# Commission on Accreditation of Allied Health Education Programs

**Standards and Guidelines**
**for the Accreditation of Educational Programs in Surgical Technology**

**Essentials/Standards initially adopted in l972; revised in 1991, 2000, 2002, 2004 and 2013**
**by the:**

**American College of Surgeons**
**Association of Surgical Technologists**
**Accreditation Review Council on Education in Surgical Technology and Surgical Assisting**
**Commission on Accreditation of Allied Health Education Programs**

The Commission on Accreditation of Allied Health Education Programs (CAAHEP) accredits programs upon the recommendation of the Accreditation Review Council on Education in Surgical Technology and Surgical Assisting (ARC/STSA).

These accreditation **Standards and Guidelines** are the minimum standards of quality used in accrediting programs that prepare individuals to enter the Surgical Technology profession. **Standards** are the minimum requirements to which an accredited program is held accountable. Guidelines are descriptions, examples, or recommendations that elaborate on the Standards. Guidelines are not required, but can assist with interpretation of the Standards.

Standards are printed in regular typeface in outline form. *Guidelines* are printed in italic typeface in narrative form.

## Preamble

The Commission on Accreditation of Allied Health Education Programs (CAAHEP), Accreditation Review Council on Education in Surgical Technology and Surgical Assisting (ARC/STSA), the American College of Surgeons (ACS), and the Association of Surgical Technologists (AST) cooperate to establish, maintain and promote appropriate standards of quality for educational programs in surgical technology and to provide recognition for educational programs that meet or exceed the minimum standards outlined in these accreditation **Standards and Guidelines**. Lists of accredited programs are published for the information of students, employers, educational institutions and agencies, and the public.

These **Standards and Guidelines** are to be used for the development, evaluation, and self-analysis of surgical technology programs. On-site review teams assist in the evaluation of a program's relative compliance with the accreditation Standards.

---

**Description of the Profession of Surgical Technology**

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 or environment is safe, that equipment functions properly, and that the operative procedure is conducted under conditions that maximize patient safety.

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.

---

# I. Sponsorship

## A. Sponsoring Institution

A sponsoring institution must be at least one of the following:

1. A post-secondary academic institution accredited by an institutional accrediting agency that is recognized by the U.S. Department of Education, and authorized under applicable law or other acceptable authority to provide a post-secondary program, which awards a minimum of a certificate/diploma at the completion of the program.
2. A foreign post-secondary academic institution acceptable to CAAHEP, which is authorized under applicable law or other acceptable authority to provide a postsecondary program, which awards a minimum of a certificate/diploma at the completion of the academic program.
3. A hospital or medical center that is institutionally accredited, and authorized under applicable law or other acceptable authority to provide healthcare, which awards a minimum of a certificate/diploma at the completion of the academic program.
4. A branch of the United States Armed Forces, which awards a minimum of a certificate/diploma at the completion of the program.

*Projected for August 1, 2021, all sponsoring institutions should award a minimum of an Associate's Degree at the completion of the program.*

## B. Consortium Sponsor

1. A consortium sponsor is an entity consisting of two or more members that exists for the purpose of operating an educational program. In such instances, at least one of the members of the consortium must meet the requirements of a sponsoring institution as described in I.A.

2. The responsibilities of each member of the consortium must be clearly documented as a formal affiliation agreement or memorandum of understanding, which includes governance and lines of authority.

## C. Responsibilities of Sponsor

The Sponsor must ensure that the provisions of these **Standards and Guidelines** are met.

*The Sponsor should refer to the ARC/STSA* Surgical Technology Standards Interpretive Guide *(SIG) for examples that demonstrate compliance with the provisions of these* ***Standards and Guidelines****.*

# II. Program Goals

## A. Program Goals and Outcomes

There must be a written statement of the program's goals and learning domains consistent with and responsive to the demonstrated needs and expectations of the various communities of interest served by the educational program. The communities of interest that are served by the program must include, but are not limited to: students, graduates, faculty, sponsor administration, employers, physicians, and the public.

Program-specific statements of goals and learning domains provide the basis for program planning, implementation, and evaluation. Such goals and learning domains must be compatible with both the mission of the sponsoring institution(s) and the expectations of the communities of interest, and nationally accepted standards of roles and functions. Goals and learning domains are based upon the substantiated needs of health care providers and employers, and the educational needs of the students served by the educational program.

*The program should demonstrate that a survey was conducted for the establishment of clinical affiliations. The program should provide a formal statement from a Chair, a Dean, or an appropriate*

*institutional official and from a local committee or group that provides input to the institution indicating that the established expectation of the program's curriculum and actual practice experience available at clinical affiliates meet the institution's needs.*

**B. Appropriateness of Goals and Learning Domains**

The program must regularly assess its goals and learning domains. Program personnel must identify and respond to changes in the needs and/or expectations of its communities of interest.

An advisory committee, which is representative of at least each of the communities of interest named in these **Standards**, must be designated and charged with the responsibility of meeting at least annually, to assist program and sponsor personnel in formulating and periodically revising appropriate goals and learning domains, monitoring needs and expectations, and ensuring program responsiveness to change.

**C. Minimum Expectations**

The program must have the following goal defining minimum expectations: "To prepare competent entry-level surgical technologists in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains."

Programs adopting educational goals beyond entry-level competence must clearly delineate this intent and provide evidence that all students have achieved the identified basic competencies prior to entry into the field.

