

# Pre-Medical Imaging & Radiation Sciences at OUHSC

The Pre-Medical Imaging & Radiation Sciences program is designed to meet the requirements of the University of Oklahoma Health Sciences Center Bachelor's Degree BSMIR in the areas of Radiography, Nuclear Medicine, Radiation Therapy, and Sonography. Selection of students is competitive and is made on the basis of academic achievement, interview performance and knowledge of healthcare services. The applicant must meet all admission requirements and have completed a minimum of 64 hours with a minimum GPA of 2.5 on a 4.0 scale.

<b>Enrollment Abbreviation</b>	<b>Course Name</b>	<b>Hours</b>	<b>Completed</b>
ENGL 1113	Freshman Composition I	3	<input type="checkbox"/>
ENGL 1213	Freshman Composition II	3	<input type="checkbox"/>
PHYS 1115	General Physics I	5	<input type="checkbox"/>
PHYS 1215	General Physics II	5	<input type="checkbox"/>
MATH 3513	Statistical Methods	3	<input type="checkbox"/>
MATH 1513	College Algebra	3	<input type="checkbox"/>
BIOL 1013 (Lecture) BIOL 1011 (Lab)	Introductory Biology I	4	<input type="checkbox"/>
BIOL 1023 (Lecture) BIOL 1021 (Lab)	Introductory Biology II	4	<input type="checkbox"/>
BIOL 3224	Microbiology	4	<input type="checkbox"/>
BIOL 3013	Animal Biology	3	<input type="checkbox"/>
BIOL 3114	Genetics	4	<input type="checkbox"/>
BIOL 3123 or 3344 or 3524 or 4133 or 4354	Cell Biology or Animal Physiology or General Ecology or Virology or Immunology	3 or 4	
CHEM 1123 (Lecture) CHEM 1131 (Lab)	General Chemistry I	4	
CHEM 1223 (Lecture) CHEM 1231 (Lab)	General Chemistry II	4	<input type="checkbox"/>
CHEM 3123 (Lecture) CHEM 3132 (Lab)	Organic Chemistry I	5	<input type="checkbox"/>
CHEM 3223 (Lecture) CHEM 3232 (Lab)	Organic Chemistry II	5	<input type="checkbox"/>
CHEM 4214	Biochemistry	4	<input type="checkbox"/>
<b>Additional Information</b>			
One Non Western Culture Class	SOC 4153, SOC 3123, MUS 3861, MUS 3852, HIST 4653, ENGL 4883, ART 3013, ANTH 4153, ANTH 3123, or ANTH 2223	3	<input type="checkbox"/>

**For additional information contact**  
**Prehealth Professions Advising**  
**Dr. Hector Gonzalez**  
**TQSC 156, 918-444-3819 or BASC 218, 918-449-3819**  
**gonzaleh@nsuok.edu**

One Artistic Forms  
Class

THTR 2843, THTR 2763, MUS 3002, MUS  
2543, HUM 2843, HUM 2763, ENGL 3033,  
ART 4453, ART 3223

3



### ADDITIONAL INFORMATION

The Department of Medical Imaging and Radiation Sciences offers a four-year baccalaureate degree in Medical Imaging and Radiation Sciences with programs in the areas of Radiography, Nuclear Medicine, Radiation Therapy, and Sonography (Ultrasound). Students apply to the professional phase of the program after first completing a freshman and sophomore year (or 64 hours) of general education inclusive of the pre-requisites for the programs. The four-year program culminates with a Bachelor of Science Degree in Medical Imaging and Radiation Sciences (B.S.)

#### **Radiography**

The Radiographer positions the patient and translates a high tech imaging process into a humane experience for the patient to obtain satisfactory radiographs, which are then interpreted by the physician to diagnose disease. Radiographers may operate a wide variety of photographic and electronic imaging equipment and computers. Radiographers also make images in highly specialized studies in which internal organs are made visible in moving and stationary images used for medical diagnosis.

