

MEDICAL IMAGING, MAGNETIC RESONANCE IMAGING, ASSOCIATE OF APPLIED SCIENCE



Program Information

A magnetic resonance imaging technologist is qualified in providing patient services using magnetic fields and radio waves to assist in the diagnosis and detection of disease. The typical duties of the magnetic resonance imaging technologist include performing MRI procedures for diagnostic interpretation, providing patient care, applying MRI safety principles, evaluating MRI images for technical quality and applying professional judgement.

The San Jacinto College Magnetic Resonance Imaging Associate of Applied Science (AAS) degree program:

- Educates and trains students for entry-level employment in magnetic resonance imaging through on-site rotations in area hospitals and clinics;
- Teaches Students to be clinically competent, possess critical thinking skills, communicate effectively, and act professionally making ethically sound decisions; and
- Trains students in appropriate patient care, complete magnetic resonance imaging procedures of diagnostic quality, demonstrate proper MRI safety, demonstrate the ability to modify routine procedures for non-routine scenarios as well as critique images for diagnostic quality.

Career Opportunities

Employment outlook is excellent, and many of our students will gain employment within 6-12 months of graduation. Graduates of this program can gain employment in hospitals, clinics, or imaging centers.

Additional Information

This AAS degree program provides a primary pathway for eligibility to take the American Registry of Radiologic Technologists (ARRT) certification exam in magnetic resonance imaging. Students are admitted on a competitive basis because clinical space is limited. Those

seeking admission should first apply to San Jacinto College and gain acceptance to the College.

The Magnetic Resonance Imaging AAS degree program holds information sessions throughout the year for those interested in the program. For dates and times of these information sessions, students can call the Medical Imaging Department at 281-476-1871 or look for posted times on the San Jacinto College Medical Imaging webpage (<https://www.sanjac.edu/programs/areas-of-study/health/medical-imaging/>). Attendance at an information session is required prior to application to the program. Program admission criteria and the selection process are explained at the information session.

Earning potential

Magnetic Resonance Imaging Technologist: \$80,029¹

¹ Source: texaswages.com (<https://texaswages.com/WDAWages/>), medial salary Gulf Coast region, 2022

For more information, students may contact 281-476-1871.

Campus

Central Campus

Information

Students enrolling into San Jacinto College programs with external learning experiences (i.e., clinical, practicum, externship, cooperative, etc.) will be required to comply with the immunization requirements and policies of the clinical/external learning sites to engage in all clinical/external learning experiences. Vaccination requirements at clinical/external learning sites are implemented pursuant to the independent authority of such facilities and are not mandated by San Jacinto College. Failure to meet the immunization requirements mandated by clinical/external learning sites may limit a student's ability to complete the program and/or may delay the student's graduation date. San Jacinto College does not process exemptions, and students should address potential vaccination exemptions directly with the clinical/external learning site.

Magnetic Resonance Imaging Program

Purpose Statement

The purpose of the Magnetic Resonance Imaging Associate of Applied Science (AAS) degree program is to prepare students for entry level employment in the field of magnetic resonance imaging with the knowledge, skills, and values to be a successful member of the health care community.

The program is committed to excellence in providing a comprehensive educational experience. The program curriculum is a balance of general education and technical courses, as well as supervised clinical experience at local hospitals and clinics. The program courses utilize both theory and competency-based educational components designed to prepare the student to become a magnetic resonance imaging technologist.

Upon successful completion of the Magnetic Resonance Imaging AAS degree program, the student is granted an AAS degree and is eligible to apply for the certification examination given by the American Registry of Radiologic Technologists (ARRT).

The program effectiveness goals of the Magnetic Resonance Imaging Program are as follows:

1. Graduates will pass the national certification examination on the first attempt.
2. Graduates will be gainfully employed.
3. Students will complete the program within four semesters of program admission.
4. Employers will be satisfied with program graduates.
5. Graduates will be satisfied with the quality of their education received.

Student Goals and Student Learning Outcomes

The goals for the Magnetic Resonance Imaging program are as follows:

Goal 1: Students will demonstrate clinical competency.

1. Students will apply magnetic safety measures.
2. Students will produce magnetic resonance images of acceptable diagnostic quality.

Goal 2: Students will develop and apply critical thinking.

1. Students will adapt magnetic resonance procedures for nonroutine situations.
2. Students will critique images for diagnostic quality.

Goal 3: Students will develop and apply critical thinking.

1. Students will communicate effectively as a part of the health care team.
2. Students will be able to communicate through written correspondence pertaining to health care.

Goal 4: Students will model professionalism.

