



UNIVERSIDAD CENTRAL DEL CARIBE INSTITUTIONAL CATALOG 2015 – 2020

**P.O. BOX 60327
Bayamon, PR 00960-6032**

(787) 798-3001
www.uccaribe.edu

Revised May 2016

Table of Contents

AFFIRMATIVE ACTION STATEMENT	4
MESSAGE FROM THE PRESIDENT.....	5
GOVERNANCE AND ADMINISTRATION	6
Trustees 2015-2020	6
Administration of the University	7
GENERAL INFORMATION	8
Mission of the Universidad Central del Caribe	9
Core Competencies.....	9
Definition of Diversity.....	9
Location	10
The UCC Campus and its facilities.....	10
Learning and Information Resources Center	10
STUDENT SERVICES.....	12
ADMISSIONS OFFICE	14
Specific Admission Requirements.....	15
School of Medicine.....	15
Graduate Program in Biomedical Sciences	18
Substance Abuse Counseling Program.....	19
Medical Imaging Technology Program	21
FINANCIAL AID OFFICE	23
OFFICE OF THE REGISTRAR	25
SPECIFIC GRADUATION REQUIREMENTS.....	29
ACADEMIC CALENDARS	31
BURSARS OFFICE	51
SCHOOL OF MEDICINE	55
Department Chairpersons	55
Mission, Vision and Scope	56
Educational Goals and Objectives	56
Affiliated Institutions.....	57
Educational Program	58
Courses of Study	61
Description of Courses	62
GRADUATE PROGRAM IN BIOMEDICAL SCIENCES.....	73
Mission.....	73
Research Activities.....	73
Study Programs.....	77

Courses of Study	83
Doctor of Philosophy in Cellular and Molecular Biology	83
Doctor of Philosophy in Neurosciences	84
Master of Arts in Biomedical Sciences	85
Master of Arts in Biomedical Sciences in Anatomy and Cellular Biology	85
Master of Arts in Biomedical Sciences in Physiology	86
Master of Arts in Biomedical Sciences in Microbiology and Immunology	86
Master of Science in Biomedical Sciences in Anatomy and Cellular Biology	87
Master of Science in Biomedical Sciences in Biochemistry	87
Master of Science in Biomedical Sciences in Pharmacology	88
Master of Science in Biomedical Sciences in Physiology	89
Master of Science in Biomedical Sciences in Microbiology and Immunology	89
Master of Science in Neuroscience	90
Elective Courses	90
Description of Courses	92
SUBSTANCE ABUSE COUNSELING PROGRAM	107
Mission	107
Post-Baccalaureate Certificate in Substance Abuse Counseling	107
Courses of Study	109
Description of Courses	109
Master of Health Science in Substance Abuse Counseling	111
Courses of Study	113
Description of Courses	113
MEDICAL IMAGES TECHNOLOGY PROGRAM	118
Mission	118
Goals	118
Study Programs	121
Courses of Study	129
Associate Degree in Radiologic Technology	129
Post-Associate Certificate in Diagnostic Medical Sonography	130
Post-Associate Certificate in Mammography	130
Post-Associate Certificate in Computerized Tomography	130
Post-Associate Certificate in Magnetic Resonance	130
Bachelor of Science in Diagnostic Images	131
Description of Courses	132
FACULTY	141
Medical School Faculty	141
Biomedical Science Graduate Faculty	185
Substance Abuse Counseling Faculty	187
Medical Images Technology Faculty	189

AFFIRMATIVE ACTION STATEMENT

The Universidad Central del Caribe (UCC) recognizes the right of all persons to work and to advance on the basis of their merit, ability and potential, and is therefore committed to taking any and all steps necessary to identify and alter policies, practices, or other institutional barriers which cause or perpetuate inequality or discrimination. It is the policy of this University to recruit, employ, and promote staff and to admit and serve students without regard to race, color, religion, sex, age, national and social origin, or handicap status.

DISCLAIMER

The information in this catalog is subject to change without notice. The Universidad Central del Caribe reserves the right to make changes as deemed necessary in calendars, fees, policies, academic requirements, regulations, programs, and other subjects, after the publication date of this Catalog.

Correspondence and General Mail:

UNIVERSIDAD CENTRAL DEL CARIBE
P.O. BOX 60327
BAYAMON, PR 00960-6032

UCC Switchboard Telephone Number: (787) 798-3001

UCC Web page: www.uccaribe.edu

Date of Revision: May 2016

MESSAGE FROM THE PRESIDENT

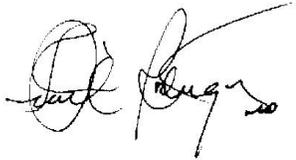
Our University reaffirms its commitment to excellence in the formation of health professionals who will serve humanity with dedication and compassion and the highest ethical and moral standards.

Through its academic programs in medicine, substance abuse counseling, biomedical sciences and technological radiology and medical images, our institution has served our community for close to forty years. The UCC has contributed to the enrichment of knowledge with an energetic research program in the clinical, biopsychosocial, and biomedical sciences. Our University has provided clinical services to the population of the Bayamón Health Region since 1984.

There is now an ongoing process of academic renewal at the UCC. With the most advanced educational technology infrastructure and innovations, the UCC will better serve our students and enable them to reach their maximum potential. Our progress reflects the visionary efforts of dedicated faculty, academic administrators, staff, and students.

We move into the future as a vigorous, maturing institution with vision and hope for our continued growth and development as a health sciences university within an academic medical center.

Within the context of this vision, we welcome our students, faculty, staff, and visitors to share with us the experiences that the UCC has to offer as Puerto Rico's Private Health Sciences University, now, and in the bright future ahead of us.

A handwritten signature in black ink, appearing to read 'José Ginel Rodríguez', with a stylized flourish at the end.

José Ginel Rodríguez, MD, FAAP
President

GOVERNANCE AND ADMINISTRATION

A thirteen-member Board of Trustees outlines the general policies and supervises the operations of the University. Prestigious members of our community volunteer to participate in this governing body. The president of the university is appointed by the Board of Trustees and is the Chief Executive Officer of the university. The deans are appointed by the Board of Trustees upon the president's recommendation and report to the president. Appointments of all administrative officials and faculty are the responsibility of the president, after consultation with the deans and faculty.

The Dean of Academic Affairs is the University's Chief Academic Officer. The Dean of Admissions and Student Affairs supervises all student services and the admissions process of all University programs. The Dean of Administration oversees all administrative and support services.

The School of Medicine is divided into Basic Science and Clinical Departments, and their chairs report directly to the Dean of Medicine. The Associate Dean of Research and Graduate Studies oversees the research agenda and the Graduate Program in Biomedical Sciences and also responds to the Dean of Medicine. The Post-Baccalaureate Certificate in Substance Abuse Counseling and the Master of Health Sciences in Substance Abuse Counseling programs have a Program Director. The Medical Imaging Technology Program includes Post-Associate Certificate in the specialties of Diagnostic Medical Sonography, Mammography, Computerized Tomography, Magnetic Resonance, Associate Degree in Radiologic Technology; a Bachelor's of Science in Diagnostic has a Program Director who reports to the Dean of Academic Affairs.

Trustees 2015-2020

Adolfo Krans, BA
President

Francisco De Torres, MD, FACOG
Vice President

Oscar González Badillo, JD
Secretary

Edgardo Fábregas, MBA

Eduardo J. Ramos, MBA

Waleska Crespo, MHSA

Mildred Rivera, BA

Rafael Campos, MD

Dennis Bechara, JD, LLM

Jorge Colón Gerena, BA

Alfredo Volckers, MHSA

David Rivé Power, JD

José R. Rivera, MA

Administration of the University

José Ginel Rodríguez, MD, FAAP President and Dean of Medicine

Oscar González Badillo, JD
Legal Counselor

Yvonne Corsino-Osorio
Director, Office of Institutional Development and Alumni Affairs

Zilka Ríos, MS
Associate Dean of Academic Affairs of Medicine

Luis Cubano, PhD
Associate Dean of Research and Graduate Studies

Harry Mercado, MD
Associate Dean of Faculty and Clinical Affairs

Nereida Díaz-Rodríguez, PhD Dean of Academic Affairs

Legier Rojas, PhD
Director, Learning and Information Resources Center

Carmen Amalia Marrero, EdD
Director, Office of Institutional Effectiveness

Elizabel De León, MD
Coordinator, Faculty Development

Nilda Montañez-López, MPA
Registrar

Alvaro Perez Arcila, MD
Assistant Dean of Curriculum Development, Accreditations, and Licensing

Emilia Soto, MSHA Dean of Administrative Affairs

Iris Font, BA
Director, Financial Resources Department

Lourdes Bonilla, MBA
Sub-Director, Financial Resources Department

María Rivera, MPA
Director, Office of Human Resources

Migdalia Dávila, BA
Director, Purchasing Office

Omar Pérez Del Pilar, PhD Dean of Admissions and Student Affairs

Irma Cordero, BA
Director, Admissions Office

Mayra Serrano, MEd
Director, Financial Aid Office

Mariana Hernández, MHS
Professional Counselor

Minerva Morales, MOC
Professional Counselor

GENERAL INFORMATION

The Universidad Central del Caribe (UCC) was founded in 1976, in Cayey, Puerto Rico, as a private non-profit institution, incorporated under the laws of the Commonwealth of Puerto Rico. The first educational units established were the School of Medicine, with the four-year program leading to the MD degree, and the Radiologic Technology Program.

In 1990, all University facilities were integrated into one campus at the grounds of the Dr. Ramón Ruiz Arnau University Hospital in the city of Bayamón.

The UCC is duly authorized by the Council on Education of Puerto Rico (CEPR) and accredited by the Middle States Commission on Higher Education (MSCHE). Their review process requires periodic survey visits and reporting. The next self-study evaluation is scheduled for academic year 2018-2019.

The program leading to the MD holds full accreditation from the Liaison Committee on Medical Education (LCME). As of June 2015, the Medical School has graduated over 2,370 physicians serving the Commonwealth of Puerto Rico and Hispanic communities in the United States. The School of Medicine houses a Graduate Program in the Biomedical Sciences that initiated in 1989. In 2009, the Graduate Program expanded to confer a PhD in Cellular and Molecular Biology; subsequently, in 2011 a PhD and a MS in Neurosciences were initiated. The Graduate Program in Biomedical Sciences has conferred over 40 degrees, including three PhDs.

In 1995, the Substance Abuse Counseling Program was initiated offering a Post-Baccalaureate Certificate in Substance Abuse Counseling and the Master of Health Sciences in Substance Abuse Counseling. The program has conferred around 100 degrees.

The Medical Imaging Technology Program (formerly the Radiologic Technology Program) has awarded over 1,450 degrees, from its inception to June 2015. As part of the undergraduate education programs, since 1993 the UCC offers the Post-Associate Certificate in Diagnostic Medical Sonography; since 2000, the Post-Associate Certificate in Mammography; and the Post-Associate +Certificate in Computerized Tomography and in Magnetic Resonance, which were initiated in 2002. The latest undergraduate program, Bachelor of Sciences in Diagnostic Images, started in August 2006.

Mission of the Universidad Central del Caribe

To prepare high-quality and committed health professionals to meet the health needs of the community in its biological, physical and social context with a humanistic focus and a high sense of moral obligation. It is characterized by its emphasis on the excellence of its educational programs, research activities and services of health maintenance, prevention, and early detection of illness. It is committed to improving the quality of life of the Puerto Rican community through its services, as well as to developing health care professionals.

Core Competencies

To fulfill the institutional mission, each academic program must demonstrate that its graduates have mastered six core competencies that should be developed and assessed according to the programs particular specialization:

1. The fundamental concepts, principles and basic information deemed necessary in their field of specialization.
2. The particular technical/clinical skills required in the field of specialization.
3. Communication skills, in English and Spanish, written and spoken, and interpersonal skills, to effectively communicate with patients, colleagues and other members of the community.
4. The skills and attitudes conducive to personal and professional development, through continuous study throughout their lives.
5. The skills and knowledge required to identify and assess reliable sources of information, to discern and be able to analyze it and apply it according to the required tasks.
6. The fundamental values and the ethical and humanistic attitudes to practice their profession, emphasizing professionalism, empathy, compassion, integrity and dedication.

What distinguishes the Universidad Central del Caribe from other educational institutions in Puerto Rico is its unwavering dedication to preparing high-quality health professionals who can offer preventive care, promote healthy life styles, and provide excellent services with humanism, compassion and the highest ethical values. Particular characteristics of the Institution are its intensive and extensive program of practical experiences in clinical settings in the community, regardless of the program of study, and its longstanding record of public/private partnerships and service-linked education.

Definition of Diversity

Diversity at the UCC comprises the added value in our academic community of individuals (staff/administration, faculty and students) representing certain segments of the population, such as those from low socioeconomic backgrounds and first generations in pursuing a professional degree, that enriches the scenarios in which the activities of the academic community take place. It is expected that these individuals, particularly as pertaining to our students, will provide health care services of excellence to the communities that they represent. Additionally, the interaction among the diverse UCC constituents helps foster lifelong positive attributes.

Indicator of diversity	Students	Faculty	Staff/ Administration
Female	59%	40%	65%
Age (Under 25)	45%	-	-
Family gross income < \$20,000/year	29%	-	-
Highest degree earned by Father (High School)	25%	22%	39%
Highest degree earned by Mother (High School)	17%	29%	52%
Raised in a rural community	34%	33%	44%
First generation in completing a professional degree	43%	46%	52%
Hispanic/Puerto Rican	98%	80%	93%

Location

Bayamón is one of the most important urban centers in Puerto Rico. Nearly 234,000 people live in this, the second largest city in Puerto Rico.

Bayamón is located on the north side of the island, seven miles west of San Juan, the capital city of Puerto Rico. Due to the short distance between Bayamón and San Juan, it is accessible to ports and airport facilities, allowing rapid movement of people and merchandise. This element helps facilitate Bayamón's commercial, industrial and tourist activity expansion.

The commercial development resulting from Bayamón's urban growth during the last twenty years has permitted the proliferation of shopping centers, with modern amenities and installations. Towards the periphery of the city, there are many new residences and modern recreational, sports and cultural facilities. Bayamón has become one of the most important educational centers on the Island, boasting seven higher education centers and a number of junior colleges and vocational schools.

The UCC Campus and its facilities

The University facilities are located on the spacious grounds of the Dr. Ramón Ruiz Arnau University Hospital in Bayamón. This 55-acre complex contains the Hospital, the Biomedical Sciences Building, and another structure which houses administrative offices for the School of Medicine, as well as clinical facilities. Ample parking is available and green areas abound.

The Biomedical Sciences Building has a total area of 64,000 square feet. Of this, 4,178 are designated for individual research activity distributed over twenty-eight specialized laboratory facilities. A Common Instrumentation Room provides centralized research support, including a preparation room, storage, scintillation counters, and high speed centrifuges. In addition, a cold room is available on each floor, and autoclave facilities are adjacent to the Department of Microbiology and Immunology. The Animal Care facility occupies nearly the entire basement. This large area has been designed and equipped to meet the requirements for Office of Laboratory Animal Welfare accreditation. The Neurosciences Department facilities are located at a nearby structure and encompass a state of the art complex to conduct specialized multidisciplinary investigations of the nerve structure and functions.

Classrooms, teaching laboratories for all academic programs, and the Learning and Information Resources Center are also housed within this modern building.

Learning and Information Resources Center

At the heart of Universidad Central del Caribe's academic life, lies the Learning and Information Resources Center (LIRC). The LIRC houses four interconnected operational units that serve the multidimensional academic life at the University, including the Dr. Arturo L. Carrion Pacheco Library, Educational Technology Unit, Technological Resources Unit, and the Information Systems and Telecommunications Unit. Orientations, consultation and professional development activities are continuously delivered to keep UCC constituents at the forefront in the advanced technologies that support the three pillars of the institutional mission: excellence in education, clinical services and research.

The LIRC is the central core through which the UCC deploys information and provides technical support to students, faculty, researchers, administrators, non-teaching personnel, and the community in general. The LIRC is in charge of the electronic communication, Internet, electronic mail, the library and other resources and services highly important to maintain the high educational level achieved in the academic programs run by the UCC. The LIRC has incorporated new methods of interaction with the academic community based on the trends in the online and offline exchanges between teachers and learners, and has also improved the interactions among the community by alternatively using cloud computing.

The LIRC improvements in hardware and software are allowing the development of interactive educational alternatives, with a positive approach in applying teaching and learning theories as part of a new dimension of our learning resources. All Units in the LIRC work interconnected to provide first line support to University constituents.

The **Arturo L. Carrión Pacheco Library** is located in the Basic Sciences Building. The library's first floor houses the circulation, reserve and reference collections, the printed serials and three small-group study rooms. In the second floor is the Puerto Rican Authors Meeting Room with a capacity for 30 users. The Library provides traditional and online services. The library holds interlibrary loan agreement services with libraries in Puerto Rico and off the island. Among those is the interlibrary loan throughout "Loansome Doc" from the National Library of Medicine. All bibliographical material requested through this system is usually received the same day. Electronic journals and books currently available can be accessed onsite or via the Remote Access Server (RAS). A variety of online databases and resources are also available. Some of those are: UCC electronic catalog; EBSCOhost: full text electronic journals; SMART image-base; OVID Electronic Books & Journals; DynaMed; Unbound Medicine; and AccessMedicine.

Complementing the aforementioned services, in the second floor the **Educational Resources Facility (ERF)** is in place, which includes: 5 small-group study rooms with capacity for up to 20 students (open 24/7), the Computer Laboratories (1 and 2) with capacity for 70 individual computer working stations; and 16 individual study carrels (open 24/7). Additionally, the first floor houses 16 individual computer working stations, 36 individual study carrels and several tables to promote collaborative learning.

The **Educational Technology Unit (ETU)** provides continuous support to all academic activities of the undergraduate and graduate programs. This unit supports instructional design and the development of classroom activities as well as distant education activities. The ETU is responsible for the in-house online exam construction and administration using LXR® as well as the support, administration and security for the web-based examinations from external-sponsored sources. This Unit also provides support, maintenance and training resources under the LMS platform Blackboard Learn®. The Computer Laboratories hardware and software are also maintained by this Unit. The ETU is involved in all activities that require using off-and on-line software by the Computer Laboratories for training purposes.

The **Technological Resources Unit (TRU)** is in charge of the circulation and loan of equipment, media production and audiovisual services, and computers-on-wheels, including computers in the classrooms. The TRU assists in the preparation of instructional materials, presentations, reports, spreadsheets, information search, and technology training. The UCC website elaboration and maintenance is under the responsibility of this Unit, including its guideline production, and the instructional guides to users in charge of departmental pages. This Unit is responsible for the use and implementation of the digital classroom response system. The **Telehealth Facility** is also located within this unit (a state of the art TV studio to support academic activities). They generate the pre- and postproduction of any video conferences, class or tele-health and tele-research activities. They edit the required post-processing to have the video conferences available to any user and/or published through the UCC-TV channel. The TRU assists researchers in the design and production of posters and presentations to its final elaboration. The Unit also is in charge of video-conferences using various production media.

The **Information System and Telecommunication Unit (ISTU)** serves the needs of the university community through the support and ongoing maintenance of the network, servers, computers, laptop computers and any portable devices distributed throughout the entire campus for the use of UCC constituents. The Unit formulates and executes the installation of different communication alternatives including among others, Internet, Wi-Fi, IP phones, etc. The implementation of several projects to integrate new technological advances to the UCC infrastructure, both hardware and software, responds to the ISTU. This Unit is responsible for the implementation of forefront technologies and their cost-effective utilization. Examples are the virtualization of applications in the servers and the use of Drobo technology.

The LIRC offers workshops and seminars on various technologies and information-related topics. The areas covered range from computerized applications to online courses as well as online testing design and development, electronic tools for assessment, information literacy and Internet searching strategies.

The counter service is available during the library hours indicated below:

Library Hours:

Monday to Friday	7:00 am - 11:00 pm
Friday	7:00 am - 10:00 pm
Saturday and Sunday*	12:00 pm - 7:30 pm
Holidays	CLOSED

All other units within the LIRC observe the following working schedule:

Monday to Friday	8:00 am - 5:00 pm
Friday	8:00 am - 4:30 pm
Saturday and Sunday	CLOSED
Holidays	CLOSED

(*) Some personnel are on call.

The second floor individual study carrels and small-group study rooms are available 24 hours, seven days a week, and 365 days a year.

STUDENT SERVICES

Student Health Services

It is mandatory for every student to carry health insurance coverage. Any student without private health insurance is required to subscribe to the institutional health insurance plan through the Office of the Dean of Admissions and Student Affairs. Students are encouraged to use this service in the most cost-effective manner. The student who has subscribed to the institutional health insurance plan may visit the physician, laboratory, or any health care service of his/her choice in accordance to the insurer policies. Minor or mayor emergencies are channeled through the closest Emergency Room accessible to the student. The coverage is also available for family dependents. The cost of the health insurance could vary every year depending on the type of insurance and on the analysis of the insurance provider. The coverage includes Dental and Pharmacy.

Counseling Program

Counseling services are available through the Dean for Admissions and Student Affairs. The Counseling Program is aimed at assisting students to take maximum advantage of the educational opportunities at the Universidad Central del Caribe, and to contribute to their success in their future professional goals. Students are referred to other specialized counseling and mental health services as needed.

Mental Hygiene Clinic

A mental hygiene clinic is in place to assist the Counseling Program and manage students at risk of confronting academic difficulties due to personal and psychological problems that interfere with their ability to study and perform. Referrals to the Clinical Psychologist are channeled through the Guidance Counselor with student consent for case discussions and for additional active referrals from the Office of the Psychologist as deemed necessary. The Mental Hygiene Clinic is also available for the delivery of individual or group sessions in effective time-management, enhancing test-taking abilities, and managing test performance anxiety, among others.

Student Tutorial Program

It is the goal of this program to provide academic tutorial assistance to students confronting academic difficulties. Students with academic difficulties are referred to the Counseling Program for a comprehensive assessment. Contingent to the findings of this assessment, they are referred to the Tutorial Program or to the appropriate counseling service.

Peer Mentoring Program

Under the guidance of a coordinator, peer mentors are actively engaged in the tutorial and review program, advising process and mentoring. Faculty members recommend those students demonstrating outstanding academic performance, good communication skills, and interest in teaching to the Peer Mentoring Program (PMP). The coordinator of the PMP is responsible for the training, coordination of the peer mentors activities, and evaluation.

Orientation activities for entering students

The UCC offers orientation workshops and activities to the entering freshman class in the summer before the beginning of the academic year. Workshops are conducted on how to improve study habits, develop better attitudes regarding stressful situations and how to deal with them.. Registration occurs at a scheduled time during these periods of activities. Several presentations are provided regarding institutional policies, specific information about areas of services (Registrar's Office, Financial Aid, Counseling, immunization requirements, emergency drills, parking requirements, etc.; Library, CPR course, among others). The main goal is to assist the incoming student in adapting to academic demands and rigors.

Parking

Parking is a privilege provided to all students in specific areas of the Institution. This service grants access to the designated parking area. The student must present all required pertinent documents and must agree to fulfill all institutional regulations. In order to maintain a secure campus, students are encouraged to move their vehicles closer to the main building after 6:00pm.

Extracurricular Activities Program

Universidad Central del Caribe believes that students should be encouraged to develop an interest in culture and the arts. With this principle in mind, the Office of the Dean of Admissions and Student Affairs sponsors educational, social, cultural and prevention activities for the student body. Every Thursday from 12:00pm to 2:00pm, the UCC observes the Universal Hour. The Universal Hour is devoted to extracurricular activities and to encourage student organizations to engage in their activities.

Student ID Cards

An identification card is issued to all registered students, and includes a photograph, name, and student number. The ID is required to gain access to all UCC facilities and entrance to hospitals, community preceptorships, practicums and internships, campus events, checking out books from the library and other official activities. The student ID is also programmed to be use as a key to enter the 24/7 study areas.

Housing and Cafeteria Facilities

Housing facilities are not available within the premises of the Universidad Central del Caribe. Students who may need housing facilities are encouraged to visit the vicinity adjacent to the UCC where numerous apartments are available for rent.

A food-stand concessionaire service is located at the Universidad Central del Caribe backyard. There are fast food restaurants in the vicinity of the Institution.

Student Organizations

The official body representing students at the Universidad Central del Caribe is the General Student Council. This Council is elected by the student body, as described in the General Student Rules and Regulations, with representation from all the academic programs. Medical students have an active chapter of the American Student Medical Association (AMSA), the Medical Student Section of the

American Medical Association, and an Alpha Omega Alpha chapter. There are also a variety of interest groups related to community services and specialties (Pediatrics, Surgery, Neurology, etc.).

Student Lounge

A space for relaxation and for student fraternization is available. A section of the student lounge has been prepared with exercise equipment to serve as a fitness center.

ADMISSIONS OFFICE

The Admissions Office is responsible for the administration and coordination of the different admissions processes. The Admissions Office assures confidentiality and integrity in the admissions processes in adherence with institutional and federal regulations. The Admissions Committees are responsible for selecting the best candidates that apply for admission to each existing program. They must present evidence of successful completion of all admission requirements for the program in which they are interested. In most programs, the Admissions Committee will also consider nonacademic factors as additional criteria in evaluating applicants. There is no discrimination on the basis of sex, color, race, religion, physical disability, economic status, political ideology or national origin.

Contact information at:

Universidad Central del Caribe
Admissions Office
PO Box 60327
Bayamon, PR 00960-6032

Phone: 787-798-3001 extensions 2402, 2403, 2404 Fax: 787-269-7550

Email: admissions@uccaribe.edu

Web page: www.uccaribe.edu

General Requirements

Students wishing to be admitted to Universidad Central del Caribe must comply with the following requirements:

1. File an application with the Office of Admissions within the required time limit for all programs except for first year medical degree applicants (only AMCAS is required through www.aamc.org). The Institutional Application form can be obtained by writing to the Admissions Office.
2. Have and submit the necessary official transcripts, grades or certifications from accredited Institutions as requested per program.
3. Take and submit the official scores of the corresponding test according to the selected program.
4. Have the minimum admission index established by the Admissions Committee according to the selected program.
5. Pay the applicable non-refundable application fee.
6. Submit the reference letters according to the program.
7. A personal interview is required prior to consideration for admission with members of the faculty (by invitation only).
8. Applicants must demonstrate proficiency in both Spanish and English. This is essential, since lectures are conducted in either language, even though Spanish is the predominant language of the Institution. Furthermore, the required clinical experience is mainly with Spanish speaking people.

9. Certificates of Good Conduct, which may be obtained from the local Police Department of the state of residence. MD students applying through AMCAS requires a Criminal Background Check (CBC) performed by Certiphi, as required by the AAMC.
10. A recent 2x2 in size photograph (optional).
11. Once admitted to the program, the student must submit a health certificate and a physical examination by a licensed physician, Tuberculin test or chest X-ray (if positive reaction to tuberculin test), and the following tests: VDRL, urinalysis, and CBC.
12. Certificate of Immunization that includes: three doses of Hepatitis B; MMR vaccines; polio vaccines; DTP vaccines; Td or Tdap vaccine (booster required every 10 years); evidence of having had chickenpox certified by a licensed physician; positive titers of varicella or if has not suffered the disease, evidence of two doses of varicella vaccine (Varivax); and seasonal flu vaccination (regular or combine H1N1). All students must complete all immunizations requirements.

Readmission

1. Students must apply for readmission if they interrupt their studies and do not attend the University for one semester or more. (Summer sessions do not count as interruptions.)
2. Students must comply with the requirements of the study program of their choice, at the time of their readmission, as well as other general requirements that may apply.
3. Interested candidates should submit transcripts of any course work taken outside the UCC during the time they were absent from the Program.
4. Candidates for readmission might be required to have an interview with the Admissions Committee of their academic program. It is comprised of the Dean of Students or his representative, the Registrar, the Dean of Academic Affairs or his representative and the Department Chair. The Committee will have the final authority to recommend the admission of special cases.
5. All readmission applications must be received 45 calendar days before the start of the session in which the student wants to resume his/her studies.

Transfer Students

A student from another institution of higher learning who applies for admission at the Universidad Central del Caribe and meets the admission requirements for a given program, will be considered a transfer student. The Admissions Office will process their application. The students must not be under academic or disciplinary sanction in the institution from which they come. In order to be admitted, students wishing to transfer must meet the requirements of the Program of their choice. The Admissions Committees will evaluate the applications

Specific Admission Requirements

School of Medicine

Admission to the School of Medicine is the responsibility of the Admissions Committee, an advisory committee composed of faculty members, which reports to the Office of the Dean of the School of Medicine. In evaluating applicants, the Admissions Committee considers academic qualifications, personal traits and potential for success in medical school as evidenced in academic records, the results of the Medical College Admission Test (MCAT), personal statement, letters of recommendation, personal interviews, research, community and health related experience.

General Requirements

1. Applicants must have approved a minimum of ninety (90) credits approved prior to application, or Bachelor Degree (highly recommended) in a college or university accredited by the Council of Higher Education or the corresponding US accrediting agency.
2. The applicant must have a minimum general grade point average of 3.00 or above on a scale where A=4.0 (includes all courses taken at college/university level).
3. The applicant must have a minimum science grade point average of 2.75 or above on a scale where A=4.0 (includes all courses in Biology, Chemistry, Physics and Mathematics taken at college/university level).
4. Total course work must include the following:

Course	Hours	Comments
Biology	8 semester hours or 12 quarters hours	Basic introductory courses in Biological Sciences may not be substituted for the particular credit hour stipulated.
General or Inorganic Chemistry	8 semester hours or 12 quarters hours	-
Organic Chemistry	8 semester hours or 12 quarters hours	-
Physics	8 semester hours or 12 quarters hours	Basic introductory courses in Physical Sciences may not be substituted for the particular credit hour stipulated.
Mathematics	6 semester hours or 9 quarters hours	-
Spanish	6 semester hours or 9 quarters hours	-
English	12 semester hours or 18 quarters hours	Six (6) semester hours in Honor courses in English approved with a grade of A or B per semester may substitute for the twelve (12) semester hours required.
Behavioral and Social Sciences in (Psychology, Sociology, Anthropology, Political Sciences or Economics).	12 semester hours or 18 quarters hours	Basic introductory courses in Social Sciences may not be substituted for the particular credit hour stipulated.

5. All academic requirements must be completed not later than the end of the second semester of the academic year preceding admission.
6. Official results of the MCAT scores taken within two years prior to application. A minimum score of 21 is required (version until January 2015) or 490 of the new test version (this minimum score is still under analysis due to recent changes in the MCAT examination and scoring). The web site is www.aamc.org/mcat.
7. Applicants must demonstrate fluency in speaking, reading and writing in Spanish and English. This is essential since lectures are conducted in either language, even though Spanish is the predominant language of the Institution. Furthermore, the required clinical experiences are nearly always conducted in Spanish.

Application Process

1. Application to our School of Medicine is through the American Medical College Application Service (AMCAS). The complete application must be processed by AMCAS between **June 1st and no later than December 15**. Therefore, all applicants must file an AMCAS application only; the web site is www.aamc.org/students/amcas.

2. *One (1) official transcript from each college/university attended, to be sent directly to our Admissions Office.
3. A minimum of two (2) letters from faculty members or the Premedical Committee of the college or university of attendance, uploaded through AMCAS.
4. The payment of a \$100.00 non-refundable application fee established at our institution. Please be advised we do not waive the admissions fee. Payments must be in the form of a money order addressed to the Universidad Central del Caribe and sent directly to our Collection Office. No personal check, credit card or ATM are acceptable.
5. The interview is in person and by invitation only; we use the modality of Multiple Mini Interview. Official identification must be required (valid driver's license or passport).

Acceptance

1. To guarantee enrollment upon acceptance, the candidate must make a \$100.00 non-refundable deposit.
2. A Criminal Background Check (CBC) performed by Certiphi, as required by the AAMC.
3. The student must submit a health certificate and a physical examination by a licensed physician with the laboratory and test required.

Admission for Transfer or Advanced Standing

Transfer applicants may apply for admission for advanced standing to the third year of the curriculum leading to the MD degree. Applications for transfer or advanced standing to the School of Medicine will be considered from those who are currently enrolled in Liaison Committee on Medical Education (LCME) accredited medical schools and from Schools of Osteopathy accredited by the American Osteopathy Association (AOA).

Applicants from non-LCME accredited medical schools will be considered on the basis of individual merits.

Admission is on a competitive basis, and the number admitted depends upon the availability of spaces in the total number of students per class, as suggested by the LCME. The Admissions Committee, in collaboration with the Evaluation and Promotion Committee, will reserve the right to recommend the placement according to UCC-SOM curriculum.

Application Process

1. An Institutional Application with a letter of your transfer interest to the UCCSoM. The application must be submitted no later than **April 1st**.
2. *One (1) official transcript from each college/university attended, to be sent directly to our Admissions Office. Evidence of all requirements for admission to first year (see general requirements).
3. *One (1) official transcript from Medical School attended, to be sent directly to our Admissions Office.
4. A minimum of two (2) letters from faculty members of your School of Medicine.
5. All applicants must have passed Step I of the U.S. Medical Licensing Examination and should submit the official results with their application.
6. A letter of evaluation from the Dean of the School of Medicine currently being attended. The Dean's letter must acknowledge that the applicant has requested to transfer and must certify the applicant's current academic status.
7. Payment of a nonrefundable application fee of \$100.00 as established by our institution. Payments must be in the form of a money order addressed to the Universidad Central del Caribe and sent directly to our Collection Office. No personal check, credit card or ATM are acceptable.
8. A Criminal Background Check (CBC) is required.
9. The interview is in person and by invitation only. Official identification must be required (valid driver's license or passport).

Acceptance

1. To guarantee enrollment upon acceptance, the candidate must make a \$100.00 non-refundable deposit.
2. The student must submit a health certificate and a physical examination by a licensed physician with the laboratory and test required.

Graduate Program in Biomedical Sciences

Admission to the Graduate Program in Biomedical Sciences (GPBS) is responsibility of the GPBS Admissions Committee, an advisory committee composed of faculty members. In evaluating applicants, the Admissions Committee considers academic qualifications, personal traits and potential for success in the program as evidenced in academic records, the results of the Graduate Record Examination (GRE), personal statement, and letters of recommendation, personal interviews, research and other related experience.

General Requirements

1. Applicants must have bachelor degree in a college or university accredited by the Council of Higher Education or the corresponding US accrediting agency.
2. The applicant must have a minimum general grade point average of 2.75 or above on a scale where A=4.0 (includes all courses taken at college/university level).
3. The applicant must have a minimum science grade point average of 3.00 or above on a scale where A=4.0 (includes all courses in Biology, Chemistry, Physics and Mathematics taken at college/university level).
4. Total course work must include the following:
 - 2 courses in mathematics
 - 2 courses in biology
 - 2 courses in chemistry
 - 2 courses in Physics

It is recommended that candidates complete the following coursework at the undergraduate level: calculus I, statistics, general and organic chemistry, general biology, biochemistry, cell biology, molecular biology or genetics, general physics, microbiology, immunology and/or other courses related to the area of specialization.
5. Applicants must demonstrate fluency in speaking, reading and writing in Spanish and English.

Application Process

1. An Institutional Application for Graduate Program. The application must be submitted no later than **April 1st**.
2. An essay indicating your interest in a graduate degree in biomedical sciences.
3. *One (1) official transcript from each college/university attended to be sent directly to our Admissions Office.
4. Official scores of the Graduate Record Examination (GRE). These results are valid for five years only prior to application. The web site is www.ets.org/gre.
5. Three letters of recommendation, including at least two from former professors in the student's area of specialization of the last completed degree.
6. Payment of \$50.00 non-refundable processing fee established at our institution. Payments must be in the form of a money order addressed to the Universidad Central del Caribe and sent directly to our Collection Office. No personal check, credit card or ATM are acceptable.
7. A Criminal Background Check (CBC) is required.
8. Interview with the department to which the student is applying or the Graduate Program in Biomedical Sciences Admissions Committee.

Acceptance

1. To guarantee enrollment upon acceptance, the candidate must make a \$100.00 non-refundable deposit.
2. The student must submit a health certificate and a physical examination by a licensed physician with the laboratory and test required.

Maintenance of Active Status

PhD Degree

Students are required to enroll in a minimum of eighteen (18) credits each year in order to maintain an active status in the Program for a period not exceeding the time allowed for the completion of the degree.

MS/MA Degree

Students that have fulfilled all the requirements for the Masters degree except for the Thesis Defense are required to enroll in BMS 899 for zero (0) credits each semester in order to maintain an active status in the Program for a period not exceeding the remainder of the time allowed for the completion of the degree, four years.

Transfer Students

Students who desire admission into the Graduate Program in Biomedical Sciences as transfer students from another graduate program of an accredited institution will be considered for admission if they fulfill all admission requirements. The applicants must request that the institution from which they wish to transfer submit all pertinent documentation. The Graduate Program in Biomedical Sciences Committee will evaluate the student academic record and will recommend to the Registrar's office the transfer of coursework as follows:

Transfer of graduate credit hours will be accepted for the PhD degree provided the grades in those courses transferred are of a B or higher and the courses are equivalent in content and depth to those offered by the UCC Graduate Program in Biomedical Sciences.

A maximum of 9 credits hours of approved coursework will be accepted for the MS/MA degree, provided the grades in those courses are B or better, the courses are equivalent to those offered by the Graduate Program in Biomedical Sciences, and they satisfy departmental requirements.

Transfer courses at the graduate level must have been taken within the past five years.

Students in the Program who are authorized to take courses outside of UCC must submit transcripts of any coursework taken to be included in their UCC transcript.

No credits used for a completion of a BS or PhD degree will be transferred.

Substance Abuse Counseling Program

Admission to the Substance Abuse Counseling Program is the responsibility of the Admissions Committee, an advisory committee composed of faculty members. In evaluating applicants, the Admissions Committee considers academic qualifications, personal traits and potential for success in the program as evidenced by academic records, the results of the "Examen de Admisión a Estudios de Post Grado" (EXADEP) or Graduate Record Examination (GRE), personal statement, and letters of recommendation, personal interviews, research, community and other related experiences.

General Requirements

1. Applicants must have a Bachelor's Degree in a college or university accredited by the Council of Higher Education or the corresponding US accrediting agency.
2. The applicant must have a minimum grade point average of 2.5 based on a scale of A = 4.0 (includes all courses taken at college/university level)
3. Total course work must include the following:

Course	Hours
Biology	3 semester hours or 5 quarters hours
Behavioral Sciences (Psychology and/or Sociology)	9 semester hours or 15 quarters hours
Mathematics	3 semester hours or 5 quarters hours

4. Applicants must demonstrate fluency in speaking, reading and writing in Spanish and proficiency in English.

Application Process

1. An Institutional Application for Graduate Program. The application must be submitted no later than **April 1st**.
2. An essay with your interest in our Graduate Academic Program.
3. *One (1) official transcript from each college/university attended to be sent directly to our Admissions Office.
4. Official copy of the “Examen de Admisión a Estudios de Post Grado” (EXADEP) or Graduate Record Examination (GRE). The web site for those texts are: www.ets.org/gre and/or www.ets.org/gre. These results are valid for five years only prior to application.
5. Three letters of recommendation. Two (2) letters should be from faculty members of your area of specialization, the other one of any academic or professional field.
6. Current curriculum vitae that includes any professional experience with substance abuse population.
7. Payment of \$50.00 non-refundable processing fee established at our institution. Payments must be in the form of a money order addressed to the Universidad Central del Caribe and sent directly to our Collection Office. No personal check, credit card or ATM are acceptable.
8. A Criminal Background Check (CBC) is required.
9. The interview is in person and by invitation only. Official identification must be required (valid driver’s license or passport).

Acceptance

1. To guarantee enrollment upon acceptance, the candidate must make a \$100.00 non-refundable deposit.
2. The student must submit a health certificate and a physical examination by a licensed physician with the laboratory and test required.

Maintenance of active status

Students who have fulfilled all the requirements for the Certificate, except for the Internship, shall be required to pay a fee of \$33.00 per trimester in order to maintain the status of graduate student in the program for a period not exceeding the rest of the time needed for the completion of the certificate, in this case, three years.

Students who have fulfilled all the requirements for the Master’s Degree, except for the Comprehensive Exam, shall be required to pay a fee of \$33.00 per trimester in order to maintain the status of graduate student in the program for a period not exceeding the rest of the time needed for the completion of the Master’s degree, five (5) years.

Transfer Students

Transfer students will be considered for admission if they fulfill all admission documents and requirements (see General Requirement and Application Process). The Committee of Graduate Studies will study the student’s academic record and will recommend to the Registrar’s Office the transfer of course work as follows:

1. For the Certificate, only six (6) Credit Hours will be accepted only if the grades of transferred courses are A or B, if the courses are equivalent to those offered by the Program in Substance Abuse, and if they satisfy program requirements.
2. For the Master Degree, only nine (9) Credit Hours will be accepted only if the grades of transferred courses are A or B, if the courses are equivalent to those offered by the Program in Substance Abuse, and if they satisfy program requirements.

Admissions Committee

The Admissions Committee of the Substance Abuse Counseling Program will be responsible for the evaluation and selection of the candidates to be admitted to the Program. The candidates will be evaluated based on the Program's established admissions requirements and will not discriminate due to race, sex, age, ethnicity, social condition, religious beliefs or political ideas. The functions of the committee are as follow:

1. The Admissions Committee of the Substance Abuse Counseling Program will follow the enrollment policies and procedures of the UCC.
2. Responsible for student's recruitment.
3. Will carefully review and evaluate the applications for admissions to the program, and will recommend to the President of the UCC the candidates to be admitted.
4. Will reevaluate, as needed, the norms as the circumstances dictate.
5. Review students' eligibility criteria.
6. Review the admission formula based on the criteria that are predictors of student's success.
7. Develop strategies to promote the Program.

Medical Imaging Technology Program

The admissions process to the Medical Imaging Technology Program is implemented by its Admissions Committee, an advisory committee composed of faculty members. In evaluating applicants, the Admissions Committee considers academic qualifications, personal traits and potential as indicated by the entire academic record, results of the College Board Entrance Examination (CEEB), letters of recommendation and personal interviews.

Associate Degree in Radiologic Technology and Bachelor of Science in Diagnostic Images

General Requirements and Application Process

1. Institutional Application must be submitted no later than April 1st.
2. Payment of \$25.00 non-refundable application fee established by our institution. Payments must be in the form of a money order addressed to the Universidad Central del Caribe and sent directly to our Collection Office. No personal check, credit card or ATM are acceptable.
3. Essay of why you want to pursue a carrier in Medical Imaging or area of specialty.
4. Applicants must have approved Algebra, Geometry or Mathematics course and two of the following science courses: Biology, Physics and/or Chemistry.
5. *Official transcript from high school, college and/or university.
6. Official scores of the College Board Entrance Examination (CEEB) if the students are less than 25 years old.
7. Two (2) letters of recommendation from professors.
8. An interview in person is required and is by invitation only.
9. Criminal Background Check is required (only for students 18 years old or above).
10. Applicants must demonstrate fluency in speaking, reading and writing in Spanish and proficiency in English.

High School Applicants

1. A minimum general grade point average (GPA) of 2.30 or above on a scale where A=4.0 is required for the Associate Degree from an accredited public or private high school or its equivalence.
2. A minimum general grade point average (GPA) of 2.50 or above on a scale where A=4.0 for the Bachelor Degree from an accredited public or private high school or its equivalence.

College Applicants

A minimum general grade point average (GPA) of 2.00 or above on a scale where A=4.0 is required for both Associate and Bachelor Degree.

Acceptance

1. To guarantee enrollment upon acceptance, the candidate must make a \$100.00 non-refundable deposit.
2. The student must submit a health certificate and a physical examination by a licensed physician with the laboratory and test required.

ADMISSION FOR TRANSFER STUDENTS

Transfer in Advanced Standing Students

Applications for transfer in advanced standing will be considered from those who are currently enrolled in a Radiologic Technology Program accredited by the Joint Review Committee on Education in Radiologic Technology (JRCERT) or Regional Accreditation Agency such as Middle State Association (MSA). These applicants will be considered on an individual basis.

General Requirements and Application Process

1. Institutional Application with a letter that indicate your interest in pursuing studies at UCC Medical Imaging Program must be submitted no later than April 1st.
2. Payment of \$25.00 non-refundable application fee established by our Institution. Payments must be in the form of a money order addressed to the Universidad Central del Caribe and sent directly to our Collection Office. No personal check, credit card or ATM are acceptable.
3. Applicants must have approved Algebra, Geometry of Mathematics course and two of the following science courses: Biology, Physics, and/or Chemistry.
4. *Official transcript from accredited college and/or university.
5. Copy of the scores of the College Board Entrance Examination (CEEB) if the students are less than 25 years old.
6. Two (2) letters of recommendation from professors.
7. Letter from Dean of Student Affairs of college or university currently attending indicating your status.
8. An interview in person is required and is by invitation only.
9. Criminal Background Check is required (only for students 18 years old or above).
10. Applicants must demonstrate fluency in speaking, reading and writing in Spanish and proficiency in English.

Post-Associate Certificates (Diagnostic Medical Sonography, Mammography, Computerized Tomography and Magnetic Resonance)

General Requirements and Applications Process

1. An Associate Degree comparable with the AD Program offered at the UCC taken in an institution accredited by the Joint Review Committee of Education in Radiologic Technology (JRCERT) or Regional Accreditation Agency such as Middle States Association (MSA).
2. Institutional application with a letter that indicates your interest in pursuing studies at the UCC in the modality of your preference. This Application must be submitted no later than April 1st.
3. Payment of \$25.00 non-refundable application fee established by our Institution. Payments must be in the form of a money order addressed to the Universidad Central del Caribe and sent directly to our Collection Office. No personal check, credit card or ATM are acceptable.
4. *Official transcript from accredited college and/or university with a minimum general point average (GPA) of 2.50 or above on a scale where A=4.0.
5. Two letters of recommendation from professors, clinical instructors or supervisor in the modality of choice.
6. Criminal Background Check is required.
7. An interview with the Program's Faculty.

8. Applicants must demonstrate fluency in speaking, reading and writing in Spanish and proficiency in English.

Acceptance

1. To guarantee enrollment upon acceptance, the candidate must make a \$100.00 non-refundable deposit.
2. The student must submit a health certificate and a physical examination by a licensed physician with the laboratory and test required.

****Students from foreign institutions must send an official translation, validation and/or equivalency to U.S.A. system in order to have their academic documentation considered. We suggest Word Educational Services (WES) as an external agency for this purpose. The web site is www.wes.org.***

FINANCIAL AID OFFICE

The Financial Aid Office is located in the Deanship of Admissions and Student Affairs. Its main goal is to provide access to the different sources of financial aid available to our students in compliance with the United State Department of Education regulations. The following summary includes a description of the scholarships and loan opportunities available. Inquiries and detailed information regarding each program may be obtained at the Financial Aid Office.

Academic Excellence and Need-Based Scholarship Program

Institutional scholarships, tuition exemptions and stipends are available to support the student's achievement of their professional goals at the UCC. These academic program-specific financial support opportunities are granted on an annual basis. The amount of scholarships, tuition exemptions and stipends granted per academic program is contingent to the total amount of funds identified by external sources through the Institutional Development Office and matched with institutional funds.

National Health Service Corps (NHSC)

This program is mandated by Congress. It is designed to provide scholarships to train health care professionals in the disciplines and specialties most needed to deliver primary care services in health professional shortage areas in the United States, including Puerto Rico. For medical students the Program will pay tuition, required fees, books and a monthly stipend. The Program stipulates a two-year minimum service requirement after graduation at an eligible site located in a federally designated Health Professional Shortage Area.

U.S. Army Health Professions Scholarship

This program covers cost of full tuition, fees, books, and also offers 12 monthly stipend payments for medical students. Requires a commitment of minimum of two years to provide primary health services in a state-designated area.

Educational Opportunities Law

This program is mandated by the Commonwealth of Puerto Rico Legislation. It includes two different scholarship programs. This scholarship fund is administered through the Council of Higher Education of Puerto Rico. The Grant Program requires a minimum grade point average of 3.00 and the recipient must be admitted from a high school. The Supplemental Grant Program requires a minimum grade point average of 2.00. All the applicants must demonstrate financial need.

Levering Educational Assistance Partnership Program (LEAP)

This is a limited fund mandated by Congress and matched by the Commonwealth of Puerto Rico. The student must demonstrate exceptional financial need and must have satisfactory academic progress.

Institutional Scholarship Fund

This is a limited fund made available through private Puerto Rican donors. At present the funds are available to a limited number of “good Puerto Rican medical students”, as explicitly established by the private sponsors.

Federal Pell Grant

This grant helps undergraduate students (one who has not earned a bachelor’s degree) to pay for their post-secondary education. The student must be enrolled in at least three (3) credits to receive the benefit and must meet the eligibility requirements of the Program.

Federal Family Education (FFELP)

This program is authorized in Part B of Title IV of the Higher Education Act of 1965, as amended in 1998. Under the FFELP program, students and their parents can obtain low-cost education loans to assist in the payment of higher education costs. The loan is guaranteed to protect the lender from loss in the event of the borrower’s death, disability, bankruptcy, or default. The US Department of Education reinsures the guarantor.

Subsidized Stafford Loan

A student who demonstrates financial need is eligible to have the Federal Government pay the interest on the loan to the lender until repayment of the loan begins and during any deferment period. The student is allowed a grace period (usually six months) after leaving school or dropping below half-time attendance before repayment begins.

Unsubsidized Stafford Loan

A student who does not demonstrate sufficient financial need is typically eligible for an Unsubsidized Stafford Loan. This loan can also be used to supplement a Subsidized Stafford Loan. The borrower does not have any interest paid on his or her behalf by the Federal government; such a borrower is responsible for paying to the lender all interest accrued on the loan from the time the loan is disbursed until it is paid in full.

Alternative Loan Program

This fund was created by private banking institutions for the students in need of additional help to cover their medical education. To be eligible, the student must be currently enrolled at least halftime in an AAMC approved medical school. The student is required to be a citizen or national of the US or a permanent resident without conditions and with proper evidence of eligibility. The student must also apply for a Stafford subsidized and unsubsidized loan before applying for ALP loan. The Annual Maximum is the Cost of Education minus other financial aid.

Emergency Loans

This is a UCC fund that was created by donations from Merck, Sharp and Dohme, other institutions and private sponsors. It provides up to a maximum of \$500.00 for MD and Graduate Programs or \$250.00 for undergraduate programs per semester to cover unanticipated emergency study expenses.

Student Work and Study Program

The Federal Work-Study Program of the Department of Education provides funds for part-time employment to help students in need, to finance the costs of postsecondary education. Students may be employed by: the institution itself; a federal, state, or local public agency; a private nonprofit organization; or a private for-profit organization.

Eligibility Criteria

In order to meet the eligibility requirements for all of the previously described programs, the student must:

1. Demonstrate financial need.
2. Have a high school diploma or a General Education Development (GED) Certificate for the undergraduate programs.
3. Have a bachelor's degree or the premed requirements for the graduate programs.
4. Be working toward a degree or certificate in an eligible program.
5. Be a U.S. citizen or eligible noncitizen.
6. Have a valid Social Security Number.
7. Maintain Satisfactory Academic Progress.
8. Submit the Free Application for Federal Student Aid (FAFSA) or Renewal FAFSA to the Financial Aid Office.
9. Register with the Selective Service, if required.
10. Be enrolled at least halftime, except for the Federal Pell Grant, which allows less than half-time enrollment.
11. Provide documentation of any information requested by the Office of Financial Aid.

Other particular criteria may apply for eligibility to institutional scholarships.

OFFICE OF THE REGISTRAR

The Office of the Registrar is part of the Deanship of Academic Affairs. It is responsible for preparing the academic calendar, the registration of students, maintaining the student's academic records and for the preparation and/or remittance of official and unofficial academic transcripts, certifications of student, and certifications of degree earned in our university. It is also in charge of submitting to the Department of Education the in-school deferments of the students who receive federal student loans. In addition, the Office of the Registrar prepares the official list of classes and the official grade lists to each course offered during each academic period.

Address Change

Students are required to provide a permanent and current addresses to the Registrar's Office at the time of registration. Students are also required to notify this office of any change of address. The UCC is not responsible for university correspondence that fails to reach the student due to inaccurate address information.

Registration and Final Grades

A student who satisfies all admission requirements and is admitted to an Academic Program, must register according to the time schedule prepared by the Registrar's Office. In order to become an official student of the University, the registration form must be submitted to the Registrar's Office, where the student will receive a copy of the completed/official registration form.

At the beginning of each academic term, and after the registration process, the Office will send an official class list to the coordinator/professor of the course. At the end of each academic period the Official Grades Lists will be mailed to the professors/coordinator of each course to report the official grade obtained by each student. At the end of each academic period, the Registrar's Office will mail the official grades of the courses taken by the students during that academic period. Students who believe that their grades are incorrect must contact the Registrar's Office no later than the second week of the following term. Students who do not receive their grades by the beginning of the next term shall notify the Registrar's Office.

Grading System

Grading system is based on honor points.

Grades	Progress Description	Honor Points
A	Excellent	4
B	Good	3
C	Average	2
F	Failure	0
P	Passed	0
H	Passed with honors	0
IP	In progress	0
I	Incomplete coursework	0
W	Withdrawal	0

Credit Hours: are assigned to each course based on contact hours.

Quality Points ("QP"): Credit-hours multiplied by Honor points achieved by the student.

Quality Point Index ("QPI"): Total credit-hours divided by total honor points achieved in a semester.

Cumulative Quality Point Index ("CQPI"): Total credit-hours divided by total honor points accumulated by the student in his academic experience.

Assignment of Credit Hours

The UCC has two types of academic periods: semesters and quarters. A traditional fifteen weeks of coursework plus one exam week semester, is followed in all academic programs, both graduate and undergraduate, except the Substance Abuse Counseling Program that follows the quarter that consists of eleven weeks of course work plus one week of exams. The post associate certificates in Mammography, in Computerized Tomography and in Magnetic Resonance Imaging are designed for completion in one semester each.

One credit hour is equal to twelve hours of instruction in a quarter calendar and fifteen hours of instruction in the semester calendar.

A credit hour at the undergraduate program level is equivalent to 15 hours of lecture, or 30 hours of laboratory, or 60 hours of independent supervised study, or 110 hours of clinical experience.

At the graduate program level, a credit hour is equivalent to 12 hours of lecture, discussion or examination, or 24 hours of supervised independent study, or clinical skills laboratory, or 48 hours of scientific laboratory, research or supervised clinical experience.

At the program conducive to the MD degree each credit hour is equivalent to 15 hours of lecture, discussion or examination, or 30 contact hours of laboratory, or 72 contact hours of clinical experience or independent supervised work

General Rules for the Transferred / Convalidation of Credits / Courses

Courses to be transferred/convalidated have to be taken in higher education institutions authorized by the Puerto Rico Council on Education and accredited by one of the six regional accreditation agencies or a corresponding programmatic accreditation organization recognized by the United States Department of Education at the time the student completed the courses.

Any student who requests the transference/convalidation of courses is required to submit with his/her admission application, an official copy of his/her academic transcript along with copy of an Institutional Catalog where the course content and credit value is described or equivalent official evidence (course syllabus, electronic catalog, etc.). The catalog should cover the time when the student satisfactorily completed the course. The Admissions Office will submit to the dean/program director/program coordinator the supporting documents at least ten (10) days prior to the expected start-date when the student is to register in the program. The dean/program director/program coordinator will review the documentation and will notify the Registrar Office, via the corresponding form, which courses are approved or denied for transference/convalidation. The

program response should be submitted to the Registrar Office at least three (3) days before the student's registration date.

Course/credits transferred/convalidation will be based on contact-hours or credit-hours, content, and academic level, as included in the official course description in the institutional documents when the course was approved and compared to the corresponding course at the UCC. Courses with a contact-hours or credit-hours value higher than the corresponding courses at the UCC will be transferred with the credit value assigned at the UCC to that course. The student will have to present relevant evidence of correspondence in terms of content and depth, if the requesting transference/convalidation of courses with contact-hour or credit-hour value is lower than the corresponding course at the UCC.

No course is to be transferred/convalidated if passed with a letter grade lower than "C" on a letter grade scale or 70% on a percentage grading scale.

Courses/credits to be transferred/convalidated should have been taken within the effective period. The UCC's rules and regulations for expiration of courses/credits will be applied.

Courses which have been used for the attainment of a higher/lower or equivalent degree as that applied for by the student will not be subject to transference/convalidation.

The number of courses/credits to be transferred/convalidated will depend on the curricular sequence of the academic program. The number of credits/courses transferred/convalidated will never exceed 50% the total courses/credits required for the degree at the UCC.

Course taken or credits earned in extension, correspondence, and online modes are subject to be transferred if such courses were considered towards the attainment of a degree by the conferring institution. Transfer of such course/credits are limited to 25% of all course/credits transferred. Acceptance of such courses/credits will be determined by the dean/program director/program coordinator according to this policy.

Courses/credits authorized for transference/convalidation will be annotated in the UCC's student record with a letter "T" as grade and the number of credits authorized. A comment will be added to identify the Institution and date the course/credit was approved. Grades reported for a transference/convalidation will not be considered in the determination of the student's GPA at the UCC.

Satisfactory Academic Progress Policy of Educational Services for Veteran Beneficiaries

Students registered in each of our academic offerings will be evaluated according to the program specific Rules and Regulations for Student Evaluation and Promotion. According to the regulations established in the Codes of Federal Regulations, Title 38 (38 U.S. Code) related to the educational benefits for veterans and its beneficiaries, the student must complete the academic program within the regular time-frame. Any student who extends his/her studies beyond the regular time frame will not be eligible to receive the veterans' benefits.

If the student receives "Pell Grant" financial aid, he/she can continue with this benefit during 50% of the additional time stipulated in Title IV Regulations.

