



Western Technical College

10526168 Radiography Clinical 1

Course Outcome Summary

Course Information

Description	This beginning level clinical course prepares radiography students to perform radiologic procedures on patients with extensive supervision and direction. Students apply radiation protection and standard precautions in the production of radiographic images while adhering to legal and ethical guidelines. An emphasis of the course is the development of communication and critical thinking skills appropriate to the clinical setting.
Career Cluster	Health Science
Instructional Level	A.A.S. - Associate in Applied Science
Total Credits	2

Textbooks

No textbook required.

Learner Supplies

Uniform: Cardinal Red scrub top, Black scrub pants - 2 sets. **Vendor:** To be discussed in class. Required.

Red Western Program Patch for sleeve on outermost garment. - \$3.50. **Vendor:** Campus Shop. Required.

Radiographic Imaging Markers (R&L). **Vendor:** To be discussed in class. Required.

Radiation Monitoring Badger (Fee added to course). **Vendor:** To be discussed in class. Required.

Success Abilities

1. Cultivate Passion: Expand a Growth-Mindset
2. Live Responsibly: Develop Resilience
3. Live Responsibly: Foster Accountability

High Impact Practices

1. Work-Based Learning: this course applies your learning to your desired profession by working in industry placements such as internships, practicums, clinicals, or co-ops.

Program Outcomes

1. Carryout the production and evaluation of radiographic images
2. Practice radiation safety principles
3. Provide quality patient care
4. Model professional and ethical behavior consistent with the A.R.R.T. Code of Ethics
5. Apply critical thinking and problem-solving skills in the practice of diagnostic radiography

Course Competencies

1. Carry out the production and evaluation of radiographic images

Assessment Strategies

- 1.1. Oral, written, graphic and/or skill assessment

Criteria

- 1.1. you follow safety procedures
- 1.2. you perform clinical competencies according to established criteria checklist
- 1.3. you assemble image documentation
- 1.4. you use equipment correctly according to established procedures
- 1.5. you select the correct image receptor
- 1.6. you perform an evaluation of the requisition and patient assessment
- 1.7. you ensure physical facilities readiness
- 1.8. you provide patient care and management
- 1.9. you position the patient correctly utilizing positioning aids if necessary
- 1.10. you adapt procedure to the age and condition of patient
- 1.11. you select appropriate image production exposure factors and make exposure
- 1.12. you evaluate final images for exposure quality, anatomical presentation, and patient identifying information
- 1.13. you apply computer skills in the radiographic clinical setting
- 1.14. you correlate digital concepts and principles to clinical application
- 1.15. you practice proper body mechanics

Learning Objectives

- 1.a. Accurately positioned patient for specified examination
- 1.b. Selection of appropriate image production exposure factors and make exposure – Correct exposure factors (kVp, mA, time, mAs, AEC, anatomic program, proper SID, etc.)
- 1.c. Evaluate final images for acceptable exposure quality, anatomical presentation, and patient identifying information

2. Provide quality patient care

Assessment Strategies

- 2.1. Oral, written, graphic and/or skill assessment

Criteria

- 2.1. you obtain patient history in a timely manner
- 2.2. you use correct medical terminology
- 2.3. you identify correct patient and procedure to perform
- 2.4. you assess patient condition and respond accordingly
- 2.5. you provide for patient modesty and comfort
- 2.6. you provide patient centered clinically effective care for all patients regardless of age, gender, disability, special needs, ethnicity or culture.
- 2.7. you demonstrate the principles of safe transfer, positioning, and immobilization of patients

Learning Objectives

- 2.a. Identifies correct patient and procedure to perform. Must verify appropriate positions to be performed prior to starting exam.
- 2.b. Assesses patient condition and responds accordingly. Interprets patient status based on clinical history and makes appropriate decisions to perform exam (age, patient condition)
- 2.c. Obtains and documents (above) accurate and complete patient history
- 2.d. Explains exam and gives clear instructions
- 2.e. Communication and interaction with patient is appropriate
- 2.f. Provides for patient modesty and comfort

3. Practice radiation safety principles

Assessment Strategies

- 3.1. Oral, written, graphic and/or skill assessment

Criteria

- 3.1. you practice the cardinal principles of radiation protection: time, distance, and shielding
- 3.2. you use proper collimation
- 3.3. you shield patient and others as appropriate
- 3.4. you wear personal dosimeter
- 3.5. you begin to recognize technical factors that produce quality diagnostic images with the lowest radiation exposure possible

