. At the end of the course, students will be expected to analyze policy from equity and social justice perspective and produce a policy paper with implications for Public Health and social determinants of health.

DESS 8306 - Practicum in Social Determinants of Health. Zero (0) credits. Pre-requisites: Graduate student must approved comprehensive exams.

The practice is intended to expose the student to the professional experience of integrating public health knowledge and skills in a real scenario. The doctoral field experience of 200 hours is required of all students, regardless of prior work experience. The student will be assigned a project and will be designed so that the student has the principal responsibility, along with a team of workers in the organization. The project will be assigned by the practicum site supervisor in consultation with the academic advisor. The result will be a product in writing and other presentation form, which is valuable for the organization. Practicum may be carried out in an agency, institution, or community in Puerto Rico, the Caribbean, and Latin America, United States or other internationally setting. After completing the course, the student will demonstrate proficiency in addressing the social determinants of health as a public health professional.

Grading System: Passed (P), Fail (F)

EDSA 6005 - Learning Principles and Teaching Strategies in Health Education. Three (3) credits.

This course is geared to develop knowledge and skills of health education; especially in planning, development and evaluation of activities and educational programs. It is expected that the students analyze the different theories of learning and the models of change in behavior and develop skills in the adequate use of methods and techniques of teaching and educational planning of activities. Conferences, group discussions, oral presentations and written reports will be used to achieve the course objectives.

EDSA 6015 - Foundations of Public Health, Health Promotion and School Health. Three (3) credits.

The course introduces students in Foundations of Public Health, Health Promotion and Health Education. The emphasis is to the conceptual and methodological approaches to Public Health, Health Promotion and Health Education and the application to school environment. Through lectures and discussion groups will analyze the historical perspectives, approaches, structures and programmatic orientations tie to school health scope in Puerto Rico and in the international community. At the end of the course, the students will evaluate models associated with school health education in Puerto Rico and the international community from the perspective of Public Health.

EDSA 6025 - Prevention in Use and Abuse of Alcohol, Tobacco and Other Drugs in School Environment. Two (2) credits.

The course is designed to guide the students and the school community to the knowledge of risk factors associated to the use and abuse of alcohol, tobacco and other drugs in the school environment. Special emphasis will be offered to the analysis of patterns of mental, social, economic and cultural conduct that prevent the use and abuse of alcohol, tobacco and other drugs and the physical impact, that causes its use.

Also special emphasis in the development will be made of skills to implant and evaluate programs of prevention for the reduction of the use of alcohol, tobacco and other drugs. At the end of the course, the students will develop skills to diminish the risk of use of alcohol, tobacco and other drugs.

EDSA 6029 - Topics Related with School Health Promotion Seminar. Two (2) credits.

The course brings students of School Health Certificate in topics related to School Health. In this course, the principal problems and needs of students and school community will be discussed. The themes will be analyzed from the holistic perspective, emphasizing the following dimensions: social, cultural, epidemiological, behavioral, educational and in-service. The themes discussed correspond to the priorities of health in the school setting as defined in the public policy of health of Puerto Rico and by the agencies of health and school health in international level. Through discussion groups, oral presentations, reflective diary and field trip the themes will be treated. At the end of the course the students demonstrate knowledge, attitude, values and skills necessary to develop school health interventions.

EDSA 6035 - Personal Development Workshop. Zero (0) credits.

This workshop will provide the students with a group experience in which different aspects related to their adjustment to the university will be discussed. It is expected that this experience will help the students in their group process integration. This workshop is a complement to EDSA 6557- Group Facilitator.

EDSA 6045 - Social Participation and Community Empowerment in Public Health. Three (3) credits.

This course focuses in the conceptual and methodological aspects of the process of social participation, community empowerment, and popular education in the context of Public Health. Themes related to the empowerment, as the lack of power, power theories, community empowerment, and social participation are discussed. One of the innovative aspects of the course is the teaching-learning experience based on the methodology of popular education developed by Freire. The students will have the opportunity to learn how this methodology facilitates the active participation in the discussion of different themes and offers them opportunity for a dialogue about the theory and practice of Public Health. This course is addressed to students of Health Education Program and health professions graduate students with interest in health promotion. At the end of course, students will have knowledge and skills for develop intervention with empowerment model.

EDSA 6055 - Strategies and Intervention Methods in School Health Promotion. Three (3) credits.

This course intends to guide the students in the development of intervention strategies directed to promote the health of students, the teachers, the non-teaching personnel and the community in general. Through active learning, will analyze the strategies and the intervention models on individuals, group and community scale directed to promote the school health. Also, will analyze the intervention strategies used in different programs in Puerto Rico and other countries that have contributed to promote the integral health of the students and the school community. At the end of the course the student will apply strategies and intervention models of health promotion to school community and/or environment.

EDSA 6066 - School Health Promotion Planning Projects. Four (4) credits.

This course intends to guide the students in the development of school health promotion planning projects. The theoretical aspects of the planning process and the principles and design of projects directed to school health promotion are studied. Through lectures and group discussions the student will develop the skills for the conceptualization, designing, implementation and evaluation of school health projects in the school environment. At the end of the course the student will design a school health project.

EDSA 6075 - School Health Promotion Supervised Practice. Three (3) credits. Pre- requisites: EDSA 6015, EDSA 6029, EDSA 6055, EDSA 6066.

The course is directed to the students of the Graduate Certificate in School Health Promotion. This course provides practical experience in a school setting for the integration of competences in the area of the school health promotion. In this practice, the student will show the methodological and conceptual control for the interventions carried out with the population in the school environment. Similarly, he (she) will integrate his skills attitudes in the management of the problems of this population and his environment. Through group meetings and visits to the field, it is expected that the student carry out interventions of health promotion according to those proposed in his (her) plan of action and to present a final report of the interventions carried out.

EDSA 6250 – Applied Research in Health Promotion and Health Education. Three (3) credits. Pre-requisites: BIOE 6525, EPID 6523.

This course provides the students knowledge, and skills to address a public health issue by the design of a research project. Through lectures, group discussions, independent study, and case study analysis, the course emphasizes theoretical components and methodology techniques for conceptualizing and designing research projects. Such as, formulating a research problem, contextualizing the problem in a theory framework selecting the appropriate research approach (quantitative, qualitative) design, considering basic concepts such as: measurement (e.g., questionnaire and interview guides), sample selection and information and data analysis plan. It is expected that students will gain basic skills in performing quantitative and qualitative data analyses and interpretation using appropriate software. At the end of the course, students will demonstrate the acquired knowledge and skills by designing a research proposal addressing a public health issue.

EDSA 6401 - Perspectives and Contexts of Health Promotion and Health Education. Two (2) credits.

The course exposes the student to the disciplinary foundations and the distinctive and unique approaches of Health Promotion and Health Education. Through interactive lectures and group discussions the historical development, the dominant concepts, the philosophical aspects, the principles, the intervention strategies and the contexts of work and professional development will be studied. The functions of the professional, current legislation, work environments, professional trends and ethical aspects of professional practice are described. The main networks and international organizations of the professional field and the political and declaratory documents at a global level are described. At the end of the course the student will analyze the current situation of the professional field at a national and international level with a critical vision of the main philosophical debates associated to the disciplinary field.

EDSA 6402 - Foundations of Health Promotion and Health Education II. Two (2) credits. Pre-requisite: EDSA 6401.

This course is geared to the analytic examination of different theories, models, and approaches in Health Education. Traditional and innovative educational methods and techniques that can be used by health educators to stimulate changes in health behavior of groups through health education and health promotion will be addressed. Lectures, oral presentations, group discussions, readings and term papers and field visits will be used to attain the course objectives.

EDSA 6405 - Health Communication Programs Design. Three (3) credits. Pre-requisites: EDSA 6401, EDSA 6476.

This course provides students with theory, research knowledge and skills used in the development of multilevel health communications projects and programs for diverse settings. It promotes a critical understanding on how messages from interpersonal, organizational, cultural and media sources affect health beliefs, behaviors and the advancement of public health. Through readings, interactive lectures, group discussions, practice exercises and field activities, students develop the skills necessary to become effective health communicators

and to use mass media strategically to influence public health policies and social change. Students will be able to design a proposal of health communication campaign and will learn how to implement, disseminate and evaluate health communication programs.

EDSA 6474 - Managerial Consideration for Developing and Implementing Health Education Programs. Three (3) credits. Pre-requisites: ADSS 6516, EDSA 6573.

This course acknowledges the managerial challenges associated with the development and implementation of health education programs. The course goal is to prepare students to effectively design and implement health education programs to optimize performance and resource allocation. Health education must ensure that programs are well-designed and implemented to deliver the expected outcomes. This entails strengthening knowledge and skills to analyze key issues in human resources and the development of a culturally diverse workforce; budgeting; decision-making; identifying of internal/external funding sources; grant-writing; and promotion organizational change. Teaching strategies include interactive class exercises, interactive lectures, independent study, and individual and group discussions with course instructor.

EDSA 6475 - Intervention Approaches for Health Promotion and Disease Prevention. Three (3) credits.

This course is designed to prepare students with skills necessary to implement Health Promotion and Health Education interventions. Emphasis will be placed on a variety of Health Promotion and Health Education strategies and techniques including but not limited to educational presentations and material development, community organization, working with an individual and groups. During the course, students will demonstrate facilitator skills relevant to Health Promotion and Health Education practice. Also, students will apply a theory or model to a topic of interest in order to address an educational, health or social issue. The course includes interactive conferences and group discussion exercises. Students will design theoretically based health education intervention using a multi-level techniques and strategies to address an educational, health or social need of an individual and group.

EDSA 6476 - Social and Behavioral Theories and Models. Two (2) credits.

This course provides an overview of health education and health behavior theory and how theory can be utilized in the field. Students will identify the impact of different physical, social, environmental, and emotional factors upon health-related behavior. Also, will describe the relationship between teaching, learning, health and behavior and will discuss how learning theories are integrate of Health Education and Health Promotion Practice. During the course, students will apply a theory or model to a topic of interest in order to address a health related issue. The course includes interactive lectures, group discussion exercises, among others learning activities. The students will demonstrate the acquired knowledge and necessary skills to design a theoretically based health education intervention to address a health or social need of a community.

EDSA 6514 - Organization and Administration of School Health in Puerto Rico. Three (3) credits.

Study of the objectives, organization, and administration of a school health program. The student will get acquainted with the theory practice of organizing and developing school health program. Emphasis is given to main components of such program: healthy school environment, medical services, and health education.

EDSA 6518 - Fundamentals of Health Education. Two (2) credits.

Presentation of educational principles and methods used for Health Education. Emphasis is placed on working with group, and with the community in general.

EDSA 6521 - Educational Process I. Three (3) credits.

This course is aimed to make the student ready to interpret the following basic concepts: education, teaching, learning and the psychological determinants of the human behavior. Emphasis will be given to the study of

learning theories and the psychological principles of learning that come from them. The student shall demonstrate his communication skills through activities aimed to that purpose.

EDSA 6522 - Educational Process II. Three (3) credits.

This course aims to the study of Health Education as a profession, its philosophy, long range objectives and its historical development in Puerto Rico. Traditional and innovative strategies that can be used by health educators to assure changes in health practices of their clients are also studied. Conferences, group discussions, readings, field visits and oral presentations will be used in order to achieve the stated objectives.

EDSA 6524 - Health Education Program Planning. Three (3) credits. Pre-requisites: EDSA 6521, EDSA 6522, EDSA 6531, EDSA 6532. Co-requisites: EDSA 6557, EDSA 6668.

In this course, theoretic aspects of the planning process are studied. Also the steps and principles applied to health education projects and programs are studied. Emphasis will be given to the design, organization and implementation of the Health Education program in different settings and levels. The student is required to design the action plan for his or her supervised practice at the end of the course.

EDSA 6531 - Health Education Intervention Methods I. Two (2) credits.

The purpose of this course is to analyze the nature and scope of Public Health Education as a behavioral change process in regards to matters of health. Special emphasis is given to the different strategies utilized to promote changes in people's life styles and in the role of the health educator as a change agent.

EDSA 6535 - Research Methods in Education. Three (3) credits. Pre-Requisites: EDSA 6521, EDSA 6522, EDSA 6531, EDSA 6532, BIOE 6525.

This course enables the student to design a research project in the education field. Different research designs in education and the application of principal statistical procedures for analyzing data are discussed.

EDSA 6536 - Intervention Methods II. Three (3) credits. Pre-requisites: EDSA 6521, EDSA 6522, EDSA 6531. Co-requisite: EDSA 6535.

The course objective is to study the health educator's role in the community and to analyze different intervention methods used to promote changes in community and organizations. Opportunity to observe health education community based programs and projects and to identify intervention strategies used by health educators is provided. At the end of the course, the student will demonstrate on class strategies used on each model studied.

EDSA 6551 - Education to Patients. Two (2) credits.

Basic concepts in patient education as an essential process in health care. Emphasis in detection of present and future needs of the patient and his family planning; and developing a health education program.

EDSA 6555 - Health Education Programs Supervision. Two (2) credits.

This course is designed to develop in the student skills in supervision. Special emphasis is placed on the educational, administrative, consultant, and evaluative functions works. Laboratory exercises are conducted which demonstrate these functions.

EDSA 6556 - Community Mental Health. Three (3) credits.

In this course, the philosophical and historical foundations of community mental health are considered. The impact of social and cultural factors upon life style of individuals in contemporary society is analyzed. Emphasis is given to the way people deal and adjust to their environment, and the different theories of personality development.

EDSA 6558 - The Health Educator as Group Facilitator. Three (3) credits. Pre-requisites: EDSA 6521, EDSA 6522, EDSA 6531, EDSA 6532. Co-requisites: EDSA 6508, EDSA 6668.

This course is designed to develop skills in the student as group facilitator. Different aspects of the facilitator's role are analyzed as well as factors that affect his/her performance.

EDSA 6563 - Intervention Methods in Health Promotion and Health Education I. Three (3) credits. Pre-requisites: EDSA 6401 or EDSA 6561, MEDU 6500.

The purpose of the course is to study Health Promotion and Health Education as a process for the development, maintenance and behavior modification in the human being. The goal is to develop the optimum state of health in the individuals. Emphasis will be given to the study of strategies to change individual health behaviors such as: behavior modification, assertive training, micro counseling, and management of emotion through the life. Emphasis will be given to categories of intervention methods, and strategies to be used in small groups interventions. The students will apply these strategies in their interventions. There will be conferences, group discussions, role playing, lectures, and field experiences.

EDSA 6565 - Administrative Aspects of Health Promotion and Health Education Programs. Three (3) credits. Pre-requisites: EDSA 6405 or EDSA 6564, EDSA 6563.

This course is geared to provide students with an overview of the administrative theories and their application to Health Promotion and Health Education programs. General principles of supervision as well as the roles of the supervisor are also included. In addition, the course seeks to initiate in the students the development of the necessary skills that contribute to assume an effective administrative role. Theoretical component of the course will be given through lectures and group discussions and will be also complemented with practical experiences in public and private organizations that have health promotion and health education programs.

EDSA 6566 - Research Methods in Health Promotion and Health Education. Four (4) credits. Pre-requisites: BIOE 6525, EDSA 6402 or EDSA 6562, EDSA 6563. Co-requisite: EDSA 6567.

This course is aimed to provide students information and practical experience in the different stages of proposal design in the field of Health Promotion and Education. Several research designs and methodological procedures are discussed. The students will apply their knowledge by developing a research proposal. Conferences, group discussion, analysis of research articles and instruments for gathering data and written work will be used.

EDSA 6567 – Advocacy, Intersectorality, and Community Mobilization. Three (3) credits. Pre-requisites: EDSA 6401, EDSA 6476.

The course describes the main intervention strategies associated with the Promotion of Health and Health Education at the political, community, and institutional levels. Emphasis will be given to strategies linked to the development of public policies favorable to health, namely; the modalities of health advocacy and health activism, the process of public policy analysis, and the legislative process. Through interactive lectures, group discussions and field visits the student will be exposed to the concepts, values and methodologies of intersectoral work and the principles and imperatives of working with the community; the development of community leadership; and approaches to community participation and mobilization. At the end of the course the student will be able to integrate community outreach actions and advocacy actions in health and intersectorality in the design of community outreach projects.

EDSA 6568 - Group Facilitation Skills. Three (3) credits.

This course is aimed at developing communication skills, cultural competence, ethical and legal aspects in the design, implementation and evaluation of educational activities for group facilitation. A laboratory approach is used in which the students will have the opportunity to practice facilitation, co-facilitation and group observation. The facilitation function is analyzed before diverse populations or group situations and the factors that influence these processes. The importance of this function is discussed in the health

professionals who intervene with groups. Interactive lectures, socialized discussions, group exercises, cooperative learning, dramatizations and educational interventions will be used in the classroom and with groups in the community. At the end of the course students will develop and facilitate group educational activities.

EDSA 6570 - Health Promotion and Education Program Planning. Three (3) credits. Pre-requisites: EDSA 6402 or EDSA 6562, EDSA 6563.

In this course, theoretic aspects of the planning process are studied. Also the steps and principles applied to Health Education projects and programs are studied. The students will develop the skills for the design, organization, and implementation of the health promotion and health education program in different settings and levels. The course will be offered through conferences and group discussion.

EDSA 6571 - Health Promotion and Health Education Evaluation and Measurement. Three (3) credits. Pre-requisites: ADSS 6516, EDSA 6476.

This hybrid course is designed to develop in student knowledge and skills for the evaluation of programs, projects and initiatives of health promotion and health education. The foundational concepts of evaluation will be discussed, as well as models, designs and data collection methods useful for evaluative judgment. In addition, the most used measures considering the theoretical models of health education field as referenced in peer review journals, will be exposed. The course will be offered through interactive lectures and independent study using an online learning platform and flipped classroom for the application of concepts. Student will design an evaluation plan with an instrument for the data collection.

