

PROGRAM DESCRIPTION

Institution	Southeast Technical College
Program Identifier Code (If applicable)	
Program Title	Mechanical Systems
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)	47.9999
Projected Implementation Date	8/22/2022
Location	<input checked="" type="checkbox"/> Main Campus <input type="checkbox"/> Other:

SUMMARY

Type of Substantive Change	<input type="checkbox"/> New Program (B.1.1) <input checked="" 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 ending the 2-Year AAS HVAC/R program while keeping and updating the 1-Year Residential Heating & Air Conditioning Technology diploma and combining it with the 1-Year plumbing diploma. STC will be creating all new classes for HVAC but all curriculum has been taught prior with some additional controls.

STC will continue to provide the two 1-Year diplomas in HVAC and Plumbing and will consolidate the programs to create a 2-Year Mechanical Systems AAS, that will provide students with expertise in both areas. STC has worked with advisory committees and our faculty to develop updated curriculum.

The Mechanical Systems AAS will support many facets of industry, especially rural South Dakota. A graduate of the Mechanical Systems program can work at a large company and choose to focus on one area, while being skilled to support or complete tasks in another area. In rural SD these graduates will be able to be employed and to support both areas.

CRITERION 1: MISSION

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 Mechanical Systems AAS provides multiple paths for workforce development and supports employers in Sioux Falls, but also in the rural communities. The Mechanical Systems AAS with the stackable diplomas of Plumbing and HVAC provide graduates the ability to work in the field of their choice for large companies and also serve both roles in rural communities.

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.

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."

STC currently has separate diplomas for HVAC and Plumbing.

Lake Area Technical College offers an Associate's degree in Building Trades Technology. Per the Board of Technical Education's FY22 Enrollment Report, LATC has enrollment of 41 students in their program.

Mitchell Technical College offers an Associate's degree in Electrical Constructions & Maintenance and both an Associate's and Diploma in Heating & Cooling Technology. Per the Board of Technical Education's FY22 Enrollment Report, MTC has enrollment of 111 students in their Electrical Construction & Maintenance program and 20 students in their Heating & Cooling Technology program.

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 has high demand for our HVAC and Plumbing graduates and these programs fill six months prior to the program start dates. The creation the of Mechanical AAS degree will continue to meet that demand with the other Technical College degrees.

By combining two one-year diplomas, The AAS in Mechanical Systems offers “stackable” training that increases student access by providing shorter programs and faster employment, lower costs and the ability to complete advanced training in the future. STC believes the stackable approach allows students to gain access to a high-paying job and then continue their education while working, thus offering multiple pathways to personal and professional success. Because stackable credentials provide short and efficient entry and exit points, first-generation and other underserved students who may need to take breaks during their education are more likely to successfully use these programs as career stepping stones on their path.

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.

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.

Upon completion of an AAS in Mechanical Systems Technology, a student will be able to:

Technical Skills

Utilize materials and methods necessary to complete a task to Uniform Plumbing Code standards.
Demonstrate proper use of plumbing tools and equipment to Uniform Plumbing Code standards.
Install HVAC/R equipment, controls, and parts for safe and efficient operation.
Handle refrigerants in accordance with section 608 of the Clean Air Act.
Utilize HVAC/R tools and equipment effectively.

Problem Solving/Critical Thinking

Troubleshoot, diagnose, and repair HVAC/R equipment to operational and efficiency standards.
Read and interpret blueprints and/or Building Information Modeling for proper installation.

Professionalism

Exhibit safe work habits to minimize injuries.
Utilize effective time management skills to maximize efficiency.

Communication

Develop skills for communicating with other trades, customers, and owners for job completion.

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

The program learning outcomes were developed by Southeast Technical Faculty with support by Southeast Tech Academic Administration. They were then approved by the program advisory committee and the Southeast Tech Faculty driven Curriculum Committee. The learning outcomes were developed based on entry level skills that a graduate would need upon completion of the program.



Program learning outcomes are validated by program level assessment for each outcome. Results of the assessment are reviewed by the program faculty, advisory committee, and academic administration. These data are entered into Watermark for programmatic and institutional assessment review.

