

May 22, 2025

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

RE: Academic Affairs - Approval of Non-Substantive Program Application(s)

To whom it may concern:

After review, the Executive Director of the South Dakota Board of Technical Education (SDBOTE) has approved the following application(s):

Associate of Applied Science Technical Studies

Per Board Policy 303.3, the receipt of this letter completes the SDBOTE's approval process, and the technical college may proceed with program implementation.

The SDBOTE'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 SDBOTE'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	Southeast Technical College
Program Identifier Code (If applicable)	N/A
Program Title	Technical Studies
Program Award Level:	 Short-Term Certificate Long-Term Certificate Diploma Associate of Applied Science Associate of Applied Science Option
CIP Code (6 Digit)	51.0911 Radiology Technologist
	309999 Technical Studies
Projected Implementation Date	8/4/2025
Approved Parent Program Title (If applicable)	N/A
Approved Parent Program Identifier Code (If applicable)	N/A
Location	 Main Campus Other: Prerequisites will be taught at STC, Radiologic Technology classes are taught at hospital sites.

SUMMARY

	 Program created using subset of existing courses (B.1.1) Creation of associate of applied science option (B.1.2)
Type of Non-	Consolidation of existing programs (B.1.3)
Substantive Change	Program award level change (B.1.4)
0	Other: Articulation agreement with Radiology Technology programs to award an
	AAS in Technical Studies.

Describe the change the institution is seeking approval of.

Students will complete pre-requisites for the Radiology Technologist program prior to starting classes at Avera McKennan Hospital in Sioux Falls, SD, or Avera Sacred Heart Hospital in Yankton, SD. After completion of the Radiology Technologist program, students will be awarded the AAS degree from STC. Students must complete either an associate or bachelor's degree in order to take the certification examination for the profession. The proposed pathway would allow students the opportunity to complete prerequisite courses in the local region.

Students will receive a block credit of 35 credits from the Radiology Technology program. Those credits will be transcript after proof of success in the Radiology Technology courses, added to the 27 credits for General Education courses, for a total of 62 credits for the AAS degree.

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.

Not an emerging 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."

Mitchell Technical College, Mitchell, SD: Radiologic Technology, 21-month AAS degree

South Dakota State University, Brookings, SD: offers prerequisites for Radiology Technologist students, who can be awarded the Associate of Arts degree from SDSU after completion of the Radiology Technologist courses.

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.

\boxtimes	Unmet	Demand (C.5	5.1.1)
\boxtimes	Industr	y Partnership	(C.5.1.2)

☐ Increases Student Access (C.5.1.3) ☐ Other:

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

Unmet demand: A shortage of trained Radiology Technologists exists in the region. Many students complete prerequisite courses at colleges outside the region and come to Sioux Falls for the Radiology programs. After completion of the programs, many students leave the region to return to their home areas.

Industry Partnership: The Radiology Technologist programs at Avera McKennan Hospital and Avera Sacred Heart Hospital, have requested the articulation agreement with STC to provide a local option for students to obtain the AAS degree and increase retention of graduates locally.

Increased Student Access: Students currently do not have access to obtain the AAS prerequisites at a public college in Sioux Falls. Providing these courses locally will allow students from the region to locate in the Sioux Falls and Yankton areas prior to attending the Radiology Technologist programs at these facilities.

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 <u>BP 301.1</u>.

- 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 Associate of Applied Science Degree in Technical Studies a student will be able to:

Technical Skills

- Students will apply technical skills required of an entry-level technician in a chosen field
- Students will demonstrate skills in science and technology by applying technical competence including knowledge of technology and/or scientific principles as these apply to programs.
- Problem Solving/Critical Thinking
- Students will select and use various approaches to solve a wide variety of problems scientific, mathematical, social and personal.
- Students will evaluate information from a variety of perspectives, analyze data and make appropriate judgements.
- Students will develop analytical skills
- Students will recognize when information is needed and have the ability to locate, organize, critically evaluate, and effectively use information from a variety of sources with intellectual integrity

Professionalism

- Students will demonstrate professionalism by developing a strong work ethic, including responsible
 attendance; skill in teamwork and collaboration, as well as an ability to work with others, respecting
 diversity; ability to adapt to change; commitment to lifelong learning; adherence to professional
 standards; and positive self-esteem and integrity.
- Students will develop life skills
- Students will develop required employability skills
- Students will promote and advance essential knowledge, skills and values students need to succeed in an interdependent, diverse and changing word

Communication

- Students will demonstrate knowledge of how to manage, access and process information.
- Students will develop the ability to communicate and interpret effectively in several forms oral, written, nonverbal and interpersonal.

