



Thatcher Campus

Radiologic Technology Clinical Handbook

2023/2024

The purpose of the clinical notebook is to provide students with the resources to gain the educational experience necessary to obtain the skills required to become a highly marketable radiologic technologist.

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CLINICAL SITE ORIENTATION

Student Name _____ Clinical Site _____

The following topics need to be discussed with students assigned to your Clinical Education Site within the first **2 weeks**.

		Students Signature (SIGN CLEAR)	Technologist Signature
1.	General Orientation to the Hospital		
	a. Parking		
	b. Hospital Entrances		
	c. Hospital Layout/ Hospital Map		
	d. Policy for students answering the phone		
2.	Department Orientation		
	a. Radiographic Rooms		
	b. PACS System		
	c. Front Desk System /Radiologist's Offices		
	d. Exam Protocol book		
	e. Storage/Linen cart/cleaning supplies		
	f. Transportation Procedures		
	g. Line of command/chain of authority for dept./		
	h. Technique charts/ Identification needed on each radiograph, Marker Rt /Lt policy		
3.	Department Policy and Procedure manuals		
	a. Department Safety, Fire, OSHA, Quality Assurance, Department Specific Policies		
	b. Set up for Special Radiographic Examinations to include oxygen/BP equipment/suction policies and procedures.		
	c. Incident reports/ Standard Precautions for Disease Prevention (eg. gloves, eyeglasses, hand washing)		
	d. Procedure for responding to a code, (cardiac, respiratory, Fire, etc.) crash cart location		
4.	Time Accountability—break and lunch assignments		
	a. Make-up-time		
	b. Punctuality		

	c. Attendance		
	d. Absenteeism (who to contact) Plus faculty!		
		Students Signature (SIGN CLEAR)	Technologist Signature
	e. Room Assignments/Breaks/Lunch Assignments. CEC Workbook/Storage Area		
	f. Where the schedule and time sheets will be posted.		
10.	CR and DR System Orientation		
11.	S, DI, DE, REX ranges and target number		
12.	Emergency Room exam protocol/procedures		
13.	RIS System operation and access functions		
15.	Patient ID verification policy and procedure		
	a. Restraints secure/ wheelchairs locked, stretcher side rails up		
	b. Ask women of childbearing age if there's any chance of pregnancy. (What is the radiology department's procedure?)		
	c. Exam history documentation policy		
	d. A radiographer must be present with the student on a repeat examination.		
	e. When in question ASK .		



VITAL SIGNS

Objectives Check off Form

Student _____ Date Completed _____

Evaluator _____

Objectives Completed _____ Yes _____ No

THE STUDENT IS ABLE TO:

_____ A. Define vital signs

_____ B. List the normal rates/limits of temperature, pulse, respiration, and blood pressure

_____ C. Demonstrate proper oxygen mask or cannula placement and oxygen gauge

_____ D. Identify various pulse sites

_____ E. Accurately read a clinical thermometer

_____ F. Accurately monitor pulse rate to be done clinically

_____ G. Accurately monitor respirations

_____ H. Accurately monitor blood pressure



STERILE AND ASEPTIC TECHNIQUE
Objectives Check off Form

Student _____ Date Completed _____

Evaluator _____

Objectives Completed _____ Yes _____ No

THE STUDENT IS ABLE TO:

- _____ A. Demonstrate the proper hand-washing technique that is accepted as medically aseptic when working with patients
- _____ B. Demonstrate the proper method of putting on a mask
- _____ C. Demonstrate the correct method of putting on a sterile gown and sterile gloves
- _____ D. Demonstrate the ability to locate infectious control measures on patient requisitions
- _____ E. Demonstrate proper infectious control measures when working with patients
- _____ F. Demonstrate the correct method of opening a sterile pack and of placing a sterile object on a sterile field
- _____ G. Demonstrate the skin preparation for a sterile procedure
- _____ H. Demonstrate the correct method of removing and reapplying a dressing
- _____ I. Identify areas in the operating room that are considered sterile and those that are not
- _____ J. Demonstrate the correct method of passing by a sterile person



VENIPUNCTURE

Student _____ Date Completed _____

Evaluator _____

Objectives Completed _____ Yes _____ No

THE STUDENT IS ABLE TO:

- _____ A. Identify contraindications to contrast administration
- _____ B. Identify potential adverse effects of administering contrast
- _____ C. Correctly identify signs of extravasation and its treatment
- _____ D. Identify potential sites for venipuncture
- _____ E. Gather equipment needed for venipuncture
- _____ F. Demonstrate proper handwashing and glove placement
- _____ G. Properly apply tourniquet, select, and cleanse injection site
- _____ H. Correctly initiate puncture of the injection site
- _____ I. Confirm vein entry and secure the catheter
- _____ J. Properly prepare and proceed with injection
- _____ K. Properly remove the catheter
- _____ l. Demonstrate proper disposal of sharps and waste



Eastern Arizona College
Radiologic Technology Program
Repeat Image Policy

JRCERT STANDARD FOUR Objective 5.4, “Assures that students are directly supervised by a qualified radiographer when repeating unsatisfactory images. The technologist assures safety; proper educational practices must be physically present and approve procedure.”