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 				
Mechanical Systems/Plumbing (AAS) Learning Outcomes	PLMB 101	PLMB 101L	PLMB 103	PLMB 151	PLMB 151L
Professionalism PLO1 Exhibit safe work habits to minimize injuries.	A	A	+	A	+
Professionalism PLO2 Utilize effective time management skills to maximize efficiency.	+	A	A	+	A
Technical Skills PLO1 Utilize materials and methods necessary to complete a task to Uniform Plumbing Code standards.	A	+	A	+	+
Technical Skills PLO2 Demonstrate proper use of plumbing tools and equipment to Uniform Plumbing Code standards.	+	A	+	+	A
Problem Solving and Critical Thinking PLO1 Read and interpret blueprints and/or Building Information Modeling for proper installation.	+	+	A	+	+
Communication PLO1					

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.

- | | |
|--|-----------------------------------|
| <input type="checkbox"/> None | <input type="checkbox"/> Clinical |
| <input checked="" type="checkbox"/> Apprenticeship | <input type="checkbox"/> Capstone |
| <input type="checkbox"/> Internship or Externship | <input type="checkbox"/> Other: |

B. If none, describe why.

Students leaving the program can enter a Plumbing Apprenticeship and work towards their journeyman license.

3.5. Describe the program's delivery methods.

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

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

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

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.

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.

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

Southeast Technical College will have two stand-alone diplomas stacked within the Mechanical Systems AAS. Students may take the Plumbing Diploma or the HVAC Diploma independently of the Mechanical Systems AAS. Students who achieve the Mechanical Systems AAS will also graduate from both the Plumbing and HVAC Diplomas.

Students pursuing the AAS will save 5 credits through not needing the 2 Credit SSS 100 and one 3 Credit General Education elective.

C. As applicable: Insert any additional comments here.

CRITERION 5: CAPACITY

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.

Southeast Technical College plans on charging a \$25.00 per credit hour fee to match our existing Plumbing and HVAC programs. These course fees provide supplemental budget support for program specific supplies and equipment.

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 Mechanical Systems AAS program costs will be equal to our existing HVAC and Plumbing programs, so the program weight would be the same.

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

Southeast Technical College currently has existing equipment and curriculum for these programs. If enrollment numbers are not sufficient, Southeast Tech will hold off on a remodel of the HVAC program until numbers justify the cost.

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.

All faculty are currently hired, and Southeast Technical College does not expect to need additional faculty. The current faculty all meet the requirements of the South Dakota Board of Technical Education and the requirements set by HVAC Excellence.

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.

The Mechanical Systems AAS program will utilize existing space at Southeast Technical College. The HVAC program is due for an overhaul to provide improved ventilation for furnaces and improved electrical and natural gas distribution. These updates are part of the long-term Southeast Technical College Capital Improvement program and will only be completed once sufficient funds are available. In the short term, faculty are creating a detailed plan for improvement that will be provided to the Sioux Falls School District architectural team for building and cost analysis.

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 existing plumbing and HVAC programs have a 5-year long-term capital equipment plan that includes needed equipment for the updated curriculum. In addition, both programs continue to work with industry for donations.

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.

The Mechanical Systems AAS program will pursue HVAC Excellence. The Southeast Technical College HVAC program is under review for HVAC Excellence and under guidance of ESCO the new curriculum has been submitted for review.

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

Southeast Technical College
 Mechanical Systems, AAS

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)
49-9021	Heating, AC, & Refrigeration Mechanics & Installers	137	1,178	1,324	146	12.40%		\$ 50,520.00
47-2152	Plumbers, Pipefitters, and Steamfitters	219	1,684	1,896	212	12.60%		\$ 45,333.00

NATIONAL								
SOC* CODE	SOC* TITLE	AVERAGE ANNUAL OPENINGS	2020 EMPLOYMENT	2030 EMPLOYMENT	NUMERIC CHANGE: 2020-2020	PERCENT CHANGE: 2020-2030	MEDIAN: ANNUAL WAGE (2020)	AVERAGE: ANNUAL WAGE (2020)
49-9021	Heating, AC, & Refrigeration Mechanics & Installers	N/A	380,400	399,400	19,000	5.00%	\$ 50,990.00	N/A
47-2152	Plumbers, Pipefitters, and Steamfitters	N/A	469,900	493,200	23,400	5.00%	\$ 56,330.00	N/A

SOURCE: South Dakota Department of Labor and Regulation, Labor Market Information Center (LMIC) (<https://dlr.sd.gov/lmic/>)
SOURCE: United States Department of Labor and Regulation, Employment Projections (<https://data.bls.gov/projections/occupationProj>)
DATE: 12/29/21

NOTES: The individual areas are indicated as minimum expectations of demand.

