



SURGICAL TECHNOLOGY

Associate of Applied Science Degree

STI

**SOUTHEAST
TECHNICAL INSTITUTE**

southeasttech.edu

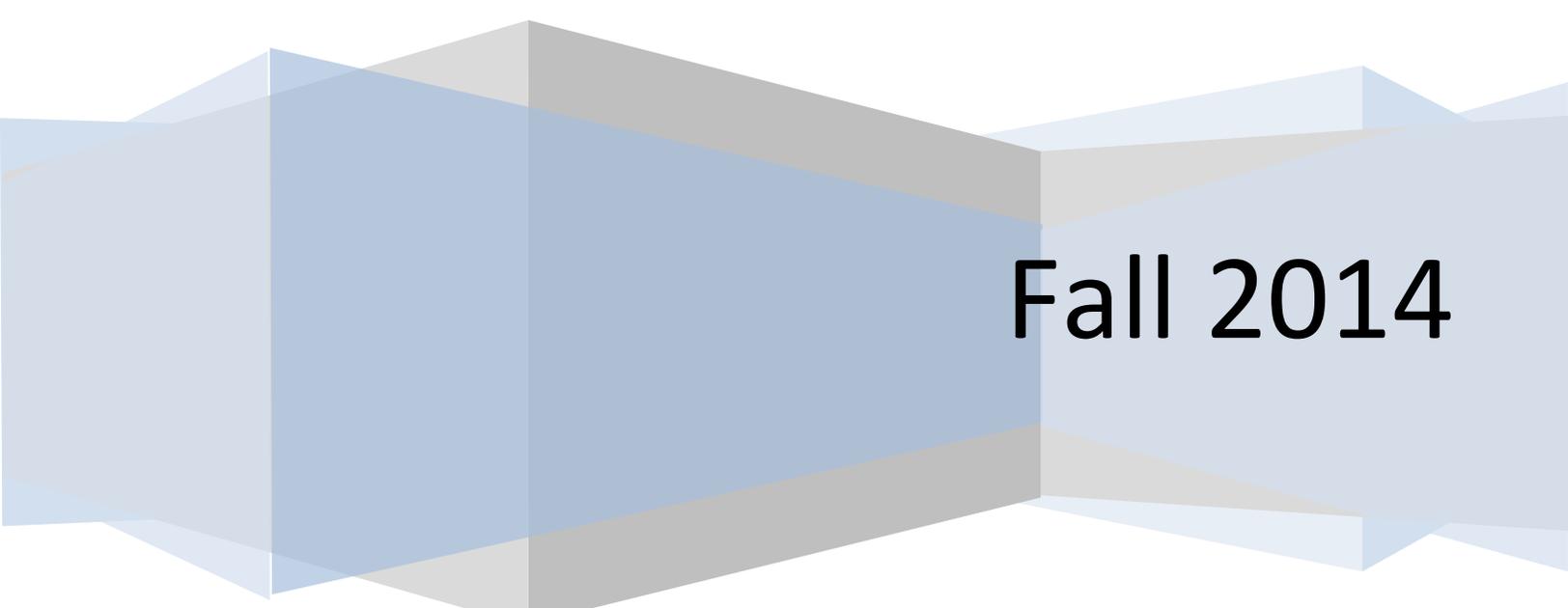
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Southeast Technical Institute

New Program Application

Surgical Technology

Associate of Applied Science Degree



Fall 2014

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Surgical Technology – AAS Degree

Executive Summary

Southeast Technical Institute currently offers a Surgical Technology Diploma program. The program is accredited by the organization known as CAAHEP (Commission on Accreditation of Allied Health Education Programs). CAAHEP has determined that all sponsoring institutions that graduate surgical technologists should award a minimum of an Associate's Degree at the completion of their program by August 1, 2021

Surgical technologists are allied health professionals who are an integral part of the team of medical practitioners providing surgical care to patients in a variety of settings. The surgical technologist works under medical supervision to facilitate the safe and effective conduct of invasive surgical procedures. This individual works under the supervision of a surgeon to ensure that the operating room environment is safe, that equipment functions properly, and that the operative procedure is conducted under conditions that maximize patient safety.