*Nothing in this Standard restricts programs from formulating goals beyond entry-level competence.*

## III. Resources

**A. Type and Amount**

Program resources must be sufficient to ensure the achievement of the program's goals and outcomes. Resources must include, but are not limited to: faculty; clerical and support staff; curriculum; finances; offices; classroom, laboratory, and, ancillary student facilities; clinical affiliates; equipment; supplies; computer resources; instructional reference materials; and faculty/staff continuing education.

*The student to instructor ratio for laboratory instruction should be no more than 10:1.*

**B. Personnel**

The sponsor must appoint sufficient faculty and staff with the necessary qualifications to perform the functions identified in documented job descriptions and to achieve the program's stated goals and outcomes.

**1. Program Director**

The sponsor must appoint a full-time Program Director.

*Full time is defined as the usual and customary time commitment required by the institution for faculty members in equivalent positions in other health educational activities. Under this definition, the Program Director should be sufficiently free from service and other non-educational responsibilities to fulfill the educational and administrative responsibilities of the surgical technology program.*

**a) Responsibilities**

The Program Director must be responsible for all aspects of the program, including the organization, administration, continuous review, planning, development, and general effectiveness of the program.

*Newly appointed Program Directors should participate in an ARC/STSA sponsored Accreditation Fundamentals for Educators workshop within one year of their appointment.*

*The Program Director should pursue ongoing formal training designed to maintain and upgrade his/her professional, instructional, and administrative capabilities*

*The Program Director should participate in an ARC/STSA sponsored accreditation workshop at least once every five years.*

**b) Qualifications**

**The program director must:**

1) possess a credential in the field of surgical technology through a national certification program that is accredited by the National Commission on Certifying Agencies (NCCA).
2) have a minimum total of five years of experience, either in the operating room scrub role or as an instructor in surgical technology, or a combination of both, within the past ten years.
3) possess an Associate's Degree or greater.
4) possess proficiency in instructional methodology, curriculum design, and program planning.

*Persons approved as program directors under previous Standards will continue to be approved in that position at that institution.*

*Program Director should possess experience/training as an educator.*

*Associate-degree should have concentration in surgical technology.*

**2. Clinical Coordinator**

**a) Responsibilities**

The Clinical Coordinator must be responsible for organization, administration, continuous review, planning, development, and general effectiveness of clinical experiences for students enrolled in the surgical technology program.

*Responsibilities may include didactic and laboratory instruction (in addition to clinical instruction) and direction and guidance of clinical instructors.*

*The Clinical Coordinator should pursue ongoing formal training designed to maintain and upgrade his/her professional, instructional, and administrative capabilities.*

**b) Qualifications**

**The Clinical Coordinator must:**

1) possess a credential in the field of surgical technology through a national certification program that is accredited by the National Commission on Certifying Agencies (NCCA).
2) have a minimum total of three years of experience, either in the operating room scrub role or as an instructor in surgical technology, or a combination of both, within the past five years.

*Persons approved as Clinical Coordinators under previous Standards will continue to be approved in that position at that institution. The Program Director may also serve as Clinical Coordinator.*

**3. Didactic/Clinical Faculty and/or Instructional Staff**

**a) Responsibilities**

The instructional staff must be responsible for directing, evaluating and reporting student progress toward course objectives and for the periodic review and updating of course material.

**b) Qualifications**

1) Faculty must be qualified by education and experience, and must be effective in teaching the subjects assigned.
2) Faculty with instructional responsibilities in core surgical technology courses must:
   (a) possess a credential in the field of surgical technology through a national certification program that is accredited by the National Commission on Certifying Agencies (NCCA).
   (b) have a minimum total of two years of experience, either in the operating room scrub role or as an instructor in surgical technology, or a combination of both, within the past five years.

*Persons approved as didactic/clinical faculty and/or instructional staff under previous Standards will continue to be approved in that position at that institution.*

*Core surgical technology courses include the components of Surgical Technology fundamentals and practice. Examples of non-core courses include Medical Terminology, Pharmacology, Pathophysiology, Anatomy and Physiology, Microbiology, and other general education courses not specific to surgical technology.*

*The didactic/clinical faculty with instructional responsibilities in core surgical technology courses should pursue ongoing formal training designed to maintain and upgrade professional and instructional capabilities.*

**C. Curriculum**

The curriculum must ensure the achievement of program goals and learning domains. Instruction must be an appropriate sequence of classroom, laboratory, and clinical activities. Instruction must be based on clearly written course syllabi that include course description, course objectives, methods of evaluation, topic outline, and competencies required for graduation.

The program must demonstrate by comparison that the curriculum offered meets or exceeds the content and competencies specified in the current edition of the **Core Curriculum for Surgical Technology** (see Appendix B – Curriculum).

*Program length should be sufficient to ensure student achievement of the master curriculum content demands.*

**D. Resource Assessment**

The program must, at least annually, assess the appropriateness and effectiveness of the resources described in these **Standards**. The results of resource assessment must be the basis for ongoing planning and appropriate change. An action plan must be developed when deficiencies are identified in the program resources. Implementation of the action plan must be documented and results measured by ongoing resource assessment.

## IV. Student and Graduate Evaluation/Assessment

### A. Student Evaluation

**1. Frequency and purpose**

Evaluation of students must be conducted on a recurrent basis and with sufficient frequency to provide both the students and program faculty with valid and timely indications of the students' progress toward and achievement of the competencies and learning domains stated in the curriculum.

*The evaluation system should document each student's knowledge, performance-based strengths and areas needing improvement.*

*The documentation should include a plan for routine communication, a copy of all forms used in communicating, a description of how the department and institution handles problem or failing students, and student evaluation of the communication process.*

**2. Documentation**

Records of student evaluations must be maintained in sufficient detail to document learning progress and achievements.

