

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.

Date Revised: 2/2/2021