

Common Course Outline
RADT 230
Patient Care in Computed Tomography (CT)
4 Semester Hours

The Community College of Baltimore County

Description

RADT 230—4 credits—Patient Care in Computed Tomography (CT) introduces the student to CT and patient care in the CT suite. It focuses on patient care and radiation safety issues as they relate to CT. Classes cover topics in patient assessment, venipuncture, contrast agents, and radiation safety. This course is delivered both online and in a classroom setting with lectures and discussion.

4 credits: 4 lecture hours per week

Prerequisite: Admission into the CT Program

Overall Course Objectives

Upon completion of this course, the student will be able to:

1. Define what Computed Tomography is;
2. discuss expectations regarding didactic and clinical education ;
3. review rules and regulations that are outlined in the student handbook;
4. explain standard precautions and infection control policies;
5. explain how the practice of standards for the radiographer is defined by the ASRT;
6. justify the need for informed consent;
7. differentiate among various types of laws;
8. identify preferred venous access sites and factors to consider in site selection;
9. demonstrate on a mannequin the ability to gain venous access using sterile technique;
10. describe effective methods of communication with patients;
11. describe immobilization and transfer techniques for various types of procedures and patient conditions;
12. explain the information to be collected prior to a patient exam;
13. assess patient vital signs;
14. recognize abnormal and normal laboratory values for renal function
15. describe precautions taken for a patient with traumatic injuries.
16. demonstrate an understanding of contrast agents and their possible adverse reactions;
17. differentiate between low osmolar and high osmolar contrast media;
18. demonstrate the ability to properly fill out an allergy history form for contrast media;
19. explain the purpose of the power injector and demonstrate how to use it;
20. distinguish between the chemical, generic, and trade names of common drugs;
21. explain the actions and uses for select drugs;
22. define radiation units of measurement; and

23. state the goal of radiation protection and identify the responsibility of the CT Technologist for radiation protection.

Major Topics

- I. Introduction to Computerized Tomography
 - a. Introduction to clinical education
 - b. Infection control
 - c. Professional roles and responsibilities
- II. Patient Preparation
 - a. Communication
 - b. Immobilization and safety
 - c. Patient education
 - d. Scheduling and screening
- III. Patient Assessment
 - a. History
 - b. Monitoring
 - c. Lab values
 - d. Special considerations
- IV. Venipuncture Procedures
 - a. Site selection
 - b. Aseptic and sterile technique
 - c. Injection techniques
 - d. Pharmacology
- V. Contrast Agents
 - a. Types
 - b. Administration route
 - c. Adverse reactions
- VI. Radiation Safety
 - a. Technical factors affecting patient dose
 - b. Radiation protection
 - c. Dose measurement
 - d. Patient dose reduction

Course Requirements

Grading/exams: Grading procedures will be determined by the individual faculty member but will include:

Discussion board postings

Quizzes

Assignments

A comprehensive final exam will be given.

Writing: a minimum of 4 Discussion Board postings

Grading

A minimum score of 75% is required to pass this course. The American Registry of Radiologic Technologists (ARRT) has established a minimum scaled passing score of 75. The CT certificate 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

This course will be a blended course, taught partially online and partially in class.

This course is a required course in the CT certificate program within the Radiography department.

Date Revised: 1/28/10