

RDTH 200C : Radiation Protection and Biology

Presents basic principles of radiation protection and safety for the radiation therapist. Radiation health and safety requirements of federal and state regulatory agencies, accreditation agencies, and healthcare organizations are incorporated. Specific responsibilities of the radiation therapist are discussed, examined, performed, and evaluated. Content also includes basic concepts and principles of radiation biology. The interactions of radiation with cells, tissues and the body as a whole, and resultant biophysical events will be presented. Discussion of the theories and principles of tolerance dose, time dose relationships, fractionation schemes, and the relationship to the clinical practice of radiation therapy will be discussed, examined, and evaluated.

Credits 3

Lab/Practicum/Clinical Hours 0

Lecture Hours 3

Prerequisite Courses

RDTH 101C

RADT 180C

RDTH 150C

Learning Outcomes

- Identify all components of a cell discussing the radiosensitivities of each.
- Discuss the early and late effects of radiation on the cells and tissues.
- Compare somatic and genetic effects of radiation.
- Compare the relationship of time, dose, fractionation, volume, and site to radiation effects.
- Evaluate the principles of radiation protection for the occupational worker.