South Dakota Board of
Technical Education

October 7, 2021

Mitchell Technical College
1800 E Spruce St.
Mitchell, SD 57301

RE: Approval of Mitchell Technical College's Proposed Associate of Applied Science Option in Radiologic Technologies - Sonography

To whom it may concern:

After review, the Executive Director has approved Mitchell Technical College's Non-Substantive Program Application for an Associate of Applied Science Option in Radiologic Technologies – Sonography. Per Board Policy 303.3, the receipt of this letter completes the South Dakota Board of Technical Education's approval process, and the technical college may proceed with program implementation.

The Board of Technical Education's approval is valid for three years upon the date of this letter. If a technical college does not implement an approved program within three years, approval is terminated.

A technical college must update the program's profile in the Board of Technical Education's Academic Program Database by June 30 prior to the year in which students are first enrolled or at least 30 days prior to enrolling students, whichever is first.

Sincerely,

Scott DesLauriers
Deputy Director
South Dakota Board of Technical Education
800 Governors Drive
Pierre, SD 57006
Scott.DesLauriers@state.sd.us
(605) 295-7033

PROGRAM DESCRIPTION

Institution	Mitchell Technical College
Program Identifier Code (If applicable)	N/A
Program Title	Sonography
Program Award Level:	☐ Short-Term Certificate ☐ Long-Term Certificate ☐ Diploma ☐ Associate of Applied Science ☒ Associate of Applied Science Option
CIP Code (6 Digit)	51-0910
Projected Implementation Date	6/1/2022
Approved Parent Program Title (If applicable)	Radiologic Technologies
Approved Parent Program Identifier Code (If applicable)	N/A
Location	☒ Main Campus ☐ Other: N/A

SUMMARY

Type of Non-Substantive Change	☐ Program created using subset of existing courses (B.1.1) ☒ Creation of associate of applied science option (B.1.2) ☐ Consolidation of existing programs (B.1.3) ☐ Program award level change (B.1.4) ☐ Other:

Describe the change the institution is seeking approval of.

Mitchell Technical College (MTC) has been approached by Avera Queen of Peace requesting additional curriculum for ultrasound to be offered as an option for graduates of the radiologic technology program. The demand for cross training radiologic technicians is necessary to meet the needs of both clinical and hospital settings. There isn't enough time for industry to train sonography on the job and industry partners such as Huron Regional Medical Center (HRMC) experience inefficiencies and high costs associated with cross-training existing staff.

MTC has received support from Avera, HRMC, and Prairie Lakes Hospital in Watertown. According to the occupational projections for South Dakota, sonographers are increasing in demand by 20.3% with an average of 25 openings per year (dlr.sd.gov/lmic).

Graduates will be eligible to take ultrasound exams offered by the American Registry for Diagnostic Medical Sonography (ARDMS). The ARDMS administers exams that are recognized as the international standard in sonography credentialing.

Offering an option for Radiologic Technologists to earn additional credentials is a manageable solution to this growing challenge. MTC's proposal for an AAS option for the Radiologic Technology program includes didactic, simulation, and clinical components in abdomen ultrasound, obstetrics and gynecological ultrasound, and vascular ultrasound. The additional one-year option will be 3 semesters and include 38 credit hours.

CRITERION 2: DEMAND

The program leads to meaningful employment, adequate student enrollment, and/or fulfills needs not being met by existing education and training providers.

2.1. The program leads to high-wage occupations that have an average/mean wage greater than the median wage across all occupations.
2.2. The program leads to high-demand occupations that have project annual openings (a measure of demand for workers) greater than the average across all occupations or is shown as an economic and/or labor market emerging field for the state of South Dakota and its regions.
2.3. The program's student enrollment is adequate to justify program existence.
2.4. The program fulfills a demand not being met by existing education and training providers in the region and/or state.

2.1. Describe the wage projections for occupations associated with the proposed program by completing Appendix 2.A.

2.2. Describe the demand projections for occupations associated with the proposed program.

A. Complete Appendix 2.A.

B. If an emerging field for the state of South Dakota, describe the field. Letter(s) of support, detailing demand, should be attached as appendices.

N/A

2.3. Describe projected student enrollment for the proposed program by completing Appendix 2.B.

2.4. Describe how the proposed program fulfills a demand not being met by existing education and training providers in the region and/or state.

A. Identify closely related program(s) that currently exist at other public higher education institutions in the system or state. If none, write "None."

