MAGNETIC RESONANCE IMAGING, B.S.

Saint Louis University's Bachelor of Science in Magnetic Resonance Imaging is one of only two programs of its kind in the country. SLU's MRI program contains a strong science curriculum that prepares students for immediate job placement as well as graduate study.

Magnetic resonance imaging is a medical imaging technique that uses a large magnet and radio waves to create clear pictures of internal body structures. MRI provides excellent contrast between the different soft tissues of the body and is especially useful in imaging the brain, spine, joints, muscles and other structures. The superior resolution of the images and advancing technology are rapidly increasing the variety of exams an MRI technologist will perform.

MRI technologists are educated and trained to work with patients and other health care team members to obtain high-quality images safely and effectively. MRI offers procedures that are helpful to a broad span of medical specialties. These specialties include neurology, sports medicine, cardiology, pediatrics and more.

Program Highlights

The advantages of earning your B.S. in MRI at Saint Louis University include:

- A tailored curriculum that allows for diverse areas of concentration
- Clinical training sites within the St. Louis metropolitan area
- An interprofessional focus that emphasizes a team approach to health care
- Instruction and individual mentorship by professionally credentialed MRI faculty
- Medically relevant coursework ideal for pre-professional curriculum options, including premed and prephysician assistant
- Opportunities to participate in professional conferences with faculty and fellow students
- Undergraduate opportunities to conduct research and produce projects/papers acceptable for publication and presentation at professional conferences

Program Effectiveness Data (https://www.slu.edu/doisy/degrees/-pdf/mri-program-effectiveness-data.pdf)

Curriculum Overview

Saint Louis University's Bachelor of Science in Magnetic Resonance Imaging prepares graduates for entry-level positions as MRI technologists. The program includes all basic sciences and an intensive MRI curriculum that includes approximately 1,000 hours of clinical practicum. Upon successful completion of the program, graduates are eligible for national certification to become registered MRI technologists/radiologic technologists (MR).

Technical Standards

Purpose

This is a non-discriminatory policy that describes the intellectual, social, and physical capabilities required to perform the tasks of magnetic resonance imaging. The mission of the program is to educate a practitioner in Magnetic Resonance Imaging. Therefore, students must meet these standards to pursue the program coursework and work within the field.

All applicants and students of the Magnetic Resonance Imaging Program must be able to perform each of the standards stated in this policy.

In some cases, the use of adaptive devices may be permitted in order for the student to meet selected technical standards.

Requirements of Magnetic Resonance Imaging Technologists

Magnetic Resonance Imaging Technologists are required to:

- Intellectually understand the conceptual, integrative, and quantitative ability to analyze information and data. Comprehend three-dimensional relationships and the spatial relationships of structure. Understand and apply clinical instructions given by departmental personnel.
- Tolerate physical and emotional stress and continue to effectively function. Demonstrate emotional stability and psychological health in day-to-day interaction with patients, staff, family members and others. They must be adaptable, flexible and able to function in the face of uncertainty. A student must be able to develop mature, sensitive and effective relationships with patients and colleagues. He/she must have a high level of compassion for others, motivation to serve, integrity and a consciousness of social values. A student must possess sufficient interpersonal skills to interact with people from all levels of society, all ethnic backgrounds, and all belief systems.
- Clearly communicate, verbally and in writing, with the patient, families, personnel and others to disseminate information about patient care and work duties. Candidates must be able to speak and hear at a level that allows them to elicit and convey information, accurately perceive nonverbal communication, and describe changes in patient mood, activity and posture, and recognize and respond to an emergency or urgent situation. Must demonstrate normal or corrected hearing to discern audible signals on camera imaging equipment, phones, and timing devices.
- See with normal or device corrected vision. They must possess the ability to discriminate among blacks, grays, and whites, and various color combinations that indicate tissue contrast on both display devices and recorded images. A student must be able to observe patients accurately and completely, both from a distance and at close range.
- Read, extract and apply appropriate information and instructions contained in patient requisitions, notes, and medical charts. Have the ability to read and comprehend technical and medical information.
- Have the manual dexterity to perform various MRI procedures, such as patient imaging, system quality control, venipuncture, and preparation and administration of contrast media. Motor skills must include the ability to extend hands and arms in any direction. You must be able to hold, grasp, and turn with the hands, and possess the ability to coordinate eyes, hands and feet rapidly and accurately.
- Lift, transfer, and/or move patients from wheelchairs/stretchers/beds to imaging tables. Lift, move, reach, or push MRI equipment weighing approx. 30-35 lbs., (e.g. imaging coils, contrast pumps, etc.). Endure an eight-hour clinical day with a minimum of four to six hours of standing or walking.

- Submit to and receive a satisfactory report on criminal background checks and drug testing for substances of abuse.

