



DEPARTMENT OF
HIGHER EDUCATION &
WORKFORCE DEVELOPMENT

New Program Report

Date Submitted:

05/29/2024

Institution

St. Louis Community College

Site Information

Implementation Date:

1/1/2025 12:00:00 AM

Added Site(s):

Selected Site(s):

St. Louis Community College, Corporate College, 3221 McKelvey Road, Bridgeton, MO, 63044

CIP Information

CIP Code:

510920

CIP Description:

A program that prepares individuals who are AART-certified radiological technicians to utilize MRI technology to obtain still and moving images of various vascular structures in the human body that aid the physician in the diagnosis or treatment of disease and injury. Includes instruction in MRI imaging, sectional anatomy and pathology, MRI technology, MRI techniques and procedures, MRI physics, and clinical training.

CIP Program Title:

Magnetic Resonance Imaging (MRI) Technology/Technician

Institution Program Title:

Magnetic Resonance Imaging

Degree Level/Type

Degree Level:

Certificate >= 1 Year but < 2 Year

Degree Type:

Certificate 1

Options Added:

Collaborative Program:

N

Mode of Delivery

Current Mode of Delivery

Classroom

Student Preparation



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Special Admissions Procedure or Student Qualifications required:

Pre-admissions Entrance Requirements:

Completion of all program prerequisites prior to submitting an application. Must earn a "C" or higher in the following courses:

BIO 111 Introductory Biology I or BIO 140 Principles of Biology I or CHM 101 Fundamentals of Chemistry I

BIO 207 Anatomy and Physiology I

BIO 208 Anatomy and Physiology II

PHY 111 College Physics I or PSI 101 Physical Science or XRT 107 Radiologic Physics I

MTH 160 Precalculus Algebra or MTH 180 Introductory Statistics

HIM 101 Medical Terminology and Language

ENG 101 College Composition

COM 101 Oral Communications or COM 107 Public Speaking

Associate degree or higher

Cumulative GPA of 2.7 or better for all coursework; cumulative GPA of 3.0 or better for Mathematics and Sciences courses (Physics or Physical Science, Anatomy and Physiology I and II, Precalculus Algebra or Introductory Statistics)

Only one repeat of a course prerequisite is allowed over a five-year period

Complete 4 hours of job shadowing

Complete 40 hours in a patient care setting (can be voluntary service within a hospital or nursing home)

Mathematics and science prerequisite courses must have been completed within five years of entering the program

Students who have graduated within the last 2 years from a JRCERT-accredited Radiologic Technology program are not required to retake math or science courses that are more than 5 years old. All required courses and other prerequisites must have still been completed to be eligible to apply.

If a student's math prerequisite was taken over 5 years ago, they may take the math placement test and do not have to retake the math prerequisite if the score is 264 or higher on Accuplacer Next-Gen QAS.

All applicants must complete a criminal background check and drug screen through a college-approved background screening company prior to the beginning of the fall semester of admission.

Specific Population Characteristics to be served:

n/a

Faculty Characteristics

Special Requirements for Assignment of Teaching for this Degree/Certificate:

The program coordinator will need to meet the qualifications outlined by the JRCERT (Master's degree, MRI certification, three years of clinical experience, two years of experience as an instructor in a JRCERT accredited program). Clinical coordinator will need to possess a baccalaureate degree with MRI certification and two years of clinical experience.

Estimate Percentage of Credit Hours that will be assigned to full time faculty:

100%

Expectations for professional activities, special student contact, teaching/learning innovation:

Faculty will be expected to complete continuing education activities at professional conferences.

Student Enrollment Projections Year One-Five

Year 1	Full Time: 10	Part Time: 0	
Year 2	Full Time: 12	Part Time: 0	



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Year 3	Full Time: 15	Part Time: 0	Number of Graduates: 24
Year 4	Full Time: 18	Part Time: 0	
Year 5	Full Time: 20	Part Time: 0	Number of Graduates: 54

Percentage Statement:

75.00

Program Accreditation

Institutional Plans for Accreditation:

The college will seek JRCERT accreditation as soon as the program is approved by the state.

