

Montgomery County Community College  
 RAD 214  
 Clinical Education IV  
 4-0-20

**COURSE DESCRIPTION:**

The student will observe, assist and perform radiographic examinations at the Clinical Education Centers that correlate with the didactic courses in those areas. Special attention during this semester will be given to fluoroscopic procedures as well as imaging of the skull and sinuses. 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 124 Clinical Education III

*Previous or Concurrent Course Requirements*

- RAD 221 Radiographic Procedures III
- RAD 103 Radiation Protection and Biology

LEARNING OUTCOMES Upon successful completion of this course, the student will be able to:	LEARNING ACTIVITIES	EVALUATION METHODS
1. Execute medical imaging procedures under the appropriate level of supervision.	Observation Demonstration and Practice Computer Technology Critical Thinking Activities Small Group Discussion Simulations	Clinical Evaluations Bi Weekly Evaluations Discussion Questions Critical Thinking Assignments Image Evaluation Rubrics
2. Demonstrate proper evaluation of a requisition, facility readiness, equipment operation and technique selection, positioning skills, radiation protection for patient, self and others, and image processing.	Observation Demonstration and Practice Computer Technology Critical Thinking Activities Small Group Discussion Simulations	Clinical Evaluations Bi Weekly Evaluations Discussion Questions Critical Thinking Assignments Image Evaluation Rubrics

LEARNING OUTCOMES	LEARNING ACTIVITIES	EVALUATION METHODS
3. Analyze radiographic images for proper anatomical parts, alignment, radiographic techniques, patient identification and radiation protection.	Observation Demonstration and Practice Computer Technology Critical Thinking Activities Small Group Discussion Simulations	Clinical Evaluations Bi Weekly Evaluations Discussion Questions Critical Thinking Assignments Image Evaluation Rubrics
4. Demonstrate competent assessment skills through effective management of the patient's physical and mental status.	Observation Demonstration and Practice Computer Technology Critical Thinking Activities Small Group Discussion Simulations	Clinical Evaluations Bi Weekly Evaluations Discussion Questions Critical Thinking Assignments Image Evaluation Rubrics
5. Integrate appropriate personal and professional values into clinical practice.	Observation Demonstration and Practice Computer Technology Critical Thinking Activities Small Group Discussion Simulations	Clinical Evaluations Bi Weekly Evaluations Discussion Questions Critical Thinking Assignments Image Evaluation Rubrics
6. Demonstrate appropriate and effective written, oral and nonverbal communication with patients, public and health care members.	Observation Demonstration and Practice Computer Technology Critical Thinking Activities Small Group Discussion Simulations	Clinical Evaluations Bi Weekly Evaluations Discussion Questions Critical Thinking Assignments Image Evaluation Rubrics

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:

According to the American Registry of Radiologic Technologists (ARRT), students must demonstrate competency in all 37 mandatory procedures. Procedures should be performed on patients whenever possible, but up to eight mandatory procedures may be simulated if demonstration on patients is not feasible. Students must also demonstrate competence in 15 of the 34 \*elective procedures. Elective procedures should be performed on patients whenever possible, but electives may be simulated if demonstration on patients is not feasible.

Based on the topics presented in RAD 111,121 and 221, Students will be required to achieve a minimum of 12 competencies this semester. Any competencies from the

previous semesters that are required for the total may also be attempted. For Clinical Education IV, students will be required to complete the mandatory competencies from the first 3 semesters in Clinical Education and Procedures. Students will also be responsible for completing a programmatic total of 4 Random Re-Comps at the direction of the clinical instructor or clinical coordinator.

The list of mandatory and elective\* competencies are as follows and should be used as the guideline for this semester objective completion:

1. Facial Bones\*
2. Nasal Bones\*
3. Paranasal Sinuses\*
4. Skull\*
5. Orbits\*
6. Zygomatic Arches\*
7. Mandible\*
8. Soft Tissue Neck\*
9. Esophagus Study\*
10. Upper GI\*
11. Small Bowel Series\*
12. Barium Enema\*
13. Hysterosalpingography\*
14. Myelography\*
15. Cystography\*
16. ERCP\*
17. Arthrography\*
18. Retrograde Urography\*
19. C-arm Procedure requiring manipulation around a sterile field
20. C-arm Procedure to obtain more than one projection
21. Chest, Routine
22. Pediatric Chest
23. Wheelchair or Stretcher Chest
24. Decubitus Chest\*
25. Sternum\*
26. Ribs
27. Finger or Thumb
28. Hand
29. Wrist
30. Forearm
31. Elbow
32. Humerus
33. Shoulder
34. Trauma Extremity
35. Pediatric Upper Extremity\*
36. Scapula\*
37. Clavicle

38. Acromioclavicular Joints\*
39. Trauma Shoulder
40. Abdomen Supine
41. Abdomen Upright
42. Abdomen (Decubitus)
43. Intravenous Urography\*
44. Portable Chest
45. Portable Abdomen
46. Portable Extremity
47. Toes\*
48. Foot
49. Ankle
50. Calcaneus\*
51. Tibia/Fibula
52. Knee
53. Patella
54. Femur
55. Pelvis
56. Hip
57. Trauma Hip (cross table lateral)
58. Cervical Vertebrae
59. Trauma Cervical Vertebrae (cross table lateral)
60. Thoracic Vertebrae
61. Lumbar Vertebrae
62. Sacrum/Coccyx\*
63. Scoliosis Survey\*
64. Pediatric Lower Extremity\*
65. Sacroiliac Joints\*
66. Pediatric Abdomen\*
67. Pediatric Mobile Study\*
68. Geriatric Chest
69. Geriatric Upper Extremity
70. Geriatric Lower Extremity

#### LEARNING MATERIALS:

##### Text:

Long, Curtis, and Smith, (2016). *Merrill's Pocket Guide to Radiography* (13<sup>th</sup> ed.). St. Louis, MO: Mosby Publishing Inc.

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: Date: 1/9/2018



*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.*