



UNIVERSITY OF PUERTO RICO MEDICAL SCIENCES CAMPUS SCHOOL OF MEDICINE

MEDICINE CATALOG

COURSE TITLE : MPRI 7117, Medical Histology

NUMBER OF HOURS : 100

COURSE DURATION :

PRE-REQUISITES :

CO-REQUISITES :

COURSE DESCRIPTION : Conferences, laboratories and discussions about the normal microscopic structure of the cell, tissues and organs in relation to principles of biochemistry, physiologic and molecular biology pertinent to the medical practice.

COURSE TITLE	:	MPRI 7119, Biochemistry and Molecular Biology
NUMBER OF HOURS	:	115
COURSE DURATION	:	7 Weeks daily. Equivalent to 1 semester and 6 credits
PRE-REQUISITES	:	General Biology, General Chemistry, Organic Chemistry, Physical Chemistry
CO-REQUISITES	:	None
COURSE DESCRIPTION	:	<p>The first half of the course includes basic physical chemistry principles, structure and properties of proteins and enzymes, energetic metabolism and metabolic pathways of carbohydrates, lipids and amino acids. General hormone action. The second half emphasizes the fundamental aspects of molecular biology and its projections into modern medicine. Includes the structure and properties of genetic material, nature of the genetic information and genetic code. Duplication and repair of DNA repetitive and specific sequences. Introns, exons, palindromes, promoters, transposons, enhancers, etc. Oncogenes, mutations, genetic recombination and genetic engineering, gene therapy. The human genome. Transcription and translations. Control of genetic translation. Control of genetic expression. Utilization of molecular biology methodology in medicine. The course ends with a series of topics on physiological biochemistry such as blood proteins, coagulation and fibrinolysis, muscle contraction, vitamins and basic concepts on nutrition. Most of the subjects of the course are illustrated with clinical correlations.</p>

COURSE TITLE	:	MPRI 7120, Human Physiology
NUMBER OF HOURS	:	144
COURSE DURATION	:	9 Weeks
PRE-REQUISITES	:	Gross Anatomy, Embriology Histology and Biochemistry
CO-REQUISITES	:	None
COURSE DESCRIPTION	:	This course will offer the physiological knowledge that is fundamental to the understanding of the essential facts and concepts of human physiology, in order for the medical student to be able to make clinical judgments based on a strong and rational scientific foundation. Clinical contexts are used thorough the course in all the areas to make the students aware of the importance of physiology in their future medical practice. The course runs 9 weeks from January to early March during the second semester with more than half of the time dedicated to active learning activities in the form of small group discurssons, laboratories and student directed discussions.

COURSE TITLE	:	MPRI 7127, Public Health & Preventive Medicine I
NUMBER OF HOURS	:	18
COURSE DURATION	:	1 Week
PRE-REQUISITES	:	None
CO-REQUISITES	:	None
COURSE DESCRIPTION	:	To introduce first year medical students to the concepts of public health and preventive medicine and the importance of preventive measures in medical practice. Topics include: history, philosophy, and concepts of public health and preventive medicine, aspects of public health policy, health care delivery systems, basic concepts of epidemiology, environmental health, nutrition and ethical considerations in medical practice.

COURSE TITLE : MPRI 7130, Integration Seminar I

NUMBER OF HOURS : 54

COURSE DURATION :

PRE-REQUISITES :

CO-REQUISITES :

COURSE DESCRIPTION : The course will develop skills in computerized information retrieval and appropriate use of library resources. A variety of related clinical skills will be developed. The study of clinical cases with emphasis in the basic sciences associated concepts will be introduced.

COURSE TITLE : MPRI 7136, Medical Neuroscience

NUMBER OF HOURS : 99

COURSE DURATION :

PRE-REQUISITES :

CO-REQUISITES :

COURSE DESCRIPTION : Neurosciences includes function of the individual nerve cell, basic anatomical connections and organization of the central nervous system, and integrative and systems neurophysiology. These topics are reinforced by laboratories in neuroanatomy and neurophysiology as well as clinical correlation conferences.

COURSE TITLE : MPRI 7137, Behavioral Sciences

NUMBER OF HOURS : 45

COURSE DURATION : One Week in June

PRE-REQUISITES : N/A

CO-REQUISITES : Be registered in MS I Curriculum

COURSE DESCRIPTION : Upon completion of this course, the participants will identify the basic knowledge of the behavioral sciences; will also develop skills and attitudes that will enable him/her to understand the psychopathology of psychiatric disorders and clinical psychiatry.

