

The Profession

Nuclear medicine involves the use of radioactive tracers in studying a wide variety of normal and abnormal body functions and in treating certain diseases. A radiotracer, or radiopharmaceutical, is simply an element that emits radiation which, when administered to a patient, can be detected outside the body. Under the direction of a qualified physician, a nuclear medicine technologist prepares and administers radiopharmaceuticals, operates radiation detection equipment that measures the quantity or distribution of the radiopharmaceutical in the patient, and performs any calculations or computer analyses needed to complete the patient's exam.

The most common procedures include cardiac imaging in which the technologist analyzes the blood flow through the heart and creates computerized images of the beating heart to map damaged heart tissue. Bone scans are usually performed to evaluate the spread of cancer in the body, but might also be used to test for bone infections or stress fractures. The thyroid can be scanned to determine its size or for the presence of nodules. In addition, special techniques can be used to determine the amount of thyroid hormones in the patient's blood. These are just a few of the many types of procedures technologists will perform. Certified nuclear medicine technologists work primarily in the hospital setting or outpatient clinics.

Nuclear medicine technologists work closely with nuclear medicine physicians and other professionals in the field of medical imaging. Technologists with additional skills in radiography, magnetic resonance imaging, sonography, laboratory and cardiac procedures are excellent candidates for employment. The national average for entry level technologist's starting salaries in 2008 was \$50,000 per year.

The classroom education is conducted via distance education, primarily through the Internet, by faculty at UAMS. Clinical education is conducted at a variety of clinical sites in Little Rock, Fayetteville, Jonesboro, and Texarkana, Arkansas; Shreveport and Baton Rouge, Louisiana; Dallas and Tyler, Texas; Springfield, Missouri; and Tulsa, Oklahoma. Students from these areas are encouraged to apply for admission and will be able to complete the program from any of these cities.

The Program

The College of Health Related Professions offers the Bachelor of Science degree in Nuclear Medicine Imaging Sciences. You will learn how to use radioactive tracers to

diagnose and treat a wide variety of abnormal conditions. Nuclear medicine technologists receive their education in two parts: the preprofessional component which lasts three years and the professional component which lasts one year and is taken at UAMS beginning in the Fall Semester.

Preprofessional Curriculum

Preprofessional courses are taken at any regionally accredited college or university and must fulfill all College requirements regarding acceptance of transfer credit to include at least 85 semester credit hours. The following courses are required:

Area/Typical Course Title	Minimum Semester Hours
SCIENCE	
Human Anatomy & Physiology*	8
General Physics I & II	8
General Chemistry I & II	8
College Algebra	3
Biological Science or Microbiology	4
Statistics	3
COMMUNICATIONS	
Speech	2
LIBERAL ARTS	
English Composition I	3
English Composition II	3
History of Civilization or World History	6
American History or National Government	3
FINE ARTS	
Art, Music or Theater Art	3
HUMANITIES	
Philosophy, Political Science, Literature, or Humanities	3
SOCIAL SCIENCES	
Psychology, Sociology, Anthropology, Geography, or Economics	6
COMPUTER SCIENCE	
Computer Fundamentals/Applications	<u>3</u>
	66

*Students must successfully complete a Human Anatomy and Physiology course that covers all body systems.

The remaining 19 hours are elective and are of the student's choice. Advanced coursework in anatomy, physiology, chemistry, physics, and mathematics and introductory coursework in statistics and computer sciences are recommended. At least 6 of the 38 hours must be at the junior/senior level.

