

South Plains College-Reese Campus  
Course Syllabus

COURSE: **RADR 2367.200 (3:0:24), Practicum Radiologic Technology/Science-Radiographer**  
SEMESTER: **Spring 2016**  
INSTRUCTOR: **Clinton Bishop**  
OFFICE: **RC 512B**  
OFFICE HOURS: **MTWR, 8:00-11:00 & by appointment**  
OFFICE PHONE: **806-716-4629**  
E-MAIL: [cbishop@southplainscollege.edu](mailto:cbishop@southplainscollege.edu)  
FACEBOOK: The radiologic technology program has a Facebook page at [www.facebook.com/spradiologictechnologyprogram](http://www.facebook.com/spradiologictechnologyprogram). 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 are 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."*

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**GENERAL COURSE INFORMATION**

**COURSE DESCRIPTION**

This course consists of practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student. Direct supervision is provided by the clinical professional.

**PURPOSE**

This course will provide the student an opportunity to reinforce radiographic didactic learning, perfect technical skills and complete the required clinical radiographic competences to meet graduation requirements.

**STUDENT LEARNING OUTCOMES**

The Student will:

1. Participate as a healthcare team member within the assigned clinical education setting.
2. Perform a variety of radiographic procedures to produce images for diagnostic purposes.
3. Assess radiographic images for diagnostic quality.
4. Provide basic patient care.
5. Provide optimal radiation protection.

**COURSE OBJECTIVES**

The student will:

1. Assist in providing basic health care to the patient in the radiology department. (F6,15;C9,11,14)
2. Protect the patient from all unnecessary radiation, using the appropriate radiation protection procedures. (F6,8,12,16,17;C11,15,16,18,19,20)
3. Follow appropriate radiation protection procedures for the patient and occupational workers. (F6,8,12,16,17;C11,15,16,18,19,20)

4. Participate in radiographic procedures to achieve competency in the assigned discipline. (F1,5,6,7,8,9,16;C1,3,4,5,9,18)
5. Assist in the daily operation of the radiology department, to include (but not limited to): patient transportation, image processing, office and clerical duties as required. (F1,2,5,6,8,11,12,13,15;C4,9,15,18)

## **EVALUATION METHOD**

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 assure the competency of the student in the assigned clinical area and provide correlation of classroom instruction with the clinical setting. This information will be reinforced through interactions with Radiologists, staff radiographers, and patients in the clinical sites. In addition, the Radiology department in-service programs are available to the students. Image analysis is conducted in the clinical setting and the classroom setting.

The student should make every effort to complete 25% of the total required clinical competencies by the end of this course. This includes routine and portable procedures in the following categories:

Abdominal, Thorax, Upper Extremities/Shoulder Girdle, Lower Extremities/Pelvic Girdle, Spine, Urinary, Gastrointestinal System, Nervous System, Special procedures, as well as the areas of equipment maintenance.

If during the semester the student is having difficulty accomplishing the appropriate procedures, it may be necessary to reassign the student in order for him/her to complete the required number of procedures.

## **GRADING CRITERIA FOR RADIOGRAPHIC PROFICIENCY**

- 1) Was the student available at the time of request?
- 2) Did the student properly interpret the request?
- 3) Did the student properly prepare the room for the procedure?
- 4) Did the student correctly identify the patient?
- 5) Did the student correctly identify himself/herself?
- 6) Did the student conduct himself/herself in a professional manner?
- 7) Did the student obtain patient history and explain the procedure to the patient?
- 8) Did the student ask the female patient if there was a possibility she could be pregnant?
- 9) Did the student give proper dressing instructions?
- 10) Did the student safely transport the patient to and from the x-ray table?
- 11) Did the student effectively communicate instructions to the patient?
- 12) Did the student demonstrate proper patient care while attending the patient?
- 13) Did the student use the correct SID?
- 14) Did the student position the patient correctly?
- 15) Did the student use the correct central ray orientation and angle?
- 16) Did the student collimate correctly?
- 17) Did the student use the appropriate film size and orientation?
- 18) Did the student use the correct marker and place it appropriately?
- 19) Did the student properly shield the patient when possible?
- 20) Did the student correctly shield himself/herself and others from unnecessary radiation exposure?
- 21) Did the student use the technical factors appropriate for the procedure being completed?
- 22) Did the student complete the correct projections for the procedure?
- 23) Did the student demonstrate the desired anatomy on the processed radiograph?
- 24) Did the student produce a diagnostic study?