COURSE TITLE	:	MPRI 7138, Introduction to Clinical Skills
NUMBER OF HOURS	:	75
COURSE DURATION	:	
PRE-REQUISITES	:	First level medicine courses
CO-REQUISITES	:	
COURSE DESCRIPTION	:	<p>This course is offered to the whole class of first level medical students with the purpose of developing important skills which are necessary for the practice of medicine, such as: the medical interview, including adult, pediatric and geriatric patients; physical examination, including the correct techniques and normal findings; the correct use of diagnostic medical equipment; universal precautions, occupational safety and personal protective measures; venipuncture and parenteral medications administration; cardiopulmonary resuscitation.</p> <p>At the same time, this course will serve as an introduction and liaison with clinical setting in which these students receive most of their training. Grading system: the grading system for this course was passed (p) not passed (NP), since august 2005 it changes to the traditional grading system of A, B, C, F</p>

COURSE TITLE	:	MPRI 7139, Human Development
NUMBER OF HOURS	:	76.0
COURSE DURATION	:	4 Weeks
PRE-REQUISITES	:	None
CO-REQUISITES	:	Medicine I Program
COURSE DESCRIPTION	:	This course presents the basic principles of human development, from conception to old age, using the biosychosocial model. This model includes aspects of medical genetics. The environment and their interaction with the integral development of the person. The course is addressed to first year medical students. The educational methodology to be use includes, among others: small group discussions, lectures, panel discussions by medical students and or faculty, independent studies utilization of external resources and patients.

COURSE TITLE	:	MPRI 7140, Gross Anatomy and Embryology
NUMBER OF HOURS	:	192
COURSE DURATION	:	
PRE-REQUISITES	:	
CO-REQUISITES	:	
COURSE DESCRIPTION	:	Through lectures, laboratory dissections, and discussions future physicians will be familiarized with the normal three-dimensional structure and functional organization of the human body. Students will analyze early embryonic development and the patterns for formation of all major organs in the human embryo, which provide the conceptual basis for comprehending both normal human anatomy and congenital malformations.

COURSE TITLE	:	MSEG 7215, Pathology and Introduction to Laboratory Medicine
NUMBER OF HOURS	:	164
COURSE DURATION	:	40 Weeks
PRE-REQUISITES	:	First year of medical studies, particularly approval of the following courses or units: Anatomy, Physiology, Biochemistry, Genetics, Histology and Embryology.
CO-REQUISITES	:	
COURSE DESCRIPTION	:	The study of the natural history of diseases, including their origins and causes, evolution and final outcome, as well as the effect upon the said natural history of clinical interventions; this also includes all techniques, methods and procedures applied to the examination of cells, tissues and fluids of the human body employed in the analysis of the said history.

COURSE TITLE : MSEG 7216, Infectious Diseases

NUMBER OF HOURS : 126

COURSE DURATION :

PRE-REQUISITES :

CO-REQUISITES :

COURSE DESCRIPTION : Introduction to basic concepts in bacterial physiology and genetics. The study of the epidemiology, taxonomy, diagnosis, immunopathology, and treatment of the microorganisms of medical importance (bacteria, virus, fungi, and parasites).

COURSE TITLE : MSEG 7217, Pharmacology

NUMBER OF HOURS : 99

COURSE DURATION : 1 Academic Year

PRE-REQUISITES : Medicine I

CO-REQUISITES : Medicine II

COURSE DESCRIPTION : Basic medical pharmacology and introduction to therapeutics. Emphasis on vocabulary, mechanisms of action and handling of drugs in the body. Prototype drugs of the mayor classes will be studied in detail.

COURSE TITLE	:	MSEG 7218, Fundamentals of Clinical Diagnosis
NUMBER OF HOURS	:	110
COURSE DURATION	:	August to May
PRE-REQUISITES	:	Medicine I
CO-REQUISITES	:	Medicine II
COURSE DESCRIPTION	:	This course comprises both of the essential process for the clinical study of diseases: the history of the patient's disability, and the complete physical examination. The students will rotate through participating hospitals for the clinical exercises covering the different organ systems.

COURSE TITLE	:	MSEG 7229, Psychopathology
NUMBER OF HOURS	:	36
COURSE DURATION	:	2 Weeks
PRE-REQUISITES	:	N/A
CO-REQUISITES	:	Be registered
COURSE DESCRIPTION	:	This course is designed to provide second year medical students with basic knowledge related to the major psychiatric entities of the DSM-IV TR. The methods used for delivering content will be lectures, audiovisual presentations and small group discussions. Evaluation will be by participation in group activities and summative exam.