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 the AAS in Technical Studies. The program learning outcomes align with the Southeast Technical College's broad student learning outcomes, aligning with the mission and vision of the institution.

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 an objective has been met without distinguishing 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 can 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 memorizing 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, allowing the college to plan, assess, report, review, and improve the program and institutional expected common learning outcomes. With the Watermark

software, all faculty and administrators can review and manage each academic program's assessment outcomes year over year. The software allows everyone to gather actionable insights from various reports to decide how students learn and aid in making decisions on program changes.

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

⊠ On Campus	Apprenticeship Other: Heavital based Radialagy Tashpalagy asuraas
⊠ Blended	

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

The general education prerequisites are taught in various formats, including on the STC campus, hybrid, and online. The variety allows students flexibility with their schedules, increasing school/life balance while preparing to take the hospital-based courses. The hospital curriculum is taught at health care facilities after students have completed prerequisites.

All the following listed prerequisite courses are all available as dual credit courses, as long as the student meets prerequisite requirements for the course. The hospital-based courses are not available as dual credit.

MATH 103	Mathematical Reasoning	ENGL 101	Composition
HC 118	Applied Anatomy	HC 118L	Applied Anatomy Lab
HC 117	Medical Language	PSYC 101	General Psychology
PHYS 100	Applied Physics	CMST 101	Foundations of Communication
PHSY 210	Physiology with Lab	SSS 100	Student Success Seminar

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 <u>required</u> 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.

Completion of prerequisites for the AAS degree in Technical Studies allows students to start the Radiology Technologist program sooner, thus facilitating entry into the profession more quickly. The Technical Studies degree is already offered. The requested change allows flexibility for students to move on to a bachelor's degree if desired after professional certification as Radiologic Technologists.

C. As applicable: Insert any additional comments here.

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

Southeast Technical College

Associate of Applied Science in Technical Studies (for Radiologic Technology)

SOUTH DAKOTA								
SOC* CODE	SOC* TITLE	AVERAGE ANNUAL OPENINGS	2022 EMPLOYMENT	2032 EMPLOYMENT	NUMERIC CHANGE: 2022-2032	PERCENT CHANGE: 2022-2032	MEDIAN: ANNUAL WAGE (2022)	AVERAGE: ANNUAL WAGE (2022)
29-2034	Radiologic Technologists and Technicians	68	1011	1129	118	11.67	\$63,590	\$63,590

ATIONAL								
SOC* CODE	SOC* TITLE	AVERAGE ANNUAL OPENINGS	2020 EMPLOYMENT	2029 EMPLOYMENT	NUMERIC CHANGE: 2020-2029	PERCENT CHANGE: 2020-2029	MEDIAN: ANNUAL WAGE (2020)	AVERAGE: ANNUAL WAGE (2020)
29-2034	Radiologic Technologists and Technicians	20,800	207,143	238,587	31,444	15%	\$ 73,403.00	\$ 73,403.00

SOURCE: DATE:

South Dakota Department of Labor and Regulation, Lightcast 03/14/2025

NOTES:

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

Southeast Technical College

[YEAR 1	YEAR 2	YEAR 3
Student Full-Time Equivalent (FTE)			
Headcount: Full-Time	12	12	14
Headcount: Part-Time			
Headcount: Total	12	12	14
Total Program or Site Capacity			

