



MERCER
COUNTY COMMUNITY COLLEGE

COURSE OUTLINE

| Course Number | Course Title | Credits |
|--|--|---|
| RAD128 | Radiographic Procedures II | 6 |
| Hours: Lecture/Lab/Other 2/3/225 clinical hours | Co- or Pre-requisite Pre-requisites: RAD102,RAD119, RAD127 Co-requisites: RAD 120 | Implementation Semester & Year Spring 2022 |

Catalog description:

Focuses on standard radiographic positioning and related medical terminology of the bony thorax, pelvic girdle, upper femora, and vertebral column with laboratory simulation and evaluation. Students acquire correlated clinical experience and continue the clinical competency evaluation process at a clinical affiliate. Radiographic image analysis is assigned.

General Education Category:
Not GenEd

Course coordinator:
Sandra L. Kerr, 609-570-3337, kerrs@mccc.edu

Required texts/Supplements:

REQUIRED:

Title: Textbook of Radiographic Positioning and Related Anatomy
 Author: K.L. Bontrager; J.P. Lampignano
 Publisher: Elsevier
 Edition: 10th

Title: Radiographic Positioning and Related Anatomy
 Workbook, Volume I
 Author: K.L. Bontrager; J.P. Lampignano
 Publisher: Elsevier
 Edition: 10th

Title: Radiographic Image Analysis
 Author: Kathy McQuillen Martensen
 Publisher: Elsevier
 Edition: 4th

Title: Radiographic Image Analysis Workbook
 Author: Kathy McQuillen Martensen
 Publisher: Mosby
 Edition: 4th

Title: Bontrager's Handbook of Radiographic Positioning & Techniques
Author: K.L. Bontrager; J.P. Lamignano
Publisher: Elsevier Mosby
Edition: 9th

Course Student Learning Outcomes (SLO):

Upon completion of this course *the student will be able to:*

1. Interpret medical terms and pathological processes that apply to the pelvic girdle, proximal femora, vertebral spine and bony thorax. [Supports ILG # 3]
2. Describe and perform routine radiographic procedures of the pelvic girdle, proximal femora, vertebral spine and bony thorax during laboratory simulation. [Supports ILG # 1-5, 8-11]
3. Develop the clinical competence to perform all types of diagnostic imaging procedures with specific focus on the pelvic girdle, proximal femora, vertebral spine and bony thorax on a variety of patient types using wide-ranging imaging equipment, technique formulations, and processing modes. [Supports ILG # 1-5, 8-11]
4. Analyze radiographic images to determine optimal quality in accordance with imaging standards and radiation safety. [Supports ILG # 3, 9]
5. Develop effective communication skills when performing radiographic procedures during laboratory simulation and clinical education. [Supports ILG # 1]
6. Compare trauma and operating suite procedures to diagnostic radiologic imaging procedures. [Supports ILG # 3, 11]

Course-specific Institutional Learning Goals (ILG):

Institutional Learning Goal 1. Written and Oral Communication in English. Students will communicate effectively in both speech and writing.

Institutional Learning Goal 2. Mathematics. Students will use appropriate mathematical and statistical concepts and operations to interpret data and to solve problems.

Institutional Learning Goal 3. Science. Students will use the scientific method of inquiry, through the acquisition of scientific knowledge.

Institutional Learning Goal 4. Technology. Students will use computer systems or other appropriate forms of technology to achieve educational and personal goals.

Institutional Learning Goal 5. Social Science. Students will use social science theories and concepts to analyze human behavior and social and political institutions and to act as responsible citizens.

Institutional Learning Goal 8. Diversity and Global Perspective: Students will understand the importance of a global perspective and culturally diverse peoples

Institutional Learning Goal 9. Ethical Reasoning and Action. Students will understand ethical frameworks, issues, and situations.

Institutional Learning Goal 10. Information Literacy: Students will recognize when information is needed and have the knowledge and skills to locate, evaluate, and effectively use information for college level work.

