COURSE INFORMATION

Course Title: Imaging Interpretation I

Course Numbers(s): XR0508

Term: 5

Time Requirement: (hours/week)
Lecture Hours: 2
Laboratory Hours: 2
Total Units: 3

Prerequisites: NRA or equivalent*
*as determined by instructor, department chair, and/or dean.

Co-requisites: None

Faculty:
Lead Faculty: Curtis Yomtob
Contact Information: e-mail curtisyomtob@scuhs.edu ext. 540
Office Hours: TBD
Office Location: Howe Building (H Building)

Faculty Assisting in the Course: Diagnostic Imaging Residents

COURSE PURPOSE

Course Description: This is an advanced level course that is focused on developing search pattern and radiographic identification and interpretive skills. The course will cover the roentgen signs of bone and joint disease, general concepts of bone tumors and musculoskeletal trauma, infection, metabolic, endocrine, hematologic and congenital disorders. Practical application of advanced imaging modalities in the assessment of pathology will be presented when appropriate. Teaching methods include lectures, skills laboratory, radiology report writing exercises and problem based group discussions that focus on clinical reasoning.

Additional Course Activities: (hours/week)
Self-directed online review of pathology of the Chest, a two part presentation – as noted below
Open lab film review - 2 hours
Reading review of weekly information - 2 hours
Lecture prep (assigned reading) - 1 hours
Total: 5 hours

Student Learning Outcomes:
1. Diagnostic Studies (Intermediate Level) (objectives:1-11)
   - Select, perform, interpret and / or apply diagnostic studies in uncomplicated cases

2. Communication and Interpersonal Skills (Intermediate Level) (objective:12)
   - Effectively communicate medical / scientific concepts verbally and in written form

Objectives:
1. Identify and describe the roentgen signs of joint disease.
2. Identify and describe the roentgen signs of bone disease.
3. Describe the general concepts of bone tumors.
4. Describe the general concepts of skeletal trauma.
5. Describe the general concepts of skeletal infection.
6. Describe the general concepts of congenital processes.
7. Describe the general concepts of endocrine/metabolic disorders.
8. Describe the general concepts of hematologic disease.
9. Describe the general concepts of diseases of the chest.
10. Appropriately interpret radiographs with the above listed conditions.
11. Correlate radiological findings with aspects of clinical issues, where appropriate.
12. Utilize the ABCS search pattern to locate and describe disease processes.