*Each student file should contain copies of all communication regarding students standing.*

### B. Outcomes Assessment

**1. Outcomes Assessment**

The program must at least annually assess its effectiveness in achieving its stated goals and learning domains. The results of this evaluation must be reflected in the review and timely revision of the program.

Outcomes assessments include, but are not limited to: performance on national credentialing examination program(s) accredited by the National Commission for Certifying Agencies, programmatic retention/attrition, graduate satisfaction, employer satisfaction, job (positive) placement, and programmatic summative measures. The program must meet the outcomes assessment thresholds.

*Programmatic summative measures should contribute to assessing effectiveness in specific learning domains. "Positive placement" means that the graduate is employed full or part-time in the field or a related field; and/or continuing his/her education; and/ or serving in the military.*

**2. Outcomes Reporting**

The program must periodically submit to the ARC/STSA the program goal(s), learning domains, evaluation systems (including type, cut score, and appropriateness), outcomes, its analysis of the outcomes and an appropriate action plan based on the analysis.

Programs not meeting the established thresholds must begin a dialogue with the ARC/STSA to develop an appropriate plan of action to respond to the identified shortcomings.

## V. Fair Practices

### A. Publications and Disclosure

1. Announcements, catalogs, publications, and advertising must accurately reflect the program offered.
2. At least the following must be made known to all applicants and students: the sponsor's institutional and programmatic accreditation status as well as the name, mailing address, web site address, and phone number of the accrediting agencies; admissions policies and practices, including technical standards (when used); policies on advanced placement, transfer of credits, and credits for experiential learning; number of credits required for completion of the program; tuition/fees and other costs required to complete the program; policies and processes for withdrawal and for refunds of tuition/fees.

3. At least the following must be made known to all students: academic calendar, student grievance procedure, criteria for successful completion of each segment of the curriculum and for graduation, and policies and processes by which students may perform clinical work while enrolled in the program.
4. The sponsor must maintain, and provide upon request, current and consistent information about student/graduate achievement that includes the results of one or more of the outcomes assessments required in these **Standards**.

*The sponsor should develop a suitable means of communicating to the communities of interest the achievement of students/graduates.*

**B. Lawful and Non-discriminatory Practices**

All activities associated with the program, including student and faculty recruitment, student admission, and faculty employment practices, must be non-discriminatory and in accord with federal and state statutes, rules, and regulations. There must be a faculty grievance procedure made known to all paid faculty.

**C. Safeguards**

The health and safety of patients, students, and faculty associated with the educational activities of the students must be adequately safeguarded.

All activities required in the program must be educational and students must not be substituted for staff.

**D. Student Records**

Satisfactory records must be maintained for student admission, advisement, counseling and evaluation. Grades and credits for courses must be recorded on the student transcript and permanently maintained by the sponsor in a safe and accessible location.

**E. Substantive Changes**

The sponsor must report substantive changes as described in Appendix A to CAAHEP/CoA in a timely manner. Additional substantive changes to be reported to the ARC/STSA within the time limits prescribed include:

1) program resources proportional to and sufficient for the programs stated enrollment capacity
2) curriculum, including department-wide changes made in other departments
3) continued alignment with Appendix B - Curriculum
4) increase or decrease in clock or credit hours required for successful completion of the program
5) clinical affiliation changes (additions or subtractions)
6) change of location (campus, laboratory facilities, school administration)
7) addition of Accelerated Alternate Delivery (AAD) component
8) addition of distance education program as defined by CAAHEP policy
9) addition of a satellite campus
10) addition of a location (campus) where core curriculum surgical technology coursework is delivered

**F. Agreements**

There must be a formal affiliation agreement or memorandum of understanding between the sponsor and all other entities that participate in the education of the students describing the relationship, roles, and responsibilities of the sponsor and that entity.

## APPENDIX A

Application, Maintenance and Administration of Accreditation

### A. Program and Sponsor Responsibilities

### 1. Applying for Initial Accreditation

a. The chief executive officer or an officially designated representative of the sponsor completes a "Request for Accreditation Services" form and returns it electronically or by mail to:

Accreditation Review Council on Education in Surgical Technology
and Surgical Assisting (ARCST/SA)
6 West Dry Creek Circle, Suite 110
Littleton, CO 80120

The "Request for Accreditation Services" form can be obtained from the CAAHEP website at www.caahep.org/Content.aspx?ID=11.

**Note:** There is **no** CAAHEP fee when applying for accreditation services; however, individual committees on accreditation may have an application fee.

b. The program undergoes a comprehensive review, which includes a written self-study report and an on-site review.

The self-study instructions and report form are available from the Accreditation Review Council on Education in Surgical Technology and Surgical Assisting. The on-site review will be scheduled in cooperation with the program and ARCST/SA once the self-study report has been completed, submitted, and accepted by the Accreditation Review Council on Education in Surgical Technology and Surgical Assisting.

### 2. Applying for Continuing Accreditation

a. Upon written notice from the ARCST/SA, the chief executive officer or an officially designated representative of the sponsor completes a "Request for Accreditation Services" form, and returns it electronically or by mail to:

Accreditation Review Council on Education in Surgical Technology
and Surgical Assisting (ARCST/SA)
6 West Dry Creek Circle, Suite 110
Littleton, CO 80120

The "Request for Accreditation Services" form can be obtained from the CAAHEP website at www.caahep.org/Content.aspx?ID=11.

b. The program may undergo a comprehensive review in accordance with the policies and procedures of the ARCST/SA.

