

RT - RADIATION THERAPY TECHNOLOGY

RT 3000 Concepts of Clinical Care Cr. 3

Procedures and ethics related to the care and examination of the radiation oncology patient. Topics include: basic pharmacology, drug administration, pain management, treatment side effects and their management. Offered Fall.

Restriction(s): Enrollment limited to students in the BS in Radiation Therapy Tech program.

Course Material Fees: \$25

RT 3010 Introductory Radiation Physics Cr. 3

Basic introduction of radiation physics including the x-ray machine, physical principles and circuitry; principles of mathematics. Offered Fall.

Restriction(s): Enrollment limited to students in the BS in Radiation Therapy Tech program.

RT 3020 Clinical Radiation Physics Cr. 3

Principles of radiation exposure; radiation producing and measuring devices; clinical application of radiation physics. Offered Winter.

Prerequisite: RT 3010 with a minimum grade of C

Restriction(s): Enrollment limited to students in the BS in Radiation Therapy Tech program.

RT 3110 Clinical Aspects of Radiation Therapy Cr. 3

Basic concepts in oncology and radiation therapy technology. Topics include: cancer statistics, neoplasia, and principles of treatment and dosage. Offered Spring/Summer.

Restriction(s): Enrollment limited to students in the BS in Radiation Therapy Tech program.

Course Material Fees: \$75

RT 3140 Topographic Anatomy and Medical Imaging Cr. 3

Procedures for imaging human structure and their relevance to radiation therapy; topographic and cross sectional anatomy, identification of anatomic structures as demonstrated through various imaging modalities and human anatomy lab sessions; fundamentals of radiographic exposure techniques and film processing. Offered Fall.

Restriction(s): Enrollment limited to students in the BS in Radiation Therapy Tech program.

Course Material Fees: \$10

RT 3200 Therapeutic Interactions in Oncology Care Cr. 2

Issues related to professional interaction with oncology patients. Impact of cancer diagnosis on patient and family; subsequent role of radiation therapist. Approaches to effective communication. Offered Winter.

Restriction(s): Enrollment limited to students in the BS in Radiation Therapy Tech program.

Course Material Fees: \$5

RT 3310 Clinical Practicum I Cr. 4

Introduction to clinical radiation therapy. Closely supervised patient-related activities. Emphasis on development of interpersonal communication skills in the clinical setting; medical terminology. Offered Spring/Summer.

Restriction(s): Enrollment limited to students in the BS in Radiation Therapy Tech program.

Course Material Fees: \$79

RT 3320 Clinical Practicum II Cr. 4

Closely supervised practice in the delivery of prescribed doses of radiation utilizing common radiation equipment. Observation and performance of clinical care procedures; Development of communication skills in patient/therapist relationships. Correlation of medical imaging techniques to diagnostic workup and treatment planning. Completion of clinical competency requirements. Offered Fall.

Restriction(s): Enrollment limited to students in the BS in Radiation Therapy Tech program.

Course Material Fees: \$79

RT 3330 Clinical Practicum III Cr. 4

Expanded supervised practice in the delivery of radiation therapy treatments. Submission of essay on radiation oncology topic. Completion of clinical competency requirements. Offered Winter.

Restriction(s): Enrollment limited to students in the BS in Radiation Therapy Tech program.

Course Material Fees: \$132

RT 4110 Clinical Radiation Oncology Cr. 4

General presentation of malignant conditions, their etiology and methods of treatment; specific radiation treatment methodology including technical parameters of field size and direction, dosage, blocking, and patient positioning. Offered Fall.

Restriction(s): Enrollment limited to students in the BS in Radiation Therapy Tech program.

Course Material Fees: \$15

RT 4120 Basic Clinical Dosimetry Cr. 4

Basic concepts of clinical dosimetry and treatment planning; various external beam techniques, depth dose data, and summation of isodose curves. Offered Winter.

