

Montgomery County Community College  
 RAD 121  
 Radiographic Procedures II  
 3-2-2

**COURSE DESCRIPTION:**

This course is a continuation of the Radiographic Procedures I (RAD 111) course. This course is designed to prepare the student to perform certain radiographic procedures of the lower extremity and spine that are of optimal diagnostic quality. Laboratory experience combined with simulations and clinical experience are used to complement the didactic portion of the course. This course is subject to a course fee. Refer to <http://mc3.edu/adm-fin-aid/paying/tuition/course-fees> for current rates.

**REQUISITES:***Previous Course Requirements*

- RAD 100 Introduction to Radiography and Patient Care
- RAD 106 Radiographic Image Production and Analysis
- RAD 104 Clinical Education I
- RAD 111 Radiographic Procedures I

*Previous or Concurrent Course Requirements*

- RAD 105 Radiation Physics and Imaging Equipment
- RAD 114 Clinical Education II

LEARNING OUTCOMES Upon successful completion of this course, the student will be able to:	LEARNING ACTIVITIES	EVALUATION METHODS
1. Discuss general procedures for radiographic examinations of the lower extremity and spine.	Lecture/Discussion Demonstration/Practice Applications CD ROMS Assigned Readings Small Group Activities Competencies Technology	Exam Questions Image Critique Oral Presentations
2. Simulate lower extremity and spine procedures on a person or phantom in the laboratory setting.	Lecture/Discussion Demonstration/Practice Case Study/Applications Student Presentation Assigned Readings Small Group Activities Competencies Technology	Skills Competency Exam Questions Image Critique Oral Presentations

LEARNING OUTCOMES	LEARNING ACTIVITIES	EVALUATION METHODS
3. Evaluate images for positioning, centering, anatomy, and image quality.	Lecture/Discussion Demonstration/Practice Case Study/Applications Student Presentation Assigned Readings Small Group Activities Competencies Technology	Exam Questions Image Critique Oral Presentations
4. Apply the problem-solving process used for image analysis.	Lecture/Discussion Case Study/Applications Student Presentation Assigned Readings Small Group Activities Competencies Technology	Exam Questions Image Critique Oral Presentations
5. Summarize common equipment malfunctions that affect image quality, and determine corrective action.	Lecture/Discussion Case Study/Applications Student Presentation Assigned Readings Small Group Activities Competencies Technology	Exam Questions Image Critique Oral Presentations

At the conclusion of each semester/session, assessment of the learning outcomes will be completed by course faculty using the listed evaluation method(s). Aggregated results will be submitted to the Associate Vice President of Academic Affairs. The benchmark for each learning outcome is that *70% of students will meet or exceed outcome criteria.*

#### SEQUENCE OF TOPICS:

1. Positioning Considerations for Routine Radiographic Procedures
  - a. C-arm Procedure
  - b. Surgical C-arm Procedure
  - c. Toes
  - d. Foot
  - e. Ankle
  - f. Calcaneus
  - g. Tibia/fibula
  - h. Knee
  - i. Patella
  - j. Femur
  - k. Hip
  - l. Pelvis
  - m. Soft Tissue Neck
  - n. Cervical vertebrae

- o. Thoracic vertebrae
  - p. Lumbar vertebrae
  - q. Sacrum/coccyx
  - r. Sacroiliac Joints
2. Patient Education
  3. General considerations

**LEARNING MATERIALS:**

Texts:

Frank, E.D. (2023). *Merrill’s Atlas of Radiographic Positions and Radiologic Procedures* (15<sup>th</sup> ed.). St. Louis, MO: C.V. Mosby.  
 Frank, E.D. (2023). *Workbook for Merrill’s Atlas* (15<sup>th</sup> ed.). St. Louis, MO: C.V. Mosby.

Other:

Use of the laboratory materials including but not limited to computers, skeletal parts, images

Other learning materials may be required and made available directly to the student and/or via the College’s Libraries and/or course management system.

**COURSE APPROVAL:**

Prepared by: Cheryl L. Weiss, M.S., R.T. and Dr. Victoria Bastecki-Perez	Date: 12/2002
Revised by: Debra Poelhuis, M.S., R.T.	Date: 1/2009
VPAA/Provost Compliance Verification: Dr. John C. Flynn, Jr.	Date: 9/11/2009
Revised by: Debra Poelhuis, R.T., M.S.	Date: 10/26/2012
VPAA/Provost or designee Compliance Verification: Victoria L. Bastecki-Perez, Ed.D.	Date: 10/26/2012
Revised by: Cheryl L. DiLanzo, M.S., R.T.	Date: 6/2017
VPAA/Provost or designee Compliance Verification: Victoria L. Bastecki-Perez, Ed.D.	Date: 8/23/2017
Revised by: Debbie Dalrymple and Cheryl L. DiLanzo, M.S., R.T.	Date: 1/9/2018
VPAA/Provost or designee Compliance Verification: Victoria L. Bastecki-Perez, Ed.D.	Date: 1/9/2018
Revised by: Dana Smith, M.S., R.T.	Date: 10/27/2022
VPAA or designee Compliance Verification:	Date: 10/27/2022



*This course is consistent with Montgomery County Community College's mission. It was developed, approved and will be delivered in full compliance with the policies and procedures established by the College.*