Mandatory Competencies			
Procedure	Facility	Date Completed	Verified by (initials)
C-Arm Procedure (Requiring Manipulation to Obtain More Than One Projection)			
C-Arm Procedure (Requiring Manipulation to Obtain More Than One Projection)			
Mobile Radiographic Procedures			
Chest			
Abdomen			
Upper or Lower Extremity			
Pediatric Patients (Age 6 or younger)			
Chest Routine			
Geriatric Patient (At least 65 years of age and physically or cognitively impaired)			
Chest Routine			
Upper or Lower Extremity			
Chest and Thorax			
Chest Routine			
Chest AP (Wheelchair or Stretcher)			
Ribs			
Upper Extremity			
Thumb or Finger			

Hand			
Wrist			
Forearm			
Elbow			
Humerus			
Shoulder			
Clavicle			
Trauma: Shoulder or Humerus (Scapular Y, Transthoracic or Axial)*			
Trauma: Upper Extremity (Non-Shoulder)*			
Lower Extremity			
Foot			
Ankle			
Knee			
Tibia-Fibula			
Femur			
Hip			
Pelvis			
Cross-Table Lateral Hip (horizontal beam patient recumbent)			
Trauma: Lower Extremity (Trauma requires modifications in positioning due to injury with monitoring of the patient's condition)			
Spine and Pelvis			

Cervical Spine			
Thoracic Spine			
Lumbar Spine			
Cross-Table (Horizontal Beam) Lateral Spine (Patient Recumbent)			
Abdomen			
Abdomen Supine			
Abdomen Upright			
General Patient Care			
CPR/BLS Certified			
Care of patient tubes, catheters, medical equipment			
Vital Signs Temperature			
Vital Signs Pulse			
Vital Signs Pulse Ox			
Vital Signs Respiration			
Vital Signs Blood Pressure			
Sterile and Aseptic Technique			
Patient Transfer			
Venipuncture			
Procedure	Facility	Date Completed	Verified by (initials)

Procedure	Facility	Date Completed	Verified by (initials)
Fluoroscopy Studies – Candidates must select two procedures from this section and perform per site protocol.			
Upper GI Series, Single or Double Contrast			
Contrast Enema, Single or Double Contrast			
Small Bowel Series			
Esophagus (<i>NOT</i> Swallowing Dysfunction Study)			
Cystography/Cystourethrography			
ERCP			
Myelography			
Arthrography			
Hysterosalpingography			
Pediatric Patients			
Upper or Lower Extremity			
Abdomen			
Mobile Study			
Geriatric Patients			
Hip or Spine			
Chest Thorax			

Chest Lateral Decubitus			
Sternum			
Upper Airway (Soft-Tissue Neck)			
Sternoclavicular Joints			
Upper Extremity			
Scapula			
AC Joints			
Lower Extremity			
Toes			
Calcaneus			
Patella			
Head- Candidates must select at least one elective procedure from this section			
Skull			
Facial Bones			
Mandible			
Temporomandibular Joints			
Nasal Bones			
Orbits			
Paranasal Sinuses			
Spine and Pelvis			
Sacrum and/or Coccyx			
Scoliosis Series			
Sacroiliac Joints			
Abdomen			

Abdomen Decubitus			
Intravenous Urography			
Procedure	Facility	Date Completed	Verified by (initials)
	Mandatory	Electives	Patient Care
Total Required	36	15	10

0=Not Acceptable

1=Requires Minor Improvement

2=Acceptable

Performance Evaluation	A			B			C			D		
	0	1	2	0	1	2	0	1	2	0	1	2
<i>Perform the Radiological Procedures listed demonstrating appropriate: (1-17)</i>												
Type of EXAM:	Projection			Projection			Projection			Projection		
1.Evaluation of requisition and verified patient I.D., and LMP status												
2.Room readiness, and Portable, C-arm cleanliness												
3.Patient care and management. Effectively												
4.Obtained and documented exam related history.												
5.Correct positioning skills. CP/ alignment.												
6.Correct CR and part position/rotation.												
7.Correct use of collimation (ALARA).												
8.Proper image identification (Lead Markers).												
9.Demonstrated professional behavior.												
10.Post procedure instructions and paperwork.												
11.Resulting images demonstrate proper positioning, key anatomy and is properly displayed.												
12.Resulting images are properly exposed.												
13.Exam was completed in a timely manner.												
14.Understanding of "S" or "Di" number ranges.												
15. Demonstrates competence with operating system functions(window level, orientation, and labels).												

