

2012 Mississippi Curriculum Framework

Postsecondary Surgical Technology

(Program CIP: 51.0909 – Surgical Technology/Technologist)

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Standards in this document are based on information from the following organizations:

Standards Based on the Core Curriculum for Surgical Technology

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Related Academic Standards

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Preface

Surgical Technology Research Synopsis

Surgical technicians, scrub tech, and operation room technicians (OR Techs) assist in surgery under the supervision of surgeons, registered nurses, or other surgical personnel. They prepare the room for surgery by laying out instruments and equipment. They are responsible for the assembly, maintenance, and sterilization of surgical equipment and supplies. In addition to the maintenance and care for surgical equipment, surgical technicians prepare patients for surgery as well by shaving and sterilizing incision sites. During surgery, technologists pass instruments and other sterile supplies to surgeons and surgical assistants. They may hold retractors, cut sutures, and help count sponges, needles, supplies, and instruments. Surgical technologists help prepare, care for, and dispose of specimens taken for laboratory analysis and help apply dressings. Some operate sterilizers, lights, or suction machines and help operate diagnostic equipment. After an operation, surgical technologists may help transfer patients to the recovery room and clean and restock the operating room (US Bureau of Labor Statistics, 2010).

Articles, books, Web sites, and other materials listed at the end of each course were considered during the revision process and were especially useful in providing insight into trends and issues in the field. These references are suggested for use by instructors and students during the study of the topics outlined.

Industry advisory team members from colleges throughout the state were asked to give input related to changes to be made to the curriculum framework. Specific comments related to soft skills needed in this program included punctuality, attentiveness, professionalism, adaptability, and initiative. Occupational-specific skills stated included knowledge of sterile technique, surgical instruments, medical terminology, and anatomy, the ability to handle special drugs and solutions, and being adaptable to the needs of the surgeon and surgery team. Safety practices emphasized include maintaining a sterile field, infection control, proper handling of sharps, radiation safety, and universal precautions.

Needs of the Future Workforce

There were over 91,000 surgical technologists employed in the United States in 2009 (EMSI, 2009). Hospitals are and will continue to be the top employers of surgical technologists although opportunities will be available in other establishments (US Bureau of Labor Statistics, 2009). The surgical technology occupation is projected to have much faster than average growth over the projection period in the United States, 24%, and in Mississippi, 26% (EMSI, 2009). Job prospects will be good for individuals with certifications or associate degrees as hospitals seek to fill open positions as well as replacements (EMSI, 2009; US Bureau of Labor Statistics, 2009).

Surgical Technology Employment Projections and Earnings

Region	2009 Jobs	2019 Jobs	Change	% Change	Current Median Hourly Earnings
Regional Total	1,087	1,366	279	26%	\$15.13
National Total	91,128	112,930	21,802	24%	\$18.61

Source: EMSI Complete Employment - 4th Quarter 2009

Curriculum

The following national standards were referenced in each course of the curriculum:

- *CTB/McGraw-Hill LLC Tests of Adult Basic Education, forms 7 and 8 Academic Standards*
- *21st Century Skills*
- *Standards Based on the Core Curriculum for Surgical Technology*

Industry and instructor comments, along with current research, were considered by the curriculum revision team during the revision process; and changes were made as needed and appropriate. Many of the skills and topics noted in the research were already included in the curriculum framework. Specific changes made to the curriculum at the February 23–24, 2010, and September 13, 2012, curriculum revision meeting included the following:

- Competencies and objectives were reviewed to ensure accuracy and appropriateness.
- Aligned standards were reviewed to ensure accuracy and appropriateness.
- The Recommended Tools and Equipment list was updated.
- An articulation agreement between Secondary Allied Health and Postsecondary Surgical Technology was formulated and appears in detail later in this section.
- The suggested references for each course were updated.
- The clock hours for Principles of Surgical Technique were changed from 1-hr lecture, 10-hr lab to become 2-hr lecture, 8-hr lab.
- Verbiage was added to the corequisite requirements for Surgical Microbiology, Basic and Related Surgical Procedures, Specialized Surgical Procedures, and Advanced Surgical Procedures allow for variance of the course sequencing among different programs.
- The course sequence format was modified.

Assessment

Students will be assessed using the *Certifying Exam for Surgical Technologists given by the National Board of Surgical Technology and Surgical Assisting (NBSTSA)*.

Best Practices

Teachers are expected to use a wide variety of teaching strategies throughout the curriculum to instruct competencies in various methods. Teachers should develop strategies that reflect academic achievement, problem solving, and industry needs for daily use in the classroom.

Professional Learning

It is suggested that instructors participate in professional learning related to the following concepts:

- Continuing education and instruction in endoscopic and robotic procedures

- How to use the program Blackboard site (or related learning management system)
- Differentiated instruction – To learn more about differentiated instruction, please go to http://www.paec.org/teacher2teacher/additional_subjects.html, and click on Differentiated Instruction. Work through this online course, and review the additional resources.

Articulation

Articulation credit from Secondary Allied Health to Postsecondary Surgical Technology will be awarded beginning with the fall semester of 2010. Both years of the Secondary Allied Health program are required to be articulated to the Postsecondary Surgical Technology program.

Secondary Courses to be Articulated	Postsecondary Courses Articulated
Both years of the Secondary Allied Health (CIP: 51.0000)	Medical Office Terminology I (BOT 1613)

Statewide Guidelines on Articulated Credit

Eligibility

- To be eligible for articulated credit, a student must do the following:
 - Complete the articulated Secondary Vocational Program.
 - Score 80% or higher on the Mississippi Career Planning and Assessment System (MS CPAS) in his or her secondary program of study.
- To be awarded articulated credit, a student must do the following:
 - Complete application for articulated credit at the community or junior college.
 - Enroll in the community or junior college within 18 months of graduation.
 - Successfully complete 12 non-developmental career/technical or academic credit hours in the corresponding articulated postsecondary career–technical program of study.

How MS CPAS will be documented

- The Research and Curriculum Unit of Mississippi State University will provide the SBCJC a list of all secondary CTE students scoring at or above the 80 percentile for the articulated programs.
- The SBCJC will forward the list of students eligible for articulated credit to the colleges.

Transcripting of Articulated Credit

- Students must complete 12 non-developmental career/technical or academic credit hours in the articulated postsecondary career–technical program of study before the articulated credit is transcripted.
- No grade will be given on the transcript for articulated courses; only hours granted will be transcripted (thus resulting in no change in quality points).

Time Limit

- MS CPAS scores will be accepted to demonstrate competencies for up to 18 months after high school graduation.

Cost

- No costs will be assessed on hours earned through articulated credit.

Foreword

As the world economy continues to evolve, businesses and industries must adopt new practices and processes in order to survive. Quality and cost control, work teams and participatory management, and an infusion of technology are transforming the way people work and do business. Employees are now expected to read, write, and communicate effectively; think creatively, solve problems, and make decisions; and interact with each other and the technologies in the workplace. Career–technical programs must also adopt these practices in order to provide graduates who can enter and advance in the changing work world.

The curriculum framework in this document reflects these changes in the workplace and a number of other factors that impact local career–technical programs. Federal and state legislation calls for articulation between high school and community college programs, integration of academic and career skills, and the development of sequential courses of study that provide students with the optimum educational path for achieving successful employment. National skills standards, developed by industry groups and sponsored by the U.S. Department of Education and Labor, provide career and technical educators with the expectations of employers across the United States. All of these factors are reflected in the framework found in this document.