If it is determined that there were significant concerns with the conduct of the on-site review, the sponsor may request a second site visit with a different team.

After the on-site review team submits a report of its findings, the sponsor is-provided the opportunity to comment in writing and to correct factual errors prior to the Accreditation Review Council on Education in Surgical Technology and Surgical Assisting forwarding a recommendation to CAAHEP.

**3. Administrative Requirements for Maintaining Accreditation**

a. The program must inform the Accreditation Review Council on Education in Surgical Technology and Surgical Assisting and CAAHEP within a reasonable period of time (as defined by the committee on accreditation and CAAHEP policies) of changes in chief executive officer, dean of health professions or equivalent position, and required program personnel (Refer to Standard III.B.).

b. The sponsor must inform CAAHEP and the ARCST/SA of its intent to transfer program sponsorship. To begin the process for a Transfer of Sponsorship, the current sponsor must submit a letter (signed by the CEO or designated individual) to CAAHEP and the Accreditation Review Council on Education in Surgical Technology and Surgical Assisting that it is relinquishing its sponsorship of the program. Additionally, the new sponsor must submit a "Request for Transfer of Sponsorship Services" form. The Accreditation Review Council on Education in Surgical Technology and Surgical Assisting has the discretion of requesting a new self-study report with or without an on-site review. Applying for a transfer of sponsorship does not guarantee that the transfer of accreditation will be granted.

c. The sponsor must promptly inform CAAHEP and the Accreditation Review Council on Education in Surgical Technology and Surgical Assisting of any adverse decision affecting its accreditation by recognized institutional accrediting agencies and/or state agencies (or their equivalent).

d. Comprehensive reviews are scheduled by the ARCST/SA in accordance with its policies and procedures. The time between comprehensive reviews is determined by the ARCST/SA and based on the program's on-going compliance with the Standards, however, all programs must undergo a comprehensive review at least once every ten years.

e. The program and the sponsor must pay Accreditation Review Council on Education in Surgical Technology and Surgical Assisting and CAAHEP fees within a reasonable period of time, as determined by the Accreditation Review Council on Education in Surgical Technology and Surgical Assisting and CAAHEP respectively.

f. The sponsor must file all reports in a timely manner (self-study report, progress reports, probation reports, annual reports, etc.) in accordance with ARCST/SA policy.

g. The sponsor must agree to a reasonable on-site review date that provides sufficient time for CAAHEP to act on a ARCST/SA accreditation recommendation prior to the "next comprehensive review" period, which was designated by CAAHEP at the time of its last accreditation action, or a reasonable date otherwise designated by the ARCST/SA.

Failure to meet any of the aforementioned administrative requirements may lead to administrative probation and ultimately to the withdrawal of accreditation. CAAHEP will immediately rescind administrative probation once all administrative deficiencies have been rectified.

**4. Voluntary Withdrawal of a CAAHEP- Accredited Program**

Notification of voluntary withdrawal of accreditation from CAAHEP must be made by the Chief Executive Officer or an officially designated representative of the sponsor by writing to CAAHEP indicating: the desired effective date of the voluntary withdrawal, and the location where all records will be kept for students who have completed the program.

**5. Requesting Inactive Status of a CAAHEP- Accredited Program**

Inactive status for any accredited program other than one holding Initial Accreditation may be requested from CAAHEP at any time by the Chief Executive Officer or an officially designated representative of the sponsor writing to CAAHEP indicating the desired date to become inactive. No

students can be enrolled or matriculated in the program at any time during the time period in which the program is on inactive status. The maximum period for inactive status is two years. The sponsor must continue to pay all required fees to the Accreditation Review Council on Education in Surgical Technology and Surgical Assisting and CAAHEP to maintain its accreditation status.

To reactivate the program the Chief Executive Officer or an officially designated representative of the sponsor must provide notice of its intent to do so in writing to both CAAHEP and the Accreditation Review Council on Education in Surgical Technology and Surgical Assisting. The sponsor will be notified by the Accreditation Review Council on Education in Surgical Technology and Surgical Assisting of additional requirements, if any, that must be met to restore active status.

If the sponsor has not notified CAAHEP of its intent to re-activate a program by the end of the two-year period, CAAHEP will consider this a "Voluntary Withdrawal of Accreditation."

**B. CAAHEP and Committee on Accreditation Responsibilities – Accreditation Recommendation Process**

1. After a program has had the opportunity to comment in writing and to correct factual errors on the on-site review report, the Accreditation Review Council on Education in Surgical Technology and Surgical Assisting forwards a status of public recognition recommendation to the CAAHEP Board of Directors. The recommendation may be for any of the following statuses: initial accreditation, continuing accreditation, transfer of sponsorship, probationary accreditation, withhold of accreditation, or withdrawal of accreditation.

   The decision of the CAAHEP Board of Directors is provided in writing to the sponsor immediately following the CAAHEP meeting at which the program was reviewed and voted upon.

2. Before the Accreditation Review Council on Education in Surgical Technology and Surgical Assisting allows the Initial Accreditation of a program to expire, the sponsor must have the opportunity to request reconsideration of that decision or to request voluntary withdrawal of accreditation. The ARCST/SA's decision is final and CAAHEP will not entertain any appeal on behalf of the program. CAAHEP will notify the sponsor in writing of the ARCST/SA's decision.