Withdrawal Procedures

Authorized withdrawals will be granted following the established rules and regulations. The deadline for withdrawal from a course or courses will be stipulated in the academic calendar of the UCC.

The withdrawal process starts at the Registrar's Office where the appropriate forms are provided. The student will follow the instructions and must collect the signature of the professors and the pertinent university officials. The student should explain in the withdrawal form the reason for its decision. The withdrawal becomes official when the Registrar or its representative signs the form.

At the time of withdrawal, authorized withdrawals are to be graded W, WP or WF according to the student's academic performance in the course from which he/she is withdrawing.

In the Graduate Program in Biomedical Sciences unauthorized withdrawals constitute grounds for dismissal from the Program.

Auditing Students

Those students who wish to audit a course may do so by submitting a letter for the approval of the Chairperson of the Department offering the course(s) and if they register during the registration period. They must also pay the corresponding fees and charges.

Certifications and Transcripts

If a student needs an official transcript, certification of studies, and/or certification of degree earned, he/she should request it in writing, and pay the applicable fees. Official documents will be sent directly to the concerned college, university, industrial firm, etc. and will never be given directly to the student. However, students may obtain non-official copies of their academic record.

Students who consider that there are errors in their transcripts, must communicate it to the Registrar's Office within seven (7) days after the receipt of the document.

Graduation

Application forms for graduation are obtained from the Registrar's Office, and students must apply and pay the corresponding graduation fee no later than the date set in the Academic Calendar. Non-compliance with these requirements may postpone the conferring of the degree.

Diplomas

The diplomas will be distributed by the Registrar's Office. All claims pertaining to the diplomas should be made no later than one month after the commencement date. The UCC is not responsible for diplomas that are not claimed one year after graduation.

Academic Honors

Academic honor will be given to those students of degree programs who have obtained the following cumulative averages, after completing all the Program's requirements.

"CQPI"	HONOR
3.75 a 4.00	SUMMA CUM LAUDE
3.50 a 3.74	MAGNA CUM LAUDE
3.25 a 3.49	CUM LAUDE

Certificates and non-degree program graduates academic honors will not be recorded in official documents.

SPECIFIC GRADUATION REQUIREMENTS

School of Medicine

Successful completion of four full academic years will be required for graduation. This includes having obtained at least a grade of C in all required courses, to pass the USMLE Step 1 and to pass the knowledge component of USMLE Step 2. In order to obtain a medical degree from this medical school, the student must be enrolled in this institution for the final two academic years.

Please refer to other specific requirements for student promotion and graduation as contained in the Regulations for Student Evaluation and Promotion.

Graduate Program in Biomedical Sciences

A MS/MA or PhD student must complete all the requirements and have turned in the final version of his/hers thesis/dissertation in order to participate in the Commencement Ceremony.

Student must remain enrolled until completing all graduation requirements and delivering the final version of the thesis / dissertation.

PhD Degree

Early in the doctoral work, a dissertation subject is chosen in the field of study and approved by the dissertation committee. The dissertation must represent original investigation that contributes new knowledge to the candidate's field. Upon completion of at least four (4) years of graduate study and a dissertation, the candidate must pass a dissertation defense.

1. Grade index: 3.0 or above
2. Credits As stipulated by the program of study, 72 credits minimum.
3. Residence: A minimum of 36 credits must be completed at UCC.
4. Time limitations: A maximum of 7 years to satisfy all the requirements.
5. Candidacy examination: Required of all students
6. Dissertation defense: Required of all students
7. Authorship: First author in at least one (1) manuscript or co-author in at least two (2) manuscripts accepted for publication in a peer-reviewed journal, which incorporates work that was performed by the student and is included in the student's dissertation. Brief / short communications do not necessarily meet this requirement. The dissertation committee must approve brief / short communications.

MS/MA Degree

1. Grade index: 3.0 or above
2. Credits: As stipulated by the program of study, 34 credits minimum.
3. Residence: A minimum of two year of full-time work must be completed at UCC
4. Time limitations: A maximum of 4 years to complete all the requirements
5. Comprehensive examination required of all MS and MA candidates
6. Thesis defense: Required of all MS candidates

The student must deliver the approved dissertation/thesis in a CD-ROM or flash drive, according to the Dissertation/Thesis Manual, to complete the graduation requirements and receive his/hers diploma. The Graduate Programs in Biomedical Sciences will print and bind three (3) copies of the thesis (one for the student, one for the department and one for the library).

Substance Abuse Counseling Program

Post-Baccalaureate Certificate in Substance Abuse Counseling

The student must: complete the 25 Credit Hours required for the Post-Baccalaureate Certificate in Substance Abuse Counseling with a grade point average of 2.5 or higher; complete a minimum of 18 credits at the UCC, complete all requirements for the Post-Baccalaureate Certificate in Substance Abuse

Counseling within three (3) years from the date of admission, and comply with all academic and institutional requirements of the Program in Substance Abuse and the UCC.

Masters of Health Science in Substance Abuse Counseling

The student must complete the 44 Credit Hours required for the Masters of Health Science in Substance Abuse Counseling with a grade point average of 3.0 or higher. He/she must complete a minimum of 32 credits at the UCC, approve a comprehensive exam with a minimum score of 75% in each component of the exam, and comply with all academic and institutional requirements within five (5) years from the date of admission.

Medical Images Technology Program

In order to obtain a degree for all Medical Images Technology Program offerings, students must complete all the courses described in the program specific curriculum with a qualification of "C" or above. In addition, they must comply with all the administrative requirements established by the Universidad Central del Caribe.

ACADEMIC CALENDARS

Academic Calendar 2015-2016

First Semester	
June 5, 2015 (Friday)	Last day of classes and to apply for authorized withdrawal for 3rd year MD students .
June 18, 2015 (Thursday)	Last day to apply for Authorized Withdrawal for RT-203 (Summer Clinical Practice).
June 19, 2015 (Friday)	Last day of classes for RT-203 (Summer Clinical Practice).
June 22-23, 2015 (Monday -Tuesday)	Orientation period for new students in MD faculty. Part I
June 22, 2015 (Monday)	Registration process for new students in the MD faculty (PM).
July 2, 2015 (Thursday)	Last day of classes and to apply for authorized withdrawal for students in the 4th quarter of Substance Abuse Counseling Program .
July 4, 2015 (Saturday) (Holiday) observed on July 3, 2015 (Friday)*	USA Independence Day
July 6-10, 2015 (Monday thru Friday)	Orientation period for new students in the Graduate Program in Biomedical Sciences .
July 7, 9, 2015 (Tuesday- Thursday)	Final examination period for students in the 4th quarter of Substance Abuse Counseling Program .
July 14, 2015 (Tuesday)	Registration process for 3rd year MD students (AM). Registration process for students in the Graduate Program in Biomedical Sciences (PM).
***July 15,17,18, 2015 (Wednesday, Friday & Saturday)	Orientation period for new students in the Substance Abuse Counseling Program .
July 15, 2015 (Wednesday)	Registration process for new students in the Substance Abuse Counseling Program (2:00-4:00 PM).
July 16, 2015 (Thursday)	Registration process for 2nd year MD students (AM) and 2nd year students in the Associate Degree in Radiologic Technology (PM).
July 17, 2015 (Friday)	Registration process for 4th year MD students (PM).
July 25, (Saturday) (Holiday) observed on July 24, 2015 (Friday)*	PR Constitution Day
July 28-30, 2015 (Tuesday thru Thursday)	Orientation period for new students in MD faculty. Part II
August 3, 2015 (Monday)	First day of classes for students in the MD faculty , and Graduate Program in Biomedical Sciences .
August 3-7, 2015 (Monday thru Friday)	Late Registration period for students in the MD faculty . Late Registration period for students in the Graduate Program in Biomedical Sciences .
August 4, 2015 (Tuesday)	Registration process for 5th quarter of Substance Abuse Counseling Program . First day of classes for students in the 1st & 5th quarters of the Substance Abuse Counseling Program .
August 5-7, 2015 (Wednesday thru Friday)	Late Registration period for students in the 1st & 5th quarters of Substance Abuse Counseling Program .
August 5,6,7, 2015 (Wednesday thru Friday)	Orientation period for new students in the Undergraduate Academic Programs .
August 6, 2015 (Thursday)	Registration process for 1st year students in the Associate Degree in Radiologic Technology (AM) and the Post-Associate Certificate in Computerized Tomography (PM).
August 7, 2015 (Friday)	Registration process for new students in the Bachelor of Science in Diagnostic Images , Post-Associate Certificate in Diagnostic Medical Sonography, Mammography and Computerized Tomography (PM)
August 10, 2015 (Monday)	First day of classes for students in the Undergraduate Academic Programs .

August 10-14, 2015 (Monday thru Friday)	Late Registration period for students in the Undergraduate Academic Programs.
August 21, 2015 (Friday)	Last day for removal of Incomplete Work for students in MD, Graduate Program in Biomedical Sciences and 1st and 5th quarter of Substance Abuse Counseling Program.
August 28, 2015 (Friday)	Last day for removal of Incomplete Work for students in the Undergraduate Academic Programs.
September 7, 2015 (Monday)* (Holiday)	Labor Day
September 30, 2015 (Wednesday)	Last day to apply for admission /reclassification for January 2016.
October 12, 2015 (Monday)* (Holiday)	Columbus Day
October 22, 2015 (Thursday)	Last day of classes and to apply for authorized withdrawal for students in the 1st & 5th quarters in the Substance Abuse Counseling Program.
October 23, 2015 (Friday)	Elective Courses Orientation process for students in 3rd year MD (PM)*
October 27, 2015 (Tuesday)	Registration process and first day of classes for students in 2nd & 6th quarters of Substance Abuse Counseling Program (2:00-4:00 PM).
October 28-30, 2015 (Wednesday thru Friday)	Late registration period for students in the 2nd & 6th quarters in Substance Abuse Counseling Program.
November 2, 2015 (Monday)	Deadline for late application for admission/reclassification for January 2016.
November 11, 2015 (Wednesday)* (Holiday)	Veteran's Day
November 12, 2015 (Thursday)	Last day for removal of Incomplete work for students in the 1st & 5th quarters in Substance Abuse Counseling Program.
November 13, 2015 (Friday)	Last day to apply for Authorized Leave of Absence (LOA) for the second semester (Jan.-June 2016).
November 19, 2015 (Thursday)* (Holiday)	Puerto Rico Discovery Day
November 23-27, 2015 (Monday & Friday)*	Thanksgiving Recess
November 30, 2015 (Monday)	Registration process for 1st year MD students (AM) & 2nd year (PM).
November 30-December 4, 2015 (Monday thru Friday)	Final examination period for the Undergraduate Academic Programs.
December 3,4, 2015 (Thursday & Friday)	Registration process for 4th year MD students (AM)
December 4, 2015 (Friday)	Last day of classes and to apply for authorized withdrawal for the Undergraduate Academic Programs. Last day to submit the eligibility qualifications to obtain certificate/degree on December 18, 2015. Last day to apply for authorized withdrawal for students in the Graduate Program in Biomedical Sciences. (Before the final class test.)
December 8, 2015 (Tuesday)	Registration process for Graduate Program in Biomedical Sciences (PM).
December 11, 2015 (Friday)	Last day to submit to the Office of the Registrar the Official Grade Lists for the Undergraduate Academic Programs.
December 14, 2015 (Monday)	Last day to apply for admission to the MD Program. (first year new students, August 2016)
December 17, 2015 (Thursday)	Last day of classes for students of Substance Abuse Counseling Program. (Classes of the Substance Abuse Counseling Program will be meeting according Thursday schedule).
December 18, 2015 (Friday)	Last day of classes and to apply for authorized withdrawal for 1st, 2nd & 4th year MD students. Last day of classes for the Graduate Program in Biomedical Sciences. Official date for conferring Certificate/Degree for students who have completed all the requirements during 2015.
December 23, 2015 - January 8, 2016	Christmas Recess

Second Semester

January 11, 2016 (Monday)	First day of classes for 1st, 2nd and 4th year MD students , the Graduate Program in Biomedical Sciences and Substance Abuse Counseling Program . Registration for students in the Post-Associate Certificate in Diagnostic Medical Sonography (AM) , in the Bachelor of Science in Diagnostic Images , and in the Post-Associate Certificate in Magnetic Resonance (PM) .
January 12-15, 2016 (Tuesday thru Friday)	Late Registration period for students registered in December 2015 (4th year MD students), Graduate Program in Biomedical Sciences and Undergraduate Academic Programs .
January 15, 2016 (Friday)	Registration process for students of the Associate Degree in Rad. Tech. (1st year (AM) , & 2nd year (PM)).
January 18, 2016 (Monday)* (Holiday)	Martin Luther King Day
January 19, 2016 (Tuesday)	First day of classes for Undergraduate Academic Programs .
January 22, 2016 (Friday)	Last day of classes and last day to apply for authorized withdrawal for 3rd year MD students . Registration process for the 2nd semester of 3rd year MD students . Last day for removal of Incomplete work for students in the 1st, 2nd & 4th year MD , Graduate Program in Biomedical Sciences, PhD and Undergraduate Academic Programs.
January 25, 2016 (Monday)	First day of classes for the 2nd semester of 3rd year MD students .
January 25-29, 2016 (Monday thru Friday)	Late registration period for the 2nd semester of 3rd year MD students .
January 28, 2016 (Thursday)	Last day of classes and last day to apply for authorized withdrawal for students in the 2nd & 6th quarters of Substance Abuse Counseling Program .
February 2, 2016 (Tuesday)	Registration process for students in the 3rd & 7th quarters of Substance Abuse Counseling Program . First day of classes for students in the 3rd & 7th quarters of Substance Abuse Counseling Program .
February 3-5, 2016 (Wednesday thru Friday)	Late registration period for students in the 3rd & 7th quarters of Substance Abuse Counseling Program .
February 4, 2016 (Thursday)	Last day for removal of Incomplete work for students in the 2nd & 6th quarters of Substance Abuse Counseling Program and for students in the Undergraduate Academic Programs .
February 12, 2016 (Friday)	Last day for removal of Incomplete work for students in 3rd year MD .
February 15, 2016 (Monday)* (Holiday)	President's Day
March 24, 25, 2016 (Thursday & Friday)*	Easter Recess
March 30, 2016 (Wednesday)	Last day to apply for admission /reclassification for August 2016.
April 15, 2016 (Friday)	Last day of classes and to apply for authorized withdrawal for students in 2nd year MD .
April 19 (Tuesday) thru May 13, 2016 (Friday)	Final examination period for 2nd year MD .
April 20, 2016 (Wednesday)	Last day to apply for authorized withdrawal for students in the Graduate Program in Biomedical Sciences and in the Undergraduate Academic Programs (before the last course exam).
April 21, 2016 (Thursday)	Last day of classes and last day to apply for authorized withdrawal for students in the 3rd & 7th quarters of Substance Abuse Counseling Program .
April 26, 2016 (Tuesday)	Registration and first day of classes for students in 4th quarter of Substance Abuse Counseling Program . Deadline for late application for admission/reclassification for August 2016 (except 1st year MD Program).
April 27-29, 2016 (Wednesday thru Friday)	Late registration period for students in the 4th quarter of Substance Abuse Counseling Program .

April 28, 2016 (Thursday)	Last day for removal of Incomplete work for students in the 3rd & 7th quarters of Substance Abuse Counseling Program.
April 29, 2016 (Friday)	Deadline for late application for admission/reclassification for January 2017.
May 6, 2016 (Friday)	Registration process for RT-203 (Summer Clinical Practice) . Last day of classes & to apply for authorized withdrawal for students in the 1st year MD, Graduate Program in Biomedical Sciences and in the Undergraduate Academic Programs.
May 7, 2016 (Saturday)	Comprehensive Exam for Substance Abuse Counseling Program
May 9, 2016 (Monday)	First day of classes for RT-203 (Summer Clinical Practice) .
May 9 (Monday) -20, 2016 (Friday)	Final examination period for students in the Undergraduate Academic Programs.
May 9 (Monday) -27, 2016 (Friday)	Final examination period for students in 1st year MD.
May 27, 2016 (Friday)	Last day of classes & to apply for authorized withdrawal for students in 4th year MD. Last day to submit to the Office of the Registrar the Official Grades Lists for the students in the Undergraduate Academic Programs.
May 30, 2016 (Monday)* (Holiday)	Memorial Day
June 4, 2016 (Saturday)	Commencement Exercises
June 10, 2016 (Friday)	Last day of classes for 3rd year MD students. Last day to apply for Authorized Leave of Absence (LOA) MD students for 1 st semester 2016-2017. Last day of classes for RT-203 (Summer Clinical Practice).
June 16, 2016 (Thursday)	Last day to apply for authorized withdrawal for RT-203 (Summer Clinical Practice).
June 20-24, 2016 (Monday thru Friday)	Orientation period for new students in the MD faculty.
June 20, 2016 (Monday)	Registration process for new students in the MD faculty (PM).
July 4, 2016 (Monday)* (Holiday)	USA Independence Day
July 7, 2016 (Thursday)	Last day of classes and to apply for authorized withdrawal for students in the 4th quarter of Substance Abuse Counseling Program.
July 11-15, 2016 (Monday thru Friday)	Orientation period for new students in the Graduate Program in Biomedical Sciences
July 12, 2016 (Tuesday)	Registration process for 3rd year MD students (AM). Registration process for students in the Graduate Program in Biomedical Sciences (PM)
***July 13,15 & 16, 2016 (Wednesday, Friday & Saturday)	Orientation period for new students in the Substance Abuse Counseling Program.
July 13, 2016 (Wednesday)	Registration process for new students in the Substance Abuse Counseling Program.
July 14, 2016 (Thursday)	Registration process for 2nd year MD students (AM) & for 2nd year students of the Associate Degree in Radiologic Technology (PM).
July 15, 2016 (Friday)	Registration process for 4th year MD students (PM).
July 25, 2016 (Monday)* (Holiday)	PR Constitution Day

*Subject to change.

The undergraduate academic programs include: Associate Degree in Radiologic Technology, Bachelor of Science in Diagnostic Images, Post-Associate Certificate in Mammography, Magnetic Resonance, Computerized Tomography, and Diagnostic Medical Sonography.

Every Thursday, from 12:00 to 2:00 PM, the "UNIVERSAL HOUR" will be observed for extracurricular purposes.

*UCC faculty can determine if during any Holiday an exam may be administered.

Academic Calendar 2016-2017

First Semester	
June 10, 2016 (Friday)	Last day of classes and to apply for authorized withdrawal for 3rd year MD students . Last day to apply for Authorized Leave of Absence (LOA) MD students for 1st semester 2016-2017 (August-December 2016).
June 16, 2016 (Thursday)	Last day to apply for Authorized Withdrawal for RT-203 (Summer Clinical Practice).
June 17, 2016 (Friday)	Last day of classes for RT-203 (Summer Clinical Practice).
June 20, 2016 (Monday)	Registration process for new students in the MD faculty (PM).
June 20-21, 2016 (Monday, Tuesday)	Orientation period for new students in the MD faculty. Part I
June 30, 2016 (Thursday)	Last day of classes and to apply for authorized withdrawal for students in the 4th quarter of Substance Abuse Counseling Program .
July 4, 2016 (Monday)* (Holiday)	USA Independence Day
July 5, 7, 2016 (Tuesday- Thursday)	Final examination period for students in the 4th quarter of Substance Abuse Counseling Program .
July 11-15, 2016 (Monday thru Friday)	Orientation period for new students in the Graduate Program in Biomedical Sciences .
July 12, 2016 (Tuesday)	Registration process for 3rd year MD students (AM). Registration process for students in the Graduate Program in Biomedical Sciences (PM) .
***July 13, 15, 16, 2016 (Wednesday, Friday & Saturday)	Orientation period for new students in the Substance Abuse Counseling Program .
July 13, 2016 (Wednesday)	Registration process for new students in the Substance Abuse Counseling Program (2:00-4:00 PM).
July 14, 2016 (Thursday)	Registration process for 2nd year MD students (AM) and 2nd year students in the Associate Degree in Radiologic Technology (PM).
July 15, 2016 (Friday)	Registration process for 4th year MD students (PM).
July 25, 2016 (Monday)* (Holiday)	PR Constitution Day
July 26-29, 2016 (Tuesday thru Friday)	Orientation period for new students in the MD faculty. Part II
August 1, 2016 (Monday)	First day of classes for students in the MD faculty , and Graduate Program in Biomedical Sciences . Late Registration period for students in the MD faculty . Late Registration period for students in the Graduate Program in Biomedical Sciences .
August 2, 2016 (Tuesday)	Registration process for 5th quarter of Substance Abuse Counseling Program . First day of classes for students in the 1st & 5th quarters of the Substance Abuse Counseling Program .
August 3, 2016 (Wednesday)	Registration process for students in the Bachelor of Science in Diagnostic Images (PM).
August 3-5, 2016 (Wednesday thru Friday)	Late Registration period for students in the 1st & 5th quarters of Substance Abuse Counseling Program . Orientation period for new students in the Undergraduate Academic Programs .
August 4, 2016 (Thursday)	Registration process for 1st year students in the Associate Degree Technology (AM) and the Post-Associate Certificate in Computerized Tomography (PM).
August 5, 2016 (Friday)	Registration process for new students in the Bachelor of Science in Diagnostic Images and Mammography (PM).
August 8, 2016 (Monday)	First day of classes for students in the Undergraduate Academic Programs . Late Registration period for students in the Undergraduate Academic Programs .

August 19, 2016 (Friday)	Last day for removal of Incomplete Work for students in MD, Graduate Program in Biomedical Sciences and 1st and 5th quarter of Substance Abuse Counseling Program.
August 26, 2016 (Friday)	Last day for removal of Incomplete Work for students in the Undergraduate Academic Programs.
September 5, 2016 (Monday)* (Holiday)	Labor Day
September 26, 2016 (Monday)	Last day to apply for admission /reclassification for January 2017.
October 10, 2016 (Monday)* (Holiday)	Columbus Day
October 20, 2016 (Thursday)	Last day of classes and to apply for authorized withdrawal for students in the 1st & 5th quarters in the Substance Abuse Counseling Program.
October 21, 2016 (Friday)	Elective Courses Orientation process for students in 3rd year MD (PM)*
October 25, 2016 (Tuesday)	Registration process and first day of classes for students in 2nd & 6th quarters of Substance Abuse Counseling Program (2:00-4:00 PM).
October 26-28, 2016 (Wednesday thru Friday)	Late registration period for students in the 2nd & 6th quarters in Substance Abuse Counseling Program.
October 31, 2016 (Monday)	Deadline for late application for admission/reclassification for January 2017.
November 10, 2016 (Thursday)	Last day for removal of Incomplete work for students in the 1st & 5th quarters in Substance Abuse Counseling Program. Last day to apply for Authorized Leave of Absence (LOA) for the second semester (Jan.-June 2016).
November 11, 2016 (Friday)* (Holiday)	Veteran's Day
November 24-25, 2016 (Thursday & Friday)*	Thanksgiving Recess
November 28, 2016 (Monday)	Registration process for 1st year MD students (AM) & 2nd year (PM).
November 28-December 2, 2016 (Monday thru Friday)	Final examination period for the Undergraduate Academic Programs.
December 1-2, 2016 (Thursday and Friday)	Registration process for 4th year MD students (AM)
December 2, 2016 (Friday)	Last day of classes and to apply for authorized withdrawal for the Undergraduate Academic Programs. Last day to submit the eligibility qualifications to obtain certificate/degree on December 16, 2016. Last day to apply for authorized withdrawal for students in the Graduate Program in Biomedical Sciences. (Before the final class test.)
December 6, 2016 (Tuesday)	Registration process for Graduate Program in Biomedical Sciences (PM).
December 9, 2016 (Friday)	Last day to submit to the Office of the Registrar the Official Grade Lists for the Undergraduate Academic Programs.
December 12, 2016 (Monday)	Last day to apply for admission to the MD Program. (first year new students, August 2017)
December 15, 2016 (Thursday)	Last day of classes for students of Substance Abuse Counseling Program. (Classes of the Substance Abuse Counseling Program will be meeting according Thursday schedule).
December 16, 2016 (Friday)	Last day of classes and to apply for authorized withdrawal for 1st, 2nd & 4th year MD students. Last day of classes for the Graduate Program in Biomedical Sciences. Official date for conferring Certificate/Degree for students who have completed all the requirements during 2016.
December 23, 2016 - January 9, 2017	Christmas Recess
Second Semester	
January 8, 2017 (Monday)	First day of classes for 1st, 2nd and 4th year MD students, the Graduate Program in Biomedical Sciences and Substance Abuse Counseling Program.

	<p>Registration for students in the Post-Associate Certificate in Diagnostic Medical Sonography (AM), in the Bachelor of Science in Diagnostic Images, and in the Post-Associate Certificate in Magnetic Resonance (PM).</p> <p>Late Registration period for students registered in December 2016 (4th year MD students), Graduate Program in Biomedical Sciences and Undergraduate Academic Programs.</p>
January 13, 2017 (Friday)	Registration process for students of the Associate Degree in Rad. Tech. (1 st year (AM), & 2 nd year (PM)).
January 16, 2017 (Monday)* (Holiday)	Martin Luther King Day
January 17, 2018 (Tuesday)	<p>First day of classes for Undergraduate Academic Programs.</p> <p>Late registration period for students in the Undergraduate Academic Programs.</p>
January 20, 2017 (Friday)	<p>Last day of classes and last day to apply for authorized withdrawal for 3rd year MD students.</p> <p>Registration process for the 2nd semester of 3rd year MD students.</p> <p>Last day for removal of Incomplete work for students in the 1st, 2nd & 4th year MD, Graduate Program in Biomedical Sciences, PhD and Undergraduate Academic Programs.</p>
January 23, 2017 (Monday)	<p>First day of classes for the 2nd semester of 3rd year MD students.</p> <p>Late registration period for the 2nd semester of 3rd year MD students.</p>
January 26, 2017 (Thursday)	Last day of classes and last day to apply for authorized withdrawal for students in the 2nd & 6th quarters of Substance Abuse Counseling Program .
January 31, 2017 (Tuesday)	<p>Registration process for students in the 3rd & 7th quarters of Substance Abuse Counseling Program.</p> <p>First day of classes for students in the 3rd & 7th quarters of Substance Abuse Counseling Program.</p>
February 2, 2017 (Thursday)	<p>Late registration period for students in the 3rd & 7th quarters of Substance Abuse Counseling Program.</p> <p>Last day for removal of Incomplete work for students in the 2nd & 6th quarters of Substance Abuse Counseling Program and for students in the Undergraduate Academic Programs.</p>
February 10, 2017 (Friday)	Last day for removal of Incomplete work for students in 3rd year MD .
February 20, 2017 (Monday)* (Holiday)	President's Day
March 29, 2017 (Wednesday)	Last day to apply for admission /reclassification for August 2017.
April 13, 14, 2017 (Thursday & Friday)	Easter Recess
April 14, 2017 (Friday)	Last day of classes and to apply for authorized withdrawal for students in 2nd year MD .
April 18 (Tuesday) thru May 12, 2017(Friday)	Final examination period for 2nd year MD .
April 19, 2017 (Wednesday)	Last day to apply for authorized withdrawal for students in the Graduate Program in Biomedical Sciences and in the Undergraduate Academic Programs (before the last course exam).
April 20, 2017 (Thursday)	Last day of classes and last day to apply for authorized withdrawal for students in the 3rd & 7th quarters of Substance Abuse Counseling Program .
April 25, 2017 (Tuesday)	<p>Registration and first day of classes for students in 4th quarter of Substance Abuse Counseling Program.</p> <p>Deadline for late application for admission/reclassification for August 2017 (except 1st year MD Program).</p>
April 27, 2017 (Thursday)	<p>Late registration period for students in the 4th quarter of Substance Abuse Counseling Program.</p> <p>Last day for removal of Incomplete work for students in the 3rd & 7th quarters of Substance Abuse Counseling Program.</p>

April 28, 2017 (Friday)	Deadline for late application for admission/reclassification for January 2018.
May 1-5, 2017 (Monday thru Friday)	Final examination period for students in the Undergraduate Academic Programs .
May 5, 2017 (Friday)	Last day of classes & to apply for authorized withdrawal for students in the 1st year MD . Registration process for RT-203 (Summer Clinical Practice) .
May 6, 2017 (Saturday)	Comprehensive Exam for Substance Abuse Counseling Program
May 8, 2017 (Monday)	First day of classes for RT-203 (Summer Clinical Practice) .
May 8 (Monday) -26, 2017 (Friday)	Final examination period for students in 1st year MD .
May 19, 2017 (Friday)	Last day of classes for students in the Graduate Program in Biomedical Sciences and in the Undergraduate Academic Programs .
May 26, 2017 (Friday)	Last day of classes & to apply for authorized withdrawal for students in 4th year MD . Last day to submit to the Office of the Registrar the Official Grades Lists for the students in the Undergraduate Academic Programs .
May 29, 2017 (Monday)* (Holiday)	Memorial Day
June 3, 2017 (Saturday)	Commencement Exercises
June 9, 2017 (Friday)	Last day of classes and to apply for authorized withdrawal for 3rd year MD students . Last day to apply for Authorized Leave of Absence (LOA) MD students for 1 st semester 2017-2018. Last day of classes for RT-203 (Summer Clinical Practice) .
June 15, 2017 (Thursday)	Last day to apply for authorized withdrawal for RT-203 (Summer Clinical Practice) .
June 19-20, 2017 (Monday- Tuesday)	Orientation period for new students in the MD faculty . Part I
June 19, 2017 (Monday)	Registration process for new students in the MD faculty (PM).
July 4, 2017 (Tuesday)* (Holiday)	USA Independence Day
July 6, 2017 (Thursday)	Last day of classes and to apply for authorized withdrawal for students in the 4th quarter of Substance Abuse Counseling Program .
July 10-14, 2017 (Monday-Friday)	Orientation period for new students in the Graduate Program in Biomedical Sciences .
July 11, 2017 (Tuesday)	Registration process for 3rd year MD students (AM). Registration process for students in the Graduate Program in Biomedical Sciences (PM)
***July 12,14 & 15, 2017 (Wednesday, Friday & Saturday)	Orientation period for new students in the Substance Abuse Counseling Program .
July 12, 2017 (Wednesday)	Registration process for new students in the Substance Abuse Counseling Program .
July 13, 2017 (Thursday)	Registration process for 2nd year MD students (AM) & for 2nd year students of the Associate Degree in Radiologic Technology (PM).
July 14, 2017 (Friday)	Registration process for 4th year MD students (PM).
July 25, 2017 (Tuesday)* (Holiday)	PR Constitution Day

*Subject to change.

The undergraduate academic programs include: Associate Degree in Radiologic Technology, Bachelor of Science in Diagnostic Images, Post-Associate Certificate in Mammography, Magnetic Resonance, Computerized Tomography, and Diagnostic Medical Sonography.

Every Thursday, from 12:00 to 2:00 PM, the "UNIVERSAL HOUR" will be observed for extracurricular purposes.

*UCC faculty can determine if during any Holiday an exam may be administered.

Academic Calendar 2017-2018

First Semester	
June 9, 2017 (Friday)	Last day of classes and to apply for authorized withdrawal for 3rd year MD students . Last day of classes for RT-203 (Summer Clinical Practice). Last day to apply for Authorized Leave of Absence (LOA) MD students for 1st semester 2017-2018 (August-December 2017).
June 15, 2017 (Thursday)	Last day to apply for Authorized Withdrawal for RT-203 (Summer Clinical Practice).
June 19-20, 2017 (Monday -Tuesday)	Orientation period for new students in the MD faculty . Part I
June 19, 2017 (Monday)	Registration process for new students in the MD faculty (PM).
June 29, 2017 (Thursday)	Last day of classes and to apply for authorized withdrawal for students in the 4th quarter of Substance Abuse Counseling Program .
July 4, 2015 (Tuesday)* (Holiday)	USA Independence Day
July 10-14, 2017 (Monday thru Friday)	Orientation period for new students in the Graduate Program in Biomedical Sciences .
July 11, 2015 (Tuesday)	Registration process for 3rd year MD students (AM). Registration process for students in the Graduate Program in Biomedical Sciences (PM).
July 11,13, 2017 (Tuesday-Thursday)	Final examination period for students in the 4th quarter of Substance Abuse Counseling Program .
***July 12, 14 & 15, 2017 (Wednesday, Friday & Saturday)	Orientation period for new students in the Substance Abuse Counseling Program .
July 12, 2017 (Wednesday)	Registration process for new students in the Substance Abuse Counseling Program (2:00-4:00 PM).
July 13, 2017 (Thursday)	Registration process for 2nd year MD students (AM) and 2nd year students in the Associate Degree in Radiologic Technology (PM).
July 14, 2017 (Friday)	Registration process for 4th year MD students (PM).
July 25, 2017 (Tuesday)* (Holiday)	PR Constitution Day
July 26-28, 2017 (Thursday thru Friday)	Orientation period for new students in the MD faculty . Part II
July 31, 2017 (Monday)	First day of classes for students in the MD faculty, and Graduate Program in Biomedical Sciences . Late Registration period for students in the MD faculty . Late Registration period for students in the Graduate Program in Biomedical Sciences .
July 31- August 4, 2017 (Monday thru Friday)	Orientation period for new students in the Undergraduate Academic Programs .
August 1, 2017 (Tuesday)	Registration process for 5th quarter of Substance Abuse Counseling Program . First day of classes for students in the 1st & 5th quarters of the Substance Abuse Counseling Program .
August 2, 2017 (Wednesday)	Registration process for students in the Bachelor of Science in Diagnostic Images & Post-Associate Certificate Post-Associate Certificate in Diagnostic Medical Sonography and Mammography (PM).
August 2-4, 2017 (Wednesday thru Friday)	Late Registration period for students in the 1st & 5th quarters of Substance Abuse Counseling Program .
August 3, 2017 (Thursday)	Registration process for 1st year students in the Associate Degree in Radiologic Technology (AM) and the Post-Associate Certificate in Computerized Tomography (PM) .
August 7, 2017 (Monday)	First day of classes for students in the Undergraduate Academic Programs . Late Registration period for students in the Undergraduate Academic Programs .

August 18, 2017 (Friday)	Last day for removal of Incomplete Work for students in MD, Graduate Program in Biomedical Sciences and 1st and 5th quarter of Substance Abuse Counseling Program.
August 25, 2017 (Friday)	Last day for removal of Incomplete Work for students in the Undergraduate Academic Programs.
September 4, 2017 (Monday)* (Holiday)	Labor Day
September 25, 2017 (Monday)	Last day to apply for admission /reclassification for January 2018.
	Columbus Day
October 19, 2017 (Thursday)	Last day of classes and to apply for authorized withdrawal for students in the 1st & 5th quarters in the Substance Abuse Counseling Program.
October 20, 2017 (Friday)	Elective Courses Orientation process for students in 3rd year MD (PM)*
October 24, 2017 (Tuesday)	Registration process and first day of classes for students in 2nd & 6th quarters of Substance Abuse Counseling Program (2:00-4:00 PM).
October 25-27, 2017 (Wednesday thru Friday)	Late registration period for students in the 2nd & 6th quarters in Substance Abuse Counseling Program.
October 30, 2017 (Monday)	Deadline for late application for admission/reclassification for January 2018.
November 9, 2017 (Thursday)	Last day for removal of Incomplete work for students in the 1st & 5th quarters in Substance Abuse Counseling Program. Last day to apply for authorized withdrawal and last day of classes for the Undergraduate Academic Programs. Last day to apply for Authorized Leave of Absence (LOA) for the second semester (Jan.-June 2018).
November 23-24, 2017 (Thursday & Friday)*	Thanksgiving Recess
November 27, 2017 (Monday)	Registration process for 1st year MD students (AM) & 2nd year (PM).
November 27-December 1, 2017 (Monday thru Friday)	Final examination period for the Undergraduate Academic Programs.
November 30 - December 1, 2017 (Thursday and Friday)	Registration process for 4th year MD students (AM)
December 1, 2017 (Friday)	Last day to submit the eligibility qualifications to obtain certificate/degree on December 15, 2017. Last day to apply for authorized withdrawal for students in the Graduate Program in Biomedical Sciences. (Before the final class test.)
December 5, 2017 (Tuesday)	Registration process for Graduate Program in Biomedical Sciences (PM).
December 8, 2017 (Friday)	Last day to submit to the Office of the Registrar the Official Grade Lists for the Undergraduate Academic Programs.
December 11, 2017 (Monday)	Last day to apply for admission to the MD Program. (first year new students, August 2018)
December 14, 2017 (Thursday)	Last day of classes for students of Substance Abuse Counseling Program. (Classes of the Substance Abuse Counseling Program will be meeting according to Thursday schedule).
December 15, 2017 (Friday)	Last day of classes and to apply for authorized withdrawal for 1st, 2nd & 4th year MD students. Last day of classes for the Graduate Program in Biomedical Sciences. Official date for conferring Certificate/Degree for students who have completed all the requirements during 2017.
December 25, 2017 - January 5, 2018	Christmas Recess
Second Semester	
January 8, 2018 (Monday)	First day of classes for 1st, 2nd and 4th year MD students, the Graduate Program in Biomedical Sciences and Substance Abuse Counseling Program. Late Registration period for students registered in December 2017 (4th year MD students), Graduate Program in Biomedical Sciences

	Registration for students in the Post-Associate Certificate in Diagnostic Medical Sonography (AM) , in the Bachelor of Science in Diagnostic Images , and in the Post-Associate Certificate in Magnetic Resonance (PM) .
January 12, 2018 (Friday)	Registration process for students of the Associate Degree in Rad. Tech. (1 st year (AM), & 2 nd year (PM)).
January 15, 2018 (Monday)* (Holiday)	Martin Luther King Day
January 16, 2018 (Tuesday)	First day of classes for Undergraduate Academic Programs . Late Registration period for students in the Undergraduate Academic Programs .
January 19, 2018 (Friday)	Last day of classes and last day to apply for authorized withdrawal for 3rd year MD students . Registration process for the 2 nd semester of 3rd year MD students . Last day for removal of Incomplete work for students in the 1st, 2nd & 4th year MD, Graduate Program in Biomedical Sciences, PhD and Undergraduate Academic Programs .
January 22, 2018 (Monday)	First day of classes for the 2 nd semester of 3rd year MD students . Late registration period for the 2 nd semester of 3rd year MD students .
	Last day of classes and last day to apply for authorized withdrawal for students in the 2nd & 6th quarters of Substance Abuse Counseling Program .
January 25, 2018 (Thursday)	Last day of classes for students in the 2nd & 6th quarters of Substance Abuse Counseling Program .
January 30, 2018 (Tuesday)	Registration process for students in the 3rd & 7th quarters of Substance Abuse Counseling Program . First day of classes for students in the 3rd & 7th quarters of Substance Abuse Counseling Program .
January 31-February 2, 2018 (Wednesday thru Friday)	Late registration period for students in the 3rd & 7th quarters of Substance Abuse Counseling Program .
February 1, 2018 (Thursday)	Last day for removal of Incomplete work for students in the 2nd & 6th quarters of Substance Abuse Counseling Program and for students in the Undergraduate Academic Programs .
February 9, 2018 (Friday)	Last day for removal of Incomplete work for students in 3rd year MD .
February 19, 2018 (Monday)* (Holiday)	President's Day
March 28, 2018 (Wednesday)	Last day to apply for admission /reclassification for August 2018.
March 29-30, 2018 (Thursday & Friday)	Easter Recess
April 13, 2018 (Friday)	Last day of classes and to apply for authorized withdrawal for students in 2nd year MD .
April 16 (Monday) thru May 11, 2018 (Friday)	Final examination period for 2nd year MD .
April 18, 2018 (Wednesday)	Last day to apply for authorized withdrawal for students in the Graduate Program in Biomedical Sciences and in the Undergraduate Academic Programs (before the last course exam).
April 19, 2018 (Thursday)	Last day of classes and last day to apply for authorized withdrawal for students in the 3rd & 7th quarters of Substance Abuse Counseling Program .
April 24, 2018 (Tuesday)	Registration and first day of classes for students in 4th quarter of Substance Abuse Counseling Program . Deadline for late application for admission/reclassification for August 2018 (except 1st year MD Program).
April 25-27, 2018 (Wednesday thru Friday)	Late registration period for students in the 4th quarter of Substance Abuse Counseling Program .
April 26, 2018 (Thursday)	Last day for removal of Incomplete work for students in the 3rd & 7th quarters of Substance Abuse Counseling Program .
April 27, 2018 (Friday)	Last day of classes & to apply for authorized withdrawal for students in the 1st year MD .

	Last day of classes for students in the Graduate Program in Biomedical Sciences and in the Undergraduate Academic Programs . Deadline for late application for admission/reclassification for January 2019.
April 30 – May 4-, 2018 (Monday thru Friday)	Final examination period for students in the Undergraduate Academic Programs .
May 4, 2018 (Friday)	Registration process for RT-203 (Summer Clinical Practice) .
May 5, 2018 (Saturday)	Comprehensive Exam for Substance Abuse Counseling Program
May 7, 2018 (Monday)	First day of classes for RT-203 (Summer Clinical Practice) .
May 7 (Monday) -25, 2018 (Friday)	Final examination period for students in 1st year MD .
May 18, 2018 (Friday)	Last day to submit to the Office of the Registrar the Official Grades Lists for the students in the Undergraduate Academic Programs .
May 25, 2018 (Friday)	Last day of classes & to apply for authorized withdrawal for students in 4th year MD .
May 28, 2018 (Monday)* (Holiday)	Memorial Day
June 2, 2018 (Saturday)	Commencement Exercises
June 8, 2018 (Friday)	Last day of classes and to apply for authorized withdrawal for 3rd year MD students . Last day to apply for Authorized Leave of Absence (LOA) MD students for 1 st semester 2018-2019. (August-December 2018) Last day of classes for RT-203 (Summer Clinical Practice) .
June 14, 2018 (Thursday)	Last day to apply for authorized withdrawal for RT-203 (Summer Clinical Practice) .
June 18-22, 2018 (Monday- Friday)	Orientation period for new students in the MD faculty.
June 18, 2018 (Monday)	Registration process for new students in the MD faculty (PM).
July 4, 2018 (Wednesday)* (Holiday)	USA Independence Day
July 5, 2018 (Thursday)	Last day of classes and to apply for authorized withdrawal for students in the 4th quarter of Substance Abuse Counseling Program .
July 9-13, 2018 (Monday-Friday)	Orientation period for new students in the Graduate Program in Biomedical Sciences
July 10, 2018 (Tuesday)	Registration process for 3rd year MD students (AM). Registration process for students in the Graduate Program in Biomedical Sciences (PM)
***July 11,13 & 14, 2018 (Wednesday, Friday & Saturday)	Orientation period for new students in the Substance Abuse Counseling Program .
July 11, 2018 (Wednesday)	Registration process for new students in the Substance Abuse Counseling Program .
July 12, 2018 (Thursday)	Registration process for 2nd year MD students (AM) & for 2nd year students of the Associate Degree in Radiologic Technology (PM).
July 13, 2018 (Friday)	Registration process for 4th year MD students (PM).
July 25, 2018 (Wednesday)* (Holiday)	PR Constitution Day

*Subject to change.

The undergraduate academic programs include: Associate Degree in Radiologic Technology, Bachelor of Science in Diagnostic Images, Post-Associate Certificate in Mammography, Magnetic Resonance, Computerized Tomography, and Diagnostic Medical Sonography.

Every Thursday, from 12:00 to 2:00 PM, the "UNIVERSAL HOUR" will be observed for extracurricular purposes.

*UCC faculty can determine if during any Holiday an exam may be administered.

Academic Calendar 2018-2019

First Semester	
June 8, 2018 (Friday)	Last day of classes and to apply for authorized withdrawal for 3rd year MD students . Last day of classes for RT-203 (Summer Clinical Practice). Last day to apply for Authorized Leave of Absence (LOA) MD students for 1st semester 2018-2019 (August-December 2018).
June 14, 2018 (Thursday)	Last day to apply for Authorized Withdrawal for RT-203 (Summer Clinical Practice).
June 18-19, 2018 (Monday-Tuesday)	Orientation period for new students in the MD faculty. Part I
June 18, 2018 (Monday)	Registration process for new students in the MD faculty (PM).
June 26, 2018 (Thursday)	Last day of classes and to apply for authorized withdrawal for students in the 4th quarter of Substance Abuse Counseling Program .
July 3-5, 2018 (Tuesday- Thursday)	Final examination period for students in the 4th quarter of Substance Abuse Counseling Program .
July 4, 2018 (Wednesday)	USA Independence Day
July 9-13, 2018 (Monday thru Friday)	Orientation period for new students in the Graduate Program in Biomedical Sciences .
July 10, 2018 (Tuesday)	Registration process for 3rd year MD students (AM). Registration process for students in the Graduate Program in Biomedical Sciences (PM) .
***July 11, 13-14, 2018 (Wednesday, Friday & Saturday)	Orientation period for new students in the Substance Abuse Counseling Program .
July 11, 2018 (Wednesday)	Registration process for new students in the Substance Abuse Counseling Program (2:00-4:00 PM).
July 12, 2018 (Thursday)	Registration process for 2nd year MD students (AM) and 2nd year students in the Associate Degree in Radiologic Technology (PM).
July 13, 2018 (Friday)	Registration process for 4th year MD students (PM).
July 22-27, 2018 (Tuesday thru Friday)	Orientation period for new students in the MD Faculty. Part II
July 30, 2018 (Monday)	First day of classes for students in the MD faculty , and Graduate Program in Biomedical Sciences .
July 30, 2018 (Monday - Tuesday)	Late Registration period for students in the MD faculty . Late Registration period for students in the Graduate Program in Biomedical Sciences . Orientation period for new students in the Undergraduate Academic Programs .
July 31, 2018 (Tuesday)	Registration process for 5th quarter of Substance Abuse Counseling Program . First day of classes for students in the 1st & 5th quarters of the Substance Abuse Counseling Program .
August 1, 2018 (Wednesday)	Registration process for students in the Bachelor of Science in Diagnostic Images & Post-Associate Certificate Post-Associate Certificate in Diagnostic Medical Sonography and Mammography (PM).
August 1-3, 2018 (Wednesday thru Friday)	Late Registration period for students in the 1st & 5th quarters of Substance Abuse Counseling Program .
August 2, 2018 (Thursday)	Registration process for 1st year students in the Associate Degree in Radiologic Technology (AM) and the Post-Associate Certificate in Computerized Tomography (PM) .
August 3, 2018 (Friday)	Registration process for new students in the Bachelor of Science in Diagnostic Images, and Mammography . (PM)
August 6, 2018 (Monday)	First day of classes for students in the Undergraduate Academic Programs . Late Registration period for students in the Undergraduate Academic Programs .

August 17, 2018 (Friday)	Last day for removal of Incomplete Work for students in MD, Graduate Program in Biomedical Sciences and 1st and 5th quarter of Substance Abuse Counseling Program.
August 24, 2018 (Friday)	Last day for removal of Incomplete Work for students in the Undergraduate Academic Programs.
September 3, 2018 (Monday)* (Holiday)	Labor Day
September 24, 2018 (Monday)	Last day to apply for admission /reclassification for January 2019.
October 8, 2018 (Friday)* (Holiday)	Columbus Day
October 18, 2018 (Thursday)	Last day of classes and to apply for authorized withdrawal for students in the 1st & 5th quarters in the Substance Abuse Counseling Program.
October 19, 2018 (Friday)	Elective Courses Orientation process for students in 3rd year MD (PM)*
October 23, 2018 (Tuesday)	Registration process and first day of classes for students in 2nd & 6th quarters of Substance Abuse Counseling Program (2:00-4:00 PM).
October 24-26, 2018 (Wednesday thru Friday)	Late registration period for students in the 2nd & 6th quarters in Substance Abuse Counseling Program.
October 29, 2018 (Monday)	Deadline for late application for admission/reclassification for January 2019.
November 8, 2018 (Thursday)	Last day for removal of Incomplete work for students in the 1st & 5th quarters in Substance Abuse Counseling Program. Last day to apply for authorized withdrawal and last day of classes for the Undergraduate Academic Programs. Last day to apply for Authorized Leave of Absence (LAO) for the second semester (January-June 2019).
November 19, 2018 (Monday)* (Holiday)	Puerto Rico Discovery Day
November 21-22, 2018 (Thursday & Friday)*	Thanksgiving Recess
November 26, 2018 (Monday)	Registration process for 1st year MD students (AM) & 2nd year (PM).
November 22-30, 2018 (Monday thru Friday)	Final examination period for the Undergraduate Academic Programs.
November 30, 2018 (Friday)	Last day of classes and to apply for authorized withdrawal for the Undergraduate Academic Program.
December 6, 2018 (Thursday)	Registration process for 4th year MD students (AM)
December 7, 2018 (Friday)	Last day to submit to the Office of the Registrar the Official Grade Lists for the Undergraduate Academic Programs. Last day to submit the eligibility qualifications to obtain certificate/degree on December 14, 2018. Last day to apply for authorized withdrawal for students in the Graduate Program in Biomedical Sciences. (Before the final class test.)
December 13, 2018 (Tuesday)	Registration process for Graduate Program in Biomedical Sciences (PM).
December 10, 2018 (Monday)	Last day to apply for admission to the MD Program. (first year new students, August 2019)
December 13, 2018 (Thursday)	Last day of classes for students of Substance Abuse Counseling Program. (Classes of the Substance Abuse Counseling Program will be meeting according Thursday schedule).
December 14, 2018 (Friday)	Last day of classes and to apply for authorized withdrawal for 1st, 2nd & 4th year MD students. Last day of classes for the Graduate Program in Biomedical Sciences. Official date for conferring Certificate/Degree for students who have completed all the requirements during 2018.
December 24, 2018 - January 8, 2019	Christmas Recess
Second Semester	

January 8, 2019 (Tuesday)	First day of classes for 1st, 2nd and 4th year MD students, the Graduate Program in Biomedical Sciences and Substance Abuse Counseling Program . Registration for students in the Post-Associate Certificate in Diagnostic Medical Sonography (AM) , in the Bachelor of Science in Diagnostic Images , and in the Post-Associate Certificate in Magnetic Resonance (PM) .
January 11, 2019 (Friday)	Registration process for students of the Associate Degree in Rad. Tech. (1 st year (AM), & 2 nd year (PM)).
January 14, 2019 (Monday)	First day of classes for Undergraduate Academic Programs . Late Registration period for students registered in December 2018 (4 th year MD students), Graduate Program in Biomedical Sciences and Undergraduate Academic Programs .
January 14, 2019 (Monday)* (Holiday)	Martin Luther King Day
January 18, 2019 (Friday)	Last day of classes and last day to apply for authorized withdrawal for 3rd year MD students. Registration Process for the 2 nd semester of 3rd year MD students. Last day for removal of Incomplete work for students in the 1st, 2nd & 4th year MD , Graduate Program in Biomedical Sciences, PhD and Undergraduate Academic Programs.
January 25, 2019 (Monday)	First day of classes for the 2 nd semester of 3rd year MD students. Late registration period for the 2 nd semester of 3rd year MD students.
January 31, 2019 (Thursday)	Last day of classes and last day to apply for authorized withdrawal for students in the 2nd & 6th quarters of Substance Abuse Counseling Program .
February 5, 2019 (Tuesday)	Registration process for students in the 3rd & 7th quarters of Substance Abuse Counseling Program . First day of classes for students in the 3rd & 7th quarters of Substance Abuse Counseling Program .
February 7, 2019 (Thursday)	Late registration period for students in the 3rd & 7th quarters of Substance Abuse Counseling Program . Last day for removal of Incomplete work for students in the 2nd & 6th quarters of Substance Abuse Counseling Program and for students in the Undergraduate Academic Programs .
February 8, 2019 (Friday)	Last day for removal of Incomplete work for students in 3rd year MD .
February 18, 2019 (Monday)* (Holiday)	President's Day
March 27, 2019 (Wednesday)	Last day to apply for admission /reclassification for August 2019.
April 12, 2019 (Friday)	Last day of classes and to apply for authorized withdrawal for students in 2nd year MD .
April 18-19, 2019 (Thursday & Friday)*	Easter Recess
April 16 (Tuesday) thru May 10, 2019 (Friday)	Final examination period for 2nd year MD .
April 17, 2019 (Wednesday)	Last day to apply for authorized withdrawal for students in the Graduate Program in Biomedical Sciences and in the Undergraduate Academic Programs (before the last course exam).
April 22, 2019 (Thursday)	Last day of classes and last day to apply for authorized withdrawal for students in the 3rd & 7th quarters of Substance Abuse Counseling Program .
April 23, 2019 (Tuesday)	Registration and first day of classes for students in 4th quarter of Substance Abuse Counseling Program . Deadline for late application for admission/reclassification for August 2019 (except 1st year MD Program).
April 25, 2019 (Thursday)	Late registration period for students in the 4th quarter of Substance Abuse Counseling Program . Last day for removal of Incomplete work for students in the 3rd & 7th quarters of Substance Abuse Counseling Program .

April 26, 2019 (Friday)	Last day of classes & to apply for authorized withdrawal for students in the 1st year MD . Last day of classes for students in the Graduate Program in Biomedical Sciences and in the Undergraduate Academic Programs . Deadline for late application for admission/reclassification for August 2019.
April 29 – May 3, 2019 (Monday thru Friday)	Final examination period for students in the Undergraduate Academic Programs .
May 3, 2019 (Friday)	Registration process for RT-203 (Summer Clinical Practice) .
May 4, 2019 (Saturday)	Comprehensive Exam for Substance Abuse Counseling Program
May 6, 2019 (Monday)	First day of classes for RT-203 (Summer Clinical Practice) .
May 6 (Monday) 31, 2019 (Friday)	Final examination period for students in 1st year MD .
May 17, 2019 (Friday)	Last day to submit to the Office of the Registrar the Official Grades Lists for the students in the Undergraduate Academic Programs .
May 24, 2019 (Friday)	Last day of classes & to apply for authorized withdrawal for students in 4th year MD .
May 27, 2019 (Monday)* (Holiday)	Memorial Day
June 1, 2019 (Saturday)	Commencement Exercises
June 5, 2019 (Friday)	Last day of classes and to apply for authorized withdrawal for 3rd year MD students . Last day to apply for Authorized Leave of Absence (LOA) MD students for 1 st semester 2019-2020. Last day of classes for RT-203 (Summer Clinical Practice) .
June 13, 2019 (Thursday)	Last day to apply for authorized withdrawal for RT-203 (Summer Clinical Practice) .
June 17-18, 2019 (Monday- Tuesday)	Orientation period for new students in the MD faculty .
June 17, 2019 (Monday)	Registration process for new students in the MD faculty (PM) .
July 4, 2019 (Thursday)* (Holiday)	USA Independence Day
July 2, 2019 (Tuesday)	Last day of classes and to apply for authorized withdrawal for students in the 4th quarter of Substance Abuse Counseling Program .
July 8-12, 2019 (Monday-Friday)	Orientation period for new students in the Graduate Program in Biomedical Sciences .
July 9, 2019 (Tuesday)	Registration process for 3rd year MD students (AM) . Registration process for students in the Graduate Program in Biomedical Sciences (PM)
***July 10,12 & 13, 2019 (Wednesday, Friday & Saturday)	Orientation period for new students in the Substance Abuse Counseling Program .
July 10, 2019 (Wednesday)	Registration process for new students in the Substance Abuse Counseling Program .
July 11, 2019 (Thursday)	Registration process for 2nd year MD students (AM) & for 2nd year students of the Associate Degree in Radiologic Technology (PM) .
July 12, 2019 (Friday)	Registration process for 4th year MD students (PM) .

*Subject to change.

The undergraduate academic programs include: Associate Degree in Radiologic Technology, Bachelor of Science in Diagnostic Images, Post-Associate Certificate in Mammography, Magnetic Resonance, Computerized Tomography, and Diagnostic Medical Sonography.

Every Thursday, from 12:00 to 2:00 PM, the "UNIVERSAL HOUR" will be observed for extracurricular purposes.

*UCC faculty can determine if during any Holiday an exam may be administered.

Academic Calendar 2019-2020

First Semester	
June 7, 2019 (Friday)	Last day of classes and to apply for authorized withdrawal for 3rd year MD students . Last day of classes for RT-203 (Summer Clinical Practice). Last day to apply for Authorized Leave of Absence (LOA) MD students for 1st semester 2019-2020 (August-December 2019).
June 13, 2019 (Thursday)	Last day to apply for Authorized Withdrawal for RT-203 (Summer Clinical Practice).
June 17-18, 2019 (Monday-Tuesday)	Orientation period for new students in the MD faculty. Part I
June 17, 2019 (Monday)	Registration process for new students in the MD faculty (PM).
June 27, 2019 (Thursday)	Last day of classes and to apply for authorized withdrawal for students in the 4th quarter of Substance Abuse Counseling Program .
July 4, 2019 (Thursday)* (Holiday)	USA Independence Day
July 9-11, 2019 (Tuesday- Thursday)	Final examination period for students in the 4th quarter of Substance Abuse Counseling Program .
July 15-19, 2019 (Monday thru Friday)	Orientation period for new students in the Graduate Program in Biomedical Sciences .
July 16, 2019 (Tuesday)	Registration process for 3rd year MD students (AM). Registration process for students in the Graduate Program in Biomedical Sciences (PM) .
***July 17, 19, 20 2019 (Wednesday, Friday & Saturday)	Orientation period for new students in the Substance Abuse Counseling Program .
July 17, 2019 (Wednesday)	Registration process for new students in the Substance Abuse Counseling Program (2:00-4:00 PM).
July 18, 2019 (Tuesday)	Registration process for 2nd year MD students (AM) and 2nd year students in the Associate Degree in Radiologic Technology (PM).
July 19, 2019 (Friday)	Registration process for 4th year MD students (PM).
July 23-26, 2019 (Tuesday thru Friday)	Orientation period for new students in the MD faculty. Part II
July 25, 2019 (Thursday)* (Holiday)	PR Constitution Day
August 5, 2019 (Monday)	First day of classes for students in the MD faculty , and Graduate Program in Biomedical Sciences . Late Registration period for students in the MD faculty . Late Registration period for students in the Graduate Program in Biomedical Sciences .
August 5-9, 2019 (Monday thru Friday)	Orientation period for new students in the Undergraduate Academic Programs .
August 6, 2019 (Tuesday)	Registration process for 1st and 5th quarters of Substance Abuse Counseling Program . First day of classes for students in the 1st & 5th quarters of the Substance Abuse Counseling Program .
August 7, 2019 (Wednesday)	Registration process for students in the Bachelor of Science in Diagnostic Images & Post-Associate Certificate Post-Associate Certificate in Diagnostic Medical Sonography and Mammography (PM).
August 7, 8, 9 2019 (Wednesday thru Friday)	Late Registration period for students in the 1st & 5th quarters of Substance Abuse Counseling Program .
August 8, 2019 (Thursday)	Registration process for 1st year students in the Associate Degree in Radiologic Technology (AM) and the Post-Associate Certificate in Computerized Tomography (PM) .
August 12, 2019 (Monday)	First day of classes for students in the Undergraduate Academic Programs . Late Registration period for students in the Undergraduate Academic Programs .

