Surgical Technology
Mississippi Curriculum Framework

Program CIP: 51.0909 Surgical Technology/Technologist

2017

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The Office of Curriculum and Instruction (OCI) was founded in 2013 under the Division of Workforce, Career, and Technical Education at the Mississippi Community College Board (MCCB). The office is funded through a partnership with The Mississippi Department of Education (MDE), who serves as Mississippi's fiscal agent for state and federal Career and Technical Education (CTE) Funds. The OCI is tasked with developing statewide CTE curriculum, programming, and professional development designed to meet the local and statewide economic demand.

For information, please contact curriculum@mccb.edu

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ADOPTION OF NATIONAL CERTIFICATION STANDARDS

The following national certifications have been adopted for the Surgical Technology curriculum: National Board of Surgical Technology and Surgical Assisting or National Center for Competency Testing (NCCT)

The National Board of Surgical Technology and Surgical Assisting (NBSTSA), formerly the LCC-ST was established in 1974 as the certifying agency for surgical technologists. NBSTSA is solely responsible for all decisions regarding certification; from determining eligibility to maintaining, denying, granting and renewing the designation. In 2005 the NBSTSA relocated its headquarters to Littleton, Colorado.

The NBSTSA is governed by a ten (10) member Board of Directors composed of:

- Seven Certified Surgical Technologists (CST's), and Certified Surgical First Assistant (CST/CSFA),
- One public member
- One surgeon; as appointed by the American College of Surgeons (ACS)
- One surgical technology educator.

The National Commission for Certifying Agencies (NCCA) reviews and grants accreditation to the NBSTSA for its administration of both the CST and CSFA certifications.

The purpose of NBSTSA is to determine, through examination, if an individual has acquired both theoretical and practical knowledge of surgical technology or surgical first assisting. In addition, through the acquisition of continuing education credits or by re-examination, CST's certified after August 31, 1977 and all CST/CSFAs are required to stay up to date with changes in the medical field.

Certification as a Surgical Technologist or Surgical First Assistant demonstrates that the individual meets the national standard for knowledge that underlies surgical technologist and surgical first assistance practice. Certified individuals possess mastery of a broad range of skills related to surgical procedures, aseptic technique and patient care.

Because certification is voluntary, the choice to become certified exhibits pride in the profession, the desire to be recognized for mastery of scientific principles, as well as an ongoing commitment to quality patient care. Certification is a means for upward mobility, a condition for employment, a route to higher pay, and a source of recognition nationwide.

Approved candidates who take and pass the CST examination are authorized to use the initials CST as long as they maintain certification currency.

Approved candidates who take and pass the CSFA examination are authorized to use the initials CSFA as long as they maintain certification currency.

CST's certified prior to September 1, 1977, may voluntarily comply with The National Board of Surgical Technology and Surgical Assisting (NBSTSA), formerly the LCC-ST 's continuing education or re-examination requirements.

CST, CSFA, and CST/CSFA are federally registered trademarks and service marks owned by NBSTSA.

The National Center for Competency Testing (NCCT) is an independent credentialing organization that has tested healthcare professionals and instructors throughout the United States since 1989. NCCT provides multiple qualifying paths for certification in the following roles.

INDUSTRY JOB PROJECTION DATA

The surgical Technology requires an education level of short-term on-the-job training or work experience in a related field. There is expected to be a 12.5% increase in occupational demand at the regional level and 12.57% increase at the state level. Median annual income for this occupation is $35,152.00 at the state level. A summary of occupational data from the State Workforce Investment Board Data Center is displayed below:

Table 1: Education Level

Program Occupations	Education Level
Surgical Technologist	Postsecondary Career and Technical Award

Table 2: Occupational Overview

	Region	State	United States
2014 Occupational Jobs	1225	1225	103076
2024 Occupational Jobs	1379	1379	109211
Total Change	154	154	6135
Total % Change	12.57%	12.57%	5.95%
2014 Median Hourly Earnings	$16.90	$16.90	$20.84
2024 Median Annual Earnings	$35,152.00	$35,152.00	$43,347.20
Annual Openings	15	15	613

Table 3: Occupational Breakdown

Description	2014 Jobs	2024 Jobs	Annual Openings	2014 Hourly Earnings	2024 Annual Earnings 2,080 Work Hours
Surgical Technologist	1225	1379	15	$16.90	$35,152.00
TOTAL	1225	1379	15	$16.90	$35,152.00

Table 4: Occupational Change

Description	Regional Change	Regional % Change	State % Change	National % Change
Surgical Technologist	154	12.57%	12.57%	5.95%

ARTICULATION

There is no secondary program in the Surgical Technology to articulate to this program of study.

TECHNICAL SKILLS ASSESSMENT

Colleges should report the following for students who complete the program with a career certificate, technical certificate, or an Associate of Applied Science Degrees for technical skills attainment. To use the approved Alternate Assessment for the following programs of study, colleges should provide a Letter of Notification to the Director of Career Technical Education at the MS Community College Board. Please see the following link for further instructions: http://www.mccb.edu/wkfEdu/CTDefault.aspx.

CIP Code	Program of Study	
51.0909	Surgical Technology	
Level	**Standard Assessment**	**Alternate Assessment**
Technical/AAS	National Board of Surgical Technology and Surgical Assisting© or National Center for Competency Testing (NCCT)©	

ONLINE AND BLENDED LEARNING OPPORTUNITIES

Course content includes lecture and laboratory semester credit hours. Faculty members are encouraged to present lecture related content to students in an online or blended learning environment. Training related to online and blended learning will be available to faculty members through the MS Community College Board.

