

South Plains College-Reese Campus
Course Syllabus

COURSE: **RADR 2217.200 (2:2:0), Radiographic Pathology**

SEMESTER: **Sumer 2013**

CLASS TIMES: **TR, 9:30 – 11:30**

INSTRUCTOR: **Stacy Randel**

OFFICE: **RC 512H**

OFFICE HOURS: **MTWR: 01:00 – 03:00; By appointment**

OFFICE PHONE: **806-716-4629**

E-MAIL: srandel@southplainscollege.edu

FACEBOOK: The radiologic technology program has a Facebook page at www.facebook.com/spcradiologictechnologyprogram. In addition to the South Plains college websites, this Facebook page will be used to keep students up-to-date on program activities, weather delays, South Plains college announcements and will help with program recruitment. "Liking" the radiologic technology program's Facebook page is not mandatory, nor is a personal Facebook accounts in order to access this page.

BlackBoard: Blackboard is an e-education platform designed to enable educational innovations everywhere by connecting people and technology. This education tool will be used in this course throughout the semester.

"South Plains College improves each student's life."

GENERAL COURSE INFORMATION

COURSE DESCRIPTION

This course focuses on disease processes and their appearance on radiographic images.

PURPOSE

This course will provide the necessary information that will allow the student to:

1. Identify significant pathologies and their influence on radiographic technique.
2. Determine necessary changes in exposure factors to compensate for a specific pathology.
3. Modify the radiographic procedure as necessary.

STUDENT LEARNING OUTCOMES

The student will:

1. Classify disease processes of the various physiologic systems.
2. Analyze diagnostic medical images to identify significant pathologies.
3. Modify radiographic exposure factors to compensate for a specific pathology.

COURSE OBJECTIVES

The student will:

1. Identify and manipulate the primary radiographic exposure factors. (F8-10;C3,5,15,16,18-20)
2. Identify the four image-quality factors that influence the diagnostic quality of a medical image. (F10;C5,15,16)

3. Identify the most common pathologies of each system of the human body and the imaging considerations of each disease. (C5,15)
4. Identify the pathologic appearance of common diseases in a medical image. (F10;C5,15)
5. Analyze the patient and pathology to determine necessary alterations to radiographic technique. (F10;C5,16,18)

EVALUATION METHODS

The course grade will be determined by a combination major exams and a comprehensive final exam. The following guidelines will be followed regarding exams:

- The student is expected to complete a major exam at the scheduled time. **Make-up major exams will not be given.**
- If one major exam is missed for any reason, the percentage value of that exam is added to the weight of the final exam grade. Any additional missed major exam will result in a zero being recorded for the missed exam.
- A student arriving late for a major exam will not be allowed to take the exam if any student has completed the exam and left the classroom.
- All major exams must be completed within the designated class time.
- Major exams will be returned to the student to be corrected in class. One-half credit will be awarded for each successful correction and added to the original grade.
- A comprehensive final exam will be given during the time designated by South Plains College. **This exam will NOT be corrected for additional points.**

ACADEMIC INTEGRITY

It is the aim of the faculty of South Plains College to foster a spirit of complete honesty and a high standard of integrity. The attempt of any student to present as his or her own any work which he or she has not honestly performed is regarded by the faculty and administration as a most serious offense and renders the offender liable to serious consequences, possibly suspension.

Cheating - Dishonesty of any kind on examinations or on written assignments, illegal possession of examinations, the use of unauthorized notes during an examination, obtaining information during an examination from the textbook or from the examination paper of another student, assisting others to cheat, alteration of grade records, illegal entry or unauthorized presence in the office are examples of cheating. Complete honesty is required of the student in the presentation of any and all phases of coursework. This applies to quizzes of whatever length, as well as final examinations, to daily reports and to term papers.

Plagiarism - Offering the work of another as one's own, without proper acknowledgment, is plagiarism; therefore, any student who fails to give credit for quotations or essentially identical expression of material taken from books, encyclopedias, magazines and other reference works, or from themes, reports or other writings of a fellow student, is guilty of plagiarism.