COURSE TITLE	:	MSEG 7230, Mechanisms of Disease
NUMBER OF HOURS	:	113
COURSE DURATION	:	24 Weeks
PRE-REQUISITES	:	Courses of First Year of Medicine (MPRI)
CO-REQUISITES	:	Courses of Second Year of Medicine (MSEG)
COURSE DESCRIPTION	:	Through correlation of basic sciences with the clinical disciplines, this course will introduce and stimulate the student to understand the physiopathology bases using a dynamic and innovative approach. Given the broad spectrum of medical knowledge, this course will develop critical thinking and analysis of signs and symptoms of different diseases integrating basic knowledge to the mechanisms of diseases.

COURSE TITLE	:	MSEG 7236, Integration Seminar II
NUMBER OF HOURS	:	49
COURSE DURATION	:	
PRE-REQUISITES	:	MPRI 7130
CO-REQUISITES	:	N/A
COURSE DESCRIPTION	:	The goal of the course is to extend and refine the skills initiated during the integration seminar counterpart. To develop further the habits of self-directed, student-centered, problem base learning within a clinically relevant format, designed to reinforce the contents of the second year curriculum and generate new knowledge, considering the biopsychosocial aspects of comprehensive health care.

COURSE TITLE : MSEG 7237, Public Health and Prevention Med. II

NUMBER OF HOURS : 36

COURSE DURATION :

PRE-REQUISITES : MPRI 7127

CO-REQUISITES : N/A

COURSE DESCRIPTION : After completing the course, the medical student will have a basic level of knowledge and skills to:

- 1) critically evaluate the medical research literature
- 2) make clinical decisions based on quantitative data
- 3) collaborate with investigators in the design, execution and analysis of research projects.

COURSE TITLE	:	MTER 7310, Psychiatric
NUMBER OF HOURS	:	240
COURSE DURATION	:	6 Weeks
PRE-REQUISITES	:	First and second year courses/Promotion to Third Year
CO-REQUISITES	:	N/A
COURSE DESCRIPTION	:	<p>This course is part of the third year rotations for medical students. During this course, the student will develop skills to interview psychiatric patients, to obtain a complete history and perform mental status exam. The student will also learn the principles of diagnosis and management of psychiatric illnesses and their manifestations. He/she will also learn principles about management of psychiatric emergencies and consultation in psychiatry.</p> <p>This rotation is offered 6 times a year and each lasts 6 weeks. At the assigned clinical site, the student will perform interviews and evaluation of patients and will offer appropriate psychopharmacologic, psychologic and social treatment. In addition, the student is also expected to do night duties, participate in consultation/liaison activities and small group discussions. These activities are supervised by an attending physician or a psychiatry resident.</p>

COURSE TITLE : MTER 7316, Pediatric

NUMBER OF HOURS : 360

COURSE DURATION : 9 Weeks

PRE-REQUISITES :

CO-REQUISITES :

COURSE DESCRIPTION : The pediatric clerkship addresses issues unique to persons from prenatal age to late adolescence. The objectives define the "core" of pediatric knowledge, skills and attitudes which every general physician must master. The clerkship includes liaison psychiatry, adolescent medicine and pediatric HIV program clinical rotations. The comprehensive patient care experiences are varied and relevant to the most common PR. children health problems. Approximately 60% of a student's time will be spent in outpatient (ambulatory) settings.

COURSE TITLE : MTER 7318, Obstetrics and Gynecology

NUMBER OF HOURS : 240

COURSE DURATION : 6 Weeks

PRE-REQUISITES : Second Year of Medicine

CO-REQUISITES : None

COURSE DESCRIPTION : This third year clerkship is designed to last six full weeks. Time is allotted equally to work/study on services of gynecology and obstetrics. Students are exposed to patients at pre labor rooms; prenatal clinics, emergency room, and operating room. Each student must perform a minimum of 4 deliveries and present minimum of thirteen cases.

COURSE TITLE	:	MTER 7319, Family Medicine Clerkship
NUMBER OF HOURS	:	160.0
COURSE DURATION	:	4 Weeks
PRE-REQUISITES	:	Courses of Second Year of Medicine (MSEG)
CO-REQUISITES	:	N/A
COURSE DESCRIPTION	:	This course has been designed to provide students a comprehensive experience in Family Medicine. The course will expose students to the content and development of this specialty. In addition, they will learn about the evaluation and management of the 25 health problem most commonly encountered by family physicians, with an emphasis in ambulatory care. The students will also be exposed to the skills of working with families and the basic concepts of health promotion and disease prevention.

COURSE TITLE	:	MTER 7320, Radiology
NUMBER OF HOURS	:	80
COURSE DURATION	:	2 Weeks
PRE-REQUISITES	:	Medicine II
CO-REQUISITES	:	N/A
COURSE DESCRIPTION	:	The course is designed for third year medical students. The topics will be presented by means of conferences and small group discussions of clinical cases. Topics to be discussed include basic concepts in image formation of various modalities available in the fields of diagnostic radiology and nuclear medicine; basic concepts in the interpretation of these imaging modalities; indications and applications for diagnostic imaging modalities

COURSE TITLE	:	MTER 7325, Internal Medicine
NUMBER OF HOURS	:	480
COURSE DURATION	:	12 Weeks
PRE-REQUISITES	:	First and Second Year of Medicine
CO-REQUISITES	:	N/A
COURSE DESCRIPTION	:	<p>The Internal Medicine Clerkship encompasses all the aspects of adult medicine, diseases processes, prevention and health maintenance. It provides a clinical experience in the in-patient and out-patient setting. Throughout this experience the student will have the opportunity to apply the pathophysiology in the adult population.</p> <p>The Clerkship includes General Internal Medicine; Internal Medicine subspecialties, such as Allergy/Immunology, Cardiology, Endocrinology, Gastroenterology, Geriatrics, Hematology/Medical Oncology, Infectious Diseases, Nephrology, Pneumology, and Rheumatology. The fields of Neurology and Emergency Medicine will also be covered during this period. The Internal Medicine Training Program and its subspecialty programs are fully accredited by the Accreditation Graduate Medical education (ACGME). During this Clerskip academic sessions will cover most of the Internal Medicine subspecialties, as well as topics in Professionalism.</p> <p>Internal Medicine is one of the core clerkship for the thrid year medical students. This duty is share with Family Medicine, Surgery, Pediatrics, Obstetrics/Gynecology and Psychiatry. As part of the Core Curriculum, medical students will become skillful in history taking and physical examination. Also diagnostics work ups and therapeutics will be cover thought the experience with real patients. The Internal Medicine Clerkship is a 12 week rotation. The clincal experience is divided equally among the hospitalized and ambulatory experience (50% each).</p>

COURSE TITLE	:	MTER 7326, Surgery
NUMBER OF HOURS	:	360
COURSE DURATION	:	9 Weeks
PRE-REQUISITES	:	MTER 7316, MTER 7319, MTER 7325
CO-REQUISITES	:	N/A
COURSE DESCRIPTION	:	<p>This course will consist of a rotation of 10 weeks through all the surgical specialties and general surgery. The principle objective is to train medical students in the recognition, diagnosis and immediate treatment of common and critical conditions in the area of general surgery and specialties. Understand by critical those conditions that if not known of, could cause permanent multiple damage or death to the patient. Multiple models of teaching should be utilized that will include:</p> <ul style="list-style-type: none"> - conferences (2 hours daily the first 6 weeks) - ambulatory clinical experience (60%) - emergency clinical experience (80%) - problem solving sessions (14 sessions of 2-3 hours) - laboratory and practice workshops in basic techniques: sutures, resuscitation, recognizing arrhythmias, curve interpretation and hemodynamics parameters - computer assisted learning

COURSE TITLE : MCUA 7427, Public Health

NUMBER OF HOURS : 40

COURSE DURATION : 1 Week

PRE-REQUISITES : Third Year of Medicine

CO-REQUISITES : N/A

COURSE DESCRIPTION : Three weeks course in preventive medicine and public health. During this course the student develops and improves research, knowledge and skills in public health and community oriented primary care. Students will analyze the health status of a community through investigation of a health program in the community.

COURSE TITLE	:	MCUA 7437, Physical Rehabilitation and Sports Medicine
NUMBER OF HOURS	:	40
COURSE DURATION	:	1 Week
PRE-REQUISITES	:	Third Year of Medicine
CO-REQUISITES	:	N/A
COURSE DESCRIPTION	:	In this course of clinical physiatry, the medical student should be introduced to basic concepts and clinical experiences in the field of rehabilitation medicine, through the academic program of physical medicine and rehabilitation, everything that is related to clinical management in the field of physical medicine and rehabilitation and the evaluation of neuromuscular skeletal and cardio-respiratory conditions. The student should have clinical experiences with patient in a wide range of age, from pediatric to geriatric; acute, sub-acute and chronic conditions at institutions of acute care and rehabilitation centers. In addition, the students will have the opportunity to participate in workshops, where they can observe, then participate in the performance and interpretation of electro diagnostic and exercise tests.

