## GENERAL COURSE INFORMATION: Fall 2011

**Course Title:** Diagnostic Imaging III
**Course Number:** CLSC-6306
**Trimester Credit Hours:** 4
**Total Contact Hours Per Trimester:** 75
**Course Director:** Sandra R. Norton, DC, DACBR
**Email Address:** snorton@parkercc.edu
**Phone number:** (214)902-2459, ext. 7315
**Class meeting time:** T, W, R, 10:00-10:50am
**Office Hours:**

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|---|---|
| Monday | 12:00- 12:50pm |
| Tuesday | 11:00- 12:50pm |
| Wednesday | 12:00- 12:50pm |
| Friday | 12:00- 12:50pm |

*or by appointment

**Lab Hours Per Week:** 2

**Lab Director/Instructors:**
Sandra Norton, DC, DACBR (Course Director)
Kenneth Garrett, DC, DACBR
Micheal Gilbert, DC, DACBR

**Lab Contact Hours/Trimester:** 30

## COURSE DESCRIPTION:

This course supports the mission statement of Parker University, College of Chiropractic by helping to create leaders who promote Chiropractic wellness through high standards of education, research and service. This course is designed to give the student a sound educational foundation in imaging of the chest, abdomen and internal derangement of joints. The course requires that student to research outside sources to gain insight into the concepts presented. The course will introduce a systematic approach to the interpretation of plain film and advanced imaging of the chest, abdomen and select joints. The understandings of the concepts presented are absolutely essential to become a successful Chiropractor. Areas of emphasis are listed in the learning objectives below. Students are encouraged to help each other in class and lab.

## LEARNING OBJECTIVES:

**Learning Outcomes:** The primary objective of Diagnostic Imaging III is to improve the student doctor's interpretation skills of diagnostic imaging studies, particularly conventional radiography, in regards to osseous trauma, chest, abdomen and internal derangement of joints. Upon successful completion of Diagnostic Imaging III the student doctor should be able to:

1. Demonstrate the ability to incorporate basic science knowledge with clinical applications.

2. Demonstrate the ability to identify the radiographic findings/signs that aide in the diagnosis of various musculoskeletal, thorax and abdomen disorders.
3. Demonstrate the ability to order and critically interpret clinically diagnostic procedures associated with the various pathologies discussed.
4. Interpret patient assessment data to formulate an accurate diagnosis and differential list.
5. Understand descriptive terminology used and interpret imaging study reports.

**Lab Objectives:**

1. Identify the normal and common normal variants of the skeleton, chest, abdomen and select joints of the musculoskeletal system.
2. Identify various findings associated with osseous trauma.
3. Describe various osseous injuries.
4. Identify common radiographic patterns seen within the chest and abdomen.
5. Correlate common patterns seen within the chest and abdomen to commonly seen pathologies.
6. Identify common pathologies/internal derangement of the select joints using advanced imaging, especially MRI.
7. Identify the most advantageous MRI weighting and imaging planes for the various pathologies/internal derangement of joints.

**GENERAL APPROACH TO TEACHING:**

The course material is presented in a traditional didactic manner utilizing lecture, PowerPoint's and class notes. The labs provide a hands-on atmosphere but will also incorporate quizzes, group projects and written assignments/reports. Students should come to class prepared and ready to discuss the topics of the day. Students are encouraged to participate in open discussion for the purpose of clarification and increased comprehension.

**PREREQUISITES:**

Gross Anatomy II, Systemic Pathology, Diagnostic Imaging II

**REQUIRED TEXTS:**

- Yochum and Rowe's Essentials of Skeletal Radiology. 3rd ed., Yochum, Rowe. Lippincott Williams & Wilkins 2005.
- Clinical Imaging: with Skeletal, Chest and Abdomen Pattern Differentials. 2nd ed., Marchiori, Elsevier/Mosby 2005.

**RECOMMENDED ADDITIONAL TEXTBOOKS:**

- Musculoskeletal MRI. 2nd ed., Helms, Major, et al., Elsevier/Saunders 2009.
- Felson's Principles of Chest Roentgenology: A Programmed Text. 2nd edition. Goodman, L. Elsevier/Saunders, 1999.

- Chest Radiology: Plain Film Patterns and Differential Diagnosis. 5th edition. Reed, J. Elsevier/Mosby, 2003.
- The Abdomen Plain Film with Correlative Imaging. 2nd edition. Baker. Appleton & Lange, 1998.
- Diagnosis of Bone and Joint Disorders. 3th edition. Resnick, D. Elsevier/Saunders, 2005.