SCANS and FOUNDATION SKILLS

Scans and foundation skills are identified for specific course objectives. A complete list explaining these skills is attached to the back of the syllabus for your information.

SPECIFIC COURSE INFORMATION

ATTENDANCE POLICY

Class attendance is mandatory. Policies regarding absences coincide with those established for South Plains College as outlined in the SPC General Catalog.

It is important that the student take class attendance very serious, in order to make it possible to complete the course objectives. It is extremely important that students arrive for class on time. Tardiness disrupts the instructor and the other students. **Students that chronically arrive late for class will be counseled and if necessary dropped from the class, regardless of grade point average.**

CLASS PREPARATION POLICY

The student is responsible for being prepared for class, which means reading the assigned chapters and/or pages from the textbook prior to class. In some instances, information from the reading assignments not covered during class may be included on an exam.

GRADING POLICY

Grades in this course will be determined using the following criteria:

Assessment Tool	Assessment Criteria	Percentage Score	Grade
MAJOR EXAMS 50%	✓ Exceptional unit content knowledge & understanding	91 – 100	A
	✓ Good unit content knowledge & understanding	83 – 90	B
	✓ Average unit content knowledge & understanding	75 – 82	C
	✓ Unacceptable unit content knowledge & understanding	0 – 74	F
FINAL EXAM 50%	✓ Exceptional course content knowledge & understanding	91 – 100	A
	✓ Good course content knowledge & understanding	83 – 90	B
	✓ Average course content knowledge & understanding	75 – 82	C
	✓ Unacceptable unit content knowledge & understanding	0 – 74	F

Course Grade: A	91 – 100
B	83 – 90
C	75 – 82
F	0 – 74

TESTING POLICY

Students will remain in their seats during all major and final exams. Questions may be addressed during posted office hours.

COMMUNICATION POLICY

Electronic communication between instructor and students in this course will utilize the South Plains College email systems. Instructor will not initiate communication using private email accounts. Students are encouraged to sign up for **Remind 101**.

STUDENT CONDUCT

Students in this class are expected to abide by the standards of student conduct as defined in the SPC Student Guide.

CELL PHONES

Cell phones are to be turned OFF during scheduled class periods, unless prior approval has been given from the instructor. This includes text messaging. Cell phones are to be used outside the classroom only.

FACEBOOK

The Radiologic Technology Program has a Facebook page at www.facebook.com/spradiologictechnologyprogram . This Facebook page will be used to keep students up-to-date on program activities, weather delays, South Plains College announcements and will help with program recruitment. "Liking" the Radiologic Technology Facebook page is not mandatory.

ACCOMMODATIONS

DIVERSITY STATEMENT

In this class, the teacher will establish and support an environment that values and nurtures individual and group differences and encourages engagement and interaction. Understanding and respecting multiple experiences and perspectives will serve to challenge and stimulate all of us to learn about others, about the larger world and about ourselves. By promoting diversity and intellectual exchange, we will not only mirror society as it is, but also model society as it should and can be.

DISABILITIES STATEMENT

Students with disabilities, including but not limited to physical, psychiatric, or learning disabilities, who wish to request accommodations in this class should notify the Special Services Office early in the semester so that the appropriate arrangements may be made. In accordance with federal law, a student requesting accommodations must provide acceptable documentation of his/her disability to the Coordinator of Special Services. For more information, call or visit the Special Services Office in rooms 809 and 811, Reese Center Building 8, (806) 885-3048 ext. 4654.

COURSE OUTLINE

Topic: **RADIOGRAPHIC IMAGE FORMATION**

The student will:

1. Identify the prime radiographic exposure factors that control or influence medical image quality.
2. Identify the major characteristics that constitute a diagnostic medical image.

