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 805 General Radiology at St. Luke/ St. Joseph Medical Center
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 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 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.