RADIATION TECHNOLOGY/ RADIATION THERAPY (RTTH)

Courses

RTTH 332. Radiation Biology. 2 Units.
The effects of radiation on living systems.

RTTH 342. Patient-Care Practices in Radiation Therapy. 2 Units.
Aspects of radiation therapy patient care. Emphasizes equipment, treatment, and psychological support of the patient. Transmission and prevention of AIDS and other communicable diseases, with specific application to radiation therapy.

RTTH 344. Radiation Therapy Procedures. 2 Units.
Study and/or practical applications of patient support and immobilization devices. Principles of choosing patient-treatment modalities. Methods of tumor localization. Purposes and utilization of beam direction and modification equipment.

RTTH 348. Radiation Therapy Review. 2 Units.
Comprehensively reviews radiation physics, protection, and dosimetry. Applies radioactive materials. Radiobiology. Technical aspects of radiation oncology.

RTTH 354. Quality Assurance in Radiation Therapy. 2 Units.
Focuses on quality improvement in radiation oncology. Emphasizes development of a culture of safety through continuous quality improvement (CQI) for clinical and technical aspects of patient care, including treatment delivery and localization equipment, treatment planning equipment, and electronic medical records. Discusses the role of various radiation therapy team members in CQI, and legal and regulatory implications for provision of services.

RTTH 355. Physical Principles of Radiation Therapy I. 3 Units.
Nature and description of the structure of matter and energy. Radioactive decay schemes and interaction of photons and gamma radiation. Instrumentation involved in measurement of ionizing radiation, beam quality, and dose. Laboratory.

RTTH 356. Physical Principles of Radiation Therapy II. 3 Units.
Discusses the following areas: calibration techniques of photon, particulate, and electron beams; percentage depth dose, tissue-air ratios, treatment planning, scatter functions, field flatness, and symmetry; field shaping, arc therapy, and tissue inhomogeneities; clinical dosimetric considerations. Includes laboratory.

RTTH 357. Applied Dosimetry. 2 Units.
Brachytherapy sources, isotope calibration, protection, and implantation techniques. Teletherapy equipment and protection. Quality assurance for external and brachytherapy procedures. Laboratory.

RTTH 364. Radiation Oncology I. 2 Units.
A three-term course covering pathology, etiology, epidemiology, histopathology, metastasis, staging, and treatment of major types of malignant neoplasms. Includes technique/simulation laboratory.

RTTH 365. Radiation Oncology II. 2 Units.
A three-term course covering pathology, etiology, epidemiology, histopathology, metastasis staging, and treatment of major types of malignant neoplasms. Prerequisite: RTTH 364.

RTTH 366. Radiation Oncology III. 2 Units.
The third in a three-quarter course covering pathology, etiology, epidemiology, histopathology, metastasis, staging, and treatment of major types of malignant neoplasms.

RTTH 371. Radiation Therapy Affiliation I. 3 Units.
First of seven clinical affiliations.

RTTH 372. Radiation Therapy Affiliation II. 3 Units.
Continues RTTH 371.

RTTH 373. Radiation Therapy Affiliation III. 3 Units.
Continues RTTH 371, 372.

RTTH 474. Radiation Therapy Affiliation IV. 6 Units.
Continues RTTH 371-373.

RTTH 475. Radiation Therapy Affiliation V. 6 Units.
Continues RTTH 371-373, 474.

RTTH 476. Radiation Therapy Affiliation VI. 6 Units.
Continues RTTH 371-373, 474-475.

RTTH 477. Radiation Therapy Affiliation VII. 6 Units.
Continues RTTH 371-373, 474-476.