

COURSE SYLLABUS

Department: Radiologic Technology

Course Title: Radiographic Pathology

Section Name: RADR 2217

Start Date: 08/27/2012

End Date: 12/07/2012

Modality: FACE-TO-FACE & LAB

Credits: 2

Instructor Information

Name: Carrie Nanson

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Course Description

Disease processes and their appearance on radiographic images. The student will classify types of diseases; explain the pathogenesis of common diseases; and identify the appearance of common diseases on medical images. Lab fee required.

Prerequisites/Corequisites

Prerequisite: RADR 1313, RADR 2305 & RADR 2309 Corequisites: RADR 2333 & RADR 2366

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Course Objectives

LEARNING OUTCOMES:

The student will classify types of diseases; explain the pathogenesis of common diseases; differentiate between normal and abnormal radiographic findings; and correlate normal and abnormal radiographic findings. The student will make necessary adjustments to technical factors to insure quality radiographs are produced.

COMPUTER PROGRAMS AVAILABLE IN CT 216 (COMPUTER LAB)

Image Production & Evaluation Challenge, Corectec, 2009

Procedures Challenge, Corectec, 2009

Patient Care Challenge, Corectec 2009

Radiographic Imaging, Mosby, 1998 MCD

Physics Challenge, Corectec, 2009 MCD

Audiovisual: Comprehensive Radiographic Pathology Slides, Eisenberg/Dennis, LRC

COURSE COMPETENCIES

1XRA.14.00 DISCUSS THE ORIGIN OF MEDICAL TERMINOLOGY

- 1XRA.14.01 List the primary and secondary language sources from which medical terms are derived.
- 1XRA.14.02 Give examples of medical terms from both the primary and secondary sources.

1XRA.15.00 DISCUSS/PRACTICE THE WORD BUILDING PROCESS

- 1XRA.15.01 Given medical terms, operate and define each according to its basic elements.
- 1XRA.15.02 Given medical terms in noun and verb forms, change each to adjective and/or adverb forms.
- 1XRA.15.03 Analyze medical terms that combine prefixes and suffixes with other word elements.
- 1XRA.15.04 Form a list, select medical terms used in radiology.
- 1XRA.15.05 Translate medical terms into common language a patient could understand.
- 1XRA.15.06 Correctly pronounce medical terms.

1XRA.16.00 EMPLOY MEDICAL ABBREVIATIONS AND SYMBOLS

- 1XRA.16.01 Given abbreviations, provide definitions for each.
- 1XRA.16.02 Given symbols, provide definition for each.
- 1XRA.16.03 Given medical orders which include abbreviations and symbols, translate into non-medical language.

2XRA.22.00 DISCUSS/IDENTIFY THE NEED FOR RADIATION PROTECTION

- 2XRA.22.01 Identify and justify the need to minimize unproductive radiation exposure of humans.
- 2XRA.22.02 Define and distinguish between somatic and genetic radiation effects (immediate and latent), provide examples.
- 2XRA.22.03 Differentiate between the stochastic and non-stochastic effects of radiation exposure, provide examples.
- 2XRA.22.04 List the objectives of a radiation protection program and demonstrate the ability to document some.
- 2XRA.22.06 Identify the acronym "ALARA" and describe the concept optimization.
- 2XRA.22.10 Identify legal and ethical radiation protection responsibilities of radiation workers.

2XRA.34.00 DISCUSS/DESCRIBE SYSTEMIC CLASSIFICATION OF DISEASE AND DISCUSS RADIOGRAPHIC EXPOSURE COMPENSATIONS REQUIRED

2XRA.34.01 *List the systemic classifications of disease and define each.

- 2XRA.34.01a Respiratory System
- 2XRA.34.01b Skeletal System
- 2XRA.34.01c Gastrointestinal System
- 2XRA.34.01d Urinary System
- 2XRA.34.01e Cardiovascular System
- 2XRA.34.01f Nervous System
- 2XRA.34.01g Hematopoietic System
- 2XRA.34.01h Endocrine System
- 2XRA.34.01i Reproductive System
- 2XRA.34.01j Miscellaneous Diseases

2XRA.34.02 *For each of the systemic classifications of disease, describe etiology, examples and sites, complication and prognosis.