Program Structure

Total Credits:

42

Residency Requirements:

n/a

General Education Total Credits:

0

Major Requirements Total Credits:

42

Course(s) Added

COURSE NUMBER	CREDITS	COURSE TITLE
MRI 213	4	Magnetic Resonance Imaging Practicum III
MRI 212	5	Magnetic Resonance Imaging Practicum II
MRI 204	2	Magnetic Resonance Imaging Safety & Patient Care II
MRI 201	2	Magnetic Resonance Imaging Clinical Applications II
MRI 205	2	Magnetic Resonance Imaging Physics II
MRI 103	3	Magnetic Resonance Imaging Anatomy & Pathology I
MRI 214	3	Magnetic Resonance Imaging Capstone
MRI 203	2	Magnetic Resonance Imaging Instrumentation II
MRI 102	3	Magnetic Resonance Imaging Anatomy & Pathology I



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MRI 211	3	Magnetic Resonance Imaging Practicum I
MRI 202	2	Magnetic Resonance Imaging Anatomy & Pathology II
MRI 101	5	Magnetic Resonance Imaging Clinical Applications I
MRI 104	3	Magnetic Resonance Imaging Safety & Patient Care I
MRI 105	3	Magnetic Resonance Imaging Physics I

Free Elective Credits:

0

Internship or other Capstone Experience:

Magnetic Resonance Imaging (MRI) Capstone is a comprehensive review of fundamental concepts and materials learned throughout the MRI Program. Students demonstrate their knowledge and comprehension of key MRI content areas, including image formation and processing, cross-sectional anatomy, primary and secondary hardware systems, clinical procedures, and patient safety. Students complete summative assessments in written, oral, and simulation formats to prepare for MRI Program completion and to assess readiness for the American Registry of Radiologic Technologists MRI registry examination.

Assurances

I certify that the program is clearly within the institution's CBHE-approved mission. The proposed new program must be consistent with the institutional mission, as well as the principal planning priorities of the public institution, as set forth in the public institution's approved plan or plan update.

I certify that the program will be offered within the proposing institution's main campus or CBHE-approved off-site location.

I certify that the program will not unnecessarily duplicate an existing program of another Missouri institution in accordance with 6 CSR 10-4.010, subsection (9)(C) Submission of Academic Information, Data and New Programs.

I certify that the program will build upon existing programs and faculty expertise.

I certify that the program can be launched with minimal expense and falls within the institution's current operating budget.

I certify that the institution has conducted research on the feasibility of the proposal and it is likely the program will be successful. Institutions' decision to implement a program shall be based upon demand and/or need for the program in terms of meeting present and future needs of the locale, state, and nation based upon societal needs, and/or student needs.

Contact Information

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Vaughn

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New Program Proposal

Magnetic Resonance Imaging, Certificate of Proficiency

Changes proposed by: Austin Turner

Program Title

Magnetic Resonance Imaging, Certificate of Proficiency

Level of Program

Certificate of Proficiency

Campus of Origin

Forest Park

Also offered at:

Discipline

Radiologic Technology

Effective Catalog

Fall 2025

Have you completed the new program development process?

Yes

Please attach the Proposal to Develop/Revise form:

MRI CP RTD-R Form.pdf

Need and Reason for Program/ Revision

According to the BLS, overall employment of MRI technologists is projected to grow 9 percent from 2020 to 2030, about as fast as the average for all occupations. Approximately 20,800 openings for MRI technologists are projected each year, on average, over the decade. This program will offer an opportunity for students to receive advanced education and training in magnetic resonance imaging. It will help meet ever-growing demand for MRI technologists in area hospitals and imaging centers. It will strengthen our community we serve.

Catalog Description

The Magnetic Resonance Imaging (MRI) Certificate of Proficiency provides training in MRI technologies and procedures for graduates of an associate degree program or two-year hospital-based program in another health science area. Students attend full-time and complete classroom work on campus, while clinical education is completed in an affiliated MRI department. The MRI certificate provides the student with the required didactic and

clinical competencies to perform as a Magnetic Resonance Imaging Technologist in medical imaging departments of hospitals, medical centers, and free-standing diagnostic imaging facilities. Upon successful completion of the program, students are eligible to complete the American Registry of Radiologic Technologists (ARRT) MRI registry examination.