INSTRUCTIONAL STRATEGIES

Instructional strategies for faculty members implementing the curriculum can be found through the Office of Curriculum and Instruction's professional development.

ASSESSMENT STRATEGIES

The Office of Curriculum and Instruction's professional development offer assessment strategies to faculty members implementing the curriculum. Additionally, standards were included in course content when appropriate.

RESEARCH ABSTRACT

In the spring of 2017, the Office of Curriculum and Instruction (OCI) met with the different industry members who made up the advisory committees for the Surgical Technology program. An industry questionnaire was used to gather feedback concerning the trends and needs, both current and future, of their field. Program faculty, administrators, and industry members were consulted regarding industry workforce needs and trends.

Industry advisory team members were asked to give input related to changes to the curriculum framework. Specific comments were related to soft skills such as being a team player, problem solver, critical thinker, being at work every day and on time, and having the willingness to learn. Occupation-specific skills were stated: knowing the basic fundamentals of sterile surgical procedures, surgical knowledge, sterile techniques, and surgical conscience.

Based on industry visits, the need for clinical hour breakouts were needed to offer flexibility in clinical hour scheduling. Therefore, colleges now have 2 options for clinical course scheduling. A breakdown of the clinical course sequences are listed below. Both options are equal in overall student learning outcomes, semester credit hours, and clinical hours. Please see course pages for student learning outcome details.

Clinical and Lecture Combination Option 1

Course Number	Course Name	Semester Hours	Lecture Hours	Clinical Hours	Total Contact Hours
SUT 1518	Basic and Related Surgical Procedures (Lecture & Clinical)	8	4	12	240
SUT 1528	Specialized Surgical Procedures (Lecture & Clinical)	8	4	12	240
SUT 1539	Advanced Surgical Procedures (Lecture &Clinical)	9	4	15	285
	Total	**25**	**12**	**39**	**765**

Clinical and Course Separation Option 2

Course Number	Course Name	Semester Hours	Lecture Hours	Clinical Hours	Total Contact Hours
SUT 1614	Basic and Related Surgical Procedures (Lecture)	4	4	0	60
SUT 1714	Clinical I	4	0	12	180
SUT 1624	Specialized Surgical Procedures (Lecture)	4	4	0	60
SUT 1724	Clinical II	4	0	12	180
SUT 1634	Advanced Surgical Procedures (Lecture)	4	4	0	60
SUT 1735	Clinical III	5	0	15	225
	Total	**25**	**12**	**39**	**765**

REVISION HISTORY:

2012, Revised, Research and Curriculum Unit, Mississippi State University
2017, Revised, Office of Curriculum and Instruction, Mississippi Community College Board

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, physician's assistants 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.

This program of study leads to a technical certificate in surgical technology. Students who complete the technical certificate courses and the general education core may be awarded an Associate of Applied Science degree. Qualified students will be required to take the National Board of Surgical Technology and Surgical Assisting to become a Certified Surgical Technologist. Qualified students at schools without programmatic accreditation may sit for the National Center for Competency Testing (NCCT).

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

SUGGESTED COURSE SEQUENCE

Technical Certificate Required Courses (Option 1)

			SCH Breakdown			Contact Hour Breakdown	Certification Information
Course Number	Course Name	Semester Credit Hours	Lecture	Lab	Clinical	Lecture	Certification Name
SUT 1113	Fundamentals of Surgical Technology	3	3	0	0	45	National Board of Surgical Technology and Surgical Assisting© or National Center for Competency Testing (NCCT)©
SUT 1217	Principles of Surgical Technique	7	3	8	0	165	
SUT 1314*	Surgical Anatomy*	4	4	0		60	
SUT 1413	Surgical Microbiology	3	3	0	0	45	
SUT 1518	Basic and Related Surgical Procedures (Lecture & Clinical)	8	4	0	12	240	
SUT 1528	Specialized Surgical Procedures (Lecture & Clinical)	8	4	0	12	240	
SUT 1539	Advanced Surgical Procedures (Lecture & Clinical)	9	4	0	15	285	
	Instructor Approved electives	7					
	Total	49	**25**	**8**	**39**	**1080**	

***Institutions requiring an AAS exit point may substitute Anatomy and Physiology I &II in place of Surgical Anatomy.**

Technical Certificate Required Courses (Option 2)

			SCH Breakdown			Contact Hour Breakdown	Certification Information
Course Number	Course Name	Semester Credit Hours	Lecture	Lab	Clinical	Contact Hours	Certification Name
SUT 1113	Fundamentals of Surgical Technology	3	3	0	0	45	National Board of Surgical Technology and Surgical Assisting© or National Center for Competency Testing (NCCT)©
SUT 1217	Principles of Surgical Technique	7	3	8	0	165	
SUT 1314*	Surgical Anatomy*	4	4	0		60	
SUT 1413	Surgical Microbiology	3	3	0	0	45	
SUT 1614	Basic and Related Surgical Procedures (Lecture)	4	4	0	0	60	
SUT 1714	Clinical I	4	0	0	12	180	
SUT 1624	Specialized Surgical Procedures (Lecture)	4	4	0	0	60	
SUT 1724	Clinical II	4	0	0	12	180	
SUT 1634	Advanced Surgical Procedures (Lecture)	4	4	0	0	60	
SUT 1735	Clinical III	5	0	0	15	225	
	Instructor Approved electives	7					
	Total	**45**	**25**	**8**	**39**	**1080**	

***Institutions requiring an AAS exit point may substitute Anatomy and Physiology II in place of surgical anatomy.**

General Education Core Courses – Surgical Technology

To receive the Associate of Applied Science Degree, a student must complete all of the required coursework found in the Career Certificate option, Technical Certificate option and a minimum of 15 semester hours of General Education Core. 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 or provided primarily within the last semester. Each community college will specify the actual courses that are required to meet the General Education Core Requirements for the Associate of Applied Science Degree at their college. The Southern Association of Colleges and Schools (SACS) Commission on Colleges Standard 2.7.3 from the Principles of Accreditation: Foundations for Quality Enhancement1 describes the general education core.