- 2XRA.34.02a Respiratory System
- 2XRA.34.02b Skeletal System
- 2XRA.34.02c Gastrointestinal System
- 2XRA.34.02d Urinary System
- 2XRA.34.02e Cardiovascular System
- 2XRA.34.02f Nervous System
- 2XRA.34.02g Hematopoietic System
- 2XRA.34.02h Endocrine System
- 2XRA.34.02i Reproductive System
- 2XRA.34.02j Miscellaneous Diseases

2XRA.34.03 *Describe radiographic procedures and techniques appropriate for different examples of disease in each of the systemic classifications.

2XRA.34.03a Respiratory System
2XRA.34.03b Skeletal System
2XRA.34.03c Gastrointestinal System
2XRA.34.03d Urinary System
2XRA.34.03e Cardiovascular System
2XRA.34.03f Nervous System
2XRA.34.03g Hematopoietic System
2XRA.34.03h Endocrine System
2XRA.34.03i Reproductive System
2XRA.34.03j Miscellaneous Diseases

Required Readings/Materials

You must purchase the following required readings/materials:

Comprehensive Radiographic Pathology, Eisenberg/Dennis, Book and Workbook

COURSE REQUIREMENTS:

- A. Regular and punctual attendance of all class lectures and laboratory exercise.
- B. Read and discuss textbook assignments and outside readings when they are assigned.
- C. Complete all course assignments to include worksheets, laboratory exercises, written papers, examinations, etc.
- D. Demonstrate proficiency of the requirements set forth in this course by attainment of a grade of "C" or better.
- E. **Tests** - Students will be allowed to make up tests; however, 10 points will be deducted for each class day a student fails to take the examination. It is the student's responsibility to make an appointment with the instructor for the make-up examination

METHOD OF EVALUATION

METHOD OF EVALUATION:

Grading Criteria

A - 93-100
B - 84-92
C - 75-83

Weight of Course Requirements

40% - Unit Examinations
10% - Miscellaneous/Workbook
10% - Project
40% - Final Examination

ATTENDANCE POLICY

Student attendance at every class, lab and clinical practicum is expected. Students shall be prompt to class and clinical practicums. Points will be deducted from a student's final course grade for absences. (1-2 abs = .5 pt. ea.; 3-5 abs = .75 pt. ea.; 6-7 abs = 1 pt. ea.) A student is considered absent if more than 30 minutes late to lecture or lab or more than 2 hours late for clinical practicums. Four (4) or more absences will constitute an administrative drop.

ACADEMIC ETHICS:

You are expected to complete your own assignments and take tests without notes or other outside assistance. **ALL WORK IS EXPECTED TO BE YOUR OWN.** If unethical behavior is detected, **ALL** parties involved will be denied points for that project or exam. The questioned material and a report of the ethics violation will be submitted to the department chair for further action as deemed necessary by the department chair. Unethical behavior including dishonesty (cheating) on any work can be reason for dismissal from the class and ultimately the Program.

Statement of Academic Dishonesty

Ethics, Cheating and Plagiarism

"Using someone else's ideas or phrasing and representing those ideas of phrasing as our own, either on purpose or through carelessness, is a serious offense known as plagiarism. "Ideas or phrasing" includes written or spoken material, of course, from whole papers and paragraphs to sentences, and indeed, phrases. But it also includes statistics, lab results, art work, etc. "Someone else" can mean a professional source, such as a published writer or critic in a book, magazine, encyclopedia, or journal;

an electronic resource such as material we discover on the World Wide Web; another students at our school or anywhere else; a paperwriting “service” (online or otherwise), which offers to sell written papers for a fee.” (statement taken from <http://webster.commnet.edu/mla/plagiarism.shtml>)

STUDENT ASSISTANCE:

The following resources are available to assist you in successful completion of this course:

