

## PROGRAM DESCRIPTION

Institution	Southeast Technical College
Program Identifier Code (If applicable)	N/A
Program Title	Medical Lab Technician
Program Award Level: Check all that apply	<input type="checkbox"/> Short-Term Certificate <input type="checkbox"/> Long-Term Certificate <input type="checkbox"/> Diploma <input checked="" type="checkbox"/> Associate of Applied Science
CIP Code (6 Digit)	29-2010 Clinical Laboratory Technologists & Technician
Projected Implementation Date	8/29/2022
Location	<input checked="" type="checkbox"/> Main Campus <input type="checkbox"/> Other:

## SUMMARY

Type of Substantive Change	<input checked="" type="checkbox"/> New Program (B.1.1) <input type="checkbox"/> Significant Curriculum Modification (B.1.2) <input type="checkbox"/> Other:
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Describe the change the institution is seeking approval of.

Southeast Technical College (STC) is seeking approval to start a new academic program. The Associate of Applied Science in Medical Laboratory Technician is a partnership between Avera Health, Sanford Health and STC. Avera McKennan Hospital and University Health Center, a division of Avera Health, has been the leading provider of health services in South Dakota, Minnesota, Iowa, Nebraska, and North Dakota through a network of six regional centers. The Avera network covers 35 hospitals, 215 primary and specialty care clinics, 40 senior living facilities in addition to home care and hospice, sports and wellness facilities, and home medical equipment outlets. The partnership between Southeast Tech and Avera will ensure each medical facility is adequately staff with highly qualified and trained Medical Laboratory Technicians. Sanford Health, headquartered in Sioux Falls, SD, is one of the largest health systems in the United States, consisting of 46 hospitals, 224 clinic locations, 233 senior living communities, and 158 skilled nursing and rehab facilities. Sioux Falls is also home to Sanford's Clinical Research facility and 21 clinical laboratories.

The program will prepare students to enter the high demand career field of Medical Laboratory Science. The Bureau of Labor Statistics "projects the growth of Medical Laboratory Technicians to grow eleven percent from 2020-2030, faster than the average for all occupations" (bls.gov, 2022, para.3). The focus of the degree will be to prepare entry level workforce that can support and assist with providing essential healthcare support within our medical facilities.

The following proposal addresses the design, evaluation, and implementation of a Medical Laboratory Technician (MLT) program. Medical Laboratory Technicians work alongside Medical Laboratory Scientists in medical and diagnostic laboratories or physicians' offices.

The proposed curriculum includes didactic, laboratory and clinical components. Southeast Technical College has worked in collaboration with area experts in Medical Laboratory Science to develop content and curriculum in phlebotomy, urinalysis, hematology, chemistry, microbiology, immunology, body fluids, blood, blood products and serology.

Following completion of the Medical Laboratory Technician program, students will be eligible for the national certification exam through the American Society for Clinical Pathology ASCP to become certified as a Medical Laboratory Technician MLT. South Dakota does not require licensure to practice as a Medical Laboratory Technician.

## CRITERION 1: MISSION

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The program aligns with the system's mission and strategic priorities.

1.1. The program aligns with the system's mission of preparing a technically skilled workforce prepared to serve the state of South Dakota and its regions.

*1.2. The program aligns with the system's strategic priorities.*

1.1. Describe how the proposed program aligns with the system's mission.

The mission of Southeast Technical College (STC) is to work with industry to train and prepare students to enter high demand career fields. The Medical Laboratory Technician Associate's program will allow STC to meet the growing demand for skilled medical technicians to assist with patient care. Working closely and in concert with our industry partners STC can identify workforce needs. The attached proposal for the Medical Laboratory Technician program will assist in filling a much-needed workforce need in South Dakota and provide our healthcare partners with another resource to meet the critical demand needs for health professionals with our communities. A Medical Laboratory Technician (MLT) sets up, maintains, calibrates, cleanses and tests the sterility of lab equipment. They prepare solutions or reagents to be combined with samples in addition to collecting blood, tissue, or other samples from patients. Both Sanford Health and Avera Health also maintain research facilities in the Sioux Falls area and need MLT's in the support of their health system.

## CRITERION 2: DEMAND

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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.

This is not an emerging career field.

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."

Lake Area Technical College offers an Associate's degree in Medical Laboratory Technician. Per the Board of Technical Education's FY22 Enrollment Report, LATC has an enrollment of 39 students in their program.

Mitchell Technical College offers an Associate's degree in Medical Laboratory Technology. Per the Board of Technical Education's FY22 Enrollment Report, MTC has an enrollment of 17 students in their program.

Western Dakota Technical College offers an Associate's degree in Medical Laboratory Technician. Per the Board of Technical Education's FY22 Enrollment Report, WDTC had an enrollment of 29 students in their program.

The University of South Dakota offers an undergraduate program in Medical Laboratory Science (B.S.).

South Dakota State University offers an undergraduate program in Medical Laboratory Science (B.S.).

Northern State University offers an undergraduate program in Medical Laboratory Science (B.S.).

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.