Southeast Technical College (STC) offers an Associate of Applied Science (AAS) in Cardiac Sonography. According to the Board of Technical Education's 2019-2020 Appendix A Report, STC graduated 13 students during the 2019-2020 academic year. The demand for Sonographers is projected to grow by 20.3% over the next 10 years and the demand for Radiologic Technologist is projected to grow steadily at 9.6% (dlr.sd.gov/lmic). Creating a cross-training opportunity for students to meet the current workforce demand is unique.

B. If applicable: Describe the ways in which the demand is not currently being met by the aforementioned program(s) and provide justification as to why the program should be approved by addressing the following conditions that warrant duplication (BP 303.2). Select all that apply.

☐ Unmet Demand (C.5.1.1)
☒ Industry Partnership (C.5.1.2)
☐ Increases Student Access (C.5.1.3)
☐ Other:

I. For each condition selected above, provide a brief justification.

Avera approached Mitchell Technical College to offer sonography as an option for the Radiologic Technology program as it is a good fit and cross-trained employees are in high demand. MTC reached out to other local industry partners (HRMC and Prairie Lakes specifically) who also support the proposal.

CRITERION 3: DESIGN

The program's learning assessment strategy, program of study, and delivery methods are designed to provide students with the necessary competencies, as demonstrated through program learning outcomes.

3.1. The program is aligned to competencies, as demonstrated through program learning outcomes, that are developed with and continually validated by relevant stakeholders.
3.2. The program has a learning assessment strategy to validate student mastery of the program learning outcomes.
3.3. The program has an integrated program of study designed to develop and reinforce the program learning outcomes.
3.4. The program, when appropriate, includes a work-based learning component that develops and reinforces the program learning outcomes.
3.5. The program, when appropriate, offers flexible delivery methods to increase student access.

3.0. Describe the proposed program's alignment with the program award level requirements established in BP 301.1.

A. Does the program align with the requirements?

☒ Yes
☐ No (Requesting Exemption)

B. If no: Provide a detailed rationale for program exemption. Specify which requirement(s) in BP 301.1 are not met; cite specific policy sections (e.g., B.3.4), when appropriate. If external organizations are involved (accreditation, regulatory, licensure, etc.), reference the organization name(s), specific requirements (including citations), and a justification for why the exemption should be approved

N/A

3.1. Describe the program learning outcomes.

A. Provide a list of program learning outcomes for each proposed award level. Learning outcomes should be specific to the program.

Graduates of this program will be able to:

Perform patient care while following ethical standards, HIPPA guidelines, and maintaining professionalism.

Apply critical thinking and problem-solving skills to exercise discretion and judgement in performance of diagnostic sonography

Demonstrate effective oral, visual, and written communication skills.

Recognize and use resources to enhance self-development and professional growth.

Respect others for cultural, ethnic, and individual diversity.

B. Describe the how the program learning outcomes were developed and validated.

Academic leadership reviewed several accredited sonography programs (www.caahep.org/students/find-a-program.aspx) to draft the outcomes. Resources from the Commission on Accreditation of Allied Health/Education Programs (CAAHEP) were used as well, and the MTC Radiologic Technology faculty reviewed the proposed outcomes.

3.2. Describe the program's learning assessment strategy.

A. Describe how students will demonstrate mastery of the program learning outcomes. Description should be specific to the program's learning assessment plan vs. the institutional assessment plan.

MTC faculty will use feedback from industry affiliates to ensure the Sonography program not only meets the requirements established by CAAHEP, but also produces graduates ready to work in any hospital or clinical lab setting with minimal orientation or instruction. Graduates will be able to demonstrate the prescribed PLOs by graduation and will successfully pass the OBGYN Registry and the Abdomen Registry.

Every program at MTC has clearly defined Program Learning Outcomes (PLOs) that define program-level outcomes specific to the program. In addition, every course in a program has specific Student Learning Outcomes (SLOs), which are content-specific. Program faculty develop an annual assessment plan that includes the evaluation of PLOs and SLOs throughout the year. Assessment activities are designed to provide critical feedback to improve student learning. The results from the annual assessment review provides documentation that can be used to determine whether intended outcomes are being achieved and how the program can be improved.

Graduates will achieve above average marks on the clinical performance instrument.

Employer Survey results will be 3.5 or higher (out of 5) on employee performance.

At least 85% of graduates will participate in professional activities.

Graduates will be employed in the field at a 95% or higher rate.

