

Bergen Community College
Division of Health Professions
Course Syllabus

Course Information:

Course Title: Radiography IV
Sections: 001 and 002
Prerequisite: Radiography III
BIO 109 and 209
Corequisites: RAD 275 and 289
Instructor: Professor Joseph A. Mamatz, Jr.

Instructor's information:

Professor Joseph Mamatz
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Lab Instructors

Professor Maria Cerbone, M.A.S., R.T. (R) (M) (CT) (ARRT)
Professor Dorothy Celauro, M.A.S., R.T. (R) (CT) (ARRT)

Course Description

This course will introduce principles of radiation biology, reinforce the intricacies of radiation protection and provide rudiment instruction on computed tomography and cross sectional anatomy. The Laboratory experiences include the continuation technical professional skills building and an exploration of computer guided software programs designed for radiography certification content mastery.

Student Learning Objectives

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

- Describe the typical cell with respect to its structure, function, genetic makeup and division.
- Indicate the impact of the laws of Radio sensitivity on cellular response to radiation exposure.
- Determine the impact of the biologic, physical and chemical factors on cellular sensitivity.
- Identify short and long term biologic effects following both high and low radiation exposures.
- Describe the five radiation interactions with matter.
- Define and explain units used to describe radiation exposure at the output levels, absorbed dose, and occupational exposure.
- Identify the NCRP recommendation for exposures as stipulated in report #91.
- Determine the means to which the following methods of radiation protection will reduce exposure to both the patient and professional: beam limitation devices, filtration, shielding, exposure variables and equipment.

REQUIRED TEXTBOOK and Materials

Title: Radiation Protection in Medical Radiography
Authors: Statkiewicz-Sherer, Visconti, Ritenour, and Haynes
Publisher: Elsevier
Edition: 7th
ISBN: **9780323222167**

And

Corectec <https://www.corectecreview.com/modules.php?name=ReviewCourse&file=order>

All textbooks that have been utilized during the past two semesters will be used in the laboratory component of this course. The lectures are based on the principles in the Statkewicz book.

Course Assessment and Grade

The final course grade for RAD 288 will be comprised of:

50% Computer Based Assessment- Reviews**

20% Laboratory Proficiency Practical(s)

30% Comprehensive Final Examination

**All “review items” will be comprehensive. The purpose is to begin encourage retention and application of all concepts and practices for success on the ARRT.

Letter Grade Designation

Letter grades for each radiography course are assigned as follows:

- A 92-100%
- B+ 89-91%
- B 83-88%
- C+ 80-82%
- C 77-79% (the minimal passing cut off score is 77%)
- F Below 76.9%

Lecture Content and Assignments

Session 1- 1/19/17 Cell Biology Chapter 6		Session 2- 1/26/17 Molecular and cellular radiation biology Chapter 7 Review 1*
Session 3- 2/2/17 Early Effects Chapter 8		Session 4- 2/9/17 Late Effects Chapter 9 Review 2*
Session 5-2/16/17 Interactions with matter Chapter 3		Session 6-2/23/17 Radiation Quantities and Units Chapter 4 Review 2*
Session 7- 3/2/17 Patient safety Chapter 12		Session 8- 3/9/17 Personnel safety Chapter 13 Review 3*
Session 9- 3/23/17 Radiation equipment design Chapter 11		Session 10-3/30/17 Radiation equipment design Chapter 11, continued Review 4*
Session 11- 4/6/17 NCRP and Values		Session 12- 4/12/17 Dosimetry Chapter 5 Review 5*
Session 13- 4/20/17 Radiation Detection Chapter 5		Session 14- 4/27/17 Dose Response Relationships Review for the final Exam Review 6*
Session 15- 5/4/17 Final Exam		

Laboratory Grade Compilation for lab (the 20 percent of the grade of laboratory)

10% Images of each position in the study (5 to 6 cases)

10% 8 review question packets

05% Active Participation Level

By this point, the program expects students to be well versed on each projection for each study. Lab time is to be a learning experience, not a “study hall”. Rubric

05% on computer software= Corectec (hyperlink) to the site is on this syllabus

Course Policies (Important)

Student Preparation Policy

In order to maximize the laboratory experience, students must review and study the lecture content BEFORE each lab session. Please bring the textbook, notebook and, supplemental materials to each laboratory session. NO group effort is permitted in the performance of the lab projects.

Class and lab work are independent. Students are expected to be proficient with all the required

projections that are published on the ARRT appendix. It is found on the website-

www.rrt.org.

Notice of Changes Policy

The student is apprised that this document is subject to change. When any change is made the instructor will notify you in class or electronically.

Attendance Policy

- Class and laboratory are integral. Your attendance and participation in the classroom and laboratory aspects of these courses is mandatory.
- Students are expected to attend all class sessions for success.
- Bergen Community College's attendance policy states: "All students are expected to attend punctually every scheduled meeting of each course in which they are registered. Attendance and lateness policies and sanctions are to be determined by the instructor of each course. These will be established in writing on the individual
- Your attendance and participation in the classroom and laboratory aspects of the courses is mandatory. The rationale for our attendance and progression policies is to help you achieve success with the course and clinical performance. Absences and consistent tardiness affects course and clinical performance.
- You are expected to be aware of course start times. You must allow sufficient time for travel and traffic. Late arrivals are distracting to the instructor and other students. There outside of the door will be locked. The inside will remain where the students can walk in and out at any time.
- Late arrivals will not be permitted to take the assessment. Tests and Exams are timed.

Make - Policy

One comprehensive make up assessment (tests/ exams) will be given, however; under

extenuating circumstances a makeup is permissible when supported by appropriate documentation. The instructor does not need personal information. Only one make up assessment will be given.

Classroom Etiquette

- Arrival on time. Failure to do so will require an action plan.
- Talking. This is distracting, disrespectful to others and the course instructor.
- Texting. No texting while in class.
- Focus. Focus is imperative for you are approaching the certification examination.