

December 12, 2012

Dr. Crystal Kroner  
Director of Missouri Academic Program Review  
Research Associate - Academic Affairs  
Missouri Department of Higher Education  
205 Jefferson Street  
Jefferson City, MO 65102-6635

**Re: Jefferson College Program Change**

Dear Dr. Kroner:

On behalf of Jefferson College, I am pleased to submit for MDHE/CBHE review, a program proposal for a certificate program in Radiologic Technology, to be included on the February MDHE/CBHE meeting agenda. This new program has an implementation date of Fall 2013.

Per your request, I have attached the following: Form OS (Off-site Delivery of an Existing Program Form); curriculum for the certificate; a rationale for delivering the program off-site and for the student enrollment projections; Form FP (Financial Projections); Form CL (Collaborative Programs); and, the MOU between Jefferson College and St. Charles Community College.

If I can be of further assistance in answering questions, please feel free to contact me. Thank you for working with us to include this request on the February MDHE/CBHE agenda and for your consideration of this request.

Sincerely,



Mindy Selsor, Ph.D.  
Vice President of Instruction  
Chief Academic Officer

MKS:llv  
Attachments

c: Kim Harvey, Director of Admissions and Student Records  
Dena McCaffrey, Interim Dean of Career and Technical Education  
Mr. Kenny Wilson, Director of Health Occupation Programs

## OFF-SITE DELIVERY OF AN EXISTING PROGRAM FORM

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**Sponsoring Institution (s):** Jefferson College

**Program Title:** Radiologic Technology

**Degree/Certificate:** Radiologic Technology Certificate

**Institution Granting Degree:** Jefferson College

**Delivery Site(s):** Jefferson College – Hillsboro campus

**Mode of Program Delivery:** Classroom, hybrid & online based instruction

**Geographic Location of Student Access:**

Jefferson College – Hillsboro campus  
1000 Viking Dr.  
Hillsboro, MO 63050

**CIP Classification:** 51.0911 (Please provide CIP code)

**Implementation Date:** Fall semester of 2013

**Cooperative Partners:** St. Charles Community College

AUTHORIZATION

<u>Mindy Selsor, Ph.D.</u>		<u>12/10/2012</u>
Name/Title of Institutional Officer	Signature	Date
<u>Lisa Vinyard</u>		<u>636-481-3301</u>
Person to Contact for More Information		Telephone

Last Name

First Name

Date of Birth

**ASSOCIATE OF APPLIED SCIENCE  
PROPOSED Degree Plan (Effective 2013-2014)  
RADIOLOGIC TECHNOLOGY**

Minimum 2.50 Cumulative Grade Point Average for Degree.

\* Certificate Option; Minimum 2.5 Grade Point Average Required in All Certificate Courses.

COURSE TITLES	COURSE NUMBERS	COMPLETED	ENROLLED	NEED
* Anatomy and Physiology I (4)	BIO211	These courses must be completed with a "B" or better no more than 5 years prior to application into the program.		
* Anatomy and Physiology II (4)	BIO212			
* First Year Experience (1-3)	COL100/101 or GUD136	All of these prerequisite and corequisite courses must be completed with a "C" or better. Prerequisite courses must be completed no more than 10 years prior to application into the program.		
* English Composition I (3)	ENG101(H)			
* Intermediate Algebra (3)	MTH128			
* Computer Literacy (0-4)	See courses below**			
* Medical Ethics (3)	PHL203			
* Gen Psychology or Gen Sociology (3)	PSY101(H) or SOC101			
* Constitution (3)	HST103(H) or PSC102(H)			
* Radiologic Technology Prep Workshop (.5)	RAD100			
* Introduction to Radiography (2)	RAD105			
* Image Evaluation I (1)	RAD110			
* Radiographic Positioning I (3)	RAD115			
* Image Evaluation II (1)	RAD120			
* Radiographic Positioning II (3)	RAD125			
* Patient Care Management (2)	RAD130			
* Radiographic Positioning III (3)	RAD135			
* Radiographic Exposures (3)	RAD140			
* Radiographic Positioning IV (3)	RAD145			
* Cross-Sectional Anatomy (3)	RAD150			
* Radiographic Biology (3)	RAD155			
* Radiographic Physics (3)	RAD160			
* Radiographic Pharmacology (3)	RAD165			
* Radiographic Pathology (3)	RAD170			
* Image Intensification & Equipment (3)	RAD175			
* Introduction to QA and Adv Imaging Modalities (3)	RAD180			
* Radiography Curriculum Review & Prof. Dev. (3)	RAD185			
* Radiologic Technology Indep Study (1-3) <i>Optional</i>	RAD190			
* Clinical Practicum I (3)	RAD200			
* Clinical Practicum II (3)	RAD210			
* Clinical Practicum III (3)	RAD220			
* Clinical Practicum IV (3)	RAD230			
* Clinical Practicum V (3)	RAD240			
Student Signature/Date	Advisor Signature/Date			

