

Virginia Western Community College

RAD 215

Correlated Radiographic Theory

Prerequisites:

Successful completion of RAD 232.

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. William A. Callaway. 6th Edition.

ISBN: 9780323080781

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

Chapter 1: 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

Chapter 2: Review of Radiation Protection

- 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

Chapter 3: 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

Chapter 4: Review of Image Production & Evaluation

- Density
- Contrast
- Recorded Detail
- Distortion
- Radiographic Film
- Intensifying Screens
- Grids
- Technique Charts
- Automatic Exposure Controls
- Automatic Processing & Quality Assurance

Chapter 5: 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

Chapter 6: 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

Chapter 7: Challenge Tests

Chapter 8: Career Paths

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

Chapter 9: 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

Chapter 10: Interviewing Techniques

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

Chapter 11: Employment Expectations

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

Note to Instructors