August 15, 2019 (Friday)	Last day for removal of Incomplete Work for students in MD, Graduate Program in Biomedical Sciences and 1st and 5th quarter of Substance Abuse Counseling Program.
August 23, 2019 (Friday)	Last day for removal of Incomplete Work for students in the Undergraduate Academic Programs.
September 2, 2019 (Monday)* (Holiday)	Labor Day
September 23, 2019 (Monday)	Last day to apply for admission /reclassification for January 2020.
October 14, 2019 (Monday)* (Holiday)	Columbus Day
October 24, 2019 (Thursday)	Last day of classes and to apply for authorized withdrawal for students in the 1 st & 5 th quarters in the Substance Abuse Counseling Program.
October 25, 2019 (Friday)	Elective Courses Orientation process for students in 3rd year MD (PM)*
October 29, 2019 (Tuesday)	Registration process and first day of classes for students in 2nd & 6th quarters of Substance Abuse Counseling Program (2:00-4:00 PM).
October 30, 31-Nov. 1 2019 (Wednesday thru Friday)	Late registration period for students in the 2nd & 6th quarters in Substance Abuse Counseling Program.
November 4, 2019 (Monday)	Deadline for late application for admission/reclassification for January 2020.
November 13, 2019 (Wednesday)* (Holiday)	Veteran's Day
November 14, 2019 (Thursday)	Last day for removal of Incomplete work for students in the 1st & 5th quarters in Substance Abuse Counseling Program.
November 15, 2019 (Friday)	Last day to apply for Authorized Leave of Absence (LOA) for the second semester (Jan.-June 2020).
November 21, 2019 (Thursday)* (Holiday)	Puerto Rico Discovery Day
November 28-29, 2019 (Thursday & Friday)*	Thanksgiving Recess
December 1, 2019 (Monday)	Registration process for 1st year MD students (AM) & 2nd year (PM).
December 2-December 6, 2019 (Monday thru Friday)	Final examination period for the Undergraduate Academic Programs.
December 6, 2019 (Friday)	Registration process for 4th year MD students. Last day of classes and apply for authorized withdrawal for the Undergraduate Academic Programs. Last day to submit the eligibility qualifications to obtain certificate/degree on December 20, 2019. Last day to apply for authorized withdrawal for students in the Graduate Program in Biomedical Sciences. (Before the final class test.)
December 10, 2019 (Tuesday)	Registration process for Graduate Program in Biomedical Sciences (PM).
December 13, 2019 (Friday)	Last day to submit to the Office of the Registrar the Official Grade Lists for the Undergraduate Academic Programs.
December 16, 2019 (Monday)	Last day to apply for admission to the MD Program. (first year new students, August 2020)
December 17, 2019 (Tuesday)	Last day of classes for students of Substance Abuse Counseling Program. (Classes of the Substance Abuse Counseling Program will be meeting according Thursday schedule).
December 20, 2019 (Friday)	Last day of classes and to apply for authorized withdrawal for 1st, 2nd & 4th year MD students. Last day of classes for the Graduate Program in Biomedical Sciences. Official date for conferring Certificate/Degree for students who have completed all the requirements during 2019.
December 23, 2019 - January 7, 2020	Christmas Recess
Second Semester	

January 14, 2020 (Tuesday)	First day of classes for 1st, 2nd and 4th year MD students, the Graduate Program in Biomedical Sciences and Substance Abuse Counseling Program . Registration for students in the Post-Associate Certificate in Diagnostic Medical Sonography (AM) , in the Bachelor of Science in Diagnostic Images , and in the Post-Associate Certificate in Magnetic Resonance (PM) .
January 17, 2020 (Friday)	Registration process for students of the Associate Degree in Rad. Tech. (1 st year (AM), & 2 nd year (PM)).
January 20, 2016 (Monday)* (Holiday)	Martin Luther King Day
January 21, 2020 (Tuesday)	First day of classes for Undergraduate Academic Programs .
January 28-31, 2020 (Tuesday-Friday)	Late Registration period for students registered in December 2019 (4 th year MD students), Graduate Program in Biomedical Sciences and Undergraduate Academic Programs .
January 24, 2020 (Friday)	Last day of classes and last day to apply for authorized withdrawal for 3rd year MD students . Registration process for the 2 nd semester of 3rd year MD students.
	Last day for removal of Incomplete work for students in the 1st, 2nd & 4th year MD, Graduate Program in Biomedical Sciences, PhD and Undergraduate Academic Programs .
January 27, 2020 (Monday)	First day of classes for the 2 nd semester of 3rd year MD students.
January 27-31, 2020 (Monday thru Friday)	Late registration period for the 2 nd semester of 3rd year MD students.
January 28-30, 2020 (Tuesday-Thursday)	Last day of classes and last day to apply for authorized withdrawal for students in the 2nd & 6th quarters of Substance Abuse Counseling Program .
January 30, 2020 (Thursday)	Last day of classes for students in the 2nd & 6th quarters of Substance Abuse Counseling Program .
February 3, 2020 (Tuesday)	Registration process for students in the 3rd & 7th quarters of Substance Abuse Counseling Program . First day of classes for students in the 3rd & 7th quarters of Substance Abuse Counseling Program .
February 5-7, 2020 (Wednesday thru Friday)	Late registration period for students in the 3rd & 7th quarters of Substance Abuse Counseling Program .
February 6, 2020 (Thursday)	Last day for removal of Incomplete work for students in the 2nd & 6th quarters of Substance Abuse Counseling Program and for students in the Undergraduate Academic Programs .
February 14, 2020 (Friday)	Last day for removal of Incomplete work for students in 3rd year MD .
February 17, 2020 (Monday)* (Holiday)	President's Day
March 26-27, 2020 (Thursday & Friday)*	Easter Recess
April 1, 2020 (Wednesday)	Last day to apply for admission /reclassification for August 2020.
April 17, 2020 (Friday)	Last day of classes and to apply for authorized withdrawal for students in 2nd year MD .
April 20, 2020 (Monday)* (Holiday)	José de Diego Day
April 21 (Tuesday) thru May 13, 2020 (Wednesday)	Final examination period for 2nd year MD .
April 22, 2020 (Wednesday)	Last day to apply for authorized withdrawal for students in the Graduate Program in Biomedical Sciences and in the Undergraduate Academic Programs (before the last course exam).
April 23, 2020 (Thursday)	Last day of classes and last day to apply for authorized withdrawal for students in the 3rd & 7th quarters of Substance Abuse Counseling Program .
April 28, 2020 (Tuesday)	Registration and first day of classes for students in 4th quarter of Substance Abuse Counseling Program . Deadline for late application for admission/reclassification for August 2020 (except 1 st year MD Program).

April 29, 30-May 1 st . 2020 (Wednesday thru Friday)	Late registration period for students in the 4th quarter of Substance Abuse Counseling Program.
April 30, 2020 (Thursday)	Last day for removal of Incomplete work for students in the 3rd & 7th quarters of Substance Abuse Counseling Program.
May 4 (Monday)-15 (Friday), 2020	Final examination period for students in the Undergraduate Academic Programs.
May 4 (Monday) -22, 2020 (Friday)	Final examination period for students in 1st year MD.
May 8, 2020 (Friday)	Registration process for RT-203 (Summer Clinical Practice). Last day of classes and to apply for authorized withdrawal for students in the 1st year MD, Graduate Program in Biomedical Sciences and in the Undergraduate Academic Programs.
May 9, 2020 (Saturday)	Comprehensive Exam for Substance Abuse Counseling Program
May 11, 2020 (Monday)	First day of classes for RT-203 (Summer Clinical Practice).
May 22, 2020 (Friday)	Last day to submit to the Office of the Registrar the Official Grades Lists for the students in the Undergraduate Academic Programs.
May 29, 2020 (Friday)	Last day of classes & to apply for authorized withdrawal for students in 4th year MD.
May 30, 2020 (Friday)* (Holiday)	Memorial Day
June 5, 2020 (Thursday)	Commencement Exercises
June 12, 2020 (Friday)	Last day of classes and to apply for authorized withdrawal for 3rd year MD students. Last day to apply for Authorized Leave of Absence (LOA) MD students for 1 st semester 2020-2021. Last day of classes for RT-203 (Summer Clinical Practice).
June 18, 2020 (Thursday)	Last day to apply for authorized withdrawal for RT-203 (Summer Clinical Practice).
June 22-26, 2020 (Monday- Friday)	Orientation period for new students in the MD faculty.
June 22, 2020 (Monday)	Registration process for new students in the MD faculty (PM).
July 6, 2020 (Monday)* (Holiday)	USA Independence Day
July 9, 2020 (Thursday)	Last day of classes and to apply for authorized withdrawal for students in the 4th quarter of Substance Abuse Counseling Program.
July 13-17, 2020 (Monday-Friday)	Orientation period for new students in the Graduate Program in Biomedical Sciences.
July 14, 2020 (Tuesday)	Registration process for 3rd year MD students (AM). Registration process for students in the Graduate Program in Biomedical Sciences (PM)
***July 15,16 & 17, 2020 (Wednesday, Friday & Saturday)	Orientation period for new students in the Substance Abuse Counseling Program.
July 15, 2020 (Wednesday)	Registration process for new students in the Substance Abuse Counseling Program.
July 16, 2020 (Thursday)	Registration process for 2nd year MD students (AM) & for 2nd year students of the Associate Degree in Radiologic Technology (PM).
July 17, 2020 (Friday)	Registration process for 4th year MD students (PM).
July 20, 2020 (Monday) * (Holiday)	Luis Muñoz Rivera Day
July 29, 2020 (Wednesday)* (Holiday)	José Celso Barbosa Day

*Subject to change.

The undergraduate academic programs include: Associate Degree in Radiologic Technology, Bachelor of Science in Diagnostic Images, Post-Associate Certificate in Mammography, Magnetic Resonance, Computerized Tomography, and Diagnostic Medical Sonography.

Every Thursday, from 12:00 to 2:00 PM, the "UNIVERSAL HOUR" will be observed for extracurricular purposes.

*UCC faculty can determine if during any Holiday an exam may be administered.

BURSARS OFFICE

General Fees

The following fees are applicable for all students:

ID Cards (replacement)	\$15.00
Parking per year	\$40.00
Parking label replacement	\$10.00
Activity fee (per year) evening classes	\$50.00
CPR course	\$50.00
Accident insurance (per year)	\$12.00
*Health Insurance	

*All students are required to carry a health insurance plan. If the student has no insurance, the University will provide one at market cost. These costs may change per semester.

Other Fees

Transcripts	\$5.00
Dean's Letter	\$10.00
Study Certification	\$10.00
Grade Certification	\$10.00
Diploma Certification	\$10.00
Translation of Medical School Diploma	\$25.00
Certification of Payments and Costs	\$5.00
Copy of the Diploma for:	
Medicine	\$75.00
All the other programs	\$50.00
Affidavit	\$60.00
Student File Copy (per sheet)	\$2.00
Graduate Medical Education Certification	\$50.00
Mail:	
Priority Mail	\$5.00
Express Mail	\$20.00
Lockers (non-refundable)	\$10.00
Fax (per sheet)	\$1.00
Dosimeter (replacement)	\$50.00
School Badge	\$10.00

APPLICABLE TUITION AND FEES FOR:

School of Medicine

Tuition for resident medical students of Puerto Rico is \$34,250.00 per year while tuition for non-resident medical students is \$42,255.00 per year. Other fees are:

Admission, with application (non-refundable beginning on academic year 2016-2017)	\$200.00
Readmission, with application	\$100.00
Deposit to hold place (non-refundable)	\$100.00
Clinical laboratory (per year)	\$2,000.00
General fee (per year)	\$700.00
Technology Resources (per year)	\$700.00
Orientation activity fee (First year)	\$400.00
Graduation fee	\$500.00

Endowment fee (per year)	\$725.00
NBME Reposition Exam	\$225.00

Biomedical Sciences Graduate Program

Tuition for the Biomedical Sciences Graduate Program of Studies is \$335.00 per credit. Fees are the following:

Admission, with application (non-refundable)	\$50.00
Late admission	\$150.00
Readmission, with application	\$50.00
Deposit to hold place	\$100.00
Technology Resources (per year)	\$600.00
General fee (per year)	\$400.00
Laboratory fee (per year)	\$500.00
Graduation fee	\$250.00
Activity fee	\$50.00
Endowment fee (per year)	\$700.00
Software fee (per year)	\$60.00
Comprehensive test	\$50.00
Thesis printing	\$200.00
Reclassification	\$50.00

Substance Abuse Counseling Program

Tuition for the Substance Abuse Counseling Program is \$275.00 per credit. Fees are the following:

Admission, with application (non-refundable)	\$50.00
Readmission, with application	\$50.00
Late admission	\$150.00
Deposit to hold place	\$100.00
Technology Resources (per year)	\$600.00
General fee (per year)	\$400.00
Graduation fee	\$250.00
Reclassification	\$50.00

Medical Images Technology Program

(Associate Degree in Radiologic Technology, Post-Associate Certificate in Diagnostic Medical Sonography, Post-Associate Certificate in Mammography, Post-Associate Certificate in Computerized Tomography, Post-Associate Certificate in Magnetic Resonance and Bachelor of Science in Diagnostic Images)

Tuition for the Medical Images Technology Program is \$180.00 per credit. Students must be responsible for all costs pertaining to uniforms, transportation and lodging, incurred to comply with clinical practice as part of their training. Fees are the following:

Admission, with application (non-refundable)	\$25.00
Readmission, with application	\$25.00
Late admission	\$100.00
Deposit to hold place	\$100.00
Technical Resources (per year)	\$500.00
General Fee (per year)	\$150.00
Graduation Fee	\$125.00
Clinical Training (per year)	\$200.00

Reclassification	\$25.00
Late reclassification	\$30.00

Reimbursement of Tuition Fees

The university has a tuition refund policy that stipulates the amount of tuition and fees that are refunded to a student who withdraws from all classes during a term. The following chart shows the amount of tuition and fees returned to a student, depending on withdrawal date.

Time of Withdrawal	% of Charges Refunded
Before the 1 st day of class	100% tuition; 100% fees
Within the first week of classes	80% tuition; 0% fees
During the second week of classes	50% tuition; 0% fees
After the second week of classes	0% tuition; 0% fees

- Registration deposit guaranteeing admissions is not refundable.

Return of Federal (Title IV) Financial Aid

As an Institution that participates and distributes students' financial aid Title IV Funds, the Universidad Central del Caribe adheres to federal guidelines governing refunds related to said program. The return of the Title IV Funds Policy applies to all registered students who qualify and participate in the federal financial aid program and later withdraw or are administratively withdrawn. The policy determines the amount of funds the student spends at the moment of withdrawal up to sixty (60) percent of the academic term; after this period refunds are not applicable.

Refunds will be made within thirty (30) days from the date that the University determines that the student had withdrawn. Requests for withdrawal must be submitted in writing to the registrar.



THE SCHOOL OF MEDICINE

SCHOOL OF MEDICINE

José Ginel Rodríguez, MD
Dean of Medicine

Omar Pérez, PhD
Dean of Admissions and Student Affairs

Zilka Ríos, MS
Associate Dean of Academic Affairs of Medicine

Emilia Soto, MHSA
Dean of Administration

Luis Cubano, PhD
Associate Dean of Research and Graduate Studies

Harry Mercado, MD
Associate Dean of Faculty and Clinical Affairs

Frances García, MD
Director, Bioethics and Medical Humanities Center
Director of Graduate Medical Education Office

Michael Vélez Crespo, MS
Director of Academic Research & Assessment Office

Vacant
Director, Office of Electives

Jose Luis Oliver, DMD
Director, Multidisciplinary Clinical Skills Training Center

Department Chairpersons

Chairpersons of the Preclinical Sciences Departments

Anatomy and Cell Biology	Sofía Jiménez, PhD
Biochemistry.....	Richard Hann, MD
Microbiology and Immunology	Eddy O. Ríos Olivares, MPH, PhD
Pharmacology	Héctor Maldonado, PhD
Physiology.....	Priscilla Sanabria, PhD
Neurosciences.....	Vesna Eterovic, PhD

Chairpersons of the Clinical Sciences Departments

Family Medicine and Community Health	Eric González, MD
Psychiatry.....	José A. Franceschini, MD
Internal Medicine	Melba Colón, MD
Obstetrics-Gynecology.....	Alfonso Serrano Ysern, MD
Pathology and Laboratory Medicine	Angelisa Franceschini, MD
Pediatrics	Fermín Sánchez, MD
Surgery	Carlos Ramírez-Tánchez, MD

Mission, Vision and Scope

Mission

To form competent diverse health professionals with an excellent academic preparation within a humanistic and holistic framework. Our guiding principle is to ensure that our graduates possess a strong sense of professionalism and commitment to their social duties and to offer service to Puerto Rico and Hispanic communities in the mainland.

Vision

To be a School of Medicine that pursues the highest standards of excellence in education, research and clinical services, intrinsically committed to our community and societal needs.

Scope

The School of Medicine (SOM) is committed to provide our students with integrated knowledge in the sciences basic to medicine with the skills of critical thinking and analysis, with a dedication to lifelong learning and with the attitudes of compassion and respect for human dignity.

The School of Medicine contributes to the enrichment and enhancement of knowledge by strengthening a creative environment that fosters the development of research in the biomedical, clinical, and psychosocial sciences oriented towards the health needs of our community.

Within the scope of its mission, the School of Medicine offers quality health services at the primary care level and in specialized curative and rehabilitative services in a cost-effective and accessible manner to the population that it serves.

Educational Goals and Objectives

Goal

Prepare qualified physicians, with a humanistic outlook, geared toward primary medicine, with a commitment to continuous education, interested in research and capable of performing adequately in accredited postgraduate medical education programs.

The educational program of the SOM aims to achieve the following general objectives:

Patient Care

- Develop the clinical skills and attitudes to provide patient care in an appropriate and culturally sensitive manner.
- Demonstrate a doctor-patient relationship that facilitates patients' abilities for the decision making and management of their own health maintenance and disease treatment.

Medical Knowledge

- Develop knowledge and skills of the biomedical, clinical, epidemiological, social-behavioral, ethics, biostatistics and public health sciences.
- Demonstrate mastery of key concepts and principles in the basic sciences and clinical disciplines that are the basis of current and future medical practice.

Interpersonal and Communication Skills

- Develop effective interpersonal and communication skills to exchange information with patients, families, colleagues and other members of the health team.
- Integrate knowledge from the basic sciences, clinical disciplines, evidence-based medicine, and population-based medicine with specific information about the patient and the patient's life situation.

Professionalism

- Develop the professional attitudes, manners and ethical values of integrity and respect for human dignity; compassion, dedication and social responsibilities towards the interaction with peers, patients, families, and health professionals.
- Apply basic precepts of the medical profession: altruism, respect, compassion, honesty, integrity and confidentiality, to the needs of patients that supersedes self-interest.

Practice-based Learning and Improvement

- Develop the skills and attitudes required for professional and life-long learning through appraisal and assimilation of scientific evidence, and improvement in patient care.
- Understand health systems and how physicians can work effectively in health care organizations, including:
 - Electronic communication and database management for patient care.
 - Quality assessment and improvement.
 - Cost-effectiveness of health interventions.
 - Assessment of patient satisfaction.
 - Identification and alleviation of medical errors.

System-based Practice

- Develop knowledge and skills of the health care system to provide optimal services in ambulatory and hospital settings.
- Understand the healthcare needs of society to contribute to society both in the medical field and in the broader contexts of societal needs.

Affiliated Institutions

1. Dr. Ramón Ruiz Arnau University Hospital
(Formerly Bayamón Regional Hospital)
Bayamón, Puerto Rico, Main teaching hospital
2. San Juan City Hospital
San Juan, Puerto Rico
3. VA Caribbean Healthcare System
San Juan, Puerto Rico
4. Puerto Rico Children's Hospital
Bayamon, Puerto Rico
5. First Hospital Panamericano
Cidra, Puerto Rico
6. San Jorge Children's Hospital
San Juan, Puerto Rico
7. MetroPavia
Hato Rey, Puerto Rico
8. HIMA San Pablo Hospital, Caguas
Caguas, Puerto Rico
9. HIMA San Pablo Hospital, Bayamón
Bayamón, Puerto Rico
10. Manatí Medical Center Hospital
Manatí, Puerto Rico
11. Metropolitan Hospital
Rio Piedras, Puerto Rico
12. Ashford Presbyterian Hospital
San Juan, Puerto Rico

In addition, the School of Medicine holds over 30 affiliations for clinical experiences in the Medical Degree Program throughout Puerto Rico.

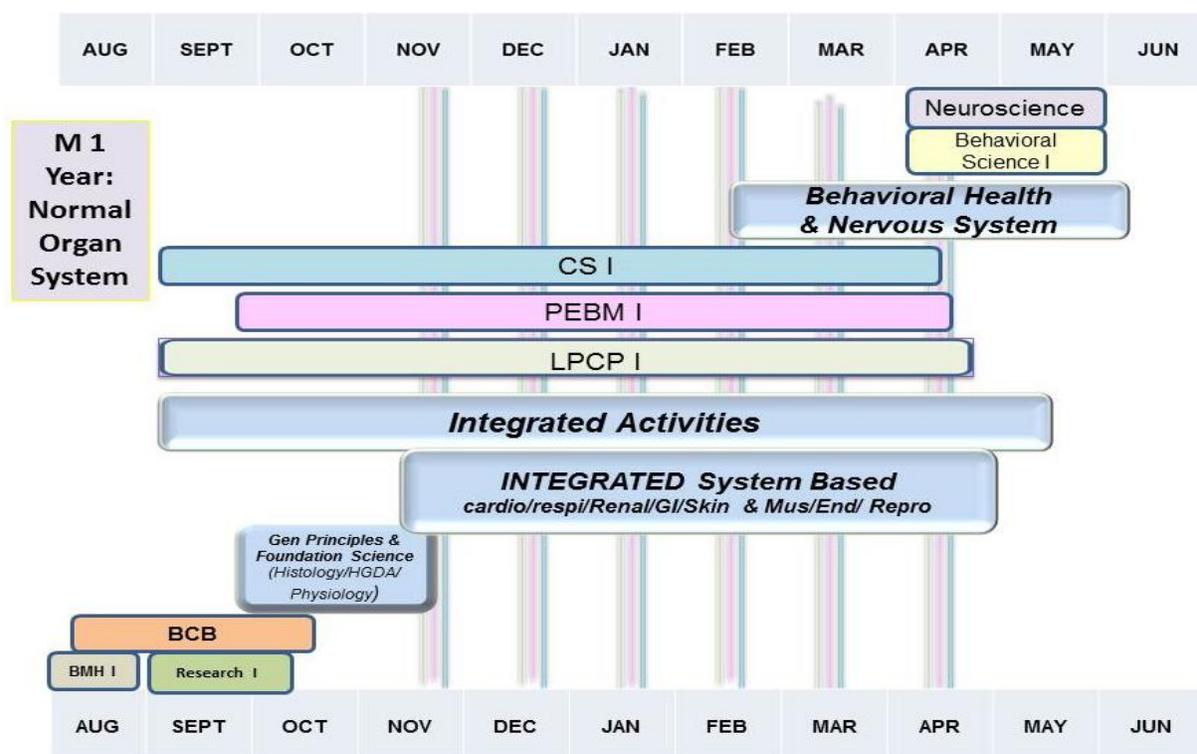
Educational Program

The curriculum of the School of Medicine consists of four years of studies. It incorporates the successful aspects of a conventional curriculum with problem-based and student-centered learning; early clinical skills learning coupled with sustained, community-based learning; the incorporation of a population and behavioral perspective into the clinical years; peer teaching; computer-assisted instruction; and biweekly seminars on professional responsibility. The curriculum also addresses the historically unmet as well as changing health care needs of our population and changing learning needs of future physicians.

In the first two years it provides students with a basic foundation in both biomedical sciences and clinical skills. The students are introduced early to standardized patients as they learn communication, observation, and examination skills. They have an opportunity to use their newly acquired skills with real patients in the Longitudinal Primary Care Preceptorship under the supervision of community preceptors. The students receive formative evaluations from the patients and faculty during the sessions in which standardized patients are used.

Figure I and II show the courses and their distribution during the first two years. The subjects are covered in separate courses, although integration of the content in all courses is closely monitored by the course coordinators who meet regularly for this purpose.

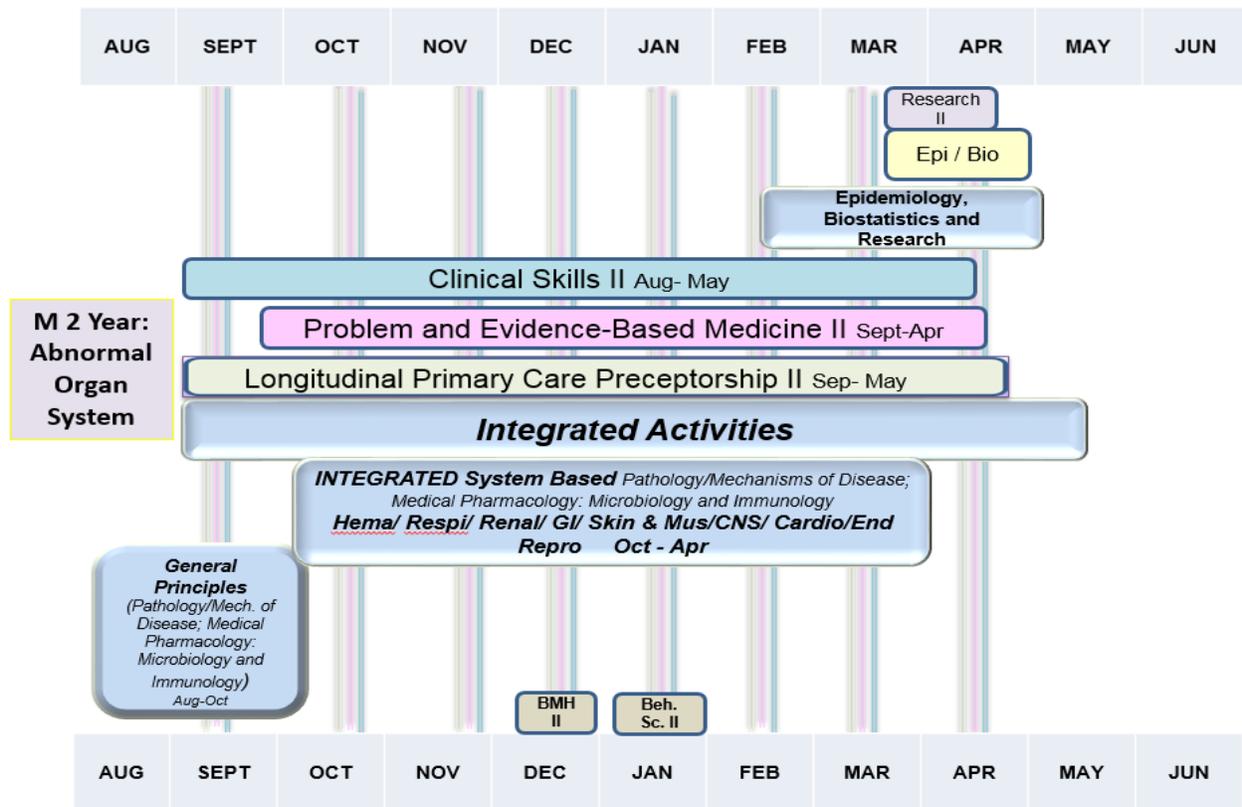
Figure I: Year 1 Course Sequence



- B = Biological
- P = Psychosocial
- S = Skills
- I = Integration

For example, the laboratory sessions of the Anatomy, Histology, and the Clinical Skills experience are given simultaneously. The class is divided into three groups of twenty students each, rotating through the Gross Anatomy laboratory session, the Histology laboratory session, and the Center for the Development of Clinical Skills to practice the corresponding organ-system of the physical examination.

FIGURE II: YEAR 2 COURSE SEQUENCE



The general principles include topics of foundational sciences of Pathology, Immunology, Microbiology and Pharmacology. This includes topics concerning those normal and abnormal processes that are not limited to specific organ systems. The integrated system based includes topics concerning specific organ systems, approached from the disciplines of Pathology, Microbiology and Pharmacology. The Clinical Skills, Problem and Evidence-Based Medicine and Longitudinal Primary Care Preceptorship courses, provide the integration of basic and clinical sciences.

Table I illustrates some of the instructional formats used in our curriculum. The Problem Based Learning courses in the first and second year facilitate integration of the material covered in other courses. Small-group discussions are used in courses such as Bioethics, Biochemistry, Physiology, and Anatomy, in which students interact with faculty and have the opportunity to receive direct feedback.

Table 1. Basic Sciences Curriculum Instructional Methods

FIRST YEAR	SECOND YEAR
Case-Based Instructional/Learning Clinical Correlations Concept Mapping Laboratory Large Group Discussions (>12) Lectures Problem Solving Preceptorship Problem Based Learning Service Learning Activity Small Group Discussions (<12) Structured Sessions with Anatomic Simulators Team-Based Learning	Case-Based Instructional/Learning Clinical Exercises Concept Mapping Laboratory Large Group Discussions (>12) Lectures Problem Solving Preceptorship Problem Based Learning Patient Oriented Problem Solving (POPS) Service Learning Activity Simulations Small Group Discussions (<12) Structured Sessions with Anatomic Simulators Team-Based Learning

Course coordinators are using the most recent educational technology and are offering their courses on-line.

Third and Fourth Year Curriculum

The third year is composed of clinical rotations. After completion of a transition to the clinical year experience, students spend most of their time at the hospitals and at different ambulatory settings. The third year schedule is uniform for all students in terms of experiences; however, students have some flexibility in terms of the order in which they take the clerkship. Students spend 9 weeks in Surgery, 9 weeks in Internal Medicine, 6 weeks in Pediatrics, 6 weeks in Psychiatry, 6 weeks in Family Medicine, 6 weeks in Obstetrics/Gynecology and 2 weeks in Transition to Clinical Years/Radiology/Emergency Medicine. At the end of the third year, students will have a broad understanding of medicine and be ready to further develop and refine their skills in the coming year.

Fourth year students have required experiences that were specifically designed to address the needs for physicians to practice in the new health environment. Students spend 6 weeks in Ambulatory Medicine and Community Research, 4 weeks in Clinical Neurology, 2 weeks in Selected Topics and 2 weeks in Bioethics/Humanities in Medicine IV. Students must complete 18 weeks of elective experience. They have ample flexibility in designing their schedule and are encouraged to broaden their learning experiences by sampling areas in which their exposure has been limited.

Courses of Study

First Year

Code	Course Title	Credits
UCC 635	Behavioral Science	2
UCC 510D	Biochemistry and Cell Biology	10
UCC 514B	Bioethics and Humanities in Medicine I	1
UCC 503B	Histology	4
UCC 502	Human Gross and Developmental Anatomy	10
UCC 619A	Introduction to Clinical Skills	2
UCC 590-1C	Longitudinal Primary Care Preceptorship I*	3
UCC 580A	Neuroscience	5
UCC 530C	Physiology	5
UCC 515CI	Problem and Evidence Based Medicine I*	2
UCC 505R-II	Research I	1

Second Year

Code	Course Title	Credits
UCC 635A	Behavioral Science II	2
UCC 514C	Bioethics and Humanities in Medicine II	1
UCC 620D	Clinical Skills II*	3
UCC 590-2A	Longitudinal Primary Care Preceptorship II*	5
UCC 540A	Medical Pharmacology*	6
UCC 520A	Medical Microbiology and Immunology *	9
UCC 553	Pathology and Mechanism of Disease*	13
UCC 516BI	Problem and Evidence Based Medicine II *	1
UCC 505R-2	Research II	1

Third Year

Code	Course Title	Credits
UCC 615A	Transition to Clinical Years	2
UCC 615	Basic Radiology	1
UCC 670B	Family Medicine Clerkship	4
UCC 623A	Internal Medicine Clerkship	6
UCC 660B	Obstetrics-Gynecology Clerkship	4
UCC 650B	Pediatrics Clerkship	4
UCC 631B	Psychiatry Clerkship	4
UCC 640C	Surgery Clerkship (including Subspecialties)	6

Fourth Year

Code	Course Title	Credits
UCC 675A	Ambulatory Medicine and Research	4
UCC 518	Bioethics and Humanities in Medicine IV	2
UCC 700	Elective courses (18 weeks)	N/C
UCC 629A	Neurology	3
UCC 607	Selected Topics	3

*One-year duration course

Total Credits: 129

Description of Courses

First Year

UCC 635 Behavioral Science
2 Credits

Basing itself on the biopsychosocial model of healthcare and a relationship-centered approach, the Behavioral Science I course will introduce the student to key knowledge and skills to (1) assess the biological, psychological and social aspects of their patient's mental health, (2) effectively and empathically communicate with patients and other healthcare providers, and (3) promote patient self-efficacy and behavior change needed for health promotion, disease prevention and chronic disease management. The student will be empowered to analyze and manage complex psychological and social scenarios threatening the general health and well-being of his or her patients, and to accordingly direct their care within the healthcare system.

Topics will include:

1. Normal brain development and physiology involved in the production of human thoughts, emotions, cognition, and behavior, including sexuality and addictions.
2. Normal childhood developmental milestones.
Common biological, psychological and social challenges to the maintenance of physical and mental health throughout the life cycle.

UCC 510D Biochemistry and Cell Biology
10 Credits

The Biochemistry and Cell Biology for Medical Students course integrates the five disciplines of biochemistry, molecular genetics, genetics, molecular cell biology and molecular nutrition and presents the most important concepts of each. The course is conducted over 10 weeks in the fall semester of the first year of medical studies and is divided into 3 units. The course features 108 scheduled student contact hours of conferences. In these classes, the course professors present important concepts and include clinical correlations chosen to illustrate these concepts. The presenting professors are encouraged to promote student interaction so that these conferences are not overly didactic in nature. The course includes 14 computer-based self-instruction modules (SIMs) which present essential material that cannot be discussed in conferences due to time constraints. The course also features 10 active-learning sessions. Six of these are clinical application exercises (CAEs) which are clinical case-based small group discussion sessions which apply and reinforce concepts that are learned either in the conferences or in the SIMs. Three of the active learning sessions are post-examination discussions designed to help the student consolidate learned material. Student knowledge is evaluated with 3 unit examinations and a comprehensive final examination.

UCC 514B Bioethics and Humanities in Medicine I
1 Credit

The first year of the Bioethics and Humanities in Medicine I course is devoted to the fundamental issues of Bioethics: Principles of Bioethics, Moral Reasoning, and Doctor/Patient relationship, including veracity, confidentiality, informed consent, and decisional capacity. The contents of this course, along with the contents of the second year course (bioethical issues concerning the beginning and end of life) constitute the indispensable foundations for the application of bioethical principles in the rotations that will begin on the third year. The Bioethics content is complemented and supported by activities and workshops on the Medical Humanities. Students participate in Action Writing and Medical Narrative workshops led by the Medical Humanities staff. The educational activities include the discussion of a film using a basic method for the analysis of narratives especially designed for our medical students, and exercises in creative writing and role-playing. These activities will promote in our medical students lifelong skills such as awareness, concentration, observation, trust, teamwork, empathy, communication, critical thinking, moral reasoning, and imagination. In this school the student begins his/her medical education with this course. It is not an accident. In this way we seek to underline the importance of the material covered in the overall education (in contrast to instruction) of the medical student, the future physician.

UCC 503B Histology
 4 Credits

The Histology course is designed to cover the discipline at an appropriate level. The course meets the educational mission/curriculum requirements of the Universidad Central del Caribe School of Medicine by offering a solid background in modern molecular and cellular biology, tissue, organ systems and clinical correlations, which are the basis for the pathology course and the biological understanding of medicine.

In the practical part of the course the student will learn to recognize and describe normal histology specimens as well as how to analyze, synthesize and organize information using high level thinking.

The histology course encourages didactic lecture, small group discussion sessions, and textbook independent study, in addition to library research.

UCC 502 Human Gross and Developmental Anatomy
 10 Credits

This course surveys the regional, functional and developmental anatomy of the human body with emphasis on the anatomical correlates of clinical medicine. The study and visualization of the different components of the human body is accomplished through a complete dissection and prosections of the human body in the following sequence: Back, Upper, and Lower Limbs; Thorax; Abdomen, Pelvis and Perineum; and Head and Neck.

The lecture series has been designed to enliven the descriptive and topographic aspects of the lab work by including such topics as: (1) the biomechanics of the locomotor apparatus; (2) the morphological principles of respiration, circulation, digestion, reproduction and other physiological processes; (3) the clinically relevant landmarks of surface anatomy; (4) case studies in clinical and surgical anatomy. Special attention is given to the principles of building a broad medical vocabulary.

Laboratory sessions includes a traditional prosection-dissection work correlated with the study of radiological anatomy (including modern methods of imaging), cross sectional anatomy, surface–projection anatomy and some principles of physical examination. Different strategies are used to evaluate the performance of the students such as written exams, laboratory exams identifying structures in the human cadaver and computer images, and the National Board of Medical Examiners Subject Exam.

UCC 619A Introduction to Clinical Skills
 2 Credits

The Introduction to Clinical Skills Course will focus on preparing the student to perform an organized, thorough physical examination, history and case presentation. The student will learn to select elements of the complete examination for application in problem specific situations. Topics will be arranged as a systems basis and will parallel systems covered in the Human Gross and Developmental Anatomy Course. It is important for the student to understand the relationship between material presented in this course and that covered in parallel courses. Material presented in one area should be recognized as complementary to and not apart from that presented in other areas. Educational strategies used in this course are: lectures and laboratories. This course will be graded as pass or fail and the students will be evaluated using the following strategies: departmental exams, conferences and laboratories attendance and Objective Structured Clinical Examination (OSCE).

UCC 590-1C Longitudinal Primary Care Preceptorship I
 3 Credits

This course is multidisciplinary in nature and exposes the students to innovative learning and service methods. The students will learn and apply the care concepts of Primary Medicine by means of 3 different approaches:

1. Lectures: Students will be exposed to basic concept of Medicine, Public Health and Social Issues related to the clinical conditions.
2. Preceptorship: Students will learn by experience the role of a primary care physician and the community factors that impact on health and delivery of health care. Students will learn by

literature review and practice how to communicate successfully with a diverse group of people; to work in a multidisciplinary team; and to understand different Health Care Delivery Systems.

3. Community Intervention: We will introduce students to the field of Urban and Community Medicine. Our students will develop knowledge, professional skills and strategies in health promotion, disease prevention and public health issues, in order to modify unhealthy life styles that affect their performance and the relation with the community.

UCC 580A Neuroscience
5 Credits

Neuroscience is a multidisciplinary course integrating the areas of Anatomy, Biochemistry, Physiology, Pharmacology, Neurology, Neuroradiology, Neurosurgery and Neuropathology. All of these areas have been experiencing a revolution due to the conceptual and technological advancements of cellular and molecular biology, imaging of the living brain, and other advances. These new approaches, together with classical ones, have allowed us to develop a more comprehensive view of the overall complex interaction of the peripheral and central nervous tissue. In the development of the topics the students will discuss information ranging from the basic ultrastructural level to establishing neurophysiological and cellular correlates of behavior.

The order of presentation of the topics is intended to provide the student with the morphological information required to understand the physiological and pathological processes related to the nervous system. The clinical correlation sessions, presented by neurologists and neuroradiologists will serve the latter goal. At the end the student will also be introduced to a new avenue in Neuroscience delineated by the development of non-invasive approaches and instruments for the in vivo study and analysis of brain tissue, such as: Magnetic Resonance Imaging (MRI); Computer Assisted Tomography (CT); Proton Emission Tomography (PET) scans, Electro-encephalogram (EEG), Polysomnograms, EMG and Evoked Potentials.

The Neuroscience Course Goals are reached through diverse educational strategies such as: Lectures, Laboratories, Small and Large Group Discussions. Evaluation is based on partial and practical computer-based examination using the LXR testing program. In addition, written and oral quizzes, sometimes including "Clickers", are incorporated both as formative as well as summative strategies.

UCC 530C Physiology
5 Credits

Human Physiology will present the current biological, chemical and physical concepts underlying the normal function of organ systems. The objectives will be attained through the use of lectures, clinical correlations and group discussions. The topics to be presented during the lectures will include the physiology of muscle tissues and that pertaining to the process of hemostasis and the cardiovascular, respiratory, renal, gastrointestinal, endocrine and reproductive systems. A short review of basic concepts of cellular physiology and the foundations of acid/base disorders will also be discussed. The course will also include small group discussion sessions in which a stronger student faculty interaction will be established. These activities are designed to help the students understand the material presented in the course, clarify doubts, increase their interest for further knowledge and help them integrate the concepts and principles of physiology to other basic sciences.

UCC 515CI Problem and Evidence Based Medicine I
2 Credits

The class will be divided into groups of 8-9 students, and a format of small group discussion will be followed. There will also be a facilitator who is a member of the faculty. Sequential simulations of patient's problems will be presented. Three sessions will be spent on each simulation. The students will take responsibility for the discussion of the problem, identifying what they need to know to better understand and manage the problem, and determining what resources they will use to acquire new information. Each student will be responsible for looking up some part of the needed information, and will prepare a report on it. This report will be presented to the rest of the group in the next session. Self-study skills as well as the evaluation of the levels of evidence from the information gathered will be promoted with this course. Students are encouraged to look for information from a variety of sources such as: Learning Resources

Center (books, journals, CD-ROMs, Internet sites, etc.); Clinical Skills Center (models, videos), private and government agencies, as well as faculty members (as experts on a given matter).

UCC 505R-II Research I
1 Credit

The Research I course is a fifteen-hour course designed to provide first-year medical students with basic principles of clinical and translational research. The course topics include how research is conducted, evaluated, explained to participants, and applied to patient care. Students are expected to discuss ethical and legal issues of research as well. Lectures by invited faculty and other teaching strategies are used in the course. This is a pass or fail course, evaluated with quizzes, classroom exercises, and a concept map.

Second Year

UCC 635A Behavioral Science II
2 Credits

As implied by the course name, the course will provide the medical student the necessary knowledge and clinical skills to perform a complete psychiatric evaluation, including mental status exam, and to identify the main pathological manifestations of mental health, and initiate standard-of-care somatic and psychological treatments. The course will feature experienced faculty specialized in the conditions and therapies to be covered, using as reference the course's primary textbook, Kaplan & Sadock's *Synopsis of Psychiatry*, 10th edition, and the NBME Behavioral Science Review Series. We will also organize the course sections and chapters, as well as study the most recent principal diagnostic changes, in accordance to the *Diagnostic and Statistical Manual of Mental Disorders*, Fifth Edition (DSM-5). Each faculty member will utilize the necessary teaching strategies to promote the acquisition of the stated course goals and objectives, choosing amongst the following methods: lectures, textbook and handouts (readings), vignettes (case discussions), role playing (simulated experiences), PRS questions and answers (problem solving and practice exam questions), and discussion board, deemed most appropriate.

UCC 514C Bioethics and Humanities in Medicine II
1 Credit

The second year of the Bioethics and Humanities in Medicine course is devoted to the beginning and the end of life. The contents of this course, along with the contents of the first year course constitute the indispensable foundations for the application of bioethical principles in the rotations that will begin in the third year.

The following topics are presented and discussed during the second year of Bioethics and Medical Humanities: a) bioethical issues concerning the beginning and the end of life; b) bioethical issues concerning the treatment of fetus, newborns, infants, and children; c) bioethical issues concerning end of life care; d) bioethical issues concerning euthanasia and assisted suicide. During the academic year 2006-2007, the presentation and discussion of these bioethical issues will be complemented with the discussion of the movie *Mar Adentro* (The Sea Inside) and role playing exercises.

UCC 620D Clinical Skills II
3 Credits

During the past decades widespread advances in diagnostic technology have enabled physicians and medical students to establish diagnosis with accuracy. However, it is also being used inappropriately, contributing to the rapidly escalating cost of health care. Most importantly, this reliance on technology has contributed to the lack of history taking and physical examination skills of medical students. A sense of how to take information from the history and physical examination and from that construct a diagnosis and a plan of action often remains underdeveloped.

The emphasis in this course is to provide students with a rational, effective, practice-based/systems-based learning, and thorough approach to history and physical examination. Topics are arranged as a systems-based and parallel systems covered in other concurrent courses. Structured observation using real and standardized patients are used for formative as well as summative evaluations. An Objective Structured Clinical Examination (OSCE) is given as a final practical exam.

With this goal in mind, we invite the student to approach with enthusiasm this course, because the history and physical examination are the building blocks of clinical medicine.

UCC 590-2A Longitudinal Primary Care Preceptorship II
5 Credits

This course is multidisciplinary in nature and exposes the students to innovative learning and service methods. We use lectures and case presentations as learning strategies. The cases presentations will be organized in a manner that the topic correlates clearly with the ones discussed in the year courses. It serves as an integration activity of the different concepts related with the discussed themes in these presentations. In this course the student will be exposed to several medical conditions throughout the academic year. It will be organized as experiences obtained in the case presentations and community interventions as well as through the longitudinal experience in the preceptorship. In this activity the student will have as a guide a list of medical topics which correlate with the most common conditions seen in the clinical primary scenario. The student would be assigned as well: Family Medicine, Internal Medicine, Pediatrics, and Ob-Gyn. In this course the student will also be exposed to fundamental concepts of Epidemiology and Biostatistics, which will introduce them to an important area of the medical investigation and research.

UCC 540A Medical Pharmacology
6 Credits

This course encompasses the presentation and discussion of the chemistry and activity of drugs, pharmacokinetics and pharmacogenetic principles, pharmacological effects, mechanisms of actions, clinical uses, adverse side effects, toxicities and interactions of drugs used in the diagnosis, prevention and treatment of disease. As far as it is possible, it also emphasizes the physiological and pharmacological effects of both endogenous and exogenous substances at the cellular level. The course involves the discussion and presentation of such topics as general pharmacological principles, pharmacological aspects of drugs affecting the autonomic and the central nervous system, the cardiovascular, respiratory, renal, gastrointestinal and the endocrine systems. It also includes the discussion and presentation of the agents used in the treatment of infectious diseases such as antibiotics, antiviral and antifungal drugs, antihelminitics and antimalarials. Cancer chemotherapy, principles of immunopharmacology and the study of the autacoids are also presented in detail. Finally, a section in Clinical Toxicology is also presented where the important aspects of the environmental, industrial agricultural and household toxic agents are discussed.

UCC 520A Medical Microbiology and Immunology
9 Credits

Medical Microbiology and Immunology is a full academic year course in pathogenic Microbiology and Immunology designed to provide the basic concepts required for all subsequent pre-clinical and clinical studies dealing with infectious diseases. This course includes many etiological agents responsible for global infectious diseases. Since the territory covered by infections and the immune response expands each year, we focus on pathogenic mechanisms in order to foster students' ability to solve problems in their future clinical career. Repeatedly throughout the course, the Faculty makes appropriate correlations between fundamental principles of medical microbiology and infectious processes, although emphasis is placed on the understanding of basic principles needed now as a student and in the future as a practicing physician. Moreover, it is the Department's responsibility to acquaint the student with enough information that enables him/her to follow, as a professional, scientific advances in the medical and medical related sciences. The course is divided into: medical immunology, virology, cell & molecular microbiology, bacteriology, mycology, and parasitology. Teaching/learning methods/strategies used to enable the achievement of learning outcomes are: lectures, laboratory practices, small/large group discussions and clinical correlations. Assessment methods, which enable students to demonstrate the learning outcomes, are: surveys in Blackboard, Patient Oriented Problem Solving (POPS) and quizzes, among others.

UCC 553 Pathology and Mechanism of Disease
13 Credits

This course presents all aspects of the development of disease, with special reference to the causes and its development, as well as the structural and functional changes in cells and organs that result from the disease process. It is offered longitudinally throughout the academic year. It consists of lectures, as well as large and small group discussion. It also includes activities with interactive computer programs and

clinical correlation. The grading methodology will include: integrated partial exams, formative and summative quizzes, small group clinical case discussions, professionalism, active participation, and final exam (NBST). This course has as prerequisite the first year curriculum of medicine, computer literacy, and the basics of evidence based medicine (research, appraisal of validity and reliability of information, and basics of statistical analysis of such information).

UCC 516BI Problem and Evidence Based Medicine II
1 Credit

In this course the students will be exposed to patient simulations in a problem-based, student-centered and evidence-based approach. This educational methodology will help students develop more responsibility for their own learning, for it is the group of students whom determines what they need to learn in order to better understand the patient's problems. The content of the simulations will be based on the topics covered in the Second Year courses (Pathology/ Mechanism of Disease, Microbiology, Psychopathology, Behavioral Sciences and Clinical Skills) as well as content from the First Year courses (Anatomy, Neuroscience, Physiology). The simulations are designed to promote the integration of knowledge from clinical and basic sciences disciplines. The class will be divided into groups of eight to nine students, and a format of small group discussion will be followed. There will also be a facilitator who is a member of the faculty. Sequential simulations of patient's problems will be presented. Three sessions will be spent on each simulation. The students will take responsibility for the discussion of the problem, identifying what they need to know to better understand and manage the problem, and determining what resources they will use to acquire new information. Each student will be responsible for looking up some part of the needed information, and will prepare a report on it. This report will be presented to the rest of the group in the next session. Self-study skills are promoted with this course, and students are encouraged to look for information from a variety of sources such as: Learning Resources Center (books, journals, practice guidelines, Internet sites, etc.); Clinical Skills Center (models, videos), private and government agencies, as well as faculty members (as experts on a given matter). The course will incorporate the concepts of PICO questions as well as the searching of empirical evidence from peer - reviewed sources.

UCC 505R-2 Research II
1 Credit

The Research II course is a fifteen-hour course designed to provide second-year medical students with basic principles of clinical and translational research, including research article evaluation through journal clubs. These exercises include developing critical thinking skills to critically read, understand, and discuss the scientific literature. These activities are intended to promote a high degree of preparation for discussion of specific papers, their results, and the implications. Journal club presentations about each system are presented by the students. Lectures by invited faculty and other teaching strategies are used in the course. This is a pass or fail course, evaluated with quizzes, classroom exercises, and journal club presentation.

Third Year

UCC 615A Transition to Clinical Years
2 Credits

This course has been designed to introduce the rising third year medical student to the complexities and new environment of the clinical years. This course emphasizes active, as well as, passive learning where group and self-directed study sessions give students the opportunity to apply and evaluate learned concepts and apply acquired skills in a controlled environment. The course introduces the medical student to: • possible emergent situations in the clinical environment and the basic established protocols to follow under such situations • the appropriate level concepts in, and application of, proper studies in the initial evaluation of patients in emergency scenarios. • The interaction with residents and faculty in a clinical environment and what is expected for this level of training and experience. • Common policies governing behavior in the clinical environment (mistreatment, harassment, workplace safety, impaired physician, etc.), appropriate documentation in the medical record, the SOAP, and physician note writing.

UCC 615 Basic Radiology
1 Credit

In medicine, the discipline of radiology plays a crucial role in the diagnosis and treatment of disease. Imaging and image-guided therapy will play an integral role in the medical practice. In addition to learning about the strengths and limitations of different imaging studies, students will be able to relate abnormal radiologic findings to pathophysiology with logic and confidence. This will lead to a more efficient imaging work-up of the patient. The course will offer the student an opportunity to observe how radiology contributes to patient care. It is hoped that the student will acquire an appreciation for the various imaging modalities and their application to the evaluation of multiple diseases. The course provides, through slide presentations, plain films of chest, abdomen, skull and extremities. In addition, computerized tomography, sonogram, MRI, and contrast studies: IVP, UGIS, ERCP, oral cholecystogram, etc., will be presented as part of the diagnostic option in the medical field. Special attention is given to correlate film interpretation with clinical finding appropriateness criteria.

UCC 650B Pediatrics Clerkship
4 Credits

The pediatric clerkship experience introduces the student to a unique, complex and challenging field of medicine. It emphasizes those aspects of general pediatrics important for all medical students and will provide a foundation for those students who elect to further study the health care of infants, children and adolescents. Students have the opportunity to participate in the clinical activities of both general and subspecialty pediatric services, but the emphasis in all services is placed on basic general pediatrics common illnesses and professional, ethical and cultural issues. Subspecialists have the opportunity to emphasize aspects of their particular area of focus that are important for the education of the general physician. As one of the core clerkships during the third year of medical school, pediatrics shares with family medicine, internal medicine, obstetrics/gynecology, psychiatry, and surgery the common responsibility to teach the knowledge, skills and attitudes basic to the development of a competent general physician. Educational strategies developed in this course are: lectures, morning reports, teaching rounds and rotations. The students will be evaluated using the following strategies: clinical skills, departmental exams and National Board Subject Examination. The major learning site for students to developing knowledge, skills and attitudes are at the Puerto Rico Children's Hospital and San Jorge Children's Hospital.

UCC 660B Obstetrics and Gynecology Clerkship
4 Credits

Student will be exposed to obstetrical and gynecological experiences under supervision. The class is divided into small groups assigned to the gynecology service, the normal and complicated obstetrics service, the labor room and emergency service, and outpatient clinics. At these stations, they will rotate for a period of four (4) weeks with responsibility for admission of patient, history and physical examination, daily rounds, follow up of patients, attendance at surgical procedures, post-operative care and discharge summary. Notably, at these stations the daily work will be supervised by full time instructors. The student should read and be familiar with material related to their cases, and be able to present and discuss their cases in daily rounds as well as with the assigned attending.

UCC 623A Internal Medicine Clerkship
6 Credits

The Internal Medicine Clinical Clerkship is designed to provide for students to obtain the knowledge, skills, and attitudes that will enable them to recognize, diagnose, prevent and either manage or recommend courses of management in the most frequently encountered problems and disease entities related to the field of Internal Medicine. In this clerkship, the student will: 1. Describe and explain etiology, pathogenesis, symptoms, and signs, likely diagnoses, prognosis and treatment of the medical problems in the field of medicine. 2. Establish a reasonable differential diagnoses as well as identify and interpret the essential laboratory test and other procedures necessary to compliments his/her clinical observations, for the management of and to make recommendations concerning management of a condition. 3. Perform laboratory test done by physicians. 4. Analyze all the data collected on the record and outline the salient features for the establishment of a reasonable management program. The student will acquire the knowledge, clinical skills and professional behavior necessary to evaluate and care for patients in a comprehensive manner. The students participate in outpatient clinics, direct patient care, group discussion sessions and clinical procedures.

UCC 640C Surgery Clerkship
6 Credits

The surgical clerkship introduces the medical student to the complex, unique and demanding world of General Surgery and its subspecialties. General Surgical principles, the evaluation and initial analysis and management concepts of the patient are explored.

This course is designed to familiarize medical students with the clinical presentation (history and physical examination), diagnostic process and management of medical-surgical problems. Students will go through the process of learning the theoretical aspects of surgery and their practical application in this rapidly evolving field of medicine. This course will aid in the development of the behavioral, professional and ethical traits expected of a complete, culturally aware and competent physician. These include but are not limited to: reliability, trust, worthiness, perseverance, intellectual honesty, self-evaluation, punctuality, efficiency, organization of time, appropriate appearance, good habits, neatness, and appropriate interaction with staff, patients and peers.

The students will have scheduled conferences by selected general and subspecialty surgeons. They will get insight into the field of surgery and basic knowledge of the most common conditions encountered. These will be supplemented by audiovisual, computer assisted teaching, suture technique laboratory exercises, clinical skills laboratory, clinical case exposures, and electronic internet data base programs. Students will also have clinical rotations through the clinics, wards, operating rooms, peer review sessions and doctor practices in which they will get involved with the diagnostic process at every level (Initial evaluations, Consultations, Pre-op, Intra-op and Post-op care of patients). The clerks will meet with the coordinator and proctors for feedback and feed forward on the progress of the clerkship, deficiency corrections, evaluations, case analysis and presentations, log reviews, on-call log reviews, and OSCE deficiency reviews. The course will provide basic surgical knowledge useful for all future clinical practices.

The clerkship and initiation of basic clinical competence in surgery will afford an opportunity for the student to directly apply knowledge and skills learned in all the basic sciences and other clinical clerkships in the evaluation and management of patients' clinical problems. They will develop professional skills in communications, history taking, physical examination, differential diagnosis, plan of analysis, management, and the capacity to handle clinical internet based data programs.

UCC 631B Psychiatry Clerkship
4 Credits

This clerkship provides the third year medical student with a review of 27 topics in clinical psychiatry as well as the opportunity to evaluate patients for diagnosis and treatment both in the general hospital and psychiatric hospital setting, 24 hours of group discussion and 24 hours in patient contact complete the course work.