If a radiograph does not display a side marker, the radiograph will be repeated and no competency will be given to the student. Marking the radiograph with a Sharpie is not allowed. Computerized/digital images must display a side marker. In the event the marker is not evident on the radiograph, the radiograph will be repeated. Annotating the images post processing will not be allowed by the student. If the supervising technologist prefers the image to not be repeated the

technologist must initial the radiograph with their personal initials. The student will not receive a competency for any exam that needs repeating because of not being marked with a lead marker evident on the initial radiograph.

## 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

These are identified for specific course objectives. A complete list explaining these skills is attached to the back of the syllabus for your information. Refer also to Course Objectives. SCANS and Foundation skills attached.

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## SPECIFIC COURSE INFORMATION

### TEXT AND MATERIALS

There is no required text for this course. Any previously acquired textbooks may be used as reference sources as needed.

### UNIFORMS

The student must follow the guidelines found outlined in the Program's student handbook. Any deviation from these guidelines may result in the student being asked to leave the clinical setting to correct the infraction and/or dropped from the clinical portion of the program. If the student must leave to correct the problem, the total time away from the clinical site will be included in the missed clinical time.

### COMMUNICATION POLICY

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

### STUDENT CONDUCT

Students in this class are expected to abide by the standards of student conduct as defined in the SPC catalog & the Radiologic Technology handbooks.

### SPECIAL REQUIREMENTS

**Cell Phones** are to be turned **OFF** and kept with *personal belongings* during the scheduled Program clinical education. The student will be sent home for the remainder of the day if found carrying and/or using a cell phone at the clinical

education site. Personal phone calls can be made while on break or at lunch. In case of emergencies, you may be contacted at your assigned department.

## **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** - Clinical attendance is extremely important to the student radiographer's education. It is during this time that valuable experience is gained that is necessary for the development of radiographic skills. Missed clinical time, for whatever reason, compromises that educational experience and grade. Being a health care provider requires commitment and professionalism, which is partially demonstrated by the student's attendance and punctuality in this course. Obviously, there are circumstances that will prevent attendance, such as in the case of illness or extreme emergency. Excessive absenteeism, regardless of the reason, makes it impossible to meet all the objectives of this course satisfactorily.

Students will adhere to the following clinical attendance policies. It is the responsibility of the student to become familiar with these policies. Ignorance of these policies will not be accepted as an excuse.

- Class attendance is mandatory. This class meets in the clinical affiliates as assigned. Attendance hours accrue throughout the Program in order to verify completion of the requirements of the Program of Radiologic Technology.
- Punctuality is a necessity in the healthcare setting. The student is required to arrive at the clinical site a few minutes early to be fully prepared to begin the day at 8 am. Clinical hours are from 8:00am to 4:30pm.
- The student is required to be present in the assigned area for a total of 24 hours per week. At the end of the semester, the student will have completed 344 clinical hours.
- The number of allowed missed clinical time will be 24 hours for this semester to maintain a "C" average. Missed clinical time due to tardiness, extended lunches, leaving early, funeral leave, doctor appointments, errands and so forth will be added to the total time missed and should be reflected on time cards/sheets. All missed clinical time will jeopardize the final clinical grade.
- Any absences in excess of 16 hours during the semester will result in a conference with the faculty and may further result in the student being placed on clinical probation or being dismissed from the Program.