STC was approached by Avera McKennan Hospital and University Health Center and by Sanford USD Medical Center and Hospital in the spring of 2021 to jointly develop a Medical Laboratory Technician associate degree level academic program. The degree provide will a career opportunity for individuals who are interested in entering the very high demand field in the Sioux Falls area.

The Avera network covers 35 hospitals, 215 primary and specialty care clinics, 40 senior living facilities in addition to home care and hospice, sports and wellness facilities, and home medical equipment outlets. The partnership between Southeast Tech and Avera will ensure each medical facility is adequately staff with highly qualified and trained mental health professionals.

Sanford USD Medical Center and Hospital, a division of Sanford Health, has been the leading provider of health services in South Dakota. Sanford Health operates 44 medical centers, 428 clinics, and over 200 senior living facilities covering 26 states. In Sioux Falls Sanford Health operates 21 clinical laboratory facilities to support its medical operations. In addition, Sioux Falls is home to Sanford's Research facility.

At present the healthcare industry is experiencing tremendous need for technicians to assist with meeting the needs of the community as they are seeing a significant increase in patients. The South Dakota Department of Labor as of December 19, 2021, had 104 open job postings for Medical and Clinical Laboratory Technicians throughout South Dakota. The addition of this program to STC breath of healthcare programs will assist in providing additional graduates to meet this high demand career field.

### CRITERION 3: DESIGN

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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.

#### Technical Outcomes

- Facilitate operation and maintenance of medical laboratory equipment
- Demonstrate competency in phlebotomy and laboratory skills

#### Problem solving/Critical Thinking Outcomes

- Recognize significant laboratory values to formulate appropriate action
- Correlate laboratory data with pathophysiology of disease processes

#### Professional Outcomes

- Promote ethical standards in medical laboratory patient care environments
- Facilitate an environment inclusive of diverse populations and groups

#### Communication

- Articulate laboratory data to a team of multidisciplinary healthcare professionals
- Demonstrate effective and professional communication

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

The program learning outcomes were developed after consultation with industry experts and review of abilities and knowledge crucial for Medical Laboratory Technicians. Industry representatives with expertise in medical laboratory science provided input to the development of program learning outcomes. The program learning outcomes are in alignment with the Southeast Technical College broad student learning outcomes, aligning with the mission and vision of the institution.

Industry experts including one Medical Laboratory Technician and two Medical Laboratory Scientists contributed to the curriculum development and program learning outcome development. Program outcomes from Medical Laboratory Technology programs at technical colleges in South Dakota were reviewed. Program outcomes from the Medical Laboratory Technology programs at Moberly Area Community College and Montgomery County Community College.

STC uses a specific process to develop and validate learning outcomes based on the following six principles.

- Learning outcomes should have two parts: an action verb and a content area. Utilize the action verb to specify the desired student performance followed by a specific description of the course-specific content target.
- Keep statements short and focused on a single outcome. This allows instructors to determine whether or not an objective has been met without having to distinguish between partial completion or complete success.
- To ensure that learning outcomes are effective and measurable, avoid using verbs that are vague or cannot be objectively assessed. Use active verbs that describe what a student will be able to do once learning has occurred.
- Learning outcomes should be SMART (specific, measurable, acceptable to the instructor, realistic to achieve, and time-bound with a deadline).
- Include complex or higher-order learning outcomes when they are appropriate. Most instructors expect students to go beyond memorization of facts and terminology; learning outcomes should reflect instructors' expectations for student performance.
- Utilize learning outcomes as a basis for course preparation. Learning outcomes should match instructional strategies and assessment requirements. To ensure the connection between various course activities, it is useful to construct a table highlighting the relationship.



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.

The Academic Leadership Team oversees Program Learning Outcomes (PLO) Assessment at STC. It is coordinated and facilitated by the Dean of Curriculum and Instruction and Institutional Effectiveness. STC utilizes Watermark's Planning & Self-Study software which allows the college to plan, assess, report, review and improve the program and institutional common learning outcomes. With the Watermark software, all faculty and administrators have immediate access to review and manage each academic program's assessment outcomes year over year. The software allows everyone to gather actionable insights from a variety of reports to make decisions on how students are learning and aides in making decisions on program changes.

Academic programs align all program learning outcomes with the Institutional Common Learning Outcomes (ICLO). The ICLO Plan focuses on tracking students' abilities related to Problem Solving/Critical Thinking, Technical Skills, Professionalism, and Communication. Faculty are supported by Celebrating Learning Team coaches. The Celebrate Learning team is a faculty led committee charged with reviewing each program's PLO plan and providing feedback to each academic program. The PLO Plans articulate the desired learning outcomes to be achieved by the graduates of a program. In addition, required coursework in the program maps to the PLOs. A curriculum map is a chart that illustrates the connections between

Program Learning Outcomes (PLOs) and Course Learning Outcomes (CLOs). The Curriculum Map also indicates to what extent a learning outcome is taught (introduced, reinforced, mastered). The maps assist in identifying redundancies and gaps in the curriculum.