Southeast Technical College

MONTHS:	36
SEMESTERS:	8
TOTAL CREDITS:	62

PREFIX AND NUMBER	TITLE	CREDITS	DESCRIPTION	EXISTING COURSE
I. GENERAL EDUCA	TION CORE			
MATH 103	Mathematical Reasoning	4	This course is designed to provide students with practical number theory, logical thinking, and mathematical skills to be quantitatively literate. The student will develop critical thinking skills, interpret data, and reason quantitatively to solve authentic problems and increase confidence with mathematics while simultaneously building a cultural appreciation for the relevant and meaningful role that mathematics plays in many areas of life. Students will use information and knowledge from multiple areas to apply mathematics to new situations and dynamic processes. This course includes an introduction to statistics as well algebraic concepts such as linear and exponential models.	Y
ENGL 101	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
HC 118	Applied Anatomy	3	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
HC 118L	Applied Anatomy Lab	1	This Lab teaches the skills, techniques and competencies that support the theory the student is learning HC 118.	Y
HC 117	Medical Language	1	This course is designed to provide the basic principles of medical word building. These principles, once learned, can readily be applied to develop an extensive medical vocabulary. The textbook is presented with a variety of self- teaching features allowing the student to work through the chapters in systemized fashion that focuses on body systems. Once satisfactorily completed, the student will be able to adequately communicate in the health care industry.	Y
PSYC 101	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

Southeast Technical College

PHYS 100	Applied Physics	3	A foundation to understanding physical processes in technical applications. A thorough overview of measurement systems, practices, and notations is presented. Energy transformation and transfer processes are developed using a "systems model." Physical processes are then described using the systems approach in a "micro-to-macro" sequence, including atomic/nuclear, molecular, electrical/magnetic, mechanical, thermal, fluid, wave/radiating, and optional astronomic/cosmic effects. Definitions and descriptions of the mass/energy interactions involved are given for each type of system, leading toward diagnosis and troubleshooting methods in technical applications.	Y
CMST 101	Foundations of Communication	3	Based on the study of communication theory as applied to public speaking. The goals are to improve the student's public speaking and listening skills. Experiences in the class range from developing speech outlines, researching topics, and practicing delivery techniques for an informative, persuasive, and panel discussion assignment.	Y
PHGY 210	Physiology with Lab	4	Study of the physiology of human cells, tissues, organs, systems, and multiple system homeostatic mechanisms.	Y
SSS 100	Student Success Seminar	2	This course provides students with tools and techniques to help them succeed in their program of study. The course focuses on interactive exercises to help the learner identify personal strengths, learning styles, and support resources based on the STC Wellness Wheel. Reading and study techniques are also practiced.	Y
SUBTOTAL OF GENERAL EDUCATION CREDITS:		27	TOTAL NEW COURSES:	0

II. PROGRAM CORE				
Ave	ra McKennan Radiologic Techology course	s. Credits are not assigned to individual cour	ses.	
		This course will introduce the student to basic principles of		
		radiology technology, radiation protection, equipment		
		manipulation, and technique selection. The student will		
		become familiar with the goals, philosophies, and		
1102	Introduction to Radiologic Technology	organization of the radiography program and radiology	Y	
		department. An appreciation will be established through an		
		understanding of medical history, the evolution of radiologic		
		technology, and the professional and accrediting		
		organizations.		
		This course provides the student with moral and ethical		
	Professional Ethics	principles which will enhance communication and empathy for		
1111		the patient. Considerations regarding ethical principles and	v	
		legal responsibilities are also presented. Students will		
		examine a variety of ethical and legal issues found in clinical		
		practice.		
		These courses will complement the radiographic procedures		
		presented the first year, first and second semesters. The		
1122 1222	Image Evaluation I & II	student will identify anatomy and use critical thinking skills to	Y	
· · · <i>_</i> · · · <i>_</i> · · · · · · · ·		evaluate images for proper quality, including positioning,	•	
		selection of technical factors, and artifact identification.		
		Corrections for repeat images are presented.		
		A course which discusses such topics as body mechanics,		
		emergency care, first-aid, vital signs, aseptic technique, IV		
1132		applications, and other subject matter pertinent to the		
	Patient Care and Nursing Procedures	physical and psychological needs of patient and family. The	Y	
	. alone care and reaching rioboudroo	course includes the procedures and application of basic		
		cardiac life support. The student will participate in practical		
		application and become a certified basic cardiac life support		
		rescuer.		

Southeast Technical College

1141	Medical Terminology Review	This didactic course deals with vocabulary training involved with medical nomenclature, abbreviations, and definitions of medical terms used in radiology and other health professions.	Y
1153	Image Acquisition and Technical Evaluation	The general principles of radiographic technique and the underlying principles regarding the practical application of the x-ray equipment and accessory devices are presented. Emphasis is placed on the factors affecting image quality.	Y
1166, 1206	Imaging Procedures I & II	This course includes lectures, classroom demonstrations, and laboratory work concerning skeletal anatomy, anatomical positioning of the chest, abdomen, thorax, upper and lower extremities, shoulder girdle, vertebral column, and pelvic girdle.	Y
1174, 1247	Applied Clinical Radiography I & II	These clinical rotations offer supervised clinical application of radiographic principles by the student technologist in their performance of general radiographic, fluoroscopic, surgical and trauma procedures. The student will participate in a radiation therapy rotation and a night rotation in Applied Clinical II.	Y
1213, 2172	Radiation Physics I & II	This course will introduce the fundamentals of radiation physics and the principles of production, characteristics, and control of radiation applicable to diagnostic radiology. The content establishes a knowledge base in radiographic, fluoroscopic, and mobile equipment requirements and design.	Y
1232	Digital Imaging	This course will introduce the student to basic principles of computer technology in the radiologic sciences. Computer nomenclature, abbreviations, and definitions will be discussed along with computer concepts. Content includes the components, principles, and operation of digital imaging systems found in diagnostic radiology. Factors that impact image acquisition, display, and archiving and retrieval are discussed. Computerized Radiography and Digital Radiography instrumentation and operation are the key focus areas.	Y
2102	Independent Study and Research	In this unit the student will prepare a scientific project and research paper pertaining to the field of radiologic technology.	Y
2111	Quality Assurance	The elements of a quality improvement program will be discussed in this unit. Emphasis is placed on the evaluation of radiographic systems to assure consistency in the production of quality images. Principles of digital system quality assurance and maintenance are presented. Students will perform quality control tests in the clinical setting.	Y
2121, 2241	Image Evaluation III & IV	Image Evaluation III will complement the spine and skull radiographic procedures. The student will identify anatomy and use critical thinking skills to evaluate images for proper quality, including positioning, selection of technical factors, and artifact identification. Corrections for repeat images are presented. Image Evaluation IV will include a comprehensive review of anatomy and evaluation of repeat images for radiographic quality.	Y
2132, 2201	Imaging Modalities I & II	These courses introduce the student to several special imaging areas, including special fluoroscopic procedures, interventional radiology, ultrasonography, magnetic resonance imaging, DEXA, PET/CT, and mammography. Equipment operation, computer functions, routine procedures, and image evaluation will be presented. These courses are designed to provide a basic foundation to the special imaging modalities.	Y

Southeast Technical College

Associate of Applied Science in Technical Studies (for Radiologic Technology)

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2142, 2223	Radiographic Anatomy & Pathology I & II	This course includes a review of radiographic anatomy, the various pathologic conditions of the body and the impact on radiographic imaging. The basic knowledge of the disease process will enable the student to produce optimal radiographs and ensure effective patient care. Radiographic anatomy and pathology of the respiratory, urinary, digestive, cardiovascular, skeletal, endocrine, and neurological systems are discussed. Student will prepare and present case studies in these courses.	Y
2156, 2235	Applied Clinical Radiography III & IV	The clinical aspects of computed tomography, magnetic resonance imaging, PET/CT, mammography, sonography, interventional procedures, and diagnostic radiography are stressed in these clinical rotations. The student rotates through the various areas to become more proficient in all areas of radiology. Significant emphasis is placed upon developing the ability to think and act independently in various situations.	Y
2161	Imaging Procedures III	This course includes lectures, class demonstrations, and laboratory work concerning specialized anatomical positioning of the skull.	Y
2212	Computed Tomography	This course will introduce the student to the fundamentals of computerized tomography. This includes areas of cross- sectional anatomy, instrumentation, computer functions, and routine scanning procedures. Normal and abnormal anatomy will be identified as well as the evolution of CT imaging.	Y
2251	Cross-Sectional Anatomy	The course includes a review of gross anatomy of the body and the relationship to other structures. Gross anatomical structures are located and identified in axial (transverse), sagittal, and coronal planes. The characteristic appearance of anatomical structures as they appear on a CT and MR image will be included.	Y
2264	Radiation Biology and Protection	This course provides the student with knowledge pertaining to the area of radiation biology and protection. Principles and concepts explaining basic interactions of radiation with matter, the effect of exposure factors on radiation dose, biological effects, units of measurement, dose equivalent limits, and exposure monitoring will be presented.	Y
2277	Radiologic Technology Review	This course offers a comprehensive review intended to serve as preparation for the National Registry Examination administered by the American Registry of Radiologic Technologists. Selected topics will be taught by the students and several comprehensive review tests will be taken throughout the summer.	Y

Statement About Avera McKennan Hospital Program:

The program consists of a total of 3521 clock hours: 2620 clinical hours and 901 classroom hours for a total of 82.0 credit hours.

The curriculum for Radiologic Technology exceeds the requirements set forth by the JRCERT and ASRT. The program includes two years of study beginning the first

Avera Sacred Heart Hospital School of Radiologic Technology courses. Credits are not assigned to individual courses.						
	Basic Radiation Protection	Units of radiation measurement are defined. The types of radiation injuries and methods of protection are discussed. The various types of radiation monitoring equipment are presented.				
	Clinical Education	Each semester the clinical application of patient care, radiographic procedures, radiographic principles and radiation protection is attained through specific clinical assignments and completion of specific clinical objectives. Clinical assignments include routine radiography, fluoroscopy, mobile radiography, surgical procedures, CT, mammography, ultrasound, MRI, nuclear medicine, radiation therapy and special procedures.	Y			

Southeast Technical College

Digital Radiography & PACS		The basic concepts, historical development and types of computers are discussed. Computer terminology and radiology applications are presented. Picture archiving and communications systems, computed radiography and digital radiography are also discussed. Basic quality assurance and quality control practices for digital radiography are discussed.	Y
Human Anatomy and Physiolog	/	Anatomical parts and physiological functions of the various systems of the body are discussed. Emphasis is placed on the framework support, metabolism, nourishment, reproduction and control of the body.	Y
Image Critique		Instruction will include the presentation of images with an analysis of the technical factors, anatomy demonstrated, positioning factors and central ray alignment. The student will learn to distinguish between diagnostic and poor quality images.	Y
Introduction to Computerized Tomog	raphy	Students are provided with the basics of computerized tomography, how it is utilized and how it compares with conventional radiography. Various examinations and scanning techniques are demonstrated.	Y
Introduction to Mammography		The student is introduced to the basic principles of mammography equipment and procedures. Various patient conditions and pathologies are discussed.	Y
Introduction to Ultrasound		The basic principles and imaging modalities of ultrasound are presented. Patient preparation, scanning technique and simple pathologies for various ultrasound examinations are discussed.	Y
Medical Terminology		The terminology used in the radiology profession is presented. The building of medical terms using word roots, suffixes and prefixes will be presented. Abbreviations and symbols commonly used in patient charting and exam requisitions are discussed.	Y
Non-Routine Radiographic Procedu	ires	The student studies the positions and procedures for radiographic examinations not performed on a regular basis. Emphasis is placed on part position and anatomical demonstration with simulation and laboratory practice.	Y
Nursing Procedures		Provides the student with concepts of patient care. Routine and emergency care procedures are described. Topics include vital signs, body mechanics, isolation, IV and oxygen administration, sterile techniques, venipuncture and NG therapies.	Y
Orientation to Radiologic Technolo	рду	A brief history and overview of radiography and its role in the field of health care is discussed. Academic, clinical, hospital, departmental and program administrative policies are presented.	Y
Professional Ethics		The study of medical and legal ethics and their applications to the technologist are presented. Emphasis is placed on professional practices and communication.	Y
Radiation Biology and Protection	1	The production of X-rays and their interactions with matter are presented and methods of radiation measurement are discussed. The signs, symptoms, effects and results of exposure to acute and chronic radiation are identified. The biological effects of radiation on cells and radiosensitivity of various tissues are discussed.	Y
Radiographic Anatomy and Pathol	ogy	Radiographic anatomy and common pathologies of the different body systems are discussed. Associated radiographic findings for disease processes are presented.	Y
Radiographic Exposure		With the use of instruction, laboratory materials, observation and practice, the student will learn and apply the effects of radiation. Primary and secondary exposure factors are presented and analyzed as to their effect on image quality.	Y