Professional Curriculum

The following courses will be taken while enrolled at UAMS:

Course #	Title	SC
Fall (1) Semester		
NMIS 4211	Introduction to Nuclear Medicine	2
NMIS 4312	Clinical Procedures & Diagnosis I	3
NMIS 4213	Nuclear Physics	2
NMIS 4214	Instrumentation I	2
NMIS 4517	Clinical Internship I	5
NMIS 4116	Journal Review and Research Methods	1
CHRP 3101	Seminar I	1
NMIS 4115	Radiopharmacy	<u>1</u>
		17
Spring (2) Semester		
NMIS 4221	Health Physics	2
NMIS 4322	Clinical Procedures & Diagnosis II	3
NMIS 4125	Radiopharmacy	1
NMIS 4223	Instrumentation II	2
NMIS 4224	Radiation Biology	2
CHRP 3102	Seminar II	1
NMIS 4524	Clinical Internship II	<u>5</u>
		16
Summer (3) Semester		
NMIS 4631	Clinical Internship III	<u>6</u>
		39

Certification/Licensure

Graduation from the program in Nuclear Medicine Imaging Sciences satisfies academic eligibility to apply for certification examinations given by the Nuclear Medicine Technologists Certification Board (NMTCB) or the American Registry of Radiologic Technologists (ARRT). Successful completion of the program does not itself ensure certification or registration. Each student is responsible for familiarizing himself/herself with the applicable certification and registration requirements.

Application Procedures and Deadlines

Class size is limited and not all applicants are selected for participation in the program. The professional component of the major is demanding and rigorous, and students are encouraged to visit a nuclear medicine department and talk with technologists and the division director to learn what would be expected of them as a student. Students must submit completed applications by March 1st. A complete application includes:

1. **Application for Admission:** The College of Health Related Professions Application for Admission Form is required. Please contact the program office for information.

2. **Application Fee:** A non-refundable application fee of \$20.00 is required and must accompany the application. If applying to multiple programs, a \$20.00 fee is required for the first program and \$10.00 for each additional program.
3. **Official Transcripts:** Arrange for each college or university you have attended to forward an official transcript of your work.
4. **References:** References from three persons qualified to judge your promise of success in the program are required. Reference forms will be sent to applicants via e-mail upon receipt of the application form.
5. **Admission Requirements for International Applicants:** All applicants who are not United States citizens or permanent resident aliens or for whom English is not their native language must meet additional admission requirements. Please consult the Admission/Academic Information section of the CHRP Catalog found at <http://www.uams.edu/chrp/catalog/>.
6. **Interview:** After March 1 qualified applicants will be interviewed after receipt of all the above.

Arkansas residency will be considered during selection for admission. Applicants are considered without regard to race, color, creed, age, marital status, national origin, or sex. Qualified handicapped persons, capable of meeting academic standards essential to participation in the program, receive equal consideration.

For additional detail contact the division office (501/686-6848) or the College admissions officer (501/686-5730).

Fees

Shown below are fees for 2008-2009. Fees are subject to change without notice by action of the Board of Trustees, so contact the division director prior to registration to learn the exact fees. Note that all fees are due upon registration.

Tuition for all students:

Arkansas resident	\$190.00 per semester credit
Non-resident	\$436.00 per semester credit

Other fees (laboratory, technology, graduation, health fee, etc.)

\$157.45	fall semester
\$199.60	spring semester
\$30.00	summer semester

Additional fees may apply; contact the division director prior to registration for exact fees.

Financial aid is available from both the UAMS Student Financial Services Office and the College of Health Related Professions. Please contact the division for eligibility requirements.

This brochure describes the program requirements for the 2009-2010 academic year. While it is expected that most of the requirements will apply to 2010-2011 as well, some changes are likely. You are strongly advised to contact the department/program office to receive the latest information.

Telephone (501) 686-6848
www.uams.edu/chrp/nuclearmedicine

Division of Nuclear Medicine Imaging Sciences
 Department of Imaging and Radiation Sciences
 College of Health Related Professions
 University of Arkansas for Medical Sciences
 4301 West Markham, #714
 Little Rock, Arkansas 72205

E-mail: thaxtonpauld@uams.edu

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COLLEGE OF
 HEALTH RELATED
 PROFESSIONS

UNIVERSITY OF ARKANSAS
 FOR MEDICAL SCIENCES

2009-2010

Department of Imaging and Radiation Sciences
 College of Health Related Professions
 University of Arkansas for Medical Sciences
 4301 West Markham Street, #714
 Little Rock, Arkansas 72205