Outcomes 	Courses 					
Digital Media Production Technology (AAS) Learning Out...	COMM ...	DMP 120	DMP 150	DMP 220	DMP 231	DMI
<b>Professionalism PLO1</b> Model workplace expectations for Digital Media Professionals.	A	+	+	A	+	
<b>Professionalism PLO2</b> Appraise the strengths &; weaknesses of one's/peers' completed work.	+	+	+	A	+	
<b>Technical Skills PLO1</b> Apply appropriate industry software & techniques to meet	+	+	+	+	+	

Key:  Aligned I Introduce R Reinforce M Master A Assessment Activity

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  Clinical  
 Apprenticeship  Capstone  
 Internship or Externship  Other:

B. If none, describe why.

3.5. Describe the program's delivery methods.



A. Select the program's primary delivery method(s)<sup>1</sup>. Select all that apply.

- |   |   |
|---|---|
| <input checked="" type="checkbox"/> On Campus | <input type="checkbox"/> Apprenticeship |
| <input type="checkbox"/> Online               | <input type="checkbox"/> Other:         |
| <input checked="" type="checkbox"/> Blended   |   |

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

Classes for the MLT program will be offered through several formats to meet student needs. Most if not all courses will be offered in a traditional face-to-face format on campus. Students who select these course will attend class in a traditional formation structure at STC's main campus in Sioux Falls. Students also could take certain course in an online and/or hybrid format. The online and hybrid format will provide students with the flexibility to continue to work full-time, support their family needs, or simply provide the opportunity for students to learn in a non-traditional manner meeting their personal educational needs. Certain courses such as laboratory and clinical courses will requires students to attend class in person and will not be offered in either the online or hybrid format.

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<sup>1</sup> **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.

#### CRITERION 4: ALIGNMENT

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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.

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

The core curriculum delivered for students enrolled in the Associate Degree in Medical Laboratory Technician program allows students the opportunity to transition to other health programs if indicated. The general education courses are transferrable within the STC college system. Students may transition to a different program at STC and transfer credits from the MLT program if other admission criteria are met. The MLT program aligns with various health care programs at Southeast Technical College to meet the industry needs of our region and enhance versatility in employment for graduates. Sixteen general education credits and prerequisite requirements transition into several health programs. The Medical Laboratory Technician AAS Degree is valuable in alignment with various programs and certificates including the Allied Health certificate, Phlebotomy certificate, diploma in Certified Nursing Assistant, diploma in Medical Assisting, and the Healthcare Leadership program.

C. As applicable: Insert any additional comments here.

## CRITERION 5: CAPACITY

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The institution demonstrates the internal and external resources necessary to develop, implement, and sustain the program.

- 5.1. The institution demonstrates the financial resources necessary to develop, implement, and sustain the program.
- 5.2. The institution demonstrates appropriately certified and qualified faculty are in place with expertise in content, pedagogy, and related industry to develop and validate the program learning outcomes.
- 5.3. The institution's physical facilities (e.g., classrooms, laboratories) reflect current industry and/or occupational standards necessary to develop and validate the program learning outcomes.
- 5.4. The institution's equipment and technology resources reflect current industry and/or occupational standards necessary to develop and validate the program learning outcomes.
- 5.5. The institution demonstrates the ability of the program to meet institutional and programmatic accreditation standards, as applicable.

5.1. Describe the institution's financial capacity to develop, implement, and sustain the proposed program.

A. Complete Appendix 5.

B. Describe the proposed program's anticipated local fee structure. Description of fee structure should be specific to the program.

The Medical Laboratory Technician program fee structure will be in alignment with STC's current fee structure. There will not be any additional fees associated with implementing or maintaining the academic program. Total current total tuition is set at \$255.00 per credit. The tuition breakdown includes state tuition of \$124 per credit, State R&M fee of \$6 per credit, State facility fee of \$36 per credit, and local fees totaling \$89 per credit (local institutional fee, student government fee, and local R&M fee). There will be an additional course fee of \$50 per MLT prefix course. The additional \$50 course fee will assist in covering instructor costs for lower enrollment courses such as clinical courses and to also assist in covering disposable lab supplies.

While this is a high demand career field there will be the need for equipment and facilities. Southeast Tech is working in partnership with Sanford Health, Avera Health, the City of Sioux Falls, the Sioux Falls Development Foundation, and Greater Sioux Falls Chamber of Commerce to obtain the Zeal Building located on STC's campus. This sectoral partnership is designed to fill a critical need in healthcare thought South Dakota and the surrounding region providing STC the ability to nearly double its healthcare enrollment and add additional academic programs focused on meeting the growing demand for highly skilled healthcare professionals. The building will be acquired and remolded with funding and support from this industry partners. In addition, STC, is working with the Governor's Office and the South Dakota Legislature to secure one-time funding to purchase equipment for the Lab Tech program and is part of the 2022 Legislative session under the Governor's budget request. The costs for the building acquisition and equipment **will not** be passed onto the student.