COMPETENCY EVALUATION GRADE SHEET

- 1. The Competency Evaluation Grade Sheet has been designed for evaluating a maximum of four projections per radiographic examination.**
- 2. The evaluator will mark each area with an X to indicate the point value.**
- 3. Passing score for a 1-projection exam a minimum of 22 out of 30 possible points.
Passing score for a 2-projection exam a minimum of 45 out of 60 possible points.
Passing score for a 3-projection exam a minimum of 68 out of 90 possible points.
Passing score for a 4-projection exam a minimum of 90 out of 120 possible points.**

STUDENT'S TOTAL POINTS ÷ TOTAL POSSIBLE POINTS = _____%

Evaluator Signature _____ Date _____

NOTICE OF UNSAFE OR UNACCEPTABLE PRACTICE OR ACT

Student: _____ Date: _____

Clinical Instructor: _____ Course: _____

Location of Occurrence _____

This is UPA (#1 DATE _____)(#2 DATE _____) (#3 DATE _____)

(#4 DATE _____) (#5 DATE _____)

A "UPA" is an action, which potentially or jeopardizes patient safety, or an action that demonstrates poor judgment in areas which the student has had previous opportunities for learning and may result in exclusion from the clinical area. Unsafe or improper actions will result in a "clinical contract" and may result in withdrawal from the clinical area.

You may have COMMITTED A "UPA" IN THE CATEGORY CHECKED BELOW.

YOU HAVE FAILED TO PROPERLY:

Patient Safety

1. Warn personnel in proximity when doing a portable X-Ray exposure.
2. Practice radiation protection.
3. Ascertain if patient is pregnant
4. Inquire if patient has allergies prior to radiopaque contrast media (ROCM) administration
5. Identify a patient before beginning a procedure
6. Practice standard precautions
7. Elevate side rails of patients who are confused, medicated, or a loss of consciousness (ALOC).
8. Restrain confused or irrational patients
9. Check physician's orders before beginning procedure and obtain pertinent history.
10. Recognize and report important patient changes: Respiration, color, bleeding, emotional state.
11. Perform a repeat exposure without proper supervision
12. Inability to demonstrate appropriate level of judgment, confidence, and professionalism.

USAFE PRACTICE ACTS

Maintain patients legal rights:

1. Maintain patient confidentiality
2. Provide for client privacy
3. Initiate and correctly perform life support measures (CPR)
4. OTHER _____

Meet Student Role Requirements:

1. Recognize own limitations: perform procedures not competent to perform without instructor.
2. Demonstrate inappropriate professional behavior that could jeopardize patient safety: tardiness, excessive absences, inappropriate grooming/dress/interpersonal behavior, reporting to clinical under the influence of alcohol or drugs, stealing or lying regarding medications, possessions (staff or patient) or treatments in the clinical experience, not following policy of Eastern Arizona College Community College and the Radiologic Technology Program.
3. OTHER _____

Description of Deficiency (include names of persons involved):

This UPA results in (please check those that apply):

- _____ 1. 1%-point reduction in final clinical grade
- _____ 2. "Clinical Contract": Student may be placed on a clinical contract based on the nature of the problem.
- _____ 3. Exclusion from the clinical area. Justification:

The UPA committee will consist of the clinical instructor, technologist, clinical coordinator, and Lead faculty. If the student disagrees with the committee decision, he/she may appeal the decision by following the process outlined in the Student Rights and Responsibilities document. The student will not be allowed to return to the CEC until all appeals have been completed.

Statement of Contractual Agreement

I, _____, understand and agree to the following:

Target Behavior: _____

Student Signature _____

Date _____

Clinical Instructor _____

Date _____

Clinical Coordinator _____

Date _____

RADIATION SAFETY REVIEW FORM

_____ has exceeded the maximum dose equivalent of 125mrem during the following month _____. The dosimeter report has been reviewed and signed by the student. He/she has been given a radiation safety review and can describe means in which to adhere to the concept of ALARA and understands the importance of practicing good radiation safety measures.

