RADT-2911: CLINICAL RADIOGRAPHY II

Cuyahoga Community College

Viewing: RADT-2911 : Clinical Radiography II

Board of Trustees:
March 2023

Academic Term:
Fall 2023

Subject Code
RADT - Radiography

Course Number:
2911

Title:
Clinical Radiography II

Catalog Description:
Directed practice experience in the hospital environment. Competency-based training and evaluation on radiographic equipment and procedures. Emphasis on further development of medical imaging skills gained in Clinical Radiography I with expanded imaging capacities such as cranium, spine, surgical procedures, special contrast studies, and specialized procedures.

Credit Hour(s):
7

Lecture Hour(s):
0

Lab Hour(s):
0

Other Hour(s):
576

Other Hour Details:
Directed Practice: 576 hours; This includes 16 hours of embedded lecture delivered at the clinical site

Requisites

Prerequisite and Corequisite
RADT-1911 Clinical Radiography I, and departmental approval: admission to program.

Outcomes

Course Outcome(s):
A. Demonstrate professionalism in carrying out the functions and responsibilities of an intermediate student radiographer under direct and indirect supervision.

Essential Learning Outcome Mapping:
Not Applicable: No Essential Learning Outcomes mapped. This course does not require application-level assignments that demonstrate mastery in any of the Essential Learning Outcomes.

Objective(s):

a. Exercise the priorities required in daily clinical practice.
b. Adhere to team practice concepts that focus on organizational theories, roles of team members and conflict resolution.
c. Describe the role of the healthcare team members in responding/reacting to a local or national emergency.
d. Integrate appropriate personal and professional values into clinical practice.
e. Recognize the influence of professional values on patient care.

f. Apply the principles of total quality management.
g. Maintain patient confidentiality standards and meet Health Insurance Portability and Accountability Act (HIPAA) requirements.

Course Outcome(s):

B. Perform intermediate patient care through appropriate action and communication with diverse populations under direct and indirect supervision.

Essential Learning Outcome Mapping:

Written Communication: Demonstrate effective written communication for an intended audience that follows genre/disciplinary conventions that reflect clarity, organization, and editing skills.

Objective(s):

a. Execute intermediate medical imaging procedures under the appropriate level of supervision.
b. Provide patient centered clinically effective care for all patients regardless of their age, gender, disability, special needs, ethnicity or culture.
c. Integrate the use of appropriate and effective written, oral and nonverbal communication with patients, the public and members of the healthcare team in the clinical setting.
d. Use patient and family education strategies appropriate to the comprehension level of the patient and family.
e. Provide desired psychosocial support to the patient and family.
f. Demonstrate competent assessment skills through effective management of the patient's physical and mental status.
g. Respond appropriately to medical emergencies.
h. Assess the patient and record clinical history.
i. Demonstrate basic life support procedures as evidenced by current valid CPR card.
j. Use appropriate charting methods.
k. Apply standard and transmission-based precautions.
l. Apply the appropriate medical asepsis and sterile technique.
m. Demonstrate the principles of transferring, positioning and immobilizing patients.

Course Outcome(s):

C. Adapt procedures to meet age specific, disease specific and cultural needs of patients.

Essential Learning Outcome Mapping:

Cultural Sensitivity: Demonstrate sensitivity to the beliefs, views, values, and practices of cultures within and beyond the United States.

Objective(s):

1. Explain how a person's cultural beliefs toward illness and health affect his or her health status.
2. Examine demographic factors that influence patient compliance with medical care.
3. Discuss the concept of diversity and its impact on the delivery of patient care.

Course Outcome(s):

D. Perform intermediate radiographic procedures using radiation safety, safe equipment operation and patient safety under direct and indirect supervision.

Essential Learning Outcome Mapping:

Not Applicable: No Essential Learning Outcomes mapped. This course does not require application-level assignments that demonstrate mastery in any of the Essential Learning Outcomes.

Objective(s):

a. Demonstrate competency in the principles of radiation protection standards.
b. Select technical factors to produce quality diagnostic images with the lowest radiation exposure possible.
c. Adhere to national, institutional and department standards, policies and procedures regarding care of patients, providing radiologic procedures and reducing medical errors.
d. Report equipment malfunctions.

e. Demonstrate safe, ethical and legal practices.
f. Comply with departmental and institutional response to emergencies, disasters and accidents.

Course Outcome(s):

E. Employ critical thinking and problem solving to routine and non-routine procedures under direct and indirect supervision.

Essential Learning Outcome Mapping:

Not Applicable: No Essential Learning Outcomes mapped. This course does not require application-level assignments that demonstrate mastery in any of the Essential Learning Outcomes.

Objective(s):

a. Critique images for appropriate anatomy, image quality and patient identification.
b. Determine corrective measures to improve inadequate images.
c. Differentiate between emergency and non-emergency procedures.
d. Examine procedure orders for accuracy and make corrective actions when applicable.
e. Integrate the radiographer's practice standards into clinical practice setting.
f. Adapt to changes and varying clinical situations.