Please note: Many medical devices, such as pacemakers, clips, cochlear implants, medication pumps, stimulators, etc., are considered unsafe in the magnetic field environment of the MRI Suite. Other implants may be considered safe or conditional; allowing access to the high magnet field and the MRI technologist profession. In addition, metallic foreign bodies inside the body may be adversely affected by the magnetic field. Any Magnetic Resonance Imaging Program applicant who has a medical device or an internal metallic foreign body MUST contact the program faculty for clearance into the program.

Clinical and Research Opportunities

Students in SLU's MRI degree program have opportunities to conduct research and produce projects and papers that are acceptable for publication and could be presented at professional conferences. MRI students are encouraged to join and participate in the American Society of Radiologic Technologists (ASRT).

Careers

The practice of MRI encompasses multidisciplinary skills. The responsibilities of the MRI technologist include:

- Operation of imaging, laboratory and computer instrumentation
- Empathetic and instructional approach to patient care
- Preparation of contrast agents
- Performance of quality control procedures
- Application of accepted standards of MRI safety and protection

Jobs can be found in the following settings:

- Medical and surgical hospitals
- Freestanding clinics
- Physician offices
- Research institutions

Some jobs are classified as traveling jobs where the employee provides temporary help to short-staffed departments for a while. These technologists regularly travel, with the length of stay and location varying.

Career advancement opportunities from the position of staff technologist may lead to areas of administration, education, sales or research.

The salary range for an MRI technologist depends on geographic location, years of experience and education. According to the Bureau of Labor Statistics, the median annual wage was $88,180 in 2024.

Transfer Credit or Second Bachelor's Degree

Undergraduate students may receive credit for prior learning. This includes college credits earned during or after high school, credit by exam and credit by assessment. Credits may be applied towards the University Undergraduate Core or program requirements or count as University electives. Find more details in the Transfer Credit policy (https://catalog.slu.edu/academic-policies/academic-policies-procedures/transfer-credit/).

Students seeking a second bachelor's degree may apply their previous coursework toward program graduation requirements following the same Transfer Credit policy (https://catalog.slu.edu/academic-policies/academic-policies-procedures/transfer-credit/). Find specific University Undergraduate Core requirements for second bachelor's degree students on the University Core page (https://catalog.slu.edu/academic-policies/academic-policies-procedures/university-core/).

Find more information on how credits transfer to SLU on the Transfer Admission page (https://www.slu.edu/admission/transfer/credits/).

Admission Requirements

Freshman Applicants

Solid academic performance in college preparatory coursework is a primary concern in reviewing a first-year applicant's file.

- Admission criteria include:
- Minimum cumulative GPA of 2.70 on a 4.00 scale
- Saint Louis University has a test-optional admission process for all undergraduate programs. Applicants may submit standardized test scores, but those who choose not to will not be disadvantaged in any way in the admission process.

Transfer Applicants

The minimum college transfer GPA is 2.70/4.00.

International Applicants

All admission policies and requirements for domestic students apply to international students, along with the following:

- You must demonstrate English language proficiency (https://catalog.slu.edu/academic-policies/office-admission/undergraduate/english-language-proficiency/).
- Proof of financial support must include:
  - A letter of financial support from the person(s) or sponsoring agency funding your time at Saint Louis University.
  - A letter from the sponsor's bank verifying that the funds are available and will be so for the duration of your study at the University.
- Academic records, in English translation, of students who have undertaken postsecondary studies outside the United States must include the courses taken and/or lectures attended, practical laboratory work, the maximum and minimum grades attainable, the grades earned or the results of all end-of-term examinations, and any honors or degrees received. WES and ECE transcripts are accepted.

Tuition

Tuition/Fee	Cost Per Year
Undergraduate Tuition	$58,960
University Fees	$1,000

Additional charges may apply. Other resources are listed below:

Net Price Calculator (https://www.slu.edu/financial-aid/tuition-and-costs/calculator.php)

Cost of Attendance (https://www.slu.edu/financial-aid/tuition-and-costs/cost-of-attendance.php)

Information on Tuition and Fees (https://catalog.slu.edu/academic-policies/student-financial-services/tuition/)

Miscellaneous Fees (https://catalog.slu.edu/academic-policies/student-financial-services/fees/)

Information on Summer Tuition (https://catalog.slu.edu/academic-policies/student-financial-services/tuition-summer-current/tuition-summer-current.pdf)

Scholarships and Financial Aid

There are two principal ways to help finance a Saint Louis University education:

- **Scholarships:** Awarded based on academic achievement, service, leadership and financial need. In addition to SLU scholarships, the Doisy College of Health Sciences offers scholarships (https://www.slu.edu/doisy/about/scholarships-for-current-students.php) to sophomores, juniors, seniors and graduate students.
- **Financial Aid:** Provided in the form of grants and loans, some of which require repayment.