- If excessive absenteeism jeopardizes a student's position in this course and the Program, the student has the option of requesting a committee review of their case. The student must submit a written request for committee consideration. The committee's decision will be final.
- Missed clinical hours **ARE** eligible for make-up during the week of final exams. It is up to the student to make arrangements with the clinical coordinator and clinical site instructor for make-up day(s).
- Missed clinical hours are to be made up during finals week only. Special considerations will be made on a case by case basis. Please see the clinical coordinator for make-up days other than the week of finals.
- Students are not allowed to "work through lunch" and/or come in early or stay late to accrue time or compensate for being absent.
- The student is required to call the clinical instructor and the program faculty in the event of any clinical time to be missed. This call should be made as close to the assigned start time and no later than one hour after the assigned time. The Clinical Coordinator must be called or emailed before the student radiographer leaves a facility early. Failure to do so is grounds for dismissal from the Program.
- Due to insurance and scheduling considerations, the student is not to decide his/her own schedule. This will be scheduled by the Clinical Coordinator.
- The clinical schedule may change throughout the semester to compensate patient load, student competency, schedule conflicts, and facility requests. The student will be given as much notice as possible to these changes.
- Additional attendance and absenteeism policies for South Plains College can be found in the student handbook and the general catalog of SPC.

## STUDENT SUPERVISION

The student will be assigned to various areas as part of the clinical education process. It is imperative that staff radiographers supervise students during their learning experiences.

A qualified radiographer must **directly** supervise the student by reviewing the procedure in relation to the student's achievement level; evaluating the condition of the patient in relation to the student's knowledge; by being present during the performance of the procedure; and reviewing and approving the procedure. Any time during the student performance that a repeat of an unsatisfactory radiograph is taken, there must be a qualified radiographer present per JRCERT recommendations. \*\*

**Indirect** supervision indicates that a qualified radiographer is immediately available to assist students regardless of the level of the student achievement. The qualified radiographer should be in the near vicinity of where the procedure is being performed. This applies to **all** areas where ionizing radiation is in use (surgery, portables, trauma, etc.)

Any reassignment of the student must be cleared with the Clinical Coordinator. If this procedure is ignored, notation regarding the incident will be made in the student's file and a possible grade penalty may be imposed if this is a recurring problem. It is therefore imperative that the students remain in the primary area of assignment.

**\*\*If it becomes necessary to repeat ANY radiograph, a qualified staff radiographer must directly supervise the student. The radiographer must initial the Repeat form at the time of the repeat. THERE ARE NO EXCEPTIONS.**

## GRADING POLICY

Grade	Criteria	Yes (Y) No (N)
A	Missed clinical time did not exceed <b>8 hours</b> (Fall, Spring) or <b>7 hours</b> (summer)	
	Student completed a <b>minimum of 20</b> of the ARRT required clinical competencies	
	Student received a passing clinical evaluation average of <b>4.0 to 5.0</b>	
	All clinical documentation submitted <b>on each assigned due date</b>	
B	Missed clinical time did not exceed <b>16 hours</b> (Fall, Spring) or <b>10 hours</b> (summer)	
	Student completed a <b>minimum of 15</b> of the ARRT required clinical competencies	
	Student received a passing clinical evaluation of <b>3.0 to 4.0</b>	
	All clinical documentation submitted <b>late</b> of each assigned due date	
C	Missed clinical time did not exceed <b>24 hours</b> (Fall, Spring) or <b>14 hours</b> (summer)	
	Student completed a <b>minimum of 10</b> of the ARRT required clinical competencies	
	Student received a passing clinical evaluation of <b>2.0 to 3.0</b>	
	All clinical documentation submitted <b>late</b> of each assigned due date	
F	Missed clinical time exceeded <b>24 hours</b> (Fall, Spring) or <b>14 hours</b> (summer)	
	Student failed to complete a <b>minimum of 5</b> of the ARRT required clinical competencies	
	Student received a failing clinical evaluation of <b>less than 2.0</b>	
	All clinical documentation was not submitted of each assigned due date	

\*Must meet all criteria in the category to receive that grade. If one criteria is not meet, the grade will be determined by which category it falls under.

