

Virginia Western Community College

RAD 245

Radiologic Specialties

Prerequisites:

Admission to the Radiography Program

Course Description:

Introduces the study of treatment of disease as it relates to various imaging modalities, computerized tomography, and magnetic resonance imaging. Introduces computers and other innovations in radiology. Emphasizes theory, principle of operation, and clinical application of these topics.

Semester Credits: 2**Lecture Hours: 2****Lab/Clinical/Internship Hours: 0****Required Materials****Textbook:**

Radiographic Positioning and Related Anatomy. Kenneth L. Bontrager. 11th Edition.
Elsevier. ISBN: 9780323936132

Other Required Materials:

Internet Access

Course Outcomes

At the completion of this course, the student should be able to:

- Obtain satisfactory radiographic images of special diagnostic procedures.
- Obtain a basic understanding of vascular & nonvascular procedures.
- Obtain a basic understanding of mammography.
- Obtain satisfactory radiographic images in trauma, mobile, & surgical procedures.
- Obtain basic understanding & satisfactory radiographic images on pediatric patients.
- Obtain a basic understanding of CT, MRI, & additional diagnostic & therapeutic modalities.

Topical Description

I: Radiographic Positioning of Additional Diagnostic Exams

- Arthrography
- Hysterosalpingography
- Myelography

II: Radiographic Positioning of Interventional Procedures

- Angiography
- Vascular & Nonvascular Interventional Procedures

III: Radiographic Positioning of the Breast

- Basic & Special Projections
- Alternative Modalities & Procedures
- Digital Mammography

IV: Radiographic Positioning of Trauma, Mobile and Surgery

- Chest
- Bony Thorax
- Abdomen
- Upper & Lower Limbs
- Spine
- Skull and Facial Bones
- Common Surgical Procedures

V: Radiographic Positioning of Pediatrics

- Chest
- Bony Thorax
- Abdomen
- Upper & Lower Limbs
- Spine
- Skull and Facial Bones

VI: Basic Understanding of CT, MRI, Therapeutic Modalities

- Cranial CT, MRI
- Thoracic CT, MRI
- Abdominal & pelvis CT, MRI
- Nuclear Medicine
- PET
- Radiation Oncology
- Ultrasound

[ADA Statement](#)

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[Title IX Statement](#)

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Note to Instructors

Clinical rotation in the Surgical suite, Trauma Room in ER, & modality area(s) if possible.