Institutional Learning Goal 11. Critical Thinking: Students will use critical thinking skills understand, analyze, or apply information or solve problems.

Units of study in detail – Unit Student Learning Outcomes

Unit I: Femur & Hip [Supports Course SLOs #1, 2, 3, 4, 5]

Unit II Pelvic Girdle [Supports Course SLOs #1, 2, 3, 4, 5]

Unit III - IX Vertebral Column [Supports Course SLOs #1, 2, 3, 4, 5]

Unit X - XI Bony Thorax [Supports Course SLOs #1, 2, 3, 4, 5]

Unit XII - XIII Trauma & Operating Suite Radiography [Supports Course SLO #6]

Learning Objectives:

At the completion of each weekly three-component activity (lecture, laboratory, and clinical education) the student will be able to: [Supports Course SLOs 1, 2, 3, 4, 5, 6]

- Exercise the priorities required in daily clinical practice.
- Execute medical imaging procedures under the appropriate level of supervision.
- Adhere to team practice concepts that focus on organizational theories, roles of team members and conflict resolution.
- Adapt to changes and varying clinical situations.
- Provide patient-centered clinically effective care for all patients regardless of age, gender, disability, special needs, ethnicity or culture.
- Integrate the use of appropriate and effective written, oral and nonverbal communication with patients, the public and members of the health care team in the clinical setting.
- Integrate appropriate personal and professional values into clinical practice.
- Recognize the influence of professional values on patient care.
- Explain how a person's cultural beliefs toward illness and health affect his or her health status.
- Use patient and family education strategies appropriate to the comprehension level of the patient/family.
- Provide desired psychosocial support to the patient and family.
- Demonstrate competent assessment skills through effective management of the patient's physical and mental status.
- Respond appropriately to medical emergencies.
- Examine demographic factors that influence patient compliance with medical care.
- Adapt procedures to meet age-specific, disease-specific and cultural needs of patients.
- Assess the patient and record clinical history.
- Demonstrate basic life support procedures.
- Use appropriate charting methods.
- Apply standard and transmission-based precautions.
- Apply the appropriate medical asepsis and sterile technique.
- Demonstrate competency in the principles of radiation protection standards
- Examine procedure orders for accuracy and take corrective actions when applicable.
- Demonstrate safe, ethical and legal practices.
- Integrate the radiographer's practice standards into clinical practice setting.
- Maintain patient confidentiality standards and meet HIPAA requirements.
- Demonstrate the principles of transferring, positioning and immobilizing patients.
- Comply with departmental and institutional response to emergencies, disasters and accidents.
- Differentiate between emergency and non-emergency procedures.
- Adhere to national, institutional and departmental standards, policies and procedures regarding care of patients, providing radiologic procedures and reducing medical errors.

- Select technical factors to produce quality diagnostic images with the lowest radiation exposure possible.
- Critique images for appropriate anatomy, image quality and patient identification.
- Determine corrective measures to improve inadequate images.

Evaluation of student learning:

A grade of "C+" (77%) or higher must be achieved in the lecture, laboratory, and clinical components of the course to progress to RAD117 and RAD207. A grade of "P" (pass) must be earned in the laboratory and clinical components. The following grading policy will be utilized:

Course Grade

| | |
|-------------|-----------------|
| Lecture: | 100% |
| Laboratory: | Pass/Fail (P/F) |
| Clinical: | Pass/Fail (P/F) |

Lecture Grade

| | |
|---------------------|-----|
| Weekly Tests: | 40% |
| Critical Thinking: | 5% |
| Image Analysis | 5% |
| RAD Tech Boot Camp: | 5% |
| Midterm Exam: | 20% |
| Final Exam: | 25% |

Clinical Grade

| | |
|----------------------------------|-----|
| Clinical Evaluations: | 30% |
| Clinical Competency Evaluations: | 40% |
| Image Evaluations: | 30% |

Lab Grade

Lab Tests: 100%