

## South Plains College-Reese Center Course Syllabus

COURSE: RADR 2401-200 (4:3:3), Introduction to Radiography and Patient Care  
SEMESTER: Spring 2020  
CLASS TIMES: MW 11:00 to 12:15  
LAB TIMES: W 1:00 to 3:00  
INSTRUCTOR: Erica Castillo  
OFFICE: RC 512H  
OFFICE HOURS: MTWR: 9:00am - 11:00am & by appointment F: By appointment  
OFFICE PHONE: 806-716-4628  
E-MAIL: [ecastillo@southplainscollege.edu](mailto:ecastillo@southplainscollege.edu)

**“South Plains College improves each student’s life.”**

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### GENERAL COURSE INFORMATION

\*It is the responsibility of each student to be familiar with the content and requirements listed in the course syllabus.\*

#### COURSE DESCRIPTION

This course is a continuation of the study of the proper manipulation of radiographic equipment, positioning and alignment of the anatomical structure and equipment and the evaluation of images for proper demonstration of the anatomy.

#### STUDENT LEARNING OUTCOMES

Manipulate equipment; perform intermediate level procedures in positioning; align anatomic structures and equipment; and evaluate images.

#### COURSE OBJECTIVE

The student will participate in anterior neck, abdomen, digestive system (alimentary canal), urinary system, skull, mobile, surgical and trauma radiographic procedures of a medical imaging facility. (F2, 5, 6; C15, 16, 17, 18, 19, 20)

#### EVALUATION METHODS

The course grade will be determined by a combination of major exams, lab worksheets, workbook assignments, pop quizzes, and a comprehensive final exam.

#### 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 and projects.

**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.

**If found cheating or plagiarizing, the student's future in this program will be based on the decisions from the Allied Health Departmental Director's Committee.**

## **BLACKBOARD**

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

**The student should only access his or her own Blackboard account. Granting permission to another or accessing another student's Blackboard account is prohibited and against the Academic Integrity code.**

## **SOCIAL MEDIA**

**Facebook:** <https://www.facebook.com/spradtechprogram>

**Instagram:** <https://www.instagram.com/spradtech/>

## **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.

## **COURSE COMPETENCIES**

Students are expected to maintain a grade average of C (75) in all Radiography classes in order to progress appropriately through the Radiography Program. Satisfactory completion of this course will prepare the student for clinical assignments and application of principles in advanced radiographic procedures. This information will be provided to the student through a series of lectures, class discussions, videos, a role playing exercises, and textbook reading assignments.

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## **SPECIFIC COURSE INFORMATION**

### **REQUIRED TEXT AND MATERIALS**

Long, B., Rollins, J.H., Smith, B. Merrill's Atlas of Radiographic Positioning and Procedures. 14<sup>th</sup> Edition.

Long, B., Rollins, J.H., Smith, B. Merrill's Pocket Guide to Radiography. 14<sup>th</sup> Edition.

Long, B., Rollins, J.H., Smith, B., Curtis, T. Merrill's Atlas of Radiographic Positioning and Procedures Workbook. 14<sup>th</sup> Edition.

Lead Markers

### **ATTENDANCE POLICY**

**SPC** - Students are expected to attend all classes in order to be successful in a course. The student may be administratively withdrawn from the course when absences become excessive as defined in the course syllabus.

When an unavoidable reason for class absence arises, such as illness, an official trip authorized by the college or an official activity, the instructor may permit the student to make up work missed. It is the student's responsibility to complete work missed within a reasonable period of time as determined by the instructor. Students are officially enrolled in all courses for which they pay tuition and fees at the time of registration. Should a student, for any reason, delay in reporting to a class after official enrollment, absences will be attributed to the student from the first class meeting.

Students who enroll in a course but have "Never Attended" by the official census date, as reported by the faculty member, will be administratively dropped by the Office of Admissions and Records. A student who does not meet the attendance requirements of a class as stated in the course syllabus and does not officially withdraw from that course by the official census date of the semester, may be administratively withdrawn from that course and receive a grade of "X" or "F" as determined by the instructor. Instructors are responsible for clearly stating their administrative drop policy in the course syllabus, and it is the student's responsibility to be aware of that policy.

It is the student's responsibility to verify administrative drops for excessive absences through MySPC using his or her student online account. If it is determined that a student is awarded financial aid for a class or classes in which the student

never attended or participated, the financial aid award will be adjusted in accordance with the classes in which the student did attend/participate and the student will owe any balance resulting from the adjustment.