Learning Objectives

- 3.a. Uses proper collimation
- 3.b. Shield patient and others according to department protocol
- 3.c. Student wears personal dosimeter
- 3.d. Practices cardinal principles of radiation safety for self and others

4. Differentiate between emergency and non-emergent patient situations

Assessment Strategies

- 4.1. Oral, written, graphic and/or skill assessment

Criteria

- 4.1. you differentiate between emergency and non-emergency procedures
- 4.2. you comply with department and institutional responses to emergencies, disasters, and accidents
- 4.3. you are CPR certified
- 4.4. you locate the crash cart

Learning Objectives

- 4.a. Identify the location of the Code Cart
- 4.b. Determine the process of calling a code
- 4.c. Identify indicators or an emergent situation- including trauma, shock and cardiac arrest
- 4.d. Demonstrate critical thinking skills in the modification of routine exams.

5. Apply infection control standards

Assessment Strategies

- 5.1. Oral, written, graphic and/or skill assessment

Criteria

- 5.1. you wear appropriate personal protective equipment (PPE)
- 5.2. you perform proper handwashing technique
- 5.3. you apply standard and transmission based precautions
- 5.4. you apply the appropriate medical asepsis and sterile technique

Learning Objectives

- 5.a. Use of standard precautions as needed
- 5.b. Maintains clean room/equipment environment

6. Use appropriate and effective written, oral, and nonverbal communication with patients, the public, and members of the healthcare team in the clinical setting

Assessment Strategies

- 6.1. Oral, written, graphic and/or skill assessment

Criteria

- 6.1. you develop communication skills appropriate to the clinical setting
- 6.2. you use appropriate communication to the comprehension level of the patient/family
- 6.3. you use active listening skills
- 6.4. you use communication techniques appropriate to the setting
- 6.5. you explain exam and give clear instructions
- 6.6. you communicate/interact with patients as appropriate
- 6.7. you adapt communication techniques to reflect ethnic and cultural diversity

Learning Objectives

- 6.a. Use of standard precautions as needed
- 6.b. Maintains clean room/equipment environment

7. Model professional and ethical behavior consistent with the ARRT Code of Ethics

Assessment Strategies

- 7.1. Oral, written, graphic and/or skill assessment

Criteria

- 7.1. you demonstrate safe, ethical and legal practices
- 7.2. you integrate personal and professional values into clinical practice
- 7.3. you maintain patient confidentiality standards and meet HIPAA requirements
- 7.4. you demonstrate respect for diversity with appropriate interaction and communication with various cultures, races, gender, and age groups
- 7.5. you interact professionally with healthcare professionals, patients and family

Learning Objectives

- 7.a. Maintains confidentiality
- 7.b. Interacts professionally with healthcare team, patients, and family
- 7.c. Respects diversity

8. Apply critical thinking and problem-solving skills in the practice of diagnostic radiography

Assessment Strategies

- 8.1. Oral, written, graphic and/or skill assessment

Criteria

- 8.1. you develop critical thinking skills appropriate to the clinical setting
- 8.2. you adapt procedures to meet age specific, disease specific, and cultural needs of patient
- 8.3. you adapt to alternative procedures and situations
- 8.4. you adapt exposure techniques to patient's physical and pathological conditions
- 8.5. use logic and judgement in performing procedure efficiently and effectively
- 8.6. you verify your decision with your supervising technologist before implementation
- 8.7. you evaluate image for diagnostic quality and implement corrective action if necessary
- 8.8. you exercise the priorities required in daily clinical practice

Learning Objectives

- 8.a. Selects correct Image Receptor (IR) and/or grid as needed
- 8.b. Places IR in correct direction (Lengthwise or Crosswise)
- 8.c. Properly centers x-ray tube to table, anatomical part, and IR
- 8.d. Adapts procedure to patient condition
- 8.e. Adapts technical factors to patient's physical/pathological condition
- 8.f. Uses logic and judgment in performing procedure efficiently
- 8.g. Appropriate breathing instructions used, if needed

- 8.h. Immobilization devices used if necessary
- 8.i. Evaluates image for diagnostic quality and implements corrective action if necessary
- 8.j. Exam completed in reasonable length of time

9. Positively influence our community through professional interactions that grow students' passion, accountability, and self-awareness

Learning Objectives

- 9.a. Live Responsibly: Adapt to change, respect yourself and others, value the environment, accept ownership of your actions, and grow your community.
- 9.b. Refine Professionalism: think and communicate as a professional, value collaboration and diversity, and behave ethically.
- 9.c. Cultivate Passion: find your purpose and be curious, practice self-reflection, and genuinely connect with others.