EDSA 6572 - Health Promotion and Education Research Project. Three (3) credits. Pre-requisites: BIOE 6525, EDSA 6566.

In this course, student must implement a research project that represent a contribution to the knowledge and practice of Health Promotion and Education. An oral presentation must be made to the research committee. Student must complete the research project under the supervision of the research committee. Individual and group discussions and meeting with members of the research committee, independent study and written work will be used.

EDSA 6573 – Assessment and Planning in Health Promotion and Health Education. Three (3) credits.

Through this course, students will gain an understanding of how to assess needs, assets and capacity for Health Promotion and Health Education Program. It is expected that during the course the students will develop the necessary skills for the design of a Health Promotion and Health Education Program using elements such as goals and objectives, strategies and interventions, implementation activities and logic model. The course will be offered through interactive lectures, oral and written presentations, and group discussions, among other educational techniques. At the end of course, students will be able to design a health education and promotion program.

EDSA 6575 - Intervention Methods in Community Mental Health. Three (3) credits.

This course presents an overview of the different intervention methods derived from the study of theoretical models of human behavior. Different methods utilized in Health Education practice to promote changes in the community and in organizations will be analyzed from the mental health point of view. The student will design an action plan for an educational intervention.

EDSA 6576 - Mental Health Problems Seminar. Three (3) credits.

Priority problems in mental health in Puerto Rico will be considered in this course. The psychosocial aspects of problems such as: violence, substance use and abuse, family conflicts, and problems related to sexual behavior will be analyzed. Students will have the opportunity to make field visits to related programs and agencies.

EDSA 6577 - Introduction to Theoretical Models of Human Behavior. Two (2) credits.

In this course some of the theoretical models developed to explain human behavior will be studied. Emphasis will be given to the following models: medical, system, existential, and holistic. The basic concepts, methodology, application, limitations, and evolution of these models will be considered. The course will include visits and case discussions.

EDSA 6578 - School Health Child Problems and Needs Seminar. Two (2) credits.

In this course the fundamental health problems and needs of the school-age child in Puerto Rico will be analyzed, particular consideration will be given to strategies geared to deal with these problems in a school health program, as well as the role of a school health educator and other members of a school health team.

EDSA 6580 - Introduction to Human Sexuality. Three (3) credits.

Primarily a content course for health personnel and others who will use the subject matter in their professional work. Topics include Anatomy and Physiology of the Reproductive System (male and female), Pregnancy, Prenatal Anatomic and Physiologic Sexual Differentiation and Development, The Physiology of Childbirth and Fertility Regulation.

EDSA 6581 - Human Sexuality I. Three (3) credits.

Social psychological approach to the study of human sexual behavior with emphasis on attitudes and values. The focus is on the functional rather than dysfunctional aspects of sexuality. Autoerotic, homosexual, bisexual, and heterosexual behaviors are examined. There will be site visits and interviews.

EDSA 6582 - Human Sexuality II. Three (3) credits.

Presents an overview of the dysfunctional aspects of human sexuality. Non-standard forms of human sexual behavior are examined. Emphasis on attitudes and values. Recent research reviewed. Case studies.

EDSA 6585 - The Teaching of Human Sexuality. Three (3) credits. Pre-requisite: EDSA 6580.

A practical course for the development of educational programs in human sexuality for schools, churches, agencies. Role of the family and school in sex education. Methodology and resource materials are examined. Basic questions concerning teacher's role are explored. Laboratory experience in individual and small group developments of teaching programs in human sexuality.

EDSA 6586 - Sexually Transmitted Diseases Education. Three (3) credits.

Review and analysis of the role and impact of education in the modification of sexual practices with emphasis in the prevention of sexually transmitted diseases. Includes the etiology of selected STD diseases, the group or individuals at risk, those exact behavior that education efforts must be design to influence and the STD control components which play a role.

EDSA 6587 - Counseling in Human Sexuality. Three (3) credits. Pre-requisite: EDSA 6580.

Application of individual and counseling theories and techniques to the ever emerging needs of individuals in the area of human sexuality. Psychological and social foundation underlying the counseling process; examination of relevant research data. Case studies, demonstrations and supervised practicum.

EDSA 6595 - Supervised Practice in Health Promotion and Health Education. Six (6) credits.

This course provides the student with a supervised practice by a preceptor in which he/she applies and integrates the skills of health educator in a real scenario. The student is assigned to an organization or community that provides health education programs or that incorporates health promotion in its philosophy of work in which he/she will participate in experiences that will allow him/her to perform roles of Health

Educator in the context of the services offered. He/she will also estimate the needs in education and health promotion, design, implement and evaluate an action plan in order to address the identified needs. The student will participate in didactic sessions and other educational activities that will complement his/her learning experience. After completing the course the student is expected to demonstrate his/her dispositions, knowledge and skills developed for the exercise of the profession.

EDSA 6668 - Research Proposal Seminar. Two (2) credits.

This course is designed to assist individual student in the preparation of an outline or proposal for the project he or she proposes to undertake. The student will have the opportunity to study in depth the research design selected for his/her project.

EDSA 6669 - Research Project in Health Education. Six (6) credits.

The student will develop a research project dealing with a relevant problem or issue in Health Education or in a related area. The research proposal submitted by student must have the approval of his research project committee (three health professionals) before he or she begins to work in the project. This committee selected by the student and the Health Education staff, has to be in accordance with the research theme. The research project is an individual endeavor unless exceptional circumstances require otherwise. The student is required to submit the completed research paper in original and two copies to his or her committee for approval, following the rules established by one of the existing styles guides published for these purposes.

EDSA 6995 - Special Topics in Health Education. One to four (1-4) credit(s).

Individual arrangement for the graduate students to study a specific area under the guidance of a faculty member of the program. May include readings, literature reviews or other special projects. Minimum of 24 hours required for each unit of credit, up to a maximum of four credit units, to be taken as an elective course.

EDSA 6996 – Supervised Practice in Health Promotion and Health Education. Four (4) credits. Pre-requisites: All basics and specialty public health courses.

This course is an applied practice experience designed for graduate students of the Master of Public Health Education. The course provides the opportunity to apply knowledge, theory, and skills in selected agencies or organizations and gain practical experience in public health education practice. Program professors and on-site preceptors supervise students progress and performance. Selected practicum settings may include state public health agencies, health-based non-profits, health insurance agencies, community-based organizations, hospitals, and others. The course activities include shadowing preceptors and a social and health situational analysis. In addition, students design, implement and evaluate an action plan in order to address the identified needs. At the end of the course, students are expected to submit and present a Practicum summary final report that demonstrates their ability to address public health problems.

EDSA 6997 – Integrative Experience in Health Promotion and Health Education. Two (2) credits. Pre-requisites: All public health care and specialty courses. Co-requisites: EDSA 6996.

This course is an Integrated Learning Experience for students of the Public Health Education specialty. Students will integrate competencies developed and strengthened throughout their coursework under the supervision of a Faculty Advisor. Course activities will include meetings with the selected organization's personnel, group discussions with peers, priority assessment exercises, selfdirected training sessions, written assignments, technical reports and policy analysis, presentations, and simulations. It is expected that students will submit a technical report, an evaluation report or a policy analysis report based on a priority issue for the Health Promotion/Health Education or comparable unit of a selected organization. They will also conduct a formal presentation for the organization and discuss relevant findings and their experience in a public or professional forum.

EDSU 6501 - Systematic Planning of Instruction. Three (3) credits.

This course provides the student the opportunity of developing the knowledge, skills, and attitudes to the roles of teacher: learning facilitator, academic counselor, human relations facilitator, member of a teaching team and a health specialist. Special consideration is given to the systematic planning and design of learning experience.

EDSU 6503 - Principles of Curriculum Design and Development. Three (3) credits.

This course is designed to develop in the participant's basic skills and positive values in the area of curricular design and development, as it relates to the educational programs in the Health Sciences.

EDSU 6505 - Principles of Higher Education. Three (3) credits.

This course presents the fundamental concepts and principles of education and its philosophical, psychological, sociological, economical, and historical bases. Laboratory exercises are directed towards the conceptualization of the principles of learning and the variables intervening in the instructional process.

EDSU 6507 - Educational Evaluation Methods. Three (3) credits.

The course presents an overview of the different methods and techniques of educational evaluation and measurement most commonly used in the teaching of Health Sciences at the university level. Special emphasis will be given to the role of testing in education, test construction and other measurement instruments. Furthermore, analysis techniques for the appraisal of students base on the data or information collected through the measuring processes will be discussed.

EDSU 6509 - Administration of Higher Education. Three (3) credits.

The course has been designed to facilitate educational programs administrator in higher education, the acquisition of knowledge, skills, and attitudes that will enable to play their administrative roles in an efficient and effective way. The course encompasses a multidisciplinary vision of the administration as a social system. An administration model is presented integrating two schools and theories within each one. The administrative process is viewed as a complex set of activities as a mean to keep, maintain, and improve educational organizations. The methodology includes seminar, practical experiences, and the application of administrative theory to higher education settings. The course is offered to graduate students and faculty members with interest in this field.

EDSU 8001 - Structuring Learning and Instructional Design in the Health Sciences. Three (3) credits.

This course is designed to train interested faculty and graduate students in the Health Sciences, with the knowledge, skills and attitudes required for systematic planning of instruction in the Health Sciences context. The students are provided with the opportunity to develop an analytical approach to pedagogical decision-making related to the process of designing instruction. The essential aspects basic to the teaching process and to the structuring of learning will be studied in an analytical way. The course will include the study of systematic planning of instruction such as: selection and construction of learning objectives; selection and organization of content to be taught; selection of educational strategies and the design of instructional activities which promote construction of knowledge and critical thinking in the students; selection of resources, and design of instructional evaluation. Current topics related to the educational process will also be discussed. The student is expected to integrate and apply the concepts acquired in the planning and development of different types of instructional designs, such as units of study, instructional guides, auto-instructional modules and course syllabi, among others. The course will be developed through group discussions and applied exercises. Three seminars will be conducted where current topics related to the instructional process will be discussed. The students will be divided in collaborative groups for researching and presenting a topic of interest to the students. The three topics will be selected according to the needs and knowledge of the students enrolled in the course.

EDSU 8005 - Teaching and Learning in the Health Sciences and the use of Media and Information Technologies. Three (3) credits. Pre-requisites: EDUC 8028, EDUC 8029, Six (6) credits - Foundations of Education Component, Six (6) credits - Planification, Evaluation, Research, and Statistics Component.

Course of the teaching of the Health Sciences component, for students of the Experimental Graduate Program-Doctor in Education (RPC-MS). Includes the use of media and technologies of information to positively impact the process of teaching and learning. Using seminars, laboratory and independent study, the following areas are covered: availability of media and technologies of information in the MSC and the UPR system; teaching, learning, media and technology; information access and; multimedia. Culminates in particular projects, in which each student will integrate media and technologies of information to his/her teaching.

EDSU 8015 - Planning Educational Programs for the Development of Health Professionals and Health Care Systems in Puerto Rico. Three (3) credits. Pre-requisites: EDUC 8028, EDUC 8029, Nine (9) credits in Philosophical, Sociological, and Psychological Foundations of Education.

This course is based on the principles of strategic planning, its epidemiological basis, philosophical contents of quality in health care and on the design and evaluation of educational programs for health professionals. In-depth study is pursued of the implications of organizational and financial changes of the health care system and of educational programs for health manpower development in Puerto Rico. In this course, students will develop knowledge, skills and attitudes for multidisciplinary educational planning for health professionals, attuned to societal realities and needs. It is designed with active student participation. In general, the course is directed to the integration of knowledge from several disciplines; such as, Management, Education and Health Sciences. It is geared to the development of educational experiences that integrate theory and practice, by the application and transference of knowledge to new ventures in the health sector. The course is directed to students of the Experimental Graduate Program, Education Doctorate of the Rio Piedras and Medical Sciences Campus, of the University of Puerto Rico.

EDSU 8017 - Quality Improvement in Health Professional Practices, Health Professions Education Programs and Health Care Organizations. Three (3) credits. Pre-requisite: Biostatistics or equivalents.

This course provides a conceptual framework on continuous quality improvement. It examines the philosophy and provides guidelines for its implementation in health professions education programs and health care organizations, with active participation of health professionals through interdisciplinary teams. The course utilizes the educational methodology ECA, that promotes the exploration and conceptualization of knowledge and skills, and the application and integration of theory and practice. Students will work as team members throughout the educational seminar-type experience.

ENOP 6005 - Reproductive Physiology for Nurse Midwives. Two (2) credits. Co-requisites: ENOP 6007, ENOP 6008, ENOP 6035.

The course addresses the physiology of human reproduction in order to gain proficiency in diagnosis of the normal pregnancy and recognition of deviations from the normal. During class discussions and independent study the following content is emphasized: menstrual cycle, physiologic changes of pregnancy, labor and delivery, reproductive endocrinology, conception, interrelationships between mother and fetus, maternal-fetal-placental physiology and introduction to gynecology.

ENOP 6006 - Human Sexuality and Well Woman Gynecology. Three (3) credits. Pre-requisite: ENOP 6005.

This course is designed to increase students understanding and acceptance of their own sexuality and that of others. The psychosexual development of the individuals is discussed; as well as preparation for marriage and family living. This course emphasizes the management of common gynecologic problems including sexually transmitted diseases. Parameters for differential diagnosis, treatment modalities including, co-management collaboration and referrals when indicated, are taught. Counseling, education and provision

of all birth control methods will be discussed. Legal, ethical, religious issues related to family planning will also be included. This course also addresses the management of the care of the woman during the perimenopause and post-menopause including therapies for alleviating the common discomforts that accompany aging. Emphasis is given to the role of the nurse-midwife in the delivery of effective family planning services and women's health care problems.

ENOP 6007 - Basic Pharmacology for Nurse Midwifery. Two (2) credits. Co-requisites: ENOP 6005, ENOP 6008, ENOP 6035.

This course is oriented toward the review of the action, indications, contraindications, side effects of the drugs commonly used in the care of women during prenatal, labor, delivery, postpartum, family planning and in the care of the newborn. Medications, standing orders, for the nurse midwife are evaluated and analyzed.

ENOP 6008 - Normal Obstetrics Management. Three (3) credits. Co-requisites: ENOP 6005, ENOP 6007, ENOP 6035.

This course contributes to the acquisition of basic clinical knowledge of normal obstetrics and the development of skills for the management and care of the women during preconception, pregnancy, labor, delivery, postpartum, and immediate care of the newborn through class discussions and independent study. The framework of nurse-midwifery management for the primary care of normal women during the maternity care cycle and the care of the newborn is constituted. The functions and responsibility of the midwife as a health team member are discussed and stressed. The student will learn the skills and techniques relevant to give expert support and care during labor, use of analgesia, performance of local and regional anesthesia, performance of episiotomy, delivery of baby and immediate care to the newborn and mother.

ENOP 6025 - Fundamental Concepts in Public Health. Four (4) credits. Co-requisites: ENOP 6005, ENOP 6007, ENOP 6008, ENOP 6035.

In this course the Nurse Midwifery Certificate students become acquainted with basic concepts, skills, and methods that underline Public Health practice. It presents the basic disciplines in the field of Public Health using interdisciplinary approach. Through class discussions, workshops and field experiences, alternatives for meeting the needs of women and children are presented. The nurse midwifery role in health promotion, conservation and restoration, as well as disease prevention are discussed, with emphasis in their responsibility as members of the health team.

ENOP 6026 - Genetics and Genetic Counseling in Nurse Midwifery. One (1) credit. Pre-requisite: ENOP 6025 or MEDU 6500.

This course, through class discussions, provides an integrated view on genetic disorders of major public health importance. The preventive aspects, diagnostic procedures, services, resources for the population at risk are discussed.

ENOP 6027 - Problems and Complications of Obstetrics. Three (3) credits. Pre-requisites: ENOP 6005, ENOP 6007, ENOP 6008, ENOP 6035. Co-requisite: ENOP 6036.

This course is designed to provide the students, through class discussions and independent study, the basic knowledge and critical evaluation of deviations from normal, complications and risk factors affecting the health of women and fetus during preconception, pregnancy, labor, delivery, and postpartum. Building upon course work in introduction to Public Health, reproductive physiology, nurse-midwifery practice and management, normal obstetrics, and pharmacology, the students will expand their knowledge in order to promptly recognize health problems, deviations and risks, to implement prevention strategies, prevention of complications, and management of emergencies. The nurse-midwifery role in complications which require physician consultation and referral is emphasized.

ENOP 6028 - Maternal and Infant Nutrition. Two (2) credits.

This course provides the student with learning experiences in the reciprocal relationships between reproduction and nutrition. The influence of nutrition during preconception and prenatal status and final outcome is discussed and evaluated by weight gain. The effects of nutrition on physical, mental growth, and development. Interrelations between nutrition, disease, and breast feeding are also discussed. Students will gain experience in the theoretical and practical background, technical information, and practical counseling techniques for the main aspects of nutrition care during pregnancy, lactation, and infant feeding. They will prepare and maintain accurate complete and valid nutrition records, and identify problems through screening and assessment, intervention through education and management, follow up of those aspects related to the maternal nutritional state.

ENOP 6029 - Care of the Newborn. Two (2) credits. Pre-requisites: ENOP 6005, ENOP 6007, ENOP 6008, ENOP 6035. Co-requisite: ENOP 6027.

This course emphasizes the theoretical, conceptual, and practical basics fundamental to assessment and management of the normal newborn. Through class discussions and clinical experiences, special attention is given to risk factors affecting growth and development (physical, social, and emotional). Complications of the intra-uterine and neonatal periods are stressed. Emphasis is on the role of the nurse-midwife in the prevention of birth disorders, education, recognition of complications, deviations, and management of the most common disorders of the neonate.