Total Credit Hours: Certificate

75.5-81.5

Total Credit Hours: Degree

84.5-90.5

**CORE GENERAL EDUCATION & INSTITUTIONAL REQUIREMENTS****Group I. Communications 3 hrs.**

ENG101(H) English Comp. I required

**Group II. Humanities/Communications 3 hrs.**

PHL203 required

**Group III. Social/Behavioral Sciences 6 hrs.**

Constitution: (3) HST103(H) or PSC102(H) required

Soc Science: (3) PSY101(H) or SOC101 required

**Group IV. Math and/or Science 11 hrs.**

BIO211, BIO212, MTH128 required

**Group V. \*\*Computer Literacy 0-4 hrs.**BIT138; CIS122,125,133; EDU205; PHY223,  
or computer literacy proficiency exam**Group VI. First Year Experience 1-3 hrs.**

COL100, COL101, or GUD136 required

## Enrollment Projections:

- Student FTE majoring in program by the end of five years.

60 full time students enrolled each year, 30 first year and 30 second year students, (after the first year).

- Percent of full time and part time enrollment by the end of five years.

Part time enrollment will not be an option for [the Radiologic Technology degree or certificate](#).

## Need:

- Rational for student enrollment projections.

### A. Market Demand:

Radiologic Technology - will see an increase of about 28% through 2020, faster than the average for all occupations according to the United State Department of Labor (Source: <http://data.bls.gov/oepl/niuem>).

Demand will stem from an increasing aging population who will have more medical conditions, such as breaks and fractures caused by osteoporosis, which require imaging to diagnose and treat. Radiologic technologists will be needed to maintain and use the diagnostic equipment.

Although hospitals will remain the main employer of radiologic technologists, a number of new jobs will be in physicians' offices and in imaging centers. Employment in these healthcare settings is expected to increase because of the shift toward outpatient care whenever possible. Outpatient care is encouraged by third-party payers as a cost-saving measure and is made possible by technological advances, such as less expensive equipment, which allow for more procedures to be done outside of hospitals.

Job prospects will be best for those with multiple professional credentials, trained to perform a wide range of procedures.

(Source: <http://www.bls.gov/ooh/healthcare/radiologic-technologists.htm#tab-6>)

Because the Missouri Economic Research and Information Center (MERIC) reports the health care industry is one of few that will expand significantly in the next few years, Governor Jay Nixon launched the “Caring for Missourians” program in 2009 to train additional Missouri students to enter high-demand, critical-need health care fields. Governor Nixon announced “Caring for Missourians will help us train the next generation of medical professionals to meet the health care needs of tomorrow while also helping turn our economy around today.” MERIC projects a 12.3% increase in the health care workforce statewide by 2016.

In his January 2011 State of the State address, Governor Nixon said, “We’re fighting for every worker who needs a new skill to compete. We’re fighting for every student who dreams of college and a career. And because we’ve been frugal, we have money to invest in the things that matter most to Missourians: jobs, education, health care, and law enforcement. To compete for twenty-first century jobs, we need a highly skilled and well-trained workforce. Our Training for Tomorrow and Caring for Missourians initiatives are preparing thousands more workers for the careers of tomorrow. We’ve invested millions in training workers to meet the growing demand in fields like computer technology, clean energy, automotive technology, and health care. Much of that training is taking place in our excellent community colleges, where the link between education and employment has always been strong. We’ve also invested \$40 million in training more than 1,000 doctors, dentists, nurses, and other professionals through our Caring for Missourians initiative. With the booming demand for health care, they’ll be ready to step into careers the minute they graduate.”

