

**Course: Diagnostic Radiology Course Number RAD 2101**

**Department:** Radiology

**Faculty Coordinator:** Kristen Bishop, MD

**Hospital:** Clements University Hospital, Parkland Health and Hospital System, Children's Health

**Periods Offered:** 1-4; 7-11

**Length:** 4 weeks

**Max # of Students:** 1-3 (5 Students Max); 4 & 7-11 (15 students Max)

**First Day Contact:** Marissa Chesir

**First Day Location:** E6

**Course Description**

During your four weeks, you will be exposed to a broad cross-section of what Radiology entails and how it can help you care for your patients regardless of the specialty you choose to pursue.

<b>Goals</b>	<b>Objectives</b>	<b>Assessment methods</b>
<b>Patient Care:</b> <i>To provide patient care that is compassionate, appropriate, and effective for the treatment of health problems.</i>	<ol style="list-style-type: none"><li>1. Name the advantages and drawbacks of various radiologic modalities and their roles in diagnosis and care of the individual patient</li><li>2. Select the most appropriate imaging modality for a given patient scenario using the ACR Appropriateness Criteria</li></ol>	<i>Skills evaluation from direct observation.</i>
<b>Medical knowledge:</b> <i>To demonstrate knowledge of established and evolving biomedical, clinical, epidemiological, and social-behavioral sciences, as well as the application of this knowledge to patient care.</i>	<ol style="list-style-type: none"><li>1. Identify normal anatomic structures on selected chest and abdominal CT images</li><li>2. Recognize appearance of selected abnormal conditions seen during clinical site rotations and during lectures, concentrating especially on radiographs (chest, abdominal, bone) and CT.</li></ol>	<i>End of course presentation</i>
<b>Interpersonal and communication skills:</b> <i>To demonstrate interpersonal and communication skills that result in the effective exchange of information and teaming with patients, their families, and professional associates.</i>	<ol style="list-style-type: none"><li>1. Give an end-of course presentation of a case seen on service utilizing appropriate references and following all applicable HIPAA privacy regulations.</li></ol>	<i>Observations of faculty and staff</i>
<b>Practice Based learning and Improvement:</b> <i>Students will demonstrate the ability</i>		<i>End of Course presentation</i>

<i>to assimilate scientific evidence and improve patient care practices.</i>		
<b>Professionalism:</b> <i>To demonstrate interpersonal and communication skills that result in the effective exchange of information and teaming with patients, their families, and professional associates.</i>	2. Exhibit professional behavior and appearance while on service including when interacting with residents, attendings, technologists, patients, and support personnel.	<i>Observations of faculty and staff</i>
<b>Systems based practice:</b> 1. Know how .... fits into the larger system of health care. 2. Work with the team and patients to optimize use of system resources		<i>Observations of faculty and staff Group discussion</i>

### Methods of Instruction:

#### A. Didactic:

- 1) There will be two (2) one-hour medical student didactic conferences every Monday – Friday afternoon from 1:00 PM – 3:00 PM. These lectures will be given by Radiology faculty, fellows or residents and will cover radiology topics appropriate for medical students. \*subject to change due to enrollment numbers

#### B. Clinical:

1. Students will rotate through a variety of clinical imaging facilities in the mornings Monday through Friday beginning at 8 a.m. and see a variety of subspecialties during the course. Students will spend one week (two weeks for IR rotation) at each selected rotation site at Parkland, Children’s, or UT Southwestern.
  - a. Each elective site can be chosen by the student from the list provided through email communication from the Program Coordinator before the start of each block. Please fill out this REDCAP survey to let the coordinator know of your site preferences.  
[https://redcap.link/Radiology\\_Elective](https://redcap.link/Radiology_Elective)
  - b. Students will receive their elective rotation preferences on a first come, first served basis, among the following choices:
    - III. Breast Imaging
    - IV. Body CT
    - V. Body MR
    - VI. Emergency Radiology (\*4 PM – 8 PM rotation\*)
    - VII. Interventional Radiology
    - VIII. Musculoskeletal

- IX. Neuroradiology
- X. Nuclear Medicine
- XI. Pediatric Radiology
- XII. Thoracic Radiology
- XIII. Ultrasound
- XIV. UT Core (\*includes and mix of Chest and Abdominal Imaging)

- c. Students can expect to observe exams being performed by radiologists, residents, and technologists and will learn how the patient experiences each type of exam. The positive and negative aspects of each type of exam will be reviewed. At the bottom of your attendance sheet, please write down what kind of procedure you witnessed, date, and attending signature. This is mandatory.
- d. Students will review imaging studies in the reading room with faculty, fellows, and residents. Students will learn radiologic anatomy, basic exam interpretation strategies, and how the exam findings correlate with the patient's overall clinical picture.
- e. Students must have a **FACULTY** member (**NOT** a resident or fellow) sign an attendance sheet each morning of visiting a clinical site. These sheets must be emailed to [marissa.chesir@utsouthwestern.edu](mailto:marissa.chesir@utsouthwestern.edu) by 5:00pm every Friday.
- f. **Loss of faculty signatures could result in documented absences, which may count toward the maximum allowed absence days.** Due to limited departmental resources and full monthly course enrollments, "make-up dates" for clinical service absences are not permitted.
- g. If there are slower periods during the clinical workday, students may review PACS teaching files provided on their assigned clinical service, study online or printed learning resources described above, or work on their PowerPoint project (described below).

