

RADIATION ONCOLOGY (RON)

School of Medicine

RON 199 – Special Study for Advanced Undergraduates: Research in Radiation Biology (1-5 units)

Course Description: Radiation Oncology is a unique discipline combining elements of clinical practice linked to complex physics based dosimetry and treatment planning. Included within this clinical environment is a strong basis in biology that underpins the clinical effectiveness of radiation treatment.

Learning Activities: Variable 3-15 hour(s).

Repeat Credit: May be repeated.

Grade Mode: Pass/No Pass only.

RON 211 – Introduction to Radiation Oncology Physics (3-6 units)

Course Description: Introduction to radiation oncology physics. Overview of treatment methodologies. Medical physics equipment. Treatment machine dosimetry, including calibration. Machine quality assurance. Patient dosimetry. Treatment planning. Simulation and treatment. Treatment quality assurance, including calculation checks and chart checks. Brachytherapy.

Prerequisite(s): Consent of instructor; restricted to physics and engineering graduate students and senior undergraduate physics majors.

Learning Activities: Variable.

Enrollment Restriction(s): Limited to 3 students.

Grade Mode: Satisfactory/Unsatisfactory only.

RON 299 – Independent Study & Research (1-12 units)

Course Description: Research under supervision of Radiation Oncology faculty. Work must be appropriate to fulfill the requirements for the Ph.D. degree.

Prerequisite(s): Enrollment with a graduate group for Ph.D. candidacy and consent of group advisor and sponsor.

Learning Activities: Laboratory 3-40 hour(s).

Grade Mode: Satisfactory/Unsatisfactory only.

RON 420 – Radiobiology Lecture Course (1 unit)

Course Description: Radiobiology lectures are designed to engage the physician residents, physics residents and medical students in learning Radiobiology principles and concepts during the year the Radiation Physics course is taught.

Prerequisite(s): BIS 001A; MAT 012; PHY 001A.

Learning Activities: Lecture 1 hour(s).

Repeat Credit: May be repeated 2 time(s).

Grade Mode: Honors/Pass/Fail.

RON 463 – Radiation Oncology Clerkship (3-9 units)

Course Description: Introduction to radiation oncology. Students will participate in workup and treatment planning for radiation oncology patients and will be introduced to the concepts involved in clinical radiation oncology, radiation biology, and radiation physics.

Prerequisite(s): MDS 430; MDS 431; third-year clinical clerkship; consent of instructor required.

Learning Activities: Clinical Activity 30 hour(s).

Repeat Credit: May be repeated.

Grade Mode: Honors/Pass/Fail.

RON 464 – Radiation Oncology Away Clerkship (3-9 units)

Course Description: Away Advanced Clerkship in Radiation Oncology.

Learning Activities: Clinical Activity 30 hour(s).

Grade Mode: Honors/Pass/Fail.

RON 465 – Externship in Radiation Oncology (3-16 units)

Course Description: Externship provides in-depth exposure to the field of Radiation Oncology for students who rotation through an affiliated institution.

Prerequisite(s): Consent of instructor.

Learning Activities: Clinical Activity 30 hour(s).

Repeat Credit: May be repeated.

Grade Mode: Honors/Pass/Fail.

RON 499 – Independent Study & Research in Therapeutic Radiology (1-18 units)

Course Description: Advanced-level research seminar in clinical and/or translational radiation oncology. Work with the course instructor to generate a testable hypothesis.

Prerequisite(s): Consent of instructor.

Learning Activities: Variable 3-40 hour(s).

Repeat Credit: May be repeated.

Grade Mode: Honors/Pass/Fail.