C. What is the proposed program weight factor (funding formula)?

- Standard Cost (1)  
 High Cost (3)  
 High Cost, Low Density (5)

I. Provide rationale related to the selection of proposed program weight factor.

The proposed program aligns with the state-level guidance for the standard-cost program weight factor. The proposed program does not require extensive overhead in faculty, expansion or renovation of physical facilities, or equipment and technology resources. Further, the program could enroll a large group of students if the demand were present.

D. Describe the contingency plans in case anticipated enrollments, income, or resources do not materialize.

STC does not anticipate low enrollment in the MLT program. The MLT program is an approved Build Dakota program and with strong support from both Avera and Sanford we anticipate that both will be sponsoring students to assist in filling these high demand position with graduates from STC. As for resources all resources and infrastructure (classrooms and laboratory equipment) will be approved and in place prior to the start of the MLT program at STC.

5.2. Describe how the institution will ensure the appropriate certified and qualified faculty are in place with the expertise in content, pedagogy, and the related industry to develop and validate the program learning outcomes.

A. Describe the necessary qualifications of faculty who will be involved in the program.

STC strictly follows the Higher Learning Commission's on highly qualified faculty. Faculty will be required to hold a Bachelor's degree in Medical Laboratory Science or a related academic discipline or a Master's degree plus 18 graduate hours in the field of Medical Laboratory Science. All General Education faculty must hold a Master's degree in field.

In addition, STC is working with USD and Northern to provide academic degree pathways for degree completion options. Both BOR institutions require that STC is hiring faculty who hold a master's degree in field or a master's degree plus 18 graduate hours in field as defined as highly qualified by HLC.

STC has a robust faculty training and development program. All adjuncts hired are required to complete a series of five professional development and training program. The five courses provide training and guidance on use of the LMS, educational pedagogy, assessment at the program and course level, student engagement, classroom management, and use of instructional technology.

All full-time faculty are enrolled in a two-year mentor-based training and development program. The new faculty start their training and development with an intensive two-week training during course. After they are assigned with another full-time faculty mentor who they meet with monthly. The training and development continue throughout the academic year with additional classroom-based training and development.

B. Does the instructorship(s) currently exist in the roster of Instructor Salary Support market value determinations?

- Yes  
 No

I. If no: Describe the SOC(s) codes and titles that will need to be added.

5.3. Describe the existing and/or new physical facilities that will be utilized or needed to reflect current industry and/or occupational standards. Outline short- and long-term investments in physical facilities.

Current facilities at STC will be remolded and with the acquisition of the Zeal Building STC will utilize the new facility to deliver the curriculum with students having the option to complete some courses online.

5.4. Describe the existing and/or new equipment and technology resources that will be utilized or needed to reflect current industry and/or occupational standards. Outline short- and long-term investments in equipment and technology resources.

The specialized equipment and technology needed to deliver the curriculum will be acquired through the state funding allocation request pending before the state legislature. The equipment purchased will be in alignment with standards of programmatic accreditation through the National Accreditation Agency for Clinical Laboratory

Sciences requirements. The current LMS will be utilized to assist in the delivery of this theory-based curriculum both on campus and online.

5.5. Describe the institution's and proposed program's ability to meet institutional and programmatic accreditation standards, as applicable.

A. Specify Higher Learning Commission (HLC) requirements.

- Notification Only
- Approval Required
- None
- Other:

B. Is there an accrediting or professional organization that has established standards for the program?

- Yes
- No

C. If yes: Describe the ability of the proposed program to meet professional accreditation standards. If the program does not or cannot meet those standards, describe the area(s) in which it is deficient and indicate steps needed to qualify the program for accreditation. Provide the date by which the program would be expected to be fully accredited.

If the institution does not plan to seek specialized accreditation, provide a rationale for not seeking.

STC will seek accreditation of the Medical Laboratory Technician program through The National Accreditation Agency for Clinical Laboratory Sciences (NAACLS).

STC has a long history of holding programmatic accreditation for many of its academic programs. The campus does not foresee any issues meeting the accreditation standards set by NAACLS. The process for accreditation will require the preparation of a self-study, hosting a site visit, and demonstration of alignment with NAACLS's accreditation standards. STC has started the process of reviewing accreditation standards in the design of the academic program, facilities, and clinical assignments. STC's Medical Laboratory Technician program should be fully accredited within three years of the program launch.

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

Southeast Technical College  
 Associate of Applied Science in Behavioral and Mental Health Technician

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)
29-2012	Medical Laboratory Technicians	45	1252	1503	251	18.06%	\$ 44,195.00	\$ 39,850.00

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)
29-2012	Medical Laboratory Technicians	2500	145600	161400	15800	11.00%	\$ 33,140.00	\$ 31,750.00

**SOURCE:** South Dakota Department of Labor and Regulation, Labor Market Information Center (LMIC) (<https://dlr.sd.gov/lmic/>)  
**DATE:** 1/10/22

**NOTES:**  
**29-2012 Medical and Clinical Laboratory Technicians**  
 Perform routine medical laboratory tests for the diagnosis, treatment, and prevention of disease.  
 May work under the supervision of a medical technologist. Illustrated Examples: Histology Technician, Pathology Technician, Serology Technician