ENOP 6030 - Planning and Organization of Maternal and Infant Nurse Midwifery Services. One (1) credit. Pre-requisites: ENOP 6006, ENOP 6026, ENOP 6027, ENOP 6028, ENOP 6029, ENOP 6036. Co-requisite: ENOP 6037.

This course presents the basic principles of health planning for the development and organization of maternal, infant and nurse midwifery services; this course will provide the basic concepts of problem solving, staffing, coordination, evaluation, and budgeting. The students will carry out assessment of the maternal and infant services at primary level of an specific area, in order to determine needs, priorities, objectives, and recommendations.

ENOP 6035 - Nurse Midwifery Practice and Management I. Two (2) credits. Co-requisites: ENOP 6005, ENOP 6007, ENOP 6008, ENOP 6025 (Not a requirement for the master degree student).

This course introduces the student to the nurse-midwifery management process as the framework for providing primary care for essentially healthy women through the life cycle. Techniques of history taking, physical assessment and utilization of common screening tests are emphasized. Principles of health promotion, disease prevention and management techniques and therapies, including complementary therapies for the treatment of common health problems of essentially healthy women are included.

ENOP 6036 - Nurse Midwifery Practice and Management II. Two (2) credits. Pre-requisites: ENOP 6005, ENOP 6007, ENOP 6008, ENOP 6035. Co-requisites: ENOP 6006, ENOP 6026, ENOP 6027, ENOP 6028, ENOP 6029.

This course is a continuation of Nurse-Midwifery Practice and Management I. Principles of health promotion, disease prevention and management techniques and therapeutics for the treatment of common health problems of essentially healthy women are included. The student is also introduced to nurse -midwifery professional issues, history of nurse-midwifery and midwifery. The professional responsibilities of certified nurse-midwives are emphasized.

ENOP 6037 - Nurse Midwifery Clinical Management and Practice. Five (5) credits. Pre-requisites: ENOP 6006, ENOP 6027, ENOP 6028, ENOP 6036. Co-requisite: ENOP 6030.

This course is given in two trimesters. Supervised clinical experience in all phases of the maternal cycle. The student assumes (under supervision) responsibility for clinical management of the essentially normal mother during antepartum, intrapartum, postpartum, interconceptual period supervision of selected groups of mothers and babies in the home, and family planning clinics. The students are also assigned for the care of high risk cases, in order to learn medical care and management. The student is expected to give the highest quality of nursing and midwifery care to those cases. Collaborative management is expected and fostered. The emphasis of this experience is place in the knowledge, judgment and skills needed for a safe practice of nurse midwifery. Students develop increasing independence in their abilities to provide clinical care to women and their families.

ENOP 6041 - Basic Aspects of Research for Nurse-Midwifery I. Two (2) credits. Pre-requisite: BIOE 6525.

The course introduces students of the MPH with Specialty in Obstetrics-Midwife Nursing, the basic knowledge of research, as well as the necessary dexterities to be able to identify the problems related with the health and the services of the mother's health and the infant. The course will promote an experience of individual research or in groups, which will be directed to obtain scientific information that proposes alternative at short and long term to solve the identified problem. In this course will discuss basic aspects related with the identification of maternal and infant health problems, the writing of the report, and the ethical and legal aspects related with the investigation. To reach out the objectives, the professor will use the conference, the group discussion, field visit, independent work, interviews, oral and written presentation. At the end of course, the students will be able to select and work in the identified related problem.

ENOP 6042 - Basic Aspects of Investigation for Nurse-Midwifery II. Two (2) credits. Pre-requisites: BIOE 6525, ENOP 6041.

The course introduces students of the MPH with Specialty in Obstetrics-Midwife Nursing, the basic knowledge of research, as well as the necessary dexterities to be able to planning and implement a research related with the health and the services of the mother's health and the infant. The course will promote an experience of individual research or in groups, which will be directed to obtain scientific information that proposes alternative at short and long term to solve the identified problem. In this course the students will work in the planning and implementation of the research problem. To reach out the objectives, the professor will use the conference, the group discussion, independent work, oral and written presentation of a problem of carried out investigation. At the end of the course, the student will be able to finish the investigation and to offer recommendations. Grading System: Passed (P), Not Passed (NP)

EPID 6523 - Epidemiological Methodology. Four (4) credits. Pre-requisites: BIOE 6525, SALP 6006.

This course, offered through face-to-face modality, is targeted to graduate students. It presents the epidemiological principles and methods as an approach to the study of phenomena of health and disease as well as heir determinants. After completing the course, students will be able to use the epidemiological method as a tool to describe and analyze diseases and other public health problems in the community. The concepts of causality, descriptive epidemiology, hypothesis formulation, analytical epidemiology, and screening will acknowledge the relevance of epidemiology in the implementation of suitable disease control and prevention measures, the health services planning, and to study the causes and natural history of diseases. The learning activities include 2 interactive lectures, discussion of current issues in epidemiology, case studies, and practice exercises.

EPID 6524 - Community Health Needs Assessment. Two (2) credits. Pre-requisites: BIOE 6525, EPID 6523

This course is aimed at students of the Master in Public Health with specialties in Epidemiology or Biostatistics. It will enable students to integrate foundational and specialty competencies in order to develop a research

proposal to address a specific health problem in a community. The course will give the students the opportunity to underscore in the proposal: identification of the research problem, literature review on the subject, formulation of the research question, identification of the limitations on resources and the scope of the research, formulation of the study hypothesis, selection of the epidemiological and sample designs, and the data processing, description, and analysis plan. The main teaching strategies of the course include discussion of readings, interactive lectures, presentations and reports, small group activities, and field experience in the study community.

EPID 6525 - Immunization Program in Latin America and Puerto Rico. Two (2) credits.

The purpose of this course is to teach the students to analyze the problems, available resources and actual yield, to design actions to extend coverage of the immunization programs. By means of group work in the form of workshops, where the contents of the modules noted below will be discussed. This modules have been prepared by the Pan American health organization, also the system used in Puerto Rico: I- Goals; II- Diseases; III- Vaccines; IV- Cold Chain; V- Program Management and VI- Evaluation (Theoretical and Practical).

EPID 6526 - Epidemiology of substance Use and Abuse. Three (3) credits. Pre-requisites: EPID 6523

Through lectures and group discussions this course provides the student an overview of the epidemiology of substance use and abuse with emphasis on its historical background, the high-risks groups, and their relationship to other behavioral problems such as violence, suicide, delinquency, and social disorganization. From a perspective of social epidemiology different historic and sociocultural aspects of the substance use and abuse will be discussed scientific articles on the co-morbidity between substance abuse, infectious diseases, and certain mental health conditions will be studied. Relevant methodological aspects in conducting epidemiological studies on substance use will also be analyzed. At the end of the course the student will be able to assess methodological aspects of epidemiological studies as well as the implications of their results in the etiology, treatment, and prevention of substance abuse.

EPID 6527 - Epidemiologic Surveillance. Two (2) credits. Pre-Requisite: EPID 6523.

The course is oriented towards the study of the behavior of transmissible diseases but emphasizing their prevalence in Puerto Rico and in other countries. This course provides concepts and application of one of the basic tools of epidemiology: epidemiological surveillance. Students will study some communicable diseases, current concepts, methods, and procedures related to the organization and functioning of an epidemiological surveillance system to determine public health action needs and to evaluate the effectiveness of programs. Through interactive lectures and group discussions, students will learn how to create a surveillance system for each specific need, acquiring a useful tool that can be used in the planning, implementation, and evaluation of specific public health programs. The course will teach students how to make use of epidemiological surveillance systems, through specific training in the design and evaluation of existing systems.

EPID 6528 - Epidemiology of Mental Disorders. Three (3) credits. Pre-requisites: EPID 6523.

This course is aimed at Epidemiology students of the Master in Public Health Program. It will enable students to understand, analyze and critically evaluate the current research about psychiatric disorders in the population. The students will understand the distribution of psychiatric disorders in the population. They will discuss and evaluate the prevalence and risk factors associated with common psychiatric disorders such as anxiety disorders, major depression disorder, alcoholism, and suicide. The course also includes the discussion of concepts associated to inequities in the mental health services such as stigma and acculturation. The teaching strategies of the course include discussion of readings, interactive lectures, group presentations and reports. Students are expected to explain the magnitude of mental health disorders and discuss concepts associated to mental health conditions and health services.

EPID 6529 - Epidemiology of Chronic Diseases. Three to four (3-4) credits. Pre-requisites: EPID 6523, SALP 6006.

This course, targeted to graduate students, discusses the epidemiology of selected chronic diseases that constitute the principal causes of death in Puerto Rico and other countries. The chronic diseases to be discussed are cancer, chronic respiratory diseases and cardiovascular diseases. The epidemiology of diabetes and hypertension are evaluated. The principal risk factors for chronic diseases are analyzed taking into consideration the development of prevention activities. The students will have the opportunity to integrate concepts and knowledge develop through this course, as well as in previous courses, through the revision and critical analysis of scientific literature. The course is offered through face-to-face modality. The learning activities include interactive lectures and group discussion of current issues in chronic disease epidemiology.

EPID 6530 - Statistical Methods in Epidemiology. Five (5) credits. Pre-requisite: BIOE 6525 (Old codification BIOE 6521).

Designed as part of the concentration in Epidemiology of the M.P.H. Program. Topics included are: Statistical Inference, Sampling Theory, Regression Analysis; Non-Parametric Tests and Life Tables. Other topics are The Principles Methods and Techniques of Statistics as Applied to the Design, Development and Analysis of Epidemiological Studies.

EPID 6535 - Epidemiology of Infectious Diseases. Four (4) credits. Pre-requisite: EPID 6523 (MS EPID).

The course is oriented towards the study of the behavior of communicable diseases in general and of some of them in particularly, in Latin America and in other countries. Through interactive presentations and group groups, students will learn about some communicable diseases, as well as concepts, principles, methods and procedures related to the organization and functioning of the epidemiological surveillance system. At the end of the course, students are expected to know and apply knowledge about natural history and disease transmission to control and prevent infectious diseases of current importance.

EPID 6536 - Epidemiology and Pathogenesis of Cancer. Three (3) credits. Pre-requisites: BIOE 6525, EPID 6523.

This course is aimed at graduate students who will acquire knowledge about the epidemiology of the most common human cancers within the environment-genetic multi-causal framework. The course involves the adequate application of basic concepts in cancer epidemiology such as the evaluation of designs and research methods, the identification of risk factors, the critical evaluation of the results of epidemiological studies, the application of causality criteria, the discussion of aspects related to the management and importance of cancer registries in its surveillance function and in the formulation of public policy, and the applicability of the strategies for cancer control and prevention at the population level. The learning activities include interactive lectures and discussion of current issues in chronic disease epidemiology. Students will have the opportunity to integrate knowledge developed, through the revision and critical analysis of scientific literature.

EPID 6539 - Epidemiological Aspects of Public Health Problems. Two (2) credits. Pre-requisite: EPID 6523.

This course provides practical epidemiology training in the management of Public Health problems through a detailed examination of origins and rationale of established policies and guidelines that pertain to disease-prevention/control.

EPID 6545 - Introduction to Pathobiology. Three (3) credits.

This course is designed to familiarize students with the physical, physiological, and mental responses of man to infectious and noninfectious disease causing agents. The immediate and intermediate effects of the most common diseases in Puerto Rico are studied.

EPID 6547 - Methodological Principles in Occupational Epidemiology. Two (2) credits. Pre-requisite: EPID 6523.

Epidemiological methods applied to the study of health problems related to the occupational environment.

EPID 6549 - Advanced Research Methods in Epidemiology. Five (5) credits. Pre-requisites: BIOE 6525, BIOE 6545, BIOE 6605, EPID 6523.

This is a course in advanced epidemiological research geared to students of the Master's in Sciences in Epidemiology Program. It focuses on the different epidemiologic research designs; their characteristics, advantages and disadvantages. Data collection methods are also examined in terms of the adequacy of each one for the different epidemiologic research designs discussed. The students will have the opportunity to develop and to apply the statistic reasoning necessary for the quantitative analysis of each of the research designs studied. The students will also have the opportunity to discuss various statistics packages to carry out the statistical analysis for each design. It is expected that the students will be able to integrate and apply the acquired knowledge in: (1) The elaboration of the different epidemiologic research designs, (2) Selecting the most adequate data collection methods and statistical analysis according to the design, (3) Determining the sample size according to the design, (4) Identifying the statistical packages and their application to Epidemiology.

EPID 6552 - Seminar in Epidemiology I. One (1) credit. Pre-requisite: BIOE 6525. Co-requisite: EPID 6523.

The first part of the seminar will emphasize the historical development of the discipline of Epidemiology. The second section will develop the skills of critical analysis of epidemiological research. The last portion of the seminar will introduce the student to various types of epidemiological research.

EPID 6553 - Seminar in Epidemiology II. One (1) credit. Pre-requisites: EPID 6552, BIOE 6535. Co-requisite: EPID 6523.

The course introduces the students to various topics in Epidemiology, such as: The Epidemiology of Chronic Diseases, Clinical Epidemiology, Psychiatric Epidemiology, and The Epidemiology of Preventive Health Behavior.

EPID 6554 - Seminar in Epidemiology III. One (1) credit. Pre-requisites: BIOE 6535, EPID 6523, EPID 6553.

The seminar presents the development of the epidemiological approach to health through readings and discussion of classical studies. It covers the development from the Greeks to the transition to modern Epidemiology.

EPID 6555 - Seminar in Epidemiology IV. One (1) credit. Pre-requisites: BIOE 6535, EPID 6552, EPID 6553, EPID 6554.

The Seminar IV continues with the historical perspective in the development of Epidemiology initiated in Seminar III. It is focused in the development of modern Epidemiology through the discussion of classical studies in the area since the Second World War.

EPID 6556 - Seminar in Epidemiology V. One (1) credit. Pre-requisites: EPID 6552, EPID 6553, EPID 6554, EPID 6555.

The Seminar in Epidemiology V consists of discussions and presentation of recent and current research projects in Epidemiology. The research projects to be discussed include the following topics: Sexually Transmitted Diseases, Chronic Illness and Occupational and Automobile Accidents.

EPID 6561 - Epidemiological Research I. Four (4) credits. Pre-requisite: EPID 6523. Co-requisite: EPID 6549.

The main objective of this course is to prepare the student with the required knowledge to design an epidemiologic research.

EPID 6562 - Epidemiological Research II. Four (4) credits. Pre-requisite: EPID 6561.

The main objective of this course is to prepare the student to apply the required knowledge to conduct an epidemiological research.

EPID 6563 - Epidemiological Research III. Two (2) credits. Pre-requisite: EPID 6562.

The main objective of this course is to prepare the student to apply the required knowledge to analyze and interpret epidemiologic research.

EPID 6995 – Applied Practice Experience: Epidemiology and Biostatistics. One (1) credit. Pre-requisites: Have approved all public health core courses and specialty courses. Co-requisites: SALP 6999.

This on-site course is aimed at students of the Master in Public Health Program with a speciality in Epidemiology or Biostatistics. The course provides students an opportunity to demonstrate their competency in the field of Public Health through an applied practice experience. The main teaching strategies of the course include interdisciplinary practice and small group discussions. At the end of the course, students are expected to develop, conduct and disseminate a community intervention to address a public health issue.

EPID 8002 - Advanced Methods in Epidemiology II. Three (3) credits. Pre-requisites: EPID 6523 or equivalent, BIOE 8005 or equivalent.

Through interactive lectures, group discussions, and case studies analysis, students will apply the epidemiological principles and methods in the study of health-related events. The epidemiological method will be applied for planning and evaluation of health services and public policy, with special emphasis on risk assessment and risk management. Topics include the phases of research and the need to obtain valid and precise exposure measurements to different agents associated with the disease process. The course will also include the available techniques to minimize errors. The types of epidemiological studies used to quantify the magnitude of the relation between the exposure and disease occurrence will be presented, emphasizing the advantages and disadvantages of each study design. The use and limitations of surveillance systems and national surveys in assessing, monitoring and evaluating policies and programs will also be presented.

EVAL 6511 - Introductory Proposal Seminar. One (1) credit.

This seminar introduces the student in the Master in Science in Health Systems Evaluation Research Program to the first two stages of The Scientific Method: formulation of a specific research question and the development of empirical hypothesis. Specifically, in the seminar the student is exposed to different areas or topics related to evaluation research. Students will be provided experiences that help develop skills in the appropriate formulation of research questions and hypothesis in areas related to evaluation research. In addition, the seminar provides the opportunity to discuss different factors that should be taken into consideration while selecting a research topic. Factors related to sample accessibility or availability to clinical records, extent of time required to conduct the study and costs are discussed.

EVAL 6512 - Intermediate Proposal Seminar. One (1) credit. Pre-requisite: EVAL 6511.

The course is designed to facilitate that students initiate their thesis proposal. It is conducted as an applied seminar to: 1) familiarize the student with the program requirements for the thesis proposal; and 2) provide help in the selection and elaboration of research topics. In the initial sessions the program's guide for proposal and thesis development will be discussed and the students' topics of interest will be explored. At the following sessions the students will present relevant studies in their area of interest. The research questions and conceptual model that guide these studies will be examined.

EVAL 6513 - Advanced Proposal Seminar. One (1) credit. Pre-requisite: EVAL 6512.

This seminar aims to facilitate the student's progress on the thesis proposal. It is based on the work initiated in the Intermediate Proposal Seminar. Based on the literature review during this period the student present his/her research problem, the research question (s), design, and methodology of the thesis project proposed. The purpose of these presentations is to provide the students with the opportunity to learn from diverse experiences and to examine different designs and research methods.

