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# AHXR 140.01: Radiographic Methods

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**MISSOULA COLLEGE UNIVERSITY of MONTANA  
DEPARTMENT OF RADIOLOGIC TECHNOLOGY**

**COURSE SYLLABUS**

**COURSE NUMBER AND TITLE:** AHXR140 Radiographic Methods

**DATE REVISED:** Fall 2013

**SEMESTER CREDITS:** 3.00

**PREREQUISITES:** BIOH 201N and BIOH 202N: Anatomy and Physiology Lecture and Lab

**Faculty:** Adair Kanter

**E-Mail:** [AKanter@mso.umt.edu](mailto:AKanter@mso.umt.edu) & [adairkanter@gmail.com](mailto:adairkanter@gmail.com)

**Phone:** 243-2752 (Tuesday thru Friday)  
214.7030 (cell)

**Office:** Curry Health Center Radiology Dept

**Office Hours:** By appointment

**RELATIONSHIP TO PROGRAM:** This course provides students with a comprehensive understanding of bony anatomy and universally required positioning techniques for standard radiology.

**COURSE DESCRIPTION:** The content of this course is designed to provide an introduction to the anatomical structures utilized in basic radiological positioning. It teaches students how to use bony landmarks to position patients, while giving attention to specific patient considerations, such as: culture, communication, and transport/transfer. Laboratory experience will complement the didactic portion.

**STUDENT PERFORMANCE OUTCOMES:**

Upon completion of this course, the student will be able to:

1. Describe standard positioning terms
2. Demonstrate proper use of positioning aids
3. Discuss general procedural considerations for radiologic examinations
4. Identify the location of structures using directional and orientation terms
5. Indicate where various planes lie in relation to the body
6. Identify and locate the bones of the human skeleton
7. Identify bony processes and depressions found on the human skeleton
8. Differentiate the primary and secondary curves of the spine
9. Describe sesamoid bones and locate examples on radiographs
10. Summarize the functions of the skeletal system
11. Label different types of articulations

12. Compare the types, locations and movements permitted by the different types of articulations
13. Demonstrate the use of topographical landmarks to locate internal structures
14. Identify major anatomical structures found within sectional images.
15. Adapt general procedural considerations to specific clinical settings
16. Cite the structures demonstrated on routine radiographic/fluoroscopic procedures.
17. Adapt radiographic, fluoroscopic and basic CT procedures based on special considerations
18. Simulate radiographic, fluoroscopic, and basic CT procedures on a person or phantom in a laboratory setting
19. Evaluate images for positioning, centering, appropriate anatomy and overall image quality
20. Discuss equipment and supplies necessary to complete radiographic, fluoroscopic and basic CT procedures
21. Recite the patient preparation necessary for various contrast and special studies
22. List and explain the routine and special views for all radiographic and fluoroscopic procedures
23. Explain the purpose for using negative and positive contrast media agents.
24. Distinguish between the types and purpose for various upper and lower gastrointestinal studies
25. Identify methods that may be utilized for modifying directions when communication barriers during patient education
26. Explain radiographic procedures to patients and family members
27. Develop an awareness of cultural factors that necessitate adapting standard exam protocols
28. Apply general radiation safety and protection practices associated with radiologic examinations and basic CT
29. Demonstrate correct principles of body mechanics applicable to patient care
30. Demonstrate techniques for specific types of patient transfer
31. Demonstrate select procedures for turning patients with various health conditions

## **STUDENT PERFORMANCE ASSESSMENT METHODS AND GRADING PROCEDURES:**

### **Grading scale:**

**100-90 A**

**89-80 B**

**79-70 C**

**69-60 D**

Grades will be determined by total points received for attendance, participation, demonstration of proper body mechanics, proper positioning techniques, comprehension of terminology, a research paper, tests, and final exam:

Attendance/ Absences and Tardies (class & labs) – 15 %

Class and Lab Participation – 20 %

Paper – 15%

Lab Practical – 25 %

Final Exam – 25 %

Quizzes are Pass/Fail; each quiz passed will earn one point to be added to Final Exam grade

The research paper will be of a quality length (2 pages of content, minimum – 3 pages of content, maximum). It should follow the format attached, be doubled spaced, and printed in 12pt font. An abstract must be included, as well as a **minimum** of three scholarly resources, sited and listed in APA style.

Written assignments will be graded by use of the following rubric:

<u>CRITERIA</u>	<u>POINTS AVAILABLE</u>
Grammar, Spelling, Mechanics	15
Organization/Structure/Format	10
Neatness/Adherence to Requirements	20
Content/Details	25
Quality of Writing	15
Acknowledgements /References	<u>15</u>
	100

**Note: Students must pass this course with a “B” (80%) in order to continue with the Radiologic Technology Program next semester.**

**ATTENDANCE POLICY:** All students are expected to come to class each day, on time. If you are unable to do so, please call my office, at least ½ hour before your absence or tardiness, and leave a message explaining the reason for your absence or tardiness.

