**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.
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 radiation oncology.

**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 804 Diagnostic Radiology**
Credits 1.25 to 10. 1.25 to 10 Other Hours.
This 2- to 4-week elective provides students with a broad understanding of radiology principles, various diagnostic modalities, their respective value and limitations as well as the overall role of radiology in medicine today. Students will gain exposure through a combination of daily didactic lectures presented by faculty, residents, fellows and guests as well as through clinical learning experiences gained alongside faculty in one of many subspecialty bases including CT Scan, Ultrasound, Gastrointestinal, Emergency Department, Nuclear Medicine, MRI, Vascular/Interventional Radiology (VIR), Neuro MRI, Neuro CT Scan, Breast Imaging and Outpatient Imaging. Students are encouraged to express any special interest in a subspecialty before the beginning of the course in order to configure their rotation schedule accordingly.

**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, Abdominal pelvis 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 Diagnostic Radiology**
Credits 1.25 to 10. 1.25 to 10 Other Hours.
This 2-week elective is intended to re-familiarize the medical student with the basic principles of radiologic imaging. Students will be shown the many different modalities used within the Department of Radiology and will become familiar with interpreting medical diagnosis results using those modalities.

**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.
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 Diagnostic Radiology  
Credits 1.25 to 10. 1.25 to 10 Other Hours.
This 2- to 4-week elective is designed for students to gain experience in the proper radiographic approach in evaluating clinical problems. This elective is designed to familiarize the student with the basic skills in interpretation of the more common x-ray examinations, CT scans, and ultrasound scans. Students will also become familiar with the proper performance of basic diagnostic imaging procedures, particularly the order performing the procedures.  
Prerequisite: Satisfactory completion of the year three of the medical school curriculum.

MRAD 814 Diagnostic Radiology - Non Chosen Specialty  
Credits 1.25 to 10. 1.25 to 10 Other Hours.
This 2- to 4-week elective is designed for students to gain experience to re-familiarize the student with the basic principles of radiologic imaging. Students will be shown the many different modalities used within the department of Radiology and will become familiar with interpreting medical diagnosis results using those modalities. It is our hope that this course will lead to a better understanding of the many services provided by Radiology.

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.