UCC 670B Family Medicine Clerkship
4 Credits

This six-week clerkship gives the third year medical students an opportunity to practice under the supervision of a Family Physician in outpatient settings mostly located in the metropolitan area or in adjacent towns in Puerto Rico. Many sites were identified and evaluated but the chosen ones were carefully selected because they have outstanding family physicians that offer a broad and high quality experience in family practice. The main emphasis is on acquiring knowledge and skills in assessing and managing common health problems (listed below) among both adults and children. The students provide continuous care for families, emphasizing prevention, patient education, and health promotion. During this experience, the student is exposed to the main procedures performed in primary care. Close attention is given to the clinical experiences to assure consistency in meeting the educational objectives of the clerkship. Every preceptor has a copy of the syllabus, which contains the clerkship objectives and evaluation forms (Clinical Tool Kit). The educational strategies developed in this course are: lectures, daily case presentations, clinical discussions, ethics group case discussion and home visits. The students are evaluated using the following strategies: oral presentations, clinical case presentations, O.S.C.E., Med-U Cases, departmental examinations, patient encounter, one exam, and the daily performance evaluation given by the preceptor and the National Board Subject Examination. All student work-up is supervised, discussed and countersigned by the attending physician. Patient logbook is evaluated at mid rotation to identify the diagnoses that the students need to be exposed in order to guarantee the clerkship requirements were accomplished. Written feedback is obtained from the students about the various

clinical sites and the preceptors. Each student must provide evidence of at least thirty (30) different outpatient encounter evaluations.

Fourth Year

UCC 518 Bioethics and Humanities in Medicine IV
 2 Credits

Bioethics and Medical Humanities provide future doctors with the development of ethical sensibility, moral integrity, communication skills, evenness, humility, self-knowledge and creativity. It should not be seen merely as an accessory but as an inseparable compliment to the knowledge and skills pertaining to any clinical specialization. They also provide them with tools such as observation and concentration skills, awareness, critical thinking, and general culture that will allow them not only to deal with the pain related to disease and death but also to enjoy life in its beauty and wonder.

The fourth year course of the Bioethics and Medical Humanities Program is devoted to discussing topics related to social bioethics and reviewing concepts studied during the previous years. Students will engage in the application of the learned material into an artistic/educational project. The contents of this course, along with the contents of the first and second year courses constitute the indispensable foundations for the application of bioethical principles in the internship, residency programs, and later in the professional life in the soon-to-graduate medical students.

The following topics are presented and discussed during the fourth year of Bioethics and Medical Humanities:

- a. Bioethical issues concerning the clinical encounter between the patient and the physician: virtuosity in the physician, veracity, confidentiality, patient's autonomy, informed consent, communicating bad news, and the physician's role as advocate.

The presentation and discussion of these bioethical issues will be done through introductory lectures, case discussions and the production of a short video (5 minutes) by the students, about a conflictive ethical situation in the clinical setting.

UCC 675A Ambulatory Medicine and Research
 4 Credits

Consonant to the School of Medicine's goal to prepare competent physicians with an excellent academic preparation within a holistic framework and due to the growing importance of primary care as a specialty and as a knowledge base for all sub specialists, the Ambulatory Care and Research Clerkship has been created. Today, owing to new technologies and alternative care settings, an emphasis on cost-containment, and patients indiscriminately exposed to divergent and changing medical information, the range of conditions treated on an outpatient basis is broader than ever. This required six-week experience is aimed to expose medical students to the most prevalent form of medical care: attention provided in the physicians' office or community based centers. It also aims to expose students to the basic principles of clinical research.

The duration of the rotation is six weeks. This clerkship emphasizes training in ambulatory care knowledge and skills in one of three primary fields: Family Practice, Pediatrics and Internal Medicine. The major part of the student's time is spent in clinical practice with a faculty preceptor in general internal medicine, pediatrics or family medicine. Many of these practices are located in the San Juan Metropolitan Area, and adjacent towns. Students also attend teaching sessions once a week, for workshop and case presentations on a variety of topics relevant to primary practice.

Concomitantly with the clinical experience, the students will work on a research project, chosen at the beginning of the rotation and based on the student's clinical experience or need. Students are expected to collect data directly from the patients (and/or their medical records), analyze and present the information, and write a final report.

UCC 700 Electives
 18 weeks required

Elective courses are offered in scheduled periods throughout the student's fourth year. These electives are available for the students who have satisfactorily completed the specific prerequisites. Students at the UCC School of Medicine are required to approve 18 weeks in elective courses. At the UCC elective courses are available in a 4 weeks period, unless otherwise specified.

In order to take electives outside the UCC, at any School of Medicine's affiliated institutions, either in Puerto Rico or in the United States, the student must be in good academic standing, and have the approval of the UCC Department's Chairperson. A catalogue with a full description of the elective courses offered is available at the UCC Library.

UCC 629A Neurology
 3 Credits

The Neurology Course completes the cycle of teaching in the Neurological Sciences. We initiated this trajectory in the First Year of Medicine, with the Neurosciences course. There, we laid the anatomical and physiological foundations of Neurology, along with its corresponding clinical correlations. We then advanced further up these echelons with the Neurophysiopathology course in the Second Year, detailing the mechanisms underlying the most common neurological diseases in clinical practice. The Neurology Liaison in the Third Year was the forum for the evaluation of in-patients with diverse neurological conditions. This Fourth Year course integrates those experiences learned during these past three medical years. It exposes students to a broader gamut of neurological disorders, especially those apt to be seen in the out-patient setting. The students evaluate neurological patients, under the supervision of neurologists in clinical practice. This represents an enriching and invaluable experience for the students, regardless of the medical specialty they eventually pursue.

Learning Neurology does not have to be cumbersome. It can be real fun – provided the proper techniques are applied. This course comprises several educational workshops, such as: The Clinical Conferences, the Ambulatory Neurology rotations, and three competencies: The Neurological Exam Competence, the Neurological History and Examination Competence, and the Lumbar Puncture Competence.

UCC 607 Selected Topics
 3 credits

This course was designed for fourth year medical students with the purpose of presenting those topics necessary to fulfill his/her professional training in accordance with the new tendencies or modalities in medicine. This required three-week experience aims to expose medical students to the most prevalent forms of medical care. This is a student centered course focusing on preparing the student for successful postgraduate training. Topics to be discussed will be presented by a guest speaker and the students will then participate in an active educational experience.



**GRADUATE PROGRAM
IN
BIOMEDICAL SCIENCES**

GRADUATE PROGRAM IN BIOMEDICAL SCIENCES

Mission

The mission of the Graduate Program in Biomedical Sciences is to provide a rigorous and stimulating research and training environment for UCC students. Our students provide the intellectual resources needed to advance the research and educational goals of the institution and to provide a new generation of scientists. The faculty is committed to excellence in interdisciplinary research training for qualified candidates who will continue to advance the fundamental knowledge needed to conquer disease and promote health and improved quality of life for all people. The knowledge and skills acquired will enable the graduate to be successful in biomedical research conducted at universities, government and private industry laboratories, as well as in education.

Research Activities

Research Centers

Cellular and Molecular Biology Center (CMBC)

The CMBC is an interdisciplinary group of researchers from all of the basic sciences departments at our Institution with common and interrelated research interests in cell and molecular biology. The CMBC coordinates seminars, workshops, and an annual research day for UCC researchers, where conceptual and technical advances in cell and molecular biology are presented and demonstrated by distinguished visiting scientists and commercial instrumentation representatives. Center researchers mainly work in the areas of signal transduction and functional genomics

Center for Addiction Studies (CAS)

The CAS was established with the purpose of expanding scientific knowledge on substance abuse, HIV/AIDS, and related topics. The objectives of the center are: a) to estimate the prevalence of drug use, abuse, and dependence in the Puerto Rican population; b) describe the patterns of drug use and associated factors; and c) examine the relationship between substance abuse and other physical and mental health conditions. The CAS aims to provide empirical knowledge as the basis for the preparation of health professionals that provide substance abuse and drug treatment services. The center also maintains scientific databases that serve as reference for public policy making.

Center for Translational Neuroscience Research (CTNR)

The purpose of the CTNR is to facilitate research on translational neuroscience at UCC. The goal of the Center is to develop novel therapeutic agents and markers for the treatment and diagnostic of neurodegenerative diseases in collaboration with the Caribbean Primate Research Center and the Morehouse School of Medicine in Atlanta, Georgia.

The Center pursues this goal through basic neuroscience research and preclinical studies of candidate drugs for neuroprotection. Currently, the Center focuses on the role of neuronal nicotinic acetylcholine receptors (AChRs) and AChRs linked neuroprotective pathways to develop new approaches to the treatment of neurological disorders.

Neuroscience Research Center (NRC)

The NRC was established in 1990 for the purpose of promoting neuroscience research in Puerto Rico. Organized as an inter-institutional association of neuroscientists with headquarters at the UCC, it has enjoyed RCMI support since 1991. At present, NRC is composed of scientists from four Puerto Rican universities, as well as associate and student members. Research projects address issues ranging from the basic mechanism of cocaine addiction, excitotoxicity and neuroprotection, to ion channel function and signal transduction pathways. Numerous collaborations with colleagues from many universities are in place. This center also organizes the Puerto Rico Neurosciences Conference, held annually since 1992.

Retrovirus Research Center (RRC)

The RRC is a multidisciplinary research center for the study of HIV/AIDS and other retroviruses. Its general goal is to promote and facilitate HIV/AIDS and other retrovirus research in Puerto Rico. The RRC promotes the study of HIV infection as a multidisciplinary research arena in which the clinical features, immunological, and virological elements and the psychological and behavioral parameters need to be integrated into a coherent research strategy. The center brings together a coalition of multidisciplinary researchers whose interest is to describe and understand key elements that play a role in the progression and/or expression of HIV infection according to an ecological view of the problem.

The Retrovirus Research Center laboratory provides clinical laboratory service, under RCMI support and a fee-for-service system, as part of an institutionalizing plan. The laboratory provides the research community with: a) standardized methodology for the rapid detection, identification, and quantification of HIV infection; b) standardized methodology for the characterization of sexually transmitted diseases, viral hepatitis, and mycobacterium; c) immunological services and expertise in the analysis and delineation of lymphocyte populations; d) facility for the determination of cytokines, chemokines, and proliferative response; e) facility to continue a repository of lymphocyte, plasma, and serum from HIV-infected individuals registered in the Data Core Facility; f) anti-retroviral drug susceptibility genotyping pattern in the HIV-infected population; and g) organized clinical laboratory support to the Data Core Facility and individual pilot projects.

University Center for Integrative and Complementary Medicine (CUMIC)

The CUMIC was founded in 2001 with the purpose of providing treatment and education about complementary and alternative medicine and fomenting research. The CUMIC coordinates seminars to stimulate the participation in alternative medicine research with special interest in the use of natural compounds for the treatment of disease. The center is currently active in cancer research.

Research Facilities

UCC has research laboratories and specialized research facilities with the necessary equipment to perform the research according to the interest of the researcher. The average size of the laboratories is 180 square feet. The individual research laboratories are complemented with common instrumentation areas, a cell culture laboratory, a retrovirology laboratory, an electron microscope, and a radioisotope laboratory.

The specialized research facilities are:

Animal Resources Center (ARC)

The Animal Resources Center is staffed with personnel specialized in animal care and handling to support research and education activities. The ARC houses small and large animals in its 7,700 square feet facility and provides information concerning purchasing, basic husbandry, quarantine, and veterinary medical care of laboratory animals.

The ARC also provides technical assistance and advice dealing with animal species used for investigation and supports the research programs by making animals, materials, and animal husbandry supplies readily available.

The ARC is equipped with specialized areas to provide the following services: necropsy, stock and treatment, quarantine, bedding, cage washing, and storage. The facilities also include an experimental surgery area with surgical, scrub, sterilizing, and recovery rooms.

Behavioral Testing Facility (BTF)

The Behavioral Testing Facility was created to facilitate the development of neuroscience research at the Universidad Central del Caribe, recognizing the importance of behavioral testing. The BTF has two (2) major components: the equipment infrastructure and the technical support division. The facility offers equipment for remote behavior visualization (RBV).

Biomedical Proteomic Facility (BPF)

The mission of the BPF is to accelerate discovery by giving UCC investigators access to cutting edge technologies in proteomics and in mass spectrometry. The facility stimulates the use of 2D gels and protein

analysis, via a proteomic imaging software, by the faculty. The aim is to provide separation and mass spectrometry techniques for the quantitative analysis of the proteome. One major objective is to identify disease and other relevant biological markers.

Common Instrumentation and Technical Support Unit

This core area houses major equipment such as ultracentrifuges, freezers, spectrophotometers, gamma counters, etc, as well as the centralized cell culture facility. It fosters equipment sharing, centralizes maintenance of equipment, and provides repair for the equipment of all the projects.

Data Management and Statistical Research Support Unit (DMSRSU)

The DMSRSU provides study design, data management, quality assurance, and statistical analysis support for UCC researchers. The DMSRSU has a strong infrastructure which includes the following subunits: Data Abstraction and Management; Data Entry; Quality Control; Data Analysis and Consultant; and Administrative and Computer Systems. Each of these subunits consists of experienced professionals readily available to assist researchers and to provide data management and statistical research support to investigators. In addition, the DMSRSU counts on a highly experienced and reliable consulting team.

HIV and Substance of Abuse Laboratory

The laboratory supports research in the areas of HIV/AIDS and substances of abuse. Specialized facilities are made available to researchers for scientific studies in fields of immunology, drugs of abuse, HIV/AIDS, and related infectious diseases. This core laboratory provides researchers with assays for nucleic acids detection, virus genotyping, flow cytometric phenotyping, lymphocyte proliferation, cytotoxic and non-cytotoxic activity, cytokine and chemokine determinations, and drugs of abuse quantification.

Immunocytochemistry Laboratory

The Immunocytochemistry Laboratory specializes in the qualitative identification and localization of cells bearing selective markers by employing specific antibodies to these molecules.

Neuronal Glia Culture Facility

The goal of the facility is to assist UCC investigators in the use of cultured neurons, glia, and organotypic cultures. The cultures are used for patch clamping after in vitro treatments with drugs of addiction or inhibitors and for in vitro models of neurodegenerative diseases. The core facility consists of a coordinator and a technician. Neuronal cultures are prepared from fetal cortex, hippocampus, or astrocytes from cerebral cortex.

Optical Imaging Facility

The facility offers microscope-based systems that allow the assessment of cellular responses, such as calcium signaling with fast temporal resolution. The facility offers: a) confocal imaging services; b) brightfield, darkfield, phase contrast, Nomarski, and epi-fluorescence imaging; c) high spatial and temporal resolution imaging; d) collection of serial sections (deconvolution capabilities); and e) morphometric analysis.

Protein and Nucleic Acid Core Facility (PNACF)

The PNACF aids in the transition from classical to molecular analysis of the problems being addressed by faculty members. The PNACF focuses on faculty training, seminars, training on specialized molecular biology techniques, protein expression, and protein purification and characterization.

Transmission Electron Microscopy Laboratory

The TEM laboratory provides access to ultrastructural analysis of biological specimens via a Jeol 100 CX transmission electron microscope. The TEM is equipped with AMT 4 MP digital camera to facilitate image acquisition and 3D reconstruction from serial sections. In addition, to conventional EM procedures of in situ and cell culture specimens the laboratory also offers immunogold labeling and the visualization of fluorescent dyes after photoconversion.

Research Support Programs

Biomedical Research Administration Development (BRAD)

BRAD promotes the establishment of biomedical research and research-related training programs by providing support for strengthening institutional research administration infrastructures. This program provides training in NIH policies and procedures. The goal of the BRAD program is to facilitate the administrative management of extramural grant awards, and foster and facilitate research activities.

Minority Biomedical Research Support (MBRS)

The purpose of the MBRS programs is to increase the numbers of underrepresented minority faculty, investigators, and students engaged in biomedical or behavioral research and to broaden the opportunities for participation in biomedical or behavioral research of underrepresented minority faculty and students.

Research Centers in Minority Institutions (RCMI)

RCMI provides funding to recruit established and promising researchers, acquire advanced instrumentation, modify laboratories for competitive research, fund core research facilities, and other research support. Because many investigators at RCMI institutions study diseases that disproportionately affect minorities, RCMI support serves the dual purpose of bringing more minority scientists into mainstream research and enhancing studies of minority health.

Specialized Neuroscience Research Programs (SNRP)

The SNRP strives to help minority institutions develop state-of-the-art neuroscience research programs; to increase ongoing research, stimulating academic and intellectual milieu that will inspire and prepare students and fellows to pursue research careers in neuroscience; and to provide support for the pilot research needed to show the skills and abilities of investigators by obtaining the preliminary data and publications that can help ensure successful competition for traditional research project grants during the performance period of the award.

Research Support Offices

Office of the Associate Dean for Research and Graduate Studies (OADRGS)

The main goal of the OADRGS is to actively facilitate and promote interdisciplinary research enterprises and curriculum development within UCC's academic community. The OADRGS is devoted to establishing and implementing pre-and-post award procedures, assist researchers in the preparation of proposals and publications, establishing a strong profile for generation of external revenue and research grant funding, and fostering research collaborations.

Research Development Office (RDO)

The RDO provides technical assistance to faculty in the development and preparation of proposals, contracts, cooperative agreements, etc by performing program guideline review and analysis, preparation of complex budgets, processing of proposals, and electronic proposal submission.

The RDO manages the Sponsored Programs Information Network (SPIN) and Federal Grants and Contracts Weekly databases for identifying potential grant opportunities and makes available pilot project funding, to obtain preliminary data for grant applications.

Sponsored Programs Office (SPO)

The SPO facilitates the successful competition for external funding, assist in the management of and compliance in sponsored projects. The Office negotiates contracts and grants with a wide variety of sponsors, assist in the management of external funds.

Scientific Resources Development Unit (SRDU)

The SRDU is responsible for the professional development and continued education of junior and senior research faculty. The unit provides training programs that address the competencies that junior research faculty require to successfully develop into senior research faculty, including the development and management of research projects, the acquisition and management of grants and the communication of the results obtained.

Graduate Student Association

The Graduate Student Association (GSA) comprises degree seeking graduate students at the Universidad Central del Caribe. The GSA mission is to enrich the graduate student experience and to represent, support, and promote graduate student interests. The GSA provides programs and services aiding in recruitment and retention of graduate students, represents graduate student interests to the University administration, and builds a sense of community among graduate students.

The President of the Graduate Student Association will represent the association in the Student Council. The directors of the Graduate Student Association (President and Secretary) will be elected during the Student Council election.

Study Programs

Description

The Graduate Program in Biomedical Sciences offers five different study programs:

1. Doctor of Philosophy in Cellular and Molecular Biology
2. Doctor of Philosophy in Neurosciences
3. Master of Science (MS) in Biomedical Sciences in
 - Anatomy and Cell Biology
 - Biochemistry
 - Microbiology and Immunology
 - Pharmacology
 - Physiology
4. Master of Science in Neuroscience
5. Master of Arts (MA) in Biomedical Sciences in
 - Anatomy and Cell Biology
 - Physiology
 - Microbiology and Immunology

Requirements for the Master of Science (MS), Master of Arts (MA) and Doctor of Philosophy Degrees:

Residency

A minimum of 36 credits must be completed at UCC.

Research Mentor

Students must select a mentor by the end of the first year. The mentor will be the chair of the Thesis / Dissertation Committee and will be selected by the student. The mentor must have a Doctoral degree and must be actively engaged in research in the case of PhD and MS students. The mentor will be responsible for direct supervision of the student's research and will coordinate the comprehensive / candidacy exam. The mentor must hold or request an academic appointment at UCC.

MA Mentor

Students must select a mentor by the end of the first year. The mentor will be in charge of organizing evaluation committees for the student's biographical reports according to the reports discipline. The mentor will be selected by the student with the advice of the chairperson of the department. The mentor will be responsible for direct supervision of the student's academic work and will coordinate the comprehensive exam. The mentor must hold or request an academic appointment at UCC.

Dissertation/Thesis Committee

After selecting the research advisor, the student, in consultation with the advisor, will select a committee no later than the first semester of the second academic year. The committee will be composed of three (3) or five (5) members, including the research advisor who will chair the committee. The members of the committee will be UCC faculty members or faculty from other institutions with similar programs, but the majority of the committee must be UCC full-time faculty members. One (1) member of the committee must be a graduate faculty member from outside the advisor's department. The advisor will keep written records of the meetings. The committee and the program of study must be approved by the Graduate Program in Biomedical Sciences Office and should be on file at that Office by the end of the first semester of the second year.

An intensive period of full-time research is the central element of the PhD / MS degree. It is the dissertation committee's responsibility to provide an objective evaluation of the project as well as contribute to the selection of specific research directions. While the dissertation committee often has useful suggestions on specific approaches to a particular protocol, a more vital function is to help focus and limit the scope of the research so that the student has, as early as possible, a clear concept of the overall design of the dissertation proposal. Although this concept will change in response to specific experimental findings, it is critical for the student to be guided to define, both in scope and quality, an appropriate research project.

The committee must meet at least once per academic year.

Biographical Reports Committee

For those students enrolled in the MA Program in the Biomedical Sciences, the Associate Dean for Research and Graduate Studies together with the student will select the Biographical Reports and his/her mentor.

Seminars

The seminars provide coverage of subjects not included in other graduate courses and serves as a forum for presentation of research proposals, work in progress and completed work by the staff and graduate students. Visiting scientists also participate in the seminars.

Each seminar will be worth 1 credit hour. All faculty members present during the seminar may evaluate the student's seminar presentation. Students will present a maximum of one seminar per day. A minimum of three faculty members must be present in order for a grade to be awarded for the seminar presentation. The seminar will be announced and open to the academic community. GPBSF 14 Seminar Presentation Evaluation Form will be used to evaluate students' presentations.

Dissertation / Thesis

Under the supervision of his/her mentor and of the Dissertation / Thesis Committee, the candidate shall prepare a thesis embodying the results of his/her investigative efforts in his/her selected major field or area of expertise. The candidate will submit a draft to the mentor and the members of the Committee at least six (6) weeks prior to the commencement date. The members of the committee will be allowed two (2) weeks after the receipt of the draft to propose in writing any changes, deletions, corrections and criticism to the draft. The Committee and the student will meet to discuss the recommendations. The candidate will then have ten (10) days to prepare the final draft of the thesis based on the changes, corrections, etc. submitted by each member of the Committee. The Committee will have two (2) weeks to reexamine the thesis and determine the acceptability of the thesis and the date of the thesis defense. Following your public defense, you have 10 days in which to make changes required by your committee. Your committee will have 2 weeks to reexamine the thesis and either approved it or disapproved.

The student must deliver the approved thesis in a CD-ROM or flash drive, according to the Thesis / Dissertation Manual, to complete the graduation requirements and receive his/hers diploma. The Graduate Programs in Biomedical Sciences Office will print and bind three (3) copies of the thesis (one for the student, one for the department and one for the library). Make sure that the Graduate School has your current contact information so you can be notified when the bound copies arrive at the Graduate School.

Dissertation / Thesis Defense

In order to be eligible to perform the Dissertation/Thesis defense, the candidate must have approved/completed all graduation requirements (including authorship requirements for PhD students) excluding the Dissertation/Thesis and must have been notified by the Dissertation/Thesis Committee that his/her Dissertation/Thesis is defensible.

The defense will consist of a public presentation of the results and conclusions of the dissertation/ thesis research. The defense will take place at UCC. The defense is an oral defense and the candidate will be examined on the content of the thesis by the Dissertation/Thesis Committee. Other members of the academic community may attend the final examination and participate in the questioning. Once the public portion of the defense is completed, the Dissertation / Thesis Committee will meet privately with the candidate for further evaluation of the student's knowledge of the contents of the dissertation / thesis. A representative of the Graduate Program in Biomedical Sciences will be appointed by the Director and will act as an evaluator of the process. This representative will be from outside the student's department. The result of the defense will be notified orally and in writing to the candidate. In case of failure, the panel may recommend that the candidate be dismissed from the program or that a second opportunity to defend the thesis be allowed no later than six (6) months from the date of the first defense. A student may defend only twice.

The Graduate Program in Biomedical Sciences Office will make the official announcement for the defense after prior notification; the notification must receive no later than fourteen (14) days prior to the intended thesis defense date.

Dissertation / Thesis Defense Approval Form

The Request for Permission for Dissertation / Thesis Defense form must be completed and submitted to the Graduate Programs in Biomedical Sciences at least two weeks prior to the final defense. A ballot for the final examination will be sent to the research advisor. After the defense, the original signed ballot must be returned to the Graduate Programs in Biomedical Sciences.

Specific Requirements for the PhD Degree

Candidacy Examination

All PhD students must pass the candidacy examinations by the end of their third year. Successful completion of this requirement is a necessary condition for advancement to doctoral candidacy and must be accomplished at least six (6) months prior to the dissertation defense. The dissertation committee is responsible for recommending advancement to candidacy to the Graduate Program in Biomedical Sciences Office. A graduate program representative will represent the Program at the dissertation defense and assure all regulations are followed.

The goal of the candidacy examination is for the faculty to assess the adequacy of the students' background knowledge in their chosen field and their ability for problem solving and for interpretation of important concepts before formally permitting them to begin their doctoral research. The dissertation committee will prepare the candidacy exam. A student who is in good academic standing but who fails the examination is allowed one (1) opportunity to retake the exam. In case of failure, the student will be reexamined no later than six (6) months from the date of the first examination. In case of a second failure, the student will be allowed to transfer to a MS/MA program. The student will not be allowed to reenter the PhD Program.

Students in the PhD program can be awarded the MA or MS degree once they have completed all of the MA or MS graduation requirements. The candidacy examination will serve as the comprehensive exam.

Within six (6) months of passing the candidacy examination, the student is expected to present a research proposal to the dissertation committee. The dissertation committee will monitor his/her research progress on a regular basis, meeting at least once a year. A week prior to each meeting, the student will present a written summary of research progress to the committee for review. The research proposal defense can be part of the candidacy exam and can take place the same day.

Requirements for the Master's Degree

Comprehensive Examinations

All students enrolled in the MS and MA Programs must pass a written examination covering the student specialization subjects described in their program of study. In case of failure, the student will be reexamined no later than six months from the date of the first examination. In the event of a second failure, the department's faculty may recommend that the candidate be dismissed from the program or re-examined for a third and final time. The comprehensive examination is normally given near the end of the student's second year of graduate studies, or after the satisfactory completion of the scheduled courses. The student mentor is responsible for the coordination and administration of the comprehensive examination.

Specific Requirements for the Master of Science (MS) Degree with Departmental Specialization

Course Requirements

All candidates for the MS degree must approve their program of study with a minimum grade point average of 3.0 (scale of 4.0). Specific course requirements, minimum passing grades and programs of study will be determined by each department.

Research Proposal

A written and oral presentation of a research proposal will be required from all MS candidates. In preparing the written proposal the student should follow the F31 guidelines set forth by the National Institutes of Health. The Thesis Committee must approve the proposal.

The candidate will submit a draft to the mentor and the members of the Committee at least two (2) weeks prior to the defense date.

Specific Requirements for the Master of Arts (MA) Degree with Departmental Specialization

Course Requirements

All candidates for the MA degree with departmental specialization must approve their program of study with a minimum grade point average of 3.0 (scale of 4.0). Written bibliographic reports included in their program of study will be assigned, supervised, and evaluated by a faculty member appointed by the mentor. Each bibliographic report will not carry a value of more than one (1) credit hour. Bibliographic Reports will be evaluated with GPBSF 19. Specific course requirements, minimum passing grades and programs of study will be determined by each department.

Specific Requirements for the Master of Arts in Biomedical Sciences

The Universidad Central del Caribe offers the Master of Arts in Biomedical Sciences to those students who wish to obtain a general knowledge but who do not want to specialize in any particular area of the Biomedical Sciences.

Course Requirements

All candidates for the Master of Arts in Biomedical Sciences must complete the program with a minimum grade point average of 3.0 (scale of 4.0). Written bibliographic reports included in their program of study will be assigned, supervised, and evaluated by a faculty member appointed by the mentor. Each bibliographic report will carry a value of no more than one (1) credit hour. Bibliographic Reports will be evaluated with GPBSF 19.

Evaluation and Promotion

Grading Policy

Grades at the end of each term are assigned according to the following letter system:

Grade	Points	Description
A	4	Excellent
B	3	Good
C	2	Satisfactory
F	0	Failure
I	--	Incomplete coursework
N	--	Non reported
W	--	Authorized withdrawal
U	--	Unauthorized withdrawal
WP	--	Withdrawal passing
WF	--	Withdrawal failing
P	--	Passed without credit*
H	--	Passed with honors
NC	--	Noncredit course
IP	--	In Progress

*Each department may propose through the Graduate Program in Biomedical Sciences Committee graduate courses for pass/fail (P/F) designation.

A grade of "I" indicates assigned work yet to be completed in the term. The grade of "I" becomes an "F" if not removed by the end of the following term according to the following schedule: "I" grades from the first semester become "F" if not removed by the end of the second semester; "I" grades from the second semester and for the summer session become "F" if not removed by the end of the first semester of the incoming academic year. An "I" grade cannot be changed to a W under any circumstances. The grade of "I" on the thesis does not become an "F" at the beginning of the next term or session and will remain as such until the evaluation of the thesis is submitted.

Student Status in the Program

The Graduate Program in Biomedical Sciences Committee will review students' records in May, for those students admitted in August of the previous year, and in December for students admitted in January (completion of two semesters in the program).

The resulting action depends upon the grade point average (GPA) on a four-point scale, as follows:

1. To be in good academic standing, the student must have a GPA of 3.0 or higher.
2. Students attaining a GPA below 2.5 will be dismissed from the Program.
3. If the grade index is below 3.0 but above 2.5, the student will be placed on probation for the following academic year, at the end of which he/she will be dismissed if his/her grade index has not improved to 3.0. Students on probation are not eligible for financial aid.
4. Students obtaining a failing grade (F) on a course will be dismissed from the program.
5. A student may repeat a course once, after withdrawing. The student must retake the course the next time that is offered. If the student does not approve the course during his/her second attempt the student will be dismissed from the program

A student that has been dismissed from the Program may appeal their cases to the Graduate Program in Biomedical Sciences Committee. The Committee will review the student's record and will make the pertinent decision on whether to readmit the student. Once dismissed from the program a student will not enroll in graduate courses under any student classification, for example, non-degree student.

All grades and repeats will be included in the calculation of the grade point average (GPA). All grades on courses not offered at the institution but approved by the Thesis Committee as part of the program of study will also be included in the GPA calculation. Withdrawals, pass/fail credit and transfer courses are not included in the calculation of the GPA. Transferred courses are defined as those completed while not enrolled at UCC.

Grade reports are sent to students at the end of each semester.

A certified letter is mailed to each student placed on probation or dismissed.

Withdrawal Procedures

1. The deadline for withdrawal from a course with a grade of "W" may be any date prior to 50% to completion of the course, afterwards the student will be assigned a grade of WF or WP (if evaluated).
2. The deadline for withdrawal without "W" will be before 10% after the beginning of the course.
3. The procedure for withdrawal is as follows: the student must provide written notification to the graduate program coordinator of the program he/she is enrolled advising what course(s) he/she intends to withdraw. The student should file the withdrawal application at the Registrar's Office.
4. Authorized withdrawals will be allowed before the course final exam.
5. Unauthorized withdrawals constitute grounds for dismissal from the Program.

Language Requirements

Knowledge of English and Spanish is a basic requirement for study in the Program. The student is expected to possess verbal and written proficiency in both languages.

Student's language abilities will be assessed during the interview. If a student is not able to participate in the interview in person, he/she must include an official report of their Test of English as a Foreign Language (TOEFL) scores with their application

Graduation

Students must apply and pay the corresponding graduation fee no later than the date set in the Academic Calendar. Application forms for this purpose are obtained from the Registrar's Office, and must be mailed or delivered together with a copy of the receipt of payment of the \$200.00 non-refundable graduation fee to the Bursar's Office. Non compliance with these requirements may postpone the conferring of the degree.

Time Limitations

PhD Degree

Students will be allowed a maximum of seven years to complete the degree requirements.

MS/MA Degree

Students will be allowed a maximum of four years to complete the degree requirements.

The student must complete all requirements by June 30 of his fourth year, the last day of the academic year. Under exceptional circumstances, the Graduate Program in Biomedical Sciences Committee may extend these periods for one (1) year.

Extension Request Procedure

The student will write a letter explaining the need for the extended period and the reasons why he/she could not complete the degree in the allowed time. The mentor will write a letter agreeing to continue being the

mentor of the student and detailing a plan for the student to complete the graduation requirements in a year period. The Graduate Program in Biomedical Sciences Committee will examine the documents presented and render a decision.

Course Load

PhD Degree

A full-time load consists of no less than eighteen (18) credits per academic year. Students must register every term; failure to do so will automatically result in the student being dropped from the Program. Student must remain enrolled until completing all graduation requirements and delivering the final version of their Dissertation. If the student is dropped and wants to reenter in the Program, the student must reapply and go through the admissions process. Courses of the doctoral program are valid for seven years

MS/MA Degree

A full time load consists of not less than nine (9) credits per academic year and two courses per semester. A student enrolled in Thesis work is considered a full-time student. Students must register every term; failure to do so will automatically withdraw the student from the Program. Student must remain registered until completing all graduation requirements and delivering the final version of their Thesis. In the event of withdrawal, a new application must be submitted if the student desires to continue in the Program

Curricular programs for the PhD, MS and MA degrees

Individual programs of study will be prepared for each student. These programs of study are designed to meet the specific requirements of each student. Once the designated program of study is approved, a student must comply with the course requirements established in his/her program of study in order to graduate.

Courses of Study

Doctor of Philosophy in Cellular and Molecular Biology

First Year

Code	Course Title	Credits
BMS 500A	Responsible Conduct of Research	2
BMS 501	Introduction to Experimental Design	1
BMS 505	Introduction to Education and Teaching	1
BMS 510G	Biochemistry and Cell Biology	6
BMS 512A	Critical Thinking	2
BMS 860	Scientific Methodology	2
BMS 861A	Biostatistics	3
BMS 862A	Research Laboratory Rotations	1

Second Year

Code	Course Title	Credits
BMS 523B	Molecular Biology	6
BMS 899	Graduate Research	5
BMS 879A	Seminar in Cellular and Molecular Biology	1
BMS	Electives	6

Third Year

Code	Course Title	Credits
BMS 899	Graduate Research	10
BMS 909	Research Seminar	1
BMS	Electives	7

Fourth Year

Code	Course Title	Credits
BMS 899	Graduate Research	17
BMS 909	Research Seminar	1

Total credits: 72

Note: Students in the PhD in Cellular and Molecular Biology, may select and organize elective courses, according to their research interests, and in coordination with his/her academic advisor or mentor.

Doctor of Philosophy in Neurosciences

First Year

Code	Course Title	Credits
BMS 500A	Responsible Conduct of Research	2
BMS 501	Introduction to Experimental Design	1
BMS 505	Introduction to Education and Teaching	1
BMS 510G	Biochemistry and Cell Biology	6
BMS 512A	Critical Thinking	2
BMS 860	Scientific Methodology	2
BMS 861A	Biostatistics	3
BMS 862A	Research Laboratory Rotations	1

Second Year

Code	Course Title	Credits
BMS 580A	Neuroscience	6
BMS 889	Seminar in Neuroscience	1
BMS 899	Graduate Research	5
BMS	Electives	6

Third Year

Code	Course Title	Credits
BMS 580B	Advance Neuroscience	3
BMS 899	Graduate Research	10
BMS 909	Research Seminar	1
BMS	Electives	4

Fourth Year

Code	Course Title	Credits
BMS 899	Graduate Research	17
BMS 909	Research Seminar	1

Total credits: 72

Master of Arts in Biomedical Sciences

First Year

Code	Course Title	Credits
BMS 500A	Responsible Conduct of Research	2
BMS 501	Introduction to Experimental Design	1
BMS 510G	Biochemistry and Cell Biology	6
BMS 860	Scientific Methodology	2
BMS 861A	Biostatistics	3

Second Year

Code	Course Title	Credits
BMS	Electives	10
BMS869	Seminar in Biomedical Science	2

Third Year

Code	Course Title	Credits
BMS	Electives	10

Total credits: 36

Master of Arts in Biomedical Sciences in Anatomy and Cellular Biology

First Year

Code	Course Title	Credits
BMS 500A	Responsible Conduct of Research	2
BMS 501	Introduction to Experimental Design	1
BMS 860	Scientific Methodology	2
BMS 861A	Biostatistics	3
BMS	Electives	8

Second Year

Code	Course Title	Credits
BMS	Electives	16

Third Year

Code	Course Title	Credits
BMS 809	Seminar in Anatomy and Cell Biology	2
BMS 868	Bibliographic Report	2

Total credits: 36

Master of Arts in Biomedical Sciences in Physiology

First Year

Code	Course Title	Credits
BMS 500A	Responsible Conduct of Research	2
BMS 501	Introduction to Experimental Design	1
BMS 510G	Biochemistry and Cell Biology	6
BMS 860	Scientific Methodology	2
BMS 861A	Biostatistics	3
BMS 862B	Research Laboratory Rotations B	2

Second Year

Code	Course Title	Credits
BMS 530B	Physiology	6
BMS 830	Neurophysiology	5
BMS 839	Seminar in Physiology	1
BMS 868	Bibliographic Report	1

Third Year

Code	Course Title	Credits
BMS 839	Seminar in Physiology	1
BMS 868	Bibliographic Report	1
BMS	Electives	5

Total credits: 36

Master of Arts in Biomedical Sciences in Microbiology and Immunology

First Year

Code	Course Title	Credits
BMS 500A	Responsible Conduct of Research	2
BMS 501	Introduction to Experimental Design	1
BMS 510G	Biochemistry and Cell Biology	6
BMS 821	Immunology	3
BMS 860	Scientific Methodology	2
BMS 861A	Biostatistics	3
BMS 862A	Research Laboratory Rotations	1

Second Year

Code	Course Title	Credits
BMS 820C	Medical Bacteriology	2
BMS 822A	Parasitology	2
BMS 825A	Mycology	2

BMS 826A	Virology	2
BMS 829A	Diagnostic Bacteriology	2
BMS 868	Bibliographic Report	1
BMS	Electives	4

Third Year

Code	Course Title	Credits
BMS 859	Seminar in Microbiology and Immunology	2
BMS 868	Bibliographic Report	1

Total credits: 36

Master of Science in Biomedical Sciences in Anatomy and Cellular Biology

First Year

Code	Course Title	Credits
BMS 500A	Responsible Conduct of Research	2
BMS 501	Introduction to Experimental Design	1
BMS 860	Scientific Methodology	2
BMS 861A	Biostatistics	3
BMS	Electives	6

Second Year

Code	Course Title	Credits
BMS	Electives	14
BMS 899	Graduate Research	2

Third Year

Code	Course Title	Credits
BMS 809	Seminar in Anatomy and Cell Biology	2
BMS 899	Graduate Research	4

Total credits: 36

Master of Science in Biomedical Sciences in Biochemistry

First Year

Code	Course Title	Credits
BMS 500A	Responsible Conduct of Research	2
BMS 501	Introduction to Experimental Design	1
BMS 510G	Biochemistry and Cell Biology	6
BMS 512A	Critical Thinking	2
BMS 860	Scientific Methodology	2
BMS 861A	Biostatistics	3
BMS 862B	Research Laboratory Rotation B	2

Second Year

Code	Course Title	Credits
BMS 523B	Molecular Biology	6
BMS 819	Seminar in Biochemistry	1
BMS	Electives	4
BMS 899	Graduate Research	4

Third Year

Code	Course Title	Credits
BMS 819	Seminar in Biochemistry	1
BMS 899	Graduate Research	4

Total credits: 36

Master of Science in Biomedical Sciences in Pharmacology

First Year

Code	Course Title	Credits
BMS 500A	Responsible Conduct of Research	2
BMS 501	Introduction to Experimental Design	1
BMS 510G	Biochemistry and Cell Biology	6
BMS 860	Scientific Methodology	2
BMS 861A	Biostatistics	3
BMS 862B	Research Laboratory Rotations B	2

Second Year

Code	Course Title	Credits
BMS 540	Medical Pharmacology	6
BMS 849	Seminar in Pharmacology	1
BMS	Electives	3
BMS 899	Graduate Research	2

Third Year

Code	Course Title	Credits
BMS 849	Seminar in Pharmacology	1
BMS	Electives	3
BMS 899	Graduate Research	4

Total credits: 36

Master of Science in Biomedical Sciences in Physiology

First Year

Code	Course Title	Credits
BMS 500A	Responsible Conduct of Research	2
BMS 501	Introduction to Experimental Design	1
BMS 510G	Biochemistry and Cell Biology	6
BMS 860	Scientific Methodology	2
BMS 861A	Biostatistics	3
BMS 862A	Research Laboratory Rotations	1

Second Year

Code	Course Title	Credits
BMS 530B	Physiology	6
BMS 830	Neurophysiology	5
BMS 839	Seminar in Physiology	1
BMS 899	Graduate Research	2

Third Year

Code	Course Title	Credits
BMS 839	Seminar in Physiology	1
BMS	Electives	2
BMS 899	Graduate Research	4

Total credits: 36

Master of Science in Biomedical Sciences in Microbiology and Immunology

First Year

Code	Course Title	Credits
BMS 500A	Responsible Conduct of Research	2
BMS 501	Introduction to Experimental Design	1
BMS 510G	Biochemistry and Cell Biology	6
BMS 821B	Immunology	3
BMS 860	Scientific Methodology	2
BMS 861A	Biostatistics	3
BMS 862A	Research Laboratory Rotations	1

Second Year

Code	Course Title	Credits
BMS 820C	Medical Bacteriology	2
BMS 822A	Parasitology	2
BMS 825A	Mycology	2
BMS 826A	Virology	2
BMS 829A	Diagnostic Bacteriology	2
BMS 899	Graduate Research	2

Third Year

Code	Description	Credits
BMS 859	Seminar in Microbiology and Immunology	2
BMS 899	Graduate Research	4

Total credits: 36

Master of Science in Neuroscience

First Year

Code	Course Title	Credits
BMS 500A	Responsible Conduct of Research	2
BMS 501	Introduction to Experimental Design	1
BMS 510G	Biochemistry and Cell Biology	6
BMS 860	Scientific Methodology	2
BMS 861A	Biostatistics	3
BMS 862A	Research Laboratory Rotations	1

Second Year

Code	Course Title	Credits
BMS 580A	Neuroscience	6
BMS 580B	Advanced Neurosciences	3
BMS 889	Seminar in Neurosciences	1
BMS	Electives	4
BMS 899	Graduate Research	2

Third Year

Code	Course Title	Credits
BMS 889	Seminar in Neurosciences	1
BMS 899	Graduate Research	4

Total credits: 36

Elective Courses

Course Code	Course Title	Credits
BMS 502	Human Gross and Developmental Anatomy	8
BMS 530B	Physiology	6
BMS 580A	Neurosciences	6
BMS 580B	Advance Neurosciences	3
BMS 580C	Medical Neurosciences	6
BMS 801	Teaching in Anatomy	
BMS 806	Developmental Anatomy	2
BMS 807	Microanatomy	5
BMS 802	Neuroanatomy	4
BMS 810	Comparative Anatomy	4
BMS 811	RNA	2
BMS 812	Epigenetics	2
BMS 813	Enzymology and Kinetics	2
BMS 814	Metabolism	2
BMS 815	Protein Structure and Function	2

Course Code	Course Title	Credits
BMS 816	Gene Expression and Protein Synthesis	2
BMS 817	Signal Transduction	2
BMS 819	Seminar in Biochemistry	1
BMS 820C	Medical Bacteriology	2
BMS 821B	Immunology	3
BMS 822	Parasitology	2
BMS 823	Cell Culture	2
BMS 824B	Cellular and Molecular Microbiology	3
BMS 825	Mycology	2
BMS 826A	Virology	3
BMS 829A	Diagnostic Bacteriology	3
BMS 830	Neurophysiology	5
BMS 831	Membrane Transport	2
BMS 832	Cardiovascular Physiology	2
BMS 833	Renal Physiology	2
BMS 834	Advanced Neurophysiology	2
BMS 839	Seminar in Physiology	1
BMS 841	Biochemical Pharmacology	3
BMS 843	Principles of Chemotherapy	2
BMS 859	Seminar in Microbiology and Immunology	1
BMS 863A	Cancer Biology	2
BMS 864A	Cancer Molecular Biology	2
BMS 865	Scientific Communication	2
BMS 866	Grant Writing	3
BMS 867A	Glial-Neuronal Cell Interactions in Biology and Disease	2
BMS 870-874	Topics in (Specify)	1 each
BMS 875A	Cell Growth and Death	2
BMS 876A	Immunopathology	2
BMS 877A	Molecular Immunology	2
BMS 878A	Cytoskeleton and Cell Motility	2
BMS 879	Seminar in Cellular and Molecular Biology	1
BMS 880	Adult Learning Evaluation Techniques	1
BMS 881	Effective Teaching Techniques	1
BMS 882	Supervised Teaching	1
BMS 883A	Cell Membranes	2
BMS 884	The Endoplasmic Reticulum	2
BMS 885	The Extracellular Matrix	2
BMS 886	The Golgi	2
BMS 887	The Mitochondria	2
BMS 888	The Nucleus	2
BMS 889	Seminar in Neurosciences	1
BMS 890	Neuronal and Glial Cell Culture	2
BMS 891	Lipids	2
BMS 892	Fluorescence Microscopy	2
BMS 893	Microelectrode Techniques in Neurophysiology	3

Description of Courses

BMS 500A Responsible Conduct of Research
1 Credit

On December 1, 2000, the US Public Health Service announced final PHS Policy for Instruction in the Responsible Conduct of Research (RCR) for extramural institutions receiving PHS funds for research. This policy required covered institutions to have in place, a program of instruction that complied with the policy. This course will cover the nine core instructional areas mandated by the PHS policy: Data acquisition, management, sharing, and ownership; Mentor/trainee responsibilities; Publication practices and responsible authorship; Peer review; Collaborative science; Human subjects; Research involving animals; Research misconduct; and Conflict of interest and commitment. The teaching strategies used are lectures, individualized learning and small group discussion. Student performance will be measured through exams and attendance.

BMS 501 Introduction to Experimental Design
1 Credit

This course introduces students to basic concepts and understanding of the process for conducting appropriate research and experiments in biomedical sciences. Rather than focusing on statistics, the emphasis is on the methodological aspects and the logical steps needed for implementing experimental designs and ensure reproducibility. Course objectives will be achieved through lectures, group discussions and individualize learning. Evaluation strategies include class participation, oral presentations and written reports. Students will incorporate gained knowledge to develop methodological steps for one area of a particular research interest. Attendance is required.

BMS 505 Introduction to Education and Teaching
1 Credit

The course provides an introduction to the basics of classroom management, preparation of syllabus, teaching technology, learning theory, adult learners, evaluation of performance, types of exams. Teaching strategies include lecture, individualize learning, discussion, and practical exercises. Student performance will be assessed through exams and evaluation of exercises.

BMS 512A Critical Thinking
2 Credits

The purpose of this course is to train students in the art of reasoning and critical thinking in the pursuit of answers to biological questions. The course encourages the active practice of critical reasoning, evaluation, and discussion. Students learn how to construct, defend, and criticize arguments; identify and assess tacit assumptions; and gather and evaluate evidence. The teaching strategies used are individualized learning and small group discussion. Student performance will be assessed through oral presentations and exams.

BMS 523B Molecular Biology I
6 Credits

Molecular biology is a course that is designed to present and discuss the applications of molecular biology techniques. Throughout the course, the students will discuss experiments that define this field and examine the experimental designs used to prove the discoveries discussed, interpret the results and draw conclusions. Current topics will be based on the literature of recent advancements in the field and will also highlight experiments used. The teaching strategies used include lectures and small group discussions. Student performance will be assessed through examinations, participation in class discussions and preparation of a specific aims page.

BMS 580A Neurosciences
Prerequisite: BMS 510G
6 Credits

An introduction to fundamental aspects of nervous system function. Topics will include neurosignaling, neuroplasticity, neuroanatomy and brain function. Introduction to fundamental aspects of nervous system development, including neural determination, axon guidance, and neuron-target interactions, and overview of basics of integrative neural function, including sensory, motor and limbic systems, and computational

neuroscience. The teaching strategies used in the course are lectures, individualized learning and oral presentations. Student performance will be evaluated by exams and oral presentations.

BMS 580B **Advanced Neurosciences**
3 Credits
Prerequisite: BMS 580A

The objective of Advanced Neurosciences is to deepen knowledge in neurosciences and to learn how to identify current frontiers in a field. To become a successful scientist in a research field one needs to know where the 'field is going'. For the development of a vision of the current direction in a research field several skills are required: 1) knowledge of the literature, 2) critical thinking, and 3) communication skills. Introductory lectures will be given by faculty members for each topic. The topics will be further deepened during interactive group discussion. During group discussions original research papers and review articles are presented by students and discussed by the group. Student performance will be assessed through an exam and oral presentations.

BMS 580C **Medical Neurosciences**
6 Credits

The course covers topics ranging from neuronal structure and function, communication at the synapse, membrane receptors and intra- and intercellular signaling systems, to the gross organization of the brain and spinal cord, the processing of sensory information, the programming of motor responses, and higher functions such as learning, memory, cognition, and speech. During the course, the student will become acquainted with the use of monoclonal antibodies, gene cloning, cell labeling and tracing, patch clamping and radioligand binding methods which have shed light into the structure and function of the basic unit of brain tissue, the neuron. The student will also be introduced to noninvasive approaches and instruments for the in-vivo study and analysis of brain tissue, NMR, CAT and PET scans. Finally, this knowledge shall lead the student to a better understanding of the principles underlying the rational pharmacological therapy of diseases related to the nervous tissue, and the new perspectives in therapy of these pathological conditions. The course includes a practical laboratory component. The course goals are reached through diverse educational strategies such as: lectures, laboratories, small and large group discussions. Evaluation is based on written exams and practical computer-based examination using the LXR testing program. In addition, written exams and quizzes using the Personal Response System (PRS) are incorporated both as formative as well as summative strategies.

BMS 811 **RNA**
2 Credits

This course focuses on RNA. The course consists of lectures given by the participating faculty and presentations and discussions of current research and review papers by students. Active student participation is expected at all times. Student performance will be evaluated by exams and participation in class discussions.

BMS 812 **Epigenetics**
2 Credits

This course focuses on epigenetics. The course consists of lectures given by the participating faculty and presentations and discussions of current research and review papers by students. Active student participation is expected at all times. Student performance will be evaluated by exams and participation in class discussions.

BMS 823 **Cell Culture**
2 Credits

The requirements for a cell culture laboratory, from the standpoint of cell protection and control of biohazards for personnel are discussed, including special laboratory practices and equipment. Aseptic techniques specific to the tissue culture laboratory will be presented. The specific nutritional requisites for different types of cells are considered and how these specific nutrient requirements vary according to the type of cell, use, applications, purpose of the culture and its functions. Within culture conditions the physical requisites for gas exchanges, buffering systems and characteristics and uses are also considered, including adherent and non-adherent cultures; primary, long-term and transformed cell cultures. Sources of cells, initiation of cultures and storage techniques are considered. Principles of good cell keeping are stressed, including routine record

keeping, routine inspection of laboratory equipment. The most frequent applications of cell cultures, as well as procedures for cell phenotyping are studied. The teaching strategies used are lectures and laboratory exercises. Student performance will be assessed through exams and laboratories

BMS 831 **Membrane Transport**
2 Credits

This course discusses fundamental concepts involving the transport of molecules and ions across biological membrane, including discussion of passive and active transport, as well as other transport processes. Examples from selected papers will be presented to illustrate the above concepts. Clinical correlations will also be presented in order to illustrate the importance of the basic concepts on clinical situations. The teaching strategy used in this course is small group discussion. Student performance will be evaluated through class participation and an oral presentation.

BMS 860 **Scientific Methodology**
2 Credits

This course will introduce basic concepts of scientific methods commonly used in biomedical research. All students will be required to actively participate in theoretical and practical discussions of scientific research and procedures. They will be given assignments of different topics to help them deepen their understanding of the material. The teaching strategy used in this course is lectures. Student performance will be evaluated through class participation and exams.

BMS 861A **Biostatistics**
3 Credits

This is essentially a two-part introductory course. Initially, there will be lectures to familiarize the students with the basic concepts of statistics, statistical analysis, and data manipulation. Depending on student background, the lectures will begin with fundamental explanations of means, modes, normal distribution, variance standard deviation, continuing with hypothesis testing, confidence levels, standard error, regression line, correlation, multiple regression, students T-test chi-square, and ANOVAs. Following the didactic portion of the course, students will be exposed to demonstrations on the use of the computer for accessing statistical and database programs. Small projects will be assigned or devised by the students to demonstrate proficiency in experimental design and data interpretation. The teaching strategies used in this course are lectures and laboratories. Student performance will be evaluated through class participation and exams.

BMS 862A/B **Research Laboratories Rotations**
1/2 Credits

Research laboratory rotations are intended to introduce students to the laboratory opportunities available through the Graduate Program in Biomedical Sciences. Students will rotate through not less than three different active research laboratories in such a way that the experience they acquire during these rotations will help them decide their area of interest and the mentor under whose supervision he/she will train. Eight weeks of rotation will be equivalent to 1 credit hour. Students are expected to work six hours a week in the laboratory. The teaching strategy used in this course is laboratory work. Student performance will be evaluated through their performance in the research laboratory.

BMS 863A **Cancer Biology**
Prerequisite: BMS 510F
3 Credits

This course presents the principles of cancer biology. The topics that will be covered in the course include growth factors, control of the cell cycle, multistep tumorigenesis, invasion and metastasis, among others. The course consists of lectures given by the participating faculty and presentations and discussions of current research and review papers by students. Active student participation is expected at all times. Student performance will be evaluated by exams and participation in class discussions

BMS 864A Cancer Molecular Biology
Prerequisite: BMS 863A
2 Credits

This course is designed to provide students with a thorough and in-depth understanding of fundamental concepts in cancer biology at the cellular and molecular levels. The topics that will be covered in the course include oncogenes and tumor suppressor genes, cell cycle regulation, signal transduction pathways, apoptosis, DNA repair mechanisms, tumor immunology, animal models for human cancers, cancer therapy and cancer epigenetics, among others. The course consists of lectures given by the participating faculty and presentations and discussions of current research and review papers by students. Active student participation is expected at all times. Student performance will be evaluated by exams and participation in class discussions.

BMS 865A Scientific Communication
2 Credits

This course provides instruction and examples on the different aspects of use of the written and oral language, and graphic representations. The course aims to build a foundation for students to engage in effective scientific communication. The teaching strategies to be used include: lectures, individualized learning, small group discussions and critiques of written and oral examples. Students' performance will be measured through evaluations of written and oral presentations, written assignments, class discussion and evaluation by peers. Full attendance is required.

BMS 866 Grant Writing
3 Credit

The course goes through the process of writing the F31 grant for PhD students turning a gap in knowledge into a proposal. Students will enter the course with a hypothesis and preliminary data and will be expected to submit a F31 grant either during or just after the course. The course will cover the NIH proposal, review process, and revisions. Evaluation will be by assignments, presentations, participation in the review process and tests.

BMS 867 Glial-Neuronal Cell Interactions in Biology and Disease
2 Credits

This course is designed to provide students with a thorough and in-depth understanding of glial-neuronal cell interactions. The topics that will be covered in the course include morphology of glial cells, glial development, and physiology of glial cells, among others. The course consists of lectures given by the participating faculty and presentations and discussions of current research and review papers by students. Active student participation is expected at all times. Student performance will be evaluated by exams and participation in class discussions.

BMS 868A/B/C Bibliographic Report
1 Credit

A library review of a topic assigned by the student's mentor or the Committee. Required of all students registered for the MA degree. See the Bibliographic Report Formatting section for details on how to prepare the document. Bibliographic Reports will be evaluated with GPBSF 19.

BMS 869A/B Seminar in the Biomedical Sciences
1 Credit

This course consists of an oral presentation in a seminar format of a relevant topic within the area of specialization. The student, upon consultation with the mentor or other academic advisor, will select the topic. The topic may be from directed readings or from the student's research. The faculty will provide assistance to the student in preparing for the seminar presentation. The student's course grade will be based on faculty evaluation of the seminar. The course consists of a one-hour seminar and a minimum of 23 hours of preparation including readings to prepare for the seminar, therefore the course is worth one credit hour.

MS/MA students are required to present two seminars. BMS 869A will be used for the first seminar offered and BMS 869B for the second.

BMS 870-874 Topics (Specify)
1 Credit

Graded or Pass/Fail (Certificate of Participation)

The topics course has been designed to provide the graduate student with the theoretical background and practical experience required for the in-depth understanding of specialized topics of interest to the student. The teaching strategy used in the course is small group discussion. Student performance will be assessed by either presentations, exams, written reports and/or class participation. The student and faculty member will determine their meeting schedule.

BMS 875A Cell Growth and Death
2 Credits

This course covers in-depth mechanisms related to cell growth and death. The topics that will be covered in the course include apoptosis, autophagy, necrosis, intrinsic and extrinsic apoptotic signal cascades, caspase-independent cell death, mitochondrial death effectors, anti-apoptotic proteins, and intracellular proteases. The course consists of lectures given by the participating faculty and presentations and discussions of current research and review papers by students. Active student participation is expected at all times. Student performance will be evaluated by exams and participation in class discussions.

BMS 876A Immunopathology
Prerequisite: BMS 821B
2 Credits

This course covers in-depth immune mechanisms of disease including immunodeficiencies, hypersensitivity disorders and autoimmunity. The course consists of lectures given by the participating faculty and presentations and discussions of current research and review papers by students. Active student participation is expected at all times. Student performance will be evaluated by exams and participation in class discussions.

BMS 877A Molecular Immunology
Prerequisite: BMS 821B
2 Credits

This course covers in-depth the molecular mechanisms involved in mounting an immune response. Topics include generation of antibodies, antigen processing and presentation, lymphocyte activation and immune regulation. The course consists of lectures given by the participating faculty and presentations and discussions of current research and review papers by students. Active student participation is expected at all times. Student performance will be evaluated by exams and participation in class discussions.

