

# Common Course Outline

## RADT 101

### Introduction to Radiography

3 credits

## The Community College of Baltimore County

### Description

**RADT 101 – 3 Credits - Introduction to Radiography** examines the radiography program and profession through classroom and clinical instruction. Classes cover the history of radiology, basic radiation protection, infection control practices, body mechanics, medical terminology and an introduction to radiographic positioning.

**3 Credits; 12 lecture hours; 26 laboratory hours a week; 4 weeks**

**(Offered Summer, day only)**

**Prerequisite: Admission into Radiography Program, ALHL 115, BIOL 109, MATH 135, & PHYS 101**

### Overall Course Objectives

Upon completion of the Orientation module the student will be able to:

1. Discuss radiography program policies;
2. Explain the purpose of clinical education;
3. Describe the organizational structure of Franklin Square Hospital Center and the radiology/imaging department;
4. Demonstrate awareness of the nature of x-ray radiation and how to reduce radiation exposure to patients and self;
5. Identify departments within the hospital and sub-sections within the radiology/imaging department;
6. Describe how requests for radiology services are made and received;
7. Describe the importance of customer service in health care;
8. Demonstrate awareness of fire and electrical safety, and the Maryland Right to Know law;
9. Describe and demonstrate the basic principles of proper lifting and transfer techniques;
10. Describe the principles of standard precautions;
11. Demonstrate proper hand washing technique;
12. Discuss the importance of maintaining confidentiality of patient information and records; and
13. Successfully complete CPR certification.

Upon completion of the Medical Terminology module the student will be able to:

1. Define medical terms and abbreviations and translate into common language a patient could understand;
2. Interpret medical terms using roots, prefixes, suffixes, and combining vowels;
3. Create medical terms using principles of combining word parts;
4. Describe terms pertaining to radiology and medical imaging; and
5. Pronounce medical terms correctly;

Upon completion of the Introduction to Positioning module the student will be able to:

1. List the steps and equipment used in the production of a diagnostic radiograph;
2. Describe ethical values pertaining to radiography according to the standards established by national professional organizations;
3. Discuss aspects of patient confidentiality;
4. Describe and give examples of common positioning terms and abbreviations;
5. Identify and describe positioning equipment and accessories, and discuss each item in terms of function and application;
6. Describe the preparation of radiographic room/equipment utilizing medical aseptic techniques;
7. Describe appropriate patient/radiographer relationships;
8. List the necessary identification to be included on radiographs;
9. Identify the major body cavities, surface landmarks and their corresponding anatomy, the anatomic planes and other divisions of the body; and
10. Define and describe body positions and movements.

Upon completion of the Clinical Education module the student will be able to:

1. Locate the rooms in the radiology/imaging department, and discuss the rooms in terms of their purpose and the procedures performed in the rooms;
2. Assist with patient care by locating and identifying correct patient, introducing self to patient, escorting patient to and from room, helping patient on and off exam table, and comforting patient during procedure;
3. Recognize relevant information on requisition including: patient name, location of patient, means of transport, special considerations, exam ordered and clinical information;
4. Demonstrate correct procedure for making an x-ray exposure;
5. Complete a lab on radiographic equipment and its manipulation;
6. Complete area-specific performance objectives for scheduled RADT 101 clinical areas; and
7. Demonstrate appropriate professional behavior while on clinical duty.

## **Major Topics**

### Orientation module

- I. Introduction to the radiography program
  - A. Review of student handbook
  - B. Program expectations
  - C. CCBC Essex counseling/peer tutoring
  - D. Review of educational schedules
- II. Clinical Education
  - A. Clinical Competency Program
  - B. Expectations for clinical competency
  - C. Evaluations in lab and hospital
- III. Introduction to Radiology
  - A. History of radiology

- B. Organization of radiology department
- C. Nature of radiation and x-rays
- D. Principles of radiation protection
- IV. Introduction to Franklin Square Hospital Center
  - A. Introduction to the organization
  - B. Introduction to operations
    - 1. Safety
    - 2. Infection Control
    - 3. Body mechanics
    - 4. Risk Management
- V. CPR Certification

Introduction to Positioning module

- I. Preliminary Steps in Radiography
  - A. Skills
  - B. Equipment
  - C. Requisitions
- II. Code of Ethics and Patient Confidentiality
- III. Positioning Principles
  - A. Basic Protocol
  - B. Positioning Routines
  - C. Black Books
- IV. Body Planes
- V. Positioning Terminology
  - A. Position, Projection, View
  - B. Positioning Abbreviations
- VII. Body Positions
- VIII. Body Movements
- IX. Radiographs
  - A. Identification
  - B. Common film sizes (English-Metric)
  - C. Central ray placement
- X. Patient Motion
  - A. Voluntary versus Involuntary Motion
  - B. Controlling motion
- XI. Radiation Protection
  - A. Beam Restriction
  - B. Shielding
  - C. 10 Day Rule
- XII. Care of the Radiographic Room
  - A. Aseptic Technique
- XIII. Anatomic Terms
  - A. Body Cavities
  - B. Abdominal Quadrants and Regions
- XIV. Body Habitus
- XV. Surface Landmarks
- XVI. Patient-Technologist Relationships

## Medical Terminology Module

- I. Basic structure of medical terms
- II. Medical imaging terms

## **Course Requirements**

### Grading/exams

I. Attendance, Dress Code, & Ethics	7.5 points
-0.5 point for each absence or late, -1.0 point for a "NO CALL"	
Absence from three (3) or more classes or three absences from clinical will lower the course grade one letter unless accompanied by written documentation from a physician	
Students must be appropriately attired to be permitted in the clinical areas.	
II. Clinical Evaluations	10 points
Evaluations are completed weekly by supervising clinical staff.	
III. Clinical Performance Objectives	2.5 points
IV. Quizzes*	20 points
V. Written Tests* (completed at the end of each module)	30 points
VI. Comprehensive Final exam	<u>40 points</u> 100 points

\* Points may be deducted for quizzes and/or tests that are missed and made up at a later date.

The American Registry of Radiologic Technologists (ARRT) has established a minimum scaled passing score of 75. The radiography program has developed standards of grading that are consistent with grading systems of other programs. Letter grades will be distributed according to the following standards:

92 - 100	A
83 - 91	B
75 - 82	C
65 - 74	D
below 65	F

## **Other Course Information**

RADT 101 is the first course in the sequence of nine radiography courses that comprise the professional portion of the curriculum.

Date Revised: 01/07/04