Section 2.7.3 In each undergraduate degree program, the institution requires the successful completion of a general education component at the collegiate level that (1) is substantial component of each undergraduate degree, (2) ensures breadth of knowledge, and (3) is based on a coherent rationale. 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 the following areas: humanities/fine arts, social/behavioral sciences, and natural science/mathematics. The courses do not narrowly focus on those skills, techniques, and procedures specific to a particular occupation or profession.

General Education Courses

			SCH Breakdown			Contact Hour Breakdown		Certification Information
Course Number	Course Name	Semester Credit Hours	Lecture	Lab	Total Contact Hours	Lecture	Lab	Certification Name
	Humanities or Fine Arts	3						
	Psychology or Sociology*	3						
	Math Elective*	3						
ENG 1113*	English Composition I*	3						
BIO 2514*	Anatomy and Physiology I with lab*	4						
BIO 2524*	Anatomy and Physiology II with lab*	4						
	TOTAL	**20**						

***Requirements as specified by the National Board of Surgical Technology and Surgical Assisting**

1 Southern Association of Colleges and Schools Commission on Colleges. (2012). *The principles of accreditation: Foundations for quality enhancement*. Retrieved from http://www.sacscoc.org/pdf/2012PrinciplesOfAcreditation.pdf

2 Association of Surgical Technologists. (2011). Core Curriculum for Surgical Technology Sixth Edition. Retrieved from http://dhhs.ne.gov/publichealth/licensure/documents/STCoreCurriculum6thEdition.pdf

Electives listing

			SCH Breakdown				Contact Hour Breakdown		
Course Number	Course Name	Semester Credit Hours	Lecture	Lab	Clinical	Total Contact Hours	Lecture	Lab	Externship
SUT 1703	Certification and Role Transition	3	3	0	0	45			
SUT 1314	Surgical Anatomy	4	4	0	0	120			
SUT 1223	Medical Terminology for Surgical Technologists	3	0	0	0	45			

SURGICAL TECHNOLOGY COURSES

Course Number and Name: **SUT 1113 Fundamentals of Surgical Technology**

Description: This is a basic introductory course including hospital and surgical suite organization and environment, history, legal responsibilities, terminology, interpersonal relationships, and biomedical sciences.

Hour Breakdown:

Semester Credit Hours	Lecture	Lab	Contact Hours
3	3	0	45

Prerequisite: Instructor Approved

Student Learning Outcomes:

1. Interpret a job description for a surgical technologist.
   a. Using the Internet, trace the history, development, education, certification, and role of the surgical technologist.
   b. Describe the physical characteristics and environmental standards of the surgery suite.
   c. Explain hospital and surgery organization.
   d. Identify principles of communication and interpersonal relationships as they relate to operating room personnel.
   e. Interpret the ethical, moral, and legal responsibilities of the surgical technologist, including HIPAA.
   f. Analyze the procedures and legal concepts of obtaining informed consent.

2. Interpret various word parts of medical terms.
   a. Identify various medical terms relating to surgery including abbreviations and symbols.
   b. Pronounce various medical terms relating to surgery including abbreviations and symbols.
   c. Spell various medical terms relating to surgery including abbreviations and symbols.

3. Discuss principles of environmental safety procedures.
   a. Apply knowledge in the OR to include electricity, fire, radiation, and laser principles.
   b. Explain the information included in Material Safety Data Sheets.
   c. Demonstrate proper body mechanics as applied to the surgical environment.

4. Apply computer knowledge to the educational process and safe patient care practices in the operating room.
   a. Identify the basic components of a computer system.
   b. Perform basic word processing.
   c. Perform graphics importation.
   d. Print and save computer information.
   e. Perform Internet functions.

5. Apply information effectively using written, verbal, and electronic formats.
   a. Recognize when information is needed.
   b. Locate information using the latest technology available.
   c. Evaluate information obtained from a variety of sources.

National Board of Surgical Technology and Surgical Assisting

I. Peri Operative Care

A. Pre- Operative Preparation
21. Consider patient needs (e.g., pediatrics, immunocompromised, patient allergies).

II. Additional Duties

A. Administrative and Personnel
2. Utilize computer technology for:
a. surgeon's preference card.
b. interdepartmental communication
c. continuing education.
d. research.
3. Follow hospital and national disaster plan and protocol (e.g., safety drills, mass casualty drills, and biologic hazard).
4. Recognize safety and environmental hazards (e.g., fire, chemical spill, laser, smoke).
6. Apply ethical and legal practices related to surgical patient care.
7. Use interpersonal skills (e.g., listening, diplomacy, responsiveness) and group dynamics.
12. Understand basic principles of electricity and electrical safety.

III. Basic Science

A. Anatomy and Physiology
1. Use appropriate medical terminology and abbreviations.

National Center for Competency Testing

I. Peri-Operative Care
A. Pre-Operative Preparation
1. Anticipate the needs of special populations (e.g., pediatric, geriatric, immune compromised).