Identification and Description of the Program

STI is proposing a two-year Surgical Technology AAS Degree program. A surgical technologist possesses expertise in the theory and application of sterile and aseptic technique and combines the knowledge of human anatomy, surgical procedures, and implementation tools and technologies to facilitate a physician's performance of invasive therapeutic and diagnostic procedures.

Objectives and Purpose of the Program

The primary objective of this program is to provide qualified personnel to serve as Surgical Technologists in all aspects of surgical patient services. Graduates can be employed in hospital surgical suites, dental offices, physicians' offices, clinics, same-day surgery clinics and in ancillary departments that support surgical procedures. This program qualifies graduates to sit for the national certification exam, which awards the credential of CST (Certified Surgical Technologist).

The objectives of the program include:

- Checks supplies and equipment needed for surgical procedures
- Scrubs, gowns and gloves
- Sets up sterile table with instruments, supplies, equipment, and medications/solutions needed for procedure
- Performs appropriate counts with circulator prior to the operation and before incision is closed
- Gowns and gloves surgeon and assistants
- Maintains highest standard of sterile technique during procedure
- Cleans and prepares instruments for terminal sterilization
- Assists other members of team with terminal cleaning of room
- Assists in prepping room for the next patient
- Operate and assemble surgical instruments and/or equipment,
- Adjust or monitor sterilizers, lights, suction machines, or diagnostic equipment to ensure proper operation

Methods of Attaining the Objectives of the Program

Upon receipt of the State Board of Education approval, Southeast Technical Institute will accept up to 35 students beginning in the Fall Semester of 2014. The marketing campaign to recruit students will include a comprehensive media mix.

The two-year Surgical Technology AAS Degree program will consist of classes in Surgical Theory, Surgical Procedures, Mathematics, Computers and Communications. The students will receive an extensive amount of laboratory time in Surgical Labs to develop their skill and prepare them for their Clinical experience.

The Surgical Technology Degree will be offered traditionally, during the day, at STI.

During the development of the Surgical Technology Degree program, STI has worked with several individuals in the Health care field and our Surgical Technology Advisory Board.

Description of Labor Market Demands of the United States, State of South Dakota, Student Needs, and Industry Support

National Data

According to the 2012 – 2022 National Bureau of Labor Statistics, there is an expected increase of 29.84% or 29,300 employees for Surgical Technologists. Growth for this career is expected to be faster than average. See Table Below.

National Bureau of Labor Statistics 2012 – 2022			
Position	Employees 2012	Employees 2022	2012 – 2022 %
Surgical Technologist	98,500	127,800	29.84%

State/Regional Data

According to the 2010 – 2020 South Dakota Occupational Employment Projections, there is an expected increase of 10.3% for Surgical Technologists. See Table Below.

SD Bureau of Labor Statistics 2010 – 2020			
Position	Employees 2010	Employees 2020	2010 – 2020 %
Surgical Technologists	435	480	10.3%

Student Needs

This program will provide students with an opportunity to enter an expanding industry that has many different entry points, areas for growth, and training that meets industry growth and needs. The program provides a background in theory, processes, and general education.

Industry support

STI has met with leaders of health care organizations and our Surgical Technology Advisory Board and has received a strong level of support, indicated by the letters of support attached in Appendix C.

Population to be served by the Program

STI will recruit students from a variety of backgrounds, including both traditional and non-traditional. It is anticipated that this program will attract students directly out of high school in addition to those who are unemployed, underemployed and those wanting to make a career change.