EVAL 6515 - Conceptualization and Methodology for Evaluation Research. Four (4) credits.

The basic steps in the research process will be studied and applied in this course. Special attention will be given to the selection, definition, and development of a problem in the area of Evaluation Research. The student will develop a conceptual model and will conduct an exhaustive literature research. Also, the student will establish the methodology, design, and procedure to be used in the study. Finally, the student will analyze data obtained from a small pilot study. The main teaching strategies will be conferences and discussions.

EVAL 6610 - Principles of Evaluation. Three (3) credits.

This course introduces the student to the role of evaluation in the Health Care Services Sector and the historical needs that have influenced the development of the discipline. They will be exposed to the history, principles, and scope of the discipline. They will become familiar with the context in which the profession is practiced as well as with the different evaluation modalities that are more frequently applied to Health Services. At the end of the course the students will have become aware of the need to acquire or develop the knowledge, skills, and attitudes provided by the academic program so that they may exercise the profession in different health care services settings.

EVAL 6611 - Evaluation Models. Three (3) credits. Pre-requisite: EVAL 6610.

This course presents different theoretical models utilized in Program Evaluation. In particular, the characteristics of diverse models are identified and their applicability to specific situations is analyzed. Students will examine the strategies, steps, and procedures required of the evaluation processes that are derived from the various models. By the end of the course the students will be able to select an Evaluation Model and design a Program Evaluation Plan.

EVAL 6613 - Seminar in Strategies for the Analysis and Evaluation of Health Problems, Programs, and Policies. Three (3) credits.

This course presents and analyses different strategies for the analysis and evaluation of the health problems, programs, and policies. It is expected that at the end of the course the student will be able to discriminate and select the best strategy for the analysis of a specific project in evaluation, planning or development.

EVAL 6614 - Evaluation of Health Services. Two (2) credits.

This course presents basic concepts in evaluation research. Emphasis is given to the different research techniques used in monitoring health programs. Some of the topics are: Surveys and Observations for Planning Intervention Strategies, Designs, and Data Analysis to Measure Program Effectiveness.

EVAL 6615 - Development of Measurement Instruments. Three (3) credits.

This course aims that students develop skills that allow them to select, adapt, or develop measures appropriate to the situation under study. Diverse data collection techniques, including their advantages and disadvantages, are examined. Specifically, we discuss self-reported questionnaire, personal interview, telephone interview, observation, and diary, among others. We also examine relevant elements in the planning and administration of diverse data collection measures.

EVAL 6616 - Evaluation Analysis. Three (3) credits.

This course will present different evaluation designs that could be used in the health field. Emphasis will be given to the circumstances under which they are feasible.

EVAL 6617 - Advanced Seminar in Measurement Problems. Three (3) credits. Pre-requisites: ADSS 6574, EVAL 6610, EVAL 6611, MEDU 6500.

Critical analysis of evaluative research papers in the area of Health Services. Emphasis will be given to measurement problems when non-parametric measures are used.

EVAL 6618 - Advanced Evaluation Seminar. Six (6) credits. Pre-requisites: EVAL 6610, EVAL 6611, EVAL 6612, EVAL 6613, MEDU 6500.

Course designed to guide the student, at an individual level, to develop and carry-out evaluate research.

EVAL 6619 - Special Interests. Six (6) credits. Pre-requisites: EVAL 6610, EVAL 6611, EVAL 6612, EVAL 6613, MEDU 6500.

Course designed so that the student has the opportunity to be in contact with the practical aspect of evaluation. It will be designed according the student's special interests. The content will depend on the subject matter that the student wants to develop.

EVAL 6620 - Applied Statistics for Evaluation Research Studies. Three (3) credits. Pre-requisites: BIOE 6525, BIOE 6535, BIOE 6555, BIOE 6605.

This course will cover the application of fundamental methods of statistical analysis for evaluation research studies. The course also includes the management of a data bank, and the creation and transformation of variables. In the application of statistical methods to evaluation research studies we examine descriptive and inferential statistics. In particular, we discuss T Test, F Test, ANOVA, Chi-Square, and the use of Odds-Ratios in evaluation research studies. In addition, the use of multivariate and logistic regression in evaluative studies will be discussed. It is expected that at the end of the course the student can successfully integrate theory and practice such that he will be able to perform the appropriate statistical analysis to a data bank in order to complete a particular research study. The course will be offered as seminar.

EVAL 6621 - Research Evaluation Seminar I. One (1) credit.

The seminar introduces the student in the Master's Degree Program in Evaluation Research of Health Systems to the first two steps of the Scientific Method, construction of a specific research problem and hypothesis empirically testable. Specifically, the seminar will provide the student experiences that develop skills in the proper construction of research problems and hypothesis in different areas of evaluation research. In addition, in the seminar will present and discuss several factors that should be considered in the selection of a research topic. For example, factors such as: access to the sample or clinical records, time to carry-out the research and cost.

EVAL 6625 - Analysis and Interpretation of Evaluative Studies. Three (3) credits.

This course analyses literature in the field of Evaluation in order to judge critically the methodologies used. In addition, it provides an applied experience in the analysis, interpretation of evaluative studies. The course

emphasizes that the students relate to studies conducted in the field of Evaluation to identify alternate methodologies and examine the weaknesses and strengths of these.

EVAL 6626 - Evaluation Practice. Two (2) credits.

This course has as its fundamental purpose to provide the students the opportunity to put into practice theoretical concepts and skills acquired during the coursework. This practice facilitates the transition from an academic to an occupational environment. The students will also be able to assume the functions and responsibilities of an evaluator in a work setting. The students will develop a project in accordance with the agency.

EVAL 6628 - Principles of Cost-Benefit Analysis. Three (3) credits.

This course will introduce students to the economic evaluation of health programs and interventions. It uses an economic model to analyze health services and identify inputs of production as physical facilities, equipment, human resources, and medications. It also examines changes in health status as the output of a production process using the previous inputs. Since the availability of resources required to fulfill the population needs for health services is limited the efficient use of resources must be emphasized. Cost benefit, cost effectiveness, and cost utility analysis are discussed as methods that allow the evaluation different alternative, programs, projects or interventions. Students are expected to develop the skills and knowledge necessary to choose the most adequate methodology in their analysis of cost and benefits of health services. Case discussions, homework, and lectures are the teaching strategies used in this course.

EVAL 6630 - Strategies for Evaluation and Communication. Three (3) credits. Pre-requisites: EVAL 6515, EVAL 6610, EVAL 6611.

This course aims to develop skills in the negotiation and design of an evaluation plan. Strategies for the purpose of communicating evaluation results are also discussed. The essential stages and activities for the elaboration of an evaluation plan for a specific professional context are discussed. Specifically, aspects such as: definition of the program, objectives of the evaluation, methodology and budget are included. Skills for effective communication in the evaluator-client relationship are develop. Different formats and strategies are presented for the communication of evaluation findings. This course will be offered through lectures, work groups and students' presentations.

EVAL 6650 - Evaluation Practicum. One (1) credit. Pre-requisites: EVAL 6610, EVAL 6615, EVAL 6620, EVAL 6630.

The main purpose of this course is to provide the student with the opportunity to practice the theoretical concepts and skills developed in previous courses. The practicum will also allow the student's transition from an academic environment to an occupational setting. The student must develop an evaluation project that responds to the needs of the agency.

EVAL 6700 - Thesis Project. Three (3) credits. Pre-requisites: EVAL 6513, EVAL 6515.

The main purpose of this course is to facilitate the implementation of an evaluation research project. It has been structured as an applied project aimed at guiding the students individually through the various phases associated with the preparation of a thesis. During this process the student will discuss with his/her advisor the progress and difficulties encountered in the process of data collection, data analyses, interpretation of findings and generating recommendations.

GERO 6005 - Introductory Seminar to Gerontology. One (1) credit.

The goal of the course is to stimulate the participants to analyze their attitudes towards older adults and their own aging process, and to introduce gerontology as a discipline. Through interactive lectures in the classroom, several introductory topics that are fundamental for the study of gerontology are discussed, such as: myths and stereotypes, perceptions about old age, gerontological terminology, historical trajectory of

gerontology, demography of aging and the process of interviewing an older adult. At the end of the course, students will be able to analyze factors that affect aging in the population and will reflect their perception of old age for their personal and professional development in the future.

GERO 6495 - Planning the Interdisciplinary Intervention in Gerontology. One (1) credit. Pre-requisites: GERO 6005, GERO 6501. Co-requisite: GERO 6505.

This course provides to the Certificate of Gerontology student, knowledge and skills to develop a health promotion plan to older participants in a community. Is a preparatory course for GERO 6511: Interdisciplinary Intervention in Gerontology. Integrates theory and practice in the discussion and application of: interview process in older people, diagnosis of health needs, planning health promotion programs for older persons and importance of team work in the care of this group. Offers the opportunity to refine interview, planning group deliberation and teamwork skills. It consists of three conceptual seminars with application exercises and a practice activity. At the end, it is expected that the student discuss and justify a health promotion plan designed for the community assigned for the interdisciplinary intervention.

GERO 6500 - Introduction to Gerontology. Three (3) credits.

Introduction to the field of Gerontology as an interdisciplinary area and as a new area of knowledge, research, and services. The human life cycle is presented focusing the theme of aging as biological and social process starting at conception and finishing at the latest state, death. The subject presents the study of aging and the aged as an area of increasing importance in the field of Public Health.

GERO 6501 - Biological Aspects of Aging. Three (3) credits.

This course is based on a public health approach whose goal is to improve the quality of life of older adults. The course covers the biology of aging and the physiological changes at the cellular and systemic level that occur during the process of aging. Through interactive lectures and group discussions in the classroom, the course provides students with a biological framework for addressing the physical, social and psychological needs of older adults. In addition, this course tackles the main causes of disability in older adults produced by the synergism of the aging process, health conditions and the environment. The main goal is to propose public health intervention strategies to delay disability and for the compression of morbidity, which have enormous social costs. At the end of the course, students will know the principles of public health that can help attenuate the effects of aging and its relationship with disability.

GERO 6503 - Psychological Aspects of Aging. Three (3) credits.

This course provides students with a multi-disciplinary view of the psychological aspects of aging. The course provides simulated and real-life experiences that will help students understand changes associated to normal aging, environmental factors, psychopathology, communication disorders and cognitive aging. The course will cover special topics such as retirement, sexuality, life-styles, depression, medication and alcohol abuse. Special attention will be paid to death and its impact on families. Through interactive lectures and group discussions, students will understand the many aspects of aging presented in the context of our Puerto Rican setting. At the end of the course, students will be able to address issues from a psychological perspective to strengths older adults' capacities.

GERO 6505 - Clinical Aspects of Aging. Three (3) credits. Pre-requisite: GERO 6501.

This course provides students with a clinical and public health perspective for addressing the physical, social and psychological needs of older adults. Through interactive lectures in the classroom among other activities, the course will cover the most common diseases and chronic conditions that affect older adults, the management of medicines and polypharmacy, nutrition and other health related topics important for older adult health promotion. It also covers environmental and self-care factors that affect older adults and its relationship with disability. At the end of the course, students will apply clinical knowledge within public health strategies for health promotion and disease prevention among elderly.

GERO 6507 - Social Aspects of Aging. Three (3) credits.

This course is composed of two main topics: Sociology and Demographic and Economic Aspects of Aging. The Demographic Aspects section of the course develops the competencies related to the demographic and economics of aging. It includes the structure and dynamics of the population, the relation between aging population and the economic, international income transfer, dependency and replacement ratios, economic growth inflation, employment, and others. The Sociology section presents the societal cultural ideology of the aged in Puerto Rico and the United States, with influence in institutionalization of stereotypes and prejudices at the macro level of the society and community and the micro level of the primary group. The institutionalized approach will be explored as it affects the social conditions of the aged and the institutional response to aged in the past, present and future. The social aspects will be seen within an interdisciplinary frame of reference.

GERO 6508 - Planning Field Experience in Public Health Gerontology. Two (2) credits. Pre-requisites: All MPH Courses, GERO 6501, GERO 6507.

This course aims to initiate the conceptualization and planning of the applied field experience for the completion of the degree final requirements. Students, in interdisciplinary groups, will integrate, apply and synthesize knowledge, skills and learning experiences to the analysis of a relevant public health issue related to the older population in Puerto Rico and propose a plan to address it. Students will identify their topic of interest in coordination with the interests of an agency/organization/community in a real-world setting and develop a proposal under the direction and approval of their preceptor. The goal of the course is to demonstrate the skills and proficiency to address a public health problem or issue of interest and social relevance related to the older population in Puerto Rico.

GERO 6509 - Policy and Management Aspects in Gerontology. Three (3) credits.

The course aims to provide students an integrated vision of two areas related to provision of services for the older adult population: healthy policy and management. Through interactive lecture, students will understand the multidimensional perspective of the health systems from Puerto Rico and United States and the provision of health services to the older adult population. Through colloquiums, group discussions and in-class student presentation, students will discuss the conceptual framework of current public policy and related legislation for older adults, their relation to the management of public health programs, and issues related to the financing older adult services. After completion of the course, students will conduct an analytical project addressing critical issues related to a public health program, its management, and the fiscal, ethical and logistical issues that impact the elderly population.

GERO 6510 - Aging and Developmental Disabilities. Three (3) credits.

The course is oriented toward the discussion and analysis of basic aspects to be considered in the provision of services to aged individuals with developmental disabilities. Manifestations of aging among individuals with developmental disabilities will be discussed, as well as models and principles for the delivery of services within a holistic, bio-social perspective.

GERO 6511 - Interdisciplinary Intervention. Three (3) credits. Pre-requisites: GERO 6501, GERO 6503, GERO 6505, GERO 6507. Co-requisite: GERO 6509.

This course is designed to provide the students the opportunity to practice their theoretical background in a community or institution, to render an effective intervention with the elderly within a team approach. It rests on the application of the knowledge students have gained, the skills they master, and the attitudes and values they have clarified. Grading System changed since 3rd Trimester 2007-2008 to traditional grade (A, B, C, F), before was graded Passed (P), Not Passed (NP).

GERO 6515 - Ethical Issues Related to the Aging Process. Three (3) credits.

The course is aimed at public health graduate students who are interested in the field of gerontology and ethical issues presented by aging of the population. The main objective is that the students develop a basic theoretical framework in the field of bioethics and moral reasoning skills that enable them to identify, critically analyze and wisely manage ethical issues implicit in the care and health care delivery of the elderly population.

GERO 6516 - Productive Aging. Three (3) credits.

This is an elective course addressed to students of the Master in Public Health with Specialty in Gerontology, the Graduated Certificate in Gerontology, and master students in the different Health Allied Professions. Through conferences and groups discussion students will have the opportunity to acquire general knowledge related with the different positions about productive aging. The focus of the course will be the existent situation in United States. Equally, in the measure that is possible, the existent situation will be presented in Puerto Rico. Through literature research, group discussions, and presentations, the student will be able to argue the concerning matters with the social and economic role of people of advanced age in United States and Puerto Rico.

GERO 6518 - Public Health Practice in Gerontology. Two (2) credits.

These practices will enable the students to investigate deeper in areas of interest and needs in the field of Gerontology. Students who come into the course with previous experience in working with the elderly are assisted in selecting placements that will broaden their background in the field. The purpose in the field placement is to give students practical experiences in working with the elderly or in administering programs for older people.

GERO 6525 - Fundamentals in Gerontological Research. Three (3) credits. Pre-requisites: BIOE 6525 and a graduate level Gerontology course (GERO 6005 or GERO 6500 or GERO 6501).

This is an elective course, addressed to students of the Master in Public Health with Specialty in Gerontology, master students of the different Allied Professions to the Health, and other interested students that fulfill the established prerequisites. The course is an introduction to research in which students will have the opportunity to acquire general knowledge related with different variants of quantitative and qualitative investigation. Through conferences, group discussions, and practical exercises, existent methodologies of statistical analysis and guidelines for criticism investigation studies will be discussed. Equally it is expected that the student applies the steps to develop a pre-proposal in the Gerontology area.

GERO 6990 - Special Topics in Gerontology. One to four (1-4) credit(s).

Special elective course for the analysis or research of issues and problems related to the aging process and the aged from a Public Health perspective. May include seminars, reports, readings, workshops and field work among others. At the end of the course the student will have a profound knowledge of the topic selected and will be able to integrate the acquired concepts and apply them to real life situations. The course will be self-directed.

GERO 6995 – Applied Practice Experience: Gerontology. One (1) credit. Pre-requisites: GERO 6997.

This course provides an applied practice experience for mas-ter in public health with a speciality in gerontology. With the guidance of faculty, students will develop a project that addresses the needs of a community-based organization, a governmental agency, or non-governmental organization. The goal of the course is for students to demonstrate competency in a real-world public health gerontology setting in which they make a meaningful contribution. Depending on the project, the final product can be health promotion materials, policy and program proposals or recommendations, training manuals and/or curriculums, among

others. The course is based on the project conducted in the Integrative Experience land is aimed to guide students from the integration of knowledge to its application in public health actions.

GERO 6997 – Integrative Experience in Public Health: Gerontology. Five (5) credits.

This course is an Integrative Learning Experience for students of the master in public health with a specialty in gerontology. Students, in interdisciplinary groups, will implement and complete a project in coordination with an agency, organization, or community under the guidance of a faculty preceptor. The project will address a relevant public health issue related to the older population in Puerto Rico. The goal is for the student to comprehend the context in which public health work takes place and demonstrate proficiency in applying and integrating the knowledge and skills acquired to the realities of the field. The project to be completed during the course can be in applied research; policy or program evaluation; or active aging and health promotion. At the end of the course, students are expected to present the results of their project in an oral presentation and a written technical report

INTD 6996 – Interprofessional Collaborative Practis in Public Health. Zero (0) credits.