3. Before the Accreditation Review Council on Education in Surgical Technology and Surgical Assisting forwards a recommendation to CAAHEP that a program be placed on probationary accreditation, the sponsor must have the opportunity to request reconsideration of that recommendation or to request voluntary withdrawal of accreditation. The ARCST/SA's reconsideration of a recommendation for probationary accreditation must be based on conditions existing both when the committee arrived at its recommendation as well as on subsequent documented evidence of corrected deficiencies provided by the sponsor.

   The CAAHEP Board of Directors' decision to confer probationary accreditation is not subject to appeal.

4. Before the Accreditation Review Council on Education in Surgical Technology and Surgical Assisting forwards a recommendation to CAAHEP that a program's accreditation be withdrawn or that accreditation be withheld, the sponsor must have the opportunity to request reconsideration of the recommendation, or to request voluntary withdrawal of accreditation or withdrawal of the accreditation application, whichever is applicable. The ARCST/SA's reconsideration of a recommendation of withdraw or withhold accreditation must be based on conditions existing both when the Accreditation Review Council on Education in Surgical Technology and Surgical Assisting arrived at its recommendation as well as on subsequent documented evidence of corrected deficiencies provided by the sponsor.

   <u>The CAAHEP Board of Directors' decision to withdraw or withhold accreditation may be appealed. A copy of the CAAHEP "Appeal of Adverse Accreditation Actions" is enclosed with the CAAHEP letter notifying the sponsor of either of these actions.</u>

At the completion of due process, when accreditation is withheld or withdrawn, the sponsor's Chief Executive Officer is provided with a statement of each deficiency. Programs are eligible to re-apply for accreditation once the sponsor believes that the program is in compliance with the accreditation Standards.

**Note: Any student who completes a program that was accredited by CAAHEP at any time during his/her matriculation is deemed by CAAHEP to be a graduate of a CAAHEP-accredited program.**

## APPENDIX B

### Curriculum

Appendix B does not contain the complete curriculum content guide required to demonstrate compliance with Standard III.C. The complete curriculum is specified in the current edition of the **Core Curriculum for Surgical Technology.** Core surgical technology course subjects and topics are identified by an asterisk (*).

**1. Healthcare Sciences**

a. Anatomy and Physiology
   1. Identify the basic organizational structures of the human body, including body planes, general organization, and terms of reference.
   2. Analyze the basic structure of cells and relate cellular components to integrated cell function.
   3. Analyze the types of tissue that make up organs and the characteristics of each.
   4. Contrast and compare organs of the body.
   5. Analyze the different body systems for composition and function.

b. Pharmacology and Anesthesia
   1. Analyze the principles of anesthesia administration as well as be able to explain the necessity of each component of anesthesia preparation of the surgical patient.
   2. Compare and contrast methods, agents, and techniques of anesthesia administration and preparation.
   3. Correlate anesthesia monitoring devices with patient homeostasis.
   4. Explain anesthesia complications and interventions.
   5. Calculate medication conversions and dosages.
   6. Apply general terminology to medication use.
   7. Prepare and manage medications and solutions.
   8. *Use medications in the care of the surgical patient.

c. Medical Terminology
   1. Combine prefixes, word roots, and suffixes to create medical terms related to surgery.
   2. Construct and combine compound words.
   3. Pronounce medical terms related to surgery.
   4. Write medical terms using correct spelling.

d. Microbiology
   1. *Correlate the impact of microbiology in relationship to the practice of sterile technique and infection control in the operative setting.
   2. Identify the name and function of various parts of the compound microscope.
   3. Compare and contrast the structure and characteristics of different microorganisms.
   4. Analyze the various immune responses that occur in the body as defenses against invasion by pathogens.
   5. *Relate the infectious process to surgical practice.

e. Pathophysiology
   1. *Relate pathophysiology to surgical interventions.
   2. Analyze the relationship between cell pathology and disease.
   3. Examine hemodynamic disorders, inflammation and infection.
   4. Compare and contrast the various surgical pathologies of each body system.

**2. Technological Sciences**

a. Electricity
   1. Describe the principles of electricity and electrical flow.
   2. *Demonstrate electrical knowledge as it relates to patient safety.

b. Information Technology
   1. Describe the basic components of a computer system.

2. *Apply computer knowledge to the educational process and safe patient care practices in the O.R.
3. Locate and evaluate information using the latest technology available.

c. Robotics
1. Describe the robotic terms as related to surgery.
2. *Describe the surgical applications of robotics.
3. *Identify the basic components of equipment used in robotic surgery.
4. Describe the movements of the robotic system manipulators.
5. Apply the principles of robotics to patient safety.

**3. Patient Care Concepts**

a. Biopsychosocial Needs of the Patient
1. Discuss the basic physical and biological needs required to sustain life.
2. Compare and contrast various spiritual and cultural needs of the surgical patient.
3. *Demonstrate appropriate behavior in response to the needs manifested by the surgical patient.
4. Analyze and describe the potential psychological needs of the surgical patient and family.
5. List and describe potential sources of anxiety and fears of the surgical patient.
6. *Identify and discuss the specific needs of the special populations.

b. Death and Dying
1. Evaluate attitudes, beliefs and classifications regarding death and dying.
2. Compare and contrast responses to the process of death and various coping strategies and mechanisms.
3. Debate quality of life vs. quantity of life.
4. *Trace the steps that are implemented when a patient death occurs in the operating room.

