

# Virginia Western Community College

## RAD 215

### Correlated Radiographic Theory

**Prerequisites:**

Successful completion of RAD 231.

**Course Description:**

Presents intensive correlation of all major radiologic technology subject areas. Studies interrelationships of biology, physics, principles of exposure, radiologic procedures, patient care, and radiation protection

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

*Mosby's Comprehensive Review of Radiography*. 7<sup>th</sup> Ed, William A. Callaway  
ISBN: 9780323354233

*Lange Q&A Radiography Examination*, 11<sup>th</sup> ed., D.A. Saia  
ISBN: 9781259863592

**Course Outcomes**

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

- Satisfactorily complete all review/correlation course work with a minimum of 75% competency.
- Be academically prepared to sit for and pass the ARRT Examination in Radiologic Technology.

## **Topical Description**

### **Preparation for Review**

- Prioritizing Subjects & Scheduling Study Time
- Planning the Review Process
- Scheduling Your Study Time
- Study Habits
- ARRT Examination Procedures-Application Process
- Materials Needed for Examination
- Examination Results
- Test Taking Skills

### **Review of Patient Care & Education**

- Basic Patient Care Terminology
- Communication with the Patient
- Medicolegal Aspects of Practice
- Patient Preparation
- Patient History
- Patient Transfer
- Infection Control
- Contrast Media
- Venipuncture
- Hazardous Materials

### **Review of Radiation Protection (Safety)**

- Basic Radiation Protection Terminology
- Basic Principles of Radiation Protection
- Photon Tissue Interactions
- Units of Radiation Measurement
- Annual Dose Limits
- Review of the Cell
- Biologic Effects of Ionizing Radiation
- Patient Exposure & Protection
- Radiation Worker Exposure & Protection
- Monitoring Radiation Exposure

### **Review of Image Production & Evaluation**

- Density
- Contrast
- Recorded Detail
- Distortion
- Radiographic Film
- Intensifying Screens
- Grids
- Technique Charts

- Automatic Exposure Controls
- Automatic Processing & Quality Assurance

#### Review of Equipment Operation & Quality Control

- Basic Physics Terminology
- Conditions Necessary for the Production of X-Rays
- Equipment Used In the Production of X-Rays
- X-Ray Production
- Dedicated Imaging Equipment
- Digital Imaging Units
- Quality Control of X-ray Producing Equipment

#### Review of Radiographic Procedures

- Basic Procedures & Positioning Terminology
- Basic Principles of Positioning & Procedures
- Topography
- Motion Control
- Exposure Modification
- Gonadal Shielding
- Body Habitus
- Pediatric Radiography: General Principles
- Trauma: General Principles
- Review of Anatomy Relevant to Radiography

#### Challenge Tests

#### Career Paths

- Career Planning Inventory
- Goal Setting
- Continuing Education Requirements
- Radiologic Specialties
- Academic Degrees

#### Writing a Professional Resume

- Purpose of a Resume
- Contents of a Resume
- Writing a Resume
- Cover Letter
- Appearance of the Resume and Cover Letter
- Job Application

Interviewing Techniques

- Purpose of an Interview
- Personal Appearance
- Preparing for the Interview
- Interview Process
- Interview Outcomes and Follow Up

Employment Expectations

- Entering the Health Care Workforce
- Task Inventory
- Organizational Structure and Professional Responsibility