Students are expected to be prepared for class each day by having all books with them, at all times, having read the assigned chapters, and by having projects/papers complete, and ready to be turned in on time. Class attendance and participation are required, and will be graded.

**REQUIRED TEXT:** *Merrill's Atlas of Radiologic Positioning & Procedures: Twelfth Edition (three volumes)*

**Workbook:** *Merrill's Atlas of Radiologic Positioning & Procedures: Twelfth Edition*

**SUPPLEMENT:** *Merrill's Pocket Guide to Radiography (spiral bound)*

**Resources:** <http://evolve.elsevier.com/enroll> Course ID# 2279\_pgauthier2\_0001



**ACADEMIC INTEGRITY:** All students must practice academic honesty. Academic misconduct is subject to an academic penalty by the course instructor and/or a disciplinary sanction by The University. All students need to be familiar with the Student Conduct Code. The Code is available for review online at [http://life.umt.edu/vpsa/student\\_conduct.php](http://life.umt.edu/vpsa/student_conduct.php)

**DISABILITY ACOMODATION:** Eligible students with disabilities will receive appropriate accommodations in this course when requested in a timely way. Please speak with me after class or in my office. Please be prepared to provide a letter from your DSS Coordinator. For more information, visit the Disabilities Services website at <http://www.umt.edu/dss/> or call 406-243-2243 (voice/text).

**Note: Instructor reserves the right to modify syllabi and assignments as needed based on faculty, student, and/or environmental circumstances.**

DATE	ASSIGNMENT	DUE
Aug 26	Topics, CMC Orient/Chapt1 Chapt2 & 3	We are NOT using a WB (workbook) but will have exercised that will need to be completed.
Sept 2	<b>No Class- Labor Day</b> Chapt1, 2 & 3 Quiz 1, 2 & 3	
Sept 9	Chapt4 Lab: Chapt4	Review Chapt1,2,3 in class
Sep 16	Quiz Chapt4/Chapt5 Lab Chapt5	
Sept 23	Quiz 5/Chapt 6 Lab: Chapt 6	
Sept 30	Quiz 6/ Chapt 7 Lab: Chapt 7	
Oct 7	Quiz 7/Chapt 8 Test: 4 - 6 COT	
Oct 14	Quiz 8/Chapt 9 & 10 Lab: 9 & 10	
Oct 21	Quiz 9 & 10/Chapt 16 & 17 Test: 7 - 10 COT	
Oct 28	Quiz 16 & 17/Chapt 12, 18, 19 Lab: 12, 18 & 19	
Nov 4	Quiz 12, 18, 19/Papers Due 11/6 No Sch 11/7 Lab	Research Presented to Class (11/5)
Nov 11	No School Test: 12, 16 - 19	

Nov 19	Chapt 13, 26 – 29 Lab	
Nov 21	Travel Day	
Nov 25	Quiz 13, 26 – 29/Chpt 20 – 22 Lab	
Dec 2	Test: 13, 20 -22 & 26-29 Lab (Practical Exam)	
Dec 9-13	Finals Week- Test: Cumulative	

**Meeting places:** Mon. Lecture (whole class) – Griz House 01(GH)  
 Lab (half class) –Rm 005, Basement, Integrated Science Bldg. (ISB) Main Campus  
 \*OR\* CMC TBA in lecture.

- First lab students meet promptly for class on Mondays from 13:00 –14:50 .
- Second lab students meet promptly for class on Monday from 15:00-16:50..
- This schedule of classes/labs is subject to change at the discretion of the instructor. Appropriate notification of such changes will be provided.

All Labs are held on the Main Campus, in room 005, in the basement of the Integrated Science Building unless instructed to meet at CMC. It is located on the corner of Arthur and Beckwith. The phone number to the “Hot Lab” is: 243-6696.

It is strongly encouraged that students take advantage of the Campus Shuttle Bus to serve as their transportation vehicle to & from the Hot Lab. It conveniently leaves from the front door of the Administration Building of the COT every 15 minutes, beginning at 7:30 am, each day. There is a bus stop on Beckwith, directly adjacent to the parking lot of the ISB. It is suggested that at least 15 minutes be allowed for travel time from the COT to the ISB to account for the additional stops made along the shuttle route.

Students are required to dress appropriately for labs, (in clean scrubs) the same as they would for Clinical Rotations, as according to the regulations set forth in the Radiologic Handbook. They must also come to Labs prepared with positioning books, notes, markers and a writing utensil.

Revised 7/18/2014