Program meets all requirements set forth by CAAHEP.

B. Is the program preparation for a professional licensure and/or certification examination?

☒ Yes (Detail in Appendix 4: Section 3)
☐ No

3.3. Describe the program of study by completing Appendix 3.

3.4. Describe the program's work-based learning component.

A. Does the program have a work-based learning component? If so, select all that apply.

☐ None
☐ Apprenticeship
☐ Internship or Externship
☒ Clinical
☐ Capstone
☐ Other:

B. If none, describe why.

N/A

3.5. Describe the program's delivery methods.

A. Select the program's primary delivery method(s)[1]. Select all that apply.

☒ On Campus
☐ Online
☐ Blended
☐ Apprenticeship
☐ Other:

[1] ***In Person****:* 100 percent of courses are available in-person. ***Online:*** 100 percent of courses are available via distance learning. Delivery is only via the Internet. ***Blended****:* Delivery includes a required combination of both in-person and online courses. If a student has the option to take courses online, but is not required to do so, the program is not necessarily considered blended.

B. Describe how flexible delivery methods are being leveraged to increase student access.

MTC is developing the program as a traditional program with in-person instruction; however, if online learning alternative options are requested due to the current pandemic, instructional staff are prepared to assist faculty in moving the courses online.

CRITERION 4: ALIGNMENT

The program is vertically aligned to an education and training pathway.

4.1. The program is vertically aligned to an education and training pathway, reflecting efficient articulation of:
4.1.1. Non-degree credential/industry certification
4.1.2. Certificate to diploma
4.1.3. Diploma to associate of applied science
4.1.4. Associate of applied science to baccalaureate

4.1. Describe the alignment of the proposed program along an education and training pathway.

A. Complete Appendix 4.

C. Describe the projected alignment between the proposed program and existing academic programs within the technical college system.

The proposed AAS option for sonography is offered to graduates of the AAS program in radiologic technologies.

D. As applicable: Insert any additional comments here.

The proposed program is an option for radiologic technology graduates only.

APPENDICES

- 2.A. Labor Market Information
- 2.B. Student Demand Projections
- 3. Program of Study
- 4. Alignment Projection
- Letters of Support
    - Avera Queen Peace Hospital
    - Huron Regional Medical Center
    - Prairie Lakes Healthcare System

SOUTH DAKOTA BOARD OF TECHNICAL EDUCATION
Appendix 2.A: Labor Market Information

Mitchell Technical College
AAS Option in Radioloic Technologies - Sonography

SOUTH DAKOTA								
SOC* CODE	**SOC* TITLE**	**AVERAGE ANNUAL OPENINGS**	**2018 EMPLOYMENT**	**2028 EMPLOYMENT**	**NUMERIC CHANGE: 2018-2028**	**PERCENT CHANGE: 2018-2028**	**MEDIAN: ANNUAL WAGE (2020)**	**AVERAGE: ANNUAL WAGE (2020)**
00-0000	*Total, All Occupations*	*62,664*	*491,588*	*526,251*	*34,663*	*7.1*	*$36,823*	*$44,961*
29-2032	Diagnostic Sonographer		316	380	64	20.3	$ 64,794.00	$ 64,835.00

NATIONAL								
SOC* CODE	**SOC* TITLE**	**AVERAGE ANNUAL OPENINGS**	**2019 EMPLOYMENT**	**2029 EMPLOYMENT**	**NUMERIC CHANGE: 2019-2029**	**PERCENT CHANGE: 2019-2029**	**MEDIAN: ANNUAL WAGE (2020)**	**AVERAGE: ANNUAL WAGE (2020)**
29-2032	Diagnostic Sonographer		74,300	86,800	12,500	16.8	$ 75,920.00	$ 77,790.00

SOURCE: South Dakota Department of Labor and Regulation, Labor Market Information Center (LMIC) (https://dlr.sd.gov/lmic/)
DATE: 7.19.2021

NOTES:

SOUTH DAKOTA BOARD OF TECHNICAL EDUCATION
Appendix 2.B: Student Demand Projections

Mitchell Technical College
AAS Option in Radioloic Technologies - Sonography

	YEAR 1	YEAR 2	YEAR 3
Student Full-Time Equivalent (FTE)	**12**	**18**	**24**
Headcount: Full-Time	12	18	18
Headcount: Part-Time	0	0	6
Headcount: Total	**12**	**18**	**24**
Total Program or Site Capacity	12	18	24