In Summary, a radiologic technology program not only aligns with the mission of Jefferson College, but also Governor Nixon’s vision for all of Missouri.

**B. Societal Need:**

Health care is an ever changing industry that must adjust to meet the needs of its ever-changing population. Medical and technological developments should permit an increased percentage of trauma victims and newborns with birth defects to survive, creating added demand for imaging services.

In 2011, the first members of the Baby Boomer generation turned 65 years old. It is estimated that by 2030, those over the age of 65 will represent 20% of the population. Due to improvements in the practice of medicine as well as technology, adults who reach the age of 65 are likely to live an additional 19 years. However, about 80% of those over the age of 65 have one chronic condition while 50% are living with two or more chronic conditions. Examples of chronic conditions include arthritis, high blood pressure, heart disease, diabetes, and osteoporosis. Manifestations of these chronic conditions, including functional impairments such as decreased strength, balance, and mobility can lead to falls and further disability. These impairments lead to increased utilization of health care as evidenced by appointments with physicians and hospital stays, and other costs to society.

According to an article in 2007 in The Chronicle of Higher Education, this rapid aging of the population has caused the federal Bureau of Labor Statistics to project that 3.5 million more health care workers will be needed to meet the increasing demand. This number is in addition to replacements for the two million health care workers who will leave their positions.

**C. Methodology Used to Determine Above Noted Demand and Need:**

Research was conducted utilizing information, reports, and articles from sources including the United States Department of Labor, Missouri Economic Research and Information Center, the Office of Governor of Missouri, Missouri Hospital Association, Occupational Outlook Handbook, and regional healthcare facilities and employers.

## **Duplication and Collaboration:**

Duplication of radiologic technology programs in the local area can be justified by two key points. The first point is that some of the area programs have long waiting lists for entry into their radiologic technology programs. Demand for education in this field is high in our local area. The second point is because of the unique opportunity afforded to Jefferson College and St. Charles Community College by the MoHealthWINS grant, industry standard as well as cutting edge equipment and technology will be available to all students accepted into the program from both colleges. With this equipment and technology, students will be afforded a unique opportunity to broaden their knowledge base and discover a deeper understanding of the concepts needed to perform at a high level in the career field of radiologic technology. Another benefit from this collaboration is that St. Charles Community College will not have to invest the monies necessary to start a brand new radiologic technology program to help provide for its service area. This collaboration will help provide qualified radiographers to a service area that is truly in need.

Seventeen Radiography programs currently exist in Missouri. Some are hospital based and some operating in career and technical centers, community colleges and universities. In the greater St. Louis area, three programs exist. They include: Sanford-Brown College, Mercy Medical Center and St. Louis Community College. Mineral Area School of Radiologic Technology in Park Hills is also operating in Jefferson College's region.

Sanford Brown College is located in Fenton, 25 miles north of Jefferson College. This program accepts on average 15 students annually. Sanford Brown awards both associate and bachelor degrees in radiography.

St. Johns Mercy Medical Center is located in St. Louis, 36 miles north of Jefferson College. This program accepts 10 students annually. This is a certificate/diploma program that awards no college credit.

St. Louis Community College is located in St. Louis at Forest Park, 39 miles north of Jefferson College. This program accepts 40 students annually. An associate degree is earned upon completion of this program.

Mineral Area School of Radiologic Technology is located in Park Hills, 37 miles south of Jefferson College. This program accepts 16 students annually. An associate degree is earned upon completion of this program.