A *“C” or better* must be maintained in all **radiologic technology courses**. Failure to do so will result in the student being dropped from the program.

**Failure of a clinical education course will result in the student being withdrawn from the Program. The possibility of the student repeating the clinical course may be an option that will be addressed on a case by case circumstance.**

**IF A STUDENT WISHES TO APPEAL A CLINICAL COURSE GRADE, HIS OR HER APPEAL WILL BE PRESENTED TO THE ALLIED HEALTH COMMITTEE.**

Competencies to be completed by the completion of the two-year Program:

### THORAX

- Routine Chest (2v)
- Chest (Wheelchair or stretcher)
- Ribs
- Chest lateral decubitus\*
- Sternum\*
- Upper airway (soft-tissue neck)\*

## **UPPER EXTREMITIES**

- Thumb or finger
- Hand
- Wrist
- Forearm
- Elbow
- Humerus
- Shoulder
- Trauma: shoulder
- Clavicle\*
- Scapula\*
- AC joints\*
- Trauma: upper extremity (non-shoulder)

## **LOWER EXTREMITIES**

- Toes\*
- Foot
- Ankle
- Knee
- Tibia-fibula
- Femur
- Trauma: lower extremity
- Patella\*
- Calcaneus \*

## **HEAD** – student must do at least one procedure from this section

- Skull\*
- Paranasal \*
- Facial bones\*
- Orbits\*
- Zygomatic arches\*
- Nasal bones\*
- Mandible \*

## **VERTEBRAL COLUMN & PELVIS**

- Cervical Spine (5v)
- Trauma: cervical spine (X-table lateral)\*
- Thoracic Spine (2v)
- Lumbar Spine (5v)
- Pelvis
- Hip
- X-table lateral hip
- Sacrum and/or coccyx\*
- Scoliosis series\*
- Sacroiliac joints\*

## **ABDOMEN**

- Abdomen supine (KUB)
- Abdomen upright
- Abdomen decubitus \*
- Intravenous urography\*

## **FLUOROGRAPHY & CONTRAST RADIOGRAPHY**

- UGI (required)

- Colon (required)
- Small bowel series
- Esophagus\*
- Cystography/Cystourethrography\*
- ERCP\*
- Myelography
- Arthrography

#### **SURGICAL STUDIES**

- C-arm (orthopedic)
- C-arm (non-orthopedic)

#### **MOBILE STUDIES**

- Chest
- Abdomen
- Orthopedic

#### **PEDIATRICS (age 6 or younger)**

- Chest routine
- Upper extremity
- Lower extremity
- Abdomen
- Mobile study

#### **GENERAL PATIENT CARE**

- CPR (satisfied by Healthcare Provider CPR certification)
- Vital signs
- Sterile & aseptic technique
- Venipuncture
- Transfer of patient
- Care of patient medical equipment

### **CLINICAL RECORDS AND PAPERWORK**

#### **DATAARC**

The student is responsible for maintaining the electronic clinical records, which is DataArc, for the documentation of clinical time, experience, repeat record, and competencies. The website is [dataarc.ws](http://dataarc.ws). The following examples of the clinical paperwork is the same in DataArc, just in an electronic form.