BMS 878A Cytoskeleton and Cell Motility
2 Credits

This course focuses on the components of the cytoskeleton and actin-based cell motility. The course consists of lectures given by the participating faculty and presentations and discussions of current research and review papers by students. Active student participation is expected at all times. Student performance will be evaluated by exams and participation in class discussions.

BMS 879A/B Seminar in Cell and Molecular Biology
1 Credit

This course consists of an oral presentation in a seminar format of a relevant topic within the area of specialization. The student upon consultation with the mentor or other academic advisor will select the topic. The topic may be from directed readings or from the student's research. The faculty will provide assistance to the student in preparing for the seminar presentation. The seminar is not the presentation of a research publication (single paper). It is intended to develop in the students the capacity to prepare a class on a specified topic. The student's course grade will be based on faculty evaluation of the seminar. The course consists of a one-hour seminar and a minimum of 23 hours of preparation including readings to prepare for the seminar, therefore the course is worth one credit hour. The seminar will be announced and open to the academic community. GPBSF 14 Seminar Presentation Evaluation Form will be used to evaluate students' presentations. MS students are required to present two seminars. BMS 819A will be used for the first seminar offered by the student and BMS 819B for the second.

BMS 880 **Adult Learning and Evaluation Techniques**
1 Credit

In this course students will learn in more detail about learning theory, characteristics of adult learners, what motivates adults to learn, evaluation of performance, effective methods of giving feedback, grading practices, types of exams, construction of effective exams and alternative testing methods. Teaching strategies include lecture, individualize learning, discussion, and practical exercises. Student performance will be assessed through exams and evaluation of exercises.

BMS 881 **Effective Teaching Techniques**

1 Credit

In this course students will learn in more detail about methodology of effective teaching techniques. Topics will include strengths and limitations of teaching methods, advantages and disadvantages of different types of visual aids, selection of delivery strategy, how to improve retention of information, positive and negative transference, positive reinforcement vs. negative reinforcement. The teaching strategies include lecture and practical exercises. Student performance will be assessed through exams and evaluation of exercise

BMS 882 **Supervised Teaching**

1 Credit

This elective is designed to provide students with experience in teaching and to improve the students' teaching skills. Students will serve as instructors to new graduate students providing a laboratory safety lecture and introducing new graduate students to the use of laboratory equipment, including a laboratory exercise. Following the teaching format of an undergraduate laboratory course, the students will prepare an introductory lecture to a laboratory exercise that will be followed with a laboratory session. The student's course grade will be based on the evaluation of the two lectures and the laboratory exercise. Prerequisite: Adult Learning and Evaluation Techniques, Effective Teaching Techniques

BMS 883A **Cell Membranes**
2 Credits

This course focuses on the organization of cellular membranes. Topics include membrane lipids, membrane proteins, and membrane related structures. The course consists of lectures given by the participating faculty and presentations and discussions of current research and review papers by students. Active student participation is expected at all times. Student performance will be evaluated by exams and participation in class discussions.

BMS 884 **The Endoplasmic Reticulum**
2 Credits

This course focuses on the endoplasmic reticulum. The course consists of lectures given by the participating faculty and presentations and discussions of current research and review papers by students. Active student participation is expected at all times. Student performance will be evaluated by exams and participation in class discussions.

BMS 885 **The Extracellular Matrix**
2 Credits

This course focuses on the extracellular matrix. The course consists of lectures given by the participating faculty and presentations and discussions of current research and review papers by students. Active student participation is expected at all times. Student performance will be evaluated by exams and participation in class discussions.

BMS 886 **The Golgi**
2 Credits

This course focuses on the golgi. The course consists of lectures given by the participating faculty and presentations and discussions of current research and review papers by students. Active student participation is expected at all times. Student performance will be evaluated by exams and participation in class discussions.

BMS 887 **The Mitochondria**
2 Credits

This course focuses on the mitochondria. The course consists of lectures given by the participating faculty and presentations and discussions of current research and review papers by students. Active student participation is expected at all times. Student performance will be evaluated by exams and participation in class discussions.

BMS 888 **The Nucleus**
2 Credits

This course focuses on the nucleus. The course consists of lectures given by the participating faculty and presentations and discussions of current research and review papers by students. Active student participation is expected at all times. Student performance will be evaluated by exams and participation in class discussions.

BMS 891 **Lipids**
2 Credits

This course focuses on lipids. The course consists of lectures given by the participating faculty and presentations and discussions of current research and review papers by students. Active student participation is expected at all times. Student performance will be evaluated by exams and participation in class discussions.

BMS 892 **Fluorescence Microscopy**
2 Credits

Provides students with practical knowledge of fluorescence microscopy methods and possible applications to their research. The course will cover the different aspects of modern microscopy, such as: hardware, optics, lighting, fluorescent labels, sample preparation, decoding cell components, probing cell structure-function, confocal microscopy, image acquisition and quantitative image analysis. Discussion of research articles will demonstrate and extend what is learned in lectures. The teaching strategies used are lectures, individualized learning and small group discussion. Student performance will be measured through exams, oral presentations and attendance.

BMS 893 **Microelectrode Techniques in Neurophysiology**
3 Credit

The purpose of this course is to expose the students to the basic terms, concepts and methods of electrical activity measurement in the biological systems, with a special emphasis on microelectrode techniques used in the field of neurophysiology. The course will include theoretical classes, calculations and problem solving exercises and demonstration of the selected electrophysiological techniques in the rodent brain slices. Student performance will be measured through exams and attendance.

BMS 899 **Graduate Research**
Variable
Grading is Pass or Fail

The student will perform faculty-supervised research in the laboratory with a faculty member who will serve as the student's research advisor. This research will be the basis for the written dissertation or thesis, which is required for the PhD or MS degree, respectively. The main objective is to develop a specific research project and produce meaningful data, which can contribute further knowledge in the area. The data should be publishable in a peer-reviewed journal and acceptable for presentation as a written dissertation or thesis as partial fulfillment of the requirement for the PhD or MS degree. Upon completion, the student will present his/her research in seminar form to the academic community as a final defense of the dissertation or thesis. The teaching strategies used in this course are individualized learning and laboratory work. Student performance will be assessed through their performance in the research laboratory and dissertation or thesis defense.

BMS 909 RESEARCH SEMINAR
 1 Credit
 Grading is Pass or Fail

Beginning on the first semester of their third year, students will enroll in one (1) credit of Research Seminars every semester that they remain active in the program. The course will consist of weekly meetings in which the students will present their research projects and current results. The course will provide students with the experience of presenting their research to a multidisciplinary audience and practice their presentation skills. On average students will present once per year. For students with no other coursework, a full-time load will be 8 credits of BMS 899 Graduate Research and 1 credit of BMS 909. Grading will be based on student attendance. Seven (7) or more absences per semester will result in a failing grade. Students attending a scientific meeting will be excused from that week's seminar. Students performing research and/or visiting the laboratories outside of UCC will participate in seminars at the visiting institution to meet attendance requirements. The PI of the host laboratory will certify attendance.

Department of Anatomy and Cell Biology

BMS 502 Human Gross and Developmental Anatomy
 8 Credits

This course surveys the regional, functional and developmental anatomy of the human body with emphasis on the anatomical correlates of clinical medicine. The study and visualization of the different components of the human body is accomplished through a complete dissection and prosection of the human body in the following sequence: Back, Upper and Lower Limbs, Thorax; Head and Neck; Abdomen, Pelvis and Perineum.

BMS 801 Teaching in Anatomy
 2 Credits

This course will provide students with an overview of basic principles and methodology in education as well as the opportunity to utilize these concepts while serving as teacher aids in the morphology courses taught throughout the academic year by the Department of Anatomy. All the first year Biomedical Sciences Morphology Courses are pre-requisites.

BMS 802 Neuroanatomy
 4 Credits

This course deals with the general organization and meaning of the nervous system, its embryology and histological structure. The organization and segmental distribution of the peripheral nerve elements and the architectonics of the Central Nervous System are studied by levels. The main sensory (ascending) and motor (descending) pathways are discussed in relationship to cortical organization. Topics in neurophysiology are included to integrate structural and functional features of the CNS. Currently, this course is based on the medical sciences course on Neurosciences which is offered during the second semester; however, the student will benefit from attending other sections of this course besides the Neuroanatomy component to get an insight into the physiology, biochemistry and pharmacology pertinent to this area. The course also includes a practical laboratory component.

BMS 806 Developmental Anatomy
 2 Credits

This course provides a current account of the human embryonic development taking into account (1) normal morphology and function, (2) the new technology that allows the manipulation and study of the human embryo and fetal development, (3) the developmental basis for the more important congenital abnormalities, and (4) clinical correlations to further emphasize the practical implications of such malformations. Part one of the course covers in detail the early development, the function of the structures and tissues, and the relationship between the mother and fetus. An overview of the main changes from the third month to birth introduces the student to the next section of the course, bringing together the entire process of embryonic development to result in the birth of the fetus. Part two discusses in detail the development of the body systems, both normally and in the development of anomalies, emphasizing the immediate and normal adaptations in each system necessary for life outside the womb. New tools and techniques such as ultrasound and other imaging modalities have provided new ways of visualizing living embryos; however, these techniques are presented in the discussion of specific systems due to the time constraints of the course.

BMS 807 **Microanatomy**
5 Credits

The first part of the course, cell and basic tissues, will prepare those who have no experience in histology with the background necessary to understand the normal morphological adaptations and modifications of tissues in the formation of organs, and enable the student to understand why these adaptations and modifications provide the body with the basic and fundamental functions to have and maintain a general well-being. Outlining the principal methods employed in the microscopic study of cells, tissues, and organs will set the stage for the subsequent detailed study of the cells and tissues of the body in other basic sciences courses. The course requires a general knowledge of cellular and molecular biology as well as familiarity in the usage of the bright field binocular microscope.

BMS 809A/B **Seminar in Anatomy and Cell Biology**
1 Credit

This course consists of an oral presentation in a seminar format of a relevant topic within the area of specialization. The student upon consultation with the mentor or other academic advisor will select the topic. The topic may be from directed readings or from the student's research. The faculty will provide assistance to the student in preparing for the seminar presentation. The seminar is not the presentation of a research publication (single paper). It is intended to develop in the students the capacity to prepare a class on a specified topic. The student's course grade will be based on faculty evaluation of the seminar. The course consists of a one-hour seminar and a minimum of 23 hours of preparation including readings to prepare for the seminar, therefore the course is worth one credit hour. The seminar will be announced and open to the academic community. GPBSF 14 Seminar Presentation Evaluation Form will be used to evaluate students' presentations. MS/MA students are required to present two seminars. BMS 809A will be used for the first seminar offered and BMS 809B for the second.

BMS 810 **Comparative Anatomy**
4 Credits

This course is a study of the structural and functional evolution of selected organ systems in representative vertebrates. It examines how organ systems work and how they evolve within a phylogenetic context. The purpose is to better understand the vertebrate design. For this purpose, the vertebrate groups are organized phylogenetically and their systems are interpreted in terms of their embryological development, phylogeny and functional adaptations. The main emphasis is given to the morphology and structural organization of organ systems and how they undergo adaptive changes on the basic vertebrate body plan.

Short writing assignments will be given to be discussed in every discussion session. Satisfactory completion of all assignments will be required to pass the course, but the assignments may not receive a letter grade.

Department of Biochemistry

BMS 510G **Biochemistry and Cell Biology**
6 Credits

Biochemistry and Cell Biology is a foundation course that is designed to introduce graduate students to the most important concepts of biochemistry and cell biology. The Biochemistry and Cell Biology for Graduate Students course integrates the disciplines of biochemistry and cell biology and presents the most important concepts in each. The course is conducted in the Spring semester. The Biochemistry and Cell Biology course features conferences that are taught by a team of professors with expertise in their respective fields. In these classes, the course faculty present and discuss with the students the most important course concepts. Student interaction with the presenting faculty during these classes is encouraged. Student knowledge in the Biochemistry and Cell Biology course is evaluated with course examinations.

BMS 813 **Enzymology and Kinetics**
Prerequisite: BMS 510G
2 Credits

The course emphasizes concepts and current methods of enzyme structure and kinetics. These concepts are applicable to the general field of receptor-ligand interactions. The use of mathematical models to help understand the kinetic behavior of a particular compound will also be discussed.

BMS 814 Metabolism
Prerequisite: BMS 510G
2 Credits

Topics in this course will cover metabolism of carbohydrates, lipids, amino acids and other important metabolites. The topics will be covered in depth and the relationships among them will be pointed out. Specific topics presented and discussed in this course will depend on the participating faculty and the interests of the enrolled students. Abnormalities in the pathways of each will be emphasized. Along with the lectures there will be reading assignments of journal articles related to the specific topic. Student performance will be assessed by either presentations, exams, written reports and/or class participation. The student and faculty member will determine their meeting schedule.

BMS 815 Protein Structure and Function
Prerequisite: BMS 510G
2 Credits

Topics in this course emphasize the physical and chemical bases for protein structure and function. The relationships between amino acid sequence, secondary structure, tertiary structure and activity will be discussed. Topics will include the use of site-directed mutagenesis to deduce protein function and principles of protein-protein interactions. The teaching strategies used are lectures and laboratories. Student performance will be evaluated through exams and class participation.

BMS 816 Gene Expression and Protein Synthesis
Prerequisite: BMS 510G
2 Credits

This course is an advanced study of important recent literature dealing with the structure and function of nucleic acids, biosynthesis of proteins, and the control of gene expression. The teaching strategies used are journal article discussions, oral presentations and individualized learning. Student performance will be assessed through class participation and oral presentations.

BMS 817 Signal Transduction
Prerequisite: BMS 510G, BMS 523B
2 Credits

A variety of topics in signal transduction will be covered, including the general principles of cellular communications, surface and intracellular receptors, secondary messengers and effectors, and integration of signaling pathways for physiological processes. The first half of the course will examine the mechanism of action for enzyme-linked receptors, G-Protein Coupled or Heptahelical receptors and associated proteins, and intracellular/lipid signaling. The second half of the course will integrate specific signaling pathways with important biological processes such as stem cell differentiation, abnormal cell growth, neuroprotection, and other neuronal processes. Classes will meet for 2 hours on a weekly basis for 12 sessions. Weekly reading assignments will consist of current research article(s). Students will be evaluated on the basis of a mid-term exam, class participation in the discussion of the paper, and an oral presentation on a topic of their choice.

BMS 819A/B Seminar in Biochemistry
1 Credit

This course consists of an oral presentation in a seminar format of a relevant topic within the area of specialization. The student upon consultation with the mentor or other academic advisor will select the topic. The topic may be from directed readings or from the student's research. The faculty will provide assistance to the student in preparing for the seminar presentation. The seminar is not the presentation of a research publication (single paper). It is intended to develop in the students the capacity to prepare a class on a specified topic. The student's course grade will be based on faculty evaluation of the seminar. The course consists of a one-hour seminar and a minimum of 23 hours of preparation including readings to prepare for the seminar, therefore the course is worth one credit hour. The seminar will be announced and open to the academic community. GPBSF 14 Seminar Presentation Evaluation Form will be used to evaluate students' presentations. MS students are required to present two seminars. BMS 819A will be used for the first seminar offered by the student and BMS 819B for the second.

BMS 890 Neuronal and Glial Cell Culture
 2 Credits

This course is designed to provide students with a thorough and in-depth understanding of the isolation and establishment of mixed neuronal and glial culture from postnatal rats and the maintenance of those cultures. Participants will perform preparations, learn to maintain the cell cultures, describe the cultures by direct observation and typified using immunocytochemical methods. Student performance will be evaluated through their performance in the laboratory.

Department of Microbiology & Immunology

BMS 820C Medical Bacteriology
 2 Credits

This course will introduce students to the relationship between microorganisms and human health. Principles and processes by which these microorganisms cause disease, their virulence factors, transmission, consequences and the signs and symptoms of the diseases they produce will be discussed. In addition, the methods used for the identification of pathogenic organisms as well as for their prevention and treatment will be introduced. Specific laboratory exercises and review of recently published scientific manuscripts will be included. The teaching strategies used in the course include lectures laboratories and small group discussions. Student performance will be evaluated through exams, laboratory exercises and small group discussion. This is a year-long course.

BMS 821B Immunology
 3 Credits

This course provides graduate students with a working knowledge of the immune system and the specialized vocabulary that describes it. Topics to be covered include: (1) the structure, function, and genetics of immunoglobulins, (2) T-lymphocyte antigen receptors, and major histocompatibility complex-encoded proteins, (3) the development and differentiation of lymphocytes, (4) cell-to-cell interactions in the immune system, and (5) the regulation of immune responses. It also will include laboratory exercises and discussion of scientific papers that are used to illustrate experimental approaches to current questions. The teaching strategies used in the course include lectures, laboratories, small group discussion and individualized learning. The students will be evaluated by exams and small group discussion.

BMS 822A Parasitology
 Prerequisite: BMS 821B
 2 Credits

This course encompasses the presentation and discussion of parasitic organisms of medical and veterinary importance, with emphasis on life cycles, host-parasite relationships, epidemiology, diagnostic procedures, pathogenesis, treatment, and control methods. Practical laboratory experience is included. The teaching methods utilized in the course are lectures, laboratories, small group discussions and individualized learning. Student performance will be assessed by exams, laboratories, oral and written presentations, and quizzes.

BMS 824B Cellular and Molecular Microbiology
 3 Credits

An advanced course designed for graduate students in biomedical sciences. The course emphasizes the function of microbial structures and the metabolism and control of microorganisms. The course includes the study of gene structure, genetic variations, metabolic regulation and regulation of gene expression, and recombinant DNA techniques. The basic mechanisms of action of antimicrobial agents are also considered. The laboratory exercises include techniques used, DNA extraction, protein extraction and separation, 2-D gel analysis, protein identification, genomics and proteomics. The teaching strategies used in the course include lectures, problem solving, individualized learning and oral presentations. Student performance will be measured by exams and presentations.

BMS 825A Mycology
 Prerequisite: BMS 821B
 2 Credits

This course deals with fungi of industrial and medical importance. The course will give emphasis on: morphology, structures, physiology, genetics, growth and nutrition, classification, life cycles, host-parasite,

identification, pathogenesis, contaminants and diagnostic of different mycoses, ecology, and economic importance of fungi. In laboratories, the fundamentals of general mycology and the procedures used for isolation and identification of fungi will be included. The course consists of lectures, laboratory, and critical readings of the primary literature and student presentations. Heavy emphasis will be placed on student participation. The students will be evaluated through exams, laboratories, class presentations and term papers.

BMS 826A Virology
Prerequisite: BMS 821B
2 Credits

This course consists of the study of viruses and their interaction with humans and animals. The course consists of five main units: 1) Fundamental principles of virology, detection methods and genetics; 2) Genome structure and replication; 3) Host response to viral infection; 4) Pathogenesis, prevention and control of specific virus, and emerging viruses, 5) Discussion of recent scientific articles. The teaching strategies include lectures, laboratories, small group discussion and individualized learning, and small group discussion. The students will be evaluated by exams, laboratories, oral and written presentations.

BMS 829A Diagnostic Bacteriology
Prerequisite: BMS 821B, BMS 820C
2 Credits

The course acquaints the student with microorganisms with emphasis on the bacteria in diseases of man. Theory and principles of isolation, identification, biochemical reaction, growth requirement and susceptibility testing will be considered. Theory and practical application will include lecture, demonstration, laboratory practice, audiovisual presentations, written reports/journals, and small group activities. The teaching strategies are lectures and laboratories. Student performance will be assessed by exams, laboratory reports and student presentations.

BMS 859A/B Seminar in Microbiology and Immunology
1 Credit

This course consists of an oral presentation in a seminar format of a relevant topic within the area of specialization. The student upon consultation with the mentor or other academic advisor will select the topic. The topic may be from directed readings or from the student's research. The faculty will provide assistance to the student in preparing for the seminar presentation. The seminar is not the presentation of a research publication (single paper). It is intended to develop in the students the capacity to prepare a class on a specified topic. The student's course grade will be based on faculty evaluation of the seminar. The course consists of a one-hour seminar and a minimum of 23 hours of preparation including readings to prepare for the seminar, therefore the course is worth one credit hour. The seminar will be announced and open to the academic community. GPBSF 14 Seminar Presentation Evaluation Form will be used to evaluate students' presentations. MS/MA students are required to present two seminars. BMS 859A will be used for the first seminar offered by the student and BMS 859B for the second.

Department of Pharmacology

BMS 540 Medical Pharmacology
6 Credits

The course aims to present the basic knowledge of the way drugs act upon the body; provide the essential knowledge for the understanding of drug therapy; and provide for the rational use of different drugs in clinical situations. It includes the chemistry of drugs, structure-activity relationship of different kinds of drugs, pharmacokinetics, absorption, distribution, excretion, metabolism, pharmacological actions, mechanism of action, clinical uses, side effects toxicity, adverse reactions, and interactions of substances used in the diagnosis, prevention and treatment of disease. It also emphasizes the effect of endogenous and exogenous substances at the cellular level. The course involves lectures and conferences on blocks of material such as general pharmacological principles, autonomic pharmacology, cardiovascular drugs, CNS pharmacology, pharmacology of chemotherapeutic agents, endocrine pharmacology, gastrointestinal pharmacology, autacoids and anti-histamines, prostaglandins, drug interactions and clinical toxicology.

BMS 841 Biochemical Pharmacology
Prerequisite: BMS 540 (or concurrently enrolled)
3 Credits

In this course the fundamental and basic pharmacological concepts are integrated with Biochemistry. The following topics are presented in detail: pharmacokinetics, pharmacodynamics, mechanisms of drug metabolism (cytochrome P-45- systems, transferases, etc.), ions and amino acids transport, metabolism of biogenic amines, neuronal receptors, etc.

BMS 843 Principles of Chemotherapy
2 Credits

This course encompasses such topics as general pharmacological and pharmacokinetic principles, discussion and presentation of the agents used in the treatment of infectious disease, such as antibiotics, antifungal, antiviral, antihelminthic drugs and antimalarials, cancer chemotherapy, immunotherapy and principles of drug interactions. This course is specifically designed for those students not majoring in the area of Pharmacology and whose interests are met by studying specific topics in Pharmacology.

BMS 849A/B Seminar in Pharmacology
1 Credit

This course consists of an oral presentation in a seminar format of a relevant topic within the area of specialization. The student upon consultation with the mentor or other academic advisor will select the topic. The topic may be from directed readings or from the student's research. The faculty will provide assistance to the student in preparing for the seminar presentation. The seminar is not the presentation of a research publication (single paper). It is intended to develop in the students the capacity to prepare a class on a specified topic. The student's course grade will be based on faculty evaluation of the seminar. The course consists of a one-hour seminar and a minimum of 23 hours of preparation including readings to prepare for the seminar, therefore the course is worth one credit hour. The seminar will be announced and open to the academic community. GPBSF 14 Seminar Presentation Evaluation Form will be used to evaluate students' presentations. MS students are required to present two seminars. BMS 849A will be used for the first seminar offered by the student and BMS 849B for the second.

Department of Physiology

Graduate courses

BMS 530B Physiology
6 Credits

This course offers a detailed presentation of the currently accepted concepts dealing with the manner in which the individual cells and organs are integrated into the complex functions by the living organisms as well as the processes which compose the activities of living cells and organ systems. Clinical correlations are held for the presentation and discussion of cases pertaining to each of the systems studied. Group discussions are held in which students prepare and present a case study for each system. The topics covered include the physiology of the major organ systems (neuromuscular, reticuloendothelial, cardiopulmonary, renal, gastrointestinal, endocrine and reproductive). The teaching strategies used in the course include lectures and individualized learning. Student performance will be assessed through exams and student presentations.

BMS 830 Neurophysiology
5 Credits

The course introduces students to the basic principles of neuroscience that all physiology graduate students are expected to know before embarking on their specialized research programs. Several topics will be discussed, ranging from cellular aspects of neuronal signaling to cortical mechanisms of perception and motor control. A discussion-based format with a focus on original papers, exercises and demonstrations will allow students to familiarize themselves in the fundamental issues at the heart of contemporary neuroscience. Emphasis will be given to the critical evaluation of neuronal theories of brain function. The teaching strategies used in the course are lectures, individualized learning and oral presentations. Student performance will be evaluated by exams and oral presentations.

BMS 832 Cardiovascular Physiology
Prerequisite: BMS 530
2 Credits

This course provides detailed discussion of specific topics on the physiology of the cardiovascular system, such as electrophysiology of the myocardium, cardiac work, control of cardiac function, peripheral circulation, cardiac output, pathogenesis of atherosclerosis, atrial natriuretic peptide, and inter-cellular communication in the myocardium. The teaching strategies used in the course are lectures and individualized learning. Student performance will be assessed by exams and oral presentations.

BMS 833 Renal Physiology
Prerequisite: BMS 530
2 Credits

This is a combined lecture-seminar course emphasizing special topics in renal physiology and the physiology of body fluids. Topics in renal physiology will include initially an overview of the renal physiology to then review specific mechanism of the normal function or during pathological situation to be discussed using specialized publications in the area. Students are expected to present two seminars during the course. The teaching strategies used in this course are lectures and individualized learning. Student performance will be assessed through student presentations and exams.

BMS 834B Advanced Neurophysiology
Prerequisite: BMS 530, BMS 830
2 Credits

Combined lecture-seminar course emphasizing special topics in Neurophysiology. Students, the instructor in charge of the course and invited scientists are expected to participate in seminar presentations during the course.

BMS 839A/B Seminar in Physiology
1 Credit

This course consists of an oral presentation in a seminar format of a relevant topic within the area of specialization. The student upon consultation with the mentor or other academic advisor will select the topic. The topic may be from directed readings or from the student's research. The faculty will provide assistance to the student in preparing for the seminar presentation. The seminar is not the presentation of a research publication (single paper). It is intended to develop in the students the capacity to prepare a class on a specified topic. The student's course grade will be based on faculty evaluation of the seminar. The course consists of a one-hour seminar and a minimum of 23 hours of preparation including readings to prepare for the seminar, therefore the course is worth one credit hour. The seminar will be announced and open to the academic community. GPBSF 14 Seminar Presentation Evaluation Form will be used to evaluate students' presentations. MS/MA students are required to present two seminars. BMS 839A will be used for the first seminar offered by the student and BMS 839B for the second.

Department of Neuroscience

Graduate courses

BMS 889A/B Seminar in Neurosciences
1 Credit

This course consists of an oral presentation in a seminar format of a relevant topic within the area of specialization. The student upon consultation with the mentor or other academic advisor will select the topic. The topic may be from directed readings or from the student's research. The faculty will provide assistance to the student in preparing for the seminar presentation. The seminar is not the presentation of a research publication (single paper). It is intended to develop in the students the capacity to prepare a class on a specified topic. The student's course grade will be based on faculty evaluation of the seminar. The course consists of a one-hour seminar and a minimum of 23 hours of preparation including readings to prepare for the seminar, therefore the course is worth one credit hour. The seminar will be announced and open to the academic community. GPBSF 14 Seminar Presentation Evaluation Form will be used to evaluate students' presentations. MS/MA students are required to present two seminars. BMS 839A will be used for the first seminar offered by the student and BMS 839B for the second.



SUBSTANCE ABUSE COUNSELING PROGRAM

SUBSTANCE ABUSE COUNSELING PROGRAM

Mission

The purpose of the educational program is the formation of high quality health professionals to provide excellent, high quality service in substance abuse treatment and prevention in response to current community need.

Course Load

The academic load of a full-time student will be no less than six (6) and no more than ten (10) credits each trimester.

Auditing Students

Those students who wish to audit courses may do so if they have the approval of the Program Coordinator and if they register during the registration period. They must also pay the corresponding fees.

Post-Baccalaureate Certificate in Substance Abuse Counseling

Goal

The Post-Baccalaureate Certificate in Substance Abuse Counseling trains professionals to provide addiction counseling services to individual clients, their families, groups and others in the community.

Objectives

1. Acquire competencies in knowledge, skills, and attitudes necessary for effective substance abuse counseling of individuals, groups, and families.
2. Understand and apply theoretical foundations necessary for substance abuse counseling of individuals, groups, and families.
3. Effectively perform the professional functions of an addiction counselor.
4. Apply knowledge and strategies for primary, secondary, and tertiary prevention of substance abuse.
5. Practice effective counseling within a biopsychosocial approach in diverse public and private settings.
6. Perform as member of a professional interdisciplinary team.
7. Understand various perspectives in issues related to substance abuse counseling; considering the social, political, economic, and cultural context within which substance abuse exists.

Time Limit

Students are allowed a maximum of three (3) years to complete the requirements of the Post-Baccalaureate Certificate in Substance Abuse Counseling.

Residence Requirements

Students must complete a minimum of 18 Credit Hours at the UCC.

Graduation

Students must apply and pay the corresponding graduation fee no later than the date set in the Academic Calendar. Application forms for this purpose are obtained from the Registrar's Office, and must be delivered to the Bursar's Office with the receipt of payment of the non-refundable graduation fee. Non-compliance with these requirements may postpone the conferring of the certificate.

Graduation requirements:

1. Complete the 25 Credit Hours required for the Post-Baccalaureate Certificate in Substance Abuse Counseling with a grade point average of 2.5 or higher.
2. Complete a minimum of 18 credits at the UCC.
3. Complete all requirements for the Certificate in Substance Abuse Counseling within three (3) years from the date of admission.
4. Comply with all academic and institutional requirements of the Program in Substance Abuse and the UCC.

Evaluation and Promotion Committee

The graduate student will be reviewed by a Committee on Promotions at the end of each *trimester* term to monitor academic progress. The Committee on Promotions will meet at the end of each academic year to evaluate the student academic status; the resulting recommendation will be based upon the general academic index (CQPI) on the four point scale, as follows:

1. To be in good academic standing, the student must have a grade index of 2.5 or higher.
2. If the grade index is below 2.5, the student will be on probation and will be required to repeat courses in order to achieve satisfactory academic progress. At the end of the term in which the student is repeating courses, he/she will be suspended if his/her grade index is not in good standing (2.5). Students on probation are not eligible for financial aid.
3. When a student is placed on probation, a formal written communication will be sent with the specific conditions as established by the Committee on Promotions.

Students who have been suspended indefinitely from the program may appeal their cases to the Committee on Graduate Studies, who will review the student's record and make the decision regarding whether to readmit the student or whether to recommend dismissal from the Program.

The grade index is calculated by dividing the weighted accumulated number of points by the total number of Credit Hours, including grades of F and repeated classes. Withdrawals and grades for transferred courses are not included in the calculation of the grade index.

Grade reports are sent to students at the end of each term. A certified letter is mailed to each student placed on probation or suspended. Since mail may be delayed or misdirected, it is the responsibility of every student to check with the Coordinator of the Program to determine his or her academic status before registration for the next trimester.

Courses of Study

Post-Baccalaureate Certificate in Substance Abuse Counseling

First Year

Code	Course Title	Credits
SAC 504	Human Development	3
SAC 503A	Neuropsychopharmacological Aspects of Substance Abuse	3
SAC 511	Theory and Practice of Individual Counseling	4
SAC 501A	Theoretical Models of Addictions and its Implications for Counseling	3
SAC 516	Theory and Practice of Family Counseling	3
SAC 514	Theory and Practice of Group Counseling	3
SAC 517	Ethical and Legal Aspects of Substance Abuse Counseling	2
SAC 530	Internship I: Substance Abuse Counseling	4

Total Credits: 25

Description of Courses

SAC 504 Human Development
3 Credits

The course engages in an analysis of the principal theories and concepts that have been developed to understand and explain human development through the life span. A selected group of human development theories will be discussed including: psychosexual, cognitive developmental theories (Piaget and Vigotsky), learning conditioning (Pavlov and Skinner), social learning (Bandura), cognitive behaviorism, and psychosocial (Erikson). Essential concepts drawn from the cultural theory, social role theory and humanism are discussed as they become relevant to the understanding of diversity, the psychosocial stages and developmental tasks. Following Erik Erikson's psychosocial developmental theory, the course encompasses a comprehensive analysis of the stages of development, the developmental tasks, the psychosocial crisis of each life stage, the central process for the resolution of the developmental crises, and the development of prime adaptive ego qualities and core pathologies. The impact of substance use and abuse on the biological, psychosocial and societal systems is addressed as the course progresses within a psychosocial framework discussing each developmental stage from the prenatal stage to the very old age.

SAC 503A Neuropsychopharmacological Aspects of Substance Abuse
3 Credits

This course examines the effects of psychoactive substances on various biological systems and behaviors. The pharmacokinetics (absorption, distribution, metabolism and excretion) and the pharmacodynamics (mechanisms and sites of action) of alcohol, sedative-hypnotics, barbiturates, stimulants, opiates and hallucinogens among others will be studied. The functional anatomy of the brain and neurons, the process of neurotransmission, and variations in individual responses to psychoactive substances are reviewed. Basic neuropsychopharmacological principles are discussed in terms of substance abuse treatment and prevention, and recent scientific developments and socio-historical issues pertinent to substance abuse counselors are presented.

SAC 511 Theory and Practice of Individual Counseling
4 Credits

Counseling is viewed as a process facilitating the client's achievement of constructive personal goals. Focus is placed on the student's ability to apply state-of-the-art individual counseling models and understand the implications of the stages of change to the counseling process. The theoretical basis and practice of motivational interviewing and the following counseling - cognitive, behavioral, and social learning - will be presented. Topics covered include crisis intervention, anger in the substance abuse process, relapse-prevention models, and distinct needs of special populations. Students practice the use of different assessment instruments and develop a comprehensive treatment

plan for a person with addiction-related problems. Various treatment modalities are discussed in terms of theoretical basis and effectiveness.

SAC 501A Theoretical Models of Addictions and its Implications for Counseling
3 Credits

This course provides the student with a clear articulation of what it means to be a professional substance abuse counselor. A summary introduction describes the foundation of knowledge, skills, and attitudes upon which the core functions of the substance abuse counselor are based. Selected theories are reviewed to understand the complexity of addiction for helping the student to develop a comprehensive model of substance abuse. The disease model, psychoanalytic perspective, behavioral and cognitive behavioral approaches, social learning theory, family systems theory, and the biopsychosocial paradigm are used to conceptualize addiction. The implications for substance abuse counseling associated to each model are discussed. Special emphasis is given to the development of awareness of personal constructs and these theoretical foundations in order to allow for an integration of these elements into an effective counseling approach.

SAC 514 Theory and Practice of Group Counseling
3 Credits

This course will focus on group strategies used in prevention and treatment of substance abuse. The group counseling will emphasize in-group process and the strategies designed to enhance mutual support and to acquire skills such as drug refusal. Presentation of material will be didactic and experimental. Demonstration of group work will be integrated throughout the course. An involvement in a group session outside the classroom is a course requirement.

SAC 516 Theory and Practice of Family Counseling
3 Credits

This course will focus on family strategies used in the prevention and treatment of substance abuse. The family counseling provides an overview of the interactions between family dynamics and substance abuse. Basic concepts of family systems theory will be discussed to learn the application of both didactic and experimental. Demonstrations of family counseling will be integrated throughout the course. Involvement in family sessions outside the classroom is a course requirement.

SAC 517 Ethical and Legal Aspects of Substance Abuse Counseling
2 Credits

This course examines the laws that directly affect substance abuse counseling and the ethical standards of substance abuse professionals. Topics included are: civil rights of substance abusers, confidentiality law (as amended in 1987), family law, criminal law, mental health care law, driving while intoxicated, commitment and guardianship, negligence, liability and the legal aspects of employee assistance programs. Also, the theories for ethical decision-making and the process and guidelines for reaching ethical decisions in difficult and sometimes complicated situations are presented and discussed. Particular emphasis is placed on the nature of legal and ethical obligations of the newly emerging professional substance abuse counselor in Puerto Rico.

SAC 530 Internship I: Substance Abuse Counseling
4 Credits

Internship I: Substance Abuse Counseling emphasizes the acquisition of substance abuse counseling skills and the integration of these skills into a variety of substance abuse prevention and treatment settings. A rich combination of at-risk populations, substance abuse treatment scenarios, and substance abuse counseling supervisors ensure that students acquire basic competencies in each core counselor function. An attempt is made to personalize the internship to meet each trainee's specific needs. The internship is divided into different rotations and a seminar. On each rotation the student works closely with the staff substance abuse counselor who provides supervision and guidance. The student becomes a member of the interdisciplinary team and provides counseling services to clients (individuals, family and groups), consultation to other professionals, attends interdisciplinary meetings and presents clients' progress in staff conferences. In consultation with the Internship Coordinator, the student selects internship sites from the available private and public treatment settings with which agreements have been reached. In addition to the rotations, the student is expected to participate in a two-hour seminar every other week. This didactic aspect of the internship is intended to offer academic training in areas that directly relate to the student's present and future career as a well-rounded

substance abuse counselor. The didactics include case presentations, lectures, and conferences. Topics covered in this seminar include substance abuse counseling strategies (individuals, family and group), research in neuropsychopharmacology and clinical aspects of substance abuse, and professional and ethical responsibilities of the substance abuse counselor.

*Each credit hour is equivalent to 12 contact hours of lecture or 24 hours of laboratory or 48 hours of clinical experience or independent study.

Master of Health Science in Substance Abuse Counseling

Goal and Objectives

The Master of Health Science in Substance Abuse Counseling imparts the knowledge, skills and attitudes that enable Counselors to provide and supervise counseling services and to plan, manage, and evaluate substance abuse counseling programs for prevention and treatment in public and private organizations.

The program objectives are:

1. Develop competencies to provide effective substance abuse counseling to individuals, groups, and families according to their needs and resources.
2. Develop knowledge, skills, and attitudes in management of Substance Abuse Counseling Programs.

Time Limit

Students are allowed a maximum of five (5) years to complete the requirements of the Master of Health Science in Substance Abuse Counseling.

Residence Requirements

Students must complete a minimum of 32 Credit Hours at the UCC.

Comprehensive Examination

The student must complete all courses required for the Master's degree and have achieved a CQPI of 3.00 before taking the comprehensive exam. The student must obtain 75% or higher in each topical area covered in the exam. If the student does not achieve this score, he/she will have two (2) additional opportunities to do so. Re-examination will take place no later than six (6) months after the first exam.

Dates for the comprehensive exam are announced by the Registrar's Office.

Graduation

Students must apply and pay the corresponding graduation fee no later than the date established in the Academic Calendar.

Application forms for this purpose are obtained from the Registrar's Office, and must be sent or delivered to the Bursar's Office with the receipt of payment of the non-refundable graduation fee. Non-compliance with these requirements may postpone the conferring of the degree.

Graduation requirements:

1. Complete the 44 Credit Hours required for the Master of Health Science in Substance Abuse Counseling with a grade point average of 3.0 or higher.
2. Complete a minimum of 32 credits at the UCC.
3. Pass a comprehensive exam with a minimum score of 75% in each component of the exam.

4. Comply with all academic and institutional requirements of the Program in Substance Abuse Counseling and the UCC.
5. Complete all requirements for the Master of Health Science in Substance Abuse Counseling within five (5) years from the date of admission.

Evaluation and Promotion Committee

The graduate student record is reviewed by a Committee on Promotions at the end of each *trimester* term to monitor academic progress. The Committee on Promotions meets at the end of each academic year to evaluate the student academic status. The resulting recommendations are based upon the general academic index on the four point scale, as follows:

1. To be in good academic standing, the student must have a grade index of 3.0 or higher.
2. If the grade index is below 3.0, but the deficiency does not extend beyond the limits for academic suspension, (2.5), the student will be on probation for the next academic year until he/she reaches satisfactory academic progress. Students on probation are not eligible for financial aid.
3. Any student who at the end of the second academic year has not reached satisfactory academic progress will not be eligible for taking the comprehensive exam. The Committee on Promotions will send a formal written communication with the specific conditions for the student to remain in the program if his/her academic performance in the second year is still within the limit of 2.99-2.55 (Probation). The student will be on probation and will be required to repeat courses in order to achieve satisfactory academic progress. At the end of the term in which the student is repeating courses, he/she will be suspended if his/her grade index is not in good standing 3.00. Students on probation are not eligible for financial aid.
4. A student may be suspended indefinitely from the program by:
 - a. Being on probation for two consecutive terms.
 - b. Attaining a grade index below 2.5 in any academic year

-Good Standing	3.0 +
-Probation	2.99 – 2.55
-Suspension	2.49

Students who have been suspended indefinitely from the program may appeal their cases to the Committee on Graduate Studies, who review the student's record and make the decision about whether to readmit the student or to recommend dismissal from the Program.

The grade index is calculated by dividing the weighted accumulated number of points by the total number of Credit Hours including grades of **F** and repeated classes. Withdrawals and grades from transferred courses are not included in the calculation of the grade index.

Grade reports are sent to students at the end of each term. A certified letter is mailed to each student placed on probation or suspended. Since mail may be delayed or misdirected, it is the responsibility of every student to check with the Coordinator of the Program to determine his or her academic status before registration for the next trimester.

Courses of Study

Master of Health Science in Substance Abuse Counseling

First Year

Code	Course Title	Credits
SAC 504	Human Development	3
SAC 503A	Neuropsychopharmacological Aspects of Substance Abuse	3
SAC 511	Theory and Practice of Individual Counseling	4
SAC 501A	Theoretical Models of Addictions and its Implications for Counseling	3
SAC 516	Theory and Practice of Family Counseling	3
SAC 514	Theory and Practice of Group Counseling	3
SAC 517	Ethical and Legal Aspects of Substance Abuse Counseling	2
SAC 530	Internship I: Substance Abuse Counseling	4

Second Year

Code	Course Title	Credits
SAC 635	Design, Planning and Implementation of Substance Abuse Counseling Programs	3
SAC 633	Research Methodology	3
SAC 629	Clinical Intervention of Special Populations	2
SAC 619	Theory and Practice of Supervision	3
SAC 625	Program Evaluation	2
SAC 515	Theory and Practice of Substance Abuse Prevention	2
SAC 630	Internship II: Planning, Management and Evaluation of Substance Abuse	4
	Comprehensive Exam	0

Total Credits: 44

Description of Courses

SAC 504 Human Development
3 Credits

The course engages in an analysis of the principal theories and concepts that have been developed to understand and explain human development through the life span. A selected group of human development theories will be discussed including: psychosexual, cognitive developmental theories (Piaget and Vigotsky), learning conditioning (Pavlov and Skinner), social learning (Bandura), cognitive behaviorism, and psychosocial (Erikson). Developmental theories are compared on the basis of its implications for human development and their links to the psychosocial theory. Essential concepts drawn from the cultural theory, social role theory and humanism are discussed as they become relevant to the understanding of diversity, the psychosocial stages and developmental tasks. Following Erik Erikson's psychosocial developmental theory the course encompasses a comprehensive analysis of the stages of development, the developmental tasks, the psychosocial crisis of each life stage, the central process for the resolution of the developmental crises, and the development of prime adaptive ego qualities and core pathologies. The impact of substance use and abuse on the biological, psychosocial and societal systems is addressed as the course progresses within a psychosocial framework discussing each developmental stage from the prenatal stage to the very old age.

SAC 503A Neuropsychopharmacological Aspects of Substance Abuse
3 Credits

This course examines the effects of psychoactive substances on various biological systems and behaviors. The pharmacokinetics (absorption, distribution, metabolism and excretion) and the pharmacodynamics (mechanisms and sites of action) of alcohol, sedative-hypnotics, barbiturates, stimulants, opiates and hallucinogens among others will be studied. The functional anatomy of the brain and neurons, the process of neurotransmission, and variations in individual responses to psychoactive substances are reviewed. Basic neuropsychopharmacological principles are discussed in terms of substance abuse treatment and prevention, and recent scientific developments, and socio-historical issues pertinent to substance abuse counselors are presented.

SAC 511 Theory and Practice of Individual Counseling
4 Credits

Counseling is viewed as a process facilitating the client's achievement of constructive personal goals. Focus is placed on the student's ability to apply state-of-the-art individual counseling models and understand the implications of the stages of change to the counseling process. The theoretical basis and practice of motivational interviewing and the following counseling: cognitive, behavioral, and social learning will be presented.

Topics covered include crisis interventions, anger in the substance abuse process, relapse-prevention models, and distinct needs of special population. Students practice the use of different assessment instruments and develop a comprehensive treatment plan for a person with addiction-related problems. Various treatment modalities are discussed in terms of theoretical basis, and effectiveness.

SAC 501A Theoretical Models of Addictions and its Implications for Counseling
3 Credits

This course provides the student with a clear articulation of what it means to be a professional substance abuse counselor. A summary introduction describes the foundation of knowledge, skills, and attitudes upon which the core functions of the substance abuse counselor are based. Selected theories are reviewed to understand the complexity of addiction for helping the student to develop a comprehensive model of substance abuse. The disease model, psychoanalytic perspective, behavioral and cognitive behavioral approaches, social learning theory, family systems theory, and the biopsychosocial paradigm are used to conceptualize addiction. The implications for substance abuse counseling associated to each model are discussed. Special emphasis is given to the development of awareness of personal constructs and these theoretical foundations in order to allow for an integration of these elements into an effective counseling approach.

SAC 514 Theory and Practice of Group Counseling
3 Credits

This course will focus on group strategies used in prevention and treatment of substance abuse. The group counseling will emphasize in-group process and the strategies designed to enhance mutual support and to acquire skills such as drug refusal. Presentation of material will be didactic and experimental. Demonstration of group work will be integrated throughout the course. An involvement in group sessions outside the classroom is a course requirement.

SAC 516 Theory and Practice of Family Counseling
3 Credits

This course will focus on family strategies used in the prevention and treatment of substance abuse. The family counseling provides an overview of the interactions between family dynamics and substance abuse. Basic concepts of family systems theory will be discussed to learn the application of both didactic and experimental. Demonstrations of family counseling will be integrated throughout the course. Involvement in family sessions outside the classroom is a course requirement.

SAC 517 Ethical and Legal Aspects of Substance Abuse Counseling
2 Credits

This course examines the laws that directly affect substance abuse counseling and the ethical standards of substance abuse professionals. Topics included are: civil rights of substance abusers, confidentiality law (as

amended in 1987), family law, criminal law, mental health care law, driving while intoxicated, commitment and guardianship, negligence, liability and the legal aspects of employee assistance programs. Also, the theories for ethical decision-making and the process and guidelines for reaching ethical decisions in difficult and sometimes complicated situations are presented and discussed. Particular emphasis is placed on the nature of legal and ethical obligations of the newly emerging professional substance abuse counselor in Puerto Rico.

SAC 530 Internship I: Substance Abuse Counseling
4 Credits

Internship I: Substance Abuse Counseling emphasizes the acquisition of substance abuse counseling skills and the integration of these skills into a variety of substance abuse prevention and treatment settings. A rich combination of at-risk populations, substance abuse treatment scenarios, and substance abuse counseling supervisors ensure that students acquire basic competencies in each core counselor function. An attempt is made to personalize the internship to meet each trainee's specific needs. The internship is divided into different rotations and a seminar. On each rotation the student works closely with the staff substance abuse counselor who provides supervision and guidance. The student becomes a member of the interdisciplinary team and provides counseling services to clients (individuals, family and groups), consultation to other professionals, attends interdisciplinary meetings and presents clients' progress in staff conferences. In consultation with the Internship Coordinator, the student selects internship sites from the available private and public treatment settings with which agreements have been reached. In addition to the rotations, the student is expected to participate in a two-hour seminar every other week. This didactic aspect of the internship is intended to offer academic training in areas that directly relate to the student's present and future career as a well-rounded substance abuse counselor. The didactics include case presentations, lectures, and conferences. Topics covered in this seminar include substance abuse counseling strategies (individuals, family and group), research in neuropsychopharmacology and clinical aspects of substance abuse, and professional and ethical responsibilities of the substance abuse counselor.

SAC 635 Design, Planning and Implementation of Substance Abuse Counseling Programs
3 Credits

Students in this course will receive information and develop designing, planning, and implementation skills for Substance Abuse Counseling Programs. Special attention will be given to the development of goals and objectives in accordance with an organization's vision and mission, and to enhance the student's administration capabilities by increasing understanding and implications of important political and legal aspects. The strategic planning model will be discussed as a recommended approach to manage the designing, planning and implementation process of any given program.

SAC 633 Research Methodology
3 Credits

This course focus on how to conduct scientific investigation. The students will learn how to formulate investigative questions parting from a quantity and quality point to view. They will examine different types of design, instruments, and their respective collection methods and data analysis. The course will provide students the capacity to apply the basic principles of design and methodology of a qualified and quality scientific investigation. And finally, the course will evaluate scientific articles in reference to addiction counseling.

SAC 619 Theory and Practice of Supervision
3 Credits

This course examines the role of a substance abuse supervisor with clinical and management responsibilities. It includes theory, experiential and integrative components, and will focus on both the skills and the personal characteristics needed to be an effective clinical supervisor. Specific models of clinical supervision particularly relevant to alcohol and drug counseling, including the psychodynamic, cognitive-behavioral, skills, and family therapy models are considered in detail.

SAC 515 Theory and Practice of Substance Abuse Prevention
2 Credits

This course reviews historical developments in the formation and implementation of effective substance abuse prevention strategies. Components of successful community, workplace, church and school-based prevention programs are discussed, including needs assessment, program planning and evaluation, and maintenance of

grassroots prevention efforts. The association between parenting and the initiation of substance use, risk and protective factors, current prevention strategies, future prospects of prevention design programming, group development, volunteer management, and self-help group formation are also discussed. Although there is a focus on strategies targeting youth, the course also addresses other high-risk groups.

SAC 625 Program Evaluation
 2 Credits

This course is designed to provide skills in program evaluation. Emphasis is given to evaluation designs, and the problems of implementing certain designs at the program level. The different methodologies for needs assessment, process, outcome, and impact analysis are examined. This course also trains students in basic statistical principles and their application to program evaluation. It equips students to conduct basic data collection and analysis and to organize and report data.

SAC 629 Clinical Intervention of Special Populations
 2 Credits

This course will consist of lectures delivered by guest experts and students' presentations. The seminar focuses on the specified clinical needs and issues focused on special populations with substance abuse problems. Some of the populations identified are: women, elderly, gay and lesbian, and ethnic minorities, among others. Attention is given to the cultural and social biases and stereotypes confronted by these groups in general, but more so for those who are also experiencing substance abuse problems.

SAC 630 Internship II: Planning, Management and Evaluation of Substance Abuse Counseling Program
 4 Credits

Planning, Management and Evaluation of Substance Abuse Counseling Programs is the culmination of the student's formal training in substance abuse. Through this internship, the student directly and actively engages in the process of identifying programmatic needs in order to supervise a substance abuse counseling service and plan, and implement, manage and evaluate a Substance Abuse Counseling Program. The students also attain direct experience in supervising substance abuse counselors. Students apply the knowledge and skills acquired in previous courses on the administration of Substance Abuse Counseling Programs, and gain first-hand appreciation of the factors that promote or impede effective planning, management, and evaluation.

*Each credit hour should include 12 contact hours of lecture or 24 hours of laboratory or 48 hours of clinical experience or independent study



MEDICAL IMAGES TECHNOLOGY PROGRAM

MEDICAL IMAGES TECHNOLOGY PROGRAM

Mission

To educate and train qualified personnel in the field of medical imaging technology, to provide direct service to patients using the latest in medical imaging modalities, with pride for the profession, compassion and empathy for patients and enthusiasm for lifelong learning.

Goals

1. To provide the opportunity to every qualified individual, regardless of race, creed, national origin and gender to seek the experiences, competencies, challenges, and knowledge that is required to perform as an entry level medical imaging professional.
2. To provide students with broad experiences and academic support in the academic and clinical aspects to allow them to develop and integrate knowledge, and develop competencies and attitudes needed for the optimum performance of his/her skills.
3. To contribute to the students' development in the personal, professional and humanistic aspects through academic counseling, support services and complementary activities.
4. To support Puerto Rico's medical imaging professionals through the development of continued education activities.

Our program has a qualified faculty in the medical imaging area as well as in other medical, biological, psychosocial and general education content areas. Faculty members strive to give a complete education to students, thus enabling him/her to offer a better service to patients.

Student Evaluation and Promotion

Performance of all students in the Medical Images Technology Program's offerings (Associate Degree in Radiologic Technology, post-Associate Certificates and Bachelor in Science) will be assessed applying rules and academic procedures and non-discriminatory policies.

Graduation Requirements

In order to obtain expected degrees for all Medical Images Technology Programs offerings, students must complete all the courses described on the program continuum with a qualification of "C" or above. In addition, they must comply with all the administrative requirements established by the Universidad Central del Caribe.

Individual Performance on Courses

At the beginning of each course, faculty members will provide students with a course syllabus describing learning objectives, competencies to be achieved and evaluation criteria. The evaluation of the performance of the individual students is the responsibility of the faculty member offering it. Final grade on the course is the product of:

- Student academic performance based on the objectives, requirements, and evaluation methods.
- The attendance and participation in class, clinical labs or other programmed educational activities.

Student's opinions and behavior unrelated to the academic requisites will not affect the evaluation and grade.

Minimum Grade to Approve Courses

All courses in the academic offerings of the Program must be approved with the minimum grade of "C" (Average) or higher.

Any student receiving an "F" in a course must repeat the course the next time the course is offered.

Academic Classifications

At the end of each evaluative period, the Students Evaluation and Promotion Committee reviews the academic performance of all students in all courses and makes recommendations to the program director on the status of students according to the standards performance. When the evaluation has been completed for each case the Committee submits the recommendations to its Program Director.

The Committee can recommend the following academic classifications based on the student performance: promotion, conditional promotion, academic probation, suspension and dismissal.

A. Promotion (UP)

The student will be promoted to next academic period as a regular student after having completed all courses in the study program with a "CQPI" of 2.00 or more and with no failures in any course.

After the end of the last academic period the student can be recommended to receive the corresponding degree/certificate if he/she:

1. Has completed the academic requirements with a "CQPI" of 2.00 or more.
2. Satisfactorily approved all courses required in the Program's continuum.
3. Complies with other institutional requirements as indicated at the beginning of the academic program.

B. Conditional Promotion (CP)

This classification is assigned when a student fails in less than 33% of the credits/courses registered in any evaluative period but maintains a "CQPI" of 2.00 or more. This implies that the student must repeat the failed course the next time it is offered. The course can be repeated in other institutions, with appropriate authorizations from the Program Director and the Registrar's Office.

C. Academic Probation (AP)

The Academic Probation classification corresponds to a period in which the student's performance is continuously evaluated. This classification is assigned when:

1. The student's "CQPI" is less than 2.00
2. The student receives a final grade of failure in more than 33%, but no more than 50% of the credits/courses registered in any evaluative period.

The Students Evaluation and Promotion Committee may recommend a limit of credits to be taken in the next academic period of enrollment as a condition for removal of the probation classification.

In order to be removed from academic probation the student must:

1. Maintain a "CQPI" of 2.00 or more in next academic year.
2. Repeat and satisfactorily complete all courses with previous grades of "F".
3. An Academic Probation status can be held for a maximum of two (2) evaluative periods, after which the student will be suspended.

D. Academic Suspension (AS)

Academic suspension is for a limited period of time, usually one year. The student may apply for readmission to the Program after the established period, as determined by the Program's Students Evaluation and Promotion Committee. Upon readmission the student will be assigned an Academic Probation classification. The student must comply with academic probation conditions to resume a regular course program.

The academic suspension of a student can be recommended under the following conditions:

1. The student "CQPI" is less than 2.00
2. The student receives a final grade of failure in more than 50%, but no more than 66% of the credits/courses registered in any evaluative period.
3. A student who has received an academic probation and on the next academic period fails in achieving a minimum "CQPI" of 2.00.
4. Suspension after course repetition: any student who has been asked to repeat any courses and fails it for a second time.

E. Academic Dismissal (AD)

Academic dismissal is a definitive action: the student will no longer be allowed to enroll in the Medical Images Technology Program at the UCC.

The academic dismissal of a student can be recommended under the following conditions:

1. A student who has received an academic suspension and in the next academic period fails in achieving a "CQPI" of 2.00 or fails in any one course for a third time.
2. Any student who fails in over 66% of the registered credits/courses in any evaluative period.

Satisfactory Academic Progress

To maintain satisfactory academic progress the student must achieve a CQPI of 2.00 at the end of the prescribed period and pass at least 66% of the enrolled credits.

Maximum Time Period to Obtain a Degree

The time to complete the Associated Degree in Radiologic Technology is two years (24 months), while the maximum period allowed for degree completion is three (3) years. The student can require additional time to complete degree for academic or personal reasons. In these cases the Evaluation and Promotion of Student Committee can establish a special schedule in order to allow the student to complete the requirements.

The maximum time to complete the post-Associate Certificate in Diagnostic Medical Sonographer and the Bachelor in Science in Diagnostic Images is twelve (12) months. Students can take an additional year to complete requisites for academic or personal reasons following approval by the Evaluation and Promotion of Students Committee.

The maximum time to complete the post-Associate Certificate in Mammography, Computerized Tomography and Magnetic Resonance is one semester. Students can take an additional semester to complete certificate's requisites for academic or personal reasons following approval by the Students Evaluation and Promotion Committee.

Affiliated Institutions

The Medical Images Technology Program has over forty (40) formal affiliations with institutions throughout Puerto Rico that serve as clinical training sites for students.

Study Programs

Associate Degree in Radiologic Technology

Description

Since its discovery in 1895, X-rays have become an indispensable tool in the diagnosis of health conditions. A simple radiograph is probably the front door for many individuals into the health system. Conventional radiology is still the first step in a long ladder of modalities designed to produce medical diagnostic images.

Profile of a Radiologic Technologist

A Radiologic Technologist is the health professional that produces diagnostic images through the utilization of specialized equipment working with ionizing radiation and other electronic means. He/she is responsible for producing quality images, gathering patient history/information and submitting his findings to a certified physician for interpretation and diagnosis. The Radiologic Technologist will provide services to patient/clients in the most variable of settings, ranging from hospital, Diagnostic and Treatment Centers and stand-alone offices, public or private.