Jefferson College and St. Charles Community College will offer a Radiologic Technology Program using a two year, integrated format in which some of the general education and technical courses can occur together throughout the two years. An associate degree will be awarded at completion of this program by the appropriate institution. Jefferson College will award a certificate to St. Charles Community College students completing all necessary requirements. This is similar to all existing programs in the market except for Mercy Medical Center. In conjunction with the MoHealthWINS

grant, Jefferson College will have the opportunity to create a program unlike any other in the area. As stated above, the grant will afford St. Charles Community College the opportunity to provide a degree option and properly trained radiographers for its needing service area. The state of the art radiology equipment and technology, on site at Jefferson College's Hillsboro campus, will be utilized in the teaching process and will aid graduates' transition quickly into the ever changing field of radiography. This certificate option is the first of many options that Jefferson College would like to provide for its service area. This program will also lead to the creation of certificate degree offerings in multiple radiology modalities for registered radiologic technologists working today. Jefferson College plans to be the first to offer these certificates in the St. Louis area.



Missouri Department of Higher Education

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## COLLABORATIVE PROGRAMS

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**Sponsoring Institutions:** Jefferson College

**Degree program:** Jefferson College Radiologic Technology Certificate / St. Charles Community College AAS

**Length of agreement:** Open-Ended  
(open-ended or limited)

1. Which institution(s) will have degree-granting authority?  
St. Charles Community College (SCC)
2. Which institution(s) will have the authority for faculty hiring, course assignment, evaluation, and reappointment decisions?  
Jefferson College (JC). Please refer to Section II: sub-section F of the attached MOU.
3. What agreements exist to ensure that faculty from all participating institutions will be involved in decisions about the curriculum, admissions standards, exit requirements?  
Co-Authored Memorandum of Understanding (MOU) between JC and SCC. Please refer to Sections I: sub-section A, B, C (sub sets 1, 2 and 3) and D as well as Section II: sub-section C and D of the attached MOU.
4. Which institution(s) will be responsible for academic and student-support services, e.g., registration, advising, library, academic assistance, financial aid, etc.?  
Both colleges are responsible for academic and student-support services. Please see Section II: sub-section C of the attached MOU.
5. What agreements exist to ensure that the academic calendars of the participating institutions have been aligned as needed?  
Co-Authored MOU between JC and SCC. Please refer to Section I: sub-section F of the attached MOU.
6. In addition to the information provided by each participating institution regarding Financial Projections (Form FP), please address the following items:
  1. How will tuition rates be determined if they differ among the institutions?  
Certificate students will be offered in-district tuition from JC. Please refer to Section IV: sub-section A of the attached MOU. SCC will also be limited in their capacity to recoup expenses through "Collaborative Agreement Fees".
  2. Has a formal agreement been developed regarding cost-sharing policies? If yes, please include it as part of the proposal. If no, please summarize the current understanding between all parties and the plans for developing a formal agreement.  
Please refer to Section III of the attached MOU.

[www.dhe.mo.gov](http://www.dhe.mo.gov) • [info@dhe.mo.gov](mailto:info@dhe.mo.gov)

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3. What arrangements, if any, have been made for exchange of money between participating institutions?  
Please refer to Section III of the attached MOU.
  
7. What commitments have been made by all participants to evaluate the program systematically?  
JC Radiologic Technology Program will submit an annual report to the Joint Review Committee on Education in Radiologic Technolgy (JRCERT) to maintain accreditation status. This report will include graduation rate (Day 1 to Graduation Completion rate), graduate satisfaction survey, employer satisfaction survey, credentially examination pass rate (benchmark 75%), and 6-month employment rate (benchmark 75%). This report will be submitted to SCC at time of submission to JRCERT. The report will include narrative to address areas of both Associate and Certificate Programmatic success and action plans addressing areas that do not reach satisfactory benchmark levels. Please refer to Section I: sub-section D (sub set 2) of the attached MOU.
  
8. If one institution wishes to discontinue the program, what agreements exist for terminating the offering?  
Please refer to section 5 of the MOU.

# MEMORANDUM OF UNDERSTANDING

Between

Jefferson College, hereinafter referred to as “JC”

And

Saint Charles Community College hereinafter referred to as “SCC”.

Jefferson College (JC) will establish a Radiologic Technology education program through participation in the MOHealthWins consortium, being awarded federal funds from the *Trade Adjustment Assistance Community College and Career Training (TAACCCT) Grants Program* (CFDA #17.282) under the authority of the Health Care and Education Reconciliation Act of 2010 through:

Grant Agreement #TC-22499-11-60-A-29 in the total amount of \$19,982,296.