**SOUTH DAKOTA BOARD OF TECHNICAL EDUCATION**

**Appendix 2.B: Student Demand Projections**

Southeast Technical College

Associate of Applied Science in Behavioral and Mental Health Technician

	<b>YEAR 1</b>	<b>YEAR 2</b>	<b>YEAR 3</b>
<b>Student Full-Time Equivalent (FTE)</b>	<b>16</b>	<b>24</b>	<b>24</b>
Headcount: Full-Time	16	16	16
Headcount: Part-Time	0	8	8
<b>Headcount: Total</b>	<b>16</b>	<b>24</b>	<b>24</b>
<b>Total Program or Site Capacity</b>	<b>32</b>	<b>32</b>	<b>32</b>

**SOUTH DAKOTA BOARD OF TECHNICAL EDUCATION**

**Appendix 3: Program of Study**

Southeast Technical College

Associate of Applied Science in Behavioral and Mental Health Technician

<b>MONTHS:</b>	24
<b>SEMESTERS:</b>	4
<b>TOTAL CREDITS:</b>	67

<b>PREFIX AND NUMBER</b>	<b>TITLE</b>	<b>CREDITS</b>	<b>DESCRIPTION</b>	<b>EXISTING COURSE</b>
<b>I. GENERAL EDUCATION CORE</b>				
ENGL101	Composition	3	English Composition will help develop proficiency in writing concise, coherent essays, and in using correct English. Several modes of discourse will be explored and good grammar skills are emphasized. This course will improve the student's critical thinking skills as it provides students with practice in all stages of the writing process: planning, supporting, rewriting, analyzing, proofreading, and editing. This course will also require critical reading and writing.	Y
MATH114	College Algebra	3	This is a first year, one semester College Algebra course. It begins with a review of the fundamental concepts of the real number system, polynomials, factoring, rational expressions and complex numbers. It continues with linear equations and inequalities, graphs of functions, polynomial and rational functions, exponential functions and logarithmic functions. Systems of equations, matrices and determinants, and probability will be covered as time allows. Throughout the course there is extensive use of the graphing calculator.	Y
HC118	Applied Anatomy/Physiology	4	Study of the structure and function of the human body forms the foundation for course work in the health-related professions. Using a systems approach, this human anatomy and physiology course will cover all human body systems and will enable students to understand normal and abnormal function of the human body. In addition to lectures and demonstrations, this course contains in-depth laboratory exploration of each organ system.	Y
CHEM106	Chemistry & Lab	4	Students who have had some chemistry and those who have had no chemistry background will acquire a basic understanding of the makeup of matter and the changes that it undergoes. Going from simple elements to complex compounds, this course will be concentrating on some observational facts and theoretical concepts involving problem solving, scientific reasoning, thinking and "wondering why".	Y
PSYC101	General Psychology	3	Provides the student with an introduction to the basic psychological processes underlying human behavior. Topics include the functions of the brain and nervous system, the characteristics of sensation, perception and altered states of consciousness, learning and memory, the nature of thinking skills and intelligence, theories of motivation, emotion and personality, a survey of psychological disorders and approaches to therapy, social/interpersonal relations, and practical applications.	Y



**SOUTH DAKOTA BOARD OF TECHNICAL EDUCATION**

**Appendix 3: Program of Study**

Southeast Technical College

Associate of Applied Science in Behavioral and Mental Health Technician

MICR231	Microbiology and Lab	4	An introduction to the study of microorganisms with emphasis on those affecting human health. The structure, function, and pathogenicity of representative bacteria, fungi, and viruses are emphasized, as well as techniques for their isolation, culture, destruction, and identification.	Y
SSS100	Student Success Seminar	2	This course provides students with tools and techniques that will help them be successful in their program of study. The course focuses on interactive exercises which will help the learner identify personal strengths, learning styles, and support resources. Reading and study techniques will also be practiced.	Y
<b>SUBTOTAL OF GENERAL EDUCATION CREDITS:</b>		<b>23</b>	<b>TOTAL NEW COURSES:</b>	<b>7</b>

