

RADIATION BIOLOGY
RAD 109

Instructor: Program Faculty
Hours: Th, 8:30-11:15
Text: "Radiologic Sciences", Stuart Bushong
"Fundamentals of X-ray and Radium Physics", Selmans
Prerequisite: RAD 104
Semester Schedule: Fall semester of the second year

COURSE DESCRIPTION: A study of radiation effects on the human body. An investigation of cell structure, molecular structure and organ structure will give the student an understanding of how radiation interaction affects happen at the smallest level.

Short-term and long-term effects (from the first interaction are then discussed).

Genetic, Somatic, and Reproductive effects are discussed.

COURSE OBJECTIVES:

After completing this course, the student will:

- demonstrate an understanding of Somatic, Genetic, and reproductive radiation effects.
- demonstrate an understanding of cell/organ structure and function.
- define and know differences in long-term and short-term radiation effects.
- demonstrate the different atomic numbers of tissue densities and how they affect radiation interaction.
- define and know differences in direct and indirect interaction of radiation.

METHODS:

Lectures, tests, homework assignments, paper assignment.

EVALUATION SYSTEM:

There will be three tests given worth 20% each for a total of 60%. A paper will be assigned worth 15%. A cumulative final will be worth 25% of the final grade.

Passing for this course is 75% for continuation in the program.