1. Students will analyze various health care scenarios to appropriately recognize and apply ethically sound decisions.
2. Students will exhibit professionalism by delivering unrestricted patient care regardless of various patient differences including age, gender, race, creed, social, cultural or economic status, abilities, personal attributes, or the nature of the health problem.

Program Admission criteria

The Magnetic Resonance Imaging program is a selective admission program. A limited number of students are admitted into the program once a year. Class size is determined by the availability of clinical space. Limited enrollment ensures a quality laboratory and clinical experience needed to become a competent, entry-level magnetic resonance imaging technologist.

To be considered for selection to the Magnetic Resonance Imaging AAS degree program the following steps must be completed:

1. Attend an information session. For dates, students may call 281-476-1871 or visit the Medical Imaging (<https://www.sanjac.edu/programs/areas-of-study/health/medical-imaging/>) webpage.
2. Be admitted to San Jacinto College. Students may visit the website at How to Apply (<https://www.sanjac.edu/admissions/how-to-apply/>).
3. Provide Official Transcripts.

- a. Students with any transfer credits MUST have college transcripts evaluated by San Jacinto College Admissions prior to submitting an application.
 - b. The Medical Imaging Department Chair has final approval of all transferred courses that apply toward the Magnetic Resonance Imaging AAS degree.
 - c. Transcripts from all other colleges attended must be official and sent to the Admissions Office and submitted in the program online application.
4. Complete the following prerequisite courses with a minimum of a C or higher.

Code	Title	Credits
ENGL 1301	Composition I	3
MATH 1314	College Algebra ¹	3
BIOL 2301 & BIOL 2101	Anatomy and Physiology I (Lecture) and Anatomy and Physiology I (Lab) ²	4
Select one of the following:		4
SCIT 1420	Physics for Allied Health ³	
PHYS 1301 & PHYS 1101	College Physics I (lecture) and College Physics I (lab)	

¹ For credit earned in a required biology course to be applicable to the Magnetic Resonance Imaging program, credit must have been earned within the past five (5) years and the grade earned must have been a C or higher. Credit earned in a required biology course exceeds the five (5) year stipulation if the credit was earned five (5) or more years prior to the first term in which the student enrolls into the program.

² For credit earned in the required SCIT 1420 Physics for Allied Health or PHYS 1301 College Physics I (lecture) and PHYS 1101 College Physics I (lab) course to be applicable to the Magnetic Resonance Imaging AAS Degree Program, credit must have been earned within the past five (5) years and the grade earned must have been a C or higher. Credit earned in the required SCIT 1420 or PHYS 1301/PHYS 1101 course exceeds the five (5) year stipulation if the credit was earned five (5) or more years prior to the first term in which the student enrolls into the program.

For the fall 2024 application period, SCIT 1420 Physics for Allied Health may be in progress at the time of application. If the candidate is selected for program admission, the selection would be provisional, and the candidate must provide proof of completion of the enrolled SCIT 1420 Physics for Allied Health course with a grade of C or higher.

³ Higher level math such as Calculus I may be evaluated for possible substitution if a student was placed out of College Algebra. Substitutions must be approved by the Department Chair and Dean of Health & Natural Sciences.

5. Submit the online Magnetic Resonance Imaging AAS degree program application within the application period.

Selection Criteria

Students who apply for admission to the Magnetic Resonance Imaging AAS degree program will be selected based on the total score on the application scoring rubric to include both GPA and HESI A2 entrance examination scores along with identified achievement points or deduction points. Admission scoring rubric information will be included in the information sessions. Applicants must be in good academic standing with the college (minimum 2.0). Meeting minimal entry requirements does not guarantee program admission.

Transfer Students

Course work from another program will be evaluated on an individual basis by the Program Director, Department Chair, and the Admission Appeals Committee. A grade of C or better is required on all transferred prerequisite, general education, and program-specific courses. Transfer students must obtain letter from the current Program Director verifying good standing academically and ethically. Transfer from another program will require a one-time entrance didactic and skill competency exam based on program progression level. Transfer student must have been enrolled in a magnetic resonance imaging program within two semesters of requested transfer. Transfer students must meet all criteria required of San Jacinto College Magnetic Resonance Imaging program students and complete at least 50% of the program at San Jacinto College. Transfer students from another program will be admitted on a space-available basis.

Student Progression

If a student earns a grade of D, W, or F in a Magnetic Resonance Imaging program course, the student will not be permitted to continue or to graduate from the program until that course has been repeated and a grade of C or above has been earned. Three grades of D, F, or W in any combination from a program course will cause permanent suspension from the Magnetic Resonance Imaging program. A student may appeal their suspension with the Medical Imaging Appeals Committee.