The Radiologic Technologist is responsible for assuring the safety and well-being of the patient /client under his charge and, as a member of the health professional team, has the additional responsibility of educating, supporting and serving his/her patient/client.

The Radiologic Technologist is capable of:

1. Evaluating the patient's medical and clinical information in order to follow the prescribed radiographic procedure.
2. Utilizing discrete and valorative judgment in the operation of specialized equipment and performance of radiographic procedures.
3. Performing radiographic procedures to achieve quality images that include unequivocal diagnostic information of the anatomic structure and of possible pathologic conditions.
4. Assisting the Radiologist in those invasive procedures requested or needed to fully evaluate functional conditions.
5. Facilitating the diagnosis by integrating medical information, clinical history and the images produced.
6. Orienting patients about the radiographic procedures and on healthy life styles.
7. Integrating quality assurance procedures to his/her professional duties as to maintain a consistent excellence level in performance.
8. Performing his/her duties in such a way that due respect and empathy for the human being prevails.

Educational Program

This program comprises two academic years and one summer session (22 months), divided into closely-related periods of didactic and clinical practice. The curriculum was designed based on the curricular recommendations of the American Society of Radiologic Technology and the Joint Review Committee on Education in Radiologic Technology. These two institutions recommend standardized education and accreditation of the majority of programs in Radiologic Technology in the United States. It is important to point out that we have adjusted the curriculum recommendations in order to comply with their requirements while meeting local regulations, and in accordance with the needs and realities of the Puerto Rican community.

The Program's Curriculum is designed in such a way that the balance between didactic and clinical requisites changes as the student progresses in training, increasing clinical responsibilities as the student approaches completion of the program. This system allows the student to adapt to professional life and at the same time achieve a more ordered transition towards entry-level work upon completion of training.

After the student completes all academic and administrative requirements, he/she receives the Associate Degree in Radiologic Technology and is eligible to sit for the Puerto Rico Radiology and Radiotherapy Technologists Examination Board and the American Registry of Radiologic Technologists tests.

Post-Associate Certificate in Diagnostic Medical Sonography

Description of the Post-Associate Certificate in Diagnostic Medical Sonography

Among the new trends in Medical Diagnostic, Ultrasound, or Sonography, has become one of the most common. This new technique of producing images by means of sound waves, because of its low cost and its wide use in areas prohibited to ionizing radiation (the reproduction organs) is used more every day in the specialty of obstetrics, gynecology, urology, internal medicine, pediatrics, cardiology and pediatric neurology.

Ultrasound is a technique by which the operator determines the diagnostic information that he/she needs and the techniques to be used to gather information according to the specific needs, situations and conditions of the patient.

Profile of the Sonographer

The Sonographer is the health professional that produces images of the soft tissues of the body by means of specialized equipment that uses very high frequency sound waves. He/She is responsible for producing high quality images and who later presents and submits his/her findings to a certified physician for analysis and diagnosis. The Sonographer is responsible for preserving the integrity of the patient/client under his/her charge and as a health professional, has the responsibility for educating, supporting and serving his patient/client.

The Sonographer is a health professional capable of:

1. Evaluating medical and clinical information of the patient to determine the appropriate procedure to follow.
2. Performing sonographic procedures using specialized electronic equipment to gather anatomic information that facilitates the interpretation of findings and the diagnosis of pathological conditions.
3. Assisting the physician in gathering sonographic information by means of the integration of medical information, clinical background and the images obtained.
4. Using discretion and valorative judgment in the use of procedures and operation of the equipment.
5. Providing orientation to the patient about the procedures made and as a health professional, collaborates in the promotion of good and healthy lifestyles.

Educational Program

This is a one-year academic program that seeks to develop in radiologic technologist's theoretical knowledge and practical training in the modalities of medical diagnosis by means of the ultrasound. The academic content is balanced in order to offer the student other opportunities to become more proficient in the theoretical processes related to this trend and develop practical skills in the equipment operation and patient management.

Graduates of this program will be prepared to successfully meet any professional evaluation required to practice the imaging modality selected, in Puerto Rico as well as in the continental United States.

The course content of the Post-Associate Certificate in Diagnostic Medical Sonography Program has been developed following the curricular recommendations of the American Registry on Diagnostic Medical Sonographers (ARDMS).

The academic content has been balanced to offer the student the opportunity to master the theoretical processes related to the ultrasound modality and develop practical skills in the operation of the equipment and psychomotor and affective skills of patient management.

The courses and the clinical practice requirements for the certification are distributed across two semesters. The students attend theoretical courses, and at the same time, develop the necessary skills while pursuing their clinical practices.

Post-Associate Certificate in Mammography

Description of the Post-Associate Certificate in Mammography

Mammography is the imaging procedure which utilizes ionizing radiation to produce images of the human breast. Its effectiveness in the early detection of medical conditions of the breast and surrounding tissues has been widely corroborated. Because of its importance in the battle against breast cancer, a condition that has increased in the past ten years among women and men, Mammography is now considered an area of specialization in the field of medical diagnostic images.

Profile of the Mammographer

The Mammographer is the health professional that produces images of the breast by means of specialized equipment that uses low-level ionizing radiation. He/She is responsible for producing high quality images and later presenting and submitting his/her findings to a Radiologist for analysis and diagnosis. The Mammographer is responsible for preserving the integrity of the patient/client under his/her charge and as a health professional has the responsibility of educating, supporting and serving his patient/client.

The Mammographer is a health professional capable of:

1. Evaluating medical and clinical information of the patient to determine the appropriate procedure following established protocols.
2. Performing mammographic procedures using specialized equipment to gather anatomic information that facilitates the interpretation of findings and the diagnosis of pathological conditions, integrating medical information and clinical history with the obtained images.
3. Performing mammographic procedures in any patient, regardless of mental or physical capacity and without social, racial or cultural discrimination.
4. Providing support and orienting the patient about the procedures to be performed, familiarizing the patient with the equipment, the need for breast compression, type and importance of quality procedures.
5. Explaining to the patient the FDA and ACR recommendations about base mammography, the need of keeping previous films for comparison purposes and about breast self-examination.
6. Offering an optimum quality service in a prudent and reasonable time period.
7. Participating in invasive processes with the radiologist.
8. Performing routine and extraordinary quality assurance and quality control procedures related to mammography.
9. Using discretion and valorative judgment in the use of procedures and operation of the equipment.
10. Maintaining current knowledge in mammography through continued education.

Educational Program

The academic program seeks to develop, in a radiologic technologist, theoretical knowledge and practical training in the modalities of mammography. The academic content is balanced in order to offer the student other opportunities to comprehend theoretical processes related to this trend and develop practical skills in the equipment operation and patient management.

The certificate intends to produce a comprehensive professional dedicated to breast health. The didactic-practical program of the Certificate in Mammography is designed to develop in the graduates from an Associate Degree in Radiologic Technology the theoretical knowledge and practical competencies required to produce optimum quality images of this anatomical region to be used in the diagnosis of medical conditions. Also, the new tendency to complement the conventional mammography with sonomammography images is taken into consideration as part of the training.

After a period of one semester (15 weeks) participation in didactic activities related with the mammography techniques, and working directly with patients, the student will receive the Post-Associate Degree Certificate in Mammography. The participant will be prepared to meet the requirements of any professional evaluation required to practice the imaging modality selected, in Puerto Rico as well as in the continental United States.

Post-Associate Certificate in Computerized Tomography

Description of the Post-Associate Certificate in Computerized Tomography

Computerized Tomography, developed in 1972 by Engineer Geoffrey Hounsfield, uses ionizing radiation (X-rays) and radiation detectors to provide a computer with information about the density of the human tissues, which the computer then turns into a digital image of the body volumes. Resulting images are similar to a radiograph in its density, but the image is oriented perpendicular to the body axis. Computerized Tomography is used primarily to evaluate gastrointestinal, nervous and musculoskeletal systems.

The academic program of the Post-Associate Certificate in Computerized Tomography is designed to develop, in graduates of an Associate Degree in Radiologic Technology, the theoretical knowledge and the practical skills to produce medical diagnostic images by means of the Computerized Tomography equipment. This certificate is offered in one semester long (18 weeks) period.

Profile of the Computerized Tomography Technologist

The Imaging Technologist specializing in Computerized Tomography, is the health professional that operates very complex and sophisticated equipment and combines electronic elements with ionizing radiation to produce images of the human body with the purpose of making or defining a medical diagnosis.

Because of the impression the equipment produces on patients, a Computerized Tomography technologist's first task, before doing the procedure, is the responsibility of the technologist to interact with the patient in an effective manner to orient the patient on the procedure to be performed and lower the patient's anxieties. Before the procedure, the technologist explains to the patient the importance of following the instructions he will receive during the procedure, of maintaining the proper positioning and the proper way of breathing so as to acquire optimum quality images.

The Computerized Tomography Technologist will be able to:

1. Evaluate patient's medical and clinical information to determine the procedure to perform, following the protocols established by his/her workplace and according to the medical and physical condition of the patient.
2. Perform Computerized Tomography procedures acquiring the anatomic information, and integrating patient medical and clinical information to facilitate the patient diagnosis.

3. Assume full responsibility for his/her patient's and accompanying person's safety during the procedure, avoiding unnecessary radiation exposure to them.
4. Accurately manipulate the Computerized Tomography equipment to produce optimum quality images.
5. Demonstrate his/her knowledge about the operation and physical principles related to the Computerized Tomography equipment.
6. Perform any Computerized Tomography procedure that is required from him/her, regardless of the level of physical and/or mental condition of the patient and without of social, racial or cultural prejudice.
7. Educate patient and clarify any doubt the patient might have regarding the equipment, the need to use contrast media when indicated, and the importance of performing an optimum quality procedure to enhance diagnosis.
8. Support patient, before, during and after the procedure.
9. Offer optimum quality services in a prudent and reasonable lapse of time.
10. Document any incident that may occur before, during and after the procedure, in the patient's record and/or any form designed for this purpose.
11. Evaluate the quality of the services, keeping control of the quality of the operations and functioning of the equipment and its accessories, image printing and post-processing routines and image viewing conditions, among others.
12. Acquire optimum quality images in all procedures performed.
13. Apply discretion and critical thinking to the performance of all procedures and the operation of the equipment.
14. Collaborate with the Radiologist in the performance of interventional procedures using Computerized Tomography.
15. Assume responsibility for his/her own personal and professional development and enhancement through his/her participation in continued education activities and in new procedures capacitating workshops.

Post-Associate Certificate in Magnetic Resonance

Description of the Post-Associate Certificate in Magnetic Resonance

Magnetic Resonance images have revolutionized the medical diagnostic imaging field with the superb resolution of tissues of its images. Magnetic Resonance utilizes a strong magnetic field (several times stronger than gravity force) to alienate free protons (hydrogen ions), and then these protons are stimulated with a radio frequency and pushed out of alignment. When the protons return to the magnetized state, they resonate (they resend the energy used to de-align them), during which process they emit a signal captured by a radio antenna and passed to a computer. The computer then processes the information and produces an image based on the density and volume of the tissue being imaged. Images produced with Magnetic Resonance differ from Computerized Tomography in that there are various ways to analyze tissue density based on their magnetic properties.

The academic-practical program of the Post-Associate Certificate in Magnetic Resonance is designed to develop in graduates from an Associate Degree in Radiologic Technology, the theoretical knowledge and practical skills needed to produce optimum quality images to be used in medical diagnosis through the use of

highly sophisticated equipment using magnetic and radio frequency energy. This certificate comprises 13 academic credits, which are offered in a one semester long (18 weeks) period.

Profile of the Magnetic Resonance Technologist

The Imaging Technologist specializing in Magnetic Resonance is the health professional who operates very complex and sophisticated equipment that combines magnetic and electronic elements to produce images of the human body with the purpose of making or defining a medical diagnosis.

Because of the impression the equipment produces on patients, a Magnetic Resonance technologist's first task, before doing the procedure, is the responsibility to interact with the patient in an effective way to orient the patient on the procedure to be performed and lower patient anxieties. Before the procedure, the technologist explains to the patient the importance of following the instructions he will receive during the procedure; of maintaining the proper positioning and the proper way of breathing so as to acquire optimum quality images.

The Magnetic Resonance Technologist will be able to:

1. Evaluate patient's medical and clinical information to determine the procedure to perform, following the protocols established by his/her workplace and according to the medical and physical condition of the patient.
2. Perform Magnetic Resonance procedures acquiring the anatomic information, and integrating patient medical and clinical information to facilitate the patient diagnosis.
3. Assume full responsibility for his/her patient's and accompanying person's safety during the procedure, indicating the precautions to be taken around a strong magnetic field.
4. Interview patient to assess the possible risk of metal magnetization.
5. Accurately manipulate the Magnetic Resonance equipment to produce optimum quality images.
6. Demonstrate his/her knowledge about the operation and physical principles related to the Magnetic Resonance equipment.
7. Perform any Magnetic Resonance procedure that is required from him/her, regardless of the level of physical and/or mental condition of the patient and without social, racial or cultural prejudice.
8. Educate patient and clarify any doubt the patient may have regarding the equipment, the need to use contrast media when indicated, and the importance of performing an optimum quality procedure to enhance diagnosis.
9. Support patient, before, during and after the procedure.
10. Offer optimum quality services in a timely and reasonable time and manner.
11. Document any incident that might occur before, during and after the procedure, in the patient's record and/or any form designed for this purpose.
12. Evaluate the quality of the services, keeping control of the quality of the operations and functioning of the equipment and its accessories, image printing and post-processing routines and image viewing conditions, among others.
13. Acquire optimum quality images in all procedures performed.
14. Apply discretion and critical thinking to the performance of all procedures and the operation of the equipment.

15. Collaborate with the Radiologist in the performance of interventional procedures using Magnetic Resonance.
16. Assume responsibility for his/her own personal and professional development and enhancement through his/her participation in continued education activities and in new procedures capacitating workshops.

Bachelor of Science in Diagnostic Images

The Bachelor of Science in Diagnostic Images offers graduates from an Associate Degree in Radiologic Technology from an accredited or recognized program in Puerto Rico or the United States the opportunity to acquire a higher academic degree in their professional field. Through this program, graduates from Radiologic Technology Associate degree programs will continue their training by choosing and completing two or more specialization certificates and increase their direct patient attention competencies and organizational skills.

Baccalaureate students will complete additional general education courses beyond the Associate Degree curricula and take courses in basic managerial skills to be better prepared to face additional professional responsibilities. The graduate of the Bachelor of Science in Diagnostic Images will possess the competencies in at least three medical imaging modalities: conventional radiology and two other modalities of his/her choice; a rounded general education and managerial training in medical imaging services skills.

The UCC has designed this offering based upon the premise that almost all the radiologic technologists in Puerto Rico have attained an Associate Degree. The Bachelor of Science in Diagnostic Images will integrate admitted students' academic experiences through the incorporation of credits approved in courses in: (1) general education; (2) an Associate Degree in Radiologic Technology; (3) specialization certification (Sonography, Mammography, Computerized Tomography and Magnetic Resonance), and (5) Bachelor's degree higher courses.

Profile of the Bachelor of Science in Diagnostic Images Professional

The graduate of the Bachelor of Science in Diagnostic Images will be capable of:

1. Evaluating the referral and the patient's medical information and performing the required procedure in any of the selected modalities.
2. Recognizing medical terms, applying knowledge of human topographic and sectional anatomy, pathology, and physiology to determine the most adequate protocols in the selected modality.
3. Performing diagnostic procedures that collect, through the use of electronic and sophisticated equipment, information to facilitate a diagnostic interpretation of the results of the procedure.
4. Offering patients appropriate information about the risks, secondary effects, and indications and counter indications to the procedures, before, during and after performing the same.
5. Offering patients information about healthy life styles.
6. Presenting to the specialized physician, any information obtained during the procedures which facilitates the diagnosis through the integration of patient record information, clinical history and images obtained by means of the available modalities.
7. Participating in case discussion to determine any need for follow up or complementary procedures and perform the necessary procedures if requested.
8. Applying universal protection measures against infections during the performance of the requested procedures and in any emergency situation which may arise.

9. Using effective communication skills, in Spanish and English, written or verbal, with patients, patients' families, peers and community members.
10. Demonstrating a high level of respect for individuals, taking into consideration cultural and social diversity.
11. Integrating management concepts and strategies into the work, and participating in the development of coherent policies in risk management for the work area.
12. Continuously improving personal and professional knowledge and application of information systems and its applications to the medical images and diagnosis.
13. Applying problem solving, critical thinking and decision-making skills to improve services to patients while in the workplace.
14. Promptly identifying problems with the equipment used in the workplace and relating any such problems to those responsible for maintenance and repairs.
15. Developing assessment programs in order to continuously improve quality of services and recommended corrective measures as they are required.
16. Assuming leadership positions in the institutions where he/she is employed.
17. Acting as role models to those interested in continuing formal studies in the medical images field.

Courses of Study
Associate Degree in Radiologic Technology

First Year

Code	Course Title	Credits
EN-101	English I	3
SP-101	Spanish I	3
RT-101	Introduction to Radiologic Technology	3
RT-106	Principles of Radiographic Exposure and Development of Radiographic Images (w/lab)	4
RT-113	Radiographic Procedures and Evaluation I; Extremities and Body Trunk (w/lab)	3
RT-103	Human Anatomy and Physiology I (w/lab)	3
RT-110	Introduction to Computer Systems	3
CP-101	University Life	N/C
EN-102	English Language II	3
SP-102	Spanish Language II	3
RT-111	Radiologic Physics	3
RT-104	Human Anatomy and Physiology II (w/lab)	3
RT-213	Radiographic Procedures and Evaluation II; Abdomen y Thorax	3
RT-216	Patient Care (w/lab)	3
RT-202	Clinical Practice I	3
RT-203	Clinical Practice II (Summer Session)	3

Second Year

Code	Course Title	Credits
RT-303	Sectional Anatomy (w/lab)	3
RT-231	Integral Health Concepts	3
RT-314	Radiographic Procedures and Evaluation III; Skull and Neck	2
RT-211	Radiation Biology	3
RT-115	Radiologic Pathology	2
RT-204	Clinical Practice III	3
RT-223	Radiographic Critique and Quality Assurance	3
RT-413	Introduction to Ultrasound Imaging	3
RT-414	Introduction to Imaging Modalities	3
RT-315A	Legal Concepts Seminar	1
RT-350	Review for Professional Credentialing Exam	1
RT-205	Clinical Practice IV	4

Total Credits: 77

Post-Associate Certificate in Diagnostic Medical Sonography

Code	Course Title	Credits
US-401	Clinical Practice I	3
US-411	Ultrasound Physics	4
US-416	Pelvic Sonography	2
US-419	Abdominal Sonography	3
US-421	Superficial organs and Special Procedures in Sonography	3
US-459	Integration Laboratory I	2
US-402	Clinical Practice II	3
US-417	Obstetric Sonography	3
US-427	Instrumentation and Quality Assurance	4
US-431	Basic Ultrasound Studies	3
US-440	Research Project	3
US-469	Integration Laboratory II	2

Total Credits: 35

Post-Associate Certificate in Mammography

Code	Course Title	Credits
MA 401	Mammography Procedures	3
MA 402	Anatomy, Physiology and Pathology of the Breast	2
MA 403	Physics and Quality Assurance in Mammography	3
MA 404	Operational and Clinic Fundamentals of Sonomammography	3
MA 405	Clinical Practice and Research	3

Total Credits: 14

Post-Associate Certificate in Computerized Tomography

Code	Course Title	Credits
CT 425	Operating Fundamentals of Computerized Tomography	3
CT 430	Computerized Tomography Procedures and Protocols	3
CT 435	Anatomy and Pathology in Computerized Tomography Images	3
CT 440	Clinical Practice and Research in Computerized Tomography	4

Total Credits: 13

Post-Associate Certificate in Magnetic Resonance

Code	Course Title	Credits
MR 400	Operating Fundamentals of MRI	3
MR 405	Procedures and Protocols in MRI	3
MR 410	Anatomy and Pathology in Magnetic Resonance Images	3
MR 415	Clinical Practice and Research in Magnetic Resonance	4

Total Credits: 13

Bachelor of Science in Diagnostic Images

First Year

Code	Course Title	Credits
EN-101	English I	3
SP-101	Spanish I	3
RT-101	Introduction to Radiologic Technology	3
RT-106	Principles of Radiographic Exposure and Development of Radiographic Images (w/lab)	4
RT-113	Radiographic Procedures and Evaluation I; Extremities and Body Trunk (w/lab)	3
RT-103	Human Anatomy and Physiology I (w/lab)	3
RT-110	Introduction to Computer Systems	3
CP-101	University Life	N/C
EN-102	English Language II	3
SP-102	Spanish Language II	3
RT-111	Radiologic Physics	3
RT-104	Human Anatomy and Physiology II (w/lab)	3
RT-213	Radiographic Procedures and Evaluation II; Abdomen y Thorax	3
RT-216	Patient Care (w/lab)	3
RT-202	Clinical Practice I	3
RT-203	Clinical Practice II (Summer Session)	3

Second Year

Code	Course Title	Credits
RT-303	Sectional Anatomy (w/lab)	3
RT-231	Integral Health Concepts	3
RT-314	Radiographic Procedures and Evaluation III; Skull and Neck	2
RT-211	Radiation Biology	3
RT-115	Radiologic Pathology	2
RT-204	Clinical Practice III	3
RT-223	Radiographic Critique and Quality Assurance	3
RT-413	Introduction to Ultrasound Imaging	3
RT-414	Introduction to Imaging Modalities	3
RT-315A	Legal Concepts Seminar	1
RT-350	Review for Professional Credentialing Exam	1
RT-205	Clinical Practice IV	4

Third Year

Code	Course Title	Credits
EN-201	English III	3
SP-201	Literary Genre	3
CN-101	Natural Sciences I	3
CN-102	Natural Sciences II	3
MT-101	Introduction to Mathematics	3
MT-102	Mathematics II	3
CS-101	Introduction to Sociology	3
HU-101	Occidental Civilizations	3
	Elective	3
Student must select a minimum of two of the following:		
	Post-Associate Certificate in Mammography	14
	Post-Associate Certificate in Computerized Tomography	13
	Post-Associate Certificate in Magnetic Resonance	13
	Post-Associate Certificate in Diagnostic Medical Sonography	35

Fourth Year

Code	Course Title	Credits
BSID 510	Administration and Supervision Diagnostic Images Service	3
BSID 520	Planning and Evaluation Diagnostic Images Service	3
BSID 530	Pharmacology in Diagnostic Imaging	3
BSID 540	Sociology of Health and Disease	3
BSID 550	Professional Lectures Seminar *	2

*Course lasts for two semesters

Total Credits: 144-167

Description of Courses

CP 101 University Life
0 Credits

Group discussion and activities designed to provide students with knowledge and ease the transition in successfully adapting to university life experiences. Emphasis is given to the development of skills to facilitate academic progress.

EN 101 English I
3 Credits

Deals with the basic structure of the English language, emphasizing functional use and application aimed toward guiding students in attaining mastery of such basic skills as: listening, reading, writing as a means of improving their oral and written expression.

SP 101 Spanish I
3 Credits

Introduction to the Spanish language as a technical expression vehicle. Basic skills and concepts of written and oral communication in Spanish are covered.

RT 101 Introduction to Radiologic Technology
3 Credits

Introductory course which presents Radiologic Technology as a science and other aspects related to this profession. Includes first clinical practice period (60 hours) with exposure to the operation of the imaging center.

RT 103 Human Anatomy and Physiology I
 3 Credits

Course oriented to introducing students to the basic anatomic and physiologic principles of the human body throughout descriptive Anatomy by regions and systems. Emphasis is given to the chemical, cellular, skeletal and muscular components of the human body. Course is complemented with laboratory experiences.

RT 106 Principles of Radiographic Exposure & Development of Radiographic Images
 4 Credits

Comprises the study of all concepts associated with the production of X-rays; image formation and development. Factors influencing image quality are presented and discussed. Practical demonstrations and laboratory experiences are used to facilitate comprehension of the course content.

RT 110 Introduction to Computer Systems
 3 Credits

Introductory course dealing with concepts of the operations and programming of computerized systems. Appropriate terminology and foundations on the use and operations of computers in the health field are discussed. Student acquires a functional knowledge of general use applications: Word, PowerPoint, Excel and Windows 95.

RT 113 Radiographic Procedures and Evaluation I; Extremities and Body Trunk
 3 Credits

This course includes the study of the radiographic procedures as they relate to the skeletal system. Includes positioning, exposure techniques, film evaluation and related anatomy of superior and inferior extremities and skeletal trunk.

EN 102 English II
 3 Credits

Pre-requisite EN-101. Continues the development of English language communication skills with applications to the professional life.

SP 102 Spanish II
 3 Credits

Pre-requisite SP-101. Comprises the development of skills in oral and written communication in the Spanish language. Basic concepts on correct editing are presented. Different literary styles are discussed and analyzed.

RT 202 Clinical Practice I
 3 Credits

Pre-requisite RT-101. Students participate and develop skills in performing radiographic procedures pertaining to the skeletal system (superior and inferior extremities and skeletal trunk). They observe basic radiographic procedures requiring administration of contrast mediums for the visualization of the gastrointestinal and urinary systems.

RT 111 Radiologic Physics
 3 Credits

Physics mechanisms involved in the production of X-rays and image formation are presented and discussed. It includes basic mathematical concepts for the solution of radiology related problems.

RT 216 Patient Care
 3 Credits

Comprises basic nursing procedures required for the care of the patient in the radiology department. Principles of human communication, precautionary and safety considerations, first aid, cardiopulmonary resuscitation, vital signs assessment, medication and contrast media administration, medical sepsis, and infection control procedures are discussed and demonstrated. Course is complemented with laboratory experiences.

RT 104 Human Anatomy and Physiology II
3 Credits

Pre-requisite RT-103. Course oriented to familiarizing students with the basic anatomical and physiological concepts of the nervous, circulatory, urinary, endocrine, respiratory, and reproductive systems and their application in radiology. This course is complemented with laboratory experiences.

RT 213 Radiographic Procedures and Evaluation II; Abdomen and Thorax
3 Credits

Pre-requisite RT-113. The study of radiographic procedures related to pathological conditions occurring in abdomen and thorax. Includes discussion of exposure techniques, positioning skills, medical indications and counter-indications for special studies pertaining to this anatomical region. Use of contrast media is discussed.

RT 203 Clinical Practice II (Summer Session)
3 Credits

Pre-requisite RT-202. Students participate and develop skills in the realization of special radiographic procedures of the gastrointestinal and genitourinary systems requiring the administration of contrast media.

RT 115 Radiologic Pathology
2 Credits

Pre-requisite RT-104. Study of the most common conditions and lesions affecting the human being and its relation to the changes observed in the radiographic image. Etiology, epidemiology and prognosis of these conditions are discussed.

RT 204 Clinical Practice III
3 Credits

Pre-requisite RT-203. Students participate and develop skills in the application of special radiographic procedures requiring the administration of contrast media and assisting the radiologist in interventional procedures.

RT 211 Radiation Biology
3 Credits

Pre-requisite RT-111. Comprises the information and knowledge of the interaction of radiation energy and matter. Units and manners of measuring X-rays and other radiation and its effects on living organisms, in particular its effects over long and short periods of exposure on patients.

RT 231 Integral Health Concepts
3 Credits

Interdisciplinary course, which presents an integral and introductory vision of different content matters, considered basic in the health field: public health concepts, epidemiology, statistics, and administration of health services. Emphasis is given to human development process and the needs of the individual in preserving his/her health.

RT 303 Sectional Anatomy
3 Credits

Pre-requisite RT-104. Course oriented to familiarizing students with the anatomical regions and planes as required for the application of advanced imaging modalities, such as Computerized Tomography, Magnetic Resonance Imaging and Ultrasound. Course is complemented with laboratory experiences.

RT 314 Radiographic Procedures and Evaluation III: Skull and Neck
2 Credits

Pre-requisite RT-213. Study of the radiographic procedures related to cranial structures, facial bones and neck. Includes discussion of exposure techniques, positioning skills, medical indications and indications for special and optional projections to be performed in traumatized patients and special studies pertaining to this anatomical region. Use of contrast media is discussed.

RT 205 Clinical Practice IV
 4 Credits

Pre-requisite RT-204. Students participate and develop skills in radiographic critique and quality assurance. The students acquire proficiency in the application of all radiographic procedures (extremities, trunk, skull and facial bones, and special procedures and administration of contrast media) under indirect supervision. Students are exposed to new imaging modalities.

RT 223 Radiographic Critique and Quality Assurance
 3 Credits

The course offers students basic knowledge on the importance and implementation of a quality assurance program in a radiological facility. Emphasis will be given to the quality control tests performed on radiographic exposure and film development equipment.

Evaluation and analysis of radiographs performed during clinical practice. Course provides students with the opportunity to apply knowledge, acquired during their study/work time, to a research project.

RT 315A Legal Concepts Seminar
 1 Credit

Medical-legal considerations of the health professionals in Puerto Rico with emphasis on the radiologic technologist. Comprises current aspects on ethics, responsibilities, obligations and rights of the health professionals relative to patients and colleagues, including case presentation and discussion.

RT-350 Review for Professional Credentialing Exam
 1 Credit

This course comprises the five content areas included in the ARRT: Radiographic Protection, Acquisition and Evaluation of Radiographic Images, Operation and Maintenance of Radiographic Equipment, Radiographic Procedures and Patient Care. Course content is offered through presentations, guided studies and simulated tests. At the end of the course, students will be subject and have to approve a comprehensive test similar in content to the Registry exam.

RT 413 Introduction to Ultrasound Imaging
 3 Credits

Introduction to medical diagnostic ultrasound basic concepts, images and procedures used in this modality of imaging.

RT 414 Introduction to Imaging Modalities
 3 Credits

Pre-requisite RT-211. Introductory course dealing with new modalities of medical diagnosis imaging. Includes basic concepts of principles and operational procedures of lineal tomography, digital and computerized radiology, computerized tomography, digital subtraction arteriography, magnetic resonance, nuclear medicine and radiotherapy.

RT 206 Clinical Practice V
 3 Credits

Students registered in this course are required to complete clinical competencies to gain proficiency in the application of all procedures related to diagnostic imaging. The student may select an elective appointment in a non-regular clinical site.

US 401 Clinical Practice I
 3 Credits

This course comprises a supervised clinical experience in which the student has the opportunity to recognize the protocol and techniques of the basic ultrasonography studies. Students develop competencies in medical request interpretation, patient briefing and management, scanning protocols, and the sonographic appearance of normal and pathologic organs and tissues.

US 411 Ultrasound Physics
 4 Credits

This course provides the student with the basic knowledge of the physics of sound. Course content includes mathematical operations as they apply to sonography and the physical concepts involved in the operation of ultrasound equipment. Teaching techniques include readings, lecture, and group discussion.

US 416 Pelvic Sonography
 2 Credits

The imaging and diagnosis of conditions related to the female and male pelvis comprise the basis of this course. Contents include scanning protocols, terminology, complementary studies, and sonographic appearance of normal organs and pathologic conditions diagnosed by means of Ultrasound. Diverse teaching techniques are employed: readings, lectures, group discussion, and image and case critique.

US 419 Abdominal Sonography
 3 Credits

This course emphasizes the study of the structures included in the human abdomen. Contents include protocol, terminology, complementary studies, and sonographic appearance of normal organs and pathologic conditions diagnosed by means of Ultrasound. Diverse teaching techniques are employed: readings, lectures, group discussion, and image and case critique.

US 421 Superficial Organs and Special Procedures in Sonography
 3 Credits

Study of the procedures used on the evaluation of sonographic studies of thyroids, chest, testicles, popliteal vein, neonatal neurosonography, and injections and aspirations with needles. It also includes techniques of trans-esophageal, trans-vaginal sonography and endosonography of the gastrointestinal system. It includes medical terminology related to each of the studies; normal anatomy, pathology, and methods and techniques used to help in the sonographic diagnostic of conditions associated to each of these anatomical areas.

US 459 Integration Laboratory I
 2 Credits

In this laboratory, under the direct supervision of a faculty member, the student practices the necessary competencies and protocols to perform basic sonography studies on simulated patients and peers. In this laboratory, the student integrates didactic knowledge and practices dexterity for the performance of sonographic studies. Clinical and practical teaching techniques are employed, in addition to the discussion of reviewed articles regarding scanning protocols of abdominal and pelvis sonograms.

US 402 Clinical Practice II
 3 Credits

In this second clinical practice experience, the student has the opportunity to integrate didactic knowledge with practical competencies. Students develop advanced competencies for the correct performance of sonographic procedures and develop new competencies in special sonographic procedures.

US 417 Obstetric Sonography
 3 Credits

The Obstetric Sonography course is divided into two sections. The first part provides the student with the basic knowledge of normal and pathological tissues present during pregnancy. This section also includes scanning protocols and techniques to visualize the embryo and the second and third trimester normal fetus. The second part increases student's knowledge of fetal pathology and medical complications and disorders related to pregnancy. Teaching techniques include assigned readings, lectures, and group discussion.

US 427 Instrumentation and Quality Assurance
 4 Credits

This course expands on the previous Ultrasound Physics course content and includes concepts related to equipment operation, calibration and maintenance and the implementation of a quality assurance plan within a sonography unit. Basic Doppler concepts are introduced. Teaching techniques include readings, lectures, and group discussion.

US 431 Basic Ultrasound Studies
 3 Credits

This course is designed to integrate didactic knowledge and clinical experiences. During the seminar cases performed by the students their clinical rotations are discussed. Additionally, students will be required to read, synthesize and react critically and constructively to professional articles related to Sonography found in journals and other electronic media.

US 440 Research Project
 3 Credits

As part of this course students plan and develop a special project, incorporating research concepts and techniques, and the analysis of a problem or situation occurring in a medical diagnostic ultrasound clinical area. Emphasis is given to the techniques of gathering, organizing and analyzing research data. Student projects are evaluated through the extent and integration of all aspects of research in an oral and written report.

US 469 Integration Laboratory II
 2 credits

In this laboratory, under the direct supervision of a faculty member, the student practices the necessary competencies and protocols to perform basic sonography studies on simulated patients and peers. In this laboratory, students integrate didactic knowledge and practice dexterity for the performance of sonographic studies of abdominal and pelvis organs. Clinical and practical teaching techniques are employed in addition to the discussion of assigned reviewed articles regarding scanning protocols of abdominal and pelvis sonograms.

MA 401 Mammography Procedures
 3 Credits

Procedures, protocols and positioning techniques used in the evaluation of the human breast are discussed in this course. Variations from normal procedures required to accommodate patients with special needs are also presented and discussed.

Content includes positioning terminology, patient comfort requirements, special cases including reconstructed, irradiated and the presence of prosthetic accessories; magnification, cone down views and other procedures considered non-invasive. Skills in patient care and education related to the care and of the human breast are included in this course.

MA 402 Anatomy, Physiology and Pathology of the Breast
 2 Credits

This course offers the student the opportunity to acquire concepts related to the anatomy, physiology and pathology of conditions related to the female and male breast. Content includes breast development and tissue composition, normal and abnormal variations, benign and malignant conditions and the visualization of these changes as they are presented in a mammography or sonomammography image. Changes in the breast tissue due to surgical or pathologic processes are discussed.

MA 403 Physics and Quality Assurance in Mammography
 3 Credits

This course covers the basic concepts of radiation physics related to Mammography, such as: special equipment requirements, construction standards recommended by the FDA for mammography units, exposure factors, radiation interaction with breast tissue, maximum permissible doses, collimation, developing process, final image evaluation, operation and maintenance of accessories used in mammography. The students are able to recognize, develop and implement a quality assurance program of the mammography unit.

MA 404 Operational and Clinical Fundamentals of Sonomammography
 , 3 Credits

This course comprises the basic concepts of physics, terminology, operation and instrumentation, and scanning protocols in the use of ultrasound for the evaluation and diagnosis of breast conditions. Normal anatomy, image artifacts, and interventional procedures of the breast using this modality are presented and discussed. Laboratory

sessions are used to familiarize students with the sonomammography procedures and for them to acquire skills in scanning protocols, tissue recognition, and equipment adjustment.

MA 405 Clinical Practice and Research
 3 Credits

Clinical experience in which the student implements all concepts learned in the didactic courses. As students advance in the clinical experience, they develop competencies for the correct performance of mammography and sonomammography procedures and acquire competencies in special procedures. As part of the clinical experience, the student must do a research project related to the field of breast health and imaging, in which he/she will deal with: defining a problem or situation, literature search, data acquisition and analysis, and problem solving.

Clinical practice is performed based on the development of a clinical portfolio and not on clinical hours. Clinical evaluation includes: interpreting medical orders, analysis of patient medical history; patient care and orientation; and competencies in positioning, communication, equipment handling, film critique and quality control procedures. Students are required to procure and secure a clinical practice site. Students already working in Mammography will be required to support and document their daily work to validate these experiences.

CT 425 Operating Fundamentals of Computerized Tomography
 3 Credits

This course comprises the presentation and discussion of: history of computerized tomography (CT) ; applications and terminology used in CT; ionizing radiation physics; different protocols used in CT imaging centers; technical parameters used for the acquisition of CT images; ionizing radiation safety measures; quality assurance procedures implemented in CT.

CT 430 Computerized Tomography Procedures and Protocols
 3 Credits

In this course, the protocols utilized to produce diagnostic images of the human body by means of the computerized tomography equipment are presented. The human body is divided into four basic regions: head and spine, neck and thorax, abdomen and pelvis, and extremities, and protocols are presented for each region, in terms of the: patient position, anatomy included in each slice, different variations needed to accommodate patient needs, and exposure factors.

CT 435 Anatomy and Pathology in Computerized Tomography Images
 3 Credits

This course offers the student the opportunity to acquire concepts related to the anatomy and pathology of the human body as presented in Computerized Tomography (CT) images. The most common conditions and lesions, as seen in CT, are discussed. The course includes the analysis of: normal variations, etiology and prognosis of those conditions, and its relationship to the imaging conditions in CT.

CT 440 Clinical Practice and Research in Computerized Tomography
 4 Credits

Student will complete a supervised clinical experience in computerized tomography (CT) in an accredited CT imaging center, in which the student implements all concepts learned in the didactic courses. As students advance in the clinical experience, they develop competencies in: patient care, education and management; patient's medical and clinical history interpretation; performing CT procedures following prescribed protocols, and image selection and processing. Clinical practice is performed based on the development of a clinical portfolio and not on clinical hours. As part of the clinical experience, the student must do a research project related to CT operations, in which he/she will deal with: defining a problem or situation, literature search, data acquisition and analysis, and problem solving.

MR 400 Operating Fundamentals of Magnetic Resonance
 3 Credits

This course comprises the presentation and discussion of: history of magnetic resonance (MR) and the physical and chemical principles related to MR. Among the contents to be covered in this course are: magnetisms, resonance, equipment and instrumentation, tissue characteristics, signal production, tissue spatial location,

sequences and technical parameters used in the acquisition of MR images, image processing techniques, special applications, patient and personnel security issues, and quality assurance procedures related to this modality.

MR 405 Procedures and Protocols in MRI
 3 Credits

In this course, the protocols utilized to produce diagnostic images of the human body by means of the magnetic resonance (MR) equipment are presented. The human body is divided into four basic regions: head and spine, neck and thorax, abdomen and pelvis, and extremities, and protocols are presented for each region, in terms of the: patient position, anatomy included in each slice, different variations needed to accommodate patient needs, and exposure factors.

MR410 Anatomy and Pathology in Magnetic Resonance
 45 Hours, 3 Credits

This course offers the student the opportunity to acquire concepts related to the anatomy and pathology of the human body as presented in Magnetic Resonance (MR) images. The most common conditions and lesions, as seen in MR, are discussed. The course includes the analysis of: normal variations, etiology and prognosis of those conditions, and its relationship to the imaging conditions in MR.

MR415 Clinical Practice and Research in Magnetic Resonance
 4 Credits

Student will complete a supervised clinical experience in magnetic resonance (MR) in an accredited MR imaging center, in which the student implements all concepts learned in the didactic courses. As students advance in the clinical experience, they develop competencies in: patient care, education and management; patient's medical and clinical history interpretation; performing MR procedures following prescribed protocols, and image selection and processing. Clinical practice is performed based on the development of a clinical portfolio and not on clinical hours. As part of the clinical experience, the student must do a research project related to MR operations, in which he/she will deal with defining a problem or situation, literature search, data acquisition and analysis, and problem solving.

BSID 510 Administration and Supervision Diagnostic Images Services
 3 Credits

Students will have the opportunity to develop basic skills in the organization and supervision of a diagnostic imaging center or service. This course offers students basic concepts of health service administration with an emphasis on the quality of the services offered to the community in diagnostic imaging centers. They will differentiate between the roles of the Medical Director, Administrator, Manager, and Supervisor in these types of services. Students will develop team work skills, dealing with issues such as: risk management; radiation protection and dosimetry; continuous quality improvement; service accreditation procedures and interpersonal relations. At the same time, this knowledge will help the student: design, implement, analyze and evaluate diagnostic images services, complying with state and federal policies, rules and regulations. Teaching strategies include: conferences, case presentations and discussion. Students will be evaluated through: written exams, short tests, assignments, and participation in programmed activities.

BSID 520 Planning and Evaluation Diagnostic Images Services
 3 Credits

This course will present students with the basic concepts and skills in use for the planning and evaluation of diagnostic images services. Planning and evaluation of health services will be presented as a continuous process emphasizing problem identification, developing effective answers to problems, and implementing and evaluating the program or service proposed. Course content also includes: general aspects of a health service organization; and how to develop goals and objectives to fulfill an organization mission through a Strategic Plan. Students will participate in conferences, will discuss simulated models and will present an operational model for a diagnostic images center. Students will be evaluated through: practice exercises, short texts, application projects and literature review reports.

**BSID 530 Pharmacology in Diagnostic Imaging
3 Credits**

This course will offer students the knowledge and skills necessary for the management and administration of imaging contrast media agents and other medications used in the medical diagnostic field. Course content includes: general pharmacology concepts; patient assessment skills; strategies for the safe and responsible management of contrast media agents, and administration techniques. Teaching strategies include: conferences, case discussion, electronic reference reviews, and medication administration competencies laboratories.

**BSID 540 Sociology of Health and Disease
3 Credits**

This course will offer students the knowledge and skills necessary to provide support to patients of all types. Content is designed to offer students a review of the physiologic and anatomical changes related to diverse pathologies that affect the human being in different stages of life. As part of this course, the following issues will be discussed: responsible and safe patient management; rules and regulations related to patient's medical information confidentiality; community health concepts; and communication skills. Course content will be offered through conferences, case discussion, literature review, content related assignments.

**BSID 550 Professional Lectures Seminar
2 Credits - Online course**

This one-year course will develop the student's ability to conduct critical reading of professional articles. As part of the course, emphasis will be given to the discussion of issues related to: new developments and research in the medical diagnostic images field. This course will be conducted mainly through on-line strategies where students will complete course requirements in a virtual environment. As part of this course, the following skills will be evaluated: knowledge and skills in informatics; search, validity, analysis and application of the information; and Spanish and English written communication skills. During the course, students will present five critical analyses of professional articles and will participate in the discussion of articles presented by fellow students.

FACULTY

Medical School Faculty

BASIC SCIENCES DEPARTMENTS

Department of Anatomy

Baksi, Krishna, PhD, Associate Professor

PhD, India Institute of Medical Sciences, New Delhi, India, 1977

MS, University of Calcutta, India, 1970

Cubano-Rojas, Luis A., PhD, Associate Professor and Associate Dean for
Research & Graduate Program

PhD, Kansas State University, 2000

Chinea-Martino, José J., D.MD, Professor

D.MD, University of Puerto Rico, School of Medicine, 1969

MS University of Indiana, 1972

Darmawardhane-Flanagan, Suranganie, PhD, Associate Professor

PhD, University of Massachusetts, Amherst, MA, 1987

MS, Northeastern University, Boston, MA, 1985

De León-Olmeda, Elizabeth, MD, Associate Professor

MD, Universidad Autónoma de Santo Domingo, 1996

Gómez-Pinzón, Héctor F., MD, Associate Professor

MD, Universidad Militar Nueva Granada, Bogotá, Colombia, 1984

Specialty in General Surgery, Instituto Nacional de Cancerología, 1995

Haiffe, Rosa M., MD, Professor; (Dual Appointment in Pathology)

MD, Universidad Autónoma (Dominican Republic), 1968

Specialty in Pathology, University District Hospital (UPR), 1974

Fellowship in Neuropathology, Indiana University, 1975

Jiménez, Sofía, PhD, Associate Professor and Chairperson

PhD, University of Puerto Rico, School of Medicine, 1984

MS, University of Puerto Rico, 1970

Marte, Erlin J., MD, Assistant Professor

MD, Pontificia Universidad Católica Madre y Maestra, RD., 1998

Oliver-Sostre, José L., D.MD, Associate Professor

D.MD, University of Puerto Rico, School of Medicine, 2002

Torres-Vázquez, Armando, MD, Associate Professor

MD, Universidad Central del Caribe, School of Medicine, 1980

Specialty in Ophthalmology, Bronx-Lebanon Hospital Center, 1986

Sánchez-Sánchez, Vivian, D.MD, Assistant Professor

University of Puerto Rico, School of Dentistry, 1979

Schikorski, Thomas, PhD, Associate Professor (Dual Appointment at Neuroscience Department)

PhD, in Zoology/Neuroscience, Johann-Wolfgang-Goethe University, Frankfurt, Germany, 1993

Postdoctoral in Neuroscience, The Salk Institute, San Diego, CA, 2000

Valentin-Carro, Natalia, MS, Instructor
MS, Universidad Central del Caribe, School of Medicine, 2012

Veras-Tavarez, Wilson, MD, Associate Professor
MD, Universidad Autónoma de Santo Domingo, 1989

Villarubia, Héctor J., MD, Associate Professor
MD, Universidad Central del Caribe, School of Medicine, 2002
Specialty in Ophthalmology, University of Puerto Rico, SOM, 2006
Fellowship in Glaucoma, University of Texas, Health Science Center, 2007

Washington, Anthony V., PhD, Assistant Professor
PhD, Southern Methodist University, 1998

Department of Biochemistry

Baccin-Martins, Antonio Henrique, PhD, Assistant Professor
PhD, Federal University of Sao Paulo, 2006

Eaton, Misty, PhD, Professor
PhD, University of Texas Southwestern Medical Center, 1990

Eterovic, Vesna A., PhD, Professor (Dual appointment in Neuroscience)
PhD, National University Córdoba, Argentina, 1971

Ferchmin, Pedro A., PhD, Professor
PhD, National University Cordova, Argentina, 1971

Hann, Richard, MD, Associate Professor and Chairperson
MD, University of Oklahoma College of Medicine, 1974

Kucheryavykh, Yuriy V, PhD, Assistant Professor
PhD, Saint Petersburg State University, St. Petersburg, Russia, 2003

Kucheryavykh, Lilia, PhD, Assistant Professor
PhD, Saint Petersburg State University, St. Petersburg, Russia, 2001

Martínez, Michelle M., PhD, Assistant Professor
PhD, Michigan State University, 2004
MS, University of Puerto Rico, Mayagüez Campus, 2001

Skatchkov, Serguei, PhD, Professor (Dual appointment in Physiology)
PhD, Leningrad State University, Russia, 1991
M.P.H., Leningrad State University, Russia, 1979

Vélez-Carrasco, Wanda, PhD, Associate Professor
PhD, Tufts University, Boston, 1998
MS, Tufts University, Boston, 1995

Department of Microbiology and Immunology

Boukli, Nawal, PhD, Associate Professor
PhD, University of Missouri, 1999

Espino, Ana M., PhD, Assistant Professor
PhD, Instituto de Medicina Tropical, Cuba, 1997

Otero, Miguel, PhD, Assistant Professor
PhD, University of Puerto Rico, School of Medicine, 1998

Ramírez-Ronda, Carlos H., MD, Associate Professor
MD, Northwestern University, 1967
Specialty in Internal Medicine, 1970

Ríos, Zilka, MS, Associate Professor and Associate Dean for Academic Affairs of Medicine
MS, University of Puerto Rico, School of Medicine, 1978

Ríos-Olivares, Eddy O., PhD, MPH, Professor and Chairperson
PhD, University of Puerto Rico, School of Medicine, 1976
MPH, Sanitation Microbiology, University of Minnesota, 1967

Rodas-González, Arcady R., Assistant Professor
MD, Universidad del Zulia, Maracaibo, Venezuela, 1985
Specialty in Internal Medicine,
Fellowship in Infectious Diseases, Hospital Militar Dr. Carlos Arvelo, Caracas, Venezuela, 1996

Rodríguez, José W., PhD, Associate Professor
PhD, Morehouse School of Medicine, Atlanta, Georgia, 1998
MS, Emporia State University, 1989

Saavedra, Sonia, MD, Associate Professor
MD, Universidad Central del Caribe, School of Medicine, 1980

Sanabria-Rios, David, PhD, Assistant Professor
PhD, University of Puerto Rico, Río Piedras Campus, PR, 2007

Sepulveda-Torres, Lycely, PhD, Assistant Professor
PhD, Michigan State University, 2000

Department of Neuroscience

Bykhovskaia, María, PhD, Professor
PhD in Neuroscience, Russian Academy of Science, Russia, 1992
Postdoctoral in Neuroscience, University of Virginia, 1997

Eterovic, Vesna A., PhD, Professor & Chairperson (Dual Appointment in Biochemistry)
PhD, National University Córdoba, Argentina, 1971

Jorquera-Ayala, Ramón, PhD, Assistant Professor
PhD, Austral University of Chile, Valdivia, Chile, 2007

Schikorski, Thomas, PhD, Associate Professor (Dual appointment in Anatomy)
PhD, in Zoology/Neuroscience, Johann-Wolfgang-Goethe University, Frankfurt, Germany, 1993
Postdoctoral in Neuroscience, The Salk Institute, San Diego, CA, 2000

Department of Pathology

Bonilla de Franceschini, Angelisa, MD, Associate Professor & Chairperson
MD Universidad Central del Caribe, School of Medicine, 1981
Specialty in Pathology, University of Alabama Hospital at Birmingham, 1985

Castillo-Pichardo, Linette, PhD, Assistant Professor
 PhD, University of Puerto Rico, Medical Science Campus, 2011

Conde-Stering, Daniel, MD, Associate Professor
 MD, Universidad Central del Caribe, School of Medicine, 1992
 Specialty in Pathology, Beth Israel Medical Center, New York, NY, 1997
 Fellowship in Callender-Binford, Armed Forces Institute of Pathology, Washington, DC, 1999

Conte-Miller, María S., MD J.D., Associate Professor
 MD, Universidad Católica Madre y Maestra, School of Medicine, 1982
 Specialty in Pathology, University of Puerto Rico, Medical Science Campus, 1988
 Fellowship in Forensic Pathology, University of Miami, School of Medicine, 1989
 Juris Doctor, Interamerican University of Puerto Rico, 1995

Griebenow, Kai, PhD, Professor
 PhD, Heinrich-Heine University Dusseldorf, 1992

Hill, William David II, Ph. D., Associate Professor
 PhD, Bowman Gray, School of Medicine, 1988

Isales-Forsythe, Carlos, MD, Associate Professor
 MD., University of Puerto Rico, School of Medicine, 1978

Mendez, Loyda B., PhD, Associate Professor
 PhD, University of California, Irvine, 2006

Montoya-Ospina, Ruby A., PhD, Associate Professor
 PhD, Wildlife and Fisheries Sciences, Texas A&M University, College Station, Texas, 1998

Platt, Manu O., PhD, Assistant Professor
 PhD, Georgia Institute of Technology and Emory, Atlanta GA, 2006

Ramos-Pratts, Keyla M., PhD, Assistant Professor
 PhD, University of Puerto Rico, Medical Sciences Campus, 2013

Rodríguez-Ramos, Luz M., MD, Associate Professor
 MD, University of Puerto Rico, School of Medicine, 1982
 Specialty in Pathology, University District Hospital and VA Hospital, 1986

Silvestrini, Isis, MD, Associate Professor
 MD, University of Puerto Rico, School of Medicine, 1985
 Specialty in Pathology, University District Hospital (UPR), 1989

Santos-Soto, Iván J., PhD, Assistant Professor
 PhD, University of Puerto Rico, School of Medicine, 2012

Simmons-García, José A., MD, Assistant Professor
 MD, Universidad Central del Caribe, School of Medicine, 1987
 Specialty in Pathology, University Hospital (UPR), 1992

Virella-Santana, Wilma, MD, Assistant Professor
 MD, Temple University, School of Medicine, Philadelphia, PA, 1992

Zayas-Santiago, Astrid, PhD, Assistant Professor
 MD, Illinois Institute of Technology, Chicago, IL, 2009

Department of Pharmacology

Bychkov, Rostislav, PhD, Assistant Professor
PhD, University of St. Petersburg, Russia, 1993

Maldonado, Héctor, PhD, Associate Professor and Chairperson
PhD, University of California, 1992

Pérez-Arcila, Alvaro, MD Associate Professor
MS, Universidad de Antioquía, Colombia, SA, 1995
MD, Universidad de Antioquía, Colombia, SA, 1991

Santos-Martínez, Jesús, PhD, Professor Emeritus
PhD, Purdue University, 1954
Postdoctoral Fellow, Indiana University Medical Center,
Specialty in Renal Physiology, 1966-67

Silva, Walter, PhD, Associate Professor
PhD, Mount Sinai School of Medicine, CUNY, 1986

Torres-Cruz, José L., PhD, Associate Professor
PhD, University of Puerto Rico, School of Medicine, 2011
M.S in Science, University of Puerto Rico, School of Medicine, 1976

Department of Physiology

Escalona-Motta, Gladys, Ph.D, Professor
PhD, University of Puerto Rico, 1977

Inyushin, Mikhail Y., PhD, Assistant Professor
PhD, Leningrad State University, 1986

Miranda-Ortiz, María T., MD, PhD, Assistant Professor
MD, Autonomous University of Barcelona, Barcelona, Spain
PhD, University of Puerto Rico, School of Medicine

Rivera, Amelia, PhD, Professor
PhD, University of Puerto Rico, 1982

Rojas, Legier, PhD, Professor
PhD, University of Puerto Rico, 1987

Sanabria, Priscila, PhD, Professor and Chairperson
PhD, University of Puerto Rico, 1986

Davis-Figueroa, Johnny, MD, Assistant Professor
PhD, University of Puerto Rico, School of Medicine, 2005

CLINICAL SCIENCES DEPARTMENTS

Department of Emergency Medicine

Abreu-Rivera, Arlene, MD, MPH, Assistant Professor
MD, San Juan Bautista School of Medicine, 1991
Specialty in Internal Medicine, St. Mary's Hospital, NY, 1994
Fellowship in Emergency Medicine Services, University of Pittsburgh, 1996

Acevedo-Valentín, Ismael A., Assistant Professor
 MD, Iberoamerican University, School of Medicine, 2002
 Specialty in Internal Medicine, University Hospital Dr. R. Ruiz Arnau, 2007

Alonso-Serra, Héctor M., MD, Associate professor
 MD, University of Puerto Rico, School of Medicine, 1989
 Specialty in Emergency Medicine, University District Hospital (UPR), 1992

Arroyo-Marrero, Blas C., MD, Assistant Professor
 Specialty in Emergency Medicine, University District Hospital (UPR), 1984

Bou, Carmen Inés, MD, Assistant Professor
 MD, Universidad Central del Caribe, School of Medicine, 2000
 Specialty in Emergency Medicine, New York Medical College, 2003

Colón-Méndez, Manuel J., MD, Assistant Professor
 MD, Universidad Autónoma de Puebla, 1979
 Specialty in Emergency Medicine, 1988

Cruz-Calderon, Myriam, MD, Assistant Professor
 MD, Universidad Autónoma de Guadalajara, México, 1992
 Specialty in Internal Medicine, José M. Gándara Hospital, 1997

Cruz-Resto, Olga I., MD, Assistant Professor
 MD, Universidad Autónoma, Santo Domingo, DR, 1978
 Specialty in Obstetrics and Gynecology, Bayamón Regional Hospital, 1995

Díaz-Alcalá, José Eric, M.D, Associate Professor
 MD, Universidad Central del Caribe, School of Medicine, 1990
 Specialty in Emergency Medicine, Lincoln Medical and Health Center,
 New York Medical College, 1994
 Fellowship in Medical Toxicology, Allegheny University of the Health Sciences,
 Medical College of Pennsylvania, Hahnemann University, 1996

Gago-Rivera, Jorge, MD, Associate Professor
 MD, Universidad Autónoma de Guadalajara, México, 1977
 Specialty in Emergency Medicine, University Hospital (UPR), 1982

García-Castro, Juan A., MD, Assistant Professor
 MD, Zaragoza School of Medicine, Spain, 1973
 Specialty in Emergency Medicine, University District Hospital (UPR) 1983

García-Morales, José J., MD, Assistant Professor
 MD, Universidad Nordeestana, San Francisco de Macoris, DR, 1986
 Specialty in Emergency Medicine, University District Hospital (UPR), 1997

Gascot-Zayas, Javier, MD, Assistant Professor
 MD, San Juan Bautista, School of Medicine, 2003

López-Rocafort, Jorge L., MD, Assistant Professor
 MD, Ponce School of Medicine, 2000
 Specialty in Emergency Medicine, University District Hospital (UPR), 2003

Marcano-Centeno, Geovannie, MD, Assistant Professor
 MD, Ponce School of Medicine, 1998
 Specialty in Emergency Medicine, University District Hospital (UPR), 2001

Marín- De Gracia, Jesús M., MD, Assistant Professor and Chairperson
MD, University of Seville, Spain, 1981
Specialty in Emergency Medicine, University District Hospital (UPR), 1995

Ramírez-Vega, Moises, MD, Assistant Professor
MD, Universidad Autónoma de Guadalajara, 2003