**4. *Surgical Technology**

a. Preoperative
1. Non-sterile
a) Attire
i. Recognize appropriate surgical attire.
ii. Employ principles involved in donning surgical attire.
b) Preoperative physical preparation of the patient
i. Describe and perform the physical preparation and care that the surgical patient may receive prior to the surgical procedure.
ii. Evaluate the items on the pre-operative patient checklist.
c) Patient identification
i. State the purpose of proper identification.
ii. Demonstrate the identification process for a surgical patient admitted to the surgical suite.
d) Transportation
i. Identify methods of patient transportation.
ii. Discuss the factors related to the family members and transportation of the patient.
iii. Demonstrate the principles of safe transportation.
e) Review of the chart
i. Analyze laboratory reports in relationship to patient diagnosis and intervention.
ii. Review the patient chart for completeness.
f) Surgical consent
i. Analyze the procedure for obtaining informed surgical consent.
ii. Analyze the legal concepts of obtaining informed surgical consent.
g) Transfer
i. Discuss methods of patient transfer.
ii. Identify equipment utilized for safe transfer of the surgical patient.
iii. Employ the principles of body mechanics when transferring the surgical patient.
h) Positioning

i. Analyze the function of equipment and aides utilized to achieve various surgical positions.
ii. Discuss the components and functions of the OR table.
iii. Perform basic positioning.

i) Urinary catheterization
i. List the indications for urinary catheterization.
ii. Discuss the basic considerations for urinary catheterization.
iii. List the supplies required to perform urinary catheterization.
iv. Demonstrate urinary catheterization.
v. Discuss the principles of monitoring urine output.

j) Skin preparation
i. Compare and contrast different types of skin preparations.
ii. Compare and contrast different chemical agents used for skin preparation
iii. Describe the steps and rationales for surgical skin preparation.

k) Equipment
i. Assess the function, assembly, use and care of equipment in the surgical environment.
ii. Describe the application of surgical equipment.

l) Instrumentation
i. Identify the classifications, names, parts, materials, finishes and uses of basic surgical instrumentation.
ii. Explain the relationship between instrument type and usage.
iii. Apply knowledge of basic surgical instrumentation to specific surgical procedures.

2. Sterile

a) Asepsis and sterile technique
i. Apply terms related to asepsis.
ii. Discuss sources of contamination.
iii. Demonstrate sterile technique.

b) Hand hygiene and scrubbing
i. Demonstrate the steps of a hand wash.
ii. Identify the preliminary preparations for the surgical scrub.
iii. Demonstrate the steps of the surgical scrub.
iv. Employ sterile technique during the surgical scrub.

c) Gowning and gloving
i. Employ sterile technique when gowning and gloving self and when assisting other team members.

d) Counts
i. Discuss the purposes and legal responsibilities of counts.
ii. Describe the techniques used to prevent foreign body retention.
iii. Discuss when counts should be performed.
iv. Describe the methods for counting.
v. Demonstrate the procedure for counting instruments, sponges, sharps and other items on the field.

e) Draping
i. Describe various types of draping material used in surgical procedures.
ii. Select the appropriate drapes for specific positions and surgical procedures.
iii. Demonstrate the aseptic principles of draping the patient, equipment, and furniture.

b. Intraoperative: Sterile

1. Specimen care

a) Discuss methods of obtaining specimens.
b) Discuss the types of specimen containers.
c) Describe procedure for validating specimen with surgeon and circulator.
d) Describe the procedure for specimen labeling and transfer to appropriate department.
e) Discuss areas for specimen storage.
f) Demonstrate the handling and preservation for specific types of specimens.

2. Abdominal incisions

a) Identify the various tissue layers of the abdominal wall.
b) Describe the creation and usage of various surgical incisions.
c) Discuss the advantages and disadvantages of incision types.

3. Hemostasis

a) Analyze the principles of hemostasis.
b) Differentiate among various methods of hemostasis
c) Assess special techniques of hemostasis.
d) Demonstrate surgical technologists role in hemostasis.

4. Exposure
a) Describe principles of exposure.
b) Identify criteria used to select exposure devices.
c) Apply techniques for tissue exposure.

5. Catheters and drains
a) Compare and contrast the types and characteristics of various catheters and drainage devices.
b) Correlate the correct drainage device for each drain.
c) Compare and contrast the conceptual differences between gravity and vacuum drainage.
d) Prepare catheters and drains for intraoperative use.
e) Prepare anchoring devices for drains.

6. Wound closure
a) Analyze and assess the factors that influence the closure of each wound layer.
b) Compare and contrast suture materials, suture sizing and suture coatings and analyze their significance.
c) Demonstrate proper suture selection, preparation, handling and cutting techniques.
d) Diagram and describe needle points and needle bodies and demonstrate the proper placement, handling, loading and disposal of surgical needles.
e) Evaluate various applications of surgical stapling instruments and demonstrate proper assembly of stapling instrumentation.
f) Compare and contrast reusable and disposable surgical stapling instruments and analyze the advantages and disadvantages of utilizing surgical staplers.
g) Compare and contrast biological adhesives and synthetic adhesives.
h) Analyze and evaluate various tissue repair and replacement materials.
i) Describe the advantages and disadvantages of the repair and replacement materials.
j) Discuss the specific applications of synthetic mesh.

7. Surgical dressings
a) Evaluate the purposes of surgical dressings.
b) Analyze their importance to postoperative wound care.
c) Compare and contrast the most commonly used types of surgical and specialty dressings.
d) Describe the importance of proper surgical dressing application techniques.
e) Apply proper principles of sterile technique and demonstrate the application of commonly used types of surgical and specialty dressings.