**SPC Radiologic Technology** - Class attendance is mandatory. Students with **three (3) absences** will be counseled. **Students are allowed five (5) absences during fall semester.** After the 5<sup>th</sup> absence, the student will be dropped from the program regardless of the student's grade. Policies regarding absences coincide with those established for South Plains College as outlined in the SPC General Catalog.

It is extremely important that students arrive for class **ON TIME**. **Tardiness** disrupts the instructor and the other students. Students who chronically arrive late will be counseled. The student should be prepared for class at the scheduled class start time. **3 tardies will equal one absence.**

**Students with perfect attendance and two (2) or less tardies will be awarded two (2) points to their final grade at the end of the semester.**

**\*A daily attendance sheet will be signed by each student promptly before class starts. If a student is tardy, it is their responsibility to sign the sheet AFTER class. Attendance and tardies of the day will be recorded from the signed sheet.**

## **INSTRUCTIONAL METHODS**

The student will receive course information through a series of lectures, PowerPoint presentations, lab assignments, and textbook assignments.

## **CLASSROOM PARTICIPATION**

Attending class regularly will provide the student opportunity to supplement their reading assignments and acquire a better understanding of the course material. Class time missed will result in information gaps and will increase course difficulty. It is the student's responsibility to attend class which will enable him or her to take notes, ask questions, and participate in class discussions. Information handouts may be given in certain instances, but the student should not rely on them. The student is encouraged to take adequate notes during class. Recording class is permitted.

## **ASSIGNMENT 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. The textbook is a mandatory requirement. **The student must bring the textbook/e-book to every class.** **In some instances, information from the reading assignments not covered during class may be included on an exam.**

## **COMPUTER USAGE**

As computer technology in the field of health occupations continues to become more popular, computers will be used in this course for several assignments. All students have access to computers and printers on the South Plains College campus. Students will be expected to utilize computers to access assignments and classroom resources. All registered students are supplied with a working email account from South Plains College. In order to take exams, students must have their user name and password.

**ALL STUDENTS ARE EXPECTED TO KNOW THEIR SPC STUDENT USER NAME AND PASSWORD.**

## **COMPUTER LAB USAGE**

The computer lab(s) on any campus may be used by students during scheduled open hours or as assigned by an instructor. Printer paper will not be provided for students to print materials, but students may seek assistance from faculty or staff to request lab paper from the college if needed. Lack of computer lab paper is not an excuse for not having homework assignments, skills lab sheets, or any other required documents. Students should come prepared for class.

## **REVIEW**

If a student needs assistance with reviewing any of the information giving during class or lab, the student is encouraged to make an appointment with the instructor.

## CONFERENCES

If at any time a student is not satisfied with their overall performance, he/she is encouraged to schedule an appointment with me. If necessary, a plan can be developed to help the student improve in their areas of weakness.

## GRADING RUBRIC

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

Assessment Tool	Assessment Criteria	Percentage Score	Grade
<b>LAB WORKSHEETS &amp; WORKBOOK ASSIGNMENTS 10%</b>	✓ Exceptional unit content knowledge & understanding	90 – 100	A
	✓ Good unit content knowledge & understanding	80 – 89	B
	✓ Average unit content knowledge & understanding	75 – 79	C
	✓ Unacceptable unit content knowledge & understanding	0 – 74	F
<b>POP QUIZZES 10%</b>	✓ Exceptional unit content knowledge & understanding	90 – 100	A
	✓ Good unit content knowledge & understanding	80 – 89	B
	✓ Average unit content knowledge & understanding	75 – 79	C
	✓ Unacceptable unit content knowledge & understanding	0 – 74	F
<b>MAJOR EXAMS (5) 50%</b>	✓ Exceptional course content knowledge & understanding	90 – 100	A
	✓ Good course content knowledge & understanding	80 – 89	B
	✓ Average course content knowledge & understanding	75 – 79	C
	✓ Unacceptable unit content knowledge & understanding	0 – 74	F
<b>FINAL EXAM 30%</b>	✓ Exceptional unit content knowledge & understanding	90 – 100	A
	✓ Good unit content knowledge & understanding	80 – 89	B
	✓ Average unit content knowledge & understanding	75 – 79	C
	✓ Unacceptable unit content knowledge & understanding	0 – 74	F

<b>Course Grade:</b> A	90 – 100
B	80 – 89
C	75 – 79
F	0 – 74

**A grade average of C (75) must be maintained in all RADR classes.** Failure to do so will result in the student being dropped from the program.