Southeast Technical College

	Radiographic Physics	The basic fundamentals of physics are discussed including mathematics, units of measurement, physical concepts of energy and atomic structure. The production and physical characteristics of X-rays and the electrical principles of X-ray equipment are presented.	Y
	Routine Radiographic Procedures	Detailed information on the various positions and procedures routinely performed in the radiology department are discussed. The fundamental principles of position will be followed by a demonstration and simulation in laboratory exercises.	Y
	Senior Seminar and Review	The student is required to prepare a scientific paper or exhibit on a pertinent topic in radiology. A review of the five main areas of the ARRT registry examination for radiography is presented.	Y
	Special Radiographic Procedures and Equipment	Students are exposed to various types of specialized radiographic procedures with emphasis on anatomy, technique and specialized equipment. Procedures related to angiography, myelography and urography are discussed.	Y
SUBTOTAL OF PROGRAM CREDITS: 0 TOTAL NEW COURSES:			0

SOUTH DAKOTA BOARD OF TECHNICAL EDUCATION Appendix 4: Alignment Projection

Appendix 4. Alignment i Tojecti

Southeast Technical College

Associate of Applied Science in Technical Studies (for Radiologic Technology)

TOTAL CREDITS IN PROPOSED PROGRAM:

62

I. STACKABLE OPPORTUNITIES

I ON GIUBEL OF FORTON							
Technical Studies		Short-term Certificate Long-term Certificate Diploma	Х	Existing Forthcoming	If Forthcoming: Projected Timeline	Total Credits in Stackable Program	How many PROPOSED PROGRAM credits are in this stackable program opportunity?
	Х	AAS				62	35
PROGRAM NAME		Short-term Certificate Long-term Certificate Diploma		Existing Forthcoming	If Forthcoming: Projected Timeline	Total Credits in Stackable Program	How many PROPOSED PROGRAM credits are in this stackable program opportunity?
		AAS					
PROGRAM NAME		Short-term Certificate Long-term Certificate Diploma		Existing Forthcoming	If Forthcoming: Projected Timeline	Total Credits in Stackable Program	How many PROPOSED PROGRAM credits are in this stackable program opportunity?
		AAS					
PROGRAM NAME		Short-term Certificate Long-term Certificate Diploma		Existing Forthcoming	If Forthcoming: Projected Timeline	Total Credits in Stackable Program	How many PROPOSED PROGRAM credits are in this stackable program opportunity?
		AAS					

II. ARTICULATION AGREEMENTS (BACCALAUREATE)							
PROGRAM NAME	COLLEGE OR UNIVERSITY		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?	
PROGRAM NAME	COLLEGE OR UNIVERSITY		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?	
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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 reporting per SDCL 13-1-61?						
Radiologic Technologist	American Registry of Radiologic Technologists	Yes				
LICENSURE/CERTIFICATION	OVERSIGHT ORGANIZATION	Will the licensure/certification require reporting per SDCL 13-1-61?				
LICENSURE/CERTIFICATION	OVERSIGHT ORGANIZATION	Will the licensure/certification require reporting per SDCL 13-1-61?				



1325 S. Cliff Ave. P.O. Box 5045 Sioux Falls, SD 57117-5045 605-322-8000

Avera.org

March 12, 2025

To Whom It May Concern:

I am writing to you in support of the proposal for a radiologic technology specialization at Southeast Technical College. This partnership would provide students with a seamless educational pathway, ensuring they meet the necessary requirements to take the registry exam and achieve their professional goals.

Before students can sit for the registry exam, they must have at least an associate's degree. By partnering with colleges, like Southeast Tech, we help students obtain this degree. This partnership not only facilitates their academic journey but also enhances their professional development by providing them with a solid education.

Radiologic sciences play a vital role in modern healthcare, encompassing diagnostic imaging, therapeutic procedures, and radiation therapy. As healthcare continually evolves, the demand for professionals with expertise in radiologic technology is increasing. By offering a radiologic technology specialization, it would aim to equip our students with the skills and knowledge necessary to meet these growing needs and to create well-rounded healthcare professionals.

The Avera McKennan School of Radiologic Technology has been educating students for over 75 years. Our long-standing history is complimented by a solid pass rate on the board exam, which underscores the academic and clinical preparedness of our students for the workforce. Additionally, our accreditation by the Joint Review Committee on Education in Radiologic Technology ensures that we consistently meet high educational standards.

An affiliation agreement between Southeast Tech and the Avera McKennan School of Radiologic Technology represents a step forward in advancing radiologic technology education and workforce development. This collaboration would not only benefit the students but also strengthen the local healthcare community by fostering a well-prepared and highly skilled workforce. I am excited about this potential partnership and look forward to the positive impact it will have on the community we serve.

Sincerely,

ion futura Susan Pritchard, M.B.A., R.T.(R)(CT)

Program Director Avera McKennan School of Radiologic Technology susan.pritchard@avera.org

Sponsored by the Benedictine and Presentation Sisters



501 Summit Street Yankton, SD 57078 (605) 668-8158

www.averasacredheart.org

To Whom It May Concern:

I am writing to you in support of the proposal for a radiologic technology specialization at SE Tech. Universities/colleges who offer degrees and accredited programs that offer clinical internships in radiography must now come together for the educational advancement in the field of radiology. The American Registry of Radiologic Technologists now requires two components in order for a candidate to sit for the national board examination. The "degree component" is awarded by the university/college and the "professional component" is awarded by the clinical internship program. Thus, partnerships that are created between universities/colleges and clinical internship programs are imperative for the educational advancement of those seeking a career in radiology.

A career in radiologic technology can lead in many directions. Radiologic technologists are needed in every health care setting. They work in in hospitals, outpatient clinics or physician offices. They can specialize in clinical areas ranging from prenatal care to orthopedics. Work as a technical advisor or representative of a radiology equipment firm. Perform research in diagnostic imaging or radiation therapy. Work in post-secondary educational programs at hospitals, clinics and colleges.

The field of radiologic sciences continually grows. It includes such modalities as diagnostic radiology, computerized imaging, radiation therapy, ultrasound, nuclear medicine, magnetic resonance imaging and so much more. Part science and part art, radiologic technology is an indispensable part of modern medicine.

Avera Sacred Heart Hospital School of Radiologic Technology was established in 1948. The program is administered by a director, supervised by clinical preceptors and accredited by the Joint Committee on Education in Radiologic Technology. The program is also recognized by the State of South Dakota and holds the Certificate of Authorization for Postsecondary Education from the Office of the Secretary of State.

We currently have agreements with Mount Marty University, St. Cloud State University, University of Nebraska at Kearney and University of Mary. Because of these arrangements students who successfully complete all requirements (at the university/college and the clinical internship) and pass the national board exam are able to immediately step into a career where their skills in communication, technology, care and compassion are necessary.

Avera Sacred Heart Hospital School of Radiologic Technology has longevity and is highly committed to education in our profession. We continue to seek partnerships with universities/colleges in South Dakota as the need for imaging staff is significant. To have a partnership with Southeast Technical College would not only allow graduates to work in this profession, but also hopefully help to fill the need of medical imaging professionals in the communities of South Dakota.

Sincerel) Anessa Van Osdel, M.A., R.T.(R)(M)

Anessa Van Osdel, M.A., R.T.(R)(M) Director School of Radiologic Technology Avera Sacred Heart Hospital <u>anessa.vanosdel@avera.org</u>

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