

Computed Tomography Program Courses (Radiation Sciences) (RSCT)

RSCT Courses

This is a list of courses with the subject code RSCT. For more information, see Radiation Sciences (Carver College of Medicine) in the Catalog.

RSCT:4100 Sectional Anatomy for Imaging Sciences 3 s.h.

Sectional anatomy identifiable on computed tomography and magnetic resonance imaging, including transverse, coronal, and sagittal planes. Prerequisites: ACB:3110 or HHP:1100 or HHP:1150 or HHP:3105 or HHP:3115.

RSCT:4105 Computed Tomography Clinical Internship I 2 s.h.

Clinical internship scheduled at University of Iowa Hospitals & Clinics; rotation through CT scanners, 3D lab, and radiation therapy departments; competency and objective-based education with required clinical performance evaluations; clinical coordinator facilitates schedules, rotations, learning objectives, evaluations, and competencies; experience facilitated by CT technologists, radiologists, residents, and coordinator; participation in routine and advanced CT scans; performance expectations become progressively higher as student gains experience and skills. Requirements: acceptance to B.S. radiation sciences RT/CT track.

RSCT:4110 CT/MRI Pathology 3 s.h.

Common pathological conditions found in CT and MRI images; protocol appearance variations; units of CNS, musculoskeletal, neck/thorax, and abdominopelvic pathology; textbook readings, in-class discussions, special projects including case studies and presentations. Requirements: concurrent enrollment in RSCT:4100, if not taken as a prerequisite, or at least 3 months fulltime CT/MRI clinical experience.

RSCT:4115 Computed Tomography Clinical Internship II 4 s.h.

CT scanners, 3D lab, and radiation therapy department rotation at University of Iowa Hospitals & Clinics; competency and objective-based education with required clinical performance evaluations; clinical coordinator facilitates schedule, rotations, learning objectives, evaluations, and competencies; experience facilitated by CT technologists, radiologists, residents, and coordinator; participation in routine and advanced CT scans; performance expectations become progressively higher as students gain experience and skills. Prerequisites: RSCT:4105.

RSCT:4120 Computed Tomography Procedures I 4 s.h.

Computed tomography procedures of the head, neck, thorax, mediastinum, abdomen, and pelvis; positioning techniques, patient preparation, monitoring and care, indications and contraindications for procedures; contrast media usage; basic protocol information with adjustments to tailor procedures for patient's indications; brief units on patient care relevant to CT; CT parameters and equipment. Corequisites: RSCT:4100. Requirements: acceptance to B.S. radiation sciences RT/CT track or ARRT primary certification in radiologic technology, nuclear medicine, or radiation therapy.

RSCT:4125 Computed Tomography Procedures II 4 s.h.

Imaging information in musculoskeletal exams, 3D reconstruction, CTAs; cardiac, including gating, biopsies, drains, post-myelography, radiation therapy planning, and 4D imaging; CT arthrography, PET/CT, SPECT/CT, virtual colonoscopy; procedure indications and contraindications, patient and room preparation, positioning techniques, contrast media usage, and scan parameters; basic protocol information and how to tailor procedures to a patient's indications. Prerequisites: RSCT:4120. Corequisites: RSCI:4110, if not taken as a prerequisite.

RSCT:4130 Computed Tomography Physical Principles and QC 4 s.h.

Physical principles and instrumentation; historical development and evolution of CT; characteristics of radiation, beam attenuation, linear attenuation coefficients, tissue characteristics, Hounsfield numbers, data acquisition, image manipulation techniques, tube configuration, collimation design and function, detectors, image quality factors, functions of CT computer and array processor; image processing and display examined from data acquisition through postprocessing and archiving; radiation protection practices and QC. Requirements: acceptance to B.S. radiation sciences RT/CT degree track or ARRT primary certification in radiologic technology, nuclear medicine, or radiation therapy.

RSCT:4215 Computed Tomography Clinical Internship III 4 s.h.

CT scanners, 3D lab, and radiation therapy department rotation at University of Iowa Hospitals & Clinics; competency and objective-based education with required clinical performance evaluations; clinical coordinator facilitates schedule, rotations, learning objectives, evaluations, and competencies; experience facilitated by CT technologists, radiologists, residents, and coordinator; participation in routine and advanced CT scans; performance expectations become progressively higher as students gain experience and skills. Prerequisites: RSCT:4115.