Clinical site where the radiation incident occurred _____

Clinical site notified on _____ (date)

Possible Activity that led to the reported incident:

Suspected Date(s) during the report period that the incident may have happened:

Actions Taken:

Student Signature

Faculty Signature

Program Director Signature

CLINICAL EDUCATION ABSENCES RECORD

Student _____ Course _____

Clinical Education Site _____ Semester _____

Complete the following form to record only you're ABSENCES. Absences can only be made up with the approval of the clinical instructor. All absences must be reported to the CEC clinical instructor and assigned faculty prior to the start of the shift. The absences can be made up on a day or evening shift Monday through Sunday. (See JRCERT Policy) Please complete the bottom of this form after you have met with the clinical instructor and have approval to make up dates. Students absent 16 hours must inform faculty and met to discuss plan of action.

Date of Absence	Number of Hours Missed	Absence Was Made Up On	Signature of CE Instructor To Verify Absence Was Made Up

Clinical Coordinator Signature _____ Date _____

Student Signature _____ Date _____

Radiographic Procedures Clinical Competency Requirements and Process

The clinical competency requirements include 10 general patient care activities and 51 radiographic procedures for a total of 61 competencies.

Demonstration of competence should include variations in patient characteristics (e.g., age, gender, medical condition). Demonstration of clinical competence means that the candidate has performed the procedure independently, consistently, and effectively during the course of his or her formal education. The following pages identify the specific procedures for the clinical competency requirements.

1. General Patient Care

Requirement: Students must be CPR certified and demonstrate competence in the remaining nine (9) patient care activities listed below. The activities should be performed on patients; however, simulation is acceptable.

2. General Performance Considerations:

Demonstration of competence should include variations in patient characteristics such as age, gender, and medical condition.

3. Simulated Performance

Simulations must meet the following criteria:

- The student must simulate the procedure on another person with the same level of cognitive, psychomotor, and affective skills required for performing the procedure on a patient. Examples of acceptable simulation include positioning another person for a projection without activating the x-ray beam.
- The program director or designee must be confident that the skills required to competently perform the simulated procedure will transfer to the clinical setting, and if applicable, the candidate must evaluate related images.

4. Imaging Procedures

As part of the EAC Radiologic Technology program, students must demonstrate competence in the clinical activities identified below:

- Ten mandatory general patient care activities;
- 36 mandatory imaging procedures;
- 15 elective imaging procedures selected from the list of 34 procedures;
- One of the 15 elective imaging procedures must be selected from the head section; and
- Two of the 15 elective imaging procedures must be selected from the fluoroscopy studies section, one of which must be either upper GI or contrast enema.

Students must demonstrate competence **in all 36 procedures listed as mandatory (M)**.

Students must demonstrate competence in **15 of the 34 elective (E) procedures**.

*A maximum of ten procedures may be simulated if demonstration a patient is not feasible.
Procedures eligible are noted as an (S) on the master competency sheet

Total number of competencies required is 61.

Simulated Performance must meet the following criteria:

- Simulation of imaging procedures requires use of proper radiographic equipment without activating the x-ray beam
- A total of ten imaging procedures may be simulated. Imaging procedures eligible for simulation are noted on the master competency sheet.
- If applicable, the student must evaluate related images.
- Demonstration of competence includes requisition evaluation, patient assessment, room preparation, patient management, equipment operation, technique selection, positioning skills, radiation safety, image processing, and image evaluation.
- Some situations are acceptable for General Patient Care (i.e. Vital signs, Venipuncture, Patient Transfer, Sterile and Aseptic technique, and Oxygen). These do not count toward the ten imaging procedures that can be simulated.

5. **Competency Requirements**

When performing Imaging Procedures, the candidate must independently demonstrate appropriate:

- Patient identity verification
- Examination order verification
- Patient assessment
- Room preparation
- Patient management
- Equipment operation
- Technique selection
- Patient positioning
- Radiation safety
- Image processing
- Image evaluation

*Trauma is considered a serious injury or shock to the body. Modifications may include variations in positioning, minimal movement of the body part, etc. Exp. (Orthogonal views using the IR and tube instead of the patient part)

Once a competency has been achieved, the student will require indirect supervision by a certified R.T., for that examination (**except for examinations that are repeated and portable exams**).

*One patient may be used to document more than one competency. However, each individual procedure may be used for only one competency (e.g., a portable femur can only be used for a portable extremity or a femur but not both)

Clinical Incident Report

Name of person preparing this Incident Report: _____

Date that this Incident Report is being prepared: _____

Name of student involved in the incident being reported: _____

Time, date and place of incident being reported: Time: _____ Date: _____

Location where incident occurred: _____

Description of the incident (please provide as much detail as possible—use additional sheets if necessary):

Names of other witnesses to, or persons with information concerning, the incident: _____

Clinical Instructor Notified _____ date _____

Program Director Notified _____ date _____

Clinical Coordinator Notified _____ date _____

Signature and Contact Information of Person Preparing This Incident Report

Signature

Telephone number of other contact information