#### **CLINICAL PAPERWORK (will be used for down-time and/or a back-up to DataArc)**

The student is responsible for maintaining the clinical records necessary for the documentation of clinical time, experience, repeat record, and competencies. Only blank originals must be used. **White out is not allowed on any official document.** Any mistake must be marked through with one line and initialed by the person making the mistake. The following documentation must be provided at the scheduled time:

- ✓ **Evaluation form** – Due at the **END OF EACH ROTATION**
- ✓ **Time sheet** - Due at the **END OF EACH ROTATION**
- ✓ **Competency form** – Due at the **END OF EACH ROTATION**
- ✓ **Experience form** – Due at the **END OF THE SEMESTER**
- ✓ **Repeat radiograph form** – Due at the **END OF THE SEMESTER**
- ✓ **Site evaluation form** – Due **AS DIRECTED** by the Clinical Coordinator

Failure to submit these forms prevents documentation of required evaluation, clinical time, experience and competency and will jeopardize the student's grade. Total disregard to Program Clinical paperwork guidelines will result in a warning, suspension, dismissal.



**TIME CARDS/SHEETS** provide a record of time spent at each assigned clinical education setting and will be returned to the Clinical Coordinator at the **end of each rotation**. The time sheets can only be initialed by a supervisor. There must be times on the time sheet so they can be verified. All mistakes must be crossed out with one line and initialed by the student or technologist responsible for the mistake. **White out will not be allowed on any official document.**

This record demonstrates required hours of clinical education. This is a legal document and dishonesty of the accrued time will **not** be tolerated. If a discrepancy is established on the time sheets, the student will be reprimanded and possibly dismissed from the Program. In the event of a missing time sheet and the clinical time cannot be verified the student will be required to make up the unverified clinical time.

The student is responsible for the following items pertaining to the time verification system:

- ✓ Dating the card or sheet with correct dates (this is your official verification of attendance)
- ✓ Having each time slot initialed by the supervisor on the handwritten timesheets.
- ✓ Totaling times accurately reflecting any missed time as well. (Tardiness, Dr. appointments, school meetings, etc.)
- ✓ Obtaining the signature of the clinical instructor on the card/sheet as well as the individual student's signature.
- ✓ Legibility of the time card.
- ✓

The **Clinical Competency Record** will be reviewed during the semester as indicated by the Clinical Coordinator and turned in at the **end of each rotation**. Failure to provide Competency records will result in a written reprimand and reassignment to a specific area will be required for verification of competency. If no competencies have been recorded, the student will receive an 'F' in the course and will result in the dismissal of the student from the Radiology Program. Completion of competency requirements must meet the assigned level in order for the student to complete the Program.

The **Clinical Experience Record** documents the radiographic procedures experienced by the student and should reflect all experiences seen during any given assigned day. The form will be collected at the **end of the semester** as a means of tracking clinical experiences. Care should be taken in completing this form so as to reflect not only experiences in which the student assisted another technologist, but also the procedures done unassisted and completed as competencies.

The **Clinical Repeat Record** is a required document of the Program to indicate the student radiographer was directly supervised in the event of repeating a radiographic exam. The supervising technologist must initial the form to verify the observation. The student must explain the measure used to correct the infraction. This document provides information that will help the student improve in areas of deficiency. The form is due at the **END OF THE SEMESTER**.

The **Clinical Education Site Evaluation** completed by the student should accurately reflect the experience of the clinical site. This information is used to make adjustments, improvements, and/or recommendations. These are to be returned to the Clinical Coordinator **as directed**.

## FACEBOOK

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

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## ACCOMMODATIONS

### 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 Center 806-716-2577, Reese Center (also covers ATC) Building 8: 806-716-4675, Plainview Center Main Office: 806-716-4302 or 806-296-9611, or the Health and Wellness main number at 806-716-2529.

