

Course Description

RAT 1619 | Elements of Treatment Planning | 2 credits

The course provides an overview of radiation doses in treatment planning using computerized methodology.

Course Competencies

Competency 1:

The student will demonstrate the skills, techniques and knowledge required for the clinical planning of patient treatment by:

1. Identify organs and tissues at risk and their dose limitations using published tolerance dose tables.
2. Analyze which shielding materials and thickness would be needed to attenuate electron beams to appropriate levels.
3. Describe procedures for permanent record and legal documentation of matching fields.

Learning Outcomes

- Solve problems using critical and creative thinking and scientific reasoning

Competency 2:

The student will demonstrate knowledge of factors involved with Isodose curve generation by:

1. Describe the general factors involved in isodose curve generation.
2. Differentiate between isodose distributions for all clinical variations.
3. Construct manual and computerized isodose curves.
4. Determine internal and external patient factors that influence a beam's distribution and apply isodose correction methods.

Learning Outcomes

- Solve problems using critical and creative thinking and scientific reasoning

Competency 3:

The student will demonstrate knowledge of calculations as related to treatment planning by:

1. Use appropriate factors for treatment calculations.
2. Calculate equivalent squares using various methods and consider the limitations of each.
3. Compare calculations of shielding thicknesses to measured data for electron beams.

Learning Outcomes

- Solve problems using critical and creative thinking and scientific reasoning