Program Capacity

Starting Semester	Delivery Format	Capacity
Fall 2014	Traditional Day	35

Projected Three-Year Budget Plan

BUDGET PROJECTIONS			
Year	<u>2014-2015</u>	<u>2015-2016</u>	<u>2016-2017</u>
Salaries/Benefits (2 FTE)	\$163,938	\$168,856	\$173,922
Staff Travel	\$1,500.00	\$1,500.00	\$1,500.00
Instructional Materials	\$10,000.00	\$10,000.00	\$10,000.00
Capital Equipment	\$10,000.00	\$10,000.00	\$10,000.00
Software/Books/Fees	\$3,225.00	\$3,225.00	\$3,225.00
Totals	\$188,663.00	\$193,581.00	\$198,647.00

Salaries/Benefits/FTE/Equipment

The Surgical Technology Program will need one full time instructor and one full-time lab specialist. STI has classroom, lab and office space for our current Surgical Technology program. The equipment that has been used for our Diploma program will be used for our Degree program.

Program Competencies and entry and exit points of sub-occupations

The Surgical Technologist Degree Program will provide qualified personnel to serve as Surgical Technologists in all aspects of surgical patient services. Completion of the Surgical Technologist Degree program qualifies graduates to sit for the national certification exam which awards the credential of CST (Certified Surgical Technologist).

Entry Point: Fall 2014

Exit Point: Summer 2016.

Statement of non-duplication

Western Dakota Technical Institute also offers a Surgical Technology Program.

Curriculum design and research

Southeast Technical Institute has had a curriculum in place for our Surgical Technology Diploma program. Additional coursework has been developed to meet the Surgical Technology Degree program. The curriculum is shown in Appendix B.

Wage Factor

Data from the South Dakota Department of Labor Occupational Wage Estimates through June 2012 positions the average hourly wage from \$16.03 to \$23.15. See Table Below:

South Dakota Department of Labor Occupational Wages Estimates				Percentile				
Occupation	Area	Workers	Ave. Wage	10 th	25 th	50 th	75 th	90 th
Surgical Technologist	Sioux Falls	220	\$18.85	\$16.03	\$16.39	\$18.47	\$21.35	\$23.36
Surgical Technologist	State	430	\$18.25	\$13.67	\$15.72	\$18.00	\$20.94	\$23.15

Data from the National Department of Labor positions lists the 2011 median annual wage at \$42,720.00 with a range from \$30,450.00 to \$61,300.00 for the 10th to 90th percentile. The average annual wage for 2011 was \$51,830.00. See Table Below:

Percentile	10%	25%	50% (Median)	75%	90%
Hourly Wage	\$14.64	\$16.91	\$20.54	\$25.13	\$29.47
Annual Wage	\$30,450	\$35,180	\$42,720	\$52,270	\$61,300

CIP Code

Surgical/Operating Room Technician: 51.0909: A program that prepares individuals, under the supervision of physicians and surgical nurses, to maintain, monitor, and enforce the sterile field and adherence to aseptic technique by preoperative, surgical team, and postoperative personnel. Includes instruction in instrument and equipment sterilization and handling, surgical supplies management, wound exposure and closure, surgical computer and robot operation and monitoring, maintenance of hemostasis, and patient and team scrubbing.

Appendix A – SD and US Dept of Labor Information

Occupational Employment and Wages, May 2012

29-2055 Surgical Technologists

National estimates for this occupation:

Employment estimate and mean wage estimates for this occupation:

Employment	Employment RSE	Mean hourly wage	Mean annual wage	Wage RSE
97,930	1.1 %	\$20.54	\$21.36	0.3%

Percentile wage estimates for this occupation:

Percentile	10%	25%	50% (Median)	75%	90%
Hourly Wage	\$14.64	\$16.91	\$20.54	\$25.13	\$29.47
Annual Wage	\$30,450	\$35,180	\$42,720	\$52,270	\$61,300

