

# Virginia Western Community College

## RAD 221

### Radiographic Procedures II

**Prerequisites:**

None

**Course Description:**

Introduces procedures for positioning the patient's anatomical structures relative to the x-ray beam and image receptor. Emphasizes procedures for routine examination of the chest, abdomen, extremities, and axial skeleton.

**Semester Credits: 4****Lecture Hours: 3****Lab/Clinical/Internship Hours: 3****Required Materials****Textbook:**

Radiographic Positioning & Related Anatomy. Kenneth L. Bontrager & John P. Lampignano.  
ISBN: 9780323083881

Radiographic Positioning & Related Anatomy: Workbook. ISBN: 032308832-

Radiographic Positioning & Related Anatomy: Pocket Handbook. ISBN: 9780323083898

**Supplementary Materials:**

Several resource textbooks are located in the Radiography Lab.  
Laboratory facilities are available to radiography students during the day.

**Course Outcomes**

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

- Understand human anatomy and the axial skeleton as it relates to radiographic positioning.
- Perform radiographic positioning of the chest, abdomen, and axial skeleton.
- Understand radiographic positioning concepts as they relate to the responsibilities of the clinical environment.
- Understand radiographic positioning terminology and patient care practices.

## **Topical Description**

I	Understanding Principles of Radiographic Positioning: Patient Care Patient Preparation Facilities Readiness
II	Positioning Terminology
III	Abdomen Radiographs
IV	Radiographs of the Upper Extremity
V	Radiographs of the Lower Extremity
VI	Radiographs of the Shoulder Girdle
VII	Radiographs of the Hips and Pelvic Girdle
VIII	Radiographs of the Lumbar Spine, Sacrum and Coccyx
IX	Radiographs of the Chest

## **Course Objectives**

### I: Introduction to Radiographic Positioning

- Patient Care and Preparation
- Facilities Readiness

### II: Radiographic Positioning Terminology

- Human Anatomy Review
- Anatomical Landmarks
- Planes of Body
- Regions of the Body
- Quadrants of Body
- Body Habitus
- Beam Directional Terminology
- X-ray Projection Terminology

### III: Radiographic Positioning of the Abdomen

- List the correct routine projections, image receptor size and centering references for the following selected projections:
  - AP abdomen
  - Oblique abdomen
  - Lateral abdomen
  - Decubitus abdomen
  - Erect abdomen

IV: Radiographic Positioning of the Upper Extremity

- List the correct routine projections, image receptor size and centering references for the Upper Extremity
- Obtain satisfactory radiographs and be able to identify (critique) structures demonstrated on the Upper Extremity

V: Radiographic Positioning of the Lower Extremity

- List the correct routine projections, image receptor size and centering references for the Lower Extremity
- Obtain satisfactory radiographs and be able to identify (critique) structures demonstrated on the Lower Extremity

VI: Radiographic Positioning of the Shoulder Girdle

- List the correct routine projections, image receptor size and centering references for the Shoulder Girdle
- Obtain satisfactory radiographs and be able to identify (critique) structures demonstrated on the Shoulder Girdle

VII: Radiographic Positioning of the Hips-Pelvis and SI Joints

- List the correct routine projections, image receptor size and centering references for the Hips-Pelvis and SI Joints
- Obtain satisfactory radiographs and be able to identify (critique) structures demonstrated on the Hips-Pelvis and SI Joints

VIII: Radiographic Positioning of the Lumbar Spine, Sacrum and Coccyx

- List the correct routine projections, image receptor size and centering references for the Lumbar Spine, Sacrum and Coccyx
- Obtain satisfactory radiographs and be able to identify (critique) structures demonstrated on the Lumbar Spine, Sacrum and Coccyx

IX: Radiographic Positioning of the Chest (Basic, Special) and Upper Airway

- List the correct routine projections, image receptor size and centering references for the Chest (basic, special) and Upper Airway
- Obtain satisfactory radiographs and be able to identify (critique) structures demonstrated on the Chest (basic, special) and Upper Airway

### **Note to Instructors**

1. One-on-one tutorial sessions are available upon request.
2. Students may utilize the energized laboratory under supervision of a faculty member.
3. See Instructor's Notes within the Course Syllabus.