Methods of Evaluation:

a. Exam competency
b. Written quizzes
c. Evaluation of Technical Skills and Professional Behavior
d. Student Conferences
e. Portfolio assignments

Course Content Outline:

a. Professionalism
    i. Standards of Ethics and Professional Behavior
        1. American Registry of Radiologic Technologists (ARRT) Standards of Ethics incident reporting mechanisms
        2. Student supervision
            a. Direct
            b. Indirect
        3. The patient's expectations, rights and responsibilities
        4. The radiographer's professional responsibilities
    ii. Professional communication
        1. Patients
        2. Patient's family or authorized representatives
        3. Health care team
        4. Confidentiality of patient records (Health Insurance Portability and Accountability Act [HIPAA] compliance)
    iii. Radiography Practice Standards
        1. Scope of Practice
        2. Clinical Performance Standards
        3. Quality Performance Standards
        4. Professional Performance Standards
        5. American Society of Radiologic Technologists (ASRT) Advisory Opinion Statements
        6. ASRT's Best Practices in Digital Radiography
    iv. Values
        1. Personal
            a. Values development
            b. Effect on patient care
        2. Societal
            a. Rights and privileges
            b. Community values
            c. Effect on patient care
        3. Professional

a. Values development
b. Values conflict
c. Effect on patient care
d. Effect on social media

v. Diversity, equity and inclusion
1. Diversity concepts
a. Individual
b. Population
c. Social
2. Socioeconomic factors
3. Gender identity/expression
4. Ethnicity (e.g. language)
5. Race
6. Age
a. Infant
b. Child
c. Adolescent
d. Young adult
e. Middle-aged
f. Geriatric
7. Family structure and dynamics
8. Geographical factors
9. Religion, spirituality and belief system
10. Lifestyle choices and behaviors
11. Sexual orientation
12. Disability
13. Equity
a. Structural racism
b. Social justice
14. Culture of inclusion
a. Environmental
b. Organizational

b. Procedural Performance
i. Scheduling and sequencing of exams
ii. Order/requisition evaluation and corrective measures
iii. Facilities setup
iv. Patient assessment, clinical history, education and care
1. Patient monitoring- emergency and non-emergency
a. Vital signs
b. Assessment and clinical history
c. Equipment
d. Patient emergencies
2. Patient privacy and confidentiality (HIPAA)
3. Documentation
4. Infection control
a. Personal protective equipment (PPE)
i. Types
ii. Proper use
5. Patient education
a. Appropriate communication style
b. Age specific
c. Cultural sensitivity
d. Socioeconomic sensitivity
e. Patient centered care

6. Medical error reduction
7. Patient safety considerations

v. Imaging
1. Positioning considerations
2. Technical considerations
3. Image acquisition
4. Image analysis

vi. Radiation protection
1. Principles (ALARA)
2. Radiation safety practices
   a. Protection of the patient (American Association of Physicists in Medicine [AAPM] recommendations)
   b. Protection of personnel
   c. Protection of others

vii. Education
1. Patient, family members or authorized representatives
2. Other members of the healthcare team

viii. Equipment and accessories

ix. Exam specific protocols according to ARRT Clinical Competency Requirements
1. Extremities
   a. Upper extremities
   b. Lower extremities
2. Thorax, abdomen and pelvis
   a. Chest
   b. Abdomen
   c. Intravenous urography
   d. Pelvis and hip
   e. Ribs
   f. Sternum
   g. Sternoclavicular joints
   h. Soft tissue neck
3. Gastrointestinal (GI) procedures
   a. Contrast enemas (single or double contrast)
   b. Esophageal studies
   c. Small bowel series
   d. Swallowing dysfunction studies
   e. Upper GI series (single or double contrast)
4. Mobile radiography
   a. Chest
   b. Abdomen
   c. Extremities
   d. Cranium
   e. Other
5. ER/trauma and general procedures
   a. Chest
   b. Abdomen
   c. Extremities
   d. Cranium
   e. Spines
   f. Other
6. Spine
   a. Cervical spine
   b. Thoracic spine
   c. Lumbar spine
   d. Sacrum and coccyx
   e. Scoliosis series
   f. Sacroiliac joints

7. Head
    a. Facial bones
    b. Mandible
    c. Nasal bones
    d. Orbits
    e. Paranasal sinuses
    f. Skull
    g. Temporomandibular joints
8. Specialized contrast procedures
    a. Arthrography
    b. Cystography
    c. Endoscopic retrograde cholangiopancreatogram (ERCP)
    d. Hysterosalpingography (HSG)
    e. Myelography
    f. Selective contrast procedures
9. Surgical Procedures
    a. C-arm procedures
    b. Cystourethrography
    c. Orthopedic procedures
    d. Pacemaker insertion
    e. Pain management
    f. Retrograde urography
    g. Spinal procedures
    h. Surgical cholangiography
    i. Other surgical procedures
10. Computed tomography (CT) procedures
    a. Abdomen
    b. Chest
    c. Head
    d. Spines
    e. Other special studies
11. Observational areas
    a. Cardiac catheterization
    b. Interventional radiography
    c. Magnetic resonance imaging (MRI)
    d. Mammography
    e. Nuclear medicine
    f. Radiation therapy
    g. Ultrasound

Resources

Cuyahoga Community College Radiography Program. (Month and year of 1st clinical semester) *Radiography Program Clinical Manual*, Western Campus, Parma, OH: Cuyahoga Community College.

Salimbene, S. (2015) *What Language Does Your Patient Hurt In?*, St.Paul: EMC Paradigm.

Long, B.W., Rollins, J.H., & Smith, B.J. (2023) *Merrill's Atlas of Radiographic Positioning and Procedures, Vol. 1-3*, St. Louis: Elsevier.

Resources Other

1. American Society of Radiologic Technologists Radiography Curriculum www.asrt.org
2. American Registry of Radiologic Technologists radiography certification examination content specifications www.arrt.org

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