#### **Radiation Therapy**

The Radiation Therapist is in daily contact with the cancer patient. Radiations are directed at diseased tissues in strictly controlled circumstances to cure or to palliate the disease. The therapist positions the patient for treatment, performs mathematical calculations of radiation dosage, and operates a variety of ionizing radiation producing equipment.

#### **Nuclear Medicine**

Nuclear Medicine is a specialty which uses radiopharmaceuticals, cameras, and computers to image and quantify various physiological processes in any organ system in the body. The nuclear medicine technologist administers radiopharmaceuticals to patients, positions them for images, and operates the cameras and computers. The images and data technologists obtain from studies provide physicians with information on disease processes affecting organ function. The program includes instruction in general and cardiac nuclear imaging along with radio pharmacy and radioimmunoassay.

#### **Sonography (Ultrasound)**

The Sonographer uses equipment, which generates high frequency sound waves to produce images of the human body. Using these procedures, the sonographer gathers data for interpretation and evaluation by the physician. Areas include Diagnostic Abdominal Sonography, Neurosonography Echocardiography, Obstetrical and Pelvic Sonography, Vascular Doppler Evaluation, and others. In each of these areas, the Sonographer must be knowledgeable of expected Pathology, applicable instrumentation and results.

#### **Employment Opportunities**

Employment in the field of Medical Imaging and Radiation Sciences is expected to grow much faster than the average for all occupations because of the importance of these technologies in the diagnosis and treatment of disease. Radiology is a dynamic field with clinical potential. New uses of imaging equipment are certain to increase demand for professionals in all categories. In the treatment area, radiation therapy will continue to be used alone or in combination with surgery or chemotherapy to treat cancer. New advance modalities promise to change the way some diseases are managed. Positron Emission Tomography (PET) images the function of the brain, and Magnetic Resonance Imaging (MRI), which utilizes high frequency radio waves and magnetic fields, are two examples. Radiographers, Nuclear Medicine Technologists, Radiation Therapists, and Sonographers will continue to be at the growing edge of medicine and health care.

#### **Application Requirements**

Admission to the program requires completion of pre-requisite course work and submission of all application materials. The Department Admissions Committee will review application materials and may require additional information from each applicant such as a personal interview, and/or testing scores. Applicants are considered for the summer semester only. To be considered for admission an applicant must:

1. Have successfully completed, or be in the process of completing a minimum of sixty-four (64) semester hours of course work, from any accredited college or university, prior to matriculation to the program.
2. Be in good standing with the college or university last or currently attending.
3. Submit a completed University of Oklahoma Health Sciences Center online application and supplemental documents with fees. Submit official transcripts in a sealed envelope from all colleges or universities attended prior to March 1 of the year in which admission is sought.
4. Have a minimum grade point average of 2.5 on a 4.0 scale of all college work attempted. Average science/math GPA 3.6.
5. Have successfully completed, or be in the process of completing, the courses listed on the front of this form. These pre-requisites are the same for all departmental programs. At the time of application to the Health Sciences Center, students indicate the program of their choice. Any exceptions or substitutions must be approved by the program director, department chairperson and college dean. To search for transferable courses, use the web-based prerequisite finder: <http://www.ou.edu/content/admissions/apply/transfer-credits/transfer-equivalencies.html>



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**For more information about Medical Imaging and Radiation Sciences programs:**

<https://alliedhealth.ouhsc.edu/Prospective-Students/Academic-Programs>

**For Medical Imaging and Radiation Sciences information and application materials from OUHSC contact:** Professor Vesper Grantham (405) 271-6477. University of Oklahoma Health Sciences Center, Medical Imaging and Radiation Services, 1200 N. Stonewall, Oklahoma City, Oklahoma 73190

OUHSC Medical Imaging and Radiation Sciences Site:

<https://alliedhealth.ouhsc.edu/Departments/Medical-Imaging-and-Radiation-Sciences>