## CLASS ASSIGNMENTS

### Lab Worksheets & Workbook Assignments – 10%

The lab worksheets and workbook assignments will consist of a various exercises and assignments of the procedures covered in class/lab.

The following guidelines will be followed regarding **Lab Worksheets & Workbook Assignments**:

1. Exercises or assignments will be from the instructor and from the Merrill's workbook for each anatomical area.
2. The student must complete each workbook assignment by the due date given by the instructor.
3. **NO LATE WORK IS ACCEPTED.**

### Pop Quizzes – 10%

Pop quizzes will be randomly given throughout the semester to assure that the student is comprehending the modules presented. Pop quizzes will be multiple choice, fill in the blank and/or matching. They will be taken in the classroom using a pen and paper or electronically in the computer lab.

The following guidelines will be followed regarding **Pop Quizzes**:

1. The student must complete the pop quiz in the allotted time given by the instructor.
2. There will be **NO** make-up pop quizzes.
3. If a pop quiz is missed, the student will receive a zero for the quiz.
4. A student arriving late during a pop quiz will not be allowed to take the exam if **any** student has completed the quiz and left the room. This will also count as a tardy.
5. **Only** a blank paper and pencil/pen may be used during a quiz.
6. **NO** cell phones, smart watches, calculators or other electronic assistance are allowed during pop quizzes.

### Major Exams – 50% - (5 exams, each worth 10%)

Five scheduled major exams will be given throughout the semester following each module presented. Exams will be multiple choice and matching and will be taken electronically in the computer lab.

The following guidelines will be followed regarding **Major Exams**:

1. The student will complete the exam at the scheduled time. Make up exams are at the instructor's discretion.
2. The student must complete the exam within the allotted class time of **1 hour and 15 min.**
3. If a test must be missed, the weight of the final exam will be increased.
4. A student arriving late for an exam will not be allowed to take the exam if **any** student has completed the exam and has left the room. This will also count as a tardy.
5. **Only** a blank paper and pencil/pen may be used during an exam.
6. **NO** cell phones, smart watches, calculators or other electronic assistance are allowed during exams.

### Final Exam – 30%

A scheduled comprehensive final exam will be given at the end of the semester. Two hours will be allotted for an exam of approximately 110 multiple choice questions and will be taken electronically in the computer lab.

The following guidelines will be followed regarding the **Final Exam**:

1. The final exam will be comprehensive.
2. The final exam must be completed within the allotted time, **2 hours.**
3. A student arriving late for an exam will not be allowed to take the final exam if **any** student has completed the exam and left the room.
4. **Only** a blank paper and pencil/pen may be used during the final exam.
5. **NO** cell phones, smart watches, calculators or other electronic assistance are allowed during exams.
6. If a student is unable to take the final exam at the assigned time for any reason, the student may be given an incomplete for the course

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## RADR 2401 LAB PARTICIPATION & SAFETY

**Program Safety Rules and Operating Procedures are located in office 512B and on Blackboard**

The radiographic lab is part of RADR 1411 to allow the student the opportunity to acquire basic radiographic skills prior to beginning the clinical/practicum aspect of the Program. The student is expected to use the full lab time to practice the radiographic skills under simulated conditions using radiographic phantoms and energized x-ray equipment. The student will also be required to practice the same skills using a classmate, without actual radiation exposures. It is a violation of state law to expose a living subject in the radiographic lab of SPC.

Basic radiographic procedure assignments will be distributed at the beginning of the student's assigned lab time. All lab assignments should be completed by the conclusion of the lab time.

### **FOR RADIATION SAFETY REASONS, NO HUMANS WILL BE IRRADIATED IN THE LAB, NO EXCEPTIONS.**

Students will be working with ionizing radiation emitting equipment. Therefore, students must refrain from mind-altering substances, including alcohol and prescribed drugs, prior to lab time for the radiation safety of all concerned. If a student presents with any indication of being impaired, the student will not participate in lab and sent home. A second offense may result in disciplinary withdrawal from the course and dismissal from the Program.

If the student is taking prescription drugs, he or she must inform the faculty and schedule a make-up lab session to complete the lab assignments.