Program Clinical Requirements

Students selected for any of the Medical Imaging programs are required to submit a physical exam after they have received provisional acceptance to the program. The department will provide instructions. This physical exam must be consistent with the requirements of the teaching hospitals and agencies the student is assigned during clinical assignments and the performance standards required to function as a student imaging technologist. The exam will also include documentation of any communicable diseases along with immunity to Rubella, Measles, Mumps, Varicella, and Hepatitis B. Completion of an updated Tetanus, an annual TB screening, and the current seasonal flu vaccine are required. In addition to meeting all other requirements, students entering a Medical Imaging program will be required to submit a criminal background check and drug and alcohol screening completed by designated companies, show proof of health insurance, and CPR (American Heart Associate-Health Care Provider) certification. Clinical affiliates may require additional immunizations, titers, and documentation.

In accordance with Texas House Bill 1508, the College informs all students in this program who may have a criminal background that a criminal history could keep graduates from being licensed by the state of Texas. Students with any questions about their background and licensure may speak with the Department Chair.

Plan of Study

3MED-MRI

Prerequisites	Credits
MATH 1314 College Algebra ¹	3
BIOL 2301 & BIOL 2101 Anatomy and Physiology I (Lecture) and Anatomy and Physiology I (Lab) ²	4
ENGL 1301 Composition I	3
Select one of the following: ³	4
SCIT 1420 Physics for Allied Health	

PHYS 1301 & PHYS 1101	College Physics I (lecture) and College Physics I (lab)	
Credits		14
First Term		
BIOL 2302 & BIOL 2102	Anatomy and Physiology II (Lecture) and Anatomy and Physiology II (Lab)	4
	Language, Philosophy and Culture (Humanities) or Creative Arts (Fine Arts)	3
RADR 1303	Patient Care	3
HPRS 1206	Essentials of Medical Terminology	2
Credits		12
Second Term		
RADR 2340	Sectional Anatomy for Medical Imaging	3
MRIT 2330	Principles of Magnetic Resonance Imaging	3
MRIT 1471	MR Imaging Procedures	4
MRIT 2260	Clinical I - Radiologic Technology/Science - Radiographer	2
Credits		12
Third Term		
MRIT 2334	Magnetic Resonance Equipment and Methodology	3
MRIT 2355	Magnetic Resonance Imaging Physics	3
MRIT 2461	Clinical II - Radiologic Technology/Science - Radiographer	4
Credits		10
Fourth Term		
MRIT 2462	Clinical III - Radiologic Technology/Science - Radiographer	4
MRIT 2274	MRI Pathology	2
MRIT 2375	Magnetic Resonance Imaging Technology Seminar	3
PSYC 2301	General Psychology	3
Credits		12
Total Credits		60

- ¹ Higher level math such as Calculus I may be evaluated for possible substitution if a student was placed out of college algebra. Substitutions must be approved by the Department Chair and Dean of Health & Natural Sciences.
- ² For credit earned in a required biology course to be applicable to the Magnetic Resonance Imaging program, credit must have been earned within the past five (5) years and the grade earned must have been a C or higher. Credit earned in a required biology course exceeds the five (5) year stipulation if the credit was earned five (5) or more years prior to the first term in which the student enrolls into the program.
- ³ For credit earned in the required SCIT 1420 Physics for Allied Health or PHYS 1301 College Physics I (lecture) and PHYS 1101 College Physics I (lab) course to be applicable to the Magnetic Resonance Imaging AAS Degree Program, credit must have been earned within the past five (5) years and the grade earned must have been a C or above. Credit earned in the required SCIT 1420 or PHYS 1301/PHYS 1101 course exceeds the five (5) year stipulation if the credit was earned five (5) or more years prior to the first term in which the student enrolls into the program.
For the Fall 2024 application period, SCIT 1420 Physics for Allied Health may be in progress at the time of application. If the candidate is selected for program admission, the selection would be provisional,

and the candidate must provide proof of completion of the enrolled SCIT 1420 Physics for Allied Health course with a grade of C or higher.

Capstone Experience: Eligibility to take ARRT MRI certification examination.

The College will award students either the Medical Imaging, Magnetic Resonance Imaging, Associate of Applied Science degree or the Medical Imaging, Magnetic Resonance Imaging, Advanced Technical Certificate, but not both.

Students must earn a C or better in all Diagnostic Medical Sonography (DMSO) and all science courses; the student will not be permitted to continue or to graduate from the program until that course has been repeated and a grade of C or above has been earned.