SOUTH DAKOTA BOARD OF TECHNICAL EDUCATION
Appendix 3: Program of Study

Mitchell Technical College
AAS Option in Radioloic Technologies - Sonography

Months: 12
Semesters: 3
Credits: 38

PREFIX AND NUMBER	TITLE	CREDITS	DESCRIPTION	EXISTING COURSE
I. PROGRAM CORE				
PHY 101	Ultrasound Physics	2	Ultrasound physics is a course designed to give students a thorough knowledge of basic acoustic physics and it's application in the field of ultrasound.	N
ABD 101	Abdominal Ultrasound	3	The abdominal ultrasound didactic course is designed to provide didactic instruction in the basic concepts of abdominal sonography.	N
ABD 102	Abdominal Scanning	3	The abdominal ultrasound scanning is a course designed to provide scanning instruction in abdominal ultrasound.	N
OBG 101	Obstetrics & Gynecology	3	The obstetrics and gynecology classroom course is designed to instruct students in concepts of obstetric and gynecology anatomy, physiology and pathology, with emphasis on application of ultrasound procedures.	N
OBG 102	Obstertrics & Gynecology Scanning	3	The obstetrics and gynecology scanning course is designed to instruct students in concepts of obstetric and gynecology anatomy, physiology and pathology, with emphasis on application of ultrasound scanning procedures.	N
SON 190	Clinical Rotation I	3	Minimum of 120 hours in a clinical setting.	N
ECH 101	Echocardiography	3	The basic concepts of cardiac sonography are presented in this course.	N
ECH 102	Echocardiography Scanning	3	Echocardiography scanning instruction in cardiac ultrasound.	N
VAS 101	Vascular Ultrasound	3	Provides didactic instruction in the basic concepts of vascular sonography.	N
VAS 102	Vascular Scanning	3	Provides scanning instruction in vascular ultrasound.	N
SON191	Clinical Rotation II	3	Minimum of 120 hours in a clinical setting.	N
SON 192	Clinical Practicum	6	Minimum 240 hours in a clinical setting	N
Total Program Core Credits:		**38**	**Total New Courses:**	**12**

SOUTH DAKOTA BOARD OF TECHNICAL EDUCATION
Appendix 4: Alignment Projection

Mitchell Technical College
AAS Option in Radioloic Technologies - Sonography

TOTAL CREDITS IN PROPOSED PROGRAM:
38

I. STACKABLE OPPORTUNITIES							
PROGRAM NAME		Short-term Certificate	X	Existing	If Forthcoming: Projected Timeline	Total Credits in Stackable Program	How many PROPOSED PROGRAM credits are in this stackable program opportunity?
Radiologic Technologies		Long-term Certificate		Forthcoming			
		Diploma					
	X	AAS				93.5	0

II. ARTICULATION AGREEMENTS (BACCALAUREATE)						
PROGRAM NAME	**COLLEGE OR UNIVERSITY**		Existing	If Forthcoming: Projected Timeline	Total Credits in Bachelor's Degree	How many PROPOSED PROGRAM credits are projected to be accepted in the articulation agreement?
Technical Leadership	USD	X	Forthcoming			
				June, 2022	120	60
PROGRAM NAME	**COLLEGE OR UNIVERSITY**		Existing	If Forthcoming: Projected Timeline	Total Credits in Bachelor's Degree	How many PROPOSED PROGRAM credits are projected to be accepted in the articulation agreement?
Health Sciences	USD	X	Forthcoming			
				June, 2022	120	60-69

III. LICENSURE AND CERTIFICATION OPPORTUNITIES		
The PROPOSED PROGRAM will qualify students to pursue the following licensure and/or certification opportunities:		
LICENSURE/CERTIFICATION	**OVERSIGHT ORGANIZATION**	Will the licensure/certification require reporting per SDCL 13-1-61?
Abdomen Certification	American Registry for Diagnostic Medical Sonography	Yes
LICENSURE/CERTIFICATION	**OVERSIGHT ORGANIZATION**	Will the licensure/certification require reporting per SDCL 13-1-61?
Obstetrics and Gynecology Certification	American Registry for Diagnostic Medical Sonography	Yes
LICENSURE/CERTIFICATION	**OVERSIGHT ORGANIZATION**	Will the licensure/certification require reporting per SDCL 13-1-61?
Vascular Technology	American Registry for Diagnostic Medical Sonography	Yes

Avera
Queen of Peace Hospital

525 N Foster Street
Mitchell, SD 57301-2999
(605) 995-2000
Fax (605) 995-2441

Avera.org/queen-of-peace

August 23, 2021

Dear President Wilson,

I appreciate the opportunity to weigh in on the Sonography training pathway being considered at Mitchell Technical College. From our own historical perspective, we have struggled with not having the appropriate number of Ultrasound staff to conduct day to day operations as well as afterhours call coverage to promote a healthy work life balance for the staff. It takes a great deal of time and resources to appropriately cross train a technologist to perform Ultrasound and our staffing structure among both the technologists and Radiologists does not allow for this type of on the job training any longer.