8. Wound healing
a) Compare and contrast intentional, unintentional, and incidental/chronic wounds.
b) Analyze the mechanisms of wound healing, the inflammatory process, and the healing process.
c) Evaluate the classification of surgical wounds, analyze factors that influence healing, and devise a plan to prevent postoperative wound infections.
d) Demonstrate basic wound care concepts and apply the principles of asepsis to the practice of sterile technique.

9. Tissue replacement materials
a) Describe tissue replacement materials.
b) Demonstrate knowledge of biological wound cover materials.

10. Emergency patient situations
a) Perform duties related to emergencies in the O.R. setting.
b) Describe the emergency procedures carried out in the O.R. setting.
c) Obtain CPR certification.

c. Postoperative
   1. PACU
      a) Analyze the immediate postoperative care of the surgical patient.
      b) Describe potential postoperative discomforts and complications.
      c) List necessary equipment in the PACU.
   2. Methods of disinfection and sterilization
      a) Define terms related to the terminal disinfection/sterilization process.
      b) Identify the methods of processing items during terminal disinfection and/or sterilization.
      c) Identify the concepts of microbial barriers.
      d) Contrast and compare the materials used for creating microbial barriers.
      e) List the methods for sealing microbial barriers.
      f) List the process for preparing items for sterilization.
      g) Define terms related to the sterilization process.
      h) Identify variables related to the sterilization process and the materials to be processed.
      i) Compare and contrast methods of sterilization.
      j) Identify process monitoring devices and methods.
   3. Environmental disinfection of the O.R.
      a) Perform decontamination of the O.R. environment.
      b) Analyze the factors and variable of disinfecting agents.
      c) Compare and contrast disinfecting agents.

d. Perioperative Case Management
   1. Demonstrate methods utilized to analyze and plan for the needs of the surgical case.
   2. Select the instruments, supplies and equipment needed for a surgical procedure.
   3. Describe the function of the physical components of the operating room.
   4. Demonstrate the arrangement, care, handling and assembly of operating room furniture and equipment.
   5. Describe the use of instruments and supplies.
   6. Demonstrate techniques for preparing the sterile field.
   7. Explain the procedures for draping furniture and equipment.
   8. Describe placing and securing supplies and equipment for use on the sterile field.
   9. Explain methods for monitoring the sterile field.
   10. Apply the principles of asepsis to the practice of sterile technique.
   11. Assess and anticipate the needs of the surgical team.
   12. Integrate variations of case management according to the surgical procedure.
   13. Demonstrate postoperative case management duties in an organized manner.
   14. Apply standard precautions to the performance of perioperative case management activities.

e. Assistant Circulator Role
   1. Discuss the perioperative duties of the assistant circulator.
   2. Discuss the O.R. documentation to be completed by the assistant circulator.
   3. Demonstrate the duties of the assistant circulator including completion of documentation.

f. Surgical Procedures –Didactic
   1. Surgical specialties - The following objectives must be met for each of the designated surgical specialties:
      Correlate the relevant surgical anatomy and physiology to the surgical procedure.
      Correlate the relevant pathophysiology to the surgical procedure.
      Explain the diagnostic interventions that are utilized for obtaining a diagnosis.
      Discuss specific factors that are unique to the surgical procedure.
      List the supplies, equipment and instrumentation needed for the procedure.
      Explain the correct order of steps taken during the surgical procedure.
      Discuss the postoperative care of the patient according to the procedure.
      List the wound classification and correlate to wound management.

      a) General
      b) Obstetrics and Gynecology
      c) Genitourinary

d) Otorhinolaryngology
e) Orthopedic
f) Oral and Maxillofacial
g) Plastic and Reconstructive
h) Ophthalmic
i) Cardiothoracic
j) Peripheral Vascular
k) Neurosurgery

g. Surgical Rotation - Clinical
1. Surgical Rotation Case Requirements

| **Surgical Specialty** | **Total # of Cases Required** | **Minimum # of First Scrub Cases Required** | **Maximum # of Second Scrub Cases That Can be Applied Towards 120 Cases Required** |
|---|---|---|---|
| General Surgery | 30 | 20 | 10 |
| Surgical Specialties | 90 | 60 | 30 |
| **Totals** | **120** | **80** | **40** |

2. First and Second Scrub Role and Observation Descriptions
a) First Scrub Role
The student surgical technologist shall perform the following duties during any given surgical procedure with proficiency. A student not meeting the five criteria below cannot count the case in the first scrub role and the case must be documented in the second scrub role or observation role.
i. Verify supplies and equipment needed for the surgical procedure.
ii. Set up the sterile field with instruments, supplies, equipment, medication(s) and solutions needed for the procedure.
iii. Perform counts with the circulator prior to the procedure and before the incision is closed.
iv. Pass instruments and supplies to the sterile surgical team members during the procedure.
v. Maintain sterile technique as measured by recognized breaks in technique and demonstrate knowledge of how to correct with appropriate technique.
b) Second Scrub Role
The student surgical technologist who is at the sterile field and has not met all criteria for the first scrub role, but actively participates in the surgical procedure in its entirety by completing any of the following:
i. Sponging
ii. Suctioning
iii. Cutting suture
iv. Holding retractors
v. Manipulating endoscopic camera
c) Observation Role
The student surgical technologist who is in the operating room performing roles that do not meet the criteria for the first or second scrub role are observers. These observation cases are not to be included in the required minimum total case count, but must be documented by the program.

**5. Professional Practice**
a. Professionalism
1. *Professional management
a) Describe the characteristics of the professional surgical technologist.
b) Compare and contrast professional organizations related to the profession.
c) Describe the credentialing options available to the surgical technologist.