II. Additional Duties
A. Administrative and Personnel
1. Revise surgeon's preference card (pick list) as necessary
2. Follow facility disaster plan protocol
3. Recognize and react to safety and environmental hazards (e.g., fire, chemical spills, laser smoke).
4. Follow cost saving measures.
5. Provide culturally appropriate care to patients from different backgrounds.
6. Precept to perioperative personnel when needed.
7. Perform transition of care as per hospital policies and procedures (e.g., breaks, lunch, end of shift, on call).
8. Record and report unusual events appropriately (e.g., sentinel events, incident reports).
9. Maintain par levels of supplies.
10. Act as an advocate for the patient.

Course Number and Name: **SUT 1217 Principles of Surgical Technique**

Description: This course is a comprehensive study of aseptic technique, safe patient care, anesthesia, pharmacology, and surgical techniques.

Hour Breakdown:

Semester Credit Hours	Lecture	Lab	Contact Hours
7	3	8	165

Prerequisite: Instructor Approved

Student Learning Outcomes:

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

3. Circulating surgical technologist

10. Identify the drugs and anesthesia used in the care of the surgical patient.
    a. Identify the principles and concepts for the use and administration (methods of administration) surgical drugs and anesthetic agents.
    b. Convert temperature, lengths, weights, and capacities to the metric system.
    c. Apply general terminology to medication use.
    d. Calculate medical conversions and dosages.
    e. Prepare and manage medications and solutions.
    f. Analyze the immediate postoperative care of the surgical patient.
    g. Describe the emergency procedures carried out in the OR setting

National Board of Surgical Technology and Surgical Assisting

I. Peri-Operative Care
   A. Pre-Operative Preparation

      1. Review Surgeon's preference card.
      2. Verify availability of surgery equipment (e.g. reserve equipment for surgery)
      3. Prepare and maintain operating room environment according to surgical procedure (e.g. temperature, light, suction and furniture).
      4. Utilize preoperative documentation (e.g. informed consent, advanced directives, allergies, and laboratory results).
      5. Obtain and apply additional equipment (e.g. pneumatic tourniquet, sequential compression devices, and thermoregulatory devices).
      6. Don personal protective equipment.
      7. Obtain instruments, supplies, and equipment and verify readiness for surgery.
      8. Check package integrity of sterile supplies.
      9. Open sterile supplies/ instruments while maintaining aseptic techniques.
      10. Perform surgical scrub (e.g., initial, waterless)
      11. Assemble, inspect, and set up sterile instruments and supplies for surgical procedures.
      12. Gown and glove sterile team members.
      13. Participate in "Time Out".
      14. Drape patient.
      15. Transport patient to and from operating room utilizing correct patient positioning.
      16. Transfer patient to operating room table.
      17. Apply patient safety measures (e.g., safety strap, protective padding, and x-ray safety.)
      18. Apply patient monitoring devices.
      19. Position the patient.
      20. Prepare surgical site (e.g., hair removal, surgical preparation)
      21. Consider patient needs (e.g., pediatrics, immunocompromised, patient allergies).
      22. Don gown and gloves.
      23. Perform medical hand wash.
      24. Secure cords/tubing to drapes and apply light handles.
      25. Drape specialty equipment (e.g., c-arm, Da Vinci, microscope).

   B. Intra- Operative Procedure
      1. Provide intra-operative assistance under the direction of the surgeon.
      2. Perform counts with circulator at appropriate intervals.
      3. Identify Instruments by:
         Function
         Application
         Classification

4. Prepare bone and tissue grafts (e.g., allograft, auto graft, synthetic).
5. Anticipate the steps of surgical procedures.
6. Differentiate among the various methods and applications of hemostasis (e.g., mechanical, thermal, chemical).
7. Specify methods of operative exposure.
8. Place and secure retractors.
9. Verify with surgeon the correct type and/ or size implantable devices.
10. Pass instruments and supplies during surgery.
11. Irrigate, suction, and sponge operative site.
12. Monitor and maintain aseptic technique throughout the procedure.
13. Assemble, test, and operate specialty equipment during surgery.
14. Utilize specialty equipment:
    a. Microscope.
    b. Computer navigation systems.
    c. Thermal ablation.
    d. Robotic technology
    e. Laser technology (e.g., helium, argon, CO2 beam coagulators).
    f. Ultrasound technology (e.g. harmonic scalpel
    g. Phacoemulsification)
    h. Endoscopic technology.
    i. Power equipment and fracture sets.
15. Verify, mix, and label all medications and solutions.
16. Minimize intra-operative cross contamination.
17. Follow Standard and Universal precautions.
18. Monitor medication and solution use.
19. Prepare drains, catheters, and tubing for insertion.
20. Verify, prepare, and label specimen(s).
21. Observe patient's intra-operative status (e.g. Monitor color of blood, blood loss, patient position).
22. Apply thermal surgical techniques and safety precautions (e.g., cryo-surgery, laser surgery, electrical surgery unit (ESU)).
23. Prepare suture materials.
24. Cut suture material as directed.
25. Identify appropriate usage of sutures/needles and stapling devices.
26. Provide assistance with stapling devices.
27. Perform appropriate actions during an emergency.
28. Initiate preventative actions in potentially hazardous situations.
29. Connect and activate drains to suction apparatus.
30. Prepare and apply sterile dressings.
31. Assist in the application of casts, splints, braces, and similar devices.

C. Post –Operative Procedure
1. Report abnormal post-operative findings (e.g., bleeding at surgical site, Hematoma, rash)
2. Transfer patient from operating table to stretcher.
3. Remove drapes and other equipment (e.g., suction, cautery, non-disposable items) from patient.
4. Perform room clean up after surgery.
5. Dispose of contaminated waste and drapes after surgery in compliance with Standard Precautions.
6. Dispose of contaminated sharps after surgery in compliance with Standard Precautions.
7. Report use of local anesthetic.
8. Complete terminal cleaning of operating room.
9. Transport laboratory specimens.