3. Explain how to adjust radiographic exposure factors to alter the appearance of the medical image. (F8-10; C5,15,18,19)

Topic: **INTRODUCTION TO PATHOLOGY**

The student will:

1. Define common terminology associated pathology.
2. Differentiate between *signs* and *symptoms*. (F10; C5,7)
3. Distinguish between disease *diagnosis* and *prognosis*. (F10; C5,7)
4. Classify the more common diseases in terms of their x-ray attenuation properties. (F10; C5,7)
5. Differentiate the basic mechanisms of the most common pathologic conditions that manifest in a radiographic image: **INFLAMMATION, EDEMA, ISCHEMIA and INFARCTION, HEMORRHAGE, ALTERED CELL GROWTH RESULTING IN THE DEVELOPMENT OF NEOPLASMS, HEREDITARY DISEASES and IMMUNE REACTIONS (I.E. AIDS)**. (F10; C5,7)
6. Identify characteristics that distinguish *benign* from *malignant* neoplasms. (F10; C5,7)
7. Describe the system used to stage malignant tumors.
8. Identify the most common causes of death.

Topic: **RESPIRATORY SYSTEM**

The student will:

1. Identify anatomic structures on both diagrams and radiographs of the respiratory system. (F10;C5-8)
2. Describe the physiology of the respiratory system. (F10;C5-8)
3. Differentiate the more common pathologic conditions affecting the respiratory system and their radiographic manifestations. (F10;C5-8)
4. Identify the changes in exposure factors required to obtain optimal radiographs of the pathologic condition. (F10;C5-8,15,16,18,19)

Topic: **SKELETAL SYSTEM**

The student will:

1. Identify anatomic structures on both diagrams and radiographs of the skeletal system. (F10;C5-8)
2. Describe the physiology of the skeletal system. (F10;C5-8)
3. Differentiate the more common pathologic conditions affecting the skeletal system and their radiographic manifestations. (F10;C5-8)
4. Identify the changes in exposure factors required to obtain optimal radiographs of the pathologic condition. (F10;C5-8,15,16,18,19)

Topic: **GASTROINTESTINAL SYSTEM**

The student will:

1. Identify anatomic structures on both diagrams and radiographs of the gastrointestinal system. (F10;C5-8)
2. Describe the physiology of the gastrointestinal system. (F10;C5-8)
3. Differentiate the more common pathologic conditions affecting the gastrointestinal system and their radiographic manifestations. (F10;C5-8)
4. Identify the changes in exposure factors required to obtain optimal radiographs of the pathologic condition. (F10;C5-8,15,16,18,19)

Topic: **URINARY SYSTEM**

The student will:

1. Identify anatomic structures on both diagrams and radiographs of the urinary system. (F10;C5-8)
2. Describe the physiology of the urinary system. (F10;C5-8)
3. Differentiate the more common pathologic conditions affecting the urinary system and their radiographic manifestations. (F10;C5-8)
4. Identify the changes in exposure factors required to obtain optimal radiographs of the pathologic condition. (F10;C5-8,15,16,18,19)

Topic: **NERVOUS SYSTEM**

The student will:

1. Identify anatomic structures on both diagrams and radiographs of the nervous system. (F10;C5-8)
2. Describe the physiology of the nervous system. (F10;C5-8)
3. Differentiate the more common pathologic conditions affecting the nervous system and their radiographic manifestations. (F10;C5-8)
4. Identify the changes in exposure factors required to obtain optimal radiographs of the pathologic condition. (F10;C5-8,15,16,18,19)

Topic: **MISCELLANEOUS PATHOLOGY**

The student will:

1. Identify anatomic structures on both diagrams and radiographs of the nervous system. (F10;C5-8)
2. Describe the physiology of the nervous system. (F10;C5-8)
3. Differentiate the more common pathologic conditions affecting the nervous system and their radiographic manifestations. (F10;C5-8)
4. Identify the changes in exposure factors required to obtain optimal radiographs of the pathologic condition. (F10;C5-8,15,16,18,19)

FOUNDATION SKILLS

BASIC SKILLS—Reads, Writes, Performs Arithmetic and Mathematical Operations, Listens and Speaks

F-1 Reading—locates, understands, and interprets written information in prose and in documents such as manuals, graphs, and schedules.