Prerequisite: RT 4110

Restriction(s): Enrollment limited to students in the BS in Radiation Therapy Tech program.

Course Material Fees: \$10

RT 4140 Oncologic Pathology Cr. 2

Basic principles of neoplasia, including types of growth, causative factors, biological behavior, and significance of staging procedures. Pathology of radiation injury. Offered Fall.

Restriction(s): Enrollment limited to students in the BS in Radiation Therapy Tech program.

Course Material Fees: \$10

RT 4150 Radiobiology of Radiation Oncology Cr. 2

Biological effects of ionizing radiation on living tissue. Cell and tissue radiosensitivity; radiation syndromes and related effects. Basic radiobiological principles of radiation oncology and radiation protection. Offered Winter.

Restriction(s): Enrollment limited to students in the BS in Radiation Therapy Tech program.

RT 4220 Radionuclide Physics Cr. 3

Natural radioactivity; isotopes and nuclear structure; techniques of radiation measurement. The clinical use of radionuclides. Radiation safety. Offered Fall.

Prerequisite: RT 3020 with a minimum grade of C

Restriction(s): Enrollment limited to students in the BS in Radiation Therapy Tech program.

RT 4240 Radiation Therapy Technology Seminar Cr. 3

Issues relevant to the practice and profession of radiation therapy technology explored through group discussion and case studies. Topics include: psychosocial, cultural, economic, physical, and educational factors which affect the patient; professional, administrative, legal, and bioethical issues which influence professional practice. Offered Spring/Summer.

Restriction(s): Enrollment limited to students in the BS in Radiation Therapy Tech program.

Course Material Fees: \$15

RT 4300 Quality Assurance Cr. 2

Principles and application of a comprehensive quality assurance program, addressing general clinical and physics factors. Contents include: tasks to be performed, with their frequency and acceptable limits; model implementation program; and legal implications. Lecture and laboratory settings. Offered Winter.

Restriction(s): Enrollment limited to students in the BS in Radiation Therapy Tech program.

Course Material Fees: \$10

RT 4350 Clinical Practicum IV Cr. 4

Continued supervised practice in a wide spectrum of clinical activities. Submission of a critical bibliography from current literature of radiation therapy, cancer management and related areas. Completion of clinical competency requirements. Offered Spring/Summer.

Restriction(s): Enrollment limited to students in the BS in Radiation Therapy Tech program.

Course Material Fees: \$126

RT 4360 Clinical Practicum V Cr. 4

Satisfies General Education Requirement: Writing Intensive Competency
Continued clinical practice under limited supervision. Submission of essay on radiation oncology topic. Completion of clinical competency requirements. Satisfies the University General Education Writing Intensive Course in the Major requirement. Offered Fall.

Restriction(s): Enrollment limited to students in the BS in Radiation Therapy Tech program.

Course Material Fees: \$67

RT 4370 Clinical Practicum VI Cr. 4

Continued clinical practice under minimal supervision. Practice of procedures related to the development of various treatment plans and methods of treatment planning. Submission of report on quality assurance activities. Completion of clinical competency requirements. Offered Winter.

Restriction(s): Enrollment limited to students in the BS in Radiation Therapy Tech program.

Course Material Fees: \$69

RT 5650 Pathophysiology for Health Sciences Cr. 3

Fundamental knowledge of the nature of disease for the health sciences student; physiologic and morphologic changes accompanying disease processes; mechanisms of repair and recovery. Offered Winter.

Restriction(s): Enrollment limited to students in the BS in Radiation Therapy Tech program.

Equivalent: OT 5650, PT 5650

RT 5990 Directed Study in Radiation Therapy Technology Cr. 1-5

Production of a paper, written assignment, or presentation to develop critical thinking, research, writing and presentation skills. Focus on career options within the field. Offered Every Term.

Restriction(s): Enrollment limited to students in the BS in Radiation Therapy Tech program.

Repeatable for 5 Credits