SOUTH DAKOTA BOARD OF TECHNICAL EDUCATION

Appendix 2.B: Student Demand Projections

Southeast Technical College

Mechanical Systems, AAS

	YEAR 1	YEAR 2	YEAR 3
Student Full-Time Equivalent (FTE)	60	60	60
Headcount: Full-Time	56	56	56
Headcount: Part-Time	8	8	8
Headcount: Total	64	64	64
Total Program or Site Capacity	60	60	60

Student capacity includes individuals taking the 1-year diploma only as well.

SOUTH DAKOTA BOARD OF TECHNICAL EDUCATION

Appendix 3: Program of Study

Southeast Technical College
 Mechanical Systems, AAS

MONTHS:	16
SEMESTERS:	4
TOTAL CREDITS:	16 to 17

PREFIX AND NUMBER	TITLE	CREDITS	DESCRIPTION	EXISTING COURSE
ENGL 100	Communication in the Workplace	3	Presents the elements of oral and written communication necessary to succeed in today's workplace. Emphasizes the written and oral skills needed for job search and employment. Hands-on activities and collaborative projects will provide students with comprehensive information addressing essential writing, speaking, and listening skills necessary to excel in today's workplace as well as the workplace of tomorrow.	Y
MATH 100	Math Applications	3	A course covering the concepts and applications of mathematics, that includes: the arithmetic order of operations, percent problems, descriptive statistics and graphing, algebraic manipulations, solving linear equations, formula rearrangement, word problems, measurement, and applied plane and solid geometry. This course satisfies the institution's general education requirements for mathematics, but is not a transfer course.	Y
Gen Ed Req	Additional General Education	9	Students will select 3 additional general education classes from at least two different areas than Communications and Mathematics.	Y
PLMB 101	Plumbing Theory & Processes I	4	This is an introductory course of plumbing essentials. This course will cover the basics of the Uniform Plumbing Code for plumbing installation and Safety. In addition, this course will cover basic water sources, pipe systems, equipment, drains and fixtures.	Y
PLMB 101L	Plumbing Theory & Processes I Lab	6	This is an introductory lab course of plumbing essentials. This course will provide the hands on experience for the basics of the Uniform Plumbing Code for plumbing installation. In addition, this course will cover basic water sources, pipe systems, equipment, drains and fixtures.	Y
PLMB 103	Blueprint Reading for Plumbers	2	This is an introductory course in the study and practice of measuring, drawing, sketching and blueprint reading. The course will cover documents shown as plan view, isometric views and other areas that pertain to the plumbing and mechanical requirements.	Y
PLMB 151	Plumbing Theory & Processes II	4	This is an advanced course of plumbing essentials. This course will cover the advanced topics of the Uniform Plumbing Code for plumbing installation and Safety. In addition, this course will cover basic water sources, pipe systems, equipment, drains and fixtures.	Y
PLMB 151L	Plumbing Theory & Processes II Lab	6	This is an advanced lab course of plumbing essentials. This course will provide the hands on experience for the basics of the Uniform Plumbing Code for plumbing installation. In addition, this course will cover basic water sources, pipe systems, equipment, drains and fixtures.	Y
WLD 150	Welding Essentials for Plumbers	2	This is a course of welding essentials relating to the plumbing industry. Students will receive general welding theory and be given laboratory time to develop their welding skills.	Y