This course provides the opportunity to integrate essential interprofessional education to public health students when addressing a public health issue. Through modules, discussion groups and case studies, students will apprehend the values, roles, and responsibilities of the teamwork approach to analyze public health issues. Students will participate in interprofessional teams for a decisionMmaking process based on case studies [analysis to develop an intervention plan. Interprofessional teams will be constituted by public health professionals and other professionals related to public health as physicians, pharmacists, nurses, dentists, psychologists, social workers, engineerings, lawyers, architects, among others. At the end of the course, students will reflect on team effectiveness in the collaborative approach to establish public health actions.

MANI 6005 - Maternal and Child Concepts and Strategies. Five (5) credits.

This is a basic MCH course, designed to analyze the determinant factors and particular problems which may affect the health of the mother and child during its growth and development. For each problem discussed, the etiology, risk manifestations, precipitant factors, and a plan of action for prevention and management are analyzed. The student will develop appropriate criteria to identify needs to be satisfied in order to promote optimum health status of the MCH population. The course deals with the application of the technical tools of health planning needs for the development and organization of MCH programs. The student will carry out an assessment of the maternal and child health of an specific region or community. Priorities will be ranked and recommendations will be issued for the improvement and organization of maternal and child health.

MANI 6055 - Legislation in Maternal and Child Health. One (1) credit.

This course offered the student the opportunity to become acquainted with the trends and process by which the MCH programs have developed in the United States and Puerto Rico. The most important and basic MCH legislation (federal/commonwealth) are analyzed. The intervention support and advocacy for promoting, regulating, formulation of new legislation and the establishment of public policy are considered and fully discussed.

MANI 6056 - Programs and Services for the Handicapped Child. Two (2) credits.

This course will cover the health and social needs of the handicapped child and its implications for the planning, organizing, and implementing of comprehensive programs to meet those needs. Special attention will be given to the concept of comprehensive care.

MANI 6057 - The Health of the School-Aged Child. Two (2) credits.

This course is designed to study the physical, mental, and social development of the child from conception to adolescence. Special emphasis is given to the characteristics, needs, and problems of the school-aged child, with particular consideration to those which may present obstacles to learning processes.

MANI 6525 - Human Genetics. Two (2) credits.

This course is designed to provide an integrated view on genetic disorders of mayor Public Health importance. The preventive aspects as well as services and resources needs to meet the needs and demands of the population at risk and affected is discussed in detail. Such topics as Development of Screening Programs, Prenatal Diagnosis, Genetic Effect of Environmental Agents and Genetic Engineering and Legal Implications of Genetics are discussed.

MANI 6535 - Family Care in Health Services. Three (3) credits.

In this course the student is introduced to the significance of a full understanding of the socio-economic and cultural variables affecting the family for developing adequate strategies for meeting its health needs. The importance of the family as the basic social unit is stressed. The students develop the necessary skills for the utilization of analytical methods, such as the epidemiological approach, in order to study the family in the community and the health problems that affect the family as a whole. The basic aspects of health care oriented to the family are analyzed, as well as the family's behavior towards health and health care. The students acquire the basic knowledge for a comprehensive intervention in family health.

MANI 6536 - Research in Maternal and Child Health. Four (4) credits. Co-requisite: Course of Biostatistics.

This course has been elaborated to provide the students with the necessary information to design and carry out a research project in different areas of health services available to mothers and children, with the aim of improving the provision of these services. This is a combined effort with the Department of Epidemiology and Biostatistics. The course has been divided in three phases: a) General principles of research methodology: conceptualization, planning and development of a research design. Department of Biostatistics and MCH program-six sessions. b) Classroom presentation of health problems of national prominence and local relevance in the field of maternal and child health, and suggested research topics that would improve the quality of maternal and child health programs. Development of proposal-six sessions. c) Supervised field practice in areas of particular interest related to maternal and child health problems, as they concern the researcher - one hundred eight hours.

MANI 6537 - Integral and Comprehensive Care. Eight (8) credits.

This course addresses the most important and basic issues in maternal and child health and its implications for the planning, organization, and delivery of comprehensive health services. Policies, legislation, regulations, and standards which guide and determine the provision of these health services are carefully examined. The course is divided into several units: Unit I - Is an introductory unit to the course where the following topics are discussed: Health Situation of Mothers and Children in P.R., The Objectives and the Essential Elements of Care of an MCH Program; Standards and Guidelines of Care; The Delivery of Health Services as the Model of Care Being Implemented in P.R. Unit II - Makes emphasis on the women in our contemporary society and the effects of her expectations on Health Care System. Unit III - Enters into the study of human life cycle and Public Health: growth and development and its implications for organization of MCH programs and services.

MANI 6541 - Population and Family Planning. Three (3) credits.

This course focuses on population factors and their relation to socio-economic and health aspects. The course emphasized the formulation of population policies as an integral part of a country's plans for development. It discusses family planning concepts, philosophy, and methodology. The strategy to facilitate the

development and provision of family planning services, the planning, organizational management, and the evaluation aspects are fully discussed.

MANI 6551 - Human Sexuality and Health. Zero (0) credits.

The course is designed to provide a comprehensive approach to the study of human sexuality and its relation to individual and community health.

MANI 6570 - Seminar on Maternal and Child Health Services in Developing Countries. Two (2) credits.

The course discussed objectives and strategies of the different models of MCH care at primary level. Emphasis is given to the community organization, responsibilities and function of the human resources in health, from the point of view of Public Health. Studies the problems and relationship of factors affecting the health status of at risk population.

MEDU 6500 - Core Course in Public Health. Three to six (3-6) credits.

All candidates for a master's degree in the School of Public Health are required to take this core course. It provides a core content in Demography, Biostatistics, Epidemiology, Social Sciences, Nutrition, Public Health, and Health Education as applied to health and disease. The course is presented in four sub stages: Man Interactive with his Environment, Instruments of Measure and Diagnosis, Health Problems, and Strategies and Techniques of Intervention. The course have four objectives: perceive the human being as a bio-psycho-social individual. Recognize the mayor epidemiological concepts and methods used to diagnose health problems, identify services related to epidemiological vigilance and health education, and the identification of basic biostatistics methods as they related to the health fields.

NUTR 6521 - Biochemistry and Nutrition I. Two (2) credits.

The course presents basic concepts of the chemistry and metabolism of macro and micronutrients by means of lectures, presentations and readings. The student is expected to understand basic concepts of biochemistry and its relation to nutrition.

NUTR 6523 - Biochemistry and Nutrition II. Two (2) credits. Pre-requisite: NUTR 6521.

The course presents more advanced concepts of the biochemistry and metabolism of macro and micronutrients by means of lectures, presentations and readings. The student is expected to understand more advanced concepts of biochemistry and its relation to nutrition.

NUTR 6528 - Seminar in Public Health Nutrition. Two (2) credits.

This course is offered to students participating in the Nutrition Program. It is opened to doctors nutritionists, dentists, and students who have knowledge in Biology, Physiology, and Chemistry. A specific problems related to nutrition in Public Health. Emphasis is given to existing knowledge that will contribute to the solution of such problems. The participation of the nutritionist in the solution of such problems is discussed. The students are expected to get involved in library research, and be ready for the discussion analysis and presentation of a nutritional problem in Public Health. No pre-requisite.

NUTR 6529 - Planning Public Health Nutrition Programs. Two (2) credits.

NUTR 6530 - Biochemistry and Nutrition. Four (4) credits.

This course is concerned with digestion and absorption, chemistry and metabolism of carbohydrates, lipids, proteins and nucleic acids, inorganic metabolism (including acid-base, water, and electrolyte balance), biological oxidation, hormones, vitamins, enzymes and their properties, chemistry of body fluids, physico-chemical topics and chemical composition of fluids.

NUTR 6531 - Human Nutrition. Three (3) credits.

Through interactive lectures and group discussions, this course provides students with the fundamental knowledge of human nutrition. The course emphasizes basic information in nutrition and an integrated perspective of the application of biological, and chemical principles to the use of nutrients. The individual's nutrition is discussed from the perspective of its integration in the community as well as a separate entity. The course also covers other important aspects of human nutrition such as; nutrient needs and recommendations, the metabolic role of nutrients, metabolic processes, nutritional supplementation, nutrition and chronic disease, and the relationship of diet and genes.

NUTR 6533 - Nutrition in Public Health. Three (3) credits.

This course provides a broad view of public health nutrition using a population and community-based approach for the assessment and intervention of nutrition-related public health problems. It covers the importance of public health and nutrition science, evidence, measures and standards in the assessment of public health nutrition problems and the programs and policy designed to address them. Through lectures and field visits, students will become familiar with research, programs, and policies focused solely on nutrition as well as those in which nutrition is one of several components, with special emphasis on policies and programs in the US and Puerto Rico. The course covers the main nutrition problems of vulnerable groups and the relationship between nutrition and social and environmental factors. Students will have a toolbox of skills to utilize and apply in a wide range of practice settings in the assessment and intervention of population-based nutrition issues.

NUTR 6534 - Clinical Nutrition and Diet Therapy. Four (4) credits.

This course includes the biochemical, physiological, and nutritional basis for therapeutic treatment of various conditions and diseases in man by dietary means, special emphasis is given to the nutritional aspects of those diseases which constitute public health problems, such as obesity, cardiovascular diseases, cancer, mental diseases, including drug addiction and alcoholism.

NUTR 6535 - Research Project. Six (6) credits.

Individual work, under direction, for students at the master's level. Students plan and execute a research project and apply basic techniques of scientific investigation. These include: design, sampling, direct observation, interviews and questionnaires. The students are required to present the thesis in written and oral form.

NUTR 6536 - Food Technology. Two (2) credits.

Elements of food technology.

NUTR 6537 - International Food Supply. Three (3) credits.

Review of the world wide aspects of agriculture that are related to the need and the supply of essential foods for the world population. Production, marketing, distribution, and economic factors are considered.

NUTR 6538 - Evaluation of Nutritional Status. Three (3) credits. Pre-requisite: SALP 6006, EPID 6523.

This course trains students in the development of a nutritional evaluation through a comprehensive assessment of the dietary, anthropometric, biochemical and clinical indicators in individuals and populations. The course centers on the selection of nutritional evaluation methods that are best suited for the design, purpose and population under study. It emphasizes the importance of considering socio-cultural characteristics that have an impact on dietary practices and in the nutritional status of individuals and populations. Students apply knowledge, and methods discussed in class through a nutritional assessment of a selected population in Puerto Rico. The course includes concepts of appropriate nutritional counseling based on the health conditions of different populations. This course uses interactive lectures, group discussions, student presentations and fieldwork to achieve its objectives.

NUTR 6539 - Nutrition Health Mother and Child. Two (2) credits.

This course has been designed for the in-depth study of modern nutritional concepts, as are related to growth and development. It includes the discussion and analysis of nutrition problems which may be present at the different stages of growth and development, such as: prenatal, infant, pre-school, school and adolescent periods.

NUTR 6540 - Laboratory Techniques for Nutritional Investigation. Three (3) credits.

Through lectures, discussions, laboratory work and tutorial instruction, principles and practices of modern experimental animal research techniques are learned. The student may simultaneously participate in a variety of ongoing research projects involving animal or mammalian cell cultures.

NUTR 6550 -Human Nutrition in Clinical Medicine. Zero (0) credits. Pre-requisite: Third Year of Medicine.

This course provides the medical student an opportunity to learn the role of nutrition in medical practice. It also equips the student with information on nutrition therapy and case studies in which nutritional factors are an important consideration. Five commonly prescribed modified diets provide a focal point for discussion of specific areas of nutrition: calorie control, hyper alimentation, low fat, low sodium and fiber diet.

NUTR 6551 - Nutrition in Growth and Development. Zero (0) credits.

This course will provide the student with learning experiences in general aspects of human growth development. The interrelationship of genetic and environmental factors that determine human growth.

NUTR 6552 - Nutrition in Public Health. Zero (0) credits.

This course provides the medical student the opportunity to learn the role of nutrition in the different stages of the life cycle and the methods used to evaluate the nutritional status at the individual and community level. It also helps to integrate this knowledge with other aspects of medical practice.

NUTR 6555 - Quality of Life and Nutrition of Persons Fifty Years and Over. Two (2) credits. Pre-requisites: NUTR 6531, MEDU 6500.

This course takes into consideration the epidemiological and nutritional changes occurring in Puerto Rico during the last years which reflect needs mainly by the increasing population over fifty years of age. Nutritional, health and demographic changes and their relationship to basic needs will be addressed. Also will be discussed theories that explain anatomical and physiological modifications that accompany the aging process. The course is complemented with an analysis of nutritional habits and tendencies, nutritional needs specific to the group of interest and a description of the interrelationship between drugs and nutrients that mostly affects the elderly population. The course is offered to students of the Nutrition Program, Graduate School of Public Health. This course is given by means of lectures and group discussions, supported by visual aids. At the end of the course the student will be able to recognize and identify sociodemographic, nutritional, physiological and basic needs changes in population over fifty years old. Also it is expected that the students will be able to apply the concepts discussed in the course in activities and services directed to this population.

NUTR 6560 - Planning of Nutrition Program. Two (2) credits.

This course presents the evolution of concepts and levels of planning with emphasis on their application to nutritional programs principles and criteria involved in identifying field situations. Priorities of nutritional problems considering political, operative and technical problems will be addressed. The process of establishing objectives that respond to specific needs will be discussed. Administrative and functional aspects of identified projects and program will be addressed in order to reach the establish goals. It will identify the components of the nutritional strategies, to consider the different food and nutrition situations, and the most appropriate criteria to make the choice. The course is offered to students of the Nutrition Program, Graduate School of Public Health. This course is given by means of lectures and group discussions, supported

with visual aids. At the end of the course the student will have the planning knowledge to use the principles and criteria needed to define nutritional situations and problems, to establish food and nutrition policies, plans and projects. The student will be able to apply the concepts and principles to real life situations.

NUTR 6570 - Nutritional Research Methodology. Three (3) credits. Pre-requisites: NUTR 6528, NUTR 6560, NUTR 6538, BIOE 6525, EPID 6523, DEMO 6606.

This course pretends that graduate student of nutrition program be able to develop research proposals that address the public health situation in the area of nutrition. To do so, he/she will review and integrate knowledge and skills previously acquired in other courses, and perform a literature review in order to develop the idea that will be investigated. Some points to be addressed in the course are: the conception of the idea, application of frameworks to nutritional studies, research question, objectives, method development for data management. The course will be offered through lectures and group discussions. After completing the course the student is expected to present (written and orally) a research proposal.

SAAM 6005 - Environmental Chemistry. Three (3) credits.

The course reviews the physical and chemical processes that affect the transport and fate of pollutants in the environment. The sources, distribution, and transformations of these contaminants will be discussed, as well as the main chemical reactions involved in these processes. Specific examples from the literature and from current environmental issues in Puerto Rico will be included in the discussions. Additionally, mathematical problems will be used in order to quantitatively analyze these processes. At the end of the course, the students will be able to apply and integrate the concepts learned on environmental chemistry in the search of solutions to environmental and human health problems.

SAAM 6512 - Physical Hazards Control. Three (3) credits. Pre-requisites: SAAM 6543. Co-requisites: SAAM 6513.

Notwithstanding that anticipation, recognition, evaluation and control of occupational hazards constitutes the fundamental tasks performed by industrial hygienists, the effective control of occupational hazard is the final objective of every industrial hygiene effort. This course aims at providing students with the necessary knowledge for the design of effective control strategies for physical hazards such as noise, vibration, ionizing radiation and heat stress. The course covers the basic principles applied to physical hazards mitigation, including the design and evaluation of engineering, administrative and Personal Protection Equipment as control strategies for noise, vibration, ionizing radiation and heat stress. The course is designed for industrial hygiene students and may require that some class meetings be held at UPR-Cayey, NEC 018, where the IH Program has located its ventilation tunnel laboratory.

SAAM 6513 - Physical Hazards Laboratory. One (1) credit. Pre-requisites: SAAM 6543 Co-requisites: SAAM 6512.

This course is designed for industrial hygiene students and presents theory and hands-on aspects of the occupational hazard assessment process on physical hazards in the workplace. The course content includes the discussion, laboratory exercises and field work in modern methods applied to the evaluation of physical hazards in the workplace. Sampling, monitoring, and analysis for applied noise, vibration, ionizing radiation and heat, are also emphasized. Course instructor will present techniques used in noise and vibration integrated monitoring and frequency spectrum analysis, as well as those used in real time and integrated ionizing radiation and heat stress monitoring. This course may require that some class meetings be held at UPR-Cayey, NEC 018, where the IH Program has located its ventilation tunnel laboratory.

SAAM 6524 - Occupational Health Principles. Three (3) credits.

Basic principles of Occupational Health in the community, emphasizing the prevention and control of work accidents and illness. The following topics are included: Adverse Health Effect from Exposure to Excessive Noise, Vibration, Extremes of Temperatures, Radiations, and Chemicals. The epidemiologic aspects of work

accidents are covered. Techniques for organizing and developing occupational health programs are discussed. Emphasis is placed on legal requirements under OSHA.

SAAM 6526 - Principles Industrial Ergonomics. Three (3) credits. Pre-requisite: SAAM 6524.

The course will focus on the discussion of the ergonomic risks and their impact on employee well-being. The contemporary application of ergonomic as part of any industrial process will be presented. The student will analyze the human bio-mechanics model as it pertains to ergonomics. The anthropometric principles will be discussed. The most common musculoskeletal disorders related to poor ergonomic practices will be presented. The ergonomic risk factors and optimal workstation characteristics will be analyzed. Special attention will be given to material handling techniques. The evaluation and control techniques to manage ergonomics in the workplace will be discussed during classroom lectures and supplemented with practical exercises. The medical management of musculoskeletal disorders will be illustrated.

SAAM 6527 - Principles of Environmental Sciences. Three (3) credits.

The ecological principles such as natural cycles of various vital elements, energy flow, and energetic resources. The basic fundamental pollution problems will also be studied specially for the air, water, and soil environment: as well as the pollution control methods available to control such pollution problems. The student will also be expose to environmental problems from the work environment, industrial safety and hygiene, laws and regulations and other problems, waste management in residential areas will also be covered. Food production will be studied.

SAAM 6528 - Principles of Environmental Public Health. Three (3) credits.

Using a systematic approach, the external ecological environment with its biological, physical, chemical components, and the effects of its interaction with other systems on public health, is studied. Throught interactive lectures, group discussions, and case studies, the main exposures to environmental hazards that affect human and public health, including climate change and natural disasters; current methods for environmental monitoring; environmental risks assessment; and risk communication, are studied. Examples of environmental policy at the national and international levels, ethics and evidence for policymaking considered, and its impact on public health, are also discussed. public health students are expected to apply the acquired knowledge in environmental health to promote health and human wellbeing.

SAAM 6529 - Seminar on Environmental Health. One (1) credit.

Actual problems related to environmental pollution and control, reading, and reports on recent advances in environmental health.

SAAM 6530 - Environmental Planning. Four (4) credits. Pre-requisites: MEDU 6500, SAAM 6527 or SAAM 6528.

Techniques used for planning projects, land use, and resource use compatible with environmental health will be studied. It includes a practical application of the planning theory discussed in the course.

SAAM 6531 - Aquatic Systems and Public Health. Three (3) credits.

This course present to environmental health specialty students the environmental aspects of aquatic systems and their impact to public health. Through interactive lectures and group discussions students will analyze resources such as water and coastal resources as the most precious resources for public health, well-being and their environment. Students will participate in a field trip to understand the connections among aquatic systems and public health with a socio-ecological approach as an experiential learning activity. At the end of the course, students are expected, apply appropriate knowledge and propose solutions to problems influencing health, water and aquatic ecosystems.

SAAM 6533 - Environmental Radiation. Four (4) credits.

The environmental health aspects of nuclear radiation. Evaluation of the significance of the uses of nuclear energy. Medical and industrial uses of radionuclides in relation to environmental processes. Methods of control of radionuclides in the environment. Considerations of biological uptake and movement of the radionuclides in the environment. Rationale of regulatory standards for air, water, milk, and their limitations.

SAAM 6534 - Air Pollution and Public Health. Three (3) credits.

This course describes the fundamentals for examining the link between air quality and human health effects. It presents an overview of the problem of air pollution and discusses the main air contaminants with their sources, effects and fate and transport process in the atmosphere. Through interactive lectures and group discussions, the course provides students the opportunity to become acquainted with ways to characterize air pollutions as well as its public health implications based on recent epidemiological or toxicological research. The course covers the main mechanisms, and existing public policies and regulations for air pollution control, as well as an introduction to climate change and its effects on public health. At the end student will be able to examine air pollution as a major environmental public health risk.

SAAM 6535 - Environmental Toxicology. Three (3) credits.

The course introduces students to the environmental toxicology field that study the adverse health effects caused by environmental pollutants. It covers absorption, distribution, metabolism, and excretion of environmental chemicals, and describes the disposition of chemicals in the organisms and how it affects toxicity. Students will learn examples of the major environmental chemical substances and about mechanisms of toxicity. Through interactive lecture and in-class exercises students will examine methods to measure exposure, susceptibility and toxicity to these chemical and interpreted toxicology data. at the end, students will critically evaluate public health issue related to environmental hazards to characterize their effects in the ecosystem and in the population health.

SAAM 6536 - Readings in Environmental Health. Two (2) credits.

Supervised readings and discussions of selected problems in various aspects of Environmental Health.

SAAM 6537 - Readings in Environmental Health. Three (3) credits.

Supervised readings and discussions of selected problems in various aspects of Environmental Health.

SAAM 6538 - Readings in Environmental Health. Four (4) credits.

Supervised readings and discussions of selected problems in various aspects of Environmental Health.

SAAM 6539 - Computer System Applied to Environmental Health. Four (4) credits.

Techniques of system analysis and mathematical modeling for formulating and solving problems of environmental interest. An introduction to Fortran programming, linear, and nonlinear programming and other techniques and tools used in system analysis.

SAAM 6540 - Solid Wastes Management. Three (3) credits.

It includes topics on solid wastes environmental pollution and its control, reuse of resources, possible solutions to the problems and some aspects of environmental planning.

SAAM 6541 - Laws and Environmental Health Protection. Three (3) credits.

The course introduces students to the legal issues related to the management of pollution control and other environmental factors that affect health. The functions and interaction of courts, legislatures, regulators and their role in environmental health policy will be discussed. Using interactive conferences and group discussions, students will analyze the environmental law, political rights and administrative law principles applied of the clean air act the clean water act, RCRA and CERCLA will be studied. And the end of the

course the student will apply the constitutional right, the principles of the general environmental law, and the existing regulations to a public health situation.

SAAM 6542 - Accident Prevention. Four (4) credits.

The epidemiological evaluation of industrial home and traffic accidents. Legislation of safety programs including hazard recognition. Analysis and control.

SAAM 6543 - Industrial Hygiene. Three (3) credits.

Basic concepts of Industrial Hygiene. The relation between health, safety, and well being of the employees in relation to the working environment. The industrial and government services dealing with these problems is studied.

SAAM 6544 - Radiological Health. Four (4) credits.

Radiation physics, radiochemistry, radiobiology, and radiation detection. Emphasis on methods of protection against radiation hazards on occupational and other environmental aspects. Control and disposal of radioactive wastes, legal aspects, and administration of Radiological Health Programs.

SAAM 6545 - Food Hygiene. Three (3) credits.

The course provides to students the knowledge and skills to integrate administrative and scientific fundamentals in public health, microbiology, and sanitary control to achieve food safety. The course allows students to offer solutions to improve public health in order to prevent food-borne diseases. Through interactive lectures and group discussions, students will discuss concepts, rules and regulations in food safety, sanitary quality of a food product and epidemiological procedures and techniques regarding the investigation of food-borne outbreaks. Also, students analyze public health problems associated with food safety and its relationship with existing public health policy. It is expected that students evaluate different courses of action for the solution of food safety problems.

SAAM 6546 - Occupational Medicine. Three (3) credits.

It includes the study of physician responsibilities under OSHA, the prevention of occupational health hazard, and the diagnosis and management of the most common occupational diseases. Emphasis is given to the development of skills in Toxicology and Epidemiology which are applicable to Occupational Health Programs. Medical monitoring techniques are discussed in conjunction with the physical examination program. Basic administrative aspects including the design and equipment of a medical department are discussed. The study of the Health Care System for handling occupational injuries and illnesses in Puerto Rico is covered.

SAAM 6547 - Basic Principles in Occupational Safety. Three (3) credits.

This course offers the student the opportunity to develop his knowledge of the occupational safety field. The course includes the study of the laws dealing with health and safety in the United States and Puerto Rico. The origin and development of safety practices will be discussed and the terminology used in the accident prevention and accident investigation field will be analyzed. During the course, the importance of compilation of data in occupational safety and their statistical analysis will be stressed. Visits to working areas will be programmed so that the students can apply concepts learned in the course. Particular emphasis during the visits will be offered to risk determination, corrective procedures, fine prevention, and inspection of work surfaces.

SAAM 6548 - Industrial Hygiene Laboratory. Two (2) credits.

This course will offer the student the opportunity to learn the theoretical basis of operation of industrial hygiene instruments, their calibration and use. The emphasis will be upon the importance of calibration, the sampling techniques and the statistical analysis of sampling data. This course is a must for students who desire

a concentration of courses in Occupational Health. Only ten (10) students will be accepted per trimester per section in order to optimize the use of available equipment and increment communication.

SAAM 6549 - Occupational Health for Nursing Personnel. Four (4) credits.

This course will offer the student nurses, and nurses already working in industries the opportunity to improve knowledge and develop skills in the application of nursing principles in Occupational Health. The basics concepts of Occupational Health are the base to introduce the nurse in this specialized field. Principles of industry hygiene, safety and accident prevention are covered. The legal aspects and requirements under OSHA with emphasis on nurse's responsibilities are prevented. Emphasis is placed on the application of the nursing process to the Occupational Health Programs specially in the implementation of nursing services. The wide scope of occupational health nurse role covered, like administrative tasks, counseling, and health education.

SAAM 6550 - Basic Principles in Occupational Safety II. Four (4) credits.

During this course the student studies the justification for the development of health and safety program. The activities, functions, and budget of such program will be discussed. The guidelines related to the control of the physical environment, accident prevention, fire extinguishing, and traffic safety will be examined and practiced. Visits will be performed to work places with the purpose of determining violations to the safety regulations and to establish corrective procedures.

SAAM 6551 - Occupational Medicine. Three (3) credits.

Includes study of physician's responsibilities under OSHA and OSHO, occupational health hazards and diagnosis, and management of most common occupational disease in Puerto Rico. Emphasis in Toxicology and Epidemiology. Biological monitoring of employees, administration of program and Occupational Health Care Delivery Systems in Puerto Rico are covered.

SAAM 6555 - Introduction to Hydrology. Four (4) credits.

The course provides an overview of applied Hydrology following case studies in Puerto Rico. It includes topics on Meteorology, Geology, Surface Waters, Floods, Low Flows, Water Quality, Limnology, Ground Water Hydraulics, Aquifers, Water Resources Management, and Water Law.

SAAM 6565 – Chemical Risks Control. Three (3) credits.

Principles and application of different methods and technology for controlling health hazards at work places.

SAAM 6566 - Field Studies of the Workplace. Two (2) credits. Pre-requisites: SAAM 6543, SAAM 6547, SAAM 6548, SAAM 6565.

This course consists of various field trips to different workplaces and discussions where students will be able to familiarize with specific industrial processes or activities and their associated health hazards. The student will analyze these workplaces based on the principles of anticipation, recognition, evaluation, and control of occupational hazards. Visits will include different workplaces that represent different occupational health hazards such as noise, chemical, ergonomics, biological, and radiation. Students will present a written report of their findings and analysis.

SAAM 6567 - Management Tools for Industrial Hygienists. Three (3) credits. Pre-requisite: BIOE 6525.

This course aims at providing students of the industrial hygiene program with some important management tools that are required from industrial hygienists for their effective participation in the decision-making process of modern industry. The course curriculum covers: a) the theoretical and practical aspects of the strategy proposed by the American Industrial Hygiene Association (AIHA) for the assessment and management of occupational exposures; b) the application of engineering economics principles for the justification of OEHS controls; and c) principles of continuing improvement used in modern manufacturing

systems. The course also provides the opportunity for students to learn and use MS excel statistical and financial tools. The course requires the use of a laptop with MS Excel installed at all meetings.

SAAM 6568 - Laws and Regulations Applied to Occupational Safety. Three (3) credits.

In this course the fundamental concepts of occupational safety laws, standards, and regulations, as well as important aspects leading to the prevention of incidents and accidents are studied. The code of federal register 29 (cfr) and international standards such as those published by the international standards organizations (iso) are used as base to establish/assess compliance towards protecting workers against occupational risk factors. Moreover, class discussions are directed towards the role of the environmental health and safety specialist pertaining the development and application of laws and regulation and control of chemical, physical, and biological hazards in the workplace. Finally, case studies are used to evaluate laws, regulations, and standards, as well as to evaluate the effectiveness of social media technologies as surveillance and audit tools.

SAAM 6570 - Response and Preparation for Emergencies and Hazardous Operations. Three (3) credits.

The course introduces the Master in Science in Industrial Hygiene student to the fundamentals of emergency management and fire protection. Through interactive lectures, group discussions, presentations, readings and projects, the student will analyze issues related to recognition, prevention and response to emergency situations in work environments, such as: fires, accidental emissions of hazardous materials, and floods, among others. The analysis of the work environment will be studied as a system in order to identify conditions that can generate an emergency situation, and to discuss the tools available for an industrial hygienist to respond to emergency situations. The student will learn the legal requirements regarding emergency prevention and handle of situations to effectively identify, prevent, respond, and coordinate efforts of emergency management with government agencies.

SAAM 6571 - Research Topics in Occupational Epidemiology and Health. Three (3) credits. Pre-requisites: EPID 6523, BIOE 6525

Main objective in this course is to allow masters students in the industrial hygiene program to acquire knowledge and skills required for their scientific evaluation of health problems related to their workplaces and occupational tasks. Students are expected to develop skills in the use of scientific methods to evaluate, design, and justify interventions, and establish strategies for the prevention of industrial hygiene risk factors. The course addresses basic occupational epidemiology principles through discussion and comparison of research articles focusing on health issues in workers. It also discusses the application of scientific research methods that allow students to answer questions regarding prevention and control of occupational injuries and illnesses.

SAAM 6572 - Design of Controls in Ergonomics. Three (3) credits.

The course is addressed to students in the master in sciences in the industrial hygiene program, and its aim is to develop skills in the analysis and design of mechanisms for the prevention and control of ergonomics risk factors in order to mitigate situations that may cause occupational injuries using practical experiences and real work situations, students will apply skills such as team working, oral communication, and critical ergonomic problem solving in the field of industrial hygiene and occupational health and safety. Students will demonstrate their designing skills controlling ergonomics risk factors in an ergonomics charette format.

SAAM 6573 - Chemical Risk Laboratory. One (1) credit. Pre-requisite: SAAM 6548. Co-requisite: SAAM 6565.

This course is designed for students from the industrial hygiene program and presents theory and practical aspects regarding chemical hazard control and indoor air quality as it pertains to occupational health. Course content includes evaluation of indoor air contaminants, such as, carbon monoxide and bio aerosols;

general and local ventilations systems monitoring; and qualitative and quantitative respiratory protection fit testing. Instructional strategies include classroom discussion, laboratory exercises, field studies focused on modern workplace assessment methods for ventilation systems and respiratory protection. Since course delivery includes diagnostic techniques for ventilation systems performance and respiratory fit testing techniques used in general industrial hygiene, some of the laboratory sessions will be held at the wind tunnel laboratory facility at the University of Puerto Rico Cayey Campus.

SAAM 6600 - Domestic and Industrial Wastes. Four (4) credits.

The basic physical, chemical, and biological principles used in sewage treatment. The mayor treatment systems are presented and analyzed. Federal and state water pollution control laws are studied. Other mayor topics included are Sewage and Industrial Wastes Sampling and Analysis, Tertiary Treatment, and others. The Water Environment is a prerequisite.

SAAM 6601 - Water Pollution Control. Four (4) credits.

Specific water pollution control methods and techniques. Principal topics include: Water Bacteriology; Effects of the Aquatic Community on the Nutrient Cycles; Mathematical Models of Water Pollution and Controls; Stream and Coastal Water Pollution Control, and others, The Water Environment, Domestic and Industrial Waste Treatment and Potable Water are prerequisites.

SAAM 6602 - Potable Water Treatment. Four (4) credits.

The Basic Principles of Water Treatment, Reservoir and Water Resources Management, and Potable Water Distribution Systems are included among the top topics. Potable water laws and regulations are studied, both of state and United States level.

SAAM 6603 - Water Chemistry. Four (4) credits.

The Effects of Chemical Composition of Stream and Subsurface Water on the Ecology of Water System, The Various Reactions which commonly take place in Water Systems, The Limitations on Uses Imposed by Chemical Substances Dissolved in Water, Equilibrium Reactions of the Most Important Ions and The Chemical Composition of Natural Waters are the mayor topics in this course.

SAAM 6604 - Water Pollution Contamination. Four (4) credits.

Sources of air pollution and effects, control measures, the organization of community control programs. Regulatory aspects and standards are discussed.

SAAM 6605 - Meteorology in Air Pollution. Four (4) credits.

Effects upon the dispersion of air pollutants due to meteorologic changes. Mathematical models describing the concentration of pollutants as a function of source strength and meteorological changes will be used.

SAAM 6606 - Sampling and Analysis in Air Pollution. Three (3) credits.

The theory and application of the analysis of samples, calibration of equipments and site selection, calibration, and use of direct reading instruments.

SAAM 6607 - Food Processing. Three (3) credits.

Detailed study of product development including packaging, waste disposal, plant layout, cost estimation and analysis using the case study approach. Classes include guest lectures from industry and public agencies.

SAAM 6608 - Food Establishment Sanitation. Three (3) credits.

Principles and practices in the supervision of foods. Emphasis on equipment and techniques for the preparation, preservation, and storage. Special attention is given to the inspection of food vending establishments.

SAAM 6609 - Milk and Milk Products Hygiene. Three (3) credits.

Principles and practices in the sanitation supervision of the production, manipulation, pasteurization and transportation of milk and milk products. Includes regulations, inspections and control measures, their application legal and education aspects.

SAAM 6610 - Radiation Biology. Four (4) credits.

A general course in Radiation Biology designed to acquaint the student with the effects of radiation on living matter including elementary forms of life and higher organisms as well, dose-effect relationship, target theory, and linear energy transfer temperature, and oxygen effect. Biological effects of radiation on a mammal or human from the physiological and pathological point of view. Special emphasis is placed on dose-effect relationship, effects due to acute and chronic exposures, radiation, sickness and late effects, etc.

SAAM 6611 - Radiochemistry. Four (4) credits.

Natural radioactivity, laws of radioactive decay, and cosmic radiation are discussed. Special emphasis is placed on environmental sampling and low level counting techniques. Radio assays of air, water, soil, vegetation and milk samples are included.

SAAM 6612 - Radiation Dosimetry. Four (4) credits.

