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.
To provide an 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.
To provide an 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.
This 2- to 4-week elective is designed for students to become familiar with an overview of cancer, its pathogenesis, statistics, and treatment modalities. Students will gain experience and become familiar 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.
To provide an 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.
This 2- to 4-week elective is designed for students to participate in a clinical research project. This elective will increase the student’s familiarity and knowledge of the student to principles of study design, data collection, data management and analysis. Students will participate 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.
The 4-week elective in Body Imaging is designed for motivated students planning a career in radiology. The course is organized as one-week rotations in Thoracic Imaging, Abdominopelvic CT, Body and Musculoskeletal MR, and Ultrasound. Students 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.
Prerequisite: Satisfactory completion of the year three of the medical school curriculum.

MRAD 808 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 809 Neuroradiology
Credits 1.25 to 10. 1.25 to 10 Other Hours.
This 2-week elective in Neuroradiology is designed for motivated students planning a career in radiology. The course allows for flexibility within the department, but is primarily based on CT and MR imaging of the brain and spine. Experience with CT and MR angiography and a range of neurointerventional procedures is also available. Students 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.
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.
This 2-week elective is an introduction to common Nuclear Medicine procedures and techniques. This elective is designed to familiarize the student with the appropriate utilization of these techniques for diagnosis and prognosis in selected common problems in clinical medicine. Students will gain 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.
This 2-week elective in Pediatric Imaging is designed for motivated students planning a career in radiology. The course allows for 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. The integration of multiple imaging modalities and interaction with referring clinicians allows more comprehensive understanding of disease processes unique to children. Students 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.
Prerequisite: 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.
This 2- to 4-week elective is designed for students to participate in interpretation of history, physical, laboratory and radiological findings in the management of cancer patients. Students will gain 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 813 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 814 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. The College of Medicine requires that each of these electives be approved prior to the rotation.

MRAD 999 On Campus Student Initiated Elective
Credits 1.25 to 12. 1.25 to 12 Other Hours.
This is an on-campus opportunity in the department of Radiology in the College 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. Students interested in developing an elective of this type should contact the head of the appropriate department for additional details.