10. Participate in case debrief (e.g., following sentinel event).

II. Additional Duties

A. Administrative and Personnel

1. Revise surgeon's preference card as necessary.
2. Utilize computer technology for:
   a. Surgeon's preference cards.
   b. Interdepartmental communication.
   c. Continuing education.
   d. Research.

B. Equipment Sterilization and Maintenance

1. Operate cleaning and sterilizing devices (e.g., ultrasonic washers, autoclave, and cart washer).
2. Troubleshoot equipment malfunctions.
3. Decontaminate and clean instruments and equipment.
4. Inspect, test, and assemble instruments and equipment.
5. Package and sterilize instruments and equipment.
6. Perform quality assurance functions (e.g. biological monitoring of sterilization methods).
7. Maintain equipment records and logs (e.g.., Sterrad, biological, laser log, sterilizers).
8. Sterilize instruments for immediate use (e.g., short cycle).

III. Basic Science

A. Anatomy and Physiology

1. Use appropriate medical terminology and abbreviations.
2. Demonstrate knowledge of anatomical systems as they relate to the surgical procedure.(a-n)
3. Demonstrate knowledge of human physiology as they relate to the surgical procedure. (a-n)
4. Identify the following pathologies:
   a. Abnormal anatomy
   b. Disease processes
   c. Traumatic injuries
   d. Malignancies

B. Microbiology

1. Apply principles of surgical microbiology to operative practice:
   b. infection control procedures (e.g. aseptic technique).
   c. principles of tissue handling (e.g., Halsted principles, tissue manipulation methods, traction/counter traction).

C. Surgical Pharmacology

1. Apply principals of surgical pharmacology to operative practice:
   a. anesthesia related agents and medications.
   b. blood and fluid replacement.
   c. complications from drug interactions (e.g., malignant hyperthermia).
   d. methods of anesthesia administration (e.g., general, lock, block).
   e. types, uses, action, and interactions of drugs and solution (e.g., hemostatic agents, antibiotics, IV solutions).
   f. weights, measures, and conversations.

2. Maintain awareness of maximum dosage.

National Center for Competency Testing (NCCT)

I. Pre-Operative Care

A. Pre-operative Preparation

1. Prepare the operating room environment and equipment according to the surgical procedure.
2. Verify the presence of surgical team members and the patient.
3. Gather specific surgical supplies, medications, and equipment based on the surgeon's preference card (pick list).
4. Check package integrity and expiration date of sterile supplies.
5. Obtain specialized patient equipment (e.g., sequential compression devices, pneumatic tourniquet, thermoregulatory devices).
6. Assemble and test positioning equipment.
7. Don personal protective equipment (e.g., mask, eye protection).
8. Follow the principles of aseptic technique while opening supplies for the surgery.
9. Perform surgical hand scrub.
10. Don sterile gown and gloves.
11. Set up and inspect sterile instruments and supplies for surgical procedures.
12. Perform pre-operative count with the circulating nurse (e.g., sutures, sharps, sponges, instruments).
13. Verify identity of the patient and operative site.
14. Transfer the patient to the operating room table.
15. Place the safety belt and pressure pads on the patient.
16. Assist the surgical team with gowning and gloving.
17. Assist with the draping the3 patient.
18. Verify and label medications and solutions at the sterile field pre-operatively
19. Perform surgical Time Out.
20. Initiate preventative and/or corrective actions in potentially hazardous pre-operative situations.
21. Perform appropriate actions during a pre-operative emergency.

B. Intra-Operative Procedure

1. Maintain the operating room environment according to surgical procedure (e.g., temperature, lights, suction, and furniture).
2. Verify and label medications and solutions at the sterile field intra-operatively.
3. Assemble and test specialty equipment during surgery (e.g., computer navigation systems, harmonic scalpel, endoscopic technology).
4. Anticipate the need for retraction to facilitate proper operative exposure.
5. Pass instruments and supplies as anticipated during surgery.
6. Provide intra-operative assistance when delegated by the surgeon.
7. Anticipate the need for and then implement sponging, suctioning, and irrigation.
8. Ensure aseptic technique is maintained by all OR team members throughout the surgical procedure.
9. Anticipate the need for various hemostatic agents based on the type of surgery.
10. Assemble internal stapling devices.
11. Prepare and cut suture materials as directed.
12. Verify with the surgeon and the circulating nurse the specific type and/or size of implantable devices.
13. Cauterize when directed by the surgeon (e.g., laser, cryo, ESU).
14. Obtain appropriate sutures/needles and stapling devices.
15. Handle specimens appropriately.
16. Prepare drains, catheters, and tubing for use at the end of the case.

17. Assist in the placement of wound drains.
18. Perform intra-operative counts with the circulating nurse (e.g., sutures, sharps, sponges, instruments).
19. Report the total amount of medications and solutions used during the procedure.
20. Assist with skin closure.
21. Connect and activate drains to the suction device.
22. Assemble and apply dressing material before transporting the patient to the recovery room.
23. Assist with application of casts, splints, braces, and similar devices.
24. Initiate preventative and/or corrective actions in potentially hazardous intra-operative situations.
25. Perform appropriate actions during an intra-operative emergency.
26. Provide the surgical team members the supplies and solutions required for the procedure.

