

Montgomery County Community College
 RAD 111
 Radiographic Procedures I
 3-2-2

COURSE DESCRIPTION:

Radiographic Procedures I is designed to provide the knowledge base necessary to perform standard radiographic procedures. This course combines didactic coursework along with laboratory demonstration, simulation, and practice. Students will learn radiographic procedures of the chest, abdomen and upper extremity and shoulder girdle. 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*

- BIO 131 Human Anatomy and Physiology I with a “C” or better on the second attempt within the last 5 years of the date of enrollment in RAD 100
- BIO 132 Human Anatomy and Physiology II with a “C” or better on the second attempt within the last 5 years of the date of enrollment in RAD 100
- MATH 106 or any other Quantitative Reasoning course except ACC 110 and MAT 103, with a minimum grade of “C” within 2 attempts within the last 5 years of the date of enrollment in RAD 100

Previous or Concurrent Course Requirements

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

LEARNING OUTCOMES Upon successful completion of this course, the student will be able to:	LEARNING ACTIVITIES	EVALUATION METHODS
1. Describe standard positioning terms.	Lecture/Discussion Demonstration/Practice Case Study/Applications Student Presentation Competency /Simulation Assigned Readings Written Assignments Videos	Exam Questions Image Critique Form

LEARNING OUTCOMES	LEARNING ACTIVITIES	EVALUATION METHODS
2. Discuss general procedures for radiographic examinations.	Lecture/Discussion Demonstration/Practice Case Study/Applications Student Presentation Competency /Simulation Assigned Readings Written Assignments Videos	Exam Questions Image Critique Form Oral Presentations
3. Simulate radiographic procedures on a person or phantom in the laboratory setting.	Lecture/Discussion Demonstration/Practice Case Study/Applications Student Presentation Competency /Simulation Assigned Readings Written Assignments Videos	Skills Competency Form Small Group Demonstrations Lab Practice
4. Evaluate images for positioning, centering, anatomy, and image quality.	Lecture/Discussion Demonstration/Practice Case Study/Applications Student Presentation Competency /Simulation Assigned Readings Written Assignments Videos	Image Critique Assessment Oral Presentations
5. Apply the problem-solving process used for image analysis.	Lecture/Discussion Demonstration/Practice Case Study/Applications Student Presentation Competency /Simulation Assigned Readings Written Assignments Videos	Image Critique Assessment Oral Presentations
6. Demonstrate an awareness of cultural factors that necessitate adopting standard examination protocols.	Lecture/Discussion Demonstration/Practice Case Study/Applications Student Presentation Competency /Simulation Assigned Readings Written Assignments Videos	Exam Questions Role Play Exercise Cultural Case Study

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 Director of Educational Effectiveness. The benchmark for each learning outcome is that *70% of students will meet or exceed outcome criteria.*

SEQUENCE OF TOPICS:

1. Standard Terminology for Positioning
2. Terminology of Movement and Direction
3. Positioning Aids
4. Accessory Equipment
5. Evaluation of Radiographic Orders
6. Taking Clinical History
7. Establishment of Patient Rapport
8. Positioning Consideration for Routine Radiographic Procedures of:
 - a. Chest (Includes: pediatric and geriatric)
 - b. Wheelchair/Stretcher Chest
 - c. Lateral Decubitus Chest
 - d. Mobile Chest
 - e. Thumb or Finger
 - f. Hand
 - g. Wrist
 - h. Forearm
 - i. Elbow
 - j. Humerus
 - k. Shoulder
 - l. Clavicle
 - m. Scapula
 - n. AC Joints
 - o. Trauma Shoulder or Humerus
 - p. Trauma Upper Extremity
 - q. Mobile Upper Extremity
 - r. Geriatric Upper Extremity
 - s. Abdomen (includes supine, upright, decubitus and pediatric)
 - t. Mobile Abdomen
9. Room Readiness
10. Part Placement
11. Image Receptor Selection/Beam Alignment
12. Beam Limitation and Shielding
13. Special Considerations

LEARNING MATERIALS:

Texts:

Frank, E. (2023). *Merrill's Atlas of Radiographic Positions and Radiologic Procedures* (15th ed.). St. Louis, MO: C.V. Mosby.

Frank, E. (2023). *Workbook for Merrill's Atlas* (15th ed.). St. Louis, MO: C.V. Mosby.

Other:

Articulated and dis-articulated skeletal parts, positioning aids, laboratory access

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: 10/28/2016
VPAA/Provost or designee Compliance Verification: Victoria L. Bastecki-Perez, Ed.D.	Date: 11/5/2016
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: 3/1/2024
VPAA or designee Compliance Verification:	Date: 3/27/2024



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.