COURSE TITLE	:	MCUA 7438, Dermatology
NUMBER OF HOURS	:	40.0
COURSE DURATION	:	1 Week
PRE-REQUISITES	:	Third Year of Medicine
CO-REQUISITES	:	N/A
COURSE DESCRIPTION	:	This course will consist of lectures offered by the faculty of Department of Dermatology. The students will attend OPD Dermatology Clinic and will manage patients under supervision of staff and residents. He/she will take a written and/or oral examination at the end of the course that will cover the topics discussed at lectures. Students attendance to all activities is compulsory.

COURSE TITLE	:	MMFA 7010, Family Medicine Junior
NUMBER OF HOURS	:	160.0
COURSE DURATION	:	4 Weeks
PRE-REQUISITES	:	Third Year Internal Medicine, Pediatrics and Family Medicine
CO-REQUISITES	:	
COURSE DESCRIPTION	:	The student will participate in the care of hospitalized patients at the family medicine ward with emphasis in comprehensive care of all the patients. He/she will be exposed to all the patients, notwithstanding age, sex or type of pathology. Specifically, he/she will manage patients having pediatric, obstetric gynecological, psychiatric and medical surgical conditions. The student will admit patients; make a medical history, perform a physical examination and, together with the resident and the attending staff in charge, will discuss and decide on the plan of action.

COURSE TITLE	:	MMED 7010, Clinical Clerkship in Medicine
NUMBER OF HOURS	:	160
COURSE DURATION	:	4 Weeks
PRE-REQUISITES	:	Third Year Internal Medicine
CO-REQUISITES	:	
COURSE DESCRIPTION	:	This is a clinical experience held at the department of medicine, university district hospital or at any other hospital of the consortium of the school of medicine. The student will work assigned patients; medical history, physical examination, clinical conclusions and manage the patient under supervision. It is expected that he/she attends all educational activities offered during the clerkship.

COURSE TITLE : MMED 7057, Emergency Medicine Selective Junior

NUMBER OF HOURS : 160

COURSE DURATION : 4 Weeks

PRE-REQUISITES : Internal Medicine, Pediatrics, Surgery and OB/Gyn

CO-REQUISITES :

COURSE DESCRIPTION : The student will participate as a member of the medical resident team with the faculty members. He/she will work on patients, will perform minor surgical procedures, and will interpret laboratory tests under supervision. These activities will be held at the Emergency Room, Puerto Rico Medical Center.

COURSE TITLE : MOBG 7010, Obstetrics and Gynecology Junior

NUMBER OF HOURS : 160

COURSE DURATION : 4 Week

PRE-REQUISITES : Third Year OB/Gyn

CO-REQUISITES :

COURSE DESCRIPTION : The main goal is to prepare the student to recognize early, understand, diagnose and manage disease of the female genital tract. He/she too will become acquainted with normal and abnormal conditions related to pregnancy. Emphasis will be made with the relationship of these conditions and the rest of the systems and medical specialties. Time may last four full time weeks.

COURSE TITLE : MPED 7010, Pediatric Junior

NUMBER OF HOURS : 160

COURSE DURATION : 4 Weeks

PRE-REQUISITES : Third Year Pediatric

CO-REQUISITES :

COURSE DESCRIPTION : The student will demonstrate the acquisition of knowledge and skills necessary to work on the diagnosis and management of the most common pediatric conditions. He/she will attend activities held at wards for hospitalized patients and/or pediatric emergency room.

COURSE TITLE : MPSI 7010, Psychiatry Junior

NUMBER OF HOURS : 160

COURSE DURATION : 4 Weeks

PRE-REQUISITES : Completed and Approved Third Year Rotations as Required by Specific Track

CO-REQUISITES : N/A

COURSE DESCRIPTION : The student will participate in the complete workup of a patient and family. He/she will be assigned to current activities and seminars offered to psychiatric residents while in this rotation.

COURSE TITLE	:	MCIR 7010, General Surgery
NUMBER OF HOURS	:	160
COURSE DURATION	:	4 Weeks
PRE-REQUISITES	:	Third Year Internal Medicine and Surgery
CO-REQUISITES	:	
COURSE DESCRIPTION	:	This course aims to familiarize the fourth year medical student with the practice of general clinical surgery. He/she will work in one of the four departmental services. The student will be assigned no more than four patients per week, so as to take a medical history and perform a physical examination within the first twenty four hours following admission.