C. Post-Operative Care
1. Maintain the sterility of the back table and mayo stand until the patient leaves the room.
2. Observe the patient post-operatively for any bleeding and relay status to the surgical team (e.g., bleeding at surgical site, hematoma).
3. Remove the surgical drapes from the patient.
4. Cleanse the patient's skin (e.g., blood, prep solution, body fluids).
5. Remove surgical gown, gloves, and other personal protective equipment.
6. Assist with patient transfer from the operating table to the stretcher.
7. Comply with Standard Precautions when removing and discarding of drapes and waste.
8. Dispose of all sharps after surgery in compliance with Standard Precautions and procedures.
9. Assemble the instruments for the decontamination and sterilization process.
10. Return unused supplies and equipment to the designated location.
11. Perform room turnover after surgery.
12. Initiate preventative and/or corrective actions in potentially hazardous post-operative situations.
13. Perform appropriate actions during a post-operative emergency.

II. Additional Duties

A. Administrative and Personnel
1. Revise surgeon's preference card (pick list) as necessary

B. Equipment Sterilization and Maintenance
1. Operate sterilizing devices according to parameters and manufacturer's recommendations.
2. Utilize and contain liquid sterilants and disinfectants according to parameters and manufacturer's recommendations.
3. Manually decontaminate and clean instruments and equipment.
4. Visually inspect and assemble any equipment and instruments used during the case for future use.
5. Package, label, and sterilize instruments and equipment.
6. Perform biological and DART air removal tests per second
7. Update equipment records and logs.

Course Number and Name: **SUT 1223 Medical Terminology for Surgical Technologists**

Description: A study of medical terminology as it relates to the practice of surgical technology.

Hour Breakdown:

Semester Credit Hours	Lecture	Clinical	Contact Hours
3	3	0	45

Prerequisite: Instructor Approved

Student Learning Outcomes:

1. Identify structures of each body system.
2. Describe the primary function of each body system.
3. Label anatomical structures of each body system.
4. Define word parts used for specific body systems.
5. Describe common diseases of each body system and their various signs, symptoms, clinical tests, diagnostic procedures and treatments.
6. Summarize anatomical and physiological alterations of each body system throughout the lifespan.
7. Identify common abbreviations related to each body system.
8. Define terms used in medical reports related to each body system.
9. Correctly define, spell, and pronounce each chapter's medical terms.

Use of the student CD is strongly encouraged to enhance student learning

Course Number and Name: **SUT 1314 Surgical Anatomy**

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.

Hour Breakdown:

Semester Credit Hours	Lecture	Lab	Contact Hours
4	4		60

Prerequisite: Instructor Approved

Student Learning Outcomes:

1. Explain the integrated structures and function of body systems including cells, tissues, organs, and systems as they relate to physiologic integrity.
    a. Identify the basic organization structures of the body, including body planes, general organization, and terms of reference.
    b. Describe the basic anatomical structure and function of cells, tissues, organs, and systems.

2. Locate and describe the basic function(s) and structure of the following systems:
    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.
    a. Relate pathophysiology to surgical intervention.
    b. Analyze the relationship between cell pathology and disease.
    c. Examine hemodynamic disorders, inflammation, and disease.

National Board of Surgical Technology and Surgical Assisting

III Basic Sciences

A. Anatomy and Physiology
    1. Use appropriate medical terminology and abbreviations.
    2. Demonstrate knowledge of anatomical systems as they relate to the surgical procedure.(a-n)
    3. Demonstrate knowledge of human physiology as they relate to the surgical procedure. (a-n)
    4. Identify the following pathologies:
        a. Abnormal anatomy
        b. Disease processes
        c. Traumatic injuries
        d. Malignancies

Course Number and Name: **SUT 1413 Surgical Microbiology**

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.

Hour Breakdown:

Semester Credit Hours	Lecture	Lab	Contact Hours
3	3		45

Prerequisite: Instructor Approved

Student Learning Outcomes:

1. Correlate the impact of microbiology in relationship to the practice of sterile technique and infection in the operative setting.
    a. Discuss the history of Microbiology.
    b. Identify the name and functions of various microscopes.
    c. Compare and contrast the structure and characteristics of different cells.
    d. Compare and contrast the structure and characteristics of different types of microorganisms.

2. Explain the relationship between humans and pathogenic and nonpathogenic bacteria.
    a. Discuss the Centers for Disease Control (CDC) Standard Precautions Guidelines and Recommendations as applied to the surgical suite.
    b. Distinguish between the various pathogenic organisms and their effect on the various body systems.
    c. List the means of controlling the transmission of infections.
    d. Analyze the various immune responses that occur in the body as defenses against invasion by pathogens.
    e. Select ways the body resists pathogens.

3. Identify and discuss the process of infection.
    a. Relate the infections process to surgical practice.
    b. Distinguish between the different microbial relationships.
    c. Identify portals of entry and portals of exit for infectious microbes.
    d. Correlate the infectious disease process with possible causative agents.
4. Discuss wound healing.
    a. Discuss the types of wounds.
    b. Explain the classifications of wounds.
    c. Explain the stages of wound healing.
    d. Discuss wound complications.

5. Discuss physical and chemical methods used to protect patients and workers from invasion by pathogenic microbes.
    a. Describe the physical methods of antimicrobial control and an application of each.
    b. Describe ways in which chemicals kill or inhibit bacterial growth.

6. Identify the techniques of sterilization.
    a. List methods and principles of sterilization and the advantages and disadvantages of each.
    b. Discuss monitoring methods.
    c. Describe the methods and principles of disinfection.

d. Demonstrate sterilization and/or disinfection of surgical supplies.

