

The Radiologic Sciences is a field that uses x-rays, high frequency sound waves, and magnetic resonance to provide images of bones, organs and tissues which could not otherwise be seen with the naked eye. These images aid the physician in the diagnosis of disease and injury. The radiologic science professional is knowledgeable in medical sciences, acoustical physics, and technical areas related to radiologic sciences. The professional must use this knowledge and an understanding of the patient's medical history to determine the position of the patient which will create the best diagnostic image. Primary sites for employment include hospitals, emergency care facilities, private doctors offices, sports medicine clinics, and in industry and research. Opportunities are also available in the marketing and sale of technical medical equipment.

The student in Radiologic Sciences who transfers to Thomas Jefferson University specializes in two of the following areas of study. The selected combination must meet the approval of a Thomas Jefferson faculty member.

Cardiac Sonography Using high-frequency sound waves to take moving pictures of the heart; using non-invasive techniques

General Sonography Using high-frequency sound waves to create images of many of the internal structures of the body

Nuclear Medicine Using traces of radioactive materials, radiopharmaceuticals, injected to create an image detected by a gamma camera

Radiography Using X-ray beams to create films showing different body figures as still images

Vascular Technology Using ultrasound to study arteries and veins to detect abnormalities

Magnetic Resonance Imaging Using magnetic field and radio waves to take multiple cross section images of the body

Invasive Cardiovascular Technology Assisting with invasive techniques to detect heart disease using tubes or catheters inserted in an artery or vein

Computed Tomography Using a series of X-ray beams from different angles to create cross-section images of the body

Radiation Therapy Using high-energy radiation for cancer management. Responsible for recording, interpreting and administering radiation treatment

Medical Dosimetry Deals with planning and calculating ionizing radiation dosages used for cancer treatment under the direction of a medical physicist

Students who wish to enter Radiologic Sciences as a career could do so via Manor's Allied Health Science Transfer Associate Degree program and transfer after two years to an affiliated college to receive a bachelor's degree and take their certifying exam, after which they are eligible to work in the field.



Radiologic Sciences Professional Profile

Students pursuing a career in Radiologic Sciences should be sensitive and caring in order to deal with patients' physical and psychological needs. They must be good at paying attention to detail, following instructions precisely and working as part of a team. In addition, they should have mechanical ability and manual dexterity in order to operate complicated equipment.

Course Sequence:

First Semester

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| Biology I | 4 |
| Fundamentals of Chemistry I | 4 |
| Fundamentals of Composition I | 3 |
| Mathematics (excluding MH 101 or MH 102; MH 103 Algebra recommended) | 3 |
| Religion elective | 3 |
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| | 17 |

Second Semester

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| Science Elective (Chemistry II recommended for Nuclear Medicine option) | 4 |
| Social Science Elective (Intro to Psychology recommended) | 3 |
| Fundamentals of Composition II | 3 |
| History Elective | 3 |
| Philosophy | 3 |
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| | 16 |

Third Semester

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| Anatomy & Physiology I | 4 |
| Computer Science | 3 |
| Science Elective (Physics I recommended) | 4 |
| Electives (Effective Oral Communication recommended) | 6/7 |
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| | 17/18 |

Fourth Semester

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| Anatomy & Physiology II | 4 |
| Social Science Elective (Sociology recommended) | 3 |
| Electives (Medical Terminology recommended; Physics II recommended for Medical Dosimetry option; Algebra & Trig or Calculus recommended for Medical Dosimetry option) | 9/10 |
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| | 16/17 |

Minimum credits to graduate **66**