Referenced throughout the courses of the curriculum are the 21st Century Skills, which were developed by the Partnership for 21st Century Skills, a group of business and education organizations concerned about the gap between the knowledge and skills learned in school and those needed in communities and the workplace. A portion of the 21st Century Skills addresses learning skills needed in the 21st century, including information and communication skills, thinking and problem-solving skills, and interpersonal and self-directional skills. Another important aspect of learning and working in the 21st century involves technology skills. The International Society for Technology in Education, developer of the National Educational Technology Standards (NETS), was a strategic partner in the Partnership for 21st Century Skills. Each postsecondary program of instruction consists of a program description and a suggested sequence of courses that focus on the development of occupational competencies. The MS-CPAS2 blueprints are based upon the suggested course sequences to allow for year 1 and year 2 assessments for all exit options. Please refer to the blueprint online. Each career–technical course in this sequence has been written using a common format, which includes the following components:

- Course Name – A common name that will be used by all community and junior colleges in reporting students
- Course Abbreviation – A common abbreviation that will be used by all community and junior colleges in reporting students
- Classification – Courses may be classified as the following:
 - Career–technical core – A required career–technical course for all students
 - Area of concentration (AOC) core – A course required in an area of concentration of a cluster of programs
 - Career–technical elective – An elective career–technical course
 - Related academic course – An academic course that provides academic skills and knowledge directly related to the program area

- Academic core – An academic course that is required as part of the requirements for an associate’s degree
- Description – A short narrative that includes the major purpose(s) of the course and the recommended number of hours of lecture and laboratory activities to be conducted each week during a regular semester
- Prerequisites – A listing of any courses that must be taken prior to or on enrollment in the course
- Corequisites – A listing of courses that may be taken while enrolled in the course
- Competencies and Suggested Objectives – A listing of the competencies (major concepts and performances) and the suggested student objectives that will enable students to demonstrate mastery of these competencies

The following guidelines were used in developing the program(s) in this document and should be considered in compiling and revising course syllabi and daily lesson plans at the local level:

- The content of the courses in this document reflects approximately 75% of the time allocated to each course. The remaining 25% of each course should be developed at the local district level and may reflect the following:
 - Additional competencies and objectives within the course related to topics not found in the state framework, including activities related to specific needs of industries in the community college district
 - Activities that develop a higher level of mastery on the existing competencies and suggested objectives
 - Activities and instruction related to new technologies and concepts that were not prevalent at the time the current framework was developed or revised
 - Activities that include integration of academic and career–technical skills and course work, school-to-work transition activities, and articulation of secondary and postsecondary career–technical programs
 - Individualized learning activities, including work-site learning activities, to better prepare individuals in the courses for their chosen occupational areas
- Sequencing of the course within a program is left to the discretion of the local district. Naturally, foundation courses related to topics such as safety, tool and equipment usage, and other fundamental skills should be taught first. Other courses related to specific skill areas and related academics, however, may be sequenced to take advantage of seasonal and climatic conditions, resources located outside of the school, and other factors.
- Programs that offer an Associate of Applied Science degree must include a minimum 15-semester-credit-hour academic core. Specific courses to be taken within this core are to be determined by the local district. Minimum academic core courses are as follows:
 - 3 semester credit hours (sch) Math/Science Elective
 - 3 semester credit hours Humanities/Fine Arts Elective
 - 3 semester credit hours Social/Behavioral Science Elective

It is recommended that courses in the academic core be spaced out over the entire length of the program, so that students complete some academic and career–technical courses each semester. Each community or junior college has the discretion to select the actual courses that are required to meet this academic core requirement.

- Career–technical elective courses have been included to allow community colleges and students to customize programs to meet the needs of industries and employers in their area.

In order to provide flexibility within the districts, individual courses within a framework may be customized by doing the following:

- Adding new competencies and suggested objectives
- Revising or extending the suggested objectives for individual competencies
- Adjusting the semester credit hours of a course to be up 1 hour or down 1 hour (after informing the Mississippi Community College Board [MCCB] of the change)

In addition, the curriculum framework as a whole may be customized by doing the following:

- Resequencing courses within the suggested course sequence reflecting the new assessment format
- Developing and adding a new course that meets specific needs of industries and other clients in the community or junior college district (with MCCB approval)
- Utilizing the career technical elective options in many of the curricula to customize programs

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Program Description

Surgical Technology is an instructional program that prepares an individual to serve as a member of the surgical team to work with surgeons, anesthesiologists, certified registered nurse anesthetists, registered nurses, and other surgical personnel in delivering patient care and assuming appropriate responsibilities before, during, and after surgery. This program includes the education of all aspects of surgical technology including the role of second assistant and circulator.

Graduates of the 12-month program will be awarded the Certificate of Surgical Technology. The Associate of Applied Science Degree in Surgical Technology will be awarded to the successful graduate of the 24-month program. Qualified graduates will be required to apply to the National Board of Surgical Technology and Surgical Assisting (formerly the LCC-ST) to become a Certified Surgical Technologist.

Industry standards are based on the *Core Curriculum for Surgical Technology*.

Suggested Course Sequences Surgical Technology

Technical Certificate Option

A Technical Certificate will be awarded upon completion of all the following technical courses in the Surgical Technology program.

SUT 1113	Fundamentals of Surgical Technology	3 sch
SUT 1216	Principles of Surgical Technique	6 sch
SUT 1314	Surgical Anatomy	4 sch
SUT 1413	Surgical Microbiology	3 sch
SUT 1518	Basic and Related Surgical Procedures	8 sch
SUT 1528	Specialized Surgical Procedures	8 sch
SUT 1538	Advanced Surgical Procedures	8 sch
	Written Communication Elective	3 sch
	Total Semester Credit Hours for a Technical Certificate	43 sch

Associate of Applied Science Degree Option

To receive the Associate of Applied Science (AAS) degree in surgical technology, a student must complete all of the required career-certificate and technical-certificate courses **AND** a minimum of 15 semester hours of general education core courses. The courses in the general education core may be spaced out over the entire length of the program so that students complete some academic and career technical courses each semester. Each community college specifies the actual courses that are required to meet the general education core requirements for the Associate of Applied Science degree at the college. The following 2012 SACS standard applies.

Section 2.7.3 For degree completion in associate programs, the component constitutes a minimum of 15 semester hours or the equivalent. These credit hours are to be drawn from and include at least one course from each of the following areas: humanities/fine arts, social/behavioral sciences, and natural science/mathematics.

A student must complete the following minimum credit requirements for the AAS degree option:

Technical Certificate	43 credits minimum
Anatomy and Physiology I and II	8 credits
Additional courses to meet the General Education Requirement for AAS	9 credits minimum
Total Semester Credit Hours for the Associate of Applied Science Degree	60-61 credits minimum

Approved career-technical elective courses have been included to allow community colleges and students to customize programs to meet the needs of industries and employers in their area. In order to provide flexibility within the districts, individual courses within a framework may be customized by doing the following:

- Adding new competencies and suggested objectives to complement the existing competencies and suggested objectives in the program framework
- Revising or extending the suggested objectives for individual competencies
- Adjusting the semester credit hours of a course to be up 1 hr or down 1 hr (**after informing the Mississippi Community College Board [MCCB] of the change**)

In addition, the curriculum framework as a whole may be customized by doing the following:

- Sequencing courses within the suggested course sequence to reflect the new assessment format
- Developing and adding a new course that meets specific needs of industries and other clients in the community or junior college district (**with MCCB approval**)
- Adding courses listed in the “Approved Career and Technical Electives List” as local certificate- and degree-completion requirements to meet specific needs of industries and other clients in the community (The “Approved Career and Technical Electives” are currently approved in the Uniform Course Numbering Book; therefore, MCCB approval is **not** required.)

APPROVED ELECTIVES FOR
SURGICAL TECHNOLOGY

SUT 1703	Certification and Role Transition	3 sch: 3-hr lecture
CHE 1213/1211	General Chemistry I with General Chemistry Laboratory I	3 sch and 1 sch : See Appropriate Program Description
BIO 1134	General Biology I	4 sch: See Appropriate Program Description
BIO 1144	General Biology II	4 sch: See Appropriate Program Description
MAT 1313	Algebra	3 sch: See Appropriate Program Description
EPY 2513	Child Psychology	3 sch: See Appropriate Program Description
EPY 2523	Adolescent Psychology	3 sch: See Appropriate Program Description
EPY 2533	Human Growth and Development	3 sch: See Appropriate Program Description
FCS 1253	Nutrition	3 sch: See Appropriate Program Description
HPR 1213	Personal and Community Health I	3 sch: See Appropriate Program Description
HPR 1223	Personal and Community Health II	3 sch: See Appropriate Program Description
SOC 2113	Introduction to Sociology	3 sch: See Appropriate Program Description
SOC 2143	Marriage and Family	3 sch: See Appropriate Program Description
CPT 1113	Concepts of Microcomputer Applications	3 sch: See Appropriate Program Description
CSC 1113	Computer Concepts	3 sch: See Appropriate Program Description
BAD 2533	Business Management and Microcomputers	3 sch: See Appropriate Program Description
PSY 1513	General Psychology	3 sch: See Appropriate Program Description
BOT 1613	Medical Office Terminology I	3 sch: See Appropriate Program Description
BOT 1623	Medical Office Terminology II	3 sch: See Appropriate Program Description
HPR 2213	First Aid/CPR	3 sch: See Appropriate Program Description
Other instructor-approved electives are listed in the MCCB-approved CTE or Academic Uniform Course Numbering document.		

