

RADIOLOGY - MD (RAY)

RAY 311 Radiology 4 cr

RAY 400 Radiology Externship 4 cr

To be determined.

RAY 401 Statistical Method in Clin Med 4 cr

The course offers a survey at an elementary level of classical and Bayesian statistical methods; probability, classification and measurement, sampling, description, estimation, hypothesis testing, analysis of variance, meta-analysis, correlation, regression, prediction, and decision. Examples are drawn from the medical literature. The duties and responsibilities of the student will include meeting regularly with the instructor in tutorial sessions and the preparation of a short term paper on a topic in medical statistics that is of mutual interest to the student and the instructor. The paper may consist of one or more refereed evaluations of previously published research reports. The student will also prepare and maintain a notebook on his/her readings and tutorials. The education materials include a large library of textbooks, reports, and papers in statistical methods, as well as a PC computer with a large library of statistical software.

RAY 402 Rad Physics & Rad Biology 4 cr

The course offers a survey at an elementary level of the physics and radiation biology of diagnostic and therapeutic radiology. The sources, detection and measurement of ionizing radiation are reviewed. The interactions of radiation and matter are considered. The pathological effects of radiation are discussed. Dose-response relations and somatic and genetic effects are described and the pharmacological aspects of irradiation are developed. The principles of radiation protection are developed including the modification of the effects of a given dose of radiation by chemical enhancement or suppression. The duties and responsibilities of the student(s) will include meeting regularly with the instructor in tutorial sessions and the preparation of a short term paper on a topic in radiological physics or radiation biology that is of mutual interest to the student and the instructor. The student will also prepare and maintain a notebook on his/her readings and tutorials. The education materials include a large library of textbooks, reports, and papers in radiological physics and radiation biology, as well as 3 PC computers and radiation measuring instruments, etc.

RAY 444 Radiology Special Elective 4 cr

To be prepared by the student in conjunction with the Course Director and approved by the Vice Dean before course can be added to schedule. This course is designed to offer students and faculty/clinical faculty an opportunity to develop electives which are not offered in the Electives Manual. Such an elective may be made permanent and printed in the next edition of the Elective Manual at the request of the Course Director and with the approval of the Curriculum Committee. At the discretion of the Vice Dean, this elective may count as the required "in-house" elective.

RAY 460 Radiology Preceptorship 4 cr

In-depth participation in Interventional Radiology practice designed for students specifically interested in pursuing postgraduate training in an imaging specialty, focusing on minimally invasive image-guided procedures. The goal is for students to work side by side with the radiology faculty members and residents to become well versed in planning, performing and post-procedure patient care as it pertains to interventional radiology procedures

RAY 465 Applied Clinical Radiology 4 cr

This course provides the non-radiologist with a practical understating of radiology to be applied in everyday practices.

RAY 480 Basic Radiology 4 cr

Students will be given the opportunity to rotate through X-ray, Ultrasound and CT work areas to observe procedures and film interpretations, becoming acquainted with the operation of the department. Students will attend departmental conferences which deal with various facets of radiology. Students will select an interesting case, which illustrates appropriate imaging of the specific disease process. The student will present the case during a radiology conference at the end of the rotation. Students are to participate on a full-time basis.

RAY 481 Radiology Clerkship 4 cr

Students will be given the opportunity to rotate through four subspecialty and general radiology services where they will become acquainted with technical skills and interpretive practices of radiology. Toward the end of each week, the students will participate as residents in the performance and interpretation of procedures under direct supervision of responsible faculty members. They will attend departmental conferences for residents and students. Subspecialty rotations will be coordinated with opportunities in Radiography, Computed Tomography, Ultrasound, and Pediatric Radiology.

RAY 482 Radiation Oncology 1-4 cr

This elective will expose the student to the care of oncology patients. The elective offers experience in complete patient work-ups, rounds, and conferences. The student should develop a knowledge of: (1) modes of presentation and natural history of human neoplasms, (2) multidisciplinary anti-tumor therapy (with emphasis on the primary principles of radiation therapy), (3) emotional and nutritional aspects of neoplastic diseases, and (4) newer advances in basic and clinical cancer research. The student will be exposed to patients from a variety of disciplines and should grasp the fundamentals of (1) methods of early detection, (2) recognition of curable cancers, (3) recognition of treatable cancers and palliative care, (4) oncologic emergencies and awareness of the major complications of each, and (5) specific techniques in physical diagnosis in each of these disciplines.

RAY 483 Pediatric Radiology 4 cr

The rotation includes active participation in all pediatric radiology activities such as film interpretation, special procedures and imaging modalities, active participation in the nursery and pediatric conferences, consultations with pediatric surgery, and attendance at the Pediatric Radiology Conference and Grand Rounds. Reviewing the pediatric teaching file, on-line teaching sites and CD-ROM images in the Radiology Department will be encouraged.

RAY 484 Radiology Clerkship II 4 cr

Students will be given the opportunity to shadow one or two attendings in an area of a radiology subspecialty for four weeks to become acquainted with the technical skills and interpretive practices of radiology within that subspecialty. The students will participate as residents in the performance and interpretation of procedures under direct supervision of the responsible faculty members. They will attend departmental conferences for residents and students. Flexibility as to the subspecialty rotation will be coordinated with the student's special interests and prior arrangements made with the supervising faculty. Opportunities will be available in the subspecialty areas of Angiography, Computed Tomography, Ultrasound, Nuclear Medicine and Magnetic Resonance Imaging. Students are to participate on a full-time basis.