Rodríguez-Collazo, Víctor M., MD, Assistant Professor
MD, San Pedro de Macorís, Dominican Republic, 1978
Specialty in Emergency Medicine, 1984

Rodríguez-De Jesús, Mónica, MD, Assistant Professor
MD, University of Puerto Rico, School of Medicine, 2002
Specialty in Emergency Medicine, University Hospital (UPR), 2005

Rodríguez-Martínez, Maribel, MD Associate Professor
MD, University of Puerto Rico, School of Medicine, 1989
Specialty in Emergency Medicine, Boston City Hospital, Massachusetts, 1993
Fellowship in Pediatric Emergency Medicine, Fairfax Hospital, 1995

Rodríguez-Rosello, Luis E., Assistant Professor
MD, Universidad Iberoamericana, UNIBE, 2001

Rosa-Cartagena, Félix J., MD, Assistant Professor
MD University of Puerto Rico, School of Medicine, 1985
Specialty in Emergency Medicine, University District Hospital (UPR), 1988

Sepulveda-Serra, Raymond, MD, Associate Professor
MD, Santiago de Compostela University, Spain, 1975
Specialty in Emergency Medicine, University District Hospital (UPR), 1981

Department of Family Medicine

Alonso-De La Cruz, Angelita, MD, Instructor
MD, Universidad Autónoma de Santo Domingo, DR, 1986

Acevedo-Sierra, Ignacio, MD, Assistant Professor
MD, Universidad Católica Madre y Maestra, Santiago, DR, 1989

Alicea-Santana, Digmarie, MD, Assistant Professor
MD, University of Puerto Rico, Medical Sciences Campus, 2007

Berríos-Marcano, Rafael, MD, Assistant Professor
MD, Universidad Central del Caribe, School of Medicine, 1989
Specialty in Obstetrics and Gynecology, University District Hospital, PR, 1993

Betancourt-Bojos, Félix, MD, Associate Professor
MD, University of Puerto Rico, Medical Sciences Campus, 1973

Burgos-Marquez, Linnette, LND, Instructor
LND, University of Puerto Rico, Río Piedras Campus, 2008

Cardona, Flores, MD, Assistant Professor
MD, Universidad Central del Este San Pedro de Macorís, 1984
Specialty in Pediatrics, Hospital Regional Gándara, Ponce, PR, 1996

Carrero-Perez, Astrid, MD, Assistant Professor
MD, Universidad Autónoma de Guadalajara, Jalisco, Mexico, 2002

Carrión-González, Ibis S. PsyD., Assistant Professor
PsyD., Psychology with Specialization in Clinical Psychology, Universidad Carlos Albizu, 2002

Castro-Ávila, Rosa, MD, Assistant Professor
MD, Universidad Autónoma de Guadalajara, 2000

Cedeño, Rafael, MD, Assistant Professor
MD, University of Puerto Rico, School of Medicine, 1981
Specialty in Family Medicine, San Pablo Hospital (UCC) 1988

Cedeño-Quintero, Gustavo, MD, Assistant Professor
MD, Universidad Central del Caribe, School of Medicine, 1993
Specialty in Family Medicine, University Hospital Dr. R. Ruiz Arnau (UCC), 1996

Cintron-Rivera, Vielka MD, Associate Professor
MD, MD, Universidad Autónoma de Guadalajara, Jalisco, Mexico, 1998

Chico, Francisco, MD, Instructor
MD, Universidad Santiago de Compostela, School of Medicine, 1980
Specialty in Family Medicine, San Pablo Hospital (UCC) 1984

Coppola-Muñoz, Angelo, MD, Assistant Professor
MD, Universidad Central del Caribe, School of Medicine, 1984
Specialty in Family Medicine, San Pablo Hospital, Bayamón, PR, 1987

Cox-McCleary, Evadne, MSN, MHS, Assistant Professor
MSN, Catholic University of Puerto Rico, 1983
MHS, Governors State University, Chicago, Illinois, 1996

Cruz-Igartua, Ariel, MD, Associate Professor
MD, University of Puerto Rico, Medial Science Campus, 1982
Specialty in Family Medicine, San Pablo Hospital, Bayamón, PR, 1985

Cruz-Roman, Olga A., Assistant Professor
MD, Universidad Autónoma de Santo Domingo, DR, 1991

Cuadrado-Figueroa, Fernando, MD, Assistant Professor
Specialty in Family Medicine

De Jesus-Vargas, Luis A., MD, Assistant Professor
MD, University of Puerto Rico, School of Medicine, 1978
Specialty in Internal Medicine, University Hospital (UPR) 1981

De La Torre, Irene G., CNM, MS, Assistant Professor
MS, Northern Illinois University, Dekalb, ILL, 1974
Certificate in Nurse-Midwifery, University of Southern, California, 1983

Díaz-Hernández, Jaime M., MD, Assistant Professor
MD University of Puerto Rico, School of Medicine, 1975
Specialty in Family Practice, University Hospital (UPR), 1978

Díaz-Pérez, Luis R., MD, Assistant Professor
 MD, Universidad Central del Caribe, School of Medicine, 1980
 Specialty in Family Medicine, San Pablo Hospital Residency Program, 1987

Díaz-Rodríguez, Nereida, PhD, Associate Professor and Dean of Academic Affairs
 PhD, University of Puerto Rico, 1997
 Clinical Psychology Internship, Bellevue Hospital-NYU Medical Center, 1989
 MA, University of Puerto Rico, 1986

Dominguez-Girona, Lauribel, MD, Assistant Professor
 MD, Universidad Central del Caribe, School of Medicine, 2001
 Specialty in Family Medicine, San Pablo Hospital Residency Program, Bayamón, PR, 2004

Fabian-Argueta, Rafael, D.C., Instructor
 D.C., Life University, Atlanta, GA, 2001

Feliberty, Evelyn, Ed, Dc, Assistant Professor
 Ed.Dc., Interamerican University of P.R., At Present
 MA, University of Puerto Rico, 1991

Feliciano, Héctor, MD, Profesor
 MD, Hahnemann University, 1953

Fucile, Michael L., MD, Assistant Professor
 MD, Temple University, School of Medicine, 1982
 Specialty in Family Medicine, Caguas Regional Hospital (UPR), 1985

Fuentes-Aponte, Anselmo, MD, Assistant Professor
 MD, University of Puerto Rico, School of Medicine, 1978
 Specialty in Family Medicine, San Pablo Hospital, Bayamón, PR, 1989

García-Feliciano, Arturo T. MD, Assistant Professor
 MD, Universidad Autónoma de Guadalajara, México, 1995

García-Goyco, Carlos, MD, Assistant Professor
 MD, University of Puerto Rico, School of Medicine, 1978
 Specialty in Family Medicine

García-Lopez, Carola, PhD, Instructor
 PhD, Centro de Estudios Avanzados de PR y el Caribe, 2006

García-Rodríguez, María del Mar, MSW, MHS. Assistant Professor
 MSW, La Salle Graduate School of Social Work, University of Puerto Rico, 1970

García-Rosario, Luis, MD, Assistant Professor
 MD, University of Puerto Rico, 1994
 Specialty in Family Medicine,

Girona-Lozada, Mariely D., MD, Assistant Professor
 MD, Universidad Central del Caribe, School of Medicine, 2003
 Specialty in Family Medicine, University Hospital Dr. R. Ruiz Arnau, 2006

González, Eric M., MD, MPH, Professor and Acting Chairperson
 MD, Universidad Central del Caribe, School of Medicine, 1980
 MPH, University of Puerto Rico, 1985

González-Villanueva, Myriam, PhD, Assistant Professor
PhD, University of Puerto Rico Rio Piedras Campus, 2007

González-Ramos, Astrid E., MD, Assistant Professor
MD, Universidad Central del Caribe, School of Medicine, 2012

González-Rivera, Víctor M., Psy.D, Assistant Professor
Psy.D., Carlos Albizu University, San Juan, PR

Hussein, Esam A., MD, Associate Professor
MD, Universidad Central del Este, San Pedro de Macoris, DR, 1985

Irizarry, Moises D., MD, Assistant Professor
MD, Universidad Central del Caribe, School of Medicine, 2001
Specialty in Family Medicine, University Hospital Dr. Ramón Ruiz Arnau (UCC), 2005

Lacomba-Hernández, Rafael, MD, Assistant Professor
MD, Universidad Central del Este, San Pedro de Macorís, RD, 1981

Lespier-Torres, Zahira, Psy.D. Assistant Professor
Psy.D, Caribbean Center for Advanced Studies in Psychology, San Juan, PR, 1996

López-Rivera, Fermín A., MD, Assistant Professor
MD, Universidad Central del Este, San Pedro de Macoris, DR

Maldonado-Ríos, Gertrudis, PhD, Assistant Professor
PhD, University of Puerto Rico, School of Medicine, 1997

Marrero-Pagan, Yari, MHS, Instructor
MSH, Universidad Central del Caribe, School of Medicine

Marrero-Rodríguez, Carmen Amalia, Ed.D, Associate Professor
Ed.D, University of Puerto Rico, Rio Piedras Campus, 2013
MPH, University of Puerto Rico, Medical Sciences Campus, 1989

Martir, Sylvia A., MD, Assistant Professor
MD, Ponce School of Medicine, 2002
Specialty in Emergency Medicine, University of Puerto Rico, Carolina Campus, 2005

Martínez-Millares, Francisco, MD, Assistant Professor
MD, Ponce School of Medicine, Ponce, PR, 1985
Specialty in Family Medicine, University of Maryland Hospital, Baltimore, MD, 1989

Mateo-Reyes, Enid, MD, MPH, Adjunct Associate Professor
MD, University of Puerto Rico, School of Medicine, 1975
Specialty in Family Medicine, University District Hospital (UPR), 1978
Fellowship Faculty Development, Michigan State University, 1986

Matos-González, Marta, MD, Instructor
MD, Universidad Autónoma de Guadalajara, Mexico, 2000

Medina-Avilés, Miguel, MD, Instructor
MD, Universidad Central del Caribe School of Medicine, 1993
Specialty in Family Medicine, Dr. R. Ruiz-Arnau University Hospital (UCC), 1997

Medina-Vilar, Alejandro, MD, Assistant Professor
 MD, Escuela de Medicina de Salamanca, Spain, 1988
 Specialty in Family Medicine, San Pablo Hospital, Bayamón, PR, 1997

Melendez-Ruiz, Benjamín, MD, Assistant Professor
 MD, Universidad del Noreste, Tampico, Tampa, México, 1996

Mercado, Harry, MD, Professor and Associate Dean for Clinical & Faculty Affairs
 MD, University of Puerto Rico, School of Medicine, 1980
 Specialty in Family Medicine, University District Hospital (UPR), 1983

Moscoso, Margarita, PhD, Associate Professor
 PhD, University of Michigan, 1992
 M.Ed., University of Puerto Rico, School of Medicine, 1987

Muñiz-Vega, Elaine, MD, Assistant Professor
 MD, Universidad Central del Caribe, School of Medicine, 2008

Murphy-Rivera, Francisco, MD, Associate Professor
 MD, Universidad Central del Caribe, School of Medicine, 1991
 Specialty in Family Medicine, 1994

Nevarez-Perez, Karla M., MD, Assistant Professor
 MD, Interamerican University

Nicolau-Gómez, Yania, MD, Assistant Professor
 MD, Universidad Central del Caribe, School of Medicine, 2010

Nieves-Díaz, Gil, MD, Assistant Professor
 MD, University of Puerto Rico, School of Medicine, 1976
 Specialty in Family Medicine, Caguas Regional Hospital, 1983

Nieves-Rodríguez, Aracelis, MD, Assistant Professor
 MD, San Juan Bautista Medical School, Caguas, PR, 2008
 Specialty in Family Medicine, Manatí Medical Center Family Medicine Program, 2012

Oliver-Pichardo, José L., MD, Assistant Professor
 MD, Universidad Santiago de Compostela, Escuela de Medicina, 1973

Oquendo, Leyda, MD, Assistant Professor
 MD, Ponce School of Medicine, 1994
 Specialty in Family Medicine, San Pablo Hospital, 1997

Ortiz-Díaz, Carlos, MD, Assistant Professor
 MD, Universidad Central del Este, School of Medicine, Dominican Republic, 1982
 Specialty in Pediatrics, Caguas Regional Hospital (UPR), 1992

Ortiz-Rodríguez, Cynthia M., MD, Assistant Professor
 MD, Universidad de Zaragoza, Zaragoza, Spain, 1994
 Specialty in Family Medicine, Dr. Alejandro Otero López Hospital, Manatí, PR, 1984

Pagan-Ferrer, Jocel, MD, Assistant Professor
 MD, Universidad Central del Caribe, School of Medicine,

Pagán-Mercado, Ketsy L., Assistant Professor
 MD, Universidad Autónoma de Guadalajara, México, 1999

Parrilla-Pablos, Maria P., MD, Assistant Professor
MD, Universidad Central del Este, San Pedro de Macoris, DR, 1997

Parrilla, Iris, Ph.D, Associate Professor
Ph.D, University of Puerto Rico, 2012

Pérez-Del Pilar, Omar, PhD, Assistant Professor and Dean of Admissions and Student Affairs
PhD, Clinical Psychology, University of Puerto Rico, 2002

Pesante-Pinto, José L., MD, Associate Professor
MD University of Zaragoza, Spain, 1979
Specialty in Family Medicine, San Pablo Hospital (UCC) 1986

Pizarro-Skerret, Carmen, MD, Assistant Professor
MD, Universida Autónoma de Guadalajara, Jalisco, México, 1996

Quiñones-Berrios, Areliz, Ed.D, Instructor
Ed.D., Interamerican University, 2007
MSH, Universidad Central del Caribe, School of Medicine, 1999

Ramos Vargas, Luz N., PhD, Assistant Professor
PhD, Clinical Psychology, Ponce School of Medicine, 2013
MHSAC, Universidad Central del Caribe, 2008

Reyes-Pulliza, Juan Carlos, EdD Assistant Professor
EdD University of Puerto Rico, 2003
MS, University of Puerto Rico, 1990

Reyes-Matos, Betania, MD, Assistant Professor
MD, Universidad Autónoma de Guadalajara, México, 2002

Reyes-Rosario, Yadiria, MD, Assistant Professor
MD, Universidad Autónoma de Guadalajara, School of Medicine, México, 2002
Specialty in Family Medicine, Manatí Medical Center Residency Program, 2009

Rivera-Anaya, Carmen V., MD, Assistant Professor
MD, Universidad Central del Caribe, School of Medicine, 2008

Rivera-Linares, Anthony R., MD, Instructor
MD, UCETEC, School of Medicine, Dominican Republic

Rivera-Riestra, Víctor, MD, Assistant Professor
MD, San Juan Bautista, School of Medicine, 2007

Rivera-Rivera, Erika, MD, Assistant Professor
MD, Universidad Autónoma de Guadalajara, México, 2004

Rivero, Luis M., MD, Assistant Professor
MD Universidad Autónoma de Guadalajara, 1977
Specialty in Family Medicine, San Pablo Hospital (UCC) 1987

Rodríguez, Carmen E., MD, Instructor
MD, Seville Medical University, 1972
Specialty in Family Medicine, 1982

Rodríguez, Francisco R., MD, Associate Professor
 MD, Universidad Central del Este, DR, 1979
 Specialty in Family Medicine, Hospital (UCC) Bayamón, PR,

Rodríguez-Figueroa, Linnette, PhD, Assistant Professor
 PhD, University of Michigan, Rackham School of Graduate Studies, Michigan, 2008

Rodríguez-Pombar, Miriam, MD, Assistant Professor
 MD, University of Valladolid, Spain, 1991
 Specialty in Family Medicine, 2008

Rodríguez, Wanda, JD, Assistant Professor
 JD, Interamerican University of Puerto Rico, Law School 1985

Rodríguez-Reyes, Sylvia E., MD, Assistant Professor, 1989
 MD University of Puerto Rico, School of Medicine
 Specialty in Family Medicine, University District Hospital (UPR), 1993

Rodríguez-Rodríguez, Wilbert, MD, Assistant Professor
 MD, Universidad Autónoma de Guadalajara, 2006

Rodríguez-Vázquez, María de los Angeles, MD, Assistant Professor
 MD, Ponce School of Medicine, PR., 1990
 Specialty in Family Medicine, San Pablo Hospital (UCC) Bayamón, PR, 2000

Rolón-Orengo, Laura, MD, Assistant Professor
 MD, Universidad de Cadiz, Facultad de Medicina, Spain, 1981

Rosa-Toledo, Luis, MD, Associate Professor
 MD, Universidad Autónoma de Guadalajara, 1989
 Specialty in Family Medicine, Dr. Alejandro Otero López Hospital, Manatí, PR, 1994

Santos-Reyes, Héctor O., MD, MHS, Assistant Professor
 MD, University of Puerto Rico, Medical Sciences Campus, 1980
 Specialty in Pediatrics, Dr. Eduardo Garrido Morales Hospital, 1986

Sierra-Quiñonez, Yolanda, MD, Assistant Professor
 MD, Zaragoza Medical School, 1977
 Specialty in Internal Medicine, Bayamón Reginal Hospital, PR, 1982

Sotomayor, Antonio, MD, Assistant Professor
 MD, Facultad de Medicina, Valencia, España, 1980
 Specialty in Family Medicine, San Pablo Hospital, 1987

Suárez, Ramón A., MD, Professor Emeritus
 MD University of Puerto Rico, School of Medicine, 1977
 Specialty in Family Medicine, University District Hospital (UPR), 1979
 Fellowship Faculty Development, University of Illinois, 1981

Tasch-Ramírez, Raymond J., MD, Instructor
 MD, Universidad Autónoma, Guadalajara, México, 1986
 Specialty in Family Medicine, University Hospital Dr. Ramón Ruiz Arnau, 1996

Tavarez-Alarcon, Luis E., MD, Assistant Professor
 MD, Universidad Central del Este, DR, 1979
 Specialty in Family Medicine, Dr. Alejandro Otero López Hospital, Manatí, PR, 1998

Tocuyo, Carmen M., MD, Assistant Professor
MD, Universidad Autónoma de Guadalajara, 1987
Specialty in Family Medicine, San Pablo Medical Center, 1994

Torres-Reyes, Neisa M., MD, Associate Professor
MD, Universidad Central del Caribe, School of Medicine, 1995
Specialty in Internal Medicine, University Hospital Dr. Ramón Ruiz Arnau (UCC), 1998
Fellowship Pulmonary Disease, San Juan City Hospital, 2000

Torres-Rivera, Francisco, PhD, Assistant Professor
PhD, Union Graduate School, Ohio, 1973

Torres-Romero, Luz, MD, Associate Professor
MD, Universidad Central del Caribe, School of Medicine, 1983
Specialty in Physical Medicine and Rehabilitation, New York Medical College, NY
Fellowship in Upper and Lower Limb Prosthetics and Orthotics, New York University, NY

Toro, Ismael, MD, ABFP, ABG, Assistant Professor
MD, Universidad Central del Caribe, School of Medicine, 1980
Specialty in Family Medicine, Lutheran Medical Center, 1983
Fellowship in Faculty Development, Michigan State University, 1984
Fellowship in Geriatrics, New York University, 1984

Tort-Ortiz, Bernat, Ph.Dc., Instructor
Ph.Dc., Universidad Complutense, Madrid, Spain, (at present)

Valentin-Colon, Diana C., MD, Assistant Professor
MD, Universidad Central del Caribe, School of Medicine, 2012

Vargas-Vidot, José A., MD, Assistant Professor
MD, Eugenio Maria de Hostos University, Dominican Republic, 1986

Vega-Suárez, Lorna I., MD, Assistant Professor
MD, Universidad Autónoma de Guadalajara, México, 1991
Specialty in Pediatrics, University Hospital Dr. Ramón Ruiz Arnau, 1996

Velázquez-Valle, Miguel Ali, MD, Assistant Professor
MD, University of Puerto Rico, School of Medicine, 2000
Specialty in Family Practice, University of Puerto Rico, School of Medicine, 2003

Vélez Crespo, Michael, MS, Assistant Professor
MS, University of Puerto Rico, 1995

Vera-Muñiz, Carlos J., Instructor
MD, Universidad Autónoma de Guadalajara, 1992
Specialty in Family Medicine, San Pablo Hospital, Bayamón, PR, 1998

Villalobos-Colon, Daniel, MD, Assistant Professor
MD, Universidad Iberoamericana, DR, 2005

Zaldua, Eduardo, MD, Assistant Professor
MD, Universidad Central del Caribe, School of Medicine, 1995
Specialty in Family Medicine, Universidad Central del Caribe, SOM, 2006

Zayas, Iliá, MD, Assistant Professor
MD Universidad Central del Caribe, School of Medicine, 1980
Specialty in Family Medicine, Lutheran Medical Center, 1983

Department of Internal Medicine

Adorno-Fontáñez, José R., MD, Associate Professor
MD, Ponce School of Medicine, 2003
Specialty in Internal Medicine,
Fellowship in Pulmonary & Critical Care Medicine, VA Caribbean Healthcare System, PR, 2009

Alequín-Sánchez, Ricardo, MD, Instructor
MD, Universidad Autónoma de Guadalajara, México, 2003
Specialty in Internal Medicine, University Hospital Dr. R. Ruiz Arnau, (UCC), 2006

Agosto-Maury, Norma, MD, Assistant Professor
MD, Universidad de Valencia, 1993

Andino-Rivas, Ada I., MD, Associate Professor
MD, University of Puerto Rico, School of Medicine, 1990
Specialty in Neurology, University District Hospital (UPR) 1994
Fellowship in Clinical Neurophysiology, Veterans Administration Hospital (UPR) 1995

Armaiz-Aponte, Guillermo R., Assistant Professor
MD, Universidad Central del Caribe, School of Medicine, 1980
Specialty in Internal Medicine, San Juan City Hospital (UPR), 1983

Ayala-Vélez, Iván S., MD, Assistant Professor
MD, University of Puerto Rico, School of Medicine, 1987
Specialty in Internal Medicine, University Hospital, 1990
Fellowship in Cardiology, University Hospital, 1994

Baco, Francis P., MD, Associate Professor
MD, University of Puerto Rico, Medical Sciences Campus, 1981
Specialty in Internal Medicine, University District Hospital (UPR) 1984
Fellowship in Endocrinology, Diabetes & Metabolism, University District Hospital (UPR) 1986

Bernal-Cabrero, Delfín, MD, Assistant Professor
MD, University of Barcelona, Spain, 1955
Specialty in Internal Medicine, 1958

Benítez-Colón, Carlos R., MD, Assistant Professor
MD, Universidad Central del Este, 1982
Specialty in Internal Medicine

Blanco-Franco, Alejandro, MD, Assistant Professor
MD, Universidad Autónoma de Guadaluja, México, 2007
Specialty in Internal Medicine, University Hospital Dr. Ramón Ruiz Arnau (UCC) PR, 2012

Cáceres, William, MD, Associate Professor
MD, University of Puerto Rico, School of Medicine
Specialty in Internal Medicine
Fellowship in Hematology Oncology

Cantres-Fonseca, Onix J., MD, Assistant Professor
MD, University of Puerto Rico, Medical Sciences Campus, 2006
Specialty in Internal Medicine, University District Hospital (UPR) 2009
Fellowship in Pulmonary & Critical Care, VA Caribbean Healthcare System, PR, 2012

Campos-Ruiz, Rafael, MD, Instructor
MD, Universidad Central del Caribe, School of Medicine, 1981
Specialty in Internal Medicine, University Hospital Dr. Ramón Ruiz Arnau (UCC), 1984

Carbelleira, David, MD, Associate Professor
MD, University of Puerto Rico, Medical Sciences Campus, 1984
Specialty in Internal Medicine, University District Hospital (UPR) 1987

Carrillo-Morales, Sol Melissa, MD, Assistant Professor
MD, University of Puerto Rico, Medical Sciences Campus, 2007
Specialty in Internal Medicine, University District Hospital (UPR), 2010
Sub-specialty in Infectious Diseases, University District Hospital (UPR) 2011

Carrasquillo, Efrain, MD, Assistant Professor
MD, Universidad Central del Caribe, School of Medicine, 1994
Specialty in Internal Medicine, Franklin Square Hospital Center, Baltimore, MD, 1997
Fellowship in Rheumatology, San Juan City Hospital, 2001

Casal, Jesús R., MD, Associate Professor
MD, Universidad Central del Caribe, School of Medicine, 1989
Specialty in Internal Medicine, VA Caribbean Healthcare System, PR
Fellowship in Pulmonary & Critical Care, Veterans Administration Hospital, PR

Catellanos-Martin, Michelle, MD, Assistant Professor
MD, Universidad Central del Caribe, School of Medicine, 2011
Specialty in Internal Medicine, University Hospital Dr. Ramón Ruiz Arau (UCC) 2014

Chabrier-Beauchamp, Lissette, MD, Associate Professor
MD, University of Puerto Rico, School of Medicine,
Specialty in Dermatology,

Chiesa Cedo, Carlos J., MD, Assistant Professor
MD, University of Navarra, Spain, 1972
Fellowship in Hematology-Oncology, University District Hospital (UPR), 1980

Chinea-Martínez, Angel, MD, Associate Professor
MD, Universidad de Valencia, Spain, 1980
Specialty in Neurology, San Juan VA and San Juan City Hospital, PR, 1987

Colón-Fontáñez, Francisco, MD, Associate Professor
MD, University of Puerto Rico, School of Medicine,
Specialty in Dermatology,

Colón-Candelaria, Mayra M., MD, Associate Professor
MD, Universidad Central del Caribe, School of Medicine, 1999
Sub-specialty in Infectious Diseases, Veterans Administration Hospital

Colón-Quintana, Melba, MD, Associate Professor
MD, University of Puerto Rico, School of Medicine, 1980
Specialty in Internal Medicine, University District Hospital (UPR), 1983
Fellowship in Infectious Disease, San Juan VA Medical Center, Puerto Rico, 1985

Correa, María de los Ángeles, MD, Associate Professor
 MD, Universidad Central del Caribe, School of Medicine, 1981
 Specialty in Internal Medicine 1984

Cortés, Carmen, MD, Associate Professor
 MD, Ponce School of Medicine, 1983

Cardona, Héctor R., MD, Associate Professor
 MD, University of Puerto Rico, School of Medicine, 1981
 Specialty in Internal Medicine, San Juan VA Medical Center, 1984

Cruz-Loubriel, Abdiel, MD, Assistant Professor
 MD, University of Puerto Rico, School of Medicine, 2003
 Specialty in Internal Medicine, University District Hospital (UPR), 2006
 Fellowship in Gastroenterology, University District Hospital (UPR), 2009

Cruz-Rivera, Carmen L., MD, Assistant Professor
 MD, University of Puerto Rico, School of Medicine, 1982
 Specialty in Dermatology, University District Hospital, UPR, 1987

Cuebas-Rodríguez, Clara E., MD, Associate Professor
 MD, University of Puerto Rico, School of Medicine, 1983
 Specialty in Neurology, University District Hospital (UPR), 1991

De Jesus, Eilyn, MD, Instructor
 MD, Universidad Autónoma de Guadalajara, México
 Specialty in Internal Medicine, University Hospital Dr. Ramón Ruiz Arnau

De La Torre-Lugo, Eneida, MD, Assistant Professor
 MD, University of Puerto Rico, School of Medicine, 2008
 Specialty in Dermatology, University District Hospital (UPR) 2012

Del Río-Rodríguez, Félix G., MD, Associate Professor
 MD, Universidad Central del Caribe, School of Medicine, 1989
 Specialty in Internal Medicine, Maimonides Medical Center, Brooklyn, NY, 1993
 Fellowship in Cardiology, Maimonides Medical Center, Brooklyn, NY, 1996

Del Río-Santiago, Valentín, MD, Associate Professor
 MD, Universidad Central del Caribe, School of Medicine, 2006
 Specialty in Internal Medicine, VA Caribbean Healthcare System, 2009
 Fellowship in Cardiovascular Disease, VA Caribbean Healthcare System, 2013

Deniz, Juan, MD, Assistant Professor
 MD, Universidad de Zaragoza, 1976
 Specialty in Internal Medicine

Díaz-Hernández, Antonio L., MD, Associate Professor
 MD, Ponce School of Medicine, 2005
 Specialty in Internal Medicine, San Juan VA Medical Center, 2008
 Fellowship in Nephrology, San Juan VA Medical Center, 2010

Díaz-Olivo, Rolando, MD, Associate Professor
 MD, University of Puerto Rico, School of Medicine, 1984
 Specialty in Neurology, 1988

Ducoudroy, Samadys, MD, Assistant Professor
 MD, Ponce School of Medicine, 1992
 Specialty in Internal Medicine

Dueño-Carmoega, María I., MD, Associate Professor
 MD, University of Puerto Rico, School of Medicine
 Specialty in Internal Medicine
 Fellowship in Gastroenterology

Esponda, Omar L., MD, Assistant Professor
 MD, Universidad Central del Caribe, School of Medicine, 2006
 Specialty in Internal Medicine, University Hospital Dr. Ramón Ruiz Arnau, 2009

Feliciano, Marcos, MD, Assistant Professor
 MD, University of Puerto Rico, Medical Sciences Campus, 1988
 Specialty in Specialty in Internal Medicine

Feliciano-Astacio, Briseida E., MD, Associate Professor
 MD, University of Puerto Rico, School of Medicine, 1987
 Specialty in Internal Medicine, University District Hospital (UPR), 1991
 Fellowship in Clinical Neurophysiology, University Hospital (UPR), 1992

Fernández-Santos, Diana, Ed.D., Assistant Professor
 Ed.D., University of Puerto Rico, School of Medicine, 1994

Figueroa, Javier, MD, Assistant Professor
 MD, University of Puerto Rico, School of Medicine
 Specialty in Internal Medicine
 Fellowship in Infectious Disease

Forastieri-Maldonado, Luis, MD, Assistant Professor
 MD, University of Puerto Rico, School of Medicine, 1996
 Specialty in Internal Medicine

Fuxench, Zelma Z., MD, Assistant Professor
 MD, University of Puerto Rico, School of Medicine, 1977
 Specialty in Internal Medicine, 1980

Galib, Hamid, MD, Professor
 MD, University of Puerto Rico, School of Medicine, 1972
 Specialty in Internal Medicine, University District Hospital (UPR) 1975
 Fellowship in Gastroenterology, University District Hospital (UPR) 1977

Garayalde-Cotrones, Glen, MD, Associate Professor
 MD, University of Puerto Rico, School of Medicine, 1977
 Specialty in Neurology, Boston University Hospital, 1982

García-Soberal, Madeline, MD, Assistant Professor
 MD, Universidad Autónoma de Guadalajara, 1987
 Specialty in Internal Medicine, University Hospital Dr. Ramón Ruiz Arnau (UCC), 1996
 Fellowship Hematology/Oncology, San Juan City Hospital, 2000

García-Maldonado, Miosotis, MD, Assistant Professor
 MD, Universidad Central del Caribe, Medical Science Campus, 2004
 Specialty in Anatomic and Clinical Pathology, University of Puerto Rico,
 Medical Science Campus, 2008

Girón-Morell, Jessie, MD, Assistant Professor
 MD, Universidad Iberoamericana (UNIBE), Dominican Republic, 2001
 Specialty in Internal Medicine, University Hospital Dr. R. Ruiz Arnau, 2008

Gómez, María de los Ángeles, PhD, Associate Professor
 PhD, Université de Paris V–René Descartes, 1991

Gómez, René, MD, Associate Professor
 MD, University of Puerto Rico, School of Medicine, 1965
 Specialty in Internal Medicine

González-Claudio, Glenda M., MD, Associate Professor
 MD, Universidad Central del Caribe, School of Medicine, 1993
 Specialty in Internal Medicine, VA Caribbean Healthcare System, 1996
 Fellowship in Infectious Disease, VA Caribbean Healthcare System, 1999

Guardiola-Rivera, Benjamín R., MD, Assistant Professor
 MD, Universidad Iberoamericana, Dominican Republic, 2002
 Specialty in Internal Medicine, University Hospital Dr. R. Ruiz Arnau, 2007

Gutiérrez-Nuñez, José J., MD, Associate Professor
 MD, University of Puerto Rico, School of Medicine, 1976
 Specialty in Internal Medicine, University District Hospital (UPR), 1979
 Fellowship in Infectious Disease, VA Medical Center, 1981

Hernández-Ayala, María I., MD, Associate Professor
 MD, Universidad de Zaragoza, Spain, 1976
 Sub-Specialty in Neurology, University District Hospital (UPR), 1980

Hernandez-Castillo, Ricardo A., MD, Assistant Professor
 MD, Universidad de Monterrey, Nueva León, México, 2004
 Specialty in Internal Medicine, Hospital La Concepción, PR, 2009
 Fellowship in Pulmonary and Critical Care Medicine, VA Caribbean Healthcare System, PR, 2013

Hunter-Mellado, Robert, MD, Professor
 MD University of Puerto Rico, School of Medicine, 1979
 Specialty in Internal Medicine, San Juan VA Hospital, 1981
 Fellowship Hematology, Medical Oncology, Duke University Medical Center, 1984

Igartua, Juan M., MD, Assistant Professor
 MD, Universidad de Zaragoza, Spain, 1976
 Specialty in Internal Medicine, Veterans Administration Hospital, PR, 1981
 Fellowship in Cardiology, Veterans Administration Hospital, PR, 1983

Jiménez-Rodríguez, Harry, MD, Assistant Professor
 MD, University of Puerto Rico, School of Medicine, 1972
 Fellowship in Endocrinology, University District Hospital (UPR), 1977

Lasa-Imbert, Arnaldo E., MD, Assistant Professor
 MD, Universidad Central del Caribe, School of Medicine, 2005
 Specialty in Internal Medicine, Veterans Administration Hospital, PR, 2008
 Fellowship in Gastroenterology and Hepatology, Veterans Administration Hospital, PR, 2011

León-Valiente, Carlos F., MD, Associate Professor
 MD, Universidad de Barcelona (Spain) 1971
 Specialty in Internal Medicine, San Juan VA Hospital, 1975
 Fellowship in Infectious Diseases, San Juan VA Hospital, 1977

Llado-González, Ileana J., MD, Assistant Professor
 MD, Universidad Pedro Henríquez Ureña (Dominican Republic), 1978
 Specialty in Internal Medicine, University District Hospital (UPR), 1982
 Specialty in Cardiology, University Hospital, 1984

López, Esteban, MD, Assistant Professor
 MD, CETEC, Dominican Republic, 1982
 Specialty in Internal Medicine

Lozada, Antonio, MD, Assistant Professor
 MD, American University of the Caribbean, School of Medicine, 2004
 Specialty in Internal Medicine, Saint Vincent Catholic Medical Center, NY, 2007

Maldonado-Mercado, Awilda, MD, Assistant Professor
 MD, University of Puerto Rico, School of Medicine, 1982
 Specialty in Internal Medicine, Veterans Administration Hospital, PR, 1985
 Fellowship in Hematology Oncology, University District Hospital (UPR) 1987

Marchand, Ernesto, MD, Professor Emeritus
 MD, St. Louis University, Missouri, 1943
 Specialty in Internal Medicine School of Tropical Medicine; San Juan City Hospital (UPR); Graduate
 School of Medicine, University of Pennsylvania, 1950
 Fellowship in Cardiology, John Sealy Hospital
 Fellowship Cardiovascular Diseases, University of Texas, 1951

Martínez, Héctor J., MD, A, Associate Professor
 MD, University of Puerto Rico, School of Medicine, 2005
 Specialty in Internal Medicine, Veteran Administration Medical Center, 2008

Martinez, Johanna L., MD, Associate Professor
 MD, San Juan Bautista, School of Medicine, Caguas, PR, 2001
 Specialty in Internal Medicine, Bronx-Lebanon/Albert Einstein College of Medicine, NY, 2007

Martinez-Souss, Jaime, MD, Associate Professor
 MD, University of Puerto Rico, School of Medicine
 Specialty in Internal Medicine
 Fellowship in Gastroenterology

Martinez-Ojeda, José A., MD, Associate Professor
 MD, University of Puerto Rico, School of Medicine, 2001
 Specialty in Internal Medicine, University District Hospital, 2004
 Fellowship in Cardiology, University District Hospital (UPR) 2008
 Fellowship in Interventional Cardiology, Drexel University/Hahnemann Hospital, 2009

Martino-Morales, Alejandro, MD, Associate Professor
 MD, University of Puerto Rico, School of Medicine
 Specialty in Internal Medicine,
 Fellowship in Endocrinology, Diabetes & Metabolism

Mayor-Becerra, Ángel M., MD, Assistant Professor
 MD, Military University Nueva Granada, Bogotá, Colombia, 1986

Medina, Augusto, MD, Assistant Professor
 MD, Universidad San Juan Bautista, 1991
 Specialty in Internal Medicine, McLaren Regional Medical Center, 1995
 Fellowship in Hematology-Oncology, Michigan State University College, 1998

Medina-De Vandroux, Lisa M., MD, Associate Professor
 MD, Universidad Central del Caribe, School of Medicine, 1990
 Specialty in Internal Medicine, University Hospital Dr. Ramón Ruiz Arnau (UCC), 1993

Meléndez-Rosa, Myriam, MD, Associate Professor
 MD, Universidad Central del Caribe, 1986
 Specialty in Internal Medicine, University Hospital Dr. Ramón Ruiz Arnau (UCC), 1990 Fellowship in
 Pneumology, San Juan City Hospital, PR, 1992

Mendoza-Castro, Verónica, MD, Assistant Professor
 MD, CETEC, Dominican Republic, 1981
 Specialty in Internal Medicine

Miranda, Mario C., MD, Assistant Professor;
 MD, University of Puerto Rico, School of Medicine, 1958
 Specialty in Internal Medicine, San Juan VA Hospital, 1967

Miranda-Diaz, Christine, M.P.H., Instructor
 M.P.H., University of Puerto Rico, Medical Sciences Campus, 2007

Mojica-Cosme, José, MD, Assistant Professor
 MD, Universidad Central del Caribe, School of Medicine, 1985
 Specialty in Internal Medicine, University Hospital Dr. Ramón Ruiz Arnau (UCC), 1988

Mojica Preciado, Victor M., MD, Assistant Professor
 MD, University of Puerto Rico, School of Medicine, 1989
 Specialty in Neurology, University District Hospital (UPR), 1996

Montes-Ruiz, Juan, MD, Associate Professor
 MD, Universidad Central del Caribe, School of Medicine, 1980
 Specialty in Internal Medicine, University Hospital Dr. Ramón Ruiz Arnau (CEA), 1983

Morales, José A., MD, Associate Professor
 MD, Universidad Autónoma de Guadalajara, 1978
 Specialty in Internal Medicine, San Juan City Hospital, 1984

Nazario, Sylvette, MD, Assistant Professor
 MD, University of Puerto Rico, School of Medicine
 Specialty in Internal Medicine
 Fellowship in Allergy & Immunology

Noriega, Ángel, MD, Associate Professor
 MD, Universidad Autónoma de Santo Domingo, 1968
 Specialty in Neurology, University Hospital, 1973
 Fellowship in Electroencephalography, Indiana University, 1975

Ortiz, Juan Carlos, MD, Associate Professor
 MD, Universidad Central del Caribe, School of Medicine, 2004
 Specialty in Internal Medicine, University District Hospital (UPR) 2007

Ortiz-Rivera, Damarys, MD, Assistant Professor
MD, Universidad Autónoma de Guadalajara, 2000
Specialty in Internal Medicine, Veterans Administration Medical Center, 2004

Ortiz-Rosario, José D., MD, Assistant Professor
MD, Universidad Central del Caribe, School of Medicine, 2008
Specialty in Internal Medicine, Veterans Administration Hospital, PR, 2011
Fellowship in Nephrology, Veterans Administration Hospital, 2013

Otero-Martínez, Juan R., MD, Assistant Professor
MD, University of Puerto Rico, School of Medicine, 1983
Specialty in Internal Medicine

Palacios, Miguel, MD, Assistant Professor
MD, Universidad Central del Caribe, School of Medicine, 1980
Specialty in Internal Medicine

Pereyo-Díaz, José E., MD, Associate Professor
MD, University of Puerto Rico, School of Medicine, 1998
Specialty in Internal Medicine
Fellowship in Cardiology

Pereyo-Torruellas, José A., MD, Associate Professor
MD, University of Maryland, 1959
Specialty in Internal Medicine
Fellowship in Cardiology

Pérez-Echevarria, Tricia B., MD, Assistant Professor
MD, University of Puerto Rico, School of Medicine
Specialty in Internal Medicine
Fellowship in Geriatric Medicine

Pérez-Florit, Ana, MD, Assistant Professor
MD, Universidad Nacional Pedro Henríquez Ureña (Dominican Republic), 1987
Specialty in Internal Medicine, University Hospital Dr. Ramón Ruíz Arnau (UCC), 1992

Pérez-Maldonado, Nicolás, MD, Associate Professor
MD, University of Puerto Rico, School of Medicine, 1988
Specialty in Internal Medicine

Pérez, Milton, MD, Associate Professor
MD, Universidad Central del Caribe, School of Medicine, 1981
Specialty in Internal Medicine, Staten Island Hospital, NY, 1984
Fellowship in Pulmonary Disease, Maimonides Medical Center, Brooklyn, 1986

Pérez Rios, Rene E., MD, Assistant Professor
MD, University of Puerto Rico, School of Medicine, 1981
Fellowship in Cardiology, 1987

Rivera-Pérez, Erik X., MD, Assistant Professor
MD, Universidad Central del Caribe, School of Medicine, 2009
Specialty in Internal Medicine, University Hospital Dr. Ramón Ruíz Arnau, 2012

Quesada-Suárez, Luis, MD, Assistant Professor
 MD, Universidad Central del Este Pedro de Macorís, 1981
 Specialty in Internal Medicine, Regional Hospital Dr. Eduardo Garrido, 1985
 Fellowship in Nephrology, Veterans Administration Medical Center, 1987

Quiñones-Bayron, Jacobo E., MD, Assistant Professor
 MD, San Juan Bautista, School of Medicine, 1998
 Specialty in Internal Medicine, Hospital de la Concepción, San Germán, PR, 2003

Quintero, Aida, MD, Assistant Professor
 MD, University of Puerto Rico, School of Medicine, 1985
 Specialty in Internal Medicine

Ramírez-Rivera, José, MD, Professor
 MD, Yale University, 1953
 Specialty in Internal Medicine,

Reyes, Meilyn, MD, Associate Professor
 MD, University of Puerto Rico, School of Medicine, 2003
 Specialty in Internal Medicine, Louisiana State University, New Orleans, LA, 2006

Reyes-Ortiz, Luis, MD, Associate Professor
 MD, University of Puerto Rico, School of Medicine, 1985
 Specialty in Internal Medicine in San Juan City Hospital, 1989
 Fellowship in Endocrinology in San Juan City Hospital, 1991

Rivera, Ángel, MD, MD, Assistant Professor
 MD, University of Puerto Rico, School of Medicine, 1965
 Specialty in Internal Medicine

Rivera-Del Río, José R., MD Associate Professor
 MD, Universidad Nacional Pedro Henríquez Ureña, 1972
 Specialty in Internal Medicine, San Juan V.A. Hospital, 1981
 Fellowship in Cardiology, San Juan V.A. Hospital, 1993

Rivera-Valles, José A., MD, Assistant Professor
 MD, Universidad Autónoma de Guadalajara, México, 2000
 Specialty in Internal Medicine, University Hospital Dr. R. Ruiz Arnau, 2009

Rivera-Zayas, Elvin, MD, Associate Professor
 MD, University of Puerto Rico, School of Medicine, 1989
 Specialty in Internal Medicine, New Rochelle Hospital, NY, 1994
 Fellowship in Cardiovascular Disease, San Juan Municipal Hospital, 1995

Rodríguez Steven, MD, Assistant Professor
 MD, CETEC, Dominican Republic, 1984
 Specialty in Internal Medicine

Rodríguez, Porfirio, MD, Assistant Professor
 MD, University of Puerto Rico, School of Medicine, 1988
 Fellowship in Neurology, University District Hospital (UPR), 1992

Rodríguez-Cruz, Gilda, MD, Assistant Professor
 Specialty in Internal Medicine

Rodríguez-Monge, Edgardo, MD, Assistant Professor
 MD, San Juan Bautista School of Medicine, 1991
 Specialty in Internal Medicine

Rodríguez-Olavarri, Enrique J., MD, Instructor
 MD, Universidad de Salamandra, 1987
 Specialty in Internal Medicine

Rodríguez-Cintron, William, MD, Professor
 MD, University of Puerto Rico, School of Medicine, 1983
 Specialty in Internal Medicine, Veterans Administration Hospital, 1987
 Fellowship in Pulmonary & Critical Care Medicine, Baylor College of Medicine
 Affiliated Hospitals, 1991

Rodríguez-Ospina, Luis F., MD, Assistant Professor
 MD, University of Puerto Rico, School of Medicine, 1991
 Specialty in Internal Medicine, VA Medical Center, 1994
 Fellowship in Cardiovascular Diseases, VA Medical Center, 1997

Rodríguez-Vila, Orlando, MD, Associate Professor
 MD, University of Puerto Rico, School of Medicine, 1991
 Specialty in Internal Medicine, Beth Israel Hospital, Boston, 1994
 Fellowship in Cardiovascular Diseases, Beth Israel Hospital, 1997

Rosado, Angelo, MD, Assistant Professor
 MD, Universidad Nacional Pedro Henríquez Ureña, 1989
 Specialty in Internal Medicine, La Concepción Hospital, 1994
 Fellowship in Endocrinology and Metabolism, San Juan Municipal Hospital, 1997

Rosado-Rodríguez, Carlos S., MD, Associate Professor
 MD, University of Puerto Rico, Medical Science Campus, 1985
 Specialty in Internal Medicine, San Juan VA Medical Center, PR, 1988
 Fellowship in Nephrology, San Juan VA Medical Center, 1990

Rubero, José A., MD, Assistant Professor
 MD, Universidad Central del Caribe, School of Medicine, 1996
 Specialty in Internal Medicine, Mount Sinai, School of Medicine, 1999
 Residency in Emergency Medicine, Cornell University, School of Medicine, 2002

Ruiz-Candelaria, Yelitza, MD, Assistant Professor
 MD, Universidad Central del Caribe, School of Medicine, 2001
 Specialty in Internal Medicine, University District Hospital (UPR), 2004
 Fellowship in Hematology/Oncology, Veteran Administration Hospital, 2008

Ruiz-Ramos, Juan, MD, Associate Professor
 MD, Universidad Central del Caribe, School of Medicine, 1984
 Specialty in Internal Medicine, St. Michael's Medical Center (New Jersey) 1989

Salgado-Vila, Norma, MD, Associate Professor
 MD, Universidad Autónoma de Guadalajara, México, 1999
 Specialty in Internal Medicine in San Juan VA Medical Center, 2004
 Fellowship in Hematology/Oncology, San Juan Municipal Hospital, 2008
 Fellowship in Bone Marrow Transplant, H. Lee Moffitt Cancer Center, FL, 2009

Santana, Arnulfo, MD, Assistant Professor
 MD, CETEC, Dominican Republic, 1982
 Specialty in Internal Medicine

Santiago, Ivonne, MD, Assistant Professor
 MD, Universidad Autónoma de Guadalajara, 1988
 Specialty in Internal Medicine

Santiago-Sánchez, Michellealdema, MD, Associate Professor
 MD, Universidad Central del Caribe, School of Medicine, 2005
 Specialty in Internal Medicine, Veterans Administration Hospital, PR, 2008

Santos, Eladio, MD, Associate Professor
 MD, University of Puerto Rico, School of Medicine, 1985
 Specialty in Internal Medicine, 1992
 Fellowship in Endocrinology Diabetes and Metabolism, 1995

Santori, Renato, MD, Assistant Professor
 MD, University of Pavia, Italia, 1964
 Specialty in Internal Medicine

Silva-Bermúdez, Juan, MD, Instructor
 MD, Universidad Central del Caribe, School of Medicine, 2007
 Specialty in Internal Medicine, University Hospital Dr. Ramón Ruiz Arnau (UCC) 2012

Soler-Ramírez, Ricardo J., MD, Assistant Professor
 MD, Universidad Autónoma de México
 Specialty in Internal Medicine

Toro, Aníbal, MD, Assistant Professor
 MD, Universidad Central del Caribe, School of Medicine, 1997
 Specialty in Internal Medicine, V A Caribbean Healthcare System, PR, 1986
 Fellowship in Gastroenterology, University District Hospital (UPR) 1988

Toro, Doris H., MD, Professor
 MD, University of Puerto Rico, School of Medicine, 1983
 Specialty in Internal Medicine, Veterans Administration, 1986
 Fellowship in Gastroenterology, University District Hospital, 1988

Torres-Berrios, Damarys, MD, Assistant Professor
 MD, Universidad Central del Caribe, School of Medicine, 1994
 Specialty in Neurology, University District Hospital (UPR), 1998

Torres-Palacios, José E., MD, Associate Professor
 MD, Universidad Central del Caribe, School of Medicine, 2004
 Specialty in Internal Medicine, Veterans Administration Hospital (PR) 2007
 Fellowship in Pulmonary and Critical Care, Veterans Administration Hospital, 2010

Torres-Talavera, Magaly, MS., Instructor
 MS, Interamerican University, Metropolitan Campus, PR, 2004

Valderrabano, Wagner, MD, Assistant Professor
 MD, Universidad Central del Caribe, School of Medicine, 2007
 Specialty in Internal Medicine, University Hospital Dr. Ramón Ruiz Arnau, 2010

Vallejo, Nelson, MD, Assistant Professor
MD, Universidad de Salamanca, 1987
Specialty in Internal Medicine

Vargas, Vivianne Marie, MD, Assistant Professor
MD, Universidad Central del Caribe, School of Medicine, 2000
Specialty in Internal Medicine, Veterans Administration Medical Center, 2003

Vázquez-Díaz, María M., MD, Assistant Professor
MD, Universidad Iberoamericana (UNIBE) DR, 2001
Specialty in Internal Medicine, University Hospital Dr. Ramón Ruiz Arnau (UCC) 2008

Vázquez-Medina, Juan M., MD, Assistant Professor
MD, Universidad Autónoma Guadalajara (México) 1976
Specialty in Internal Medicine, Ponce District Hospital, 1981
Fellowship in Hematology-Oncology, Roswell Park Memorial Institute, 1983

Valazquez, Roberto K., MD, Associate Professor
MD, Universidad de Guadalajara, Jalisco, México, 2004
Specialty in Internal Medicine, Hospital de la Concepción, San Germán, PR, 2010

Vendrell, Roberto M., MD, Assistant Professor
MD, University of Puerto Rico, School of Medicine, 2001
Specialty in Internal Medicine, University of Texas, Southwestern Medical Center, 2004
Fellowship in Gastroenterology, University District Hospital (UPR), 2009

Vidal-Cardona, Ana, MD, Assistant Professor
MD, University of Puerto Rico, School of Medicine
Specialty in Internal Medicine
Fellowship in Neurology

Vilá-Pérez, Salvador, MD, Professor
MD, University of Puerto Rico, School of Medicine, 1976
Specialty in Internal Medicine, Cleveland Clinic, 1979
Research Fellow, Cleveland Clinic, 1980
Fellowship in Rheumatology, University of Texas, 1983

Vila-Rivera, Karina, MD, Assistant Professor
MD, Universidad Central del Caribe, School of Medicine, 2005
Specialty in Internal Medicine, University Hospital Dr. Ramón Ruiz Arnau, 2009
Sub-specialty in Rheumatology, University District Hospital (UPR) 2012

Villafañe-San Inocencio, Edwin, MD, Associate Professor
MD, Universidad Nacional Pedro Henríquez Ureña (Dominican Republic), 1977
Specialty in Internal Medicine, San Juan V.A. Hospital, 1982

Department of Obstetrics and Gynecology

Alonso, Rafael, MD, Assistant Professor
MD, Ponce Medical School, 1987
Specialty in OB/Gyn, University Hospital (UPR), 1992

Álvarez-Pérez, Jesús, MD, Associate Professor
MD, Universidad Central del Caribe, School of Medicine, 2000
Specialty in OB/Gyn, UMD, New Jersey Medical School, 2004
Fellowship in Maternal Fetal Medicine, UMD, New Jersey, Medical School, 2007

Benabe-González, Erika M., Associate Professor
 MD, Universidad Central del Caribe, School of Medicine, 2003
 Specialty in Obstetrics and Gynecology, San Juan City Hospital, 2007

Blas-Santamaria, Lorenzo, MD, Assistant Professor
 MD, Universidad de Sevilla, Spain, 1973
 Specialty in OB/Gyn, Caguas Regional Hospital, 1978

Castro, William, H., MD, Associate Professor
 MD, University of Puerto Rico, School of Medicine, 1980
 Specialty in Obstetrics and Gynecology, Lincoln/Misericordia, New York Medical College, 1983

Cintrón-Principe, Héctor, MD, M.P.H., Assistant Professor
 MD, University of Puerto Rico, School of Medicine, 1971
 Specialty in OB/Gyn, Caguas Regional Hospital, 1975
 M.P.H., Maternal-Child Health Care, University of California, 1981

Collazo-Bonilla, Angel L., MD, Associate Professor
 MD, Universidad de Zaragoza, Spain, 1970
 Specialty in OB/Gyn, Caguas Regional Hospital Dr. Eduardo Garrido-Morales, 1986

Cruz-Díaz, José R., MD, Associate Professor
 MD, University of Puerto Rico, School of Medicine, 1993
 Specialty in OB/Gyn, University District Hospital (UPR), 1997
 Fellowship in Reproductive Endocrinology and Infertility, George Washington University
 Medical Center, Washington, DC, 1999

Cruzado, Gustavo, MD, Associate Professor
 MD, Universidad Central del Caribe, School of Medicine, 2000
 Specialty in OB/Gyn

Del Toro, Iván, MD, Assistant Professor
 MD, University of Puerto Rico, School of Medicine, 1976
 Specialty in OB/Gyn, University District Hospital (UPR), 1980

Díaz, Rodrigo, MD, Associate Professor
 MD University of Puerto Rico, School of Medicine, 1989
 Specialty in OB/Gyn, San Juan City Hospital, PR, 1994

Escobar, Pedro F., MD, Associate Professor
 MD, University of Puerto Rico, School of Medicine, 1998
 Specialty in Ob/Gyn, Northwestern University, Chicago, IL, 2002

Faget-Olivar, Guillermo L., MD, Associate Professor
 MD, Universidad de Salamanca, Spain, 1972
 Specialty in OB/Gyn, San Juan City Hospital, 1976

Figueroa-De Los Reyes, Rafael, MD, Associate Professor
 MD, Universidad Autónoma de Guadalajara, 1983
 Specialty in OB/Gyn, San Juan City Hospital Medical Center, 1986

Fonseca-Salgado, Carlos A., MD, Assistant Professor
 MD, Universidad Central del Caribe, School of Medicine, 2002
 Specialty in Obstetrics and Gynecology, San Juan City Hospital, 2005

Fraguada-Reyes, Ángel L., MD, Assistant Professor
MD, Universidad Central del Caribe, School of Medicine, 1985
Specialty in OB/Gyn, San Juan City Hospital, 1991
Fellowship in ACOG
Board Certified

Gelpi-Guzmán, Angel L., MD, Associate Professor
MD, Universidad Central del Caribe, School of Medicine, 1983
Specialty in OB/Gyn, University District Hospital (UPR) 1987

González-Rodríguez, Julio A., MD, Associate Professor
MD, Universidad Central del Caribe, School of Medicine, 1982
Specialty in OB/Gyn, San Juan City Hospital, 1987

González-Recio, Ailed, MD, Associate Professor
MD, University of Puerto Rico, School of Medicine, 1979
Specialty in OB/Gyn, University District Hospital (UPR), 1983

Llorens-Martínez, Amaury, MD, Assistant Professor
MD, Universidad Central del Caribe, School of Medicine, 1994
Specialty in Ob/Gyn, San Juan Municipal Hospital, 1999
Fellowship in Reproductive Endocrinology and Infertility, New Jersey Medical School, 2002

Martín-Rodríguez, José C., MD, Assistant Professor
MD, University of Puerto Rico, School of Medicine, 1994
Specialty in OB/Gyn, San Juan District Hospital, 1998
Board Certified

Márquez, Cecile, MD, Assistant Professor
MD, Universidad Autónoma Guadalajara, 1977
Specialty in OB/Gyn, Dr. Eduardo Garrido Regional Hospital, 1982
Fellowship in Pediatric & Adolescent Gynecology, 1981

Miro-Rosado, Aurelio, MD, Assistant Professor
MD, Universidad Central del Este, School of Medicine, DR, 1980
Specialty in OB/Gyn

Muñiz-Vélez, Eduardo J., Associate Professor
MD, Universidad Central del Caribe, School of Medicine, 1994
Specialty in OB/Gyn, University District Hospital, 1999

Náter-Orsini, Manuel, MD, Associate Professor
MD, University of Puerto Rico, School of Medicine, 1968
Specialty in OB/Gyn, University District Hospital (UPR), 1972

Ortiz-Roque, Carmen, MD, Associate Professor
MD, University of Puerto Rico, School of Medicine, 1986
Specialty in OB/Gyn, Brookdale Hospital Medical Center, NY, 1994

Pérez-Iglesias, María del C., MD, Associate Professor
MD, Universidad Central del Caribe, School of Medicine, 1980
Specialty in OB/Gyn, Caguas Regional Hospital Dr. Eduardo Garrido, 1986

Pérez-Ortiz, Iris Icela, MD, Associate Professor
MD, University of Puerto Rico, School of Medicine, 1994
Specialty in OB/Gyn, (UPR), 1998

Rivera-Mercado, José A., Associate Professor
MD, Universidad del Noreste, Tampico, México
Specialty in OB/Gyn, Ponce University Hospital Dr. José N. Gándara, 1999

Rodríguez-Millayes, Héctor J., MD, Assistant Professor
MD, Universidad Central del Caribe, School of Medicine, 2001
Specialty in OB/Gyn, San Juan City Hospital, PR, 2005