The budget allocation to the Partner Institution is:

The federal awarding agency is the Department of Labor, Employment and Training Administration. The Period of Performance is October 1, 2011 through September 30, 2014.

As a successful sub-grantee with JC, SCC agrees to follow rules and requirements outlined within the original Grant Agreement, as well as those within this Memorandum of Understanding.

NOW THEREFORE, it is agreed by and between the parties heretofore as follows:

I. Academics

- A. The total number of allowable students within the Jefferson College Radiologic Technology Program (hereafter referred to as “the PROGRAM”) will be decided by the Joint Review Committee on Education in Radiologic Technology (hereafter referred to as “JRCERT”). JRCERT establishes cohort size for the PROGRAM based on job market analysis, clinical affiliation capacity, and other factors. Distribution of student numbers between the schools will be decided based on equitable distribution and need. SCC will be given up to 50% of total JRCERT allocation.
- B. Pre-requisite course alignment
  - 1 JC will acquire MDHE approval for the Radiologic Technology Certificate Track. The PROGRAM has established a set curriculum that requires completion of a determined list of pre-requisite and co-requisite courses.

SCC has agreed to work with the PROGRAM to insure that all general education courses be completed outside of the certificate curriculum.

- 2 SCC agrees to work with JC to insure that Certificate Track students and JC Radiologic Technology students have equitable pre-requisite and co-requisite course requirements.

C. Credits for JC Radiologic Technology

- 1 Credits from the JC Certificate Track Radiologic Technology PROGRAM will be accepted by SCC for completion of SCC AAS degree,
- 2 Students entering the PROGRAM via SCC activities will be Certificate Track students at JC. JC agrees to provide required curricular activities to satisfy the didactic and clinical needs of these students for completion of JC Radiologic Technology Certificate. SCC agrees to accept the coursework and Radiologic Technology Certificate to fulfill necessary requirements towards completion of SCC AAS.
- 3 Students from SCC will earn credits from JC. All parties understand that they will not be able to sit for ARRT boards until they have received an AAS diploma.

D. Co-requisites for SCC and JC students

- 1 While in process of performance of coursework for completion of Certificate Program, Certificate Track students will be required to fulfill co-requisite requirements. These co-requisite courses will fall outside the normal curricular track. These courses should be provided through SCC or JC as appropriate. All efforts will be made to insure that these co-requisites are completed through SCC for Certificate Track Students.
- 2 The tracking of completion rate and credentialing exam pass rate are required by JRCERT. Therefore, SCC agrees to communicate successful completion of co-requisite coursework and successful awarding of SCC AAS to the JC office of Admission and Student Records, through submission of official transcripts.

E. The MOHealthWins (hereafter referred to as "MHW") grant requires establishment of a "synchronous online format" and "online simulation software" to assist in the delivery of didactic, laboratory, and clinical coursework. SCC and JC agree to work collaboratively to insure an equitable delivery platform for JC and Certificate Track students.

F. Certificate Track and JC Radiologic Technology Students will follow JC Academic Calendar while enrolled in PROGRAM Courses. If students are in process with co-requisite courses, they will need to follow the Academic Calendar for the school in which they are enrolled for that class. In case of inclement weather, a

Certificate Track Student will need to follow the PROGRAM rules and regulations with respect to classroom, laboratory, or clinical responsibilities associated with PROGRAM courses.

