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RAD 122T.01: Radiographic Imaging

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**THE UNIVERSITY OF MONTANA – MISSOULA
COLLEGE OF TECHNOLOGY
DEPARTMENT OF RADIOLOGY TECHNOLOGY**

COURSE SYLLABUS

COURSE NUMBER AND TITLE: RAD 122T Radiographic Imaging

DATE REVISED: Fall 2004

SEMESTER CREDITS: 2

CLASS HOURS: Tuesday, Friday 8:10 – 9:00

PREREQUISITES: SCN 119N Anatomy and Physiology, CRT 101 Intro to Computers, MAT 100T Algebra, RAD 110T Medical Imaging, RAD 111 T, RAD 121 T, RAD 131 T

Faculty: Anne Delaney

E-Mail: Anne.Delaney@mso.umt.edu

Phone: 243-7809

Office: AD05A

Office Hours: Tuesday, Thursday 9-10, 2-4 or by appointment

RELATIONSHIP TO PROGRAM: Students will learn the detailed imaging techniques of skull radiology. Special imaging techniques such as MRI, CT Mammography will be included in this imaging course.

COURSE DESCRIPTION: Content of the class is designed to establish students with a knowledge base in more sophisticated imaging techniques found in advance imaging procedures.

STUDENT PERFORMANCE OUTCOMES:

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

1. Discuss flat panel detectors used in digital electronic x-ray equipment.
2. Differentiate between quality improvement/management, quality assurance and quality control.
3. List the benefits of a quality management program to the patient and to the department
4. List elements of a quality management program and discuss how each is related to the quality management program.
5. Identify various types of computers
6. Define analog to digital conversion and digital signal processor.
7. Identify various terms related to computer fundamentals and components.
8. Describe major functions of central processing unit (CPU).

9. Differentiate the various types of software.
10. Identify various terms related to computer care and preventive maintenance.
11. Explain computer operation.
12. Distinguish between analog computers and digital computers.
13. Discuss application of various types of software.
14. Explain the following computing applications as they relate to radiology:
Radiologic information systems (RIS), hospital information systems (HIS) and picture archiving communication systems (PACS).
15. Define digital imaging and communications in medicine (DICOM),
16. Discuss the impact the internet has on the distribution of health information.

STUDENT PERFORMANCE ASSESSMENT METHODS AND GRADING PROCEDURES:

Grading scale:

100-90 A

89-80 B

79-70 C

69-60 D

Total grade will be determined by total points received on homework, tests, final paper and final exam.

Tests:	40%
Paper:	30%
Final Exam:	<u>30%</u>
	100%

Instructions for Semester Paper: The paper for this course will be a group paper. Students will choose a topic about the specialized areas in radiography such as CT, MRI, Mammography, PACS administration etc. Papers must include research about the specialty, educational opportunities, job market, average wage associated for the specialty and what credentialing is available for the specialty. Give me your topic in writing no later than Tuesday, September 14, 2004. Groups of 4 will be determined on the first day of class.

Papers will be type written, double spaced and 6 to 10 pages in length. Use 12pt font and one inch top and bottom margins. This paper is to include a reference and bibliography page in addition to the 6 to 10 pages. Pictures and diagrams are to be included in an appendix and referenced to in the body of the paper they are not to be included in the 6 – 10 pages. Papers will be presented on Tuesday November 9 and Friday November 12, 2004.

The purpose of the presentation is to instruct fellow students, provide opportunity for discussion and to gain confidence in presenting ideas and information. Please send me an electronic copy of your paper prior to the day you are presenting and give me a hardcopy directly following your presentation

Papers will be graded for content, interest, attention to detail, correct grammar and punctuation. Plagiarism will not be tolerated; if you are quoting a source you must reference it. Papers found to be plagiarized will be reduced by 20 points. Use of previous papers written by a student and turned as new material will be considered plagiarized.

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

ATTENDANCE POLICY: All students are expected to come to class each day, on time and prepared by having read the required chapters. Class participation is expected and may impact grades that are borderline.

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.

REQUIRED TEXT: *Radiologic Science for Technologists*; 7th Edition, Stewart C. Bushong.

Radiologic Science, Workbook and Laboratory Manual; 7th Edition, Stewart C. Bushong.

Merrill’s Atlas of Radiographic Positions and Radiologic Procedures

Radiographic Anatomy, Positioning and Procedures Workbook; Volume 2, Third Edition, Steven G. Hayes, Sr.

RAD 122 T Radiographic Imaging

DATE	READING ASSIGNMENT	WORK DUE
August 31 September 3	Introduction, Merrill's Chapter 20	Workbook p 111 – 126,
September 10	Merrill's Chapter 20 Merrill's Chapter 21	Net Anatomy Workbook p 159 -177
September 17	Positioning Lab Positioning Lab	Paper topic due Facial bones
September 24	Merrill's Chapter 23 Merrill's Chapter 24	Workbook p 195 -200 Workbook p 203 – 207
October 1	Merrill's Chapter 25 Review	Workbook p 211 - 215
October 8	Test Bushong Chapter 23, 24	Skull and Facial bones Worksheet 23-1, 23-2, 24-1
October 15	Guest Speaker	<i>Specials or Mammography</i>
October 22	Bushong Chapter 26 Bushong Chapter 27	Worksheet 26-1 Worksheets 27-1, 27-2
October 29	Bushong Chapter 28 Guest Speaker	Worksheet 28-1, 28-2 <i>?? Steve Riddle</i>
November 5	Bushong Chapter 29 Test	Worksheet 29-1, 29-2
November 12	Group Paper Presentations	
November 19	Bushong Chapter 30 Guest Speaker	Worksheet 30-1 <i>Steve Rice, review of electronics ??</i>
November 26	Thanksgiving	
December 3	Bushong Chapter 31-32 Test	Worksheet 31-1, 32-2
December 9	Guest Speaker Review	0900 MRI Melissa Rodini
December 13 - 17	Finals	Monday Dec. 13 10:10 to 12:00

Revised 4/18/16