

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 (MRI) 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 is 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 pre-med and pre-physician 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/program-pdfs/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).

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 \$ 81,530 in 2022.

Admission Requirements

Freshmen 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.

Tuition

Tuition	Cost Per Year
Undergraduate Tuition	\$52,260

Additional charges may apply. Other resources are listed below:

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

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 University 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 for merit-based scholarships, applicants should apply for admission by Dec. 1 and complete a Free Application for Federal Student Aid (FAFSA) by March 1.

For more information, visit the student financial services office online at <http://finaid.slu.edu> (<http://finaid.slu.edu/>).

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.

Joint Review Committee on Education in Radiological Technology (JRCERT)
20 N. Wacker Drive, Suite 2850
Chicago, Illinois 60606-3182
312-704-5300
<http://www.jrcert.org> (<http://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. (<https://www.slu.edu/doisy/degrees/program-pdfs/mri-accreditation-1218.pdf>)

View Additional Accreditation Information (PDF) (<https://www.slu.edu/doisy/degrees/program-pdfs/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 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 exam.
 - 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/)		
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	Health Law and Policy	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 1220 & PHYS 1235	General Physics I and General Physics I Lab	4
PHYS 1240 & PHYS 1255	General Physics II and General Physics II Lab	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 4960	Capstone in MRI	2
Total Credits		137-140

Second Bachelor's Degree Option

Total semester credits vary based on applicable courses complete in undergraduate program. Specific course plan is individually designed for each applicant.

Code	Title	Credits
Transfer Credits		
Select 56 credits		56
Prerequisite Courses		
Principles Chemistry I with Lab		4
General Physics I with Lab		4
General Physics II with Lab		4
Anatomy and Physiology I with Lab		4
Anatomy and Physiology II with Lab		4
Medical Ethics		3
College Algebra		3
Oral and Written Communication		3
Theology		3
Magnetic Resonance Imaging		
MRI 4300	MRI Clinical Practicum I	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	1

MRI 4960	Capstone in MRI	2
Total Credits		127

Continuation Standards

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

Roadmap

Roadmaps are recommended semester-by-semester plans of study for programs and assume full-time enrollment unless otherwise noted.

Courses and milestones designated as critical (marked with !) must be completed in the semester listed to ensure a timely graduation. Transfer credit may change the roadmap.

This roadmap should not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor/mentor each semester. Requirements, 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
CORE 1500	Cura Personalis 1: Self in Community	1
MATH 1200	College Algebra	3
XXXX	Elective	3
Credits		16
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 1220 & PHYS 1235	General Physics I and General Physics I Lab	4
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 1240 & PHYS 1255	General Physics II and General Physics II Lab	4
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
Credits		13
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 4960	Capstone in MRI	2
Credits		15
Total Credits		119-120

Second Baccalaureate Degree Track

Code	Title	Credits
Prerequisite Courses		
College Algebra		3
Principles of Chemistry I		8
General Physics I & II		8
Anatomy and Physiology I & II		8
Medical Ethics		3
Oral and Written Communication Elective		3

Theology	3
Total Credits	36

Courses to Be Taken at Saint Louis University

Course	Title	Credits
Year One		
Fall		
MRI 4300	MRI Clinical Practicum I	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 4350	Patient Care and MRI Safety	3
Credits		21
Spring		
MRI 4420	Emerging Technologies	2
MRI 4700	MRI Clinical Practicum II	10
MRI 4960	Capstone in MRI	2
Credits		14
Total Credits		35

Program Notes

Successful completion of this program leads to a second baccalaureate degree in magnetic resonance imaging. This option is for a student who already possesses a bachelor's degree and is motivated to become a practicing magnetic resonance technologist.

To be considered for the second baccalaureate degree option, the applicant must have satisfactorily completed a baccalaureate degree, with a minimum GPA of 2.7 (on a 4.0 scale), including the prerequisite courses listed above.

The applicant must complete the application for the MRI program and submit official transcripts of prior college work through the SLU admission website at <http://www.slu.edu>.

The applicant must show satisfactory evidence of good character and physical ability to perform functions of magnetic resonance technologists. All applicants must meet the professional performance and technical standards required by the profession. Students must also successfully complete a drug screen and criminal background check prior to the start of clinical rotations.

Application to the program is via a competitive application process with admission granted on a space-available basis. The selection process includes a personal interview for qualified applicants.

Selection Factors — Among the parameters considered by the selection committee are:

- Applicant's academic potential as evidenced by previous performance in college
- Specific motivation toward pursuit of a health care profession
- Evidence of sound judgment
- Interpersonal and communication skills

- Job shadowing of a magnetic resonance imaging department is highly recommended

Contact Us

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

Contact Doisy College of Health Sciences:

Julie Miller
Recruitment Specialist
314-977-2570
dchs@health.slu.edu