<b>II. PROGRAM CORE</b>				
MLTXX	Introduction to Medical Lab Science + Lab	3	This course provides students with an introduction to the profession of medical laboratory technology. The role of the medical laboratory technician including laboratory techniques and responsibilities are explored. The purpose and techniques behind blood analysis is reviewed to determine the pathophysiology of disease processes.	N
PH102	Phlebotomy	4	Students will understand the basic duties, skills and responsibilities in the role as a phlebotomist. Students will explore the scope of practice along with legal principles and state and federal regulations of health information including HIPAA, OSHA, and CLIA.	Y
PH102L	Phlebotomy Lab	3	Students will learn the basic duties and responsibilities of working in a team-based environment. Students will learn infection control, introduction to basic anatomy including the circulatory system and medical terminology. They will also be introduced to skills such as blood pressure, pulse, and respirations.	Y
PH122S	Phlebotomy Clinical	3	This clinical course will introduce students to hands on experience in phlebotomy procedures in the clinical setting. Techniques practiced in this clinical may include venipuncture, micropuncture, safe handling of equipment and blood products, patient care and professionalism practices, and aseptic technique.	Y
MLTXX	Medical Laboratory Techniques + Lab	3	This course provides students with an introduction to medical laboratory science practices and techniques in medical laboratories. Testing methods and procedures associated with medical laboratory science diagnostics are analyzed. Introduction to laboratory materials, equipment, function, and purpose and reviewed.	N
MLTXX	Medical Laboratory Urinalysis + Lab	2	This course provides students with an introduction to urinalysis and the study of body fluids. Students will learn components of physical, chemical, and microscopic analysis. Clinical conditions will be reviewed in correlation with urinalysis data and renal physiology. Review of physical, chemical, and microscopic properties of urine, fluid analysis, and fecal occult blood will be discussed.	N
MLTXX	Hematology + Lab	2	Students will review concepts in hematology including normal blood cell function and production. Identification of blood cells, cell counts, and differentials will be reviewed along with pathophysiology of associated disease processes	N

**SOUTH DAKOTA BOARD OF TECHNICAL EDUCATION**

**Appendix 3: Program of Study**

Southeast Technical College

Associate of Applied Science in Behavioral and Mental Health Technician

MLTXX	Immunology and Serology	1	Students will be introduced to pathophysiology of infectious disease including antigen and antibody structures in correlation with immune system disorders and serology. Basic immunology and serology procedures will be reviewed.	N
MLTXX	Clinical Experience I	2	This clinical course will introduce students to hands on experience in medical laboratory science procedures in the clinical setting. Techniques practiced in this clinical may include phlebotomy, blood products, urinalysis, body fluids, and additional laboratory procedures.	N
MLTXX	Immunohematology	2	This course will introduce students to blood banking, donor, and transfusion services. Students will learn pre and post transfusion management and services and associated antigen and antibody interactions.	N
MLTXX	Clinical Chemistry	2	This course will introduce students to clinical chemistry techniques and procedures. This course will cover specimen handling, proteins, carbohydrates, enzymes, chemical mathematics, electrolytes, and automation. The atomic structure, ionic and molecular compounds, acid-base balance, and organic chemistry will be reviewed.	N
MLTXX	Clinical Microbiology	2	This course will introduce students to clinical microbiology techniques and procedures including collection and handling of body fluids and specimens. Bacteria and biological specimens will be reviewed.	N
MLTXX	Clinical Experience II	3	This clinical course will allow students to expand on experience in medical laboratory science procedures in the clinical setting. Techniques practiced in this clinical may include phlebotomy, blood products, urinalysis, body fluids, and additional laboratory procedures.	N
MLTXX	Advanced Hematology	2	This course will expand on clinical hematology including normal blood cell function and production. Identification of blood cells, cell counts, and differentials will be reviewed along with pathophysiology of associated disease processes. Disorders of blood cells will be discussed including anemias, white blood cell neoplasm, and leukemias.	N
MLTXX	Advanced Clinical Chemistry + lab	2	This course will expand on clinical chemistry techniques and procedures in enzymes, chemical mathematics, electrolytes, automation, blood gases, tumor and cardiac markers, organic chemistry, and molecular compounds.	N
MLTXX	Advanced Clinical Microbiology + lab	2	This course will expand on clinical microbiology techniques and procedures including pathophysiology and epidemiology of parasites, organisms, and fungi. Disease processes associated with microorganisms will be reviewed.	N
MLTXX	Clinical Seminar	6	This clinical seminar course will allow students to expand on experience in medical laboratory science procedures in the clinical setting through an independent clinical practicum experience. Techniques practiced in this clinical may include phlebotomy, blood products, urinalysis, body fluids, and additional laboratory procedures.	N
<b>SUBTOTAL OF PROGRAM CREDITS:</b>		<b>44</b>	<b>TOTAL NEW COURSES:</b>	<b>3</b>

**SOUTH DAKOTA BOARD OF TECHNICAL EDUCATION**  
**Appendix 4: Alignment Projection**

Southeast Technical College  
 Associate of Applied Science in Behavioral and Mental Health Technician

**TOTAL CREDITS IN PROPOSED PROGRAM:**

67

I. STACKABLE OPPORTUNITIES							
PROGRAM NAME							
Phlebotomy	x	Short-term Certificate	x	Existing Forthcoming	If Forthcoming: Projected Timeline	Total Credits in Stackable Program	How many PROPOSED PROGRAM credits are in this stackable program opportunity?
		Long-term Certificate					
		Diploma					
		AAS				10	10
Medical Assisting		Short-term Certificate	x	Existing Forthcoming	If Forthcoming: Projected Timeline	Total Credits in Stackable Program	How many PROPOSED PROGRAM credits are in this stackable program opportunity?
		Long-term Certificate					
	x	Diploma					
		AAS				41	21
Allied Health	x	Short-term Certificate	x	Existing Forthcoming	If Forthcoming: Projected Timeline	Total Credits in Stackable Program	How many PROPOSED PROGRAM credits are in this stackable program opportunity?
		Long-term Certificate					
		Diploma					
		AAS				16	16
		Short-term Certificate		Existing Forthcoming	If Forthcoming: Projected Timeline	Total Credits in Stackable Program	How many PROPOSED PROGRAM credits are in this stackable program opportunity?
		Long-term Certificate					
		Diploma					
		AAS					