F-2 Writing—communicates thoughts, ideas, information and messages in writing and creates documents such as letters, directions, manuals, reports, graphs, and flow charts.

F-3 Arithmetic—performs basic computations; uses basic numerical concepts such as whole numbers, etc.

F-4 Mathematics—approaches practical problems by choosing appropriately from a variety of mathematical techniques.

F-5 Listening—receives, attends to, interprets, and responds to verbal messages and other cues.

F-6 Speaking—organizes ideas and communicates orally.

THINKING SKILLS—Thinks Creatively, Makes Decisions, Solves Problems, Visualizes and Knows How to Learn and Reason

F-7 Creative Thinking—generates new ideas.

F-8 Decision-Making—specifies goals and constraints, generates alternatives, considers risks, evaluates and chooses best alternative.

F-9 Problem Solving—recognizes problems, devises and implements plan of action.

F-10 Seeing Things in the Mind’s Eye—organizes and processes symbols, pictures, graphs, objects, and other information.

F-11 Knowing How to Learn—uses efficient learning techniques to acquire and apply new knowledge and skills.

F-12 Reasoning—discovers a rule or principle underlying the relationship between two or more objects and applies it when solving a problem.

PERSONAL QUALITIES—Displays Responsibility, Self-Esteem, Sociability, Self-Management, Integrity and Honesty

F-13 Responsibility—exerts a high level of effort and perseveres towards goal attainment.

F-14 Self-Esteem—believes in own self-worth and maintains a positive view of self.

F-15 Sociability—demonstrates understanding, friendliness, adaptability, empathy and politeness in group settings.

F-16 Self-Management—assesses self accurately, sets personal goals, monitors progress and exhibits self-control.

F-17 Integrity/Honesty—chooses ethical courses of action.

SCANS COMPETENCIES

C-1 **TIME** - Selects goal - relevant activities, ranks them, allocates time, prepares and follows schedules.

C-2 **MONEY** - Uses or prepares budgets, makes forecasts, keeps records and makes adjustments to meet objectives.

C-3 **MATERIALS AND FACILITIES** - Acquires, stores, allocates, and uses materials or space efficiently.

C-4 **HUMAN RESOURCES** - Assesses skills and distributes work accordingly, evaluates performances and provides feedback.

INFORMATION - Acquires and Uses Information

C-5 Acquires and evaluates information.

C-6 Organizes and maintains information.

C-7 Interprets and communicates information.

C-8 Uses computers to process information.

INTERPERSONAL—Works With Others

C-9 Participates as a member of a team and contributes to group effort.

C-10 Teaches others new skills.

C-11 Serves Clients/Customers—works to satisfy customer’s expectations.

C-12 Exercises Leadership—communicates ideas to justify position, persuades and convinces others, responsibly challenges existing procedures and policies.

C-13 Negotiates—works toward agreements involving exchanges of resources; resolves divergent interests.

C-14 Works With Diversity—works well with men and women from diverse backgrounds.

SYSTEMS—Understands Complex Interrelationships

C-15 Understands Systems—knows how social, organizational, and technological systems work and operates effectively with them.

C-16 Monitors and Corrects Performance—distinguishes trends, predicts impacts on system operations, diagnoses systems performance and corrects malfunctions.

C-17 Improves or Designs Systems—suggests modifications to existing systems and develops new or alternative systems to improve performance.

TECHNOLOGY–Works with a Variety of Technologies

C-18 Selects Technology–chooses procedures, tools, or equipment, including computers and related technologies.

C-19 Applies Technology to Task–understands overall intent and proper procedures for setup and operation of equipment.

C-20 Maintains and Troubleshoots Equipment–prevents, identifies, or solves problems with equipment, including computers and other technologies.
