Nuclear Medicine Technology

Director
• Jay J. Smith

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Undergraduate major: nuclear medicine technology (BS)
Website: https://medicine.uiowa.edu/radsci/programs/nuclear-medicine-technology

Courses

Nuclear Medicine Technology Courses

RSNM:3120 Nuclear Medicine and PET Clinical Procedures I  3 s.h.
Introduction to medical specialty of nuclear medicine and molecular imaging; basic theories of radiation protection, radiation physics and nuclear medicine instrumentation, radiopharmacy, nuclear medicine and positron emission tomography (PET) clinical procedures, professional standards of nuclear medicine technologist. Requirements: Nuclear Medicine Technology Program enrollment.

RSNM:3121 Nuclear Medicine Technology Clinical Internship I  3 s.h.
Hands-on clinical experience working with patients and performing routine nuclear medicine diagnostic imaging procedures under direct supervision of qualified clinical instructors. Requirements: Nuclear Medicine Technology Program enrollment.

RSNM:3131 Radiopharmaceuticals  3 s.h.
Introduction to radiopharmaceuticals; emphasis on physical, chemical, and biologic properties and their clinical use; fundamental aspects of radiopharmaceuticals including characteristics, preparation, quality control, and clinical use. Requirements: Nuclear Medicine Technology Program enrollment.

RSNM:3140 Foundations in Nuclear Medicine and PET  1 s.h.
Foundational instruction in the math and chemistry associated with radiopharmacy and instrumentation in the nuclear medicine technology profession, such as positron emission tomography (PET). Requirements: Nuclear Medicine Technology Program enrollment.

RSNM:3220 Nuclear Medicine and PET Clinical Procedures II  3 s.h.
Proper execution of nuclear medicine and positron emission tomography (PET) procedures from a technical point of view; published protocols and procedures specific to University of Iowa Health Care; routine setup, common errors, artifact identification, computer processing protocols, and patient care concerns identified for each procedure; review of human anatomy, physiology, and pathology germane to understanding and proper execution of nuclear medicine procedures. Prerequisites: RSNM:3120. Requirements: Nuclear Medicine Technology Program enrollment.

RSNM:3221 Nuclear Medicine Technology Clinical Internship II  3 s.h.
Progressive responsibility working with patients and performing nuclear medicine and PET clinical procedures under direct supervision of qualified clinical instructors. Prerequisites: RSNM:3121. Requirements: Nuclear Medicine Technology Program enrollment.

RSNM:3231 Nuclear Medicine Instrumentation  3 s.h.
Instruments used in medical imaging to generate and detect ionizing radiation (i.e., SPECT/CT and PET/CT scanners, dose calibrators, well counters, survey meters); focus on instrument quality control testing. Requirements: Nuclear Medicine Technology Program enrollment.

RSNM:3320 Foundations in Nuclear Medicine Instrumentation  2 s.h.
Instruction in physics and statistics associated with nuclear medicine and positron emission tomography (PET) instrumentation. Prerequisites: RSNM:3220. Requirements: Nuclear Medicine Technology Program enrollment.

RSNM:3321 Nuclear Medicine Technology Clinical Internship III  4 s.h.
Progressive responsibility working with patients and performing nuclear medicine and PET clinical procedures under direct supervision of qualified clinical instructors. Prerequisites: RSNM:3221. Requirements: Nuclear Medicine Technology Program enrollment.

RSNM:4121 Nuclear Medicine Technology Clinical Internship IV  4 s.h.
Progressive responsibility working with patients and performing nuclear medicine and PET clinical procedures under direct supervision of qualified clinical instructors. Prerequisites: RSNM:3321. Requirements: Nuclear Medicine Technology Program enrollment.

RSNM:4221 Nuclear Medicine Technology Clinical Internship V  4 s.h.
Progressive responsibility working with patients and performing nuclear medicine and PET clinical procedures under direct supervision of qualified clinical instructors. Prerequisites: RSNM:4121. Requirements: Nuclear Medicine Technology Program enrollment.

RSNM:4222 Nuclear Medicine Technology Capstone and Certification Exam Preparation  6 s.h.
Students in final semester of program work together to organize and deliver capstone and certification exam preparation course; review of specific topics and oral presentations by each student; preparation and distribution of detailed written outlines of exam content; series of content-specific quizzes, midterm, and final “Mock Board” exam to evaluate student learning and preparedness for taking the NMTCB and ARRT national certification exams; preparation and submission of capstone portfolios that provide evidence of scholarly and professional progress. Requirements: Nuclear Medicine Technology Program enrollment.