II. ARTICULATION AGREEMENTS (BACCALAUREATE)						
PROGRAM NAME	COLLEGE OR UNIVERSITY					
BS in Medical Laboratory Science	USD	x	Existing Forthcoming	If Forthcoming: Projected Timeline	Total Credits in Bachelor's Degree	How many PROPOSED PROGRAM credits are projected to be accepted in the articulation agreement?
BS in Medical Laboratory Science	NSU	x	Existing Forthcoming	If Forthcoming: Projected Timeline	Total Credits in Bachelor's Degree	How many PROPOSED PROGRAM credits are projected to be accepted in the articulation agreement?
			Existing Forthcoming	If Forthcoming: Projected Timeline	Total Credits in Bachelor's Degree	How many PROPOSED PROGRAM credits are projected to be accepted in the articulation agreement?

III. LICENSURE AND CERTIFICATION OPPORTUNITIES		
<i>The PROPOSED PROGRAM will qualify students to pursue the following licensure and/or certification opportunities:</i>		
LICENSURE/CERTIFICATION	OVERSIGHT ORGANIZATION	Will the licensure/certification require reporting per SDCL 13-1-61?
ASCP MLT - Medical Laboratory Technician	American Society for Clinical Pathology ASCP	No

**SOUTH DAKOTA BOARD OF TECHNICAL EDUCATION**

**Appendix 5: Financial Projections**

Southeast Technical College

Associate of Applied Science in Behavioral and Mental Health Technician

	YEAR 1	YEAR 2	YEAR 3
<b>Student FTE</b>	<b>16</b>	<b>24</b>	<b>24</b>

**I. PROJECTED EXPENDITURES**

**A. ONE-TIME**

New/Renovated Facilities	\$ -	\$ -	\$ -
Equipment	\$ -	\$ -	\$ -
Other: Faculty Professional Development	\$ 4,000.00	\$ 2,000.00	\$ 2,000.00
<b>Sub-Total: One-time</b>	<b>\$ 4,000.00</b>	<b>\$ 2,000.00</b>	<b>\$ 2,000.00</b>

**B. RECURRING**

**B.1. PERSONNEL**

FTE (Faculty and Staff)	1	1	1
Salary & Benefits	\$ 86,450.00	\$ 89,044.00	\$ 91,715.00

**B.2. OPERATING**

Rental / Lease	\$ -	\$ -	\$ -
Contractual Services	\$ -	\$ -	\$ -
Equipment	\$ -	\$ -	\$ -
Supplies	\$ 2,500.00	\$ 2,500.00	\$ 2,500.00
Travel	\$ 2,500.00	\$ 2,000.00	\$ 2,000.00
Other	\$ 14,000.00	\$ -	\$ -
<b>Sub-Total: Operating</b>	<b>\$ 19,000.00</b>	<b>\$ 4,500.00</b>	<b>\$ 4,500.00</b>
<b>Total: Recurring</b>	<b>\$ 105,450.00</b>	<b>\$ 93,544.00</b>	<b>\$ 96,215.00</b>

<b>TOTAL EXPENDITURES (A + B)</b>	<b>\$ 109,450.00</b>	<b>\$ 95,544.00</b>	<b>\$ 98,215.00</b>
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**II. PROJECTED REVENUE**

Tuition	\$ 59,520.00	\$ 89,280.00	\$ 89,280.00
State Fees	\$ 20,160.00	\$ 30,240.00	\$ 30,240.00
Local Fees	\$ 42,720.00	\$ 42,720.00	\$ 42,720.00
Location-Based Fees	\$ -	\$ -	\$ -
State Sources	\$ -	\$ 60,334.56	\$ 90,501.84
Federal Sources	\$ -	\$ -	\$ -
Private Grants or Gifts	\$ -	\$ -	\$ -
Other	\$ -	\$ -	\$ -

<b>TOTAL REVENUE</b>	<b>\$ 122,400.00</b>	<b>\$ 222,574.56</b>	<b>\$ 252,741.84</b>
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<b>REVENUE - EXPENDITURES</b>	<b>\$ 12,950.00</b>	<b>\$ 127,030.56</b>	<b>\$ 154,526.84</b>
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*\*Projections are held constant based on current fiscal year. Inflation or rate changes are not factored.*

Dear Mr. Wendell,

My name is Amber Stoltenburg, a former MLT. During my time as a medical laboratory technician, my primary jobs were to collect samples and process them appropriately for analysis. Also, if testing was not offered in house, I would then properly store and package samples to be shipped out to our outreach laboratories. At the Family Health Center, we serviced the free-standing ER 24/7, the FHC clinic during business hours along with all walk ins, and urgent care during evenings and weekends. In this setting the tech followed the sample all the way through from collection, processing, analyzing, and resulting into the patients' charts.

There is no doubt that Covid-19 has challenged all aspects of healthcare professionals. It has shed lots of light on our nurses, respiratory therapists, physicians, and many others. All equally overworked and understaffed. Those that may go unnoticed, more often than not, are your laboratory staff. These individuals are working carefully making sure all specimens are collected, prepared and analyzed in a timely manner. They work round the clock, both day and night, bringing our nursing staff and physicians crucial test results to help them make their medical decisions regarding patient care. You may never see their faces, but know they are working hard behind the scene of every person hospitalized.

As stated above, I am a former MLT. I first worked fulltime from 2016-2018 when I decided to continue my education to become an LPN then later an RN. From 2018- 2021 I continued to work PRN within the lab along with my fulltime job as an LPN. Once the pandemic hit, I was asked to help as much as possible. The demand had increased so rapidly that I took a leave of absence from my LPN position to help where I was most needed as a MLT swabbing and processing Covid-19 specimens.

We processed a great number of samples per day. Making sure all paperwork was filed and faxed all patient information to the state health lab. Another job in its self was packaging these samples correctly in ways that they would make it to our out-reach labs such as Mayo and ARUP and still be viable samples. We went from processing all those samples and sending them out, to now being able to do everything in house.

As Covid-19 continues to ramp up, new variants threaten us with uncertainty, there is a great demand for workers in the laboratory field. This is an excellent time to encourage young adults to join the laboratory profession. I believe that Southeast Technical College would benefit from adding medical laboratory to their services.

Thank you for your consideration,

Amber Stoltenburg

1/14/2022

Mr. Nick Wendell  
Executive Director  
South Dakota Board of Technical Education  
C/O Southeast Technical College  
2320 N. Career Ave  
Sioux Falls, SD 57107

RE: Letter of support for development of a Medical Laboratory Technician program at Southeast Technical College

Dear Mr. Wendell:

Health care is an ever-changing industry. There are many illnesses that have put a strain on multiple professions, with laboratory technicians being one of them. The COVID-19 pandemic, for example, has been life changing for the medical profession in many ways. There are not enough laboratory technicians to provide these tests and at a timely manner at that. To help give the accurate care that patients are seeking, we will need skilled laboratory professionals to assist in the diagnosing and treatment options.

Medical Laboratory Technicians have endless job opportunities. Some may go into research, work for medical companies such as Abbott, for example, while others stay in the laboratory and do the laboratory testing. These technicians have skills that assist doctors in diagnosing their patients. Unfortunately, the laboratory program is a hidden field and does not have enough graduates to fill these positions compared to the amount of retirees.

New research is being done daily for new tests and new treatment options, which means more tests but not enough laboratory technicians to perform these tests in a timely manner. This increase in demand for their services can only be met with an increase in skilled workers, which is why I am in favor of developing a Medical Laboratory Technician program at your institution in South Dakota.

Thank you for your consideration of this matter.

Very Respectfully,

*Koree Nowell, MLT*

Koree Nowell, MLT

Amber Figg MLS (ASCP)

Route #6359  
1112 S. Lake Avenue  
Sioux Falls, SD 57104  
Date 1/27/22

Mr. Nick Wendell  
Executive Director  
South Dakota Board of Technical Education  
C/O Southeast Technical College  
2320 N. Career Ave  
Sioux Falls, SD 57107

RE: Letter of support for development of a Medical Laboratory Technician program at Southeast Technical College

Dear Mr. Wendell:

The medical world is extremely complex and changing environment. Especially in today's world with not only COVID-19, but more advanced diagnosis. Doctors rely on laboratory results in order to provide accurate an accurate diagnosis. Without an accurate diagnosis, the correct treatment cannot be addressed. Ultimately, it is the patients and their lives that are effected. Laboratory professionals are the individuals completing all the testing ordered by doctors. Without laboratory professionals the doctors are only able to give an educated hypothesis.

A medical laboratory degree can provide numerous opportunities. The degree gives abundant qualifications for many research possibilities. The analyzers that laboratory use require the companies to provide technical support and training. These companies hire many medical laboratory scientists. Hospitals also have different areas to work, from routine hospital laboratories to complex specialty testing laboratories. Many people, specifically high school students, do not know about the profession. This field has been impacted greatly with retirements. Now more than ever, there is a shortage of laboratory technicians or technologists.

A Medical Laboratory Technician program through Southeast Technical College would be an enormous contribution to healthcare. It would help elevate the shortage in this profession by providing qualified individuals to fill these positions. With an increase in staff, testing will be able to expand and thrive. The turnaround times for testing will improve. This leads to advancements and favorable outcomes in healthcare as a whole.

I would be happy to discuss any questions or concerns you may have. Thank you for your consideration of this matter.

Very Respectfully,

Amber Figg MLS (ASCP) Clinical Research Specialist

 Amber Figg MLS (ASCP)

27 Jan 2022