

CUMBERLAND COUNTY COLLEGE

Course: RT 221 Equipment Operation and Maintenance II

Credits: 2

Prerequisites

RT201, RT202, RT220

Co-requisites

RT205, RT206

Course Description

The content of this course is designed to establish a knowledge base in Radiographic, Fluoroscopic, Mobile, Tomographic and Electronic imaging equipment. The content will also provide a basic knowledge of Quality Control. Upon completion, the student will be able to understand the difference in performance and testing of imaging equipment.

Learning Outcomes

At the completion of the course, students will be able to:

- Exhibit a basic knowledge of the production of x-radiation and the various types of equipment used in the production of x-rays.
- Discuss options available to reduce radiation exposure.
- Discuss options available to enhance image formation.

Topical Outline

- Quality management
- Mobile Radiography
- Fluoroscopy
- Dedicated Units
- Computed Tomography

Required Texts and Other Materials

Terri L. Fauber, *Radiographic Imaging & Exposure, 4th Edition* Elsevier Mosby, 2013.
James N. Johnson, Terri L. Fauber, *Radiographic Physics and Imaging*, Elsevier Mosby, 2012.

Reference Texts

Bushong, Stewart C., *Radiologic Science for Technologists- Physics, Biology and Protection, 10th edition*, Elsevier 2013

Carlton and Adler, *Principles of Radiographic Imaging an Art and a Science, 5th edition*, Thomson/Delmar Learning, 2013.

Selman, Joseph, *The Fundamentals of Imaging Physics and Radiobiology, 9th edition*, Charles C. Thomas, Publisher, 2000.

Student Assessment

Assessment may be accomplished through projects, portfolios, exams, presentations and/or papers

The grade for this course will be determined as follows:

- Tests = 75%
- Final Exam = 25%

Class absences will be deducted from the course grade as follows:

- 0.50 for each absence and
- 0.25 for each lateness or early departure.

If a student fails the final exam, the student will take a second final within a week. Any grade on the second final above 75% will be recorded as 75% when determining the course grade for the semester. If the student fails the second final exam a grade of F will be recorded for this course.

Academic Integrity

Plagiarism is cheating. Plagiarism is presenting in written work, in public speaking, and in oral reports the ideas or exact words of someone else without proper documentation. Whether the act of plagiarism is deliberate or accidental [ignorance of the proper rules for handling material is no excuse], plagiarism is, indeed, a “criminal” offense. As such, a plagiarized paper or report automatically receives a grade of **ZERO** and the student may receive a grade of **F** for the semester at the discretion of the instructor.

Available Resources

If you are having difficulty with work in this class, tutoring is available through the Success Center. If you think that you might have a learning disability, contact Project Assist at 856.691.8600, x1282 for information on assistance that can be provided to eligible students.

(List availability of open labs and/or writing center)

Before Withdrawing From This Course

If a student experiences adverse circumstances while enrolled in this course and considers withdrawing, s/he should see an advisor (division or advisement center) BEFORE withdrawing from the class. A withdrawal may cause harmful repercussions to completion rate standards and overall GPA which can limit or eliminate future financial aid in addition to causing academic suspension.