## II. Human Resources

- A. JC agrees to establish and manage the available clinical affiliations within the SCC service area through existing clinical staff positions at JC.
- B. SCC and JC agree to revisit the possibility of the addition of a Clinical Coordinator position in the event that clinical affiliation sites within the SCC service area exceed the capacity for present personnel to successfully manage.
- C. SCC agrees to utilize the SCC Retention Specialist (or designated staff) to identify needs of Certificate Track students within the SCC service area. JC Retention Specialist (or designated staff) will be available to provide services to students within the Radiologic Technology program. SCC Retention Specialist (or designated staff) will provide initial student advising and provide assistance to support retention activities for Certificate Track students. SCC Retention Specialist (or designated staff) and JC MHW Retention Specialist (or designated staff) will work collaboratively to enroll students each semester. JC MHW Retention Specialist (or designated staff) will have primary responsibility for student advising and retention activities for students.
- D. The JC Retention Specialist (or designated staff) agrees to work with the SCC Retention Specialist (or designated staff) to insure valid data collection for the Certificate Track students.
- E. SCC agrees to establish MHW eligibility for the Certificate Track program students within the SCC service area. After establishment of MHW eligibility, the Certificate Track student will be referred to the PROGRAM website for download and completion of all necessary application paperwork.
- F. All faculty and staff of the PROGRAM, with the exception of the SCC Retention Specialist or other staff now employed by SCC, will be considered JC employees and therefore are subject to Human Resource policy and procedures of JC.

## III. Institutional Support

- A. JC agrees to provide an appropriate laboratory setting for the Certificate Track students and PROGRAM students. JC agrees to perform all necessary maintenance to insure safety of all equipment.
- B. SCC agrees to reimburse JC for a portion of the JC Radiologic Technology Program costs. Allocation formula to be mutually agreed upon by SCC and JC and approved by MHW fiscal agent and/or program person. This cost will be billed to SCC on a semi-annual basis during the term of this agreement and/or on a basis necessary to meet MHW requirements, but should be paid within 30 days of

billing. SCC students enrolling in this program will be made aware of the PROGRAM costs should funding become unavailable and/or if grant period expires prior to their completion of the PROGRAM.

- C. SCC will reimburse JC for travel expenses incurred by Clinical Coordinator or other JC faculty in the provision of clinical services to students of SCC (total budget to be mutually agreed up and allowable under the terms of the MHW grant and must follow institutional protocols). Travel will include all clinical site activities, including the establishment of the clinical relationship, maintenance, and site visits.
- D. JC and SCC agree to be active participants in the establishment and maintenance of relationships with employer partners. These relationships are critical for the employment of graduates, feedback necessary to make appropriate curricular changes, and addition of future didactic and clinical offerings.

#### IV. Allowable Student Expenses

- A. At the conclusion of the MHW grant, Certificate Track students will be charged "In-District" Tuition for the PROGRAM courses.
- B. In the course of completion of the Radiologic Technology courses provided at JC, PROGRAM and Certificate Track students will be required to travel to JC and to clinical affiliation sites. The student will be responsible for all travel expenses.
- C. SCC agrees to discuss with the PROGRAM before imparting any fees on to SCC students for coursework completed at JC for completion of Radiologic Technology coursework.
- D. Clinical affiliation sites will be established with every effort to provide an equitable clinical experience to all students within the PROGRAM. Geographical considerations will be made only after insuring an equitable clinical experience for all students by the PROGRAM Clinical Coordinator.

#### V. Termination of Agreement

- A. Each party shall have the right to terminate this Memorandum of Understanding at any time by providing 90 days written notice to the other party of its intent to terminate. If either party terminates, steps will be taken to ensure that the termination does not affect any prior obligation, project or activity in progress. In addition, students who are partially through the program will be provided the option of completing the program as outlined under the terms of this agreement, with appropriate resources and support.
- B. All notices will be delivered personally, sent by express delivery service or by registered or certified mail, postage prepaid, return receipt requested to the undersigned individuals at the address listed below.

- C. Any notice to be given to a party shall be deemed given on the date of actual receipt by the addressee if delivered personally or on the date of deposit with express delivery service or the postal authorities if sent in either such manner.
- D. That all other provisions of the agreement, as detailed in the original Grant Agreement and in Addendum #1 to the Consortium Memorandum of Understanding, shall remain in full force and effect.

IN WITNESS WHEREOF, the parties hereto have set their hands and seals on the day and year herein stated.

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Dr. Ray Cummiskey  
President,  
Jefferson College  
1000 Viking Drive  
Hillsboro, MO 63050

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Dr. Ron Chesbrough  
President,  
Saint Charles Community College  
4601 Mid Rivers Mall Drive  
Cottleville, MO 63376

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Date

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Date