Surgical Technology Courses

Course Name: Fundamentals of Surgical Technology

Course Abbreviation: SUT 1113

Classification: Vocational–Technical Core

Description: This is a basic introductory course including hospital and surgical suite organization and environment, history, legal responsibilities, terminology, interpersonal relationships, and biomedical sciences. (3 sch: 3-hr lecture)

Corequisites: All first semester courses

Competencies and Suggested Objectives	
1.	Interpret a job description for a surgical technologist. ^{SGT 2, SGT 5, SGT 6, SGT 8, SGT 9} a. Using the Internet, trace the history, development, education, certification, and role of the surgical technologist. ^(DOK 1) b. Describe the physical characteristics and environmental standards of the surgery suite. ^(DOK 1) c. Explain hospital and surgery organization. ^(DOK 1) d. Identify principles of communication and interpersonal relationships as they relate to operating room personnel. ^(DOK 1) e. Interpret the ethical, moral, and legal responsibilities of the surgical technologist, including HIPAA. ^(DOK 1) f. Analyze the procedures and legal concepts of obtaining surgical consent. ^(DOK 1)
2.	Interpret various word parts of medical terms. ^{SGT 1} a. Identify various medical terms relating to surgery including abbreviations and symbols. ^(DOK 1) b. Pronounce various medical terms relating to surgery including abbreviations and symbols. ^(DOK 1) c. Spell various medical terms relating to surgery including abbreviations and symbols. ^(DOK 1)
3.	Discuss principles of environmental safety procedures. ^{SGT 3, SGT 4, SGT 10} a. Apply knowledge in the OR to include electricity, fire, radiation, and laser principles. ^(DOK 1) b. Explain the information included in Material Safety Data Sheets. ^(DOK 1) c. Demonstrate proper body mechanics as applied to the surgical environment. ^(DOK1)
4.	Apply computer knowledge to the educational process and safe patient care practices in the operating room. ^{SGT 3, SGT 8, SGT 10} a. Identify the basic components of a computer system. ^(DOK 1) b. Perform basic word processing. ^(DOK 1) c. Perform graphics importation. ^(DOK 1) d. Print and save computer information. ^(DOK 1) e. Perform Internet functions. ^(DOK 1)
5.	Apply information effectively using written, verbal, and electronic formats. ^{SGT 3, SGT 8, SGT}

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- a. Recognize when information is needed. (DOK 1)
- b. Locate information using the latest technology available. (DOK 1)
- c. Evaluate information obtained from a variety of sources. (DOK 2)

STANDARDS

Standards Based on the Core Curriculum for Surgical Technology

- SGT1 Basic science
- SGT2 Related science
- SGT3 Biomedical science
- SGT4 Patient care concepts
- SGT5 Nonsterile responsibilities
- SGT6 Sterile responsibilities
- SGT8 Professional management
- SGT9 Self management
- SGT10 Workplace management

Related Academic Standards

- R1 Interpret Graphic Information (forms, maps, reference sources)
- R2 Words in Context (same and opposite meaning)
- R3 Recall Information (details, sequence)
- R4 Construct Meaning (main idea, summary/paraphrase, compare–contrast, cause–effect)
- R5 Evaluate/Extend Meaning (fact/opinion, predict outcomes, point of view)
- A3 Data Interpretation (graph, table, chart, diagram)
- L1 Usage (pronoun, tense, subject–verb agreement, adjective, adverb)
- L2 Sentence Formation (fragments, run-on, clarity)
- L3 Paragraph Development (topic sentence, supporting sentence, sequence)
- L4 Capitalization (proper noun, titles)
- L5 Punctuation (comma, semicolon)
- L6 Writing Conventions (quotation marks, apostrophe, parts of a letter)
- S1 Vowel (short, long)
- S2 Consonant (variant spelling, silent letter)
- S3 Structural Unit (root, suffix)

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21st Century Skills

- CS1 Global Awareness
- CS3 Civic Literacy
- CS6 Creativity and Innovation
- CS7 Critical Thinking and Problem Solving

Postsecondary Surgical Technology

- CS8 Communication and Collaboration
- CS9 Information Literacy
- CS10 Media Literacy
- CS11 ICT Literacy
- CS13 Initiative and Self-Direction
- CS14 Social and Cross-Cultural Skills
- CS16 Leadership and Responsibility

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Course Name: Principles of Surgical Technique

Course Abbreviation: SUT 1216

Classification: Vocational–Technical Core

Description: This course is a comprehensive study of aseptic technique, safe patient care, anesthesia, pharmacology, and surgical techniques. (6 sch: 2-hr lecture, 8-hr lab)

Corequisites: All first semester courses

Competencies and Suggested Objectives	
1. Identify perioperative routines. ^{SGT 4, SGT 5, SGT 6}	
a. Explain pre-operative, intra-operative, and post-operative routines. ^(DOK 1)	
b. Conduct pre-operative, intra-operative, and post-operative routines. ^(DOK 1)	
c. Analyze laboratory reports in relationship to patient diagnosis and intervention. ^(DOK 2)	
d. Review patient chart for completeness. ^(DOK 1)	
2. Identify the procedures for the identification of the surgical patient admitted to the surgical suite. ^{SGT4}	
a. Identify the purpose of patient identification. ^(DOK 1)	
b. Demonstrate the process of patient identification. ^(DOK 1)	
c. Demonstrate the process for identifying the correct surgical site and procedure. ^(DOK 1)	
3. Identify the procedures for transporting, positioning, prepping, and draping of the surgical patient. ^{SGT 4, SGT 5, SGT 6}	
a. Explain transporting, positioning, prepping, and draping. ^(DOK 1)	
b. Demonstrate transporting, positioning, prepping, and draping. ^(DOK 1)	
4. Discuss the concepts of asepsis. ^{SGT 1, SGT 2, SGT 4, SGT 6}	
a. Explain surgical conscience as it applies to the surgical technologist and other personnel in the operating room. ^(DOK 1)	
b. Discuss the principles and concepts of aseptic technique. ^(DOK 1)	
c. Demonstrate the application of aseptic technique. ^(DOK 1)	
5. Identify categories, functions, and names of basic instruments. ^{SGT 4, SGT 5, SGT 6}	
a. Explain categories, functions, and names of basic instruments. ^(DOK 1)	
b. Demonstrate the care, handling, and uses of basic instruments. ^(DOK 1)	
6. Identify surgical supplies and equipment. ^{SGT 3, SGT 4, SGT 5, SGT 6}	
a. Explain surgical supplies and equipment. ^(DOK 1)	
b. Demonstrate the applications of various supplies and equipment. ^(DOK 1)	
c. Discuss the basic concepts related to robotics. ^(DOK 1)	
7. Identify wound closure materials. ^{SGT 1, SGT 4, SGT 5, SGT 6}	
a. Explain categories and usage of wound closure materials. ^(DOK 1)	
b. Demonstrate handling, selection, and usage of wound closure materials. ^(DOK 1)	
8. Identify basic case preparation for surgical procedures. ^{SGT 4, SGT 5, SGT 6, SGT 7}	
a. Discuss the establishment and maintenance of a sterile field. ^(DOK 1)	
b. Demonstrate the establishment and maintenance of a sterile field in the lab setting. ^(DOK 1)	
9. Identify the role and duties of the surgical team. ^{SGT 4, SGT 5, SGT 6, SGT 7, SGT 8, SGT 9, SGT 10}	

<ul style="list-style-type: none"> a. Discuss the roles and duties of all surgical team members. ^(DOK 1) b. Demonstrate the functions of the surgical technologist in the following roles: ^(DOK 1) <ul style="list-style-type: none"> 1. Scrub surgical technologist 2. Second assisting surgical technologist 3. Circulating surgical technologist
<p>10. Identify the drugs and anesthesia used in the care of the surgical patient. ^{SGT 1, SGT 4, SGT 5, SGT 6}</p> <ul style="list-style-type: none"> a. Identify the principles and concepts for the use and administration of surgical drugs and anesthetic agents. ^(DOK 1) b. Convert temperature, lengths, weights, and capacities to the metric system. ^(DOK 1) c. Apply general terminology to medication use. ^(DOK 1) d. Calculate medical conversions and dosages. ^(DOK 1) e. Prepare and manage medications and solutions. ^(DOK 2) f. Analyze the immediate postoperative care of the surgical patient. ^(DOK 1) g. Describe the emergency procedures carried out in the OR setting. ^(DOK 1)