SOUTH DAKOTA BOARD OF TECHNICAL EDUCATION

Appendix 3: Program of Study

Southeast Technical College
Mechanical Systems, AAS

RA 117	Heating	5	Students will learn about heat transfer, air velocity, and various sources of heat for residential and commercial conditioned spaces including fossil fuel, electric, geothermal, and reverse cycle refrigeration. Students will calculate BTU inputs/outputs, airflow volumes, and duct pressures.	N
RA 117L	Heating Lab	4	Students will learn to install, test, troubleshoot, and repair a variety of heating equipment including fossil fuel and electric heat furnaces, tube and unit heaters, air to air and geothermal heat pumps, and heat reclaim coils.	N
RA 127	Cooling	5	Students will learn about heat transfer, principles of thermodynamics, pressure/temperature relationships, and refrigerant properties. Concepts of refrigerant recovery, evacuation, superheat, and subcooling will be mastered. Students will be able to explain the process of refrigeration and how it is applied in high, medium, and low temperature settings.	N
RA 127L	Cooling Lab	4	Students will learn to install, test, troubleshoot, and repair a variety of refrigeration equipment including residential air conditioners, commercial roof top units, chillers, reach in coolers and freezers, walk in coolers and freezers, and ice machines.	N
RA 137	Intro to Controls	1	Students will learn basic concepts of electricity including: atomic theory, volts, ohms, amps, alternating and direct current, parallel and series circuits, switches, and loads. Students will be able to identify common electrical components and their functions.	N
RA 137L	Intro to Controls Lab	1	Students will learn how to use a meter to measure volts, ohms, amps, microfarads, and more. Simple circuits with switches and loads will be wired and tested. Basic heating and cooling components will be tested.	N
RA 147	Controls I	1	Students will learn intermediate concepts of electricity including: necessary components in a heating or cooling circuit, electrical measurements across switches and loads, and specific electrical component functions.	N
RA 147L	Controls I Lab	1	Students will be able to wire complex circuits, low voltage thermostats, and high voltage equipment. Complex circuits with heating and cooling components will be wired and tested. Operating heating a cooling equipment will be tested using a meter and other electrical testing equipment.	N
RA 157	Controls II	1	Students will learn advanced applications of electricity including: refrigeration and heating pressure controls, circuit board relays, defrost controls, motor dampers and actuator controls, and variable frequency drives.	N
RA 157L	Controls II Lab	1	Students will be able to wire advanced low and high voltage controls. DC signals will be measured when used to modulate operation of various variable speed heating and cooling equipment.	N
SSS100	Student Success	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
SUBTOTAL OF PROGRAM CREDITS:		65	TOTAL NEW COURSES:	10

SOUTH DAKOTA BOARD OF TECHNICAL EDUCATION

Appendix 4: Alignment Projection

Southeast Technical College
 Mechanical Systems, AAS

TOTAL CREDITS IN PROPOSED PROGRAM:

65

I. STACKABLE OPPORTUNITIES							
PROGRAM NAME							
Plumbing		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				35	
HVAC		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				35	
Mechanical Systems		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	x				
		Diploma					
	x	AAS			Fall 22 Start	65	

II. ARTICULATION AGREEMENTS (BACCALAUREATE)							
PROGRAM NAME	COLLEGE OR UNIVERSITY						
N/A				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?
EPA 608 - Refrigerant Handling	ESCO Institute	Yes
LICENSURE/CERTIFICATION	OVERSIGHT ORGANIZATION	Will the licensure/certification require reporting per SDCL 13-1-61?
Plumbing Journeyman (1 Year - 1900 Hours)	South Dakota State Plumbing Commission	Yes

SOUTH DAKOTA BOARD OF TECHNICAL EDUCATION

Appendix 5: Financial Projections

Southeast Technical College
Mechanical Systems, AAS

	YEAR 1	YEAR 2	YEAR 3
Student FTE	60	60	60

I. PROJECTED EXPENDITURES

A. ONE-TIME

New/Renovated Facilities	\$ 350,000.00	\$ -	\$ -
Equipment	\$ 50,000.00	\$ -	\$ -
Other	\$ -	\$ -	\$ -
Sub-Total: One-time	\$ 400,000.00	\$ -	\$ -

B. RECURRING

B.1. PERSONNEL

FTE (Faculty and Staff)	3	3	3
Salary & Benefits	\$ 249,703.00	\$ 249,704.55	\$ 249,706.10

B.2. OPERATING

Rental / Lease	\$ -	\$ -	\$ -
Contractual Services	\$ -	\$ -	\$ -
Equipment	\$ 5,000.00	\$ 5,000.00	\$ 5,000.00
Supplies	\$ 46,000.00	\$ 46,000.00	\$ 46,000.00
Travel	\$ -	\$ -	\$ -
Other	\$ -	\$ -	\$ -
Sub-Total: Operating	\$ 51,000.00	\$ 51,000.00	\$ 51,000.00
Total: Recurring	\$ 300,703.00	\$ 300,704.55	\$ 300,706.10

TOTAL EXPENDITURES (A + B)	\$ 700,703.00	\$ 300,704.55	\$ 300,706.10
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II. PROJECTED REVENUE