The theory, methods, and techniques applied to measure radiation doses are discussed. Special emphasis is placed on the measurements of absorbed dose. All types of sources producing radiation are included. The course is designed to familiarize the student with the different kinds of known dosimeters and their applications.

SAAM 6613 - Radio Pharmacy. Four (4) credits.**SAAM 6614 - Nuclear Reactor Technology and Safety. Four (4) credits.**

A course intended to acquaint the student with present reactor development. Fission and chain reactions, elements of reactor design, utilization of nuclear energy for power, and radiation problems are included. The student is acquainted with the fundamental in the controlling of the nuclear chain reaction. Special circuits and safety devices are emphasized. The course includes visits to nuclear reactors.

SAAM 6615 - Nuclear Instrumentation. Four (4) credits.

This course is designed to familiarize the student with the principles, methods, and practices of radiation detection. Emphasis is placed on the physics of counters (gas filled detectors, scintillation detectors, solid state detectors) and their applications in detecting Alpha, Beta, Gamma, and neutron radiations.

SAAM 6617 - Statistical Methods for Environmental Sampling and Data Analysis. Four (4) credits. Pre-requisites: BIOE 6525, SAAM 6528, SAAM 6531 or SAAM 6534.

The course will discuss statistical sampling designs for environmental pollutions and a wide variety of statistical procedures for analyzing environmental data including methods for handling correlated data for detecting hot spots, for estimating confidence intervals for quantiles, and the methods of time series analysis.

SAAM 6618 - Principles of Environmental Geology. Four (4) credits.

The geologic characteristics of soils and (geologic) structures will be studied and analyzed in this course mostly through conferences. Natural (geologic) phenomena, and man action's impacts on the environment as per its effects on geologic processes will also be studied. The students will learn to use, read, and interpret topographic and geological maps. The student will also learn to use aerial photographs as tools in environmental geology.

SAAM 6619 - Geographical Information Systems Applied to Environmental Health. Three (3) credits.
Pre-requisite: MEDU 6500.

The primary purpose of this course is to provide the students of Public Health a basic working understanding of various geographic information systems (GIS) and their utility to conduct environmental health studies. It will provide an in depth appreciation on how to employ these systems to analyze social, environmental, and health information from an spatial and locational perspective. Upon completion of the course students will be able to prepare maps and employ aerial and satellite images in a variety of environmental health applications. The student will develop basic skills in the utilization of one of the most popular and available GIS software (ATLAS, ARCVIEW, ARCINFO). The course material will be conducted through conferences and computer exercises.

SAAM 6625 - Special Topics in Environmental Health. Three (3) credits.

Selected problems in the field of environmental pollution are discussed. Such ambients as air, water, and soil will be considered. Problems associated with housing, solid wastes, insects, rodents, and physical risks will be discussed. Special emphasis will be given to the role of education in the control of these problems.

SAAM 6626 - Laboratory Practices for the Analysis of Environmental Samples. Three (3) credits.

The objective of the course is to develop laboratory skills in the Environmental Health students for practices in methods for the analysis of chemical, physical and bacteriological parameters of water, air, foods, and others environmental samples.

SAAM 6627 - Principles of Industrial Hygiene. Three (3) credits.

The course will be offered to students of the Graduate School of Public Health who desire to obtain a general knowledge of Industrial Hygiene. The basic concepts of Industrial Hygiene will be established with particular interest in instrumentation. The following topics are covered: Concepts of Toxicology, Permissible Levels of Exposure, Concepts of Industrial Hygiene, and the topic Occupational Safety is introduced. Hospital health and safety is covered in certain detail.

SAAM 6635 - Introduction to Environmental Microbiology and Parasitology. Five (5) credits.

Through conferences and class discussions the Environmental Health students will study the relevant aspects of the environmental microbiology and the parasitology. They will apply this knowledge in the control of the environmental contamination and the promotion of a better health.

SAAM 6636 - Occupational Toxicology. Three (3) credits. Pre-requisites: SAAM 6528. Co-requisites: SAAM 6524

The course presents an introduction on the field of occupational toxicology, the science that studies the adverse effects to the health, caused by chemical substances present or generated in the work environment. The study involves factors that determine how chemicals enter and affect the human body, types of chemicals and the typical industries that process or generate them, and their mechanisms of toxicity. The instructional strategies include lectures, review and analysis of scientific literature, classroom discussions, homework preparation and oral presentations. Students are expected to be aware of the toxic substances that are handled in work scenarios, their harmful effects on the body, as well as to critically analyze possible risk situations that may arise in the field of industrial toxicology.

SAAM 6695 - Research Project. Six (6) credits.

Research project dealing with a problem in Environmental Health.

SAAM 6696 - Industrial Hygiene Internship. Six (6) credits. Pre-requisites: SAAM 6543, SAAM 6547, SAAM 6548, SAAM 6565.

Students will spend three months (one quarter) in a field placement in industry, business company or a government agency. This practice will consist of one of the following alternatives: (1) active participation in the practice of Industrial Hygiene, (2) implementation of a practical study to solve an Industrial Hygiene problem, or (3) design of an Industrial Hygiene program for the selected site. Students will select the site of the internship with the advice of the faculty of the Industrial Hygiene Program. It is expected that at the end of the internship the student has integrated the knowledge and skills for the anticipation, recognition, evaluation and control of occupational health hazards.

SAAM 6995 – Applied Practice Experience: Environmental Health. Three (3) credits. Pre-requisites: Have approved all public health core courses and specialty courses.

This course is designed for graduate students of the Master in Public Health with a specialty in Environmental Health. The course provides students with an opportunity to demonstrate competency in the field of Public Health through an applied practice experience. The student will integrate and apply the knowledge and skills in a supervised practice experience to address a specific environmental health problem at a public health or environmental agency and/or community serving an organization. At the end of the course, students are expected to apply appropriate intervention activities to address the identified environmental public health problem and disseminate the field experience results.

SAAM 6999 – Capstone Project in Public Health Environmental Health. Three (3) credits. Pre-requisites: Have approved all public health core courses and specialty courses.

This course provides students of the Master in Public Health in Environmental Health with an integrating learning experience. It allows students to demonstrate their mastery of public health competencies. As part of the capstone, each student will submit a portfolio as evidence of the foundational and specialty competencies acquire during their studies. In this course, students are expected to generate a written product, which might include the following: training manual, policy statement, program evaluation report, review paper related to an important public health issue, a deposition before a legislative committee of the State Legislature with accompanying supporting research, among other integrative high quality project.

SAAM 8005 - Fundamentals of Environmental Health. Three (3) credits.

The course Fundamentals of Environmental Health has been designed for doctoral students, without a major in Environmental Health with emphasis in Puerto Rico. The course will be conducted by mean of general discussion of topics, case studies, and current issues in Environmental Health as well as problem solutions. It is expected the participation of the students in the discussion and it will gear around the water environment, air, soil pollution, and food hygiene from a public point of view.

SAAM 8006 - Environmental Physical Hazards. Three (3) credits.

The course is focused on the study of theories and principles of physics which apply to radiation, ionizing and non-ionizing. Those physical environmental risks such as electromagnetic waves will be studied. Emphasis will be given to radio frequency, sound, temperature, ultraviolet radiation, infrared and lasers. The biological effects and the applicable regulations to these risks within the context of Public Health will also be studied.

SAAM 8007 - Water Pollution. Three (3) credits.

This course examines the physics and chemistry of water from a Natural Sciences and processes point of view. It analyzes the transport of contaminants in surface water and the hydrogeology of groundwater in order to determine the best solution for the specific pollution problems of an area. Water quality modeling is used in order to gain a better understanding of the reasons behind the actual implementation of the Puerto

Rico water quality standards. Priority is given to the study of the contamination of surface waters, drinking water, and wastewater, both from domestic as well as from industrial sources and its effects on Public Health.

SAAM 8009 - Hazardous Waste Management. Three (3) credits.

The course is focused specifically on the study of toxic chemical substances, which are generated and release into the environment as hazardous waste. The course will start by discussing the definition, origin, classification, and regulation of hazardous wastes. Methods utilized in the remedial process of hazardous waste such as management, treatment, monitoring, and health risk assessment will be later discussed. The students are expected to apply knowledge and skills learned, to determine approach, prevention, and solution to hazardous waste problems.

SAAM 8010 - Environmental Instrumental Analysis. Three (3) credits.

The course presents theoretical and practical aspects of sampling and analysis of water, air, and soil contaminants. It consists of the discussion of the methodologies used for the monitoring and analysis of environmental agents, laboratory exercises and field studies. Analytical techniques such as UV and visible spectrophotometry, atomic absorption, GC, GC-MS will be included in the course.

SAAM 8015 - Global Environment, Health, and International Law. Three (3) credits.

The course has the primary purpose to develop the philosophic, social, and scientific knowledge base and to facilitate the identification, analysis and solution of the global environmental changes currently threatening the planet earth. The course enables students to analyze social, legal, environmental and health information related to global warming, extraordinary climatic changes, destruction of the ozone layer, acid rain, deforestation, desertification, extinction of species, rise of sea level, contamination of the oceans, nuclear activities and the transportation of dangerous waste materials. The course also provides the students with an insight on the impact of these environmental problems on human health within the Caribbean region, particularly in Puerto Rico. Thus, the structure of the course helps the students to develop the capability to integrate global environmental information as part of the decision making process related to Environmental Health at the local as well as regional and international levels.

SAAM 8016 - Environmental Policy and Management. Three (3) credits.

This course provides students the knowledge and skills necessary to integrate legal, administrative, and scientific fundamentals in the analysis of existing environmental problems and to offer solutions. Existing environmental policies in Puerto Rico, the United States, and the world are discussed, as well as their effect on the control and prevention of environmental problems. In addition, various alternatives of environmental management to deal with environmental problems are discussed. Through interactive lectures and group discussion, students will analyze public health problems related to the environment in relation to the existing public policy. Students will evaluate the implications of alternative courses of action for the solution of problems of pollution and use of natural resources for the protection of public health and propose alternatives to improve the protection of environmental health.

SAAM 8017 - Health Risk Assessment. Three (3) credits.

This course describes the fundamentals of environmental health risk assessment, with emphasis on the estimation of health risks from environmental chemical substances. It covers the four essential steps of risk assessment (hazard identification, exposure assessment, toxicity assessment, and risk characterization) and discusses the uncertainties inherent in each step. It presents an overview of risk communication principles and its role in the risk management decision-making process. Through interactive lectures, group discussions, and case studies, the course provides students the opportunity to become acquainted with the risk estimation process for different environmental health hazards. Students will synthesize the acquired knowledge and skills by assessing the health risks of an assigned case study and delineating options to address them. The

goal is to provide an understanding of how to use the risk assessment methodology in the regulatory decision-making process.

SAAM 8018 - Air Quality Management. Three (3) credits.

This course is designed for doctoral students from the School of Public Health. Three very useful and important components in the formulation of public policy and legislation regarding environmental air quality: (1) fate and transport of atmospheric pollutants, (2) dispersion modeling of contaminants, and (3) exposure assessment of air contaminants, will be discussed. These three components are presented and integrated from the perspective of management and policy of environmental air quality. The course will be offered through lectures, discussions, written exercises, and case studies. It is expected that students apply the knowledge acquired on appropriate air quality management practices.

SAAM 8020 - Current Environmental Health Issues. One (1) credit.

This seminar is designed to provide the students in the Public Health Doctorate Program essential scientific and social knowledge and understanding needed to identify, deliberate, analyze, and develop alternative solutions to current, significant, environmental issues and problems of primary interest at the moment. The course provides the means for the student to analyze Environmental and Public Health information related to ethical, technological, social, economic, and implementation strategies considerations associated with environmental issues. The course also addresses all aspects of the most controversial issues and event that impact on Public Health matters. In the beginning of the course current environmental problems are presented and discussed, then their relationship to Public Health matters are established, and finally, various solutions and implementation strategies are developed.

SAAM 8025 - Advanced Topics in Environmental Health. Three (3) credits.

This course consists of one independent work for doctoral students in a particular topic of their interest which was not covered in detail in the regular coursework. The student will review the current literature in a particular area guided by a faculty member. There will be periodic meetings between the student and the professor in charge of the course to discuss the progress of the work. At the end of the course, the student will prepare a written report about the topic studied.

SAAM 8026 - Integrated Management of Municipal Solid Waste. Three (3) credits.

This course is designed for doctoral students of Public Health. It is expected to train students in the use of the different options for the integrated management of the municipal solid wastes, and in the prevention of public health risks due to inappropriate management of the mentioned wastes. The discussed topics include: sustainable management of solid wastes, source reduction, reuse, compost production with the organic wastes, solid waste recycling, incineration, sanitary landfill design and operation, federal and state applicable laws and regulations, methodology for performing a non-hazardous solid waste composition study, public health risks, in addition to other topics. The course consists of lectures, group discussions and field visits.

SAAM 8027 – Environmental Public Health of Urban Communities. Two (2) credits. Pre-requisites: EPID 6523.

This course is targeted to doctoral public health students. Departing from the built environments of local urban communities the most relevant environmental agents and health inequities that affect the well being of specific populations will be identified and analyzed using the community based participatory research (CBPR) method and system thinking approach. Students will analyze findings of the CBPR to propose recommendations of public health interventions on evidence based methods to prevent, control, manage, or mitigate environmental exposures and health inequities. The final product of the course will be a "Community Environmental Public Health Action Plan" developed through the interaction and discussion of the student's working group with local residents, community leaders, and policy makers. The Plan will be presented to the

community and other stakeholders for their approval and support. The course framework of action are the low socioeconomic level urban communities.

SAAM 8118 – Prevention and Control Of Environmental Hazards: A Systems Thinking Approach. Three (3) credits. Pre-requisites: SAAM 8016, SAAM 8120, SAAM 8119.

This course is designed to provide students with an opportunity to demonstrate competency in the analysis and design of public health policies for the prevention and control of environmental hazards, including biological, chemical, and physical hazards. Through interactive lectures, group discussion and an applied evidence-based experience, students will select and analyze an environmental hazard in Puerto Rico, using systems thinking tools with holistic and reductional approaches. Also, students will apply policy analysis skills of selected environmental hazards. Students will be able to design a public health policy to address the whole hazard components based on the following guiding principles: environmental justice, polluter-pays principle, precautionary principle, the environmental sustainability principle, and health and sustainability in all policies.

SAAM 8119 – Exposure Assessment for Environmental Public Health. Two (2) credits.

This course, addressed to public health graduate students, describe the fundamentals of exposure assessment in public health with emphasis on environmental chemical substance. It covers the methods, measurements, tools, and models used to assess exposure, considering its variability and determinants (e.g. media, routes, timing of exposure). Through interactive lectures and group discussions, students have the opportunity to become acquainted with the exposure estimation process for different environmental exposure scenarios. Students will synthesize the acquired knowledge and skills by proposing an exposure assessment study to characterize potential risk. The goal is that students propose appropriate exposure assessment methodology in addressing environmental public health issues.

SAAM 8120 – Change Climate: A Public Health Response. Three (3) credits.

This course will examine some of the major consequence of climate change in our communities, such as: extreme events (life-threatening heat episodes, tropical cyclones, droughts, floods, and sea level rise), spread of infectious diseases and exacerbation of chronic disease, among others. The course will introduce the socio-ecological framework in the design of effective strategies to address these climate change impacts and to achieve sustainability goals. Through interactive lectures, and group discussions, students will be able to better understand, analyze and design solutions to the implication of a changing climate through a broader, integrative, resilient, and sustainable perspective. Student will understand climate change impacts on socio-ecological system and will integrate evidence-based research on environmental health to promote population health and well-being.

SAAM 8198 – Dissertation Proposal in Environmental Health. Three (3) credits. Pre-requisites: Have approved comprehensive exams.

This course is an Integrative Learning Experience for doctoral students of Environmental Health specialty. In this course, the student will demonstrate mastery in foundational and specialty competencies in the design of a research proposal that represents a theoretical and methodological contribution to public health practice in the environmental health area. The student presents the problem, research questions, and study methods as a proposal for approval of Dissertation Committee. Dissertation may take a variety of forms, and must generate a high quality written product consistent with advanced practice designed to influence programs, policies or systems addressing environmental public health. At the end of the course, students are expected to present in writing and orally a proposal for research project applying theoretical and methodological principles of environmental public health.

SAAM 8199 – Doctoral Dissertation in Environmental Health. Three (3) credits. Pre-requisites: SAAM 8198.

This course is an Integrative Learning Experience where doctoral students of Environmental Health specialty conclude the research dissertation. In this course, the student will demonstrate mastery in foundational and specialty competencies to generate a high-quality written product consistent with advanced practice designed to influence programs, policies or systems addressing environmental public health. The students complete the implementation of a research proposal. The student will develop in the implementation of a research proposal that represents a theoretical and methodological contribution to public health practice in environmental health. Students will work under the guidance of the Doctoral Dissertation Committee. It is expected that students present the results of their research in writing and orally to academic and stakeholders; and generate a high-quality written product consistent with advanced practice in environmental public health area.

SAAM 8995 – Environmental Health Doctoral Research Seminar I. One (1) credit. Pre-requisites: SALP 8106.

The first part of an advanced research seminar is designed to facilitate the development of students' research ideas for dissertation and to contribute to further develop their communication skills. Through interactive lectures, group discussions, and independent study, the course centers on exposing doctoral students in environmental health to contemporary issues for the conceptualization of their research topic. In addition, it provides an overview of research methods applied to environmental health issues and of strategies used in the literature to translate research into practice and policy. At the end, students are expected to develop a concept paper with their research question, and the appropriate justification for conducting research in this area to translate results into public health practice and policy.

SAAM 8996 – Environmental Health Doctoral Research Seminar II. One (1) credit. Pre-requisites: SAAM 8995.