### **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.

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## **COURSE OUTLINE**

### **TOPIC: CLINICAL ROTATION - ROUTINE RADIOGRAPHY**

The student will:

1. Interact with patients, peers and hospital staff in a professional manner. (F15;C9-11,14)
2. Maintain the professional confidentiality of patients, staff and the hospital. (F13,17;C11)
3. Project a professional image in their attire, attitude and conduct. (F14,16,17)
4. Effectively communicate with patients and staff in a professional manner. (F5,6;C5-8,14)
5. Assist in the medical care of the patients while in the radiology department. (C11)
6. Be competent in the correct use of the radiographic equipment and accessories used in the assigned clinical affiliate: (F2,6;C3)
7. Select the proper equipment for a specific radiographic exam. (F13;C3,18,19)
8. Protect the patient, himself/herself and other staff members from unnecessary radiation exposure, using shields, distance, collimation and optimal exposure factors. (F13,17;C3,11,18,19)
9. Identify, orally and/or in writing, and perform, with the supervision of a radiographer, the radiographic projections employed in routine radiography, according to departmental protocol.
10. Position the patient and equipment, and select the appropriate technical factors for the required projections. This will include, but is not limited to the following anatomical regions: (F2,6,10,13; C1,3,4,9,15,18,19)
  - ✓ Upper extremities and shoulder girdle
  - ✓ Lower extremities and pelvic girdle
  - ✓ Thoracic cage
  - ✓ Chest
  - ✓ Abdomen
  - ✓ GI & Urinary
  - ✓ Spinal column
  - ✓ Skull
11. Identify and correct any positioning and/or technical error on processed radiographs, with the supervision of a radiographer. (F9;C3,12,13,16-20)
12. Identify and correct common processor and radiographic equipment problems. (F1,3,8,9;C5-8,15,16,18-20)
13. Assist in the work flow of the department by transporting patients, processing images, and performing clerical duties as required. However, these duties should not occupy the major portion of the student's clinical time.(F1,2,5,6,8,9,13,17;C1,4-9,11-15,18,19)

### **TOPIC: CLINICAL ROTATION - FLUOROSCOPIC PROCEDURES**

The student will:

1. Interact with patients, peers and hospital staff in a professional manner. (F15;C9-11,14)
2. Maintain the professional confidentiality of patients, staff and the hospital. (F13,17;C11)
3. Project a professional image in their attire, attitude and conduct. (F14,16,17;C11)
4. Effectively communicate with patients and staff in a professional manner. (F5,6;C5-8,14)
5. Assist the radiologist by performing the following procedures as they pertain to fluoroscopic examinations:(F11,13;C1,3,9,11,15,18,19)
  - ✓ Setting fluoroscopic technical factors.
  - ✓ Assisting in the positioning of the patient.
  - ✓ Administering contrast media, as is required of the procedure, with orders from the physician and with the supervision of a registered technologist.
  - ✓ Proper placement of the image receptor for spot filming.
  - ✓ Assisting in the care of the patient as required.
  - ✓ Protect the patient from unnecessary radiation exposure.
  - ✓ Protect himself/herself and other health workers from unnecessary radiation exposure.
6. Identify, orally and/or in writing, and perform any overhead projections required following the fluoroscopic procedure (to include equipment positioning, patient positioning, selection of technical factors). (F2,6,10,13; C1,3,4,9,15,18,19)

TOPIC: SURGERY & PORTABLE RADIOGRAPHY

The student will:

1. Interact with patients, peers and hospital staff in a professional manner. (F15;C9-11,14)
2. Maintain the professional confidentiality of patients, staff and the hospital. (F13,17;C11)
3. Project a professional image in their attire, attitude and conduct. (F14,16,17;C11)
4. Effectively communicate with patients and staff in a professional manner. (F5,6;C5-8,14)
5. Utilize radiation protection procedures necessary in surgical and portable radiography (i.e. Lead aprons and a minimum of 6 feet between the x-ray tube and personnel); and instruct hospital personnel in radiation protection procedures, when necessary. (F13,17;C3,10-12, 15,18,19)
6. Properly enter a surgical suite with knowledge of the sterile area, with attention to appropriate attire for oneself and appropriate preparation of the radiographic equipment to be used. (F13;C3,5,11,15,18,19)
7. Conduct the requested radiographic exam within a sterile environment, without contaminating the surgical field. (F13;C15,18,19)
8. Describe, orally and/or in writing, the responsibilities of the radiographer, perform the procedure under the supervision of a radiographer, and assist the surgeon with any fluoroscopic requirements of the procedure. This will include, but is not limited to: (F2,6,11-13;C3,15,18,19)
  - ✓ Operative cholangiograms
  - ✓ Retrograde pyelograms
  - ✓ Orthopedic procedures
  - ✓ ERCP assistance
  - ✓ Post-operative extremity films
  - ✓ Recovery room radiography
  - ✓ Spinal laminectomies
  - ✓ Pacemaker insertions
  - ✓ Operation of c-arm equipment

