

MRAD - RADIOLOGY

MRAD 800 Radiology Clerkship

Credits 1 to 10. 1 to 10 Lecture Hours. Knowledge of the methods of medical imaging; conventional radiology, ultrasound, computerized tomography, magnetic resonance imaging, interventional radiology and nuclear radiology, and application of these methods to specific clinical problems. **Prerequisite:** Admission to Medical School.

MRAD 801 Diagnostic Radiology

Credits 1.25 to 10. 1.25 to 10 Other Hours. Introductory experience in the practice of radiology. **Prerequisite:** Satisfactory completion of year three of the medical school curriculum.

MRAD 802 Radiation Oncology

Credits 1.25 to 10. 1.25 to 10 Other Hours. Introductory experience in the practice of radiology. **Prerequisite:** Satisfactory completion of year three of the medical school curriculum.

MRAD 803 Introduction to Radiation Oncology

Credits 1.25 to 10. 1.25 to 10 Other Hours. 2- to 4-week elective; overview of cancer, its pathogenesis, statistics, and treatment modalities; experience and familiarization with the role of radiation therapy in a multidisciplinary modality setting. **Prerequisite:** Satisfactory completion of year three of the medical school curriculum.

MRAD 806 Clinical Research Design and Application

Credits 1.25 to 10. 1.25 to 10 Other Hours. 2- to 4-week elective; participation in a clinical research project; increase familiarity and knowledge of principles of study design, data collection, data management and analysis; participation in developing a professional manuscript, preparation, review, and submission for publication. **Prerequisite:** Satisfactory completion of year three of the medical school curriculum.

MRAD 807 Body Imaging

Credits 1.25 to 10. 1.25 to 10 Other Hours. 4-week elective; designed for those planning a career in radiology; organized as one-week rotations in Thoracic Imaging, Abdominopelvic CT, Body and Musculoskeletal MR, and Ultrasound; frequently encounter opportunity to submit an interesting case to the American College of Radiology Case in Point repository for potential peer reviewed online publication. **Prerequisite:** Satisfactory completion of the year three of the medical school curriculum.

MRAD 809 Neuroradiology

Credits 1.25 to 10. 1.25 to 10 Other Hours. 2-week elective; designed for those planning a career in radiology; flexibility within the department, but primarily based on CT and MR imaging of the brain and spine; experience with CT and MR angiography and a range of neurointerventional procedures; frequently encounter opportunity to submit an interesting case to the American College of Radiology Case in Point repository for potential peer-reviewed online publication. **Prerequisite:** Satisfactory completion of the year three of the medical school curriculum.

MRAD 810 Current Concepts in Nuclear Medicine

Credits 1.25 to 10. 1.25 to 10 Other Hours. 2-week elective; introduction to common Nuclear Medicine procedures and techniques; designed to familiarize with the appropriate utilization of these techniques for diagnosis and prognosis in selected common problems in clinical medicine; experience in correlating results of the Nuclear Medicine procedures and tests with pertinent clinical evaluation, pathophysiology, and anatomy. **Prerequisite:** Satisfactory completion of the year three of the medical school curriculum.

MRAD 811 Pediatric Imaging

Credits 1.25 to 10. 1.25 to 10 Other Hours. 2-week elective; designed for those planning a career in radiology; flexibility within the department, but is based around a multimodality experience in all facets of pediatric imaging, including radiographs, sonography, body CT and MR studies, and fluoroscopy; integration of multiple imaging modalities and interaction with referring clinicians allows more comprehensive understanding of disease processes unique to children; frequently encounter the opportunity to submit an interesting case to the American College of Radiology Case in Point repository for potential peer reviewed online publication. **Prerequisites:** Satisfactory completion of the year three of the medical school curriculum.

MRAD 812 Radiation Oncology

Credits 1.25 to 10. 1.25 to 10 Other Hours. 2- to 4-week elective; designed to participate in interpretation of history, physical, laboratory and radiological findings in the management of cancer patients; exposure with role of radiotherapy in multi-disciplinary cancer therapy and its integration with other disciplines like surgery and medical oncology. **Prerequisite:** Satisfactory completion of the year three of the medical school curriculum.

MRAD 816 Interventional Radiology

Credits 1 to 15. 1 to 15 Other Hours. Familiarization with the basic principles of interventional radiology; introduction to different imaging modalities and diagnostic and therapeutic procedures; involvement in the diagnosis, management and treatment of patients; participation in interventional procedures, film interpretation, consultation and daily rounds. **Prerequisites:** SURG 800 and MRAD 800.

MRAD 819 Pediatric Radiology

Credits 0 to 10. 0 Lecture Hours. 0 to 10 Other Hours. Utilization of Cleveland Clinic Children's Hospital pediatric radiology online curriculum; core concepts in pediatric radiology. Must be taken on a satisfactory/unsatisfactory basis. **Prerequisite:** Doctor of Medicine classification.

MRAD 820 Musculoskeletal Ultrasound - Upper Extremity

Credits 0 to 10. 0 to 10 Other Hours. Exposure to knowledge and skills of musculoskeletal ultrasound (MSKUS); focus on joints of upper extremity, gross anatomy and advanced imaging correlations; learning and demonstration of shoulder and wrist diagnostic ultrasound exams; participation in direct patient care. **Prerequisites:** Doctor of Medicine classification.

MRAD 985 Off Campus Student Initiated Elective

Credits 1.25 to 12. 1.25 to 12 Other Hours. Formally described elective courses at another medical school or off-campus opportunities that are not formally approved electives; School of Medicine requires that each of these electives be approved prior to the rotation.

MRAD 989 Special Topics in...

Credits 0 to 10. 0 to 10 Other Hours. Selected topics in an identified area of radiology. **Prerequisites:** Doctor of Medicine classification.

MRAD 999 On Campus Student Initiated Elective

Credits 1.25 to 12. 1.25 to 12 Other Hours. On-campus opportunity in the department of Radiology in the School of Medicine that is not defined herein; experiences may include clinical research, basic science research, library research, other basic science activities, and other clinical activities; interest in developing an elective of this type should contact the head of the appropriate department for additional details.