STANDARDS

Standards Based on the Core Curriculum for Surgical Technology

SGT1	Basic science
SGT2	Related science
SGT3	Biomedical science
SGT4	Patient care concepts
SGT5	Nonsterile responsibilities
SGT6	Sterile responsibilities
SGT7	Surgical interventions
SGT8	Professional management
SGT9	Self management
SGT10	Workplace management

Related Academic Standards

R1	Interpret Graphic Information (forms, maps, reference sources)
R2	Words in Context (same and opposite meaning)
R3	Recall Information (details, sequence)
R4	Construct Meaning (main idea, summary/paraphrase, compare–contrast, cause–effect)
R5	Evaluate/Extend Meaning (fact/opinion, predict outcomes, point of view)
M1	Addition of Whole Numbers (no regrouping, regrouping)
M2	Subtraction of Whole Numbers (no regrouping, regrouping)
M3	Multiplication of Whole Numbers (no regrouping, regrouping)
M4	Division of Whole Numbers (no remainder, remainder)
M5	Decimals (addition, subtraction, multiplication, division)
M6	Fractions (addition, subtraction, multiplication, division)
M7	Integers (addition, subtraction, multiplication, division)
M8	Percents

- M9 Algebraic Operations
- A1 Numeration (ordering, place value, scientific notation)
- A2 Number Theory (ratio, proportion)
- A3 Data Interpretation (graph, table, chart, diagram)
- A4 Pre-Algebra and Algebra (equations, inequality)
- A5 Measurement (money, time, temperature, length, area, volume)
- A6 Geometry (angles, Pythagorean theory)
- A7 Computation in Context (whole numbers, decimals, fractions, algebraic operations)
- A8 Estimation (rounding, estimation)
- L1 Usage (pronoun, tense, subject–verb agreement, adjective, adverb)
- L2 Sentence Formation (fragments, run-on, clarity)
- L3 Paragraph Development (topic sentence, supporting sentence, sequence)
- L4 Capitalization (proper noun, titles)
- L5 Punctuation (comma, semicolon)
- L6 Writing Conventions (quotation marks, apostrophe, parts of a letter)
- S1 Vowel (short, long)
- S2 Consonant (variant spelling, silent letter)
- S3 Structural Unit (root, suffix)

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21st Century Skills

- CS1 Global Awareness
- CS2 Financial, Economic, Business and Entrepreneurial Literacy
- CS3 Civic Literacy
- CS6 Creativity and Innovation
- CS7 Critical Thinking and Problem Solving
- CS8 Communication and Collaboration
- CS9 Information Literacy
- CS13 Initiative and Self-Direction
- CS14 Social and Cross-Cultural Skills
- CS16 Leadership and Responsibility

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- Association of Surgical Technologists. (Producer). (2005). *Surgical case management DVD series*. Littleton, CO: Author.

Journals and Magazines

- Fabian, C. E. (2005). Electronic tagging of surgical sponges to prevent their accidental retention. *Surgery, 137*(3), 298–301.

Computer Software

- Surgical instruments series* [Computer software]. (n.d.). Kalama, WA: Watson Enterprises.

Course Name: Surgical Anatomy

Course Abbreviation: SUT 1314

Classification: Vocational–Technical Core

Description: Emphasis is placed on the structure and function of the human body as related to surgery, as well as the application of the principles of surgical anatomy to participation in clinical experience. (4 sch: 4-hr lecture)

Corequisites: All first semester courses

Competencies and Suggested Objectives	
1. Explain the integrated structures and function of body systems including cells, tissues, organs, and systems as they relate to physiologic integrity. ^{SGT 1, SGT 2, SGT 7}	
a. Identify the basic organization structures of the body, including body planes, general organization, and terms of reference. ^(DOK 1)	
b. Describe the basic anatomical structure and function of cells, tissues, organs, and systems. ^(DOK 1)	
2. Locate and describe the basic function(s) and structure of the following systems: ^{SGT 1, SGT 2, SGT 7 (DOK 1)}	
a. Integumentary	
b. Muscular	
c. Skeletal	
d. Nervous	
e. Sensory	
f. Endocrine	
g. Circulatory	
h. Lymphatic	
i. Respiratory	
j. Digestive	
k. Urinary	
l. Reproductive (male and female)	
3. Compare and contrast the various surgical pathologies of each body system. ^{SGT1, SGT2, SGT7}	
a. Relate pathophysiology to surgical intervention. ^(DOK 2)	
b. Analyze the relationship between cell pathology and disease. ^(DOK 2)	
c. Examine hemodynamic disorders, inflammation, and disease. ^(DOK 1)	

STANDARDS

Standards Based on the Core Curriculum for Surgical Technology

SGT1 Basic science
 SGT2 Related science
 SGT7 Surgical interventions

Related Academic Standards

- R1 Interpret Graphic Information (forms, maps, reference sources)
- R2 Words in Context (same and opposite meaning)
- R3 Recall Information (details, sequence)
- R4 Construct Meaning (main idea, summary/paraphrase, compare–contrast, cause–effect)
- R5 Evaluate/Extend Meaning (fact/opinion, predict outcomes, point of view)
- A3 Data Interpretation (graph, table, chart, diagram)
- L1 Usage (pronoun, tense, subject–verb agreement, adjective, adverb)
- L2 Sentence Formation (fragments, run-on, clarity)
- L3 Paragraph Development (topic sentence, supporting sentence, sequence)
- L4 Capitalization (proper noun, titles)
- L5 Punctuation (comma, semicolon)
- L6 Writing Conventions (quotation marks, apostrophe, parts of a letter)
- S1 Vowel (short, long)
- S2 Consonant (variant spelling, silent letter)
- S3 Structural Unit (root, suffix)

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21st Century Skills

- CS1 Global Awareness
- CS6 Creativity and Innovation
- CS7 Critical Thinking and Problem Solving
- CS8 Communication and Collaboration
- CS9 Information Literacy
- CS13 Initiative and Self-Direction
- CS14 Social and Cross-Cultural Skills
- CS16 Leadership and Responsibility

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- Venes, D., Thomas, C. L., & Taber, C. W. (Eds.). (2001). *Taber's cyclopedic medical dictionary* (19th ed.). Philadelphia, PA: F. A. Davis.

Computer Software

A.D.A.M. interactive anatomy 4 [Computer software]. (n.d.). Atlanta, GA: A.D.A.M.

Course Name: Surgical Microbiology

Course Abbreviation: SUT 1413

Classification: Vocational–Technical Core

Description: This is an introduction to pathogenic microorganisms related to surgery and their effect on wound healing and infection. It includes principles of sterilization and disinfection. (3 sch: 3-hr lecture)

Corequisites: All first semester courses or other courses determined by the local college and/or program director

Competencies and Suggested Objectives	
1.	Correlate the impact of microbiology in relationship to the practice of sterile technique and infection in the operative setting. ^{SGT2, SGT6} a. Discuss the history of Microbiology. ^(DOK 1) b. Identify the name and functions of various microscopes. ^(DOK 1) c. Compare and contrast the structure and characteristics of different cells. ^(DOK 1) d. Compare and contrast the structure and characteristics of different types of microorganisms. ^(DOK 1)
2.	Explain the relationship between humans and pathogenic and nonpathogenic bacteria. ^{SGT 1, SGT 2, SGT 4} a. Discuss the Centers for Disease Control (CDC) Standard Precautions Guidelines and Recommendations as applied to the surgical suite. ^(DOK 1) b. Distinguish between the various pathogenic organisms and their effect on the various body systems. ^(DOK 2) c. List the means of controlling the transmission of infections. ^(DOK 1) d. Analyze the various immune responses that occur in the body as defenses against invasion by pathogens. ^(DOK 1) e. Select ways the body resists pathogens. ^(DOK 1)
3.	Identify and discuss the process of infection. ^{SGT 1, SGT 2, SGT 4, SGT 5, SGT 6} a. Relate the infections process to surgical practice. ^(DOK 2) b. Distinguish between the different microbial relationships. ^(DOK 1) c. Identify portals of entry and portals of exit for infectious microbes. ^(DOK 1) d. Correlate the infectious disease process with possible causative agents. ^(DOK 2)
4.	Discuss wound healing. ^{SGT 1, SGT 2, SGT 4, SGT 5, SGT 6} a. Discuss the types of wounds. ^(DOK 1) b. Explain the classifications of wounds. ^(DOK 1) c. Explain the stages of wound healing. ^(DOK 1) d. Discuss wound complications. ^(DOK 1)
5.	Discuss physical and chemical methods used to protect patients and workers from invasion by pathogenic microbes. ^{SGT 1, SGT 2, SGT 4, SGT 5, SGT 6} a. Describe the physical methods of antimicrobial control and an application of each. ^(DOK 1)

b. Describe ways in which chemicals kill or inhibit bacterial growth. (DOK 1)
6. Identify the techniques of sterilization. ^{SGT 1, SGT 2, SGT 5, SGT 6, SGT 10}
a. List methods and principles of sterilization and the advantages and disadvantages of each. (DOK 1)
b. Discuss monitoring methods. (DOK 1)
c. Describe the methods and principles of disinfection. (DOK 1)
d. Demonstrate sterilization and/or disinfection of surgical supplies. (DOK 1)