2. Employability skills
   a) *Assess current trends and employment opportunities for the surgical technologist.
   b) Develop a plan of action to secure employment in the health care field.
   c) Evaluate personal employability qualities and develop an employment strategy that includes positive characteristics.
   d) Develop a professional resume.
   e) Compare and contrast various types of employment/application correspondence.
   f) Analyze various interview strategies.
   g) *Contrast and compare the various roles in the surgical technology profession.
   h) *Demonstrate responsible and accountable behavior within the role and competencies of the surgical technologist.
3. Communication skills and teamwork
   a) Discuss types of communication relationships.
   b) Discuss goals of communication.
   c) Describe the significance of content and tone in communication.
   d) Distinguish between assertive and aggressive behavior.
   e) Discuss problem behaviors and coping mechanism.
   f) Describe concepts of conflict resolution.
   g) *Demonstrate principles of communication in the surgical setting.
   h) Demonstrate body language and non-verbal communication.
   i) *Demonstrate principles of teamwork in the surgical environment.
4. Ethical and moral issues
   a) Review the American Hospital Association's (AHA) Patient's Bill of Rights.
   b) Develop an increased sensitivity to the influence of ethics in professional practice.
   c) Discuss the role of morality during ethical decision making.
   d) Discuss examples of ethical situations and problems in the health professions.
   e) *Demonstrate the key elements related to developing a surgical conscience.
   f) Review principles of problem solving in ethical decision making.
   g) Discuss principles of patient confidentiality including verbal and written.
5. Legal issues, documentation and risk management
   a) Analyze the concepts of law.
   b) *Interpret the legal responsibilities of the surgical technologist and surgical team members.
   c) Compare and contrast criminal and civil liabilities and the consequences for these acts.
   d) *Assess the resources that aid the surgical technologist in interpreting and following professional standards of conduct.
   e) Analyze the recommended practices and legal elements of proper documentation.
   f) Interpret prevention, correction and documentation techniques that may positively impact risk management issues.

b. Healthcare facility information
   1. *Healthcare facility organization and management
      a) Compare and contrast the roles of team members in the operating room.
      b) Acknowledge the proper chain of command in the operating room.
      c) Compare and contrast health care facility departments that relate to direct and indirect patient care in surgical services.
   2. *Physical environment
      a) Discuss location of the surgical services within the health care facility
      b) Describe basic floor plan designs for surgical services.
      c) Describe an optimal location of an operating room.
      d) Describe the floor plan of the operating room.
      e) Describe the environmental systems and controls within the operative environment.
      f) State the proper ranges for temperature and humidity controls.
      g) Describe the various components of the operating room ventilation system.
      h) Describe the principles of environmental safety controls and guidelines.
      i) Discuss the potential hazards in the operating environment.
   3. All-hazards preparation

a) Describe disasters or public health emergencies that impact public health including the different types (e.g. natural, unintentional, & terrorist events) along with the general health, safety or security risks.
b) Describe the all-hazards framework.
c) Explain key components of regional, community, institutional, family, and personal disaster preparation and planning as related to the following:
   i. Available informational resources
   ii. Special needs of individuals
   iii. Precautions and actions for protection
   iv. Detection
   v. Immediate response
   vi. Short-term interventions
   vii. Long-term interventions
d) Describe communication strategies and procedures used in a disaster including barriers to communicating and disseminating health information, reporting systems and procedures for contacting family, coworkers, and local authorities.
e) Describe the purpose & relevance of disaster support services including rationale for integration and coordination of all systems:
   i. National Response Framework (NRF)
   ii. National Incident Management Systems (NIMS)
   iii. Hospital Incident Command System (HICS)
f) Describe the potential impact of mass casualties on the clinical and public health resources including infection control precautions, personal protective equipment, and decontamination procedures.
g) Explain the role of triage as a basis for prioritizing or rationing health care services for victims.
h) Describe the possible medical and mental health consequences, interventions, and solutions for managing those affected including the psychological, emotional, cultural, religious, and forensic considerations for management of mass fatalities and the resources, supplies and services available.
   i. Immediate care
   ii. Mass fatality management
   iii. Mass evacuation
   iv. Mass Sheltering
   v. Prolonged Sheltering
i) Explain both the basic life-saving and life-support principles and procedures that can be used at a disaster scene.
j) Describe issues relevant to the management of individuals of all ages, populations, & communities affected by a disaster or public health emergency.
   i. Moral
   ii. Ethical
   iii. Legal
   iv. Regulatory
k) *Describe the support roles of the surgical technologist in a disaster.

**6. *Clinical Experience**

a. Student Roles
Student clinical experience must be documented by procedure, date and student role.
The surgical technology program is required to verify through the surgical rotation documentation the students' progression in First and Second Scrub roles on surgical procedures of increased complexity as he/she progresses towards entry-level graduate achievement.
   1. First Scrub
   2. Second Scrub
   3. Observation

b. Surgical Procedures
The total number of cases the student must complete is 120.

1. General Surgical Procedures
   Students are required to complete 30 cases in General Surgery. 20 of the cases must be in the First Scrub Role.
2. Specialty Surgical Procedures
   Students are required to complete 90 cases in various Surgical Specialties. 60 of the cases must be in the First Scrub Role and evenly distributed between a minimum of 5 surgical specialties. However, 15 is the maximum number of cases that can be counted in any one surgical specialty.
3. Endoscopic Surgical Procedures
   Diagnostic endoscopy cases and vaginal delivery cases are not mandatory. But up to 10 diagnostic endoscopic cases and 5 vaginal delivery cases can be counted towards maximum number of Second Scrub Role cases.