**Radiographic Lab Attire.** Students are required to participate in simulated radiographic procedures regardless of their attire. Students should wear clothing that does not restrict movement, yet is appropriate for the classroom and lab. Students will be involved in lifting and moving phantoms, patients and equipment; therefore, the student should avoid wearing clothing that he or she does not want damaged. Dosimeter badges are required at **all** times the student is located in the lab/classroom when the x-ray equipment is energized x-ray lab.

The student is responsible for the appropriate use and storage of the radiation dosimeter. The student is required to wear the radiation dosimeter **at the collar level**. At the end of lab day, the student will take the dosimeter home, as it is required for clinicals. The student is responsible for the safe storage of the dosimeter.

*Do not leave the dosimeter in any location of intense heat or light (i.e. your vehicle). Do not wash the badge with your clothing. If the dosimeter is lost, the student will not participate in lab, until the dosimeter is found or replaced. This may affect the student's ability to complete the course objectives, resulting in academic dismissal from the Program. If the student fails to return the dosimeter at the next scheduled lab, the student will be dismissed and sent home.*

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## COMMUNICATION POLICY

Electronic communication between instructor and students in this course will utilize the South Plains College "My SPC" email systems and Remind ®. The instructor will not initiate communication using private email accounts. Students are encouraged to check SPC email on a **daily basis**.

## STUDENT CONDUCT

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

Rules and regulations relating to the students at South Plains College are made with the view of protecting the best interests of the individual, the general welfare of the entire student body and the educational objectives of the college. As

in any segment of society, a college community must be guided by standards that are stringent enough to prevent disorder, yet moderate enough to provide an atmosphere conducive to intellectual and personal development.

A high standard of conduct is expected of all students. When a student enrolls at South Plains College, it is assumed that the student accepts the obligations of performance and behavior imposed by the college relevant to its lawful missions, processes and functions. Obedience to the law, respect for properly constituted authority, personal honor, integrity and common sense guide the actions of each member of the college community both in and out of the classroom.

Students are subject to federal, state and local laws, as well as South Plains College rules and regulations. A student is not entitled to greater immunities or privileges before the law than those enjoyed by other citizens. Students are subject to such reasonable disciplinary action as the administration of the college may consider appropriate, including suspension and expulsion in appropriate cases for breach of federal, state or local laws, or college rules and regulations. This principle extends to conduct off-campus which is likely to have adverse effects on the college or on the educational process which identifies the offender as an unfit associate for fellow students.

Any student who fails to perform according to expected standards may be asked to withdraw.

Rules and regulations regarding student conduct appear in the current Student Guide.

## **CELL PHONES**

Cellphones may stay on the student's desk, however, they are to be turned **OFF** or put on **silent** during scheduled class/lab periods, unless prior approval has been given from the instructor. **THIS INCLUDES TEXT MESSAGING AND/OR INTERNET BROWSING.** Cell phones are to be used only outside of the classroom while class is in session.

Students will be dismissed from class/lab and sent home if a phone continuously rings/vibrates or if the student is discovered texting or browsing the internet. If dismissed from class, the student will receive an **absence** for the class. In case of emergencies, the student can also be reached by calling the front desk at (806)716-4622.

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## **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 Disability 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 Disability Services Office. For more information, call or visit the Disability Services Office at Levelland (Student Health & Wellness Office) 806-716-2577, Reese Center (Building 8) 806-716-4675, or Plainview Center (Main Office) 806-716-4302 or 806-296-9611.

### **NON-DISCRIMINATION STATEMENT**

South Plains College does not discriminate on the basis of race, color, national origin, sex, disability or age in its programs and activities. The following person has been designated to handle inquiries regarding the non-discrimination policies: Vice President for Student Affairs, South Plains College, 1401 College Avenue, Box 5, Levelland, TX 79336. Phone number 806-716-2360.

### **PREGNANCY ACCOMMODATIONS STATEMENT**

If you are pregnant, or have given birth within six months, Under Title IX you have a right to reasonable accommodations to help continue your education. To activate accommodations, you must submit a Title IX pregnancy accommodations request, along with specific medical documentation, to the Director of Health and Wellness. Once approved, notification will be sent to the student and instructors. It is the student's responsibility to work with the instructor to arrange accommodations. Contact the Director of Health and Wellness at 806-716-2362 or email [cgilster@southplainscollege.edu](mailto:cgilster@southplainscollege.edu) for assistance.

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## CAMPUS CONCEALED CARRY

Texas Senate Bill - 11 (Government Code 411.2031, et al.) authorizes the carrying of a concealed handgun in South Plains College buildings only by persons who have been issued and are in possession of a Texas License to Carry a Handgun. Qualified law enforcement officers or those who are otherwise authorized to carry a concealed handgun in the State of Texas are also permitted to do so. Pursuant to Penal Code (PC) 46.035 and South Plains College policy, license holders may not carry a concealed handgun in restricted locations. For a list of locations, please refer to the SPC policy at:

([http://www.southplainscollege.edu/human\\_resources/policy\\_procedure/hhc.php](http://www.southplainscollege.edu/human_resources/policy_procedure/hhc.php))

Pursuant to PC 46.035, the open carrying of handguns is prohibited on all South Plains College campuses. Report violations to the College Police Department at 806-716-2396 or 9-1-1.

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## COURSE OUTLINE AND OBJECTIVES

### ANTERIOR NECK

The student will:

1. Identify the anatomy of the
  - a. Neck. (F1)
  - b. Thyroid gland. (F1)
  - c. Parathyroid glands. (F1)
  - d. Pharynx. (F1)
  - e. Larynx. (F1)
2. Differentiate between the methods of radiographic examination of the throat structures. (C5,15,18)
3. Identify and describe the procedure for each radiographic projection, to include patient position, anatomical structure position, and alignment of the central ray, image receptor and anatomical structure of the
  - a. Pharynx and larynx. (C5,15,18)
  - b. Soft palate, pharynx and larynx. (C5,15,18)
4. Identify and describe the evaluation criteria for each projection of the
  - a. Pharynx and larynx. (F9,10;C16)
  - b. Soft palate, pharynx and larynx. (F9,10;C16)

TEXTBOOK READING ASSIGNMENT: **Merrill's Atlas, Vol. II**, Chapter 15

### DIGESTIVE SYSTEM

The student will:

1. Review and identify the anatomy of the
  - a. Digestive system. (F1)
  - b. Esophagus. (F1)
  - c. Stomach. (F1)
  - d. Small intestine. (F1)
  - e. Large intestine. (F1)
  - f. Liver and biliary system. (F1)
  - g. Pancreas and spleen. (F1)
2. Identify the exposure considerations for alimentary canal radiography. (C18)
3. Explain the importance of radiation protection in radiography of the alimentary canal. (C15)
4. Identify ways to reduce excessive radiation exposure during alimentary canal radiography. (C15)

5. Identify the purpose of contrast media radiographic procedures of the esophagus. (C15)
6. Describe the barium sulfate mixture for a full-column, single contrast technique used in esophageal radiography.
7. Identify the steps for a full-column, single contrast technique used in esophageal radiography. (C15,18)
8. Identify the procedure for radiographic demonstration of opaque foreign bodies in the pharynx or upper part of the esophagus. (C15,18)
9. Identify and describe the procedure, including patient position, anatomical structure position, and alignment of the central ray, image receptor and anatomical structure, for each radiographic projection of the
  - a. Esophagus. (C15,18)
  - b. Stomach and duodenum. (C15,18)
  - c. Superior stomach and distal esophagus. (C15,18)
  - d. Small intestines. (C15,18)
  - e. Large intestines. (C15,18)
10. Differentiate between single-contrast barium enemas and double-contrast barium enemas used in radiography of the large intestines. (C15,18)
11. Describe the preparation of barium sulfate suspensions for radiographic procedures of the large intestines. (C15,18)
12. Describe the patient preparation for radiographic procedures of the large intestines. (C15,18)
13. Identify the standard barium enema apparatus for large intestine radiography.
14. Describe the process of enema tip insertion for large intestine radiography. (C15,18)
15. Describe percutaneous transhepatic cholangiography. (C15,18)
16. Describe postoperative (T-tube) cholangiography. (C15,18)
17. Describe endoscopic retrograde cholangiopancreatography. (C15,18)
18. Describe the process of radiographically demonstrating an abdominal fistulae or sinus. (C15,18)

TEXTBOOK READING ASSIGNMENT: **Merrill's Atlas, Vol. II**, Chapter 15

## URINARY SYSTEM & VENIPUNCTURE

The student will:

