# RAD 4M14: MUSCULOSKELETAL RADIOLOGY 2020-2021

Contact: JaQue.Vickers@uth.tmc.edu for add/drop code

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| **Faculty In Charge Of Course:** | Directors: Dr. Manickam Kumaravel and Dr. Haitham Awdeh |
| **Participating Faculty:** | Drs. British Bawa, Nicholas Beckmann, Susanna Spence |
| **Location:** | Memorial Hermann Outpatient Imaging, 6400 Fannin Street, Suite 1600<br>MHOSH, 5410 W Loop South, Bellaire<br>LBJ Hospital, 5656 Kelley Street |
| **Offered:** | Block 14 |
| **Max. # Students/Period:** | 2 |

## Course Objective

**Material Covered:**

Musculoskeletal (MSK) radiology is a subspecialty of Diagnostic and Interventional Imaging. Students will be exposed to the basics of MSK radiology and learn to apply this knowledge and analytical clinical practice. Rotation will include the teaching of various bone pathology imaging associated with emergency, trauma, rheumatology, oncology and sports injuries.

Students will interact with imaging modalities including radiography, computed tomography, ultrasonography, and magnetic resonance imaging. In this course, they will be exposed to therapeutic MSK procedures, pre, and post-procedure evaluation, consenting patients, sterile tray set-up and protocols for a time-out in the imaging room. Students will present a case presentation for their final grade based on this subspecialty.

Teaching will occur during faculty/fellows/residents interactions, observations, discussions, direct patient care, case presentations, and scheduled conferences.

**Skills Acquired:**

At the end of the rotation, students will be able to:

- Approach and analyze radiological images and their relevance in clinical care
- Be aware of allergic reactions to contrast agents
- Discuss concepts of radiation exposure
- Recognize protocols in procedure rooms for image-guided injections
- List various musculoskeletal pathologies
- Develop effective methods of working with radiologists as a consultant and member of a health care team

## Activities Of Elective

**The Number Of New Patients/Student/Week:** 2

**Responsibilities Of Student For Assigned Patients:**

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|---|---|---|
| | Does history/physical: | Yes |
| | Who critiques: | Attending physicians, fellows, and residents |
| | Follows patients, with appropriate notes as needed: | Yes |
| | Who supervises: | Attending physicians, fellows, and residents |
| | Does student see ambulatory patients: | Yes |

| Procedures | Observe | Perform |
|---|---|---|
| MSK special procedures | **Yes** | **No** |
| Radiologic Imaging | **Yes** | **No** |
| Peripheral IV | **Yes** | **No** |

## Scheduled Duties of Student:

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| | Frequency of rounds on patients | Twice daily |
| | Presents patients to preceptor or attending physician | Yes |
| | Weekly schedule of required teaching sessions | Attend weekly conferences and lectures |

## Describe Optional Rounds And Activities, If Any:

Work with Faculty, Fellows and Residents, and/ or any research projects

## Other Required Activities:

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| | Reading/review of current literature | Yes |

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| | Writing or presenting a paper | Yes: A case presentation at the end of the elective |

**How Is Student Evaluated:**

- Attend required conferences – Min of 8
- Observe a minimum of 5 image-guided procedures
- Discuss a minimum of 5 cases on an individual basis with the attending/ fellow/ resident (each case can be x-ray/ CT/ MRI)
- Have a one-on-one with the attending and complete the mid-rotation evaluation form
- Able to complete course requirements within the 4 week period and submit the post-rotation form
- Formal case presentation at the end of the rotation

GRADING BREAK-DOWN

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| Mid-Rotation Eval (Completion) | 5% |
| Conferences attended (required and optional) | 10% |
| Procedures Observed | 10% |
| Final Evaluation | 30% |
| Case Presentation | 40% |
| Attendance | 5% |
| **Total** | **100%** |

Honors (H) : >89% -100%
High Pass (HP) : >78% - 88%
Pass (P): 69% - 77%
Fail (F) : <68%

**Who Evaluates Students:**

Assigned Faculty

**Unique Features Of This Elective:**

This 4-week MSK radiology rotation provides students with imaging knowledge of an array of pathological conditions of the musculoskeletal system, including trauma, sports medicine, arthritis, and bone and soft tissue tumors. It also provides a unique opportunity for them to witness faculty, work closely with other physicians' especially orthopedic surgeons, sports physicians, rheumatologists, and trauma team members to translate imaging findings for clinical care.

Students will be able to rotate through the three facilities, to get a comprehensive learning experience of the various multi-faceted care provided to our patients.

The students will observe radiologists performing various simple and complex image-guided procedures including injections into joints, muscle, around tendon and nerves.

Students will actively participate in weekly clinical-radiological conferences and lectures, where they will be able to understand collaborative, team approach to patient care.