- A. In the LRC - Audiovisual materials from LRC presented during course.
- B. **Smarthinking** (<http://Smarthinking.com>)
Smarthinking Provides live, online, on-demand tutoring and writing assistance to Odessa College students in **Mathematics (Basic Skills - Calculus II), Writing, General Chemistry, Organic Chemistry, Physics, Biology, Introduction to Human Anatomy and Physiology, Accounting, Economics, Introductory Finance, Spanish and Statistics.**
Keep in mind that the Success Center still has 7 outstanding tutors for in-house face-to-face tutoring sessions.
- C. Instructor Assistance - Instructor office hours are posted on their office doors. Instructors are available during these hours to assist students. Some office hours are at the college while others are at clinical affiliates.

SPECIAL NEEDS STATEMENT

Special Needs: Odessa College complies with Section 504 of the Vocational Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990. If you have any special needs or issues pertaining to your access to and participation in this or any other class at Odessa College, please contact Becky Rivera-Weiss in the Office of Disability Services at 432-335-6861 to request assistance and accommodations.

IMPORTANT NOTES

The final examination is a comprehensive examination based on the ARRT format.

“The SEI process for face-to-face and online courses is scheduled for the week of November 26th.”

MISSED EXAMINATIONS

Students will be allowed to make up tests; however, 10 points will be deducted for each class day a student fails to schedule and complete the examination. It is the student’s responsibility to schedule the retake with regards to the instructor’s schedule.

Expectations for Engagement – Face to Face Learning

To help make the learning experience fulfilling and rewarding, the following Expectations for Engagement provide the parameters for reasonable engagement between students and instructors for the learning environment. Students and instructors are welcome to exceed these requirements.

Reasonable Expectations of Engagement for Instructors

1. As an instructor, I understand the importance of clear, timely communication with my students. In order to maintain sufficient communication, I will
 - provided my contact information at the beginning of the syllabus;
 - respond to all messages in a timely manner through telephone, email, or next classroom contact; and,
 - notify students of any extended times that I will be unavailable and provide them with alternative contact information (for me or for my supervisor) in case of emergencies during the time I’m unavailable.

2. As an instructor, I understand that my students will work to the best of their abilities to fulfill the course requirements. In order to help them in this area, I will
 - provide clear information about grading policies and assignment requirements in the course syllabus, and
 - communicate any changes to assignments and/or to the course calendar to students as quickly as possible.
3. As an instructor, I understand that I need to provide regular, timely feedback to students about their performance in the course. To keep students informed about their progress, I will
 - return classroom activities and homework within one week of the due date and
 - provide grades for major assignments within 2 weeks of the due date or at least 3 days before the next major assignment is due, whichever comes first.

Reasonable Expectations of Engagement for Students

1. As a student, I understand that I am responsible for keeping up with the course. To help with this, I will
 - attend the course regularly and line up alternative transportation in case my primary means of transportation is unavailable;
 - recognize that the college provides free wi-fi, computer labs, and library resources during regular campus hours to help me with completing my assignments; and,
 - understand that my instructor does not have to accept my technical issues as a legitimate reason for late or missing work if my personal computer equipment or internet service is unreliable.
2. As a student, I understand that it is my responsibility to communicate quickly with the instructor any issue or emergency that will impact my involvement with or performance in the class. This includes, but is not limited to,
 - missing class when a major test is planned or a major assignment is due;
 - having trouble submitting assignments;
 - dealing with a traumatic personal event; and,
 - having my work or childcare schedule changed so that my classroom attendance is affected.
3. As a student, I understand that it is my responsibility to understand course material and requirements and to keep up with the course calendar. While my instructor is available for help and clarification, I will
 - seek out help from my instructor and/or from tutors;
 - ask questions if I don't understand; and,
 - attend class regularly to keep up with assignments and announcements.

SUMMARY OF ASSIGNMENTS & ACTIVITIES

Item (Name)	Type	Description
Chapter 1 – Introduction to Pathology	Lecture/Discussion of Key Points	Complete Worksheets & Review Questions
Acquaints the student radiographer with basic medical terminology used to describe various pathologic conditions occurring in the human body, including hereditary diseases,		

immune reactions, and acquired immunodeficiency syndrome, to include an explanation as to what conditions of various systems produce pathologies that increase or decrease attenuation of the x-ray beam.