### COURSE SCHEDULE

<table>
<thead>
<tr>
<th>Week</th>
<th>Lecture Mon 8-10</th>
<th>Lab Tue 1-3, 3-5</th>
<th>Reading 2nd Edition</th>
<th>Reading 3rd Edition</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Roentgen Signs of Joint Disease</td>
<td>Roentgen Signs of Joint Disease</td>
<td>Taylor-Tables 1-7,8,9 Marchiori-Chapter 5 and 9 Marchiori-Chapter 5 and 9</td>
<td>Taylor-Tables 1-7,8,9 Marchiori-Chapter 5 and 9 Marchiori-Chapter 5 and 9</td>
</tr>
<tr>
<td>2</td>
<td>MARTIN LUTHER KING DAY</td>
<td>General Categories of Joint Disease</td>
<td>Taylor-Tables 1-7,8,9 Marchiori-Chapter 5 and 9, Pages 860-864, 1218-1219</td>
<td>Taylor-Tables 1-7,8,9 Marchiori-Chapter 5 and 9, Pages 875-878, 1240-1241</td>
</tr>
<tr>
<td>3</td>
<td>General Categories of Joint Disease</td>
<td>General Categories of Joint Disease</td>
<td>Taylor-Tables 1-7,8,9 Marchiori-Chapter 5 and 9, Pages 860-864, 1218-1219</td>
<td>Taylor-Tables 1-7,8,9 Marchiori-Chapter 5 and 9, Pages 875-878, 1240-1241</td>
</tr>
<tr>
<td>4</td>
<td>Roentgen Signs of Bone Disease</td>
<td>SECTION 1 EXAM COVERING JOINT DISEASE</td>
<td>Taylor-Marchiori-</td>
<td>Taylor-Marchiori-</td>
</tr>
<tr>
<td>5</td>
<td>General Concepts of Bone Tumors</td>
<td>Roentgen Signs of Bone Disease /General Concepts of Bone Tumors</td>
<td>Taylor-Tables 1-12,13,14 Marchiori-Chapter 13</td>
<td>Taylor-Tables 1-12,13,14 Marchiori-Chapter 13</td>
</tr>
<tr>
<td>6</td>
<td>PRESIDENT'S DAY</td>
<td>General Concepts of Bone Tumors</td>
<td>Taylor-Tables 1-12,13,14 Marchiori-Chapter 13</td>
<td>Taylor-Tables 1-12,13,14 Marchiori-Chapter 13</td>
</tr>
<tr>
<td>7</td>
<td>General Concepts of Bone Tumors</td>
<td>General Concepts of Bone Tumors</td>
<td>Taylor-Tables 1-12,13,14 Marchiori-Chapter 13</td>
<td>Taylor-Tables 1-12,13,14 Marchiori-Chapter 13</td>
</tr>
<tr>
<td>8</td>
<td>General Concepts of Skeletal Trauma</td>
<td>SECTION 2 EXAM COVERING BONE DISEASE</td>
<td>Taylor-Marchiori-</td>
<td>Taylor-Marchiori-</td>
</tr>
<tr>
<td>9</td>
<td>General Concepts of Skeletal Infection</td>
<td>General Concepts of Skeletal Trauma and General Concepts of Skeletal Infection</td>
<td>Taylor– Tables 1-4,5,6 Tables 1-11,19 Marchiori – 607-622 Chapter 12</td>
<td>Taylor –Tables 1-4,5,6 Tables 1-11,19 Marchiori – 625-641 Chapter 12</td>
</tr>
<tr>
<td>11</td>
<td>TBA</td>
<td>SECTION 3 EXAM*** COVERING TRAUMA/ INFECTION/ CONGENITAL AND PART 1 CHEST</td>
<td>Taylor-Marchiori-</td>
<td>Taylor-Marchiori-</td>
</tr>
<tr>
<td>12</td>
<td>General Concepts of Endocrine and Metabolic disorders</td>
<td>General Concepts of Endocrine and Metabolic disorders</td>
<td>Taylor- Tables 1-15, Marchiori – Chapter 14, 933-934</td>
<td>Taylor- Tables 1-15, Marchiori – Chapter 14, 954</td>
</tr>
<tr>
<td>13</td>
<td>General Concepts of Hematologic Disease</td>
<td>General Concepts of Endocrine and Metabolic disorders &amp; General Concepts of Hematologic Disease</td>
<td>Taylor- Tables 1-10,16,17,18 Marchiori – Chapter 11</td>
<td>Taylor- Tables 1-10,16,17,18 Marchiori – Chapter 11</td>
</tr>
<tr>
<td>14</td>
<td>RESERVED FOR REVIEW</td>
<td>FINAL PRACTICAL EXAM***</td>
<td>CUMMULATIVE</td>
<td>CUMMULATIVE</td>
</tr>
<tr>
<td>15</td>
<td>FINAL WRITTEN EXAM***</td>
<td>NO LAB CLASS</td>
<td>CUMMULATIVE</td>
<td>CUMMULATIVE</td>
</tr>
</tbody>
</table>

***PART 1 CHEST MATERIAL INCLUDED CHEST CHAPTERS IN MARCHIORI: 21-27 SUGGESTED READING
INSTRUCTIONAL MATERIALS

Required Text(s):
1. Marchiori D; Clinical Imaging with Skeletal, Chest and Abdomen Pattern Differentials; 2nd Ed, Mosby: St Louis, MO 2005

Recommended Text(s):

Required Materials:
1. Not applicable

Provided Materials:
1. Notes
2. Film library in RLL

Required Attire:
1. Not applicable

TEACHING METHODS AND ACTIVITIES
Lectures will be augmented with reading assignments. Lecture notes will aid in the learning experience; however, you will be required to do the assigned reading in this class, and your quizzes will include information from the reading that was not discussed in lecture. All exams are based heavily on the reading assignments.