This course builds on the first doctoral research seminar. Through interactive lectures, group discussions and independent study, doctoral students in environmental health will continue the development their research ideas for dissertation and will strengthen their communication skills. The seminar focuses on the development of a literature review for the students dissertation topic of interest, and emphasizes on the critical analysis of research methods applied to address environmental health issues. Students will lead presentation and discussion on specific research methods used for the study of their topic of interest. These discussions will enable them to explain, appraise and select appropriate research methods. Students are expected to formulate a preliminary draft of study design to address their research question for their research proposal.

SALP 6001 - Microcomputer Applications in Public Health I. Three (3) credits.

This course will focus on the development of skills to use microcomputers and application programs as tools to enhance the performance of the Public Health professional. Coverage will include the use of microcomputers and software applications widely used and specific for the health care field.

SALP 6005 - Foundations of Health Promotion. Three (3) credits.

This course is intended to provide graduate students with the fundamentals, strategies, and methodologies associated with the model of health promotion (HP). Emphasis will be given to the discussion of the conceptual framework, research, and practical experience of the movement of HP at local, national, regional, and global levels. Through interactive lectures, oral reports, and case studies students will learn the values and components of the HP such as equity, intersectoral, and determinants of health. Implications of the 2030 Agenda and the Sustainable Development Goals, policies and models of Health Promotion will be analyzed using real examples in public health. At the end of the course, the student is expected to propose actions for public health using the conceptual and methodological applications of PS to the Puerto Rican context.

SALP 6006 - Introduction to Public Health. Three (3) credits.

This is a hybrid online course with online microlearning techniques, and on-site public health case-study group discussions to provide students with foundational public health knowledge required for professionals in the field of public health. The course provide an introduction to theoretical concepts that guide practice in public health. It examines public health's philosophy, mission, history, functions, services, and health promotion models. It also introduces the biological, behavioral, social, and environmental determinants of health structured around the ecological model of public health with special attention to present and future public health challenges. At the end of the course, students will be acquainted with the components of the public health system and appreciate the unique characteristics of public health practice as a social activity with an interdisciplinary approach.

SALP 6250 – Applied Public Health Research Methods. Three (3) credits.

Through case studies, analysis and group discussions, this course provides the students the opportunity to develop knowledge, and skills to address a public health issue for the design of a qualitative and/or quantitative research project. The course emphasizes formulating a public health research problem, contextualizing the problem in a theoretical framework and the importance of proper research designs, measuring basic concepts (e.g., questionnaire development, scale construction), sample selection and a data analysis plan. It is expected that students will develop skills in; performing adequate data analyses and interpreting qualitative and/or quantitative information using the appropriate software. At the end of the course, students will demonstrate the acquired knowledge and skills by writing a concept paper, and technical report addressing a public health issue.

SALP 6251 – Leadership in Public Health. Two (2) credits.

This course is intended to empower graduate students to challenge the process, develop collaborations and demonstrate competencies for the social further development of public health services to improve the well-being of the community. In this course, the students will apply principles of leadership to public health practice and learn skills for performing in leadership positions. It is expected that the students maximize their leadership skills through applied exercises, reflection, and practice. During the course, students will analyze the effectiveness of leadership applications in public health, demonstrate leadership skills needed to work effectively with diverse workforces and communities and propose leadership strategies for public health practice. The course includes self-assessment exercises, group discussion exercises, and change management tools among others.

SALP 6500 - Medical Background. Three (3) credits.

Study of the basic principles of structure and functioning of the human organism and of the human organism historical data, causes of disease, disturbance of the circulatory system. Inflammation, immunity and hypersensitivity, infections, parasites, neoplasms, radiation, hereditary diseases, and the medical terminology related to these topics.

SALP 6501 - Medical Terminology. Three (3) credits.

Study of the anatomical and physiological principles of the systems of the human organism and of the principal diseases that affects them. Includes the study of the medical terminology related to these systems.

SALP 6515 - Education for Woman and Her Family: Pregnancy and Childbirth, Healthy and Safe. Three (3)credits.

The course is intended to train mother and child health professionals to provide adequate information to women in order to motivate them to make informed decisions about their pregnancy and childbirth; and enabling them to have a satisfactory and healthy experience for them and their sons and daughters. Education and practices of pregnancy and childbirth should be based on the best and most active scientific evidence available. The course integrates evidence-based practice as a research strategy in childbirth

education. The course will be offered completely online and is aimed at the professional who attends topics related to the health of the mother and childhood.

SALP 6520 - Public Health Field Laboratory. Six (6) credits.

The students are divided into multidisciplinary teams in order to carry on a health assessment of a community using relevant information such as: morbidity, specific health problems, political, sociocultural, educational, economical, and environmental factors. Using biostatistics and epidemiological technics the students obtain information that is not available in the community. With this information they design a health program and compare it with the current health programs going on in the community. They identify differences and its rational. Finally, the teams make recommendations.

SALP 6546 - Legal Aspects of Public Health. Three (3) credits.

This course presents the basic knowledge about political structure and the organization of the governmental system with emphasis on those organisms that are responsible for the implantation, observance, and interpretation of the constitution, law, and bylaws related to health of the country. It also, includes the importance of the law as a tool in the development and implantation of a health program, be it preventive or for the solution of health problems. The course brings to the attention of the student the world health problems, their legal aspects and how the law can help in their solution.

SALP 6583 - Applied Quantitative Methods. Three (3) credits.**SALP 6584 - Administrative Aspects of Health Programs. Four (4) credits.**

This is a course for students of the Environmental Health Program. It is aimed to the analysis and study of the development and content of administration and organization as a discipline and as a process, with emphasis on the latter, as applied to both the governmental and the private sectors, especially to the health industry in general and to environmental health in particular. Basic theories of the administration process as well as its different functions, methods, and techniques will be studied and applied to Environmental Health. Substantive problems in the health services industry from the economist point of view. The characteristics of the marketing of the health services will be examined to determine the necessary public policy to insure its efficiency. Topics related to the micro and macroeconomics of health such as the demand and supply for health services, its industrial organization, and its introduction to the efficiency. An introduction to the analytical instruments used in the health industry, such as cost-benefit analysis, programming models, prediction, and public policy models will also be discussed.

SALP 6585 - General Considerations of Natural Disasters. Three (3) credits.

This course will provide the students general information and knowledge for the preparedness and management of different types of natural disasters. Topics such as: Effects of Disasters in Health, Procedures, and Organizations of Health Systems during Disasters, Epidemiological Surveillance, Preparedness for Disasters Situations, Assistance from External Organizations, will be discussed. The course has been designed for health professionals enrolled in the Master in Public Health Program and the other master programs offered in the school. The course is designed to provide knowledge and skills in handling different types of natural disasters. The student is expected to be able to design an

SALP 6587 - Clinical Management of Sexually Transmitted Diseases. Eighty (80) hours.

The course discuss the clinical management of the most common sexually transmitted diseases in Puerto Rico using lectures, demonstrations, and practical instruction.

SALP 6601 - Foundations of Maternal and Child Health. Three (3) credits.

This course is geared to Public Health students and is offered online. Fundamental aspects of maternal and child health are discussed, with emphasis on the social, economic, cultural, demographic and environmental

issues. The history and actual structure of health programs are analyzed, as well as the public sector policies and private initiatives for women in the reproductive age, infants and children. The impact of various health programs for the different stages of the life cycle, and their functional results in terms of morbidity, mortality, psychological welfare, reproduction, and growth are examined. The opportunity is provided for a critical evaluation on how health disparities, cultural, ethnic and socioeconomic factors impact access to health services for the maternal and child population, with the purpose of proposing modifications to the health care system so as to provide for their specific necessities.

SALP 6603 - Public Policy and Advocacy for Women, Children and Families. Three (3) credits.

This course discusses aspects related to the making of policies and advocacy for women, infants and families, with emphasis on the development of tools for the critical analysis for effective policies which serve as defenders of this population group. The political processes at the regional, national, federal and international levels is studied from the perspective of the roles and relations of the concerned groups in the development and implementation of public policies. The impact achieved by programs which offer health services to mothers and children supported by local and federal funds is analyzed. The opportunity is provided to propose a change in policy through work in advocacy in an organization involved with achieving a policy change. The course will be offered totally online and is geared to professionals who work with aspects related to maternal and child health.

SALP 6604 - Bioethical Aspects in Maternal and Child Health. Three (3) credits.

This course addresses the bioethical aspects related to maternal and child health from the main philosophies, principles, theories and ethical norms which are used as the basis for the solutions of public health policy debates. The ethical and legal principles of public health and clinical practice are discussed. The principles, values and ethical behaviors that support professional conduct in the health care system are recognized. By using case analyses ethical dilemmas and topics are identified which affect the population of mothers and children, to describe the ethical implications and solve problems ethically considering the community values and culture. The ethical, political and scientific implications of new developments in biotechnology are considered. The course will be offered totally online and is geared to professionals who work with aspects related to maternal and child health.

SALP 6605 - Human Lactation and Public Health. Three (3) credits.

The principal topics in the field of knowledge in human lactation and infant feeding are studied. The traditional national patterns and tendencies in infant feeding are analyzed. The student will have the opportunity of discovering the usefulness of evidence-based clinical practice for the development of strategies which lead to promotion, protection and support of breastfeeding. The formulation of public policies and legislation for the promotion, protection and support of breastfeeding, as well as advocacy strategies for its implantation are emphasized. Strategies of social marketing, education for adults and community education are analyzed in order to understand the needs of breastfeeding mothers, create new products and design programs for the promotion of breastfeeding. The course will be offered totally online and is geared to professionals who work with aspects related to maternal and child health.

SALP 6606 - Seminar on Maternal and Child Health. Two (2) credits.

Students in this course will have the opportunity to do research in a topic related to problems or situations which affect maternal and child health. The dynamics of the seminar strategy provides the student the opportunity to integrate knowledge and skills acquired in previous courses, and widen his point of view regarding maternal and child health dilemmas. Students will have the opportunity to demonstrate their abilities to communicate clearly through effective presentations, with knowledge of the maternal and child population, their needs and available services. Opportunity is afforded for students to capacitate other professionals through teaching among peers. The course will be offered totally online and is geared to professionals who work with aspects related to maternal and child health.

SALP 6995 – Applied Practice Experience: General Public Health. One (1) credit. Pre-requisites: Complete all MPH Core and Specialty Courses. Co-requisites: SALP 6997.

This on-site course is aimed at students of the Master in General Public Health Program. The course provides students with an opportunity to demonstrate applied theory, problem-solving, and principles learned in the program to actual public health problems handled in professional environments through an applied practice experience. Organizations that could be practicum sites include governmental, non-governmental, non-profit, and for-profit settings. For the practicum experience, students will work under faculty supervision and collaborators in the site to conduct, implement and complete a defined meaningful project or intervention for the organization and to the advance of the public health practice with a presentation of observed needs, a reflective statement about their experience and lessons learned in Practicum. The Practicum may be carried in out-site Puerto Rico settings.

SALP 6997 – Integrative Experience in General Public Health. Five (5) credits. Pre-requisites: Complete all MPH Core and Specialty Courses. Co-requisites: SALP 6995.

This on-site course provides students of the Master of General Public Health with an integrating learning experience. Students will be able to integrate and apply the skills and knowledge, theories, and principles learned to actual public health problems handled in professional environments. Under faculty supervision, students will work to conduct, implement and complete a defined project with measurable outcomes in one of the many areas of health policy, management or community health, making original contributions to that area. It is expected that students will apply the appropriate concepts, analyses and implications learned through the graduate program. At the end of the course, students will demonstrate the acquired knowledge and skills by writing a final technical report addressing a public health issue.

SALP 6999 – Capstone Project in Public Health: Epidemiology and Biostatistics. Five (5) credits. Co-requisites: EPID 6995.

This on-site course is aimed at students of the Master in Public Health with a specialty in Epidemiology or Biostatistics. The course provides students with an integrating learning experience that demonstrates the synthesis of foundational and specialty competencies acquired during their studies. Through the field experience in the study community, interdisciplinary practice, small group activities, discussion of readings, presentations, and reports, the different components of a previous research proposal designed are executed. Main activities include data collection, organization, management, processing, description, analysis, synthesis, and presentation; as well as interpretation of the results. At the end of the course, students are expected to formulate public health recommendations and interventions, likewise, dissemination of results.

SALP 8005 - Health Promotion Seminar. Two (2) credits.

Through the strategy of seminars and group discussions in the course theoretical-conceptual, operational and practical experience in the field of Health Promotion are analyzed. The course will present the main intervention strategies associated with Health Promotion at the community, institutional and structural levels. The relationship of conceptual and methodological articulation between Public Health and Health Promotion in the development of leadership and interprofessional social action is analyzed. The importance of health advocacy strategies, intersectoral policies and action, social and community mobilization, health education, and others is described. Trends and projections in the Promotion of Health in the local and international context are identified.

SALP 8006 - Doctoral Applied Practice Experience in Public Health. Zero (0) credits, 200 hours. Pre-requisites: All the fundamental and specialty courses of the doctoral program.

This practice experience offers doctoral students the opportunity to apply in a real world setting the theory, leadership, and problem-solving skills in an integrative manner. This 200 hour field experience is required to all students, regardless of prior work experience. The Practicum project will be designed so that the

student has the principal responsibility, along with a team of collaborators in the site. Relevant organizations that could be Practicum sites include governmental, non- governmental, non-profit, industrial and for-profit settings. At the end of course, student is expected to present a project that is meaningful for the organization and to the advance of the public health practice with a reflective statement about their experience and lessons learned in Practicum. The Practicum may be carried in or out-site Puerto Rico settings.

SALP 8007 - Bioethics and Public Health Practice. One (1) credit.

The present course has the teaching objective of sensitize, motivate, and enable health professionals to identify, analyze, and solve bioethical problems that may occur while conducting Public Health research or practice. In addition, the course is designed to help Public Health professionals learn the conceptual skills and abilities needed for the successful decision making related to bioethical issues present in Public Health. Throughout the course, health professionals will acquire the concept and principles of bioethics, will be able to recognize major bioethical issues, and also will familiarize themselves with the ethics involved in Public Health research and practice. Furthermore, it is intended that the health professional will master and apply the bioethical method in decision making related to Public Health issues and value the bioethical commitment present in Public Health. Bioethical issues and problems relevant to the different concentrations within the Public Health Doctoral Program will be selected and discussed in the present course. The bioethical method of decision making will be applied to these issues.

SALP 8015 - Doctoral Dissertation in Public Health. Nine (9) credits. Pre-requisites: Courses of First and Second Year, comprehensive test, internship.

The purpose of this course is to enable the student to develop or acquire such knowledge, skills, and attitudes as required for the development and implementation of a research project proposal that will result in improvements in Public Health practices, in his or her area of specialization. Each student will provide an oral presentation of the project and will actively participate in the conduct of the study, under the supervision of a doctoral dissertation committee. As a minimum, this committee will be constituted by one department faculty member (president), a statistician (if required), a specialist in the subject matter, and two reviewers. The course includes individual and group meetings and discussions with the dissertation committee, independent research, and preparation of written materials.

SALP 8025 - Leadership Seminar. One (1) credit.

The purpose of the course is to analyze the principal leadership theoretical models and approaches and the application in the field of Public Health. The course analyzes the meaning of leadership in term of personal and professional development; and the social contribution of leadership in fostering the health services in Puerto Rico. The course includes practical experiences; public presentations, negotiation methods, development of proposals, and other strategies.

SALP 8026 – Public Health Leader as Educator. Three (3) credits.

This course is designed to train graduate students with knowledge, skills and attitudes required to integrate educational practices and strategies into their professional public health practice. The course will emphasize educational approaches for a range of audiences, systemic planning, and design of learning experiences. Current topics related to the educational process will also be discussed as the use of media and technologies of information to positively impact the process of teaching and learning. The student is expected to integrate and apply acquired concepts in the development of educational plan for intervention in academics, organizational or community scenarios.

SALP 8105 - Research in Public Health. Three (3) credits. Pre-requisites: BIOE 8005, EPID 8002.

This course aims to increase the student's skills and research knowledge to enable them to write their research project proposal. The requirements of the proposal are examined. The themes of problem conceptualization, research design, data-gathering techniques and data analysis are emphasized. The student will explore

their topic of interest and will conduct a literature review, identification of the research design and methodology appropriate to their research problem. This course is structured as to allow students the opportunity to present their work and obtain feedback.

SALP 8106 – Research Design Approaches for Public Health. Three (3) credits. Pre-requisites: EPID 8002.

The course provides students the opportunity to become acquainted with a variety of approaches to research design and advance their understanding of research through critical exploration of diverse paradigms, ethics, and their use in public health research. Through lectures, group discussions, independent study, and case study presentations, students discuss theoretical components and practical techniques for conceptualizing and designing research projects using quantitative, qualitative, mixed-methods, policy analysis, and evaluation methods to address health issues at multiple (individual, group, organization, community and population) levels. Articles published in scientific journals and chapters from the texts will guide the discussion encouraging active student participation. At the end of the course, students will bring together the acquired knowledge and skills by proposing different research methodological approaches in addressing a public health issue.

Graduate Level Course Descriptions

INTD 6996 – Interprofessional Collaborative Practice in Public Health. Zero (0) credit – Twelve (12) hours.

This course provides the opportunity to integrate essential interprofessional education to public health students when addressing a public health issue. Through modules, discussion groups and case studies, will apprehend the values, roles, and responsibilities of the teamwork approach to analyze public health issues. Students will participate in interprofessional teams for a decision-making process based on case studies analysis to develop an intervention plan. Interprofessional teams will be constituted by public health professionals and other professional related to public health as physicians, pharmacists, nurses, dentists, psychologists, social workers, engineerings, lawyers, architects, among other. At the end of the course, students will reflect on team effectiveness in the collaborative approach to establish public health actions.