9. Identify, orally and/or in writing, and perform the portable procedures with the supervision of a radiographer, by correctly positioning the patient and equipment, and selecting the appropriate technical factors according to the departmental protocol. This will include, but is not limited to the following anatomical regions: (F2,6,13;C3,15,18,19)
  - A. Upper extremities and shoulder girdle
  - B. Lower extremities and pelvic girdle
  - C. Chest
  - D. Abdomen
  - E. Spinal column
  - F. Skull
10. Identify orally and correct any positioning and/or technical errors on the processed portable radiograph and make corrections with the supervision of a radiographer. (F13;C15,18,19)

**TOPIC: PEDIATRIC RADIOGRAPHY**

The student will:

1. Adjust routine procedures to accommodate pediatric patients, including the positioning of the patient, adjusting equipment and selecting technical factors as appropriate. (F7,8,13;C3,5,15,16,18,19)
2. Perform procedures specific to pediatric patients, to include, but not limited to: (F11-13;C15,18,19)
  - ✓ Bone age radiographic exams
  - ✓ Long bone radiographic exams
  - ✓ Scoliosis radiographic exams
  - ✓ Congenital hip malformation radiographic exams
  - ✓ Skeletal survey radiographic exams
3. Select appropriate devices to assist in the radiography of pediatric patients, to include, but not limited to: (F8,13;C3,15,18,19)
  - ✓ Radiation protection devices
  - ✓ Immobilization devices
  - ✓

**TOPIC: SPECIAL PROCEDURES**

The student will:

1. Interact and effectively communicate with patients, peers and hospital staff in a professional manner. (F5,15;C5-8,9-11,14)
2. Maintain the professional confidentiality of patients, staff and the hospital. (F13,17;C11)
3. Project a professional image with appropriate attire, attitude and conduct. (F14,16,17;C11)
4. Identify, orally and/or in writing, the required scout films, contrast media, special equipment, (i.e. Injectors, sterile trays, guide wires, catheters, etc.), patient preparation, patient position and emergency procedure for any special procedure routinely done in that department. This will include, but is not limited to: (F5,6,9-17;C1,3-9,11-20)
  - ✓ Myelography
  - ✓ Arthrography
  - ✓ Venography
  - ✓ Arteriography

5. Prepare the special procedures suite or room, by setting up the necessary equipment and instruments for any special procedure routinely done in that department. This will include, but is not limited to: (F5,6,9,10,13-17;C1,3-9,11-20)
  - ✓ Myelography
  - ✓ Arthrography
  - ✓ Venography
  - ✓ Arteriography
  
6. Describe, orally and/or in writing, and perform, with the supervision of a radiographer and according to departmental protocol, any special procedure routinely done in that department. Assist the radiographer and/or physician with any of these procedures. This will include, but is not limited to: (F5,6,9,10,13-17;C1,3-9,11-20)
  - ✓ Myelography
  - ✓ Arthrography
  - ✓ Venography
  - ✓ Arteriography
  
7. Assist the radiographer and/or physician with the care of the patient while in the special procedures suite/room. (F5,6,13,15;C1,3,5-7,9,11-20)

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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, generate alternatives, consider risks, evaluate 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.