For priority consideration of merit-based scholarships, applicants should apply for admission by Dec. 1 and complete a Free Application for Federal Student Aid (FAFSA) by Feb. 1.

For more information, visit the Office of Student Financial Services (https://www.slu.edu/financial-aid/).

Accreditation

The magnetic resonance imaging program at Saint Louis University is fully accredited by the Joint Review Committee on Education in Radiologic Technology (JRCERT), having been awarded an eight-year accreditation. The program's next scheduled accreditation review is in the third quarter of 2027. General program accreditation information and the current accreditation award letter can be found on the JRCERT website (https://www.jrcert.org/programs/saint-louis-university/).

Joint Review Committee on Education in Radiological Technology (JRCERT) (https://www.jrcert.org/)
20 N. Wacker Drive, Suite 2850
Chicago, Illinois 60606-3182
312-704-5300
jrcert.org (https://www.jrcert.org/)

For more information about the SLU magnetic resonance imaging program's goals, program outcomes, certification examination pass rates, job placement rates, technical standards and program-specific costs, please review the additional accreditation information document.

View Additional Accreditation Information (PDF) (https://www.slu.edu/doisy/degrees/-pdf/mri-accreditation.pdf)

Learning Outcomes
Doisy College of Health Sciences Learning Outcomes

1. Graduates will be able to demonstrate the Jesuit mission by caring for the whole patient.
2. Graduates will be able to demonstrate effective communication skills when interacting in the MRI profession.
3. Graduates will be able to apply critical reasoning as it relates to the MRI setting.
4. Graduates will be able to demonstrate the application of professional knowledge.
5. Graduates will be able to recognize ethical practices in the health care setting.

Magnetic Resonance Imaging Program Learning Outcomes and Goals

1. Students will be clinically competent.
   a. Students will appropriately use, record and verify patient data.
   b. Students will position patients as directed.
   c. Students will use the proper imaging sequences for ordered exams.
   d. Students practice proper MRI and patient safety.
2. Students will demonstrate problem-solving and critical-thinking skills.
   a. Students will complete imaging procedures, explaining steps in detail.
   b. Students will present case studies and MRI final capstone project.
3. Students will demonstrate effective communication skills.
   a. Students will appropriately communicate with patients.
   b. Students will demonstrate appropriate written communication.
   c. Students will demonstrate proper presentation skills.
4. Students will demonstrate professional growth and development.
   a. Students will demonstrate professional behaviors.
   b. Students will have knowledge of ethical behaviors.
   c. Students will demonstrate professional growth through critical thinking.

The program annually tracks student learning outcomes as they relate to the above student goals.

Requirements

Students in Saint Louis University's magnetic resonance imaging program take the following courses.

Code	Title	Credits
Undergraduate University Core (https://catalog.slu.edu/academic-policies/academic-policies-procedures/university-core/)		**32-35**
Foundation		
BIOL 1240 & BIOL 1245	General Biology: Information Flow and Evolution and Principles of Biology I Laboratory (satisfies CORE 3800)	4
CHEM 1080 & CHEM 1085	Principles of Chemistry 1 Lecture and Principles of Chemistry 1 Lab	4
CMM 1200	Public Speaking (satisfies CORE 1200)	3
ENGL 1900	Advanced Strategies of Rhetoric and Research (satisfies CORE 1900)	3
HCE 1600	Embodiment, Life, and Death in Context	3
HIM 4750	Fundamentals of Clinical Medicine	3
HSCI 2100	Health Care Management	3
HSCI 2200	Medical Terminology	3
HSCI 3200	Aspects of Health Law	3
HSCI 3300 & HSCI 3310	Anatomy & Physiology I and Anatomy & Physiology I Lab	4

HSCI 3400 & HSCI 3410	Anatomy and Physiology Lecture II and Anatomy & Physiology II Lab	4
HSCI 3700	Research Methods (satisfies CORE 4000)	3
IPE 4200	Applied Decision-Making in Interprofessional Practice	3
MATH 1200	College Algebra	3
MATH 1320	Survey of Calculus	3
PHIL 2050	Ethics	3
PHYS 1310 & PHYS 1320	College Physics I and College Physics I Laboratory	4
PHYS 1330 & PHYS 1340	Physics II and Physics II Laboratory	4
PSY 1010	General Psychology (satisfies CORE 3600)	3
STAT 1300	Elementary Statistics with Computers (satisfies CORE 3200)	3
Magnetic Resonance Imaging		
MRI 4300	MRI Clinical Practicum I (satisfies CORE 4500)	6
MRI 4310	Physical Principles	3
MRI 4320	Cross Sectional Anatomy and Pathology	3
MRI 4330	Instrumentation and Quality Analysis	3
MRI 4340	Clinical MRI & Imaging Production I	3
MRI 4345	Clinical MRI & Imaging Production II	3
MRI 4350	Patient Care and MRI Safety	3
MRI 4420	Emerging Technologies	2
MRI 4700	MRI Clinical Practicum II	10
MRI 4750	MRI Clinical Practicum Senior Seminar (satisfies CORE 3500)	1
MRI 4860	Capstone in MRI	2
Total Credits	**Credit Hour Note (https://catalog.slu.edu/academic-policies/academic-policies-procedures/double-counting/)**	**137-140**

Second Bachelor's Degree Option

Total program credits vary based on transfer credits. Each student will work with their advisor to create their specific course plan.