STANDARDS

Standards Based on the Core Curriculum for Surgical Technology

- SGT1 Basic science
- SGT2 Related science
- SGT4 Patient care concepts
- SGT5 Nonsterile responsibilities
- SGT6 Sterile responsibilities
- SGT10 Workplace management

Related Academic Standards

- R1 Interpret Graphic Information (forms, maps, reference sources)
- R2 Words in Context (same and opposite meaning)
- R3 Recall Information (details, sequence)
- R4 Construct Meaning (main idea, summary/paraphrase, compare–contrast, cause–effect)
- R5 Evaluate/Extend Meaning (fact/opinion, predict outcomes, point of view)
- A3 Data Interpretation (graph, table, chart, diagram)
- A5 Measurement (money, time, temperature, length, area, volume)
- L1 Usage (pronoun, tense, subject–verb agreement, adjective, adverb)
- L2 Sentence Formation (fragments, run-on, clarity)
- L3 Paragraph Development (topic sentence, supporting sentence, sequence)
- L4 Capitalization (proper noun, titles)
- L5 Punctuation (comma, semicolon)
- L6 Writing Conventions (quotation marks, apostrophe, parts of a letter)
- S1 Vowel (short, long)
- S2 Consonant (variant spelling, silent letter)
- S3 Structural Unit (root, suffix)

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21st Century Skills

- CS1 Global Awareness
- CS2 Financial, Economic, Business and Entrepreneurial Literacy
- CS6 Creativity and Innovation

Postsecondary Surgical Technology

- CS7 Critical Thinking and Problem Solving
- CS8 Communication and Collaboration
- CS9 Information Literacy
- CS13 Initiative and Self-Direction
- CS14 Social and Cross-Cultural Skills
- CS16 Leadership and Responsibility

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Venes, D., Thomas, C. L., & Taber, C. W. (Eds.). (2001). *Taber's cyclopedic medical dictionary* (19th ed.). Philadelphia, PA: F. A. Davis.

Videos

What are bacteria? [DVD]. (n.d.). Huntsville, TX: Educational Video Network.

Course Name: Basic and Related Surgical Procedures

Course Abbreviation: SUT 1518

Classification: Vocational–Technical Core

Description: This course includes instruction in regional anatomy, pathology, instrumentation, surgical techniques, and safe patient care in general surgery, gynecology, obstetrics, and urology. It requires clinical experience in area hospital surgical suites and related departments. (8 sch: 4-hr lecture, 12-hr clinical)

Prerequisites: CPR-Health Care Provider and all first semester courses or other courses determined by the local college and/or program director

Competencies and Suggested Objectives	
1.	Discuss the relevant anatomy, indications for surgery, and patient preparation for general, gynecological, obstetrical, and urological procedures. <small>SGT 1, SGT 2, SGT 3, SGT 4, SGT 5, SGT 6, SGT 7, SGT 8, SGT 9, SGT 10</small>
a.	Correlate the relevant surgical anatomy and physiology to the surgical procedure. <small>(DOK 1)</small>
b.	Correlate the relevant pathophysiology to the surgical procedure. <small>(DOK 1)</small>
c.	Explain the diagnostic interventions that are utilized for obtaining a diagnosis. <small>(DOK 1)</small>
d.	Discuss the perioperative considerations for the planned surgical procedure. <small>(DOK 2)</small>
e.	Identify and discuss co-related surgical procedures. <small>(DOK 1)</small>
f.	List the wound classifications and correlate to wound management. <small>(DOK 1)</small>
2.	Discuss equipment, supplies, and instruments for general, gynecological, obstetrical, and urological procedures. <small>SGT 1, SGT 2, SGT 3, SGT 4, SGT 5, SGT 6, SGT 7, SGT 8, SGT 9, SGT 10</small>
a.	Identify instruments, equipment, and supplies. <small>(DOK 1)</small>
b.	Demonstrate use, care, and handling of instruments, equipment, and supplies. <small>(DOK 1)</small>
3.	Discuss surgical procedures and possible complications for general, gynecological, obstetrical, and urological procedures. <small>SGT 1, SGT 2, SGT 3, SGT 4, SGT 5, SGT 6, SGT 7, SGT 8, SGT 9, SGT 10</small>
a.	Explain the correct order of steps taken during surgical procedures. <small>(DOK 1)</small>
b.	Identify possible complications. <small>(DOK 1)</small>
c.	Demonstrate the sequence of procedures by anticipating the needs of the surgeon in each of the following roles in the clinical setting: <small>(DOK 2)</small>
	(1) Scrub-Surgical Technologist
	(2) 2nd Assisting Surgical Technologist
	(3) Circulating Surgical Technologist
4.	Demonstrate knowledge of safe patient care and practices within the surgical environment in the clinical setting. <small>SGT4, SGT5, SGT6 (DOK 1)</small>

STANDARDS

Standards Based on the Core Curriculum for Surgical Technology

- SGT1 Basic science
- SGT2 Related science
- SGT3 Biomedical science
- SGT4 Patient care concepts
- SGT5 Nonsterile responsibilities
- SGT6 Sterile responsibilities
- SGT7 Surgical interventions
- SGT8 Professional management
- SGT9 Self management
- SGT10 Workplace management

Related Academic Standards

- R1 Interpret Graphic Information (forms, maps, reference sources)
- R2 Words in Context (same and opposite meaning)
- R3 Recall Information (details, sequence)
- R4 Construct Meaning (main idea, summary/paraphrase, compare–contrast, cause–effect)
- R5 Evaluate/Extend Meaning (fact/opinion, predict outcomes, point of view)
- M1 Addition of Whole Numbers (no regrouping, regrouping)
- M2 Subtraction of Whole Numbers (no regrouping, regrouping)
- M3 Multiplication of Whole Numbers (no regrouping, regrouping)
- M4 Division of Whole Numbers (no remainder, remainder)
- M5 Decimals (addition, subtraction, multiplication, division)
- M6 Fractions (addition, subtraction, multiplication, division)
- M7 Integers (addition, subtraction, multiplication, division)
- M8 Percents
- M9 Algebraic Operations
- A1 Numeration (ordering, place value, scientific notation)
- A2 Number Theory (ratio, proportion)
- A3 Data Interpretation (graph, table, chart, diagram)
- A4 Pre-Algebra and Algebra (equations, inequality)
- A5 Measurement (money, time, temperature, length, area, volume)
- A7 Computation in Context (whole numbers, decimals, fractions, algebraic operations)
- A8 Estimation (rounding, estimation)
- L1 Usage (pronoun, tense, subject–verb agreement, adjective, adverb)
- L2 Sentence Formation (fragments, run-on, clarity)
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- CS8 Communication and Collaboration
- CS9 Information Literacy
- CS13 Initiative and Self-Direction
- CS14 Social and Cross-Cultural Skills
- CS16 Leadership and Responsibility

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Course Name: Specialized Surgical Procedures

Course Abbreviation: SUT 1528

Classification: Vocational–Technical Core

Description: This course includes instruction in regional anatomy, pathology, instrumentation, techniques, and safe patient care in surgical specialty areas of ear, nose, and throat; eye; oral and maxillofacial surgery; orthopedics; and plastics. This course requires clinical experience in area hospital surgical suite and related departments. (8 sch: 4-hr lecture, 12-hr clinical)

Prerequisites: CPR-health care provider and all first semester courses or other courses determined by the local college and/or program director