Tuition	\$ 245,520.00	\$ 245,520.00	\$ 245,520.00
State Fees	\$ 83,160.00	\$ 83,160.00	\$ 83,160.00
Local Fees	\$ 53,400.00	\$ 53,400.00	\$ 53,400.00
Location-Based Fees	\$ -	\$ -	\$ -
State Sources	\$ 113,127.30	\$ 226,254.60	\$ 226,254.60
Federal Sources	\$ -	\$ -	\$ -
Private Grants or Gifts	\$ -	\$ -	\$ -
Other	\$ -	\$ -	\$ -

TOTAL REVENUE	\$ 495,207.30	\$ 608,334.60	\$ 608,334.60
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REVENUE - EXPENDITURES	\$ (205,495.70)	\$ 307,630.05	\$ 307,628.50
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**Projections are held constant based on current fiscal year. Inflation or rate changes are not factored.*

SOUTH DAKOTA BOARD OF TECHNICAL EDUCATION

Appendix 5: Financial Projections

Southeast Technical College

Mechanical Systems, AAS

Notes:

Students in the 1 year diplomas will provide additional revenue with no additional expenditure.



South East Technical Institute

01/21/2022

Dear Heating and Air Conditioning staff,

We at Frisbees wanted to let you know that we are excited to hear you that are implementing a one year program for your HVAC training. We have always been confident that a 1 year course would be adequate training for this degree. As proof, there are other prominent HVAC schools that do this training in 6 months and have been highly successful (i.e. RSI Phoenix AZ). As an example, we hired Zach Foss (an exceptional person) with a one year degree and he has done an outstanding job for us. One concern we have is whether there has been a review of training hours for proper coverage of the course outline. Since the students will only be going ½ days throughout the entire course we are wondering if that allows for enough training hours for some 'less than' exceptional students. I can provide you the syllabus from the RSI course and you can check to see if it compares with your outline in hours of coverage and content.

It is also our understanding that you want to offer a plumbing course as a 2nd year add-on to complement the HVAC program. We are a little concerned that the average student will not be able to retain their skills from the first year HVAC training if followed by the Plumbing program. Our goal is to get students working and committed to one industry whenever possible. We assume the additional plumbing training would also generate income for the school, however given the industry shortage, the tuition re-imbusement programs (many companies including ours have), maybe you could justify increasing the tuition cost and keep the programs independent. That would be our recommendation.

Thanks for your contribution to our industry and feel free to contact us if we can help you.

Mark Lamb

Service Department Manager
Frisbees Plumbing & Heating

Hander Inc.

Plumbing & Heating

2407 WEST 5TH STREET • SIOUX FALLS, SOUTH DAKOTA 57104-5673
TELEPHONE (605) 339-9633 • FAX (605) 339-9018
www.hander.com

January 20, 2022

Dr. Valdez,

I'm writing to let you know that I think it would be a great opportunity to offer an associate's degree for Plumbing and HVAC. There is a growing need for workers in the trades that will not be going away any time soon. We are constantly struggling to find individuals to even be interested. We always show preference to applicants that have been through the programs at Southeast Tech. They have applied themselves towards a career by attending school for a specific trade, which speaks volumes to an employer that they are committed to a career. Also, we believe in the instructors and have always had good experiences with the students that they have recommended to us. Thank you for your time.

Thank you,



Josh Halverson



712 East 3rd Street, Sioux Falls, SD 57103
PHONE 605.339.2020 FAX 605.339.0824
howeinc.com

January 14, 2022

**Southeast Technical College
2320 N Career Ave
Sioux Falls, SD 57107**

Vincent Berry

At Howe, we understand that students and future technicians demand choices and flexibility. That is one reason we feel that the new course selection will be mutually beneficial. Another benefit is that so many tasks and situations these students will encounter in their career overlap between plumbing and HVAC that students having exposure to both programs will create a more well-rounded technician upon completion of this new associates degree offering.

The demand for our trades is not going anywhere and with our communities growing at this rate it is clear that anything we can do to encourage people to join our efforts and become tradespeople needs to be considered. We commend the efforts of your team to recognize this and present this option to them

If you have questions, or would like to discuss further please let me know

Sincerely,

Howe, Inc.

Adam Sundermann
Service Operations Manager

