

## **RADT 101**

### **Introduction to Radiography**

3 Credits

## Community College of Baltimore County Common Course Outline

### Description

**RADT 101 – Introduction to Radiography:** examines the radiography program and profession. Students learn the history of radiology, basic radiation protection, infection control practices, body mechanics, medical terminology, and an introduction to radiographic positioning.

**Pre-requisites:** A “C” or better in ENGL 101 and MATH 083.

### Overall Course Objectives

Upon completion of this course, students will be able to:

1. discuss radiography program policies;
2. explain the purpose of clinical education;
3. demonstrate awareness of the nature of x-ray radiation and how to reduce radiation exposure to patients and self;
4. identify departments within the hospital and sub-sections within the radiology/imaging department;
5. demonstrate the basic principles of proper lifting and transfer techniques;
6. describe the principles of standard precautions;
7. discuss the importance of maintaining confidentiality of patient information and records;
8. identify major natural and artificial sources of background radiation;
9. describe the purpose and proper use of radiation monitoring devices worn by radiology personnel;
10. describe ethical values pertaining to radiography according to the standards established by national professional organizations;
11. describe common radiographic positioning terms and abbreviations;
12. identify positioning equipment and accessories in terms of function and application;
13. locate the major body cavities, surface landmarks and their corresponding anatomy, the anatomic planes, and other divisions of the body;
14. define body positions and movements;
15. recognize relevant information on requisition, including patient name, location of patient, means of transport, special considerations, exam ordered, and clinical information;
16. identify health science professions that participate in the total health care of the patient;
17. define credentialing, national certification and registration, and state licensure;
18. identify the benefits of continuing education as related to improved patient care and professional development; and
19. identify diverse populations and their needs in healthcare.

The Common Course Outline (CCO) determines the essential nature of each course.  
For more information, see your professor’s syllabus.

## **Major Topics**

- I. Body Planes
- II. Body Positions and Movements
- III. Body Habitus
- IV. Surface Landmarks
- V. Patient-Technologist Relationships
- VI. Care of the Radiographic Room
- VII. Radiation Monitoring Devices
- VIII. Infection Control
- IX. Anatomic Terms
  - a. Body cavities
  - b. Abdominal quadrants and regions
- X. Positioning Terminology
  - a. Position, projection, view
  - b. Positioning abbreviations
- XI. Patient Motion
  - a. Voluntary versus involuntary motion
  - b. Controlling motion
- XII. Sources of Background Radiation
  - a. Natural
  - b. Man-made
- XIII. Methods to Reduce Radiation
  - a. Patients
  - b. Staff
- XIV. Radiation Protection
  - a. Beam restriction
  - b. Shielding
  - c. Ten-day rule
- XV. Introduction to the Radiography Program
  - a. Review of student handbook
  - b. Program expectations
  - c. Application process
- XVI. Radiographs
  - a. Identification
  - b. Common image receptor sizes (English-Metric)
  - c. Central ray placement
- XVII. Introduction to Radiology
  - a. History of radiology
  - b. Organization of radiology department
  - c. Nature of radiation and x-rays
  - d. Principles of radiation protection
- XVIII. Units of Radiation
  - a. Air KERMA
  - b. Gray

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- c. Sievert
- d. Becquerel

### **Course Requirements**

Grading will be determined by the individual faculty member, but shall include the following, at minimum:

- 2 Discussion Board Assignments
- 8 Homework Assignments
- 3 Quizzes
- 3 Tests
- Cumulative Final Exam

Written assignments and research projects: Students are required to use appropriate academic resources in their research and cite sources according to the style selected by their professor.

### **Other Course Information**

This course is a required prerequisite to apply to the AAS Radiography program within the Medical Imaging Department. This course must be passed with a grade of C or better to be considered for the Radiography program, and the course must be completed within a two-year time frame of applying to the Radiography program.

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