Continuation Standards

Students must maintain a cumulative grade point average (GPA) of 2.70 to remain in good standing.

Roadmap

This roadmap is just one example of a semester-by-semester plan of study for this program. There are other plans students can and do take. The plan of study for each particular student is established in consultation with each student's academic advisor; *this roadmap does not replace academic advising appointments.*

Roadmap notes:

- This Roadmap assumes full-time enrollment unless otherwise noted.
- Courses/Milestones marked with an "!" are critical and must be completed in the semester listed in the Roadmap to ensure a timely graduation.
- Course availability and sequencing are subject to change.

Course	Title	Credits
Year One		
Fall		
CHEM 1080 & CHEM 1085	Principles of Chemistry 1 Lecture and Principles of Chemistry 1 Lab	4
CMM 1200	Public Speaking (satisfies CORE 1200)	3
CORE 1000	Ignite First Year Seminar	2 or 3
CORE 1500	Cura Personalis 1: Self in Community	1
MATH 1200	College Algebra	3
XXXX	Elective	3
	Credits	**16-17**
Spring		
CORE 1700	Ultimate Questions: Philosophy	3
ENGL 1900	Advanced Strategies of Rhetoric and Research (satisfies CORE 1900)	3
MATH 1320	Survey of Calculus	3
PSY 1010	General Psychology (satisfies CORE 3600)	3
STAT 1300	Elementary Statistics with Computers (satisfies CORE 3200)	3
	Credits	**15**
Year Two		
Fall		
! BIOL 1240 & BIOL 1245	General Biology: Information Flow and Evolution and Principles of Biology I Laboratory (! satisfies CORE 3800)	4
HSCI 2200	Medical Terminology	3
IPE 2100	Interprofessional Collaboration and Healthcare in Global Context	3
PHYS 1310	College Physics I	3
PHYS 1320	College Physics I Laboratory	1
	Credits	**14**
Spring		
CORE 2500	Cura Personalis 2: Self in Contemplation	0
CORE 2800	Eloquentia Perfecta 3: Creative Expression	2-3
CORE 3400	Ways of Thinking: Aesthetics, History, and Culture	3
HCE 1600	Embodiment, Life, and Death in Context (satisfies CORE 1600)	3
HSCI 2100	Health Care Management	3
PHYS 1330	College Physics II	3
PHYS 1340	College Physics II Laboratory	1
	Credits	**15-16**
Year Three		
Fall		
HIM 4750	Fundamentals of Clinical Medicine	3
HSCI 3200	Aspects of Health Law	3
HSCI 3300 & HSCI 3310	Anatomy & Physiology I and Anatomy & Physiology I Lab	4
HSCI 3700	Research Methods (! satisfies CORE 4000)	3
General Elective		3
	Credits	**16**

Spring		
HSCI 3400 & HSCI 3410	Anatomy and Physiology Lecture II and Anatomy & Physiology II Lab	4
IPE 4200	Applied Decision-Making in Interprofessional Practice	3
MRI 4340	Clinical MRI & Imaging Production I	3
MRI 4350	Patient Care and MRI Safety	3
	Credits	**13**
Year Four		
Fall		
MRI 4300	MRI Clinical Practicum I (❗ satisfies CORE 4500)	6
MRI 4310	Physical Principles	3
MRI 4320	Cross Sectional Anatomy and Pathology	3
MRI 4330	Instrumentation and Quality Analysis	3
MRI 4345	Clinical MRI & Imaging Production II	3
	Credits	**18**
Spring		
MRI 4420	Emerging Technologies	2
MRI 4700	MRI Clinical Practicum II	10
MRI 4750	MRI Clinical Practicum Senior Seminar (❗ satisfies CORE 3500)	1
MRI 4860	Capstone in MRI	2
	Credits	**15**
	Total Credits	**122-124**

Contact Us

Apply for Admission (https://www.slu.edu/admission/)

Contact Doisy College of Health Sciences
Recruitment specialist
314-977-2570
dchs@health.slu.edu

2+SLU

2+SLU programs provide a guided pathway for students transferring from a partner institution.

Magnetic Resonance Imaging, B.S. (STLCC 2+SLU) (https://catalog.slu.edu/academic-policies/office-admission/undergraduate/2plusslu/stlcc/magnetic-resonance-imaging/)