Pre-admissions Entrance Requirements:

- Completion of all program prerequisites prior to submitting an application. Must earn a "C" or higher in the following courses:
 - BIO 111 Introductory Biology I or BIO 140 Principles of Biology I or CHM 101 Fundamentals of Chemistry I
 - BIO 207 Anatomy and Physiology I
 - BIO 208 Anatomy and Physiology II
 - PHY 111 College Physics I or PSI 101 Physical Science or XRT 107 Radiologic Physics I
 - MTH 160 Precalculus Algebra or MTH 180 Introductory Statistics
 - HIM 101 Medical Terminology and Language
 - ENG 101 College Composition
 - COM 101 Oral Communications or COM 107 Public Speaking
- Associate degree or higher
- Cumulative GPA of 2.7 or better for all coursework; cumulative GPA of 3.0 or better for Mathematics and Sciences courses (Physics or Physical Science, Anatomy and Physiology I and II, Precalculus Algebra or Introductory Statistics)
- Only one repeat of a course prerequisite is allowed over a five-year period
- Complete 4 hours of job shadowing
- Complete 40 hours in a patient care setting (can be voluntary service within a hospital or nursing home)
- Mathematics and science prerequisite courses must have been completed within five years of entering the program
 - Students who have graduated within the last 2 years from a JRCERT-accredited Radiologic Technology program are not required to retake math or science courses that are more than 5 years old. All required courses and other prerequisites must have still been completed to be eligible to apply.
 - If a student's math prerequisite was taken over 5 years ago, they may take the math placement test and do not have to retake the math prerequisite if the score is 264 or higher on Accuplace Next-Gen QAS.

All applicants must complete a criminal background check and drug screen through a college-approved background screening company prior to the beginning of the fall semester of admission. The student will be responsible for the cost of the background check and drug screen. Students not passing the criminal background check and/or drug screen may be prohibited from participating in clinical education. This will prevent the student from being able to complete all program requirements for graduation.

Students are required to complete a health history, immunization record, physical exam, essential functions acknowledgment form, criminal background check, drug screen, and American Heart Association Basic Life Support (BLS) for Healthcare Providers CPR certification prior to the first day of class.

Student Learning Outcomes

Student Learning Outcomes

At the completion of the program, students are expected to:	
LO 1	summarize the principles of magnetic resonance imaging physics, image formation, and data processing.
LO 2	differentiate the characteristics of spin echo and gradient echo pulse sequences.
LO 3	predict the effects of scan parameter adjustment on image appearance.
LO 4	evaluate the appearance of normal anatomical structures and pathological features on magnetic resonance images.
LO 5	diagram the components of magnetic resonance imaging systems.
LO 6	provide safety education to all individuals within the magnetic resonance imaging environment.
LO 7	perform safety screening on all individuals prior to entering the magnetic resonance imaging environment.
LO 8	mitigate safety risks and hazards within the magnetic resonance imaging environment.
LO 9	perform magnetic resonance imaging procedures specific to the head, neck, chest, spine, abdomen, pelvis, and musculoskeletal system.
LO 10	evaluate factors for safe administration of magnetic resonance imaging contrast media.
LO 11	administer contrast media during magnetic resonance imaging procedures.
LO 12	perform quality control procedures on magnetic resonance imaging system components.
LO 13	assess the findings of quality control procedures.

Please attach your assessment plan here:

MRI Assessment Plan April 2024.docx

Courses in Program

Code	Course List		Credit Hours
	Title		
Program Requirements			
<u>MRI 101</u>	Magnetic Resonance Imaging Clinical Applications I		5
<u>MRI 102</u>	Magnetic Resonance Imaging Anatomy & Pathology I		3
<u>MRI 103</u>	Magnetic Resonance Imaging Instrumentation I		3
<u>MRI 104</u>	Magnetic Resonance Imaging Safety & Patient Care I		3
<u>MRI 105</u>	Magnetic Resonance Imaging Physics I		3

Course List

Code	Title	Credit Hours
<u>MRI 201</u>	Magnetic Resonance Imaging Clinical Applications II	2
<u>MRI 202</u>	Magnetic Resonance Imaging Anatomy & Pathology II	2
<u>MRI 203</u>	Magnetic Resonance Imaging Instrumentation II	2
<u>MRI 204</u>	Magnetic Resonance Imaging Safety & Patient Care II	2
<u>MRI 205</u>	Magnetic Resonance Imaging Physics II	2
<u>MRI 211</u>	Magnetic Resonance Imaging Practicum I	3
<u>MRI 212</u>	Magnetic Resonance Imaging Practicum II	5
<u>MRI 213</u>	Magnetic Resonance Imaging Practicum III	4
<u>MRI 214</u>	Magnetic Resonance Imaging Capstone	3
	Total Credit Hours	42

DESE CIP Code

51.0920

NCES CIP Code

510920 - Magnetic Resonance Imaging (MRI) Technology/Technician.