Romero-Gross, Glorianna, MD, Assistant Professor
MD, Universidad Central del Caribe, School of Medicine, 1993
Specialty in OB/Gyn, San Juan City Hospital, 1994

Salgado-Moráles, Juan L., MD, Associate Professor
MD, Universidad Central del Caribe, School of Medicine, 1984
Specialty in OB/Gyn, Caguas Regional Hospital Dr. Eduardo Garrido, 1989

Salgueiro-Bravo, Jesúsmanuel, MD, Assistant Professor
MD Universidad Central del Caribe, School of Medicine, 1997
Specialty in OB/Gyn, University District Hospital (UPR), 2001

Serrano-Isern, Alonso, MD, Associate Professor
MD, Ponce School of Medicine, 1985
Specialty in OB/Gyn, San Juan City Hospital, 1989

Vargas-Cordero, José, MD, Professor
MD, Santiago de Compostela University, Spain, 1955
Specialty in OB/Gyn, San Juan City Hospital, 1960

Vázquez, Miguel A., MD, Associate Professor
MD, Universidad Central del Caribe, School of Medicine, 1995
Specialty in Obstetrics and Gynecology,

Vélez-Rodríguez, Herminio, MD, Assistant Professor
MD, Universidad Central del Caribe, School of Medicine, 1987
Specialty in Obstetrics and Gynecology, Mayaguez Medical Center, PR, 1992

Department of Pediatrics

Acantilado-Bernabe, Carmen, MD, Associate Professor
MD, University of Puerto Rico, School of Medicine, 1961
Specialty in Pediatric, Wayne County Hospital, 1962

Agosto-Pérez, Mariely, MD, Assistant Professor
MD, University of Puerto Rico, School of Medicine, 1993
Residency in Pediatrics, University Pediatric Hospital (UPR) 1996

Alvelo-Santiago, Jesús M., MD, Assistant Professor
MD, Universidad Central del Caribe, School of Medicine, 1980
Specialty in Pediatrics,

Amaro, Mirna S., M.D, Assistant Professor
MD, Universidad del Este, 1984
Specialty in Pediatrics, Regional Hospital Dr. Cayetano Coll y Toste, 1989

Arzola-Rivera, Jorge, MD, FAAP, Associate Professor
 MD, University of Puerto Rico, School of Medicine, 1974
 Specialty in Pediatrics, Dr. Eduardo Garrido Morales Regional Hospital, 1977
 Developmental Pediatrics, Mount Sinai Medical Center, 1988

Arroyo-Rosas, Juan G., MD, Assistant Professor
 MD, University of Puerto Rico, School of Medicine, 1981
 Specialty in Pediatrics, San Juan City Hospital, PR, 1985

Báez-Rivera, Emilio, MD, Associate Professor
 MD, University of Puerto Rico, Medical Science Campus, 1991
 Specialty in Pediatrics, University Pediatric Hospital (UPR), 1994
 Fellowship in Pediatric Critical Care, University Pediatric Hospital (UPR), 1997

Balestra-Jiménez, Jesús, MD, Associate Professor
 MD, University of Sevilla (Spain) 1973
 Specialty in Pediatrics, University Hospital Dr. R. Ruiz Arnau (UCC), 1977

Bauza-Rossi, Julio, MD, Associate Professor
 MD, University of Uruguay, 1970
 Specialty in Pediatrics, Beth Israel Medical Center, 1975
 Fellowship in Cardiology, SUNY, 1977
 Fellowship in Neonatology, University Pediatrics Hospital, 1978

Berges-Buisac, Francisco, Psy.D, Assistant Professor
 Psy.D, Centro Caribeño de Estudios Post-graduados, 1987

Bonnet-Álvarez, Mayra Z., MD, Assistant Professor
 MD, Universidad Central del Caribe, School of Medicine, 1981
 Specialty in Pediatrics

Borges, Myrna L., MD, Assistant Professor
 MD, University of Puerto Rico, School of Medicine, 1977
 Fellowship in Clinical Genetics, University of South Alabama, 1990

Cantellops-Montalvo, José M., MD, Assistant Professor
 MD, Universidad Nacional Pedro Henriquez Ureña, RD, 1987
 Specialty in Pediatrics, University Hospital Dr. Ramón Ruiz Arnau, 1990

Capriles, José A., MD, Assistant Professor
 MD, University of Puerto Rico, School of Medicine, 1981
 Specialty in Pediatrics, San Juan City Hospital, PR, 1984
 Fellowship in Neonatal Perinatal, San Juan City Hospital, PR, 1986

Clavel-Rodríguez, Luis, MD, Professor
 MD, University of Puerto Rico, School of Medicine, 1976
 Specialty in Pediatrics, University of California Davis, School of Medicine, 1978
 Fellowship in Hematology-Oncology, Children's Hospital Medical Center, Boston, &
 Sidney Farber Cancer Institute, 1980

Colón-Pérez, Ivette, MD, Associate Professor
 MD, University of Puerto Rico, School of Medicine, 1994
 Specialty in Pediatrics, 1997

Cotto-Rodríguez, Roalba, MD, Assistant Professor
 MD, Universidad Central del Este San Pedro de Macorís, RD, 1985
 Specialty in Pediatrics, University Hospital Dr. Ramón Ruiz Arnau, 2007

Cuevas-Bocanegra, Harry R., MD, Assistant Professor
 MD, Universidad Autónoma de Guadalajara, México, 1986
 Specialty in Pediatrics, San Juan City Hospital, 1993

Cuevas-Marrero, Javier, MD, Assistant Professor
 MD, Universidad Central del Caribe, 1997
 Specialty in Pediatrics, 2000

De La Paz-Valentín, William, MD, Associate Professor
 MD, San Juan Bautista, School of Medicine, 1981
 Specialty in Pediatrics, S.U.N.Y., 1985
 Fellowship in Pediatric Pulmonary Diseases, Interfaith Medical Center, 1988

Defendini, Mari Carmen, MD, Assistant Professor
 MD, University of Puerto Rico, School of Medicine, 1987
 Specialty in Pediatrics, 1990

De Jesús-Pagán, Brenda M., MD, Associate Professor
 MD, Ponce School of Medicine, 1997
 Specialty in Pediatrics, San Juan City Hospital, 2000

Delgado-Marrero, Maribel, MD, Assistant Professor
 MD, University of Puerto Rico, School of Medicine, 1997
 Specialty in Pediatrics, University Pediatric Hospital (UPR), 2000

Díaz-Pinto, Héctor F., MD, Associate Professor
 MD, University of Puerto Rico, School of Medicine, 1976
 Specialty in Pediatrics, San Juan City Hospital, PR, 1983

Ehevarria-Escudero, María E., MD, Associate Professor
 MD, Ponce School of Medicine, 1998
 Specialty in Pediatrics, Ponce University Hospital San Lucas, Ponce, PR, 2001
 Fellowship in Neuro-Oncology, Children's Memorial Hospital, Chicago, IL, 2007

Fernández-Maymi, Carlos, MD, Professor
 MD, Universidad Central del Este, San Pedro de Macorís, 1981
 Specialty in Pediatrics, University Hospital Dr. Ramón Ruiz Arnau (UCC), 1986

Figueroa-Ramírez, Yolanda A., MD, Assistant Professor
 MD, Universidad Literaria de Valencia, Spain, 1981
 Specialty in Pediatrics, University District Hospital (UPR), 1989

Figueroa, Wanda, MD, Associate Professor
 MD, University of Puerto Rico, School of Medicine, 1986
 Specialty in Pediatrics, Dr. Eduardo Garrido Morales Regional Hospital, 1989

Freyre-González, Nylsa, MD, Assistant Professor
 MD, Universidad Central del Caribe, School of Medicine, 1981
 Specialty in Pediatrics,

García-Contreras, Frances, MD, Associate Professor
 MD, University of Puerto Rico, School of Medicine, 1973
 Specialty in Pediatrics, University District Hospital (UPR), 1976

García-Díaz, Haydee, MD, FAAP, Assistant Professor
 MD, University of Puerto Rico, School of Medicine, 1975
 Specialty in Pediatrics, University District Hospital (UPR), 1978
 Fellowship in Pediatric Infectology, Baylor University, 1980

García Viñas, Odette, MD, Instructor
 MD, University of Puerto Rico, School of Medicine, 1981
 Specialty in Pediatrics, San Juan City Hospital, 1984

González, Jesús, MD, Assistant Professor
 MD, Universidad Central del Caribe, School of Medicine, 1995
 Specialty in Emergency Medicine, University District Hospital (UPR), 1998

González-Betancourt, Alfredo, MD, Assistant Professor
 MD, Universidad de Zaragoza, Spain, 1988
 Specialty in Pediatrics, San Juan City Hospital, 1995

González-Rodríguez, Rafael, MD, Assistant Professor
 MD, University of Puerto Rico, School of Medicine, 1983
 Specialty in Pediatrics, Mount Sinai, School of Medicine, 1986
 Subspecialty in Nephrology, Health Sciences Medical Center, SUNY, Brooklyn, 1990

Hernández, Evaurely, MD, Assistant Professor
 MD, University of Puerto Rico, School of Medicine, 1994
 Specialty in Pediatrics, 1997

Irizarry, Luis, MD, Associate Professor
 MD, Universidad de Zaragoza, 1984
 Specialty in Pediatrics, University Hospital Dr. Ramón Ruiz Arnau (UCC), 1999

Jiménez-Almodovar, María C., MD, Assistant Professor
 MD, Ponce School of Medicine, 2006
 Specialty in Pediatrics, University Pediatric Hospital, 2009

Laó-Vélez, Carlos, MD, Professor
 MD, University of Puerto Rico, School of Medicine, 1971
 Specialty in Pediatrics, University District Hospital (UPR), 1974
 Fellowship Pediatrics Neurology, John Hopkins Hospital, Baltimore, 1977

León, Doris, MD, Assistant Professor
 MD, Universidad Central del Caribe, School of Medicine, 2003
 Specialty in Pediatrics, University Pediatrics Hospital (UPR), 2006

López-Martínez, Annette Y., Assistant Professor
 MD, Universidad Central del Caribe, School of Medicine, 2005
 Specialty in Pediatrics, University Pediatrics Hospital (UPR) 2008
 Fellowship in Pediatric Rheumatology, Cincinnati Children's Medical Center, 2011

López-González, Julie, MD, Associate Professor
 MD, University of Puerto Rico, School of Medicine, 1976
 Specialty in Pediatrics, University Pediatrics Hospital, 1979
 Fellowship Pediatrics Nephrology, San Juan City Hospital, 1981

Lucca-Colón, Aileen D., MD, Assistant Professor
MD, University of Puerto Rico, School of Medicine, 1984
Specialty in Pediatrics, San Juan City Hospital, 1987

Malavé-Félix, Leila V., MD, Associate Professor
MD, Universidad Autónoma de Barcelona, Spain, 1976
Specialty in Pediatrics, University Pediatric Hospital (UPR), 1980

Malavé-Rodríguez, Marisol, MD, Assistant Professor
MD, University of Puerto Rico, Medical Science Campus, 1998
Specialty in Pediatrics, University Pediatric Hospital (UPR), 2001

Malavet-Pantoja, Julia T., MD, Assistant Professor
MD, University of Puerto Rico, School of Medicine, 1988
Specialty in Pediatrics, University Pediatric Hospital, 1991

Marrero-Clemente, Giselle M., MD, Assistant Professor
MD, Ponce School of Medicine, 2006
Specialty in Pediatrics, University Pediatric Hospital, 2009

Martínez, Silma L., MD, Assistant Professor
MD, Universidad Central del Caribe, School of Medicine, 2001
Specialty in Pediatrics, San Juan City Hospital, 2004

Martínez-Santiago, Glenda, Associate Professor
MD, Universidad Central del Caribe, School of Medicine, 1989
Specialty in Pediatrics, University Pediatric Hospital (UPR), 1992

Mayol, Pedro, MD, Professor
MD, University of Puerto Rico, School of Medicine, 1962
Specialty in Pediatric, University Pediatric Hospital, 1966
Subspecialty in Pediatric Pneumology, University District Hospital (UPR), 1968

Montañez-Ramos, Victor M., MD, Assistant Professor
MD, Universidad Autónoma de Guadalajara, México, 1987
Specialty in Pediatrics, San Juan City Hospital, 1996

Nieves, Lourdes, MD, Instructor
MD, Universidad Central del Caribe, 1988
Specialty in Pediatrics, Bridgeport Hospital, 1991

Ochoa-Bacallao, Eduardo, MD, Associate Professor
MD, Universidad Central del Caribe, School of Medicine, 1980
Specialty in Pediatrics, San Juan City Hospital, 1983
Fellowship in Pediatric Critical Care, University Pediatric Hospital, 1984

Ortiz-De Jesús, Myriam, MD, Associate Professor
MD, Ponce School of Medicine, 1992
Specialty in Pediatrics, Tulane University, School of Medicine, New Orleans, LA, 1995

Ortiz, Norma, MD, Assistant Professor
MD, Universidad Complutense, Spain,
Specialty in Pediatrics, San Juan City Hospital,

Pérez-De Otero, Naydamar, MD, MPH, Assistant Professor
MD, University of Puerto Rico, Medical Science Campus, 1972
Specialty in Pediatrics, University District Hospital (UPR), 1975
M.P.H., University of Puerto Rico, Medical Science Campus, 1993

Ponce-Paredes, Guillermo, MD, Associate Professor
MD, Federico Villarreal National University, School of Medicine, Peru
Specialty in Pediatrics, San Juan City Hospital, 2004

Puig-Ramos, Gilberto, MD, Assistant Professor
MD, University of Puerto Rico, School of Medicine, 1987
Specialty in Pediatric Critical Care, 1993

Quintero-Del Río, Ana I., MD, MPH. Associate Professor
MD, San Juan Bautista, School of Medicine, 1989
Specialty in Pediatrics, University Hospital Dr. R. Ruiz Arnau, 1993
Fellowship in Pediatric Rheumatology, UT Southwestern Medical Center, TX 1997
Post Doctor Research Fellowship, Oklahoma Medical Research Foundation &
OU Medical Center, Department of Arthritis and Immunology, OK, 1999
MPH, in Epidemiology, Oklahoma University Health Science Center, OK, 2004

Ramírez, José C., MD, Assistant Professor
MD, University of Puerto Rico, School of Medicine, 1988
Specialty in Pediatrics, University of Florida, Shands Teaching Hospital, FL, 1992

Ramírez-Muñiz, María del P., MD, Assistant Professor
MD, Universidad Central del Caribe, School of Medicine, 1997
Specialty in Pediatrics, University Pediatric Hospital, 2000

Ramos-Otero, Victor, MD, Assistant Professor
MD, University of Puerto Rico, School of Medicine, 1998
Specialty in Pediatric, 2001

Ramos-Perea, Carlos D., MD, Associate Professor
MD, Universidad Autónoma de Guadalajara, México, 1977
Specialty in Pediatrics, University Pediatrics Hospital, 1981
Subspecialty in Neonatal-Perinatal Intensive Care, 1984

Reyes-Díaz, Clara N., MD, Associate Professor
MD, University of Puerto Rico, Medical Science Campus, 1980
Specialty in Pediatrics, University Pediatric Hospital, 1983
Fellowship in Hematology and Oncology, University District Hospital (UPR), 1986

Riboul-Flambert, Tamara M., Associate Professor
MD, University of Puerto Rico, School of Medicine, 2003
Specialty in Pediatrics, Jackson Memorial Hospital, Miami, FL, 2006

Rivera-Bonilla, Ileana, MD, Associate Professor
MD, University of Puerto Rico, School of Medicine, 1989
Specialty in Pediatrics, University Pediatric Hospital (UPR), 1992

Rivera-Dueño, Jaime, MD, Professor
University of Puerto Rico, School of Medicine, 1960
Specialty in Pediatrics, University Hospital (UPR), 1966

Rivera-Vélez, Rafael, MD, Assistant Professor
 MD, Universidad Pontificia Católica Madre y Maestra, RD, 1990
 Specialty in Pediatrics, University Hospital Dr. Ramón Ruiz Arnau (UCC), 1996

Rodríguez-Irizarry, José G., MD, Professor, President and Dean of Medicine
 MD, Ponce School of Medicine, 1983
 Specialty in Pediatrics, University Hospital Dr. Ramón Ruiz Arnau (UCC), 1986

Rodríguez-Santana, José R., MD, Associate Professor
 MD, Pedro Henríquez Ureña, 1981
 Specialty in Pediatrics

Rosado-Muñoz, Jaime, MD, Assistant Professor
 MD, San Juan Bautista, School of Medicine, 1993
 Specialty in Pediatric, Colombia Presbyterian Medical Center, 1999

Rosario-Mulinelli, Jorge A., MD, Assistant Professor
 MD, San Juan Bautista, School of Medicine, 1988
 Specialty in Pediatrics, Long Island College Hospital, Brooklyn, 1992
 Fellowship in Gastroenterology and Nutrition, New York Medical College, 1994

Rullán-Spallone, Grace, MD, Assistant Professor
 MD, Universidad Central del Caribe, 1984
 Subspecialty in Pediatrics, University Hospital Dr. Ramón Ruiz Arnau (UCC), 1988

Russe-Santos, José I., MD, Assistant Professor
 MD, Universidad Central del Caribe, School of Medicine, 1981
 Specialty in Pediatrics, New York City Health and Hospitals Corporation, 1984
 Fellowship in Pediatric Gastroenterology, Westchester County Medical Center, 1987

Sánchez-De Bartolomei, Carmen L., MD, Associate Professor
 MD, University of Madrid (Spain) 1965
 Specialty in Pediatric, San Juan City Hospital, 1972
 Fellowship Pediatric Hematology-Oncology, University Pediatric Hospital, 1979

Sánchez-Longo, Mercedes, MD, Assistant Professor
 MD, Universidad Católica Madre y Maestra, Santiago de los Caballeros, 1981
 Specialty in Pediatrics, University Hospital Dr. Ramón Ruiz Arnau (UCC), 1988
 Fellowship in Electroencephalography and Clinical Neuro-Physiology, 1990

Sánchez-Lugo, Fermin, MD, Professor
 MD, University of Puerto Rico, School of Medicine, 1970
 Specialty in Pediatrics, University Pediatrics Hospital, 1975
 Fellowship Pediatric Endocrinology, University District Hospital (UPR), 1977

Santaella-Jiménez, Álvaro, MD, Associate Professor
 MD, Universidad Autónoma de Bilao Vizcaya, Spain, 1979
 Specialty in Pediatrics, San Juan City Hospital, 1988
 Fellowship in Neonatal Perinatal, San Juan City Hospital, 1989

Santiago-Cornier, Alberto, MD, Associate Professor
 MD, Universidad Central del Este, San Pedro de Macorís, 1985
 Fellowship in Genetic and Metabolism, Boston Children Hospital, 1995

Santini-Hernández, Vanessa, MD, Assistant Professor
 MD, Universidad Autónoma de México, 1978
 Specialty in Pediatrics, University Hospital Dr. Ramón Ruiz Arnau (UCC), 1984

Sastre, Eduardo, MD, Associate Professor
MD, Universidad Central del Caribe, School of Medicine, 1982
Specialty in Pediatrics

Sepúlveda-Pellicier, Domingo, MD, Associate Professor
MD, Universidad Santiago de Compostela, Spain, 1975
Specialty in Pediatrics

Serrano-Guzmán, Pedro R., MD, Assistant Professor
M.D, University of Puerto Rico, School of Medicine, 1991
Specialty in Pediatrics, University Pediatric Hospital (UPR), 1994
Fellowship in Neonatology, University Pediatric Hospital (UPR), 1997

Serrano-Oyola, Edna, MD, Assistant Professor
MD, Universidad Autónoma de Guadalajara, School of Medicine 1986
Specialty in Pediatrics, 1993
Fellowship in Adolescentology, 1995

Soto-Acevedo, Aurea N., MD, Assistant Professor
MD, Universidad Autónoma de México, 1987
Specialty in Pediatrics, San Juan City Hospital, 1997

Vélez, Samuel, MD, Associate Professor
MD, University of Puerto Rico, School of Medicine, 1975
Specialty of Pediatrics, University District Hospital (UPR), 1980

Villafañe, Ivonne, MD, Assistant Professor
MD., Universidad Autónoma de Barcelona, School of Medicine, Spain
Specialty in Pediatrics, Caguas Regional Hospital, 1981

Villavicencio, Rafael, MD, Assistant Professor
MD, Universidad Central del Caribe, School of Medicine, 1996
Specialty in Pediatrics,

Zaragoza-Díaz, Elizabeth, MD, Assistant Professor
MD, Universidad Central del Este, San Pedro de Macorís, 1984
Specialty in Pediatrics, San Juan City Hospital, 1993

Department of Physical Medicine and Rehabilitation

Acevedo, William, MD, Associate Professor
MD, Universidad Central del Caribe, School of Medicine, 1987
Specialty in Physical Medicine and Rehabilitation, San Juan VA Medical Center, 1991

Arroyo, Mara, MD, Associate Professor
MD, Universidad Central del Caribe, School of Medicine, 1987
Specialty in Physical Medicine and Rehabilitation, San Juan VA Medical Center, 1991

Avilés-Guzman, Xavier, MD, Associate Professor
MD, Universidad Central del Caribe, School of Medicine, 1995
Specialty in Physical Medicine and Rehabilitation, Emory University, Georgia, 1999

Borras, Isabel C., MD, Associate Professor
MD, Universidad Central del Caribe, School of Medicine, 1994
Specialty Combined Program in Internal Medicine and Rehabilitation, 1999

Cintrón-Rodríguez, Ana Virginia, MD, FAAPMR, Associate Professor
MD, University of Puerto Rico, School of Medicine, 1980
Specialty in Physical Medicine and Rehabilitation, San Juan VA Medical Center, 1987

Cruz-Jiménez, Maricarmen, MD, Associate Professor
MD, Universidad Central del Caribe, School of Medicine, 1994
Specialty in Physical Medicine and Rehabilitation, San Juan VA Medical Center, 1998

Cuadrado-Pereira, Marianela, MD, Associate Professor
MD, University of Puerto Rico, School of Medicine, 1999
Specialty in Physical Medicine and Rehabilitation, San Juan VA Medical Center, 2003

Hernández-González, Liza M., MD, Associate Professor
MD, University of Puerto Rico, School of Medicine, 2002
Specialty in Physical Medicine and Rehabilitation, University District Hospital (UPR), 2006
Fellowship in Pain Medicine and Palliative Care, Beth Israel Medical Center, NY, 2007

Jiménez-Figueroa, Anabel, MD, Associate Professor
MD, University of Puerto Rico, School of Medicine, 2001
Specialty in Physical Medicine and Rehabilitation, Tufts New England Medical Center, MA, 2005

Morales-López, Irma I., MD, Associate Professor
MD, Universidad del Este, Dominican Republic, 1980
Specialty in Physical Medicine and Rehabilitation, San Juan VA Medical Center, 1996

Motta-Valancia, Keryl, MD, Associate Professor
MD, University of Puerto Rico, School of Medicine, 1998
Specialty in Physical Medicine and Rehabilitation, San Juan VA Medical Center, 2002

Rodríguez-Campos, Marimie, MD, Associate Professor
MD, Universidad Central del Caribe, School of Medicine, 2003
Specialty in Physical Medicine and Rehabilitation, University District Hospital (UPR), 2007
Fellowship in Interventional Pain Medicine, Beth Israel Medical Center, NY, 2008

Soto-Quijano, David A., MD, Associate Professor
MD, University of Puerto Rico, School of Medicine, 1996
Specialty in Physical Medicine and Rehabilitation, University District Hospital (UPR), 2000
Fellowship in Musculoskeletal and Sports Medicine, Baylor College of Medicine, Texas, 2004

Torres-Rivera, Anelys, MD, Associate Professor
MD, University of Puerto Rico, School of Medicine, 1986
Specialty in Physical Medicine and Rehabilitation, San Juan VA Medical Center, 1990

Department of Psychiatry

Acosta-Ramírez, Deborah A., Assistant Professor
MD, University of Puerto Rico, School of Medicine, 1997
Specialty in Psychiatry, University District Hospital (UPR) 2001

Alicea-Rosado, Dhilma L., MD, Assistant Professor
MD, University of Puerto Rico, School of Medicine, 1994
Specialty of Psychiatry, University District Hospital (UPR), 1998

Arroyo, Lillian M., Assistant Professor
 MD, University of Puerto Rico, School of Medicine, 1985
 Specialty in Psychiatry, Veterans Administration Hospital (UPR) PR, 1989

Benítez Pérez, Raúl, MD, Associate Professor
 MD, University of Puerto Rico, Medical Sciences Campus, 1984
 Specialty in Psychiatry, University of Puerto Rico and Veteran Administration, 1988

Berrios-Merced, Joalmi, MD, Assistant Professor
 MD, Universidad Central del Caribe, School of Medicine, 1999
 Specialty in Psychiatry, University District Hospital (UPR) 2006

Casanova, Cynthia, MD, Assistant Professor
 MD, University of Puerto Rico, School of Medicine, 1975
 Specialty in Psychiatry, Bronx Psychiatry Center, Albert Einstein School of Medicine, 1978
 Fellowship in Forensic Psychiatry, Manhattan State Psychiatric Center, New York University, 1979

Caro-Pérez, Osvaldo, MD, Instructor
 MD, University of Puerto Rico, School of Medicine, 1989
 Specialty in Psychiatry, University Hospital, 1993

De Jesús-García, María de los A., PhD, Assistant Professor
 PhD, Clinical Psychology, University of Puerto Rico, Río Piedras Campus, 2004

Del Castillo, Alan, MD, Assistant Professor
 Specialty in Psychiatry, Beth Israel Hospital, Harvard Medical School, 1994
 Fellowship in Geriatric Psychiatry, University of Pennsylvania, 1995

Del Valle-Rodríguez, Benjamín, MD, Instructor
 MD, Universidad Nordestana, San Francisco de Macorís, DR, 1985
 Specialty in Psychiatry, Puerto Rico Institute of Psychiatry, 2002

Entenza-Cabrera, Fernando, MD, Associate Professor
 MD, University of Puerto Rico, School of Medicine, 1990
 Specialty in Psychiatry, University District Hospital (UPR), 1994
 Fellowship in Geriatric Psychiatry, University of Pennsylvania, 1995

Escobar-Roger, Frank F., Assistant Professor
 MD, Universidad Tecnológica de Santiago, Santo Domingo, DR, 1985
 Specialty in Psychiatry, Kings County Hospital, Brooklyn, NY, 1998
 Fellowship in Child and Adolescent Psychiatry, Kings County Hospital, Brooklyn, NY, 2000

Franceschini-Carlo, José A., MD, Professor and Chairperson
 MD, Universidad Central del Caribe, School of Medicine, 1981
 Specialty in Psychiatry, University of Alabama, 1984
 Fellowship in Geriatric Psychiatry; University of Alabama, 1985

Frontera-Roura, Ernesto, MD, Associate Professor
 MD, University of Puerto Rico, School of Medicine, 1982
 Specialty in Psychiatry, San Juan VA Hospital, 1986

Ifarraguerri-Gómez, Carlos E., MD, Instructor
 MD, University of Maryland, 1961
 Specialty in Psychiatry, New York State Psychiatric, 1971

Gutiérrez, Ramón J., MD, Assistant Professor
 MD, San Juan Bautista School of Medicine, Caguas, PR, 1991
 Specialty in Psychiatry, Westchester Medical Center, Michigan, 1994
 Fellowship in Child and Adolescent, Westchester Medical Center, Michigan, NY, 1999

Iguina, Luis A., MD, Assistant Professor
 MD, Universidad Autónoma de Guadalajara, Mexico 1977
 Specialty in Psychiatry, University District Hospital (UPR) 1982

Irizarry, Ronaldo, MD, Assistant Professor
 MD, Ponce School of Medicine, PR, 2002
 Specialty in Psychiatry, Veterans Administration Hospital, San Juan, 2007

López-Valdes, Claudila, MD, Assistant Professor
 MD, University of Puerto Rico, School of Medicine, 2007
 Specialty in Psychiatry, University District Hospital (UPR) 2007

Miranda, Liliana, MD, Assistant Professor
 MD, Ponce School of Medicine, PR, 2001
 Specialty in Psychiatry, 2006

Oquendo, Miguel Angel, MD, Assistant Professor
 MD, Universidad Central del Caribe, School of Medicine, 1985
 Specialty in Psychiatry, Dwight D. Eisenhower Army Medical Center, Georgia, 1994

Ortiz, Alicia, MD, Assistant Professor
 MD, University of Puerto Rico, School of Medicine, 1987
 Specialty in Psychiatry, University District Hospital (UPR), 1991

Parrilla-Barreras, Ramón, MD, Associate Professor
 MD, University of Puerto Rico, School of Medicine, 1972
 Specialty in Psychiatry, University of St. Louis (Washington) 1975

Pérez-Alvarado, Reynaldo J., MD, Assistant Professor
 MD, San Juan Bautista School of Medicine, Caguas, PR, 2001
 Specialty in Psychiatry, San Juan Bautista Medical Center, Caguas, PR, 2005

Pierantoni, Marlene M., M.D., Assistant Professor
 MD, University of Puerto Rico, School of Medicine, 2004.
 Specialty in Psychiatry, James A. Haley & Bay Pines VA Hospital, Tampa General Hospital, 2008
 Fellowship in Psychosomatic Medicine and Psycho-Oncology, Memorial Sloan-Kettering Cancer Center, New York Presbyterian Hospital, Weill Medical College of Cornell, NY, 2009

Ramírez-Ortiz, Beatriz, MD, Assistant Professor
 MD, Universidad Autónoma de Santo Domingo, 1986
 Specialty in Psychiatry, University District Hospital (UPR), 2001
 Fellowship in Child and Adolescent Psychiatry, 2002

Reoyo-Ortiz, Zaida, MD, Instructor
 MD, Universidad Central del Caribe, School of Medicine, 1993
 Specialty in Psychiatry, University of Miami, 1997
 Fellowship in Geriatric, University of Miami, 1998

Reyes-Rabanillo, María, MD, Assistant Professor
 MD, Universidad Central del Caribe, School of Medicine, 1996
 Specialty in Psychiatry, University District Hospital (UPR) 2005

Ríos-González, Maricel, MD, Assistant Professor
 MD, University of Puerto Rico, Medical Science Campus, 1992
 Specialty in Psychiatry, University District Hospital (UPR) 1996

Rivera-Cruz, Gustavo, MD, Assistant Professor
 MD, Universidad Central del Caribe, School of Medicine, 1992
 Specialty in Psychiatry, University of Massachusetts Medical Center, 1998

Sánchez-Bonilla, María M., MD, Assistant Professor
 MD, Universidad Central del Caribe, School of Medicine, 1988
 Specialty in Psychiatry, Albert Einstein College of Medicine, NY, 1992
 Fellowship in Geriatric Psychiatry, Albert Einstein College of Medicine, 1993

Santiago-Luna, Aidarily, MD, Instructor
 MD, University of Puerto Rico, School of Medicine, 2000
 Specialty in Psychiatry, University District Hospital (UPR), 2003

Santiago-Colón, Jorge, MD, Instructor
 MD, University of Puerto Rico, School of Medicine, 1995
 Specialty of Psychiatry, University District Hospital (UPR), 1999

Segarra, Lillian Y., MD, Assistant Professor
 MD, University of Puerto Rico, School of Medicine, 1989
 Specialty of Psychiatry, University District Hospital (UPR) 1994

Soto-Raices, Ohel, MD, Assistant Professor
 MD, Universidad Central del Caribe, School of Medicine, 1997
 Specialty in Psychiatry, University of Florida College of Medicine, 2001
 Fellowship in Pediatric Psychiatry, University of Florida College of Medicine &
 Affiliated Hospitals, Gainesville, Florida, 2004

Toraño, Víctor, MD, Assistant Professor
 MD, Universidad Central del Caribe, School of Medicine, 1987
 Specialty in Psychiatry, 1992
 Fellowship in Addiction Psychiatry, Harvard Medical School, Boston, 1996

Torres, Ana I., MD, Assistant Professor
 MD, University of Puerto Rico, School of Medicine, 1987
 Specialty in Psychiatry, 1991

Troche-Panetto, Michelle, MD, Assistant Professor
 MD, Universidad Central del Caribe, School of Medicine, 1998
 Specialty of Psychiatry, Albany Medical Center, NY, 2002
 Fellowship Medical College of Virginia and H.H. McGuire VAMC, Virginia, 2003

Vargas, Rosa, MD, Assistant Professor
 MD, University of Puerto Rico, School of Medicine, 1987
 Specialty of Psychiatry, University District Hospital (UPR) 1991

Vázquez, Marlon A., MD, Assistant Professor
 MD, Universidad Autónoma de Guadalajara, México, 2001
 Specialty in Psychiatry, Veterans Administration Medical Center, PR, 2003

Vega, Ana, MD, Assistant Professor
MD, University of Puerto Rico, School of Medicine, 1981
Specialty of Psychiatry, University District Hospital (UPR) 1995

Department of Radiology

Álvarez-Villar, Carmen, MD, Assistant Professor
MD, University of Puerto Rico, School of Medicine, 1981
Specialty in Diagnostic Radiology, University Hospital, 1985

Cruz-Jové, Eva L., MD, Associate Professor
MD, University of Puerto Rico, School of Medicine, 1995
Specialty in Diagnostic Radiology, University District Hospital (UPR), 1999

De Choudens, Mercedes, MD, Assistant Professor
MD, University of Puerto Rico, School of Medicine, 1988
Specialty in Diagnostic Radiology, University Hospital, 1993

De Jesús, Ricardo, MD, Associate Professor
MD, University of Puerto Rico, School of Medicine, 1999
Specialty in Diagnostic Radiology, Christina Care Hospital, Newark, DE, 2005

Estela-Jové, Zoraida E., MD, Assistant Professor
MD, Universidad Central del Caribe, School of Medicine, 1997
Specialty in Diagnostic Radiology, University Hospital (UPR), 2002

Matos, Nelson F., MD, Associate Professor
MD, University of Puerto Rico, School of Medicine, 2000
Specialty in Diagnostic Radiology, University District Hospital (UPR), 2005
Fellowship in Neuroradiology, Medical College of Georgia, 2006

Marcial-Vega, Víctor A., MD, Associate Professor
MD, University of Puerto Rico, School of Medicine, 1984
Specialty in Radiation Oncology, Johns Hopkins University, 1988

Medina-Soto, Rochelly, MD, Associate Professor
MD, Universidad Central del Caribe, School of Medicine, 1999
Specialty in Diagnostic Radiology, University District Hospital (UPR), 2004

Rivera-Jiménez, Ricardo E., MD, Associate Professor
MD, Universidad Central del Caribe, School of Medicine, 1998
Specialty in Diagnostic Radiology, Mount Sinai Medical Center, Florida, 2003
Fellowship in Neuroradiology, University of Miami, Jackson Memorial Hospital, 2004
Fellowship in Musculoskeletal/MRI, Univ. of Miami, Jackson Memorial Hospital, 2005

Rivera, Vivian T., MD, Associate Professor
MD, Universidad Central del Caribe, School of Medicine, 1996
Specialty in Diagnostic Radiology, St. Vincent Hospital, NY, 2001
Fellowship in Thoracic Radiology, Montefiore Medical Center, NY, 2002

Vázquez-De Corral, Lorraine, MD, Associate Professor
MD, University of Puerto Rico, School of Medicine, 1980
Specialty in Diagnostic Radiology, University Hospital, 1984

Zalduondo, Fernando, MD, Associate Professor
MD, Columbia College of Physicians & Surgeons, 1989
Specialty in Diagnostic Radiology, St. Luke's Roosevelt Hospital Center, 1994
Fellowship in Neuroradiology, Duke University Medical Center, 1995

Department of Surgery

Aponte-López, Luis, MD, Assistant Professor
MD, Universidad Central del Caribe, School of Medicine, 1986
Specialty in Surgery Brooklyn Hospital Center, 1991
Fellowship in Cardiovascular, Brooklyn Hospital Center, 1994

Arboleda-Osorio, Bolívar, MD, Assistant Professor
MD, University of Puerto Rico, School of Medicine, 1983
Specialty in Surgery, University of Puerto Rico, University Hospital, 1988

Bibiloni, Juan J. MD, Associate Professor
MD, University of Puerto Rico, School of Medicine, 1983
Specialty in Orthopedic Surgery, University District Hospital (UPR), 1984

Brau-Ramírez, Ricardo H., MD, Professor
MD, University of Puerto Rico, School of Medicine, 1975
Specialty in Neurological Surgery, University of Alabama at Birmingham, 1980U

Calimano, Carlos, MD, Associate Professor
MD, University of Puerto Rico, School of Medicine, 1971
Specialty in Surgery, Henry Ford Hospital, Detroit, Michigan, 1976
Fellowship in Vascular Surgery, Henry Ford Hospital, Detroit, Michigan, 1977

Fontáñez-Sullivan, Felipe, MD, Associate Professor
MD, University of Puerto Rico, School of Medicine, 1980
Specialty in Surgery, University District Hospital (UPR), 1985

García-Ruiz, Manuel, MD, Associate Professor
MD, Universidad Santiago de Compostela, Spain, 1974
Specialty in Orthopedic, University District Hospital (UPR), 1980
Fellowship in Pediatric Ortho & Scoliosis, 1981

Guerrero, Andrés, MD, Assistant Professor
MD, University of Puerto Rico, School of Medicine, 1985
Specialty in Surgery

Gutierrez-Tabar, Cristella O., MD, Assistant Professor
MD, Universidad Autónoma de Santo Domingo, DR, 1961
Specialty in Anesthesiology, University District Hospital (UPR) 1970

Henn, Carmen, MD, Associate Professor
MD, Associate Professor, University of Puerto Rico, School of Medicine
Specialty in Surgery

Izquierdo, Natalio J., MD, Associate Professor
MD, Ponce School of Medicine, 1986
Specialty in Ophthalmology, University District Hospital (UPR), 1991
Fellowship in Glaucoma and Anterior Segment Laser Surgery,
Georgetown University Medical Center, 1993

Lugo-Piazza, Edwin, MD, Professor
 MD, Escuela de Medicina de Zaragoza, Spain
 Specialty in Neurological Surgery,

Maeso, Andres, MD, Assistant Professor
 MD, Universidad de Madrid, Spain, 1957
 Specialty in Surgery, Veterans Administration Hospital, PR 1961
 Fellowship in ENT, Medical College of Virginia, 1966

Melendez-Dedos, Andrés, MD, Assistant Professor
 MD, University of Puerto Rico, School of Medicine, 1989
 Specialty in Anesthesiology, Georgetown University Medical Center, Washington, DC, 1994
 Fellowship in Pain Management, Affiliated Hospitals, Harvard University= Medical School, 1995

Miranda, Gabriel, MD, Assistant Professor
 MD, University of Puerto Rico, School of Medicine, 1989
 Specialty in Urology, University District Hospital (UPR) 1994

Montañez-Falcón, Rufino, MD, Assistant Professor
 MD, University of Zaragoza (Spain) 1975
 Specialty in Orthopedic Surgery, University Hospital, 1984

Ortiz-Justiniano, Víctor N., MD, Professor
 MD, University of Puerto Rico, School of Medicine, 1964
 Specialty in Pediatric Surgery, Columbus Children's Hospital, 1978

Otero-López, Antonio M., MD, Assistant Professor
 MD, University of Puerto Rico, School of Medicine, 2003
 Specialty in Orthopedic Surgery, University District Hospital (UPR), 2008

Otero-López, Francisco J., MD, Assistant Professor
 MD, University of Puerto Rico, School of Medicine, 2000
 Specialty in Orthopedic Surgery, University District Hospital (UPR), 2005
 Fellowship in Arthroscopy & Sports Medicine, Orthopedic Research of Virginia, 2006

Perazza, Elizabeth, MD, Associate Professor
 MD, University of Puerto Rico, School of Medicine, 1993
 Specialty in Surgery

Ramírez-Tánchez, Carlos, MD, Professor
 MD, Universidad Central del Caribe, 1995
 Specialty in General Surgery, 2000

Ramos, Nestor W., MD, Assistant Professor
 MD, San Andrés University, School of Medicine, Bolivia, 1965
 Specialty in Surgery, University District Hospital (UPR), 1977
 Fellowship in Pediatric Orthopedic, San Diego, California, 1987
 Fellowship Orthoscopic Surgery, Hospital for Joint Diseases, NY, 1989

Ramos-Cruz, Alberto, MD, Assistant Professor
 MD, University of Sevilla, Spain, 1980
 Specialty in Orthopedic and Fracture Surgery, University District Hospital (UPR) 1986

Reyes, Reinaldo, MD, Assistant Professor
 MD, University of Puerto Rico, School of Medicine, 1993
 Specialty in Surgery

Rosario-Mendoza, Ricardo, MD, Assistant Professor
 MD, Universidad Complutense de Madrid (Spain) 1974
 Specialty in General Surgery, University District Hospital (UPR), 1980

Rullán, Pedro, MD Associate Professor
 MD, University of Puerto Rico, School of Medicine, 1981
 Specialty in Surgery

Santiago-Delpin, Eduardo A., MD, Professor
 MD, University of Puerto Rico, School of Medicine, 1965
 Specialty in General Surgery, University District Hospital (UPR), 1970
 Post-Graduate: Transplantation Surgery, University of Minnesota, 1972
 Fellowship in Cancer, University District Hospital (UPR)
 Special Research Fellow, National Institutes of Health, University of Minnesota, 1972

Santiago, Norma, MD, Assistant Professor
 MD, University of Puerto Rico, School of Medicine, 1990

Sepúlveda-Abreu, Ramón, MD, Assistant Professor
 MD, Universidad Santiago de Compostela, Spain, 1975
 Specialty in Surgery

Soler-Salas, Antonio H., MD, Associate Professor
 MD, University of Puerto Rico, School of Medicine, 1983
 Specialty in Orthopedic, San Juan City Hospital, 1988
 Fellowship in Sport Medicine, Temple University, Philadelphia, 1989

Sorrentino, José, MD, Assistant Professor
 MD, University of Puerto Rico, School of Medicine, 1986
 Specialty in Surgery

Soto-Vázquez, Julio, MD, Associate Professor and Chairperson
 MD, University of Puerto Rico, School of Medicine, 1972
 Specialty in Surgery, Mount Sinai Hospital, New York, 1978

Sotomayor-Ramírez, Ramón, MD, Assistant Professor
 MD, University of Puerto Rico, School of Medicine, 1989
 Specialty in Surgery

Suárez-Pesante, Juan R., MD, Associate Professor
 MD, University of Puerto Rico, School of Medicine, 1988
 Specialty in Orthopedic Surgery, University District Hospital (UPR), 1994
 Fellowship in Orthopedic Sports Medicine, Houghton Sports Medicine Hospital, Georgia, 1995

Tort-Saadé, Pedro, MD, Associate Professor
 MD, Universidad Central del Caribe, School of Medicine, 1998
 Fellowship in Minimally Invasive Knee and Hip Replacement,
 Rush University Medical Center, Chicago, IL. 2005

Vargas-Ramos, Irma, MD, Assistant Professor
 MD, San Juan Bautista, School of Medicine, 1989
 Specialty in Anesthesiology, St. Vincent's Hospital, NY, 1994

Biomedical Science Graduate Faculty

Department of Anatomy

- Baksi, Krishna, PhD, Associate Professor
PhD, India Institute of Medical Sciences, New Delhi, India, 1977
MS, University of Calcutta, India, 1970
- Cubano-Rojas, Luis A., PhD, Associate Professor and Associate Dean for
Research & Graduate Program
PhD, Kansas State University, 2000
- Darmawardhane-Flanagan, Suranganie, PhD, Associate Professor
PhD, University of Massachusetts, Amherst, MA, 1987
MS, Northeastern University, Boston, MA, 1985
- De León-Olmeda, Elizabeth, MD, Associate Professor
MD, Universidad Autónoma de Santo Domingo, 1996
- Haiffe, Rosa M., MD, Professor; (Dual Appointment in Pathology)
MD, Universidad Autónoma (Dominican Republic), 1968
Specialty in Pathology, University District Hospital (UPR), 1974
Fellowship in Neuropathology, Indiana University, 1975
- Jiménez, Sofía, PhD, Associate Professor and Chairperson
PhD, University of Puerto Rico, School of Medicine, 1984
MS, University of Puerto Rico, 1970
- Oliver-Sostre, José L., D.MD, Associate Professor
D.MD, University of Puerto Rico, School of Medicine, 2002
- Veras-Tavarez, Wilson, MD, Associate Professor
MD, Universidad Autónoma de Santo Domingo, 1989
- Washington, Anthony V., PhD, Assistant Professor
PhD, Southern Methodist University, 1998

Department of Biochemistry

- Eaton, Misty, PhD, Professor
PhD, University of Texas Southwestern Medical Center, 1990
- Eterovic, Vesna A., PhD, Professor (Dual appointment in Neuroscience)
PhD, National University Córdoba, Argentina, 1971
- Ferchmin, Pedro A., PhD, Professor
PhD, National University Cordova, Argentina, 1971
- Hann, Richard, MD, Associate Professor and Chairperson
MD, University of Oklahoma College of Medicine, 1974
- Kucheryavykh, Yuriy V, PhD, Assistant Professor
PhD, Saint Petersburg State University, St. Petersburg, Russia, 2003
- Kucheryavykh, Lilia, PhD, Assistant Professor
PhD, Saint Petersburg State University, St. Petersburg, Russia, 2001

Martínez, Michelle M., PhD, Assistant Professor
PhD, Michigan State University, 2004
MS, University of Puerto Rico, Mayagüez Campus, 2001

Skatchkov, Serguei, PhD, Professor (Dual appointment in Physiology)
PhD, Leningrad State University, Russia, 1991
M.P.H., Leningrad State University, Russia, 1979

Vélez-Carrasco, Wanda, PhD, Associate Professor
PhD, Tufts University, Boston, 1998
MS, Tufts University, Boston, 1995

Department of Microbiology and Immunology

Boukli, Nawal, PhD, Associate Professor
PhD, University of Missouri, 1999

Espino, Ana M., PhD, Assistant Professor
PhD, Instituto de Medicina Tropical, Cuba, 1997

Otero, Miguel, PhD, Assistant Professor
PhD, University of Puerto Rico, School of Medicine, 1998

Ramírez-Ronda, Carlos H., MD, Associate Professor
MD, Northwestern University, 1967
Specialty in Internal Medicine, 1970

Ríos, Zilka, MS, Associate Professor and Associate Dean for Academic Affairs of Medicine
MS, University of Puerto Rico, School of Medicine, 1978

Ríos-Olivares, Eddy O., PhD, MPH, Professor and Chairperson
PhD, University of Puerto Rico, School of Medicine, 1976
MPH, Sanitation Microbiology, University of Minnesota, 1967

Rodas-González, Arcady R., Assistant Professor
MD, Universidad del Zulia, Maracaibo, Venezuela, 1985
Specialty in Internal Medicine,
Fellowship in Infectious Diseases, Hospital Militar Dr. Carlos Arvelo, Caracas, Venezuela, 1996

Rodríguez, José W., PhD, Associate Professor
PhD, Morehouse School of Medicine, Atlanta, Georgia, 1998
MS, Emporia State University, 1989

Saavedra, Sonia, MD, Associate Professor
MD, Universidad Central del Caribe, School of Medicine, 1980

Sanabria-Rios, David, PhD, Assistant Professor
PhD, University of Puerto Rico, Río Piedras Campus, PR, 2007

Sepúlveda-Torres, Lycely, PhD, Assistant Professor
PhD, Michigan State University, 2000

Department of Pharmacology

Bychkov, Rostislav, PhD, Assistant Professor
PhD, University of St. Petersburg, Russia, 1993

Maldonado, Héctor, PhD, Associate Professor and Chairperson
PhD, University of California, 1992

Santos-Martínez, Jesús, PhD, Professor Emeritus
PhD, Purdue University, 1954
Postdoctoral Fellow, Indiana University Medical Center,
Specialty in Renal Physiology, 1966-67

Silva, Walter, PhD, Associate Professor
PhD, Mount Sinai School of Medicine, CUNY, 1986

Torres-Cruz, José L., PhD, Associate Professor
PhD, University of Puerto Rico, School of Medicine, 2011
M.S in Science, University of Puerto Rico, School of Medicine, 1976

Department of Physiology

Escalona-Motta, Gladys, Ph.D, Professor
PhD, University of Puerto Rico, 1977

Inyushin, Mikhail Y., PhD, Assistant Professor
PhD, Leningrad State University, 1986

Miranda-Ortiz, María T., MD, PhD, Assistant Professor
MD, Autonomous University of Barcelona, Barcelona, Spain
PhD, University of Puerto Rico, School of Medicine

Rivera, Amelia, PhD, Professor
PhD, University of Puerto Rico, 1982

Rojas, Legier, PhD, Professor
PhD, University of Puerto Rico, 1987

Sanabria, Priscila, PhD, Professor and Chairperson
PhD, University of Puerto Rico, 1986

Davis-Figueroa, Johnny, MD, Assistant Professor
PhD, University of Puerto Rico, School of Medicine, 2005

Substance Abuse Counseling Faculty

Benítez Pérez, Raúl, MD, Associate Professor
MD, University of Puerto Rico, Medical Sciences Campus, 1984
Specialty in Psychiatry, University of Puerto Rico and Veteran Administration, 1988

Carrión-González, Ibis S. PsyD., Assistant Professor
PsyD., Psychology with Specialization in Clinical Psychology, Universidad Carlos Albizu, 2002

Cox-McCleary, Evadne, MSN, MHS, Assistant Professor
MSN, Catholic University of Puerto Rico, 1983
MHS, Governors State University, Chicago, Illinois, 1996

Díaz-Rodríguez, Nereida, PhD, Associate Professor and Dean of Academic Affairs
 PhD, University of Puerto Rico, 1997
 Clinical Psychology Internship, Bellevue Hospital-NYU Medical Center, 1989
 MA, University of Puerto Rico, 1986

Echevarría Santos, Ramonita, MSN, Instructor
 MSN, UPR - Medical Sciences Campus, Mental Health and Psychiatric Nursing, 1988

Feliberty, Evelyn, Ed, Dc, Assistant Professor
 Ed.D., Interamerican University of P.R., At Present
 MA, University of Puerto Rico, 1991

García-Rodríguez, María del Mar, MSW, MHS. Assistant Professor
 MSW, La Salle Graduate School of Social Work, University of Puerto Rico, 1970

González-Villanueva, Myriam, PhD, Assistant Professor
 PhD, University of Puerto Rico Rio Piedras Campus, 2007

Lespier-Torres, Zahira, Psy.D. Assistant Professor
 Psy.D, Caribbean Center for Advanced Studies in Psychology, San Juan, PR, 1996

Maldonado-Ríos, Gertrudis, PhD, Assistant Professor
 PhD, University of Puerto Rico, School of Medicine, 1997

Marrero-Pagán, Yari, MHS, Instructor
 MSH, Universidad Central del Caribe, School of Medicine

Marrero-Rodríguez, Carmen Amalia, Ed.D, Associate Professor
 Ed.D, University of Puerto Rico, Rio Piedras Campus, 2013
 MPH, University of Puerto Rico, Medical Sciences Campus, 1989

Martir, Sylvia A., MD, Assistant Professor
 MD, Ponce School of Medicine, 2002
 Specialty in Emergency Medicine, University of Puerto Rico, Carolina Campus, 2005

Pagán-Miranda, Miguel A., Psy.D, Associate Professor
 Psy.D, Psychology with specialization in Clinical Psychology, Centro Caribeño de Estudios Post
 Graduados, 1995

Pérez-Del Pilar, Omar, PhD, Assistant Professor and Dean of Admissions and Student Affairs
 PhD, Clinical Psychology, University of Puerto Rico, 2002

Quiñones-Álvarez, Edna L., Ph.D, Associate Professor
 Ph.D, Counseling Psychology, University of Wisconsin, Madison, 1994

Quiñones-Berrios, Areliz, Ed.D, Instructor
 Ed.D., Interamerican University, 2007
 MSH, Universidad Central del Caribe, School of Medicine, 1999

Ramos Vargas, Luz N., PhD, Assistant Professor
 PhD, Clinical Psychology, Ponce School of Medicine, 2013
 MHSAC, Universidad Central del Caribe, 2008

Reyes-Pulliza, Juan Carlos, PhD Assistant Professor
EdD University of Puerto Rico, 2003
MS, University of Puerto Rico, 1990

Santos-Reyes, Héctor O., MD, MHS, Assistant Professor
MD, University of Puerto Rico, Medical Sciences Campus, 1980
Specialty in Pediatrics, Dr. Eduardo Garrido Morales Hospital, 1986

Soto-Raices, Ohel, MD, Assistant Professor (Dual appointment in Psychiatry)
MD, Universidad Central del Caribe, School of Medicine, 1997
Specialty in Psychiatry, University of Florida, College of Medicine, 2001
Fellowship in Child & Adolescent Psychiatry, University of Florida, College of Medicine, 2002

Torres-Rivera, Francisco, PhD, Assistant Professor
PhD, Union Graduate School, Ohio, 1973

Medical Images Technology Faculty

Bermúdez, Carlos, MA, Adjunct Instructor
MA, Río Piedras Campus, University of Puerto Rico, 1978

Colón-Lancara, Edgar, PhD, ARRT (R)(RM)(CT); Adjunct Instructor
PhD, Atlantic International University, 2004
MPH in Epidemiology, Public Health School, Medical Science Campus, UPR, 1998
BsHS, College of Health Allied Professions, Medical Science Campus, University of Puerto Rico, 1992

Díaz-Morales, Anibal, MPH, BSc, Professor Emeritus
MPH Public Health School, Medical Science Campus, University of Puerto Rico
BsHS, College of Health Allied Professions, Medical Science Campus, UPR
TR, University Regional Hospital of Puerto Rico

Fernández-Mora, Rosa Marina, TR, MPH; Adjunct Instructor
MPH, Public Health School, Medical Science Campus, UPR, 1986
BsHS, College of Health Allied Professions, Medical Science Campus UPR, 1984
ASRT, Collage of Health Allied Professions, UPR. , 1983

Fontanez, Juan MD
MD, Universidad Autónoma de Santo Domingo, DR
BS in Natural Sciences, Universidad de Puerto Rico, Río Piedras Campus

González-Rivera, María Enid, TR, MPH, Assistant Professor
ADTR, Universidad Central del Caribe, 1989
MPH, University of Puerto Rico, Medical Sciences Campus, 2000

Labrador-García, Ada I. B.Sc., ARDMS, Instructor
ADRT, Universidad Interamericana, San Germán, 1996
BSDI, Universidad Central del Caribe, 2009

Lopez, Roberto, MA, Instructor
MA, Instructional Design and Educational Technology, Universidad del Sagrado Corazón, 1994

Moscoso, José Rafael, TR, BSc, MPH, EdD, Professor and Program Director;
EdD, Río Piedras Campus, University of Puerto Rico (UPR), 2005
MPH, School of Public Health, Medical Science Campus, UPR, 1985
BSc, Río Piedras Campus, UPR, 1979
ADRT, College of Allied Health Professions, Medical Science Campus, 1978

Natal, Maria del Pilar, MA, Instructor
 MA, Instructional Design and Educational Technology, Universidad del Sagrado Corazón, 1994
 BBA in Finance, Universidad de Puerto Rico, Rio Piedras Campus, 1967

Orama-Feliciano, Crucita, MSE., Instructor
 MS in Education, Inter American University, 1984

Pérez-Ocasio, Juan RT, MSEH; Adjunct Instructor;
 MSEH, Public Health School, Medical Science Campus, University of Puerto Rico, 2003
 BS in Biology, Rio Piedras Campus, University of Puerto Rico, 1990
 AS, Universidad Central del Caribe, 1992

Pérez-Sierra, Sylvia, Bs.H.S., Instructor
 BS in Health Sciences, Universidad de Puerto Rico, Medical Science Campus, 1999

Rivera Vázquez, Mildred I., CIS, Instructor
 CIS, Universidad de Puerto Rico, Rio Piedras Campus, 2003
 MA Library Sciences, Universidad de Puerto Rico, Rio Piedras Campus, 1986
 MA Hispanic Civilization, University of California at Santa Barbara, 1982
 BA in Economy, Universidad de Puerto Rico, Rio Piedras Campus, 1977

Rodríguez-Martínez, Ana Ivette, BSc, RD, MS, Assistant Professor
 MS, Universidad Sagrado Corazón, 2005
 BSc, University of Puerto Rico, Cayey University College, 1988

Rodríguez-Nieves, Gladys, MA, Instructor
 MA,Ed., University of Phoenix, PR Campus, 2003

Ruiz-Izcoa, Elaine I., TR, MPH, Assistant Professor
 MPH, University of Puerto Rico, Río Piedras Campus, 1999
 TR, Universidad Central del Caribe, School of Medicine, 1993

Soler-Lamberty, William, MD, Adjunct Assistant Professor
 MD Univ. Autónoma, Dominican Republic, 1983
 BsSc., University of Puerto Rico, 1976

Toledo Charneco, Porfirio, MS, Adjunct Instructor
 MS, University of Puerto Rico, 1972

Torres, José Luis PhD, Associate Professor
 PhD, Universidad de Puerto Rico, Medical Science Campus; 2011
 MS Anatomy, Universidad de Puerto Rico, Medical Science Campus, 1976
 B.S. in Biology, Universidad de Puerto Rico, Mayaguez Campus; 1971

Valentín Caro, Natalia, MS
 MS in Biomedical Sciences, Universidad Central del Caribe, 2011
 BS in Biology; Universidad de Puerto Rico, Rio Piedras Campus, 2005

Vélez Crespo, Michael, MSD;
 MS in Demography, Universidad de Puerto Rico, Medical Science Campus: 1995
 BA in Education (Mathematics), Universidad de Puerto Rico, Rio Piedras Campus, 1989