NOTE*: If there is a disagreement between the lecture material and the texts, consider the lecture material preeminent for testing purposes.

**SUPPLIES:** Paper, writing utensils, computer with internet connection (available in the library).

**EVALUATION AND GRADING POLICY:**

Written Examinations:

- Written Examination I—Thursday, October 13 15%
- Written Examination II—Thursday, October 17 15%
- Comprehensive Written Final—Tuesday, Dec 13 @11:00am 25%

The written examinations will be completed on Scantron® forms (or a form supplied by the instructor) and are multiple choice, matching and true/false format. Essay, short answer or fill-in-the-blank may be included with advanced notice. The midterm exams will consist of fifty to sixty (50 - 60) questions to be completed in fifty (50) minutes. The final exam will consist of a maximum of one hundred (100) questions to be completed in ninety (90) minutes.

Lab (Practical) Examinations:

- Midterm – Week 8 10%
- Comprehensive Final—Week 14 15%

The midterm practical examination will consist of twenty (20) to forty (40) cases presented in view-box or PowerPoint® format. Two (2) questions will be asked on each case, with an allotted time of one minute and forty-five seconds (1'45") per case. Each case will consist of plain film only or plain film with some related advanced imaging (MRI, CT, scintigraphy, etc.).

The final practical examination is integrated with the final written examination. It will be composed of fifteen (15) to twenty (20) questions in PowerPoint® format. Each image or set of images (i.e. each slide) will comprise one question. Each slide will remain for thirty (40) seconds; however, the entire presentation will continuously loop during the entire examination period.

Quizzes/Assignments:

- Lecture and lab 20%

Lecture quizzes will be given at the discretion of the instructor and may be announced or unannounced. These quizzes will be completed independently by each student, consist of

five (5) questions covering any previous topic and may be given at any time throughout the class period. Class attendance may count for a quiz grade as well. No make-up will be given for missed quizzes, to include the student arriving to class late. No exceptions for any reason will be accepted.

Lab quizzes will consist of five (5) to ten (10) questions and will be of PowerPoint® format. Students will collaborate in groups of three (3) or four (4) and are allowed to utilize books and notes, as these exercises are intended to be more challenging in nature. These quizzes will be given at the end of the scheduled lab period; however, only those students present during the entire lab period will be eligible to complete the quiz for a grade.

**ESTIMATE OF STUDENT WORK LOAD:**
A student should plan to spend a minimum of 5 – 10 hours per week on the materials presented in this course. Some may spend considerably more and some may spend less. Diagnostic Imaging is a subject that requires repetition to master. You should consider initially working alone and then in a study group so concepts can be discussed and elaborated upon. You must plan on using open labs, various websites and your written notes to gain a complete mental understanding of the radiographic concepts.

**STUDENTS WITH SPECIAL NEEDS:**

Parker University, College of Chiropractic of Chiropractic adheres to section 504 of the Federal Disability law and assists qualified students. If you feel you qualify for this type of assistance, you should contact the Office of Student Affairs.

**90/90 RULE:**

NOT APPLICABLE FOR THIS CLASS

## A complete listing of all Academic policies is found on the Parker University Website:

**https://myparker.parkercc.edu/ics/Academics_-_Coursework/Course_Catalog.jnz**

**DISCLAIMER**

The lecture outlines contained in the lecture booklet are NOT intended to represent the entire content of the course. A lecture outline is intended to be a guide to the lecture. The responsibility of the instructor is to follow the outline, expand the concepts and give explanation and illustrations to clarify content. The role of the student is to attend lecture and take notes over material presented by the lecturer that explains and illustrates the material listed in the outline. It is also the responsibility of the student to question the instructor if explanations and illustrations are not clearly presented or understood.

The instructors take no responsibility for the accuracy or completeness of old notes, quiz questions or exam questions that students may purchase, acquire from off of the internet or be given by previous students.

**IMPORTANT NOTE:**

The provisions contained in this syllabus do not constitute a binding contract between the student and the Parker University, College of Chiropractic of Chiropractic. These provisions may be changed at any time and for any reason at the discretion of the Course Director. When it is necessary to make changes to this document, appropriate notice (at least one week, if at all possible) will be given to the student(s).