1. Review and identify the anatomy of the
  - a. Urinary system. (F1)
  - b. Suprarenal glands. (F1)
  - c. Kidneys. (F1)
  - d. Ureters. (F1)
  - e. Urinary bladder. (F1)
  - f. Urethra. (F1)
  - g. Prostate. (F1)
2. Explain the importance of radiation protection in radiography of the urinary system. (C15)
3. Identify the purpose of contrast media radiographic procedures of the urinary system. (C15)
4. Differentiate between antegrade filling and retrograde filling when introducing contrast material into the urinary system. (C15)
5. Describe the contrast material used in radiography of the urinary system. (C15)
6. Describe the preparation of the intestinal tract for urinary system radiography. (C15)
7. Describe the preparation of the patient for urinary system radiography. (C15)
8. Identify the equipment requirements for urinary system radiography. (C15)
9. Identify the indications for intravenous urography (IVU). (C5,15)
10. Describe the radiographic procedure for intravenous urography. (C15)
11. Identify and describe the procedure, including patient position, anatomical structure position, and alignment of the central ray, image receptor and anatomical structure, for each radiographic projection of the
  - a. Urinary system. (C15,18)
  - b. Renal parenchyma. (C15,18)

- c. Pelvicaliceal system and ureters. (C15,18)
  - d. Urinary bladder. (C15,18)
  - e. Male cystourethrography. (C15,18)
  - f. Female cystourethrography. (C15,18)
12. Identify and describe the structures demonstrated best in each lower extremity projection covered in class including the use of illustrations and radiographic images.
  13. Identify and describe the evaluation criteria for each lower extremity projection covered in class. (F9,10;C16)

TEXTBOOK READING ASSIGNMENT: Merrill's Atlas, Vol. II, Chapter 16

## TRAUMA, MOBILE & SURGICAL RADIOGRAPHY

The student will:

1. Identify and differentiate between the battery-operated mobile x-ray unit and the capacitor-discharge mobile x-ray unit.
2. Identify and explain the technical considerations pertinent to mobile and trauma radiography.
3. Identify and explain factors relative to effective radiation protection in mobile and trauma radiography. (F8,9;C3,15,18,19,20)
4. Identify and explain isolation considerations in mobile and trauma radiography. (F8,9;C3,15,18,19,20)
5. Identify and explain the steps in performing mobile and trauma radiography.
6. Identify and explain the adapted procedures common to mobile and trauma radiography for the following:
  - Spine
  - Chest
  - Abdomen
  - Cranium
  - Facial bones
  - Upper and lower extremities
7. Identify the members of the surgical team. (C9)
8. Identify and explain the function of the members of the sterile team. (C9)
9. Identify and explain the function of the members of the non-sterile team. (C9)
10. Identify the components of proper operating room attire and explain their function. (C15,18,19)
11. Identify the proper procedures for maintaining a sterile field in the operating suite. (C15,18,19)
12. Identify the proper handling of the image receptor in the sterile field. (C15,18,19)
13. Identify the principles of aseptic technique in the operating suite. (C15,18,19)
14. Identify the radiographic equipment utilized in the operating suite and the proper care and cleaning of the equipment. (C15,18,19)

Text Assignment: *Merrill's Atlas*, Vol. II, Ch. 12; Vol. III, Ch. 20 & 21

## SKULL, FACIAL BONES & SINUSES

The student will:

1. Review and identify the anatomy of the skull, facial bones and sinuses.
2. Identify the variations of thorax viscera due to the differences in body habitus.
3. Identify and describe the procedure for each radiographic projection of the skull, facial bones and sinuses covered in class, including patient position, anatomical structure position, and alignment of the central ray, image receptor and anatomical structure.
4. Identify and describe the structures demonstrated best in each projection covered in class including the use of illustrations and radiographic images.

5. Identify and describe the evaluation criteria for each projection covered in class.
6. Define pathologies and abnormalities affecting the skull, facial bones and sinuses.

TEXTBOOK READING ASSIGNMENT: **Merrill's Atlas, Vol. II**, Chapter 11

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## 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.

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## 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.



### **SYLLABUS ACKNOWLEDGEMENT (Required)**

After reading and understanding the contents of this syllabus:

- Go to SPC's Blackboard, <https://southplainscollege.blackboard.com>
- Choose the RADR2401-200 course
- Click on the Discussion content area
- Click on Syllabus Acknowledgement
- Click on Create Thread
- In the Subject field type: Syllabus
- In the Message field type:  
I, (fill in your first and last name), student ID (xxxxxxx), have received a copy of the 2020 RADR2401-200 course syllabus. I have read and understand the contents of this syllabus.