Appendix B – Program Course List and Semester Layout

Semester Layout

Semester	Course Title	Credits	Lec/Lab
First			
SSS 100	Student Success	2	2/0
HC 117	Medical Language	1	1/0
HC 118	Applied Anatomy/Physiology	4	3/0
HC 118L	Applied Anatomy/Physiology Lab		0/2
ST 100	Surgical Techniques	3	3/0
ST 121	Surgical Asepsis	2	2/0
ST 110	Surgical Technology Lab	<u>2</u>	0/4
		14	
Second			
PSYC 101T	General Psychology	3	3/0
SPCM 101T	Fundamentals of Speech	3	3/0
HC 121	Patient Care Techniques/Patient Care Lab	3	2/2
ST 112	Surgical Procedures I	3	3/0
ST 122	Surgical Procedures Lab	2	0/4
ST 1XX	Clinical Observation	<u>1</u>	0/8
		15	
Third			
HC 114	Health Care Human	3	3/0
ST 1XX	Microbiology for Surgical Technologists	3	3/0
ST 1XX	Surgical Procedures II	3	3/0
ST 120	Principles and Practice of Surgical Tech	1	1/0
ST 120L	Principles and Practice of Surgical Tech Lab	2	0/4
MATH 115	College Math	3	3/0
CIS 101	Computer Essentials	<u>2</u>	1/2
		17	

Appendix B – Program Course List and Semester Layout - Continued

Semester Layout

Semester	Course Title	Credits	Lec/Lab
Fourth			
ST XXX	Surgical Procedures III	3	3/0
SOC	Social Problems or Marriage in the Family	3	3/0
ST 113	Technology for Surgical Technologists	1	1/0
ST 123	Surgical Pharmacology	2	2/0
ENGL 101T	Composition	3	3/0
ST 114	Clinical Practice I	<u>4</u>	0/16
		16	
Fifth			
ST 124	Clinical Practice II	6	0/40
ST 134	Clinical Practice III	<u>6</u>	0/40
		12	

Program Course List with Descriptions

SSS 100 - Student Success Seminar – 2 Credit Hours

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.

HC 117 - Medical Language – 1 Credit Hours

This course is designed to provide the basic principles of medical work 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. A CD is included to benefit the student in pronunciation and definition of each word. Once satisfactorily completed, the student will be able to adequately communicate in the health care industry.

HC 118 - Applied Anatomy/Physiology – 4 Credit Hours

Forms the foundation of Licensed Practical Nursing and Surgical Technology programs. In addition to studying the structure and function of the human body, the disease processes that correlate with each body system will be covered.

HC 118L - Applied Anatomy/Physiology Lab

This Lab teaches the skills, techniques and competencies that support the theory the student is learning HC 118.

ST 100 - Surgical Techniques – 3 Credit Hours

Effective and safe care of the surgical patient is the focus of this course. Students will be exposed to all facets of surgery and surgical patient care. Historical perspective of the career of the Surgical Technologist will be explored. The students will spend a morning or afternoon **(7:30am-11:30am or 12-3:30)** in the surgery department of one of the Sioux Falls' health care facilities.

ST 121 - Surgical Asepsis – 2 Credit Hours

This course is an introduction to sterile technique in surgery. Students will learn all components of establishing and maintaining a sterile field. In addition, the following topics will be covered: microorganisms, their classifications and methods of control, the infection process, wound healing, suture and sterilization.

ST 110 - Surgical Techniques Lab – 2 Credit Hours

A "hands-on" introduction to Surgical Technology. It includes operating room (OR) environment, instrumentation, sterile technique, basic suture knowledge and sponge, sharp and instrument counts. Students use this basic information to practice skills and techniques in the lab setting.

PSYC 101T - General Psychology – 3 Credit Hours

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.

SPCM 101T - Fundamentals of Speech – 3 Credit Hours

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.

HC 121 - Patient Care Techniques/Patient Care Lab – 3 Credit Hours

Designed to assist students in developing the necessary skills to directly deal with patients. Skills acquired will help protect themselves, as well as the patient, and includes infection control, body mechanics, vital signs, CPR/First Aid, dealing with tubes and equipment, safety and security as well as other topics.

ST 112 - Surgical Procedures - 3 Credit Hours

This course is designed to introduce the student to surgical procedures for the following surgical specialties: General and Gastrointestinal, OBGYN, Genitourinary, Orthopedic.

ST 122 - Surgical Procedures Lab I – 2 Credit Hours

Designed to allow the student to practice concepts related to all core and specialty surgical procedures. This course will take place in a mock operating room setting at Southeast Tech. One day per week/four hours per class.