I will not be able to cover all required content in lecture. I will do my best to highlight important content and concepts in lecture and labs. Students are again expected to do the reading assignments because they will be held responsible for the material in tests, ICE, NBCE and real world practice.

Radiological Learning Laboratory (RLL): Open radiological laboratory hours are made available to all students on campus. A plethora of radiographs are available for viewing. A valid student ID card is required for checking out films. Radiology residents or student assistants are on duty in the RLL during most open lab hours. The RLL is located at the west end of the "H" building. Open lab hours will be posted in the RLL.

Periodic lecture and lab exercises: will be given to facilitate active learning and attendance.

EVALUATION OF STUDENT LEARNING

Grading procedures:
Evaluation of students will be primarily accomplished through section, midterm and final practical and written examinations along with a possible report writing exam. The practical exams will be given in the RLL at timed stations. Questions will mainly consist of multiple choice and short answer questions. All X-ray exams are cumulative – from now until you are in practice. An opportunity to review
**these exams will not be offered.** Feedback on your test will be provided in the form of sub-testing.

<table>
<thead>
<tr>
<th>Assessment</th>
<th>Weight/%/Points</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lecture quizzes 10</td>
<td>3</td>
<td>30</td>
</tr>
<tr>
<td>Lab quizzes 6</td>
<td>3</td>
<td>18</td>
</tr>
<tr>
<td>Section written exams 3</td>
<td>20</td>
<td>60</td>
</tr>
<tr>
<td>Section Lab exams 3</td>
<td>30</td>
<td>90</td>
</tr>
<tr>
<td>Final practical exam 1</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>Final written exam 1</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td><strong>APPROXIMATE TOTAL</strong></td>
<td><strong>298</strong></td>
<td></td>
</tr>
</tbody>
</table>

- **ASSESSMENT POINT VALUES AND # OF ASSESSMENTS CAN AND LIKELY WILL BE CHANGED DURING THE COURSE OF THE SEMESTER AT DR. YOMTOB’S DISCRETION. WHAT YOU SEE LISTED ABOVE IS A GENERAL GUIDE.**
- Extra credit may be given for lab/lecture exercises and possible for open lab attendance. This is all at Dr. Yomtob’s discretion, **so don’t ask.**

**Grading scale:**
Letter grades will be assigned only at the end of the trimester.
A = 90% to 100%
B = 80% - less than 90%
C = 70% - less than 80%
F = less than 70%
I = Incomplete
W = Withdrawal

**Note:** **YOU MUST EARN A GRADE OF C OR BETTER TO PASS THIS COURSE.** If, by the mid-session of the course (the 7th week), your grade is a C or lower, it will be **MANDATORY** to put in extra hours in the open radiology lab, and to seek tutoring. The score you receive is the score you earn. No additional points will be given for special circumstances. **Points WILL NOT be rounded up.** Please do not expect exceptions. For test security purposes, **the general policy of this course is that you WILL NOT be given an opportunity to review quizzes or examinations.** Make-up exams will be given only with a valid excuse and must be completed within two weeks of the return from the absence. No make-ups will be given for absences without a valid excuse. Seminars do not constitute a valid excuse, so don’t plan to attend one that conflicts with any quizzes or exams. Missed lecture and lab quizzes will be made up at the end of the term during lab time.

**University Policies**

Students are expected to spend at least two hours for each lecture or practicum hour and one hour for every two laboratory hours of course time per week in activities and assessments outside the classroom. Examples of activities include, but are not limited to: writing papers; reading articles or text; small group work; presentations; completing assignments; preparation for assessments; online activities and other activities that do not include direct instructor interaction and involvement.

All university policies apply to this course and all others. For full policy information please consult the university SCU Policy Manual. For a quick reference guide to the following policies: make-up examination, F-challenge examination, grade posting, results of failing grades, student support information, syllabus amendments, special needs, student conduct, and attendance, please consult the academic policies document housed on the [Online Student Services](#) site [the preceding is a hyperlink].

Syllabus prepared by: Curtis Yomtob DC, D.A.C.B.R.