Chapter 1 Examination

Quiz

Chapter 2 – Specialized Imaging Techniques

Acquaints the student radiographer with the different specialized imaging techniques, including mammography, ultrasound, computed tomography (CT), magnetic resonance imaging (MRI), nuclear medicine, single-photon emission computed tomography (SPECT), positron emission tomography (PET), and fusion imaging.

**Lecture/Discussion
of Key Points**

**Complete Worksheets
& Review Questions**

Chapter 2 Examination

Chapter 3 – Respiratory System

Acquaints the student radiographer with the pathophysiology and radiographic manifestations of all of the common and some of the unusual disorders of the respiratory system.

**Lecture/Discussion
of Key Points**

**Quiz
Complete Worksheets
& Review Questions**

Chapter 3 Examination

Quiz

Chapter 4 – Skeletal System

Acquaints the student radiographer with the pathophysiology and radiographic manifestations of all of the common and some of the unusual disorders of the skeletal system.

**Lecture/Discussion
of Key Points**

**Complete Worksheets
& Review Questions**

Chapter 4 Examination

Quiz

Chapter 5 – Gastrointestinal System

Acquaints the student radiographer with the pathophysiology and radiographic manifestations of all of the common and some of the unusual disorders of the gastrointestinal system.

**Lecture/Discussion
of Key Points**

**Complete Worksheets
& Review Questions**

Chapter 5 Examination

Quiz

Chapter 6 – Urinary System

Acquaints the student radiographer with the pathophysiology and radiographic manifestations of all of the common and some of the unusual disorders of the urinary system

**Lecture/Discussion
of Key Points**

**Complete Worksheets
& Review Questions**

Chapter 6 Examination

Quiz

Chapter 7 – Cardiovascular System

**Lecture/Discussion
of Key Points**

**Complete Worksheets
& Review Questions**

Acquaints the student radiographer with the pathophysiology and radiographic manifestations of all of the common and some of the unusual disorders of the cardiovascular system.

Chapter 7 Examination

Quiz

Chapter 8 – Nervous System

**Lecture/Discussion
of Key Points**

**Complete Worksheets
& Review Questions**

Acquaints the student radiographer with the pathophysiology and radiographic manifestations of all of the common and some of the unusual disorders of the skull and nervous system

Chapter 8 Examination

Quiz

Chapter 9 – Hematopoietic System

**Lecture/Discussion
of Key Points**

**Complete Worksheets
& Review Questions**

Acquaints the student radiographer with the pathophysiology and radiographic manifestations of all of the common and some of the unusual disorders of the hematopoietic system.

Chapter 9 Examination

Quiz

Chapter 10 – Endocrine System

**Lecture/Discussion
of Key Points**

**Complete Worksheets
& Review Questions**

Acquaints the student radiographer with the pathophysiology and radiographic manifestations of all of the common and some of the unusual disorders of the endocrine system.

Chapter 10 Examination

Quiz

Chapter 11 – Reproductive System

**Lecture/Discussion
of Key Points**

**Complete Worksheets
& Review Questions**

Acquaints the student radiographer with the pathophysiology and radiographic manifestations of all of the common and some of the unusual disorders of the reproductive system.

Chapter 11 Examination

Quiz

Chapter 12-Miscellaneous Diseases

**Lecture/Discussion
of Key Points**

**Complete Worksheets
& Review Questions**

Acquaints the student radiographer with the pathophysiology and radiographic manifestations of all both common and unusual disorders caused by vitamin deficiencies, hereditary abnormalities, and some disease processes that do not fit neatly

into a single body system, and to understand the use, positioning, and complications of various tubes, catheters, and wires in the chest.

Chapter 12 Examination

Quiz

**Final Examination – Comprehensive Final Examination
Multiple Choice Questions**

Quiz