ST 1XX - Clinical Observation – 1 Credit Hour

This course consists of 64 hours of surgical technology practice in operating rooms at local hospitals as an introduction to the surgical environment. The student will have completed Surgical Asepsis, Surgical Techniques and Surgical Techniques Lab. The student will be able to reinforce the learned skills that are essential in preparation of the patient, instrumentation and supplies necessary for surgery. The students will be directly involved with numerous surgical procedures and will begin complying surgical cases to complete core curriculum requirements.

HC 114 - Health Care Human – 3 Credit Hours

Discussions and activities will center around the topic of respect. This course introduces students to health care issues and assists them in developing personal and employability success skills. Topics include, but are not limited to: accountability, professionalism, communication, confidentiality, patient rights, cultural bias and discrimination, effective interpersonal skills, dealing with difficult patients of all ages, and death and dying issues.

ST 1XX - Microbiology for Surgical Technologists – 3 Credit Hours

This course explores the basic principles of microbiology and the impact of microbiology in relationships to the practice of sterile technique and infection control in the operating room and how the infectious relates to the process in surgical practice. Students will learn to compare and contrast the structure and characteristics of different microorganisms, analyze the various immune responses that occur in the body as a defense against invasion by pathogens.

ST 1XX - Surgical Procedures II – 3 Credit Hours

This course is a continuation of Surgical Procedures and is designed to introduce the student to surgical procedures for the following surgical specialties: Peripheral Vascular, Thoracic, Cardiothoracic procedures, Neurosurgery procedures.

ST 120 - Principles & Practice of Surgical Tech - 2 Credit Hours

Designed to assist the student in gaining essential skills in the preparation of patient, instrumentation and supplies used in surgery. Takes place in a mock operating room setting at Southeast Tech. One day per week/two hours per class. One hour per week of lecture time is also a part of this course.

ST 120L - Principles & Practice of Surgical Tech Lab – 2 Credit Hours

This Lab teaches the skills, techniques and competencies that support the theory the student is learning ST 120.

MATH 115 - College Math – 3 Credit Hours

A course covering the concepts and application of mathematics, that include 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 it is not a transfer course.

CIS 101 - Computer Essentials – 2 Credit Hours

Designed to enable students with little or no computer experience to acquire a basic understanding of the personal computer. This course involves the study of computer basics such as hardware, operating systems, and file management, using the Internet for research, word processing, and spreadsheets.

ST XXX - Surgical Procedures III – 3 Credit Hours

This course is a continuation of Surgical Procedures and is designed to introduce the student to surgical procedures for the following surgical specialties; Otorhinolaryngology, Oral and Maxillofacial, Plastic and Reconstructive and Ophthalmic procedures.

SOC - Social Problems or Marriage in the Family – 3 Credit Hours

Student may choose from above class options. Descriptions listed below.

SOC 150T - Social Problems

A sociological analysis of the causes and proposed solutions of contemporary social problems confronting society today. It includes an analysis of the significance of the problems and current policies and actions. The course is designed to encourage debate and to get students to consider different positions or viewpoints with regard to social issues.

SOC 250T - Marriage & the Family

Designed for all students, the purpose of the course is to develop an understanding of the social role of marriage and family living. Topics covered include courtship and preparation for marriage, conflict situations and adjustments between spouses, parent-child relationships, the family in the community, and disintegration of the family unit.

ST 113 - Technology for Surgical Technologists – 1 Credit Hour

Designed to introduce students to technology utilized in today's operating rooms. Addresses basic technological science requirements for current and future surgical practice: electricity, physics, robotics and computers.

ST 123 - Surgical Pharmacology – 2 Credit Hours

Students study the use of drugs and solutions administered to the surgical patient, anesthesia, and medical abbreviations.

ENGL 101T - Composition – 3 Credit Hour

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.

ST 114 - Clinical Practice I – 4 Credit Hours

This course consists of 240 hours of surgical technology practice in operating rooms at local hospitals. Students will gain essential skills in preparation of the patient, instrumentation and supplies necessary for surgery. Students will be directly involved with numerous surgical procedures.

ST 124 - Clinical Practice II – 6 Credit Hours

This course is a continuation of ST 114. The course will consist of a minimum 180 hours of surgical technology practice in the operating room setting at a hospital in the Midwest region. Students will apply their knowledge of surgical techniques and procedures, equipment, instruments, and supplies and increasingly develop their skills.

ST 134 - Clinical Practice III – 6 Credit Hours

This course is a continuation of ST 124. The course will consist of a minimum 180 hours of surgical technology practice in the operating room setting at a hospital in the Midwest region. Students will continue to apply their knowledge of surgical techniques and procedures, equipment, instruments, and supplies and increasingly develop their skills.

Appendix C- Letters of Support

04/22/14

Dear Board Members:

I would like to take this opportunity to express support for a program that would facilitate students enrolled in the Surgical Technologist Program at STI to obtain an Associates of Science degree.

Additional classes with the intention of enhancing communication, customer service, human relations, critical thinking and problem solving will give these individuals the skills required to function as an integral part of the Surgical Team.

As a leader in health care we are continually looking for motivated, skilled, and well prepared employees to enhance our team.

STI has historically provided very good Surgical Technology students. Adding additional skills to the student in the area of Surgical Technology would certainly enhance the caliber of individual sought after in the competitive workplace.

As a member of the STI Surgical Technology advisory board and a clinical educator in the surgery department at Sanford USD Medical Center, I support the value of the additional courses required for the student to obtain an Associate Degree in Surgical Technology.

Respectfully submitted:

Judy VanOverbeke R.N. CNOR
Clinical Education/Training Specialist
Surgical Services
Sanford USD Medical Center
Sioux Falls, South Dakota

April 24, 2014

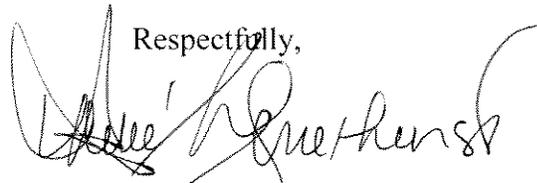
To Whom It May Concern,

I am writing this letter of recommendation in support of the Southeast Technical Institute's pursuit to transition their Surgical Technologist program to an Associate Degree program.

As a recipient of their high caliber graduates in the near and distant past, as well as the opportunity to participate as a clinical site for them, I would like to positively encourage you to afford them this designation. To the degree that the current program can possibly do in the limited time that they have to train these graduates not only in their chosen profession, but also in professionalism, they have excelled as an institution. As a profession that is often chosen by many as a first career, this additional time would be well spent further developing their professionalism and life experiences. Additionally, I believe that this would afford them a greater breadth and depth to their clinical rotations, which only enhances the care that we are able to give patients and their families.

With the looming shortages in healthcare, the numbers of aging population requiring care, along with the the industry and consumer's demands for increased quality, a move to increase the professionalism and practicum of this group seems to be a natural progression. Southeast Technical Institute routinely responds to, and even preempts, the changing needs of the healthcare arena. This is just one more example of their forward thinking. An institution that so acutely anticipates the needs of the industry they serve should naturally be granted the ability to continue doing so.

Respectfully,



Renee M. Smethurst BSN, CCRN

Director of Surgery

Avera Heart Hospital of South Dakota

April 25, 2014

To Whom It May Concern:

I am writing this letter in support of Southeast Technical Institute's Surgical Technology Program's desire to expand their curriculum by offering a 2 year Associate Degree.

For many years, our partnership with Southeast Technical Institute has proved to be mutually beneficial and has afforded us an opportunity to hire Surgical Technologists that are well prepared to enter the work-force.

By offering an Associate Degree in Surgical Technology, students who may seeking to further their education in the future will be able to transfer toward a bachelor's degree more readily.

The employment opportunities for surgical technologists continue to grow, but these opportunities demand a CST with a broad-base of knowledge and technical skills that is enhanced by completing a two-year degree.

Thank you kindly for your consideration.



Sandra King, RN, BSN, CNOR
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