## Overview of student responsibilities

### A. PowerPoint Presentation Project

- 1) Students will choose a case seen on clinical service that shows an interesting finding and illustrates a teaching point appropriate for medical students. Students must obtain de-identified, HIPAA-compliant images and present a PowerPoint presentation (approximately 5-7 minutes) on the last week of the course.
- 2) Covered sections should include Patient History (chief complaint and any pertinent history – available in Epic), Findings, Differential Diagnosis, Impression, and Discussion. For the Discussion section, students should use any textbooks, online resources, and journal articles necessary to briefly cover the topic.
- 3) Students may ask the faculty member with whom they read the case for help in obtaining the images for their case presentation. It is recommended that planning ahead and setting up an appointment with that faculty member to ensure that he/she has enough time to help you. Sometimes the Head Technologist has been very helpful in getting these images for students as well (see last page of syllabus for further help)

- 4) **Please note that these images must be de-identified and have no identifiable patient data to ensure no HIPAA violation.** The student case presentations will be saved by the course director for future medical student teaching, so de-identified images are especially important.
- 5) Extra care should be taken with ultrasound and nuclear medicine images because patient data is “burned” into the image and especially hard to eradicate. Even cropping the image is not always enough if the image can be “un-cropped” later and the patient information revealed.

#### B. Aquifer Radiology Case Review

- 1) You will be required to complete a total of 5 cases by the end of the course.
- 2) You will need to self-register via the "sign in" button at the top of the main Aquifer homepage ([www.Aquifer.org](http://www.Aquifer.org)).
- 3) **Please note, this might change due to not having didactic lectures, in that case, you will be required to complete all 19 case studies in Aquifer.** You will be informed of what is required at orientation.

#### C. Attendance

- 1) Per UTSW requirements for attendance for MS-4 clinical electives, the student **may not miss more than 4 days of EXCUSED absences.** Due to limits on departmental resources and full monthly course enrollments, “make-up days” will not be permitted. Only four (4) total days of excused absences are permitted for a *Pass* grade, with documentation of an appropriate reason provided to [Marissa.chesir@utsouthwestern.edu](mailto:Marissa.chesir@utsouthwestern.edu) .
- 2) Examples of appropriate reasons for excused absences include residency interviews or illness. Students should contact Marissa Chesir with expected dates of excused absences at least one (1) week prior to the start of the course. In the event of illness or an unexpected absence (or missed lecture) arises, promptly contact [Marissa Chesir](mailto:Marissa.Chesir).
- 3) Students must attend daily conferences (a sign-in sheet will be posted at the front of the lecture hall). A conference is considered “missed” after the first 10 minutes. Any missed conferences (excluding those from pre-approved/excused absences) are required to be made up by attending the next available Resident Conference(s). Failure to make up missed lectures could result in unexcused absences. There is a limit of two (2) make-ups for missed lectures. Each additional missed lecture thereafter would result in an unexcused absence.
  - i. There will be times when we will not offer conferences due to unforeseen circumstances.
  - ii. You will be informed of the current situation at orientation.

#### D. Dress Attire/Professionalism

- 1) Professional dress with white coat and UTSW ID badge is expected, as the student will be rotating on the clinical services and will interact with faculty, residents, other clinicians, technologists, and patients.
- 2) If the student is assigned to the Interventional Radiology (IR) clinical rotation or expects to participate in procedures at other sites, he/she will need to

wear clean scrubs from the scrub cabinet, along with a white coat and UTSW ID badge.

**3) Please have cell phones put away during readout.**

**Please note that a Professionalism Form may be filled out when an unexcused absence occurs, and this becomes a part of the student's record in the student deans' office.**

**Method of evaluation of students and requirements:**

Evaluation based on assessment methods listed above, grade is Pass/Fail

This course is graded on a "Pass" or "Fail" basis. To receive a "Pass" grade, you must:

- 1) Meet the attendance requirements assessed by Conference attendance and faculty signatures on the Clinical Site Attendance logs. (
  - i. Unless otherwise told regarding conferences for the block)
- 2) Present a PowerPoint presentation of a case seen on service at the end of the course.
- 3) Complete 5 Aquifer Radiology case modules by the last day of the block.
  - i. Unless otherwise told regarding conferences for the block
- 4) Complete evaluations of the faculty and the overall course by Sunday following the last day of the block:
  - i. Two Medhub conferences per day x 1 evaluation per lecturer = 2 Conference evaluations per day
    - i. Only if conferences are being offered
  - ii. One Medhub evaluation per faculty you shadow during clinical rotation
  - iii. One Medhub evaluation (overall course evaluation)

All evaluations must be completed prior to the first lecture on the final day of the block. Students will not receive a Pass grade until all evaluations are completed and all other requirements have been met.

***PLEASE LEAVE COMMENTS!***

***We do rely on student feedback to make improvements to the course.***

**Additional Help with Retrieving Patient Images**

**A. Parkland Patient Images:**

- 1) Go to the UTSW Clinical Portal: <http://hsir.swmed.edu/default.aspx>
- 2) Log on to UT IntelliSpace PACS (iSite)
- 3) Select iQuery
- 4) Type in Patients Parkland MRN
- 5) Select studies to retrieve
- 6) Right-click select retrieve
- 7) Request "Stat"
- 8) Wait (can take 15 min or more to retrieve)

9) Search for patient under "Patient Look-up"

10) Double Click Image and right click "Save Image to File"