Competencies and Suggested Objectives	
1.	Explain the relevant anatomy, indications for surgery, and patient preparation for ear, nose, throat, eye, plastics, orthopedics, and oral and maxillofacial surgery. ^{SGT 1, SGT 2, SGT 3, SGT 4, SGT 5, SGT 6, SGT 7, SGT 8, SGT 9, SGT 10}
	<ul style="list-style-type: none"> a. Correlate the relevant surgical anatomy and physiology to the surgical procedure. ^(DOK 1) b. Correlate the relevant pathophysiology to the surgical procedure. ^(DOK 1) c. Explain the diagnostic interventions that are utilized for obtaining a diagnosis. ^(DOK 1) d. Discuss the perioperative considerations for the planned surgical procedure. ^(DOK 2) e. Identify and discuss co-related surgical procedures. ^(DOK 1) f. List the wound classifications and correlate to wound management. ^(DOK 1)
2.	Explain equipment, supplies, and instruments for ear, nose, throat, eye, plastics, orthopedics, and oral and maxillofacial surgery. ^{SGT 1, SGT 2, SGT 3, SGT 4, SGT 5, SGT 6, SGT 7, SGT 8, SGT 9, SGT 10}
	<ul style="list-style-type: none"> a. Identify instruments, equipment, and supplies. ^(DOK 1) b. Demonstrate use, care, and handling of instruments, equipment, and supplies. ^(DOK 1)
3.	Explain surgical procedures and possible complications for ear, nose, throat, eye, plastics, orthopedics, and oral and maxillofacial surgery. ^{SGT 1, SGT 2, SGT 3, SGT 4, SGT 5, SGT 6, SGT 7, SGT 8, SGT 9, SGT 10}
	<ul style="list-style-type: none"> a. Explain the correct order of steps taken during the surgical procedures. ^(DOK 1) b. Identify possible complications. ^(DOK 1) c. Demonstrate the sequence of procedures by anticipating the needs of the surgeon in each of the following roles in the clinical setting: ^(DOK 2) <ul style="list-style-type: none"> (1) Scrub-Surgical Technologist (2) 2nd Assisting Surgical Technologist (3) Circulating Surgical Technologist
4.	Demonstrate knowledge of safe patient care and practices within the surgical environment in the clinical setting. ^{SGT4, SGT5, SGT6 (DOK 1)}

STANDARDS

Standards Based on the Core Curriculum for Surgical Technology

- SGT1 Basic science
- SGT2 Related science
- SGT3 Biomedical science
- SGT4 Patient care concepts
- SGT5 Nonsterile responsibilities
- SGT6 Sterile responsibilities
- SGT7 Surgical interventions
- SGT8 Professional management
- SGT9 Self management
- SGT10 Workplace management

Related Academic Standards

- R1 Interpret Graphic Information (forms, maps, reference sources)
- R2 Words in Context (same and opposite meaning)
- R3 Recall Information (details, sequence)
- R4 Construct Meaning (main idea, summary/paraphrase, compare–contrast, cause–effect)
- R5 Evaluate/Extend Meaning (fact/opinion, predict outcomes, point of view)
- M1 Addition of Whole Numbers (no regrouping, regrouping)
- M2 Subtraction of Whole Numbers (no regrouping, regrouping)
- M3 Multiplication of Whole Numbers (no regrouping, regrouping)
- M4 Division of Whole Numbers (no remainder, remainder)
- M5 Decimals (addition, subtraction, multiplication, division)
- M6 Fractions (addition, subtraction, multiplication, division)
- M7 Integers (addition, subtraction, multiplication, division)
- M8 Percents
- M9 Algebraic Operations
- A1 Numeration (ordering, place value, scientific notation)
- A2 Number Theory (ratio, proportion)
- A3 Data Interpretation (graph, table, chart, diagram)
- A4 Pre-Algebra and Algebra (equations, inequality)
- A5 Measurement (money, time, temperature, length, area, volume)
- A7 Computation in Context (whole numbers, decimals, fractions, algebraic operations)
- A8 Estimation (rounding, estimation)
- L1 Usage (pronoun, tense, subject–verb agreement, adjective, adverb)
- L2 Sentence Formation (fragments, run-on, clarity)
- L3 Paragraph Development (topic sentence, supporting sentence, sequence)
- L4 Capitalization (proper noun, titles)
- L5 Punctuation (comma, semicolon)
- L6 Writing Conventions (quotation marks, apostrophe, parts of a letter)
- S1 Vowel (short, long)
- S2 Consonant (variant spelling, silent letter)

S3 Structural Unit (root, suffix)

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21st Century Skills

- CS1 Global Awareness
- CS2 Financial, Economic, Business and Entrepreneurial Literacy
- CS6 Creative and Innovation
- CS7 Critical Thinking and Problem Solving
- CS8 Communication and Collaboration
- CS9 Information Literacy
- CS13 Initiative and Self-Direction
- CS14 Social and Cross-Cultural Skills
- CS16 Leadership and Responsibility

SUGGESTED REFERENCES

Books

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Journals and Magazines

Dufresne, C. R. (2005). History and development of plastic surgery. *The Surgical Technologist*, 37(1), 10–19.

Course Name: Advanced Surgical Procedures

Course Abbreviation: SUT 1538

Classification: Vocational–Technical Core

Description: This course includes instruction in regional anatomy, pathology, instrumentation, techniques, and safe patient care in surgical specialty areas of neurosurgery, thoracic, peripheral vascular, cardiovascular surgery, employability skills, and all-hazards preparation. This course requires clinical experience in area hospital surgical suites and related departments and a comprehensive final examination. (8 sch: 4-hr lecture, 12-hr clinical)

Prerequisites: CPR-health care provider and all second semester courses

Competencies and Suggested Objectives	
1.	Discuss the relevant anatomy, indications for surgery, and patient preparation for neurosurgery, thoracic, peripheral vascular, and cardiovascular surgery. ^{SGT 1, SGT 2, SGT 3, SGT 4, SGT 5, SGT 6, SGT 7, SGT 8, SGT 9, SGT 10}
	<ul style="list-style-type: none"> a. Correlate the relevant surgical anatomy and physiology to the surgical procedure. ^(DOK 1) b. Correlate the relevant pathophysiology to the surgical procedure. ^(DOK 1) c. Explain the diagnostic interventions that are utilized for obtaining a diagnosis. ^(DOK 1) d. Discuss the perioperative considerations for the planned surgical procedure. ^(DOK 2) e. Identify and discuss co-related surgical procedures. ^(DOK 1) f. List the wound classifications and correlate to wound management. ^(DOK 1)
2.	Discuss equipment, supplies, and instruments for neurosurgery, thoracic, peripheral vascular, cardiovascular surgery. ^{SGT 1, SGT 2, SGT 3, SGT 4, SGT 5, SGT 6, SGT 7, SGT 8, SGT 9, SGT 10}
	<ul style="list-style-type: none"> a. Identify instruments, equipment, and supplies. ^(DOK 1) b. Demonstrate use, care, and handling of instruments, equipment, and supplies.
3.	Discuss surgical procedures and possible complications for neurosurgery, thoracic, peripheral vascular, and cardiovascular surgery. ^{SGT 1, SGT 2, SGT 3, SGT 4, SGT 5, SGT 6, SGT 7, SGT 8, SGT 9, SGT 10}
	<ul style="list-style-type: none"> a. Explain the correct order of steps taken during surgical procedures. ^(DOK 1) b. Identify possible complications. ^(DOK 1) c. Demonstrate the sequence of procedures by anticipating the needs of the surgeon in each of the following roles in the clinical setting: ^(DOK 2) <ul style="list-style-type: none"> (1) Scrub-Surgical Technologist (2) 2nd Assisting Surgical Technologist (3) Circulating Surgical Technologist
4.	Demonstrate knowledge of safe patient care and practices within the surgical environment in the clinical setting. ^{SGT4, SGT5, SGT6} ^(DOK 1)
5.	Demonstrate employability and job retention skills. ^{SGT 1, SGT 2, SGT 3, SGT 4, SGT 5, SGT 6, SGT 7, SGT 8, SGT 9, SGT 10}
	<ul style="list-style-type: none"> a. Discuss the transition from student to employee. ^(DOK 1) b. Identify positive employee characteristics. ^(DOK 1) c. Develop a professional resume. ^(DOK 1)

d. Complete a job application. (DOK 1)
e. Discuss interview skills. (DOK 1)
f. Write a letter of resignation. (DOK 1)
g. Discuss national certification requirement and continuing education. (DOK 1)
6. Describe disasters and public-health emergencies that impact public health. ^{SGT4, SGT8, SGT10}
a. Describe the all-hazards framework. (DOK 1)
b. Discuss communication strategies, disaster support services, and the impact of mass casualties along with medical consequences. (DOK 1)
c. Identify issues relevant to medical management of individuals of all ages, populations, and communities. (DOK 1)

STANDARDS

Standards Based on the Core Curriculum for Surgical Technology

- SGT1 Basic science
- SGT2 Related science
- SGT3 Biomedical science
- SGT4 Patient care concepts
- SGT5 Nonsterile responsibilities
- SGT6 Sterile responsibilities
- SGT7 Surgical interventions
- SGT8 Professional management
- SGT9 Self management
- SGT10 Workplace management

Related Academic Standards

- R1 Interpret Graphic Information (forms, maps, reference sources)
- R2 Words in Context (same and opposite meaning)
- R3 Recall Information (details, sequence)
- R4 Construct Meaning (main idea, summary/paraphrase, compare–contrast, cause–effect)
- R5 Evaluate/Extend Meaning (fact/opinion, predict outcomes, point of view)
- M1 Addition of Whole Numbers (no regrouping, regrouping)
- M2 Subtraction of Whole Numbers (no regrouping, regrouping)
- M3 Multiplication of Whole Numbers (no regrouping, regrouping)
- M4 Division of Whole Numbers (no remainder, remainder)
- M5 Decimals (addition, subtraction, multiplication, division)
- M6 Fractions (addition, subtraction, multiplication, division)
- M7 Integers (addition, subtraction, multiplication, division)
- M8 Percents
- M9 Algebraic Operations
- A1 Numeration (ordering, place value, scientific notation)
- A2 Number Theory (ratio, proportion)
- A3 Data Interpretation (graph, table, chart, diagram)

- A4 Pre-Algebra and Algebra (equations, inequality)
- A5 Measurement (money, time, temperature, length, area, volume)
- A6 Geometry (angles, Pythagorean theory)
- A7 Computation in Context (whole numbers, decimals, fractions, algebraic operations)
- A8 Estimation (rounding, estimation)
- L1 Usage (pronoun, tense, subject–verb agreement, adjective, adverb)
- L2 Sentence Formation (fragments, run-on, clarity)
- L3 Paragraph Development (topic sentence, supporting sentence, sequence)
- L4 Capitalization (proper noun, titles)
- L5 Punctuation (comma, semicolon)
- L6 Writing Conventions (quotation marks, apostrophe, parts of a letter)
- S1 Vowel (short, long)
- S2 Consonant (variant spelling, silent letter)
- S3 Structural Unit (root, suffix)

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21st Century Skills

- CS1 Global Awareness
- CS2 Financial, Economic, Business and Entrepreneurial Literacy
- CS3 Civic Literacy
- CS6 Creativity and Innovation
- CS7 Critical Thinking and Problem Solving
- CS8 Communication and Collaboration
- CS9 Information Literacy
- CS13 Initiative and Self-Direction
- CS14 Social and Cross-Cultural Skills
- CS16 Leadership and Responsibility

SUGGESTED REFERENCES

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Course Name: Certification and Role Transition

Course Abbreviation: SUT 1703

Classification: Vocational–Technical Elective

Description: An in-depth study of the role of the surgical technologist and review for the certification examination. The course examines liability and legal issues of practice, adapting critical thinking skills to a variety of practice settings, effective team and professional behaviors, continuing education, and ethical issues. Practice on computer simulations is required. (3 sch: 3-hr lecture)

Prerequisite: None

Competencies and Suggested Objectives	
1. Identify desirable characteristics of a surgical technologist.	SGT 1, SGT 2, SGT 3, SGT 4, SGT 5, SGT 6, SGT 7, SGT 8, SGT 9, SGT 10
a. Examine legal and ethical issues that may affect the practice of surgical technology and appropriate actions.	(DOK 2)
b. Identify effective behaviors in relationship with team members.	(DOK 2)
c. Discuss conflict resolution in the workplace.	(DOK 1)
d. Describe characteristics of an effective leader and team member.	(DOK 1)
2. Explore employment and employee responsibility.	SGT 1, SGT 2, SGT 3, SGT 4, SGT 5, SGT 6, SGT 7, SGT 8, SGT 9, SGT 10
a. Prepare letters of application and resignation.	(DOK 1)
b. Demonstrate through role-play appropriate behaviors in a job interview.	(DOK 2)
c. Discuss a typical hospital orientation program.	(DOK 1)
d. Discuss “on call” and “call back” responsibilities.	(DOK 1)
3. Identify factors that promote effective transition from the role of student to the role of employee.	SGT 1, SGT 2, SGT 3, SGT 4, SGT 5, SGT 6, SGT 7, SGT 8, SGT 9, SGT 10
a. Complete a student case log.	(DOK 2)
b. Complete an application, and sit for national certification exam.	(DOK 2)
c. Utilize computer simulation to enhance critical-thinking skills.	(DOK 2)

STANDARDS

Standards Based on the Core Curriculum for Surgical Technology

SGT1	Basic science
SGT2	Related science
SGT3	Biomedical science
SGT4	Patient care concepts
SGT5	Nonsterile responsibilities
SGT6	Sterile responsibilities
SGT7	Surgical interventions
SGT8	Professional management

SGT9 Self management
 SGT10 Workplace management

Related Academic Standards

- R1 Interpret Graphic Information (forms, maps, reference sources)
- R2 Words in Context (same and opposite meaning)
- R3 Recall Information (details, sequence)
- R4 Construct Meaning (main idea, summary/paraphrase, compare–contrast, cause–effect)
- R5 Evaluate/Extend Meaning (fact/opinion, predict outcomes, point of view)
- M1 Addition of Whole Numbers (no regrouping, regrouping)
- M2 Subtraction of Whole Numbers (no regrouping, regrouping)
- M3 Multiplication of Whole Numbers (no regrouping, regrouping)
- M4 Division of Whole Numbers (no remainder, remainder)
- M5 Decimals (addition, subtraction, multiplication, division)
- M6 Fractions (addition, subtraction, multiplication, division)
- M7 Integers (addition, subtraction, multiplication, division)
- M8 Percents
- M9 Algebraic Operations
- A1 Numeration (ordering, place value, scientific notation)
- A2 Number Theory (ratio, proportion)
- A3 Data Interpretation (graph, table, chart, diagram)
- A4 Pre-Algebra and Algebra (equations, inequality)
- A5 Measurement (money, time, temperature, length, area, volume)
- A6 Geometry (angles, Pythagorean theory)
- A7 Computation in Context (whole numbers, decimals, fractions, algebraic operations)
- A8 Estimation (rounding, estimation)
- L1 Usage (pronoun, tense, subject–verb agreement, adjective, adverb)
- L2 Sentence Formation (fragments, run-on, clarity)
- L3 Paragraph Development (topic sentence, supporting sentence, sequence)
- L4 Capitalization (proper noun, titles)
- L5 Punctuation (comma, semicolon)
- L6 Writing Conventions (quotation marks, apostrophe, parts of a letter)
- S1 Vowel (short, long)
- S2 Consonant (variant spelling, silent letter)
- S3 Structural Unit (root, suffix)

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21st Century Skills

- CS1 Global Awareness
- CS2 Financial, Economic, Business and Entrepreneurial Literacy
- CS3 Civic Literacy
- CS6 Creativity and Innovation
- CS7 Critical Thinking and Problem Solving

CS8 Communication and Collaboration
 CS9 Information Literacy
 CS13 Initiative and Self-Direction
 CS14 Social and Cross-Cultural Skills
 CS16 Leadership and Responsibility

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Recommended Tools and Equipment

CAPITALIZED ITEMS

1. Bandaging simulator (1 per program)
2. Basin stand, ring stand (4 per program)
3. Board, roller/transfer (1 per program)
4. Devices, positioning (2 prone, 2 lateral, 2 sitting, 2 lithotomy, 2 supine per program)
5. Dilation and curettage set (1 per program)
6. GYN instrument tray (1 per program)
7. Minor surgical instrument set (2 per program)
8. Electrocautery unit (1 per program)
9. Laparotomy instrument set (1 per room)
10. Chest instrument set (1 per program)
11. Basic bone instrument set (1 per program)
12. Mannequin, teaching, adult (1 per room)
13. Mayo stand (4 per room)
14. Tonsil and adenoid set (1 per program)
15. Vaginal hysterectomy tray (1 per program)
16. Stretcher, patient, with brakes and side rails (1 per program)
17. Table, surgical with armboards (1 per room)
18. Table, instrument (2 per room)
19. Prep table/stand (2 per room)
20. I.V. poles (2 per room)
21. Standing platforms (2 per room)
22. Hand table (1 per program)
23. Instrument containers (1 per room)
24. Surgical lights (1 per room)
25. Autoclave (1 per program)
26. Computer, with CD-ROM and super VGA color monitor (1 per 3 students)
27. Printer, laser (1 per 2 computers)
28. Basic open reduction internal fixation set (1 per program)
29. Basic large fragment set (1 per program)
30. Refurbished or demonstration unit for laparoscopic procedures to include 1 scope, 1 camera, and 1 monitor (1 set per program)
31. Human skeleton with stand (1 per program)
32. SimMan 3G

NON-CAPITALIZED ITEMS

1. Manual sphygmomanometer, adult (1 per 2 students)
2. Digital sphygmomanometer (1 per program)
3. Sheets, full flat (4 per stretcher or table)
4. Pillows (2 per stretcher or table)
5. Stethoscope (1 per 2 students)
6. Kick bucket with coasters (2 per room)

7. Pneumatic tourniquet cuffs (1 double adult, 1 upper extremity adult, 1 lower extremity adult per program)
8. Thermometer, electronic digital (1 per program)
9. Straps, restraint (1 set per room)
10. Sitting stool (2 per program)
11. Ear model (1 per program)
12. Eye model (1 per program)
13. Heart model (1 per program)
14. Model, teaching, adult (Internal Organ) (1 per program)
15. Model, knee joint (1 per program)
16. Human lumbar spine (1 per program)
17. Laminated anatomy posters (1 set per program)
18. Laminated instrument posters (1 set per program)
19. Stethoscope, dual training (2 per program)
20. Glo-germ light kit (1 per program)

* The use of refurbished or demonstration equipment is recommended.

RECOMMENDED INSTRUCTIONAL AIDS

It is recommended that instructors have access to the following items:

1. DVD/VCR
2. LCD/Overhead projector
3. TV, color monitor, 25 in. (1 per program)
4. VCR with remote control (1 per program)
5. Cart, TV/VCR (1 per program)
6. Bookcase/display shelving (1 per program)
7. File cabinet, lockable (2 per teacher)
8. Computer table (1 per computer)
9. Computer chairs (1 per table)

Assessment

This program is assessed using the *Certifying Exam for Surgical Technologists* given by the *National Board of Surgical Technology and Surgical Assisting (NBSTSA)*.

Appendix A: Standards Based on the Core Curriculum for Surgical Technology¹

- SGT1 Basic science
- SGT2 Related science
- SGT3 Biomedical science
- SGT4 Patient care concepts
- SGT5 Nonsterile responsibilities
- SGT6 Sterile responsibilities
- SGT7 Surgical interventions
- SGT8 Professional management
- SGT9 Self management
- SGT10 Workplace management

¹ *Core curriculum for surgical technology* (5th ed.). (2002). Centennial, CO: Association of Surgical Technologists.

Appendix B: Related Academic Standards²

Reading

- R1 Interpret Graphic Information (forms, maps, reference sources)
- R2 Words in Context (same and opposite meaning)
- R3 Recall Information (details, sequence)
- R4 Construct Meaning (main idea, summary/paraphrase, compare–contrast, cause–effect)
- R5 Evaluate/Extend Meaning (fact/opinion, predict outcomes, point of view)

Mathematics Computation

- M1 Addition of Whole Numbers (no regrouping, regrouping)
- M2 Subtraction of Whole Numbers (no regrouping, regrouping)
- M3 Multiplication of Whole Numbers (no regrouping, regrouping)
- M4 Division of Whole Numbers (no remainder, remainder)
- M5 Decimals (addition, subtraction, multiplication, division)
- M6 Fractions (addition, subtraction, multiplication, division)
- M7 Integers (addition, subtraction, multiplication, division)
- M8 Percents
- M9 Algebraic Operations

Applied Mathematics

- A1 Numeration (ordering, place value, scientific notation)
- A2 Number Theory (ratio, proportion)
- A3 Data Interpretation (graph, table, chart, diagram)
- A4 Pre-Algebra and Algebra (equations, inequality)
- A5 Measurement (money, time, temperature, length, area, volume)
- A6 Geometry (angles, Pythagorean theory)
- A7 Computation in Context (whole numbers, decimals, fractions, algebraic operations)
- A8 Estimation (rounding, estimation)

Language

- L1 Usage (pronoun, tense, subject–verb agreement, adjective, adverb)
- L2 Sentence Formation (fragments, run-on, clarity)
- L3 Paragraph Development (topic sentence, supporting sentence, sequence)
- L4 Capitalization (proper noun, titles)
- L5 Punctuation (comma, semicolon)
- L6 Writing Conventions (quotation marks, apostrophe, parts of a letter)

Spelling

- S1 Vowel (short, long)
- S2 Consonant (variant spelling, silent letter)
- S3 Structural Unit (root, suffix)

² CTB/McGraw-Hill LLC. (2005). Tests of adult basic education, forms 9 and 10. Monterey, CA: Author. Reproduced with permission of CTB/McGraw-Hill LLC. TABE is a registered trademark of The McGraw-Hill Companies, Inc. Copyright © 2005 by CTB/McGraw-Hill LLC. Reproduction of this material is permitted for educational purposes only.

Appendix C: 21st Century Skills³

CSS1-21st Century Themes

CS1 Global Awareness

1. Using 21st century skills to understand and address global issues
2. Learning from and working collaboratively with individuals representing diverse cultures, religions and lifestyles in a spirit of mutual respect and open dialogue in personal, work, and community contexts
3. Understanding other nations and cultures, including the use of non-English languages

CS2 Financial, Economic, Business, and Entrepreneurial Literacy

1. Knowing how to make appropriate personal economic choices
2. Understanding the role of the economy in society
3. Using entrepreneurial skills to enhance workplace productivity and career options

CS3 Civic Literacy

1. Participating effectively in civic life through knowing how to stay informed and understanding governmental processes
2. Exercising the rights and obligations of citizenship at local, state, national and global levels
3. Understanding the local and global implications of civic decisions

CS4 Health Literacy

1. Obtaining, interpreting and understanding basic health information and services and using such information and services in ways that enhance health
2. Understanding preventive physical and mental health measures, including proper diet, nutrition, exercise, risk avoidance and stress reduction
3. Using available information to make appropriate health-related decisions
4. Establishing and monitoring personal and family health goals
5. Understanding national and international public health and safety issues

CS5 Environmental Literacy

1. Demonstrate knowledge and understanding of the environment and the circumstances and conditions affecting it, particularly as relates to air, climate, land, food, energy, water and ecosystems
2. Demonstrate knowledge and understanding of society's impact on the natural world (e.g., population growth, population development, resource consumption rate, etc.)
3. Investigate and analyze environmental issues, and make accurate conclusions about effective solutions
4. Take individual and collective action towards addressing environmental challenges (e.g., participating in global actions, designing solutions that inspire action on environmental issues)

CSS2-Learning and Innovation Skills

CS6 Creativity and Innovation

1. Think Creatively
2. Work Creatively with Others

³ *21st century skills*. (n.d.). Washington, DC: Partnership for 21st Century Skills.

3. Implement Innovations

CS7 Critical Thinking and Problem Solving

1. Reason Effectively
2. Use Systems Thinking
3. Make Judgments and Decisions
4. Solve Problems

CS8 Communication and Collaboration

1. Communicate Clearly
2. Collaborate with Others

CSS3-Information, Media and Technology Skills

CS9 Information Literacy

1. Access and Evaluate Information
2. Use and Manage Information

CS10 Media Literacy

1. Analyze Media
2. Create Media Products

CS11 ICT Literacy

1. Apply Technology Effectively

CSS4-Life and Career Skills

CS12 Flexibility and Adaptability

1. Adapt to change
2. Be Flexible

CS13 Initiative and Self-Direction

1. Manage Goals and Time
2. Work Independently
3. Be Self-directed Learners

CS14 Social and Cross-Cultural Skills

1. Interact Effectively with others
2. Work Effectively in Diverse Teams

CS15 Productivity and Accountability

1. Manage Projects
2. Produce Results

CS16 Leadership and Responsibility

1. Guide and Lead Others
2. Be Responsible to Others