We recently found ourselves go from four Sonographers to one in a very short time frame which in turn required us to contract with traveling Sonographers. This additional expense and the fact that we couldn't find qualified applicants to do both General Radiography and Ultrasound forced us to hire Sonographers with no other imaging background. We do value the formal training of these Sonographers but in a facility our size and smaller, the technologists serve in many roles to provide the 24 hour coverage expected in multiple modalities. Our best case scenario would be if we were able to find and hire candidates with both a Radiology and Ultrasound background but these candidates are rare in our market. Two of the four Critical Access Hospitals in our region also employee Radiologic Technologists with an Ultrasound skill set. The other two have contracts with mobile imaging companies to provide Ultrasound services. The technologists at these Critical Access facilities have time in their day to perform Ultrasound exams, they just lack the skill set.

Having worked with both cross trained Sonographers and those that have formal training, Dr. Kelly Smith, Avera Queen of Peace Hospital Diagnostic Imaging Medical Director has stated there is definite value in formal training as Ultrasound exams are very technologist dependent due to the nature of how the images are acquired and the need for the Sonographers to make decisions regarding anatomy and pathology more so than other imaging modalities.

Avera Queen of Peace Hospital is no stranger in managing a collaborative effort in educating Radiology students. Our department has a positive atmosphere that is conducive to learning and the staff understand their role in being mentors to students who have the desire to be in the imaging field of healthcare.

I want to close by stating Avera Queen of Peace Hospital is interested in supporting a clinical internship as long as we have the resources and the numbers clinically to get these students all they need to qualify to take the registry exam.

Sincerely,

Stephanie London

Stephanie London, RT (R) (CT)
Diagnostic Imaging Director

DEBORA A. RYCRAFT

DIRECTOR OF MEDICAL IMAGING

HURON REGIONAL MEDICAL CENTER

HURON, SD

President Wilson,

I appreciate the opportunity to weigh in on the need for Mitchell Technical College to offer a stackable credential in Ultrasonograpy to their Radiologic Technology graduates. From my own perspective as Medical Imaging Director, finding trained/schooled ultrasonographers has been and is currently a huge struggle for us. The astronomical wages we must pay for outside help to come in is debilitating to any establishment.

Finding a registered ultrasonographer has been next to impossible. Our last four staff in ultrasound positions have been cross-trained. This creates a huge challenge with staffing while doing this we have to pull staff out of other modalities to cross train and still need to pay outside help while training.

I would like to state I am absolutely in support of this need in South Dakota. I would be happy to support Mitchell Technical College in any manner you need including consulting, being a clinical site, enrolling our Radiology staff as candidates for the training as long as my staff needs are met and/ or possibly offering a scholarship program from HRMC to area students.

Thank you for the opportunity to weigh in and for your time.

Debora A. Rycraft

PRAIRIE LAKES
Healthcare System

August 11, 2021

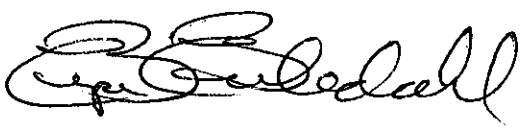
Dear President Wilson,

I am writing this letter to express my support for the Ultrasound Technologist Certificate program that is being proposed by Mitchell Technical College.

As a former educator at the Mayo Clinic School of Allied Health Ultrasound Program, and Radiology Director at a rural hospital, I know the importance of a well-trained Sonographer in the underserved rural hospitals across our state and nation. Currently I am having to pay large fees for locum Sonographers help staff my department. Being able "grow our own" Sonographers will be an invaluable asset to our facility as well as the state.

We look forward to helping Mitchel Technical College in any way we can to make this endeavor successful.

Cordially,



MA MA BS RT (R) RDMS RDCS RVT

Radiology Director

Prairie Lakes HealthCare System

Watertown, SD 57201