National Board of Surgical Technology and Surgical Assisting

III Basic Science

B. Microbiology
   1. Apply principles of surgical microbiology to operative practice:
      a. Classification and pathogenesis of microorganisms.
      b. Infection control procedures (e.g., aseptic technique).
      c. Principles of tissue handling (e.g. Halsted principles, tissue manipulation methods, traction/counter traction).
      d. Stages of and factors influencing wound healing (e.g., condition of patient, wound type).
      e. Surgical wound classification.
   2. Identify and address factors that can influence an infectious process.

Course Number and Name: **SUT 1518 Basic and Related Surgical Procedures**

Description: This course includes instruction in regional anatomy, pathology, instrumentation, surgical techniques, and safe patient care in general surgery, gynecology, obstetrics, and genitourinary. It requires clinical experience in area hospital surgical suites and related departments.

Hour Breakdown:

Semester Credit Hours	Lecture	Clinical	Contact Hours
8	4	12	240

Prerequisite: Instructor Approved

Student Learning Outcomes:

1. Discuss the relevant anatomy, indications for surgery, and patient preparation for general, gynecological, obstetrical, and urological procedures.
    a. Correlate the relevant surgical anatomy and physiology to the surgical procedure.
    b. Correlate the relevant pathophysiology to the surgical procedure.
    c. Explain the diagnostic interventions that are utilized for obtaining a diagnosis.
    d. Discuss the perioperative considerations for the planned surgical procedure.
    e. Identify and discuss co-related surgical procedures.
    f. List the wound classifications and correlate to wound management.

2. Discuss equipment, supplies, and instruments for general, gynecological, obstetrical, and urological procedures.
    a. Identify instruments, equipment, and supplies.
    b. Demonstrate use, care, and handling of instruments, equipment, and supplies.

3. Discuss surgical procedures and possible complications for general, gynecological, obstetrical, and urological procedures.
    a. Explain the correct order of steps taken during surgical procedures.
    b. Identify possible complications.
    c. Demonstrate the sequence of procedures by anticipating the needs of the surgeon in each of the following roles in the clinical setting:
        (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.
5. Demonstrate employability and job retention skills.
    a. Demonstrate professional conduct
    b. Exhibit sound communication skills to include oral, written, and electronic.
    c. Demonstrate interpersonal relations with other health care professionals.
    d. Exhibit critical thinking skills.

National Board of Surgical Technology and Surgical Assisting

I. Peri-Operative Care
    A. Pre-Operative Preparation

        1. Review Surgeon's preference card.

2. Verify availability of surgery equipment (e.g. reserve equipment for surgery)
3. Prepare and maintain operating room environment according to surgical procedure (e.g. temperature, light, suction and furniture).
4. Utilize preoperative documentation (e.g. informed consent, advanced directives, allergies, and laboratory results).
5. Obtain and apply additional equipment (e.g. pneumatic tourniquet, sequential compression devices, and thermoregulatory devices).
6. Don personal protective equipment.
7. Obtain instruments, supplies, and equipment and verify readiness for surgery.
8. Check package integrity of sterile supplies.
9. Open sterile supplies/ instruments while maintaining aseptic techniques.
10. Perform surgical scrub (e.g., initial, waterless)
11. Assemble, inspect, and set up sterile instruments and supplies for surgical procedures.
12. Gown and glove sterile team members.
13. Participate in "Time Out".
14. Drape patient.
15. Transport patient to and from operating room utilizing correct patient positioning.
16. Transfer patient to operating room table.
17. Apply patient safety measures (e.g., safety strap, protective padding, and x-ray safety.
18. Apply patient monitoring devices.
19. Position the patient.
20. Prepare surgical site (e.g., hair removal, surgical preparation)
21. Consider patient needs (e.g., pediatrics, immunocompromised, patient allergies).
22. Don gown and gloves.
23. Perform medical hand wash.
24. Secure cords/tubing to drapes and apply light handles.
25. Drape specialty equipment (e.g., c-arm, Da Vinci, microscope).

B. Intra- Operative Procedure

1. Provide intra-operative assistance under direction of the surgeon.
2. Perform counts with circulator at appropriate interval.
3. Identify Instruments by:
   Function
   Application
   Classification
4. Prepare bone and tissue grafts (e.g., allograft, autograft, synthetic.)
5. Anticipate the steps of surgical procedures.
6. Differentiate among the various methods and applications of hemostasis (e.g., mechanical, thermal, chemical).
7. Specify methods of operative exposure.
8. Place and secure retractors.
9. Verify with surgeon the correct type and /or size of implantable devices.

22. Apply thermal surgical techniques and safety precautions (e.g., cryo-surgery, laser surgery, and electrical surgery unit (ESU)).

25. Identify appropriate usage of structures. Needles and stapling devices.

III Basic Sciences

A. Anatomy and Physiology

1. Use appropriate medical terminology and abbreviations.

2. Demonstrate knowledge of anatomical systems as they relate to the surgical procedure.(a-n)

3. Demonstrate knowledge of human physiology as they relate to the surgical procedure. (a-n)

4. Identify the following pathologies:
    a. Abnormal anatomy
    b. Disease processes
    c. Traumatic injuries

National Center for Competency Testing (NCCT)

I. Pre-Operative Care

A. Pre-operative Preparation

1. Prepare the operating room environment and equipment according to the surgical procedure.
2. Verify the presence of surgical team members and the patient.
3. Gather specific surgical supplies, medications, and equipment based on the surgeon's preference card (pick list).
4. Check package integrity and expiration date of sterile supplies.
5. Obtain specialized patient equipment (e.g., sequential compression devices, pneumatic tourniquet, thermoregulatory devices).
6. Assemble and test positioning equipment.
7. Don personal protective equipment (e.g., mask, eye protection).
8. Follow the principles of aseptic technique while opening supplies for the surgery.
9. Perform surgical hand scrub.
10. Don sterile gown and gloves.
11. Set up and inspect sterile instruments and supplies for surgical procedures.
12. Perform pre-operative count with the circulating nurse (e.g., sutures, sharps, sponges, instruments).
13. Verify identity of the patient and operative site.
14. Transfer the patient to the operating room table.
15. Place the safety belt and pressure pads on the patient.
16. Assist the surgical team with gowning and gloving.
17. Assist with the draping the3 patient.
18. Verify and label medications and solutions at the sterile field pre-operatively
19. Perform surgical Time Out.
20. Initiate preventative and/or corrective actions in potentially hazardous pre-operative situations.
21. Perform appropriate actions during a pre-operative emergency.

B. Intra-Operative Procedure

1. Maintain the operating room environment according to surgical procedure (e.g., temperature, lights, suction, and furniture).
2. Verify and label medications and solutions at the sterile field intra-operatively.
3. Assemble and test specialty equipment during surgery (e.g., computer navigation systems, harmonic scalpel, endoscopic technology).
4. Anticipate the need for retraction to facilitate proper operative exposure.
5. Pass instruments and supplies as anticipated during surgery.
6. Provide intra-operative assistance when delegated by the surgeon.
7. Anticipate the need for and then implement sponging, suctioning, and irrigation.
8. Ensure aseptic technique is maintained by all OR team members throughout the surgical procedure.
9. Anticipate the need for various hemostatic agents based on the type of surgery.
10. Assemble internal stapling devices.
11. Prepare and cut suture materials as directed.

12. Verify with the surgeon and the circulating nurse the specific type and/or size of implantable devices.
13. Cauterize when directed by the surgeon (e.g., laser, cryo, ESU).
14. Obtain appropriate sutures/needles and stapling devices.
15. Handle specimens appropriately.
16. Prepare drains, catheters, and tubing for use at the end of the case.
17. Assist in the placement of wound drains.
18. Perform intra-operative counts with the circulating nurse (e.g., sutures, sharps, sponges, instruments).
19. Report the total amount of medications and solutions used during the procedure.
20. Assist with skin closure.
21. Connect and activate drains to the suction device.
22. Assemble and apply dressing material before transporting the patient to the recovery room.
23. Assist with application of casts, splints, braces, and similar devices.
24. Initiate preventative and/or corrective actions in potentially hazardous intra-operative situations.
25. Perform appropriate actions during an intra-operative emergency.
26. Provide the surgical team members the supplies and solutions required for the procedure.

C. Post-Operative Care

1. Maintain the sterility of the back table and mayo stand until the patient leaves the room.
2. Observe the patient post-operatively for any bleeding and relay status to the surgical team (e.g., bleeding at surgical site, hematoma).
3. Remove the surgical drapes from the patient.
4. Cleanse the patient's skin (e.g., blood, prep solution, body fluids).
5. Remove surgical gown, gloves, and other personal protective equipment.
6. Assist with patient transfer from the operating table to the stretcher.
7. Comply with Standard Precautions when removing and discarding of drapes and waste.
8. Dispose of all sharps after surgery in compliance with Standard Precautions and procedures.
9. Assemble the instruments for the decontamination and sterilization process.
10. Return unused supplies and equipment to the designated location.
11. Perform room turnover after surgery.
12. Initiate preventative and/or corrective actions in potentially hazardous post-operative situations.
13. Perform appropriate actions during a post-operative emergency.

II. Additional Duties

A. Administrative and Personnel

2. Revise surgeon's preference card (pick list) as necessary

B. Equipment Sterilization and Maintenance

1. Operate sterilizing devices according to parameters and manufacturer's recommendations.
2. Utilize and contain liquid sterilants and disinfectants according to parameters and manufacturer's recommendations.
3. Manually decontaminate and clean instruments and equipment.
4. Visually inspect and assemble any equipment and instruments used during the case for future use.
5. Package, label, and sterilize instruments and equipment.
6. Perform biological and DART air removal tests per second
7. Update equipment records and logs.

Course Number and Name: **SUT 1528 Specialized Surgical Procedures**

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.

Hour Breakdown:

Semester Credit Hours	Lecture	Clinical	Contact Hours
8	4	12	240

Prerequisite: Instructor Approved

Student Learning Outcomes:

1. Explain the relevant anatomy, indications for surgery, and patient preparation for ear, nose, throat, eye, plastics, orthopedics, and oral and maxillofacial surgery.
    a. Correlate the relevant surgical anatomy and physiology to the surgical procedure.
    b. Correlate the relevant pathophysiology to the surgical procedure.
    c. Explain the diagnostic interventions that are utilized for obtaining a diagnosis.
    d. Discuss the perioperative considerations for the planned surgical procedure.
    e. Identify and discuss co-related surgical procedures.
    f. List the wound classifications and correlate to wound management.

2. Explain equipment, supplies, and instruments for ear, nose, throat, eye, plastics, orthopedics, and oral and maxillofacial surgery.
    a. Identify instruments, equipment, and supplies.
    b. Demonstrate use, care, and handling of instruments, equipment, and supplies.

3. Explain surgical procedures and possible complications for ear, nose, throat, eye, plastics, Orthopedics and oral and maxillofacial surgery.
    a. Explain the correct order of steps taken during the surgical procedures.
    b. Identify possible complications.
    c. Demonstrate the sequence of procedures by anticipating the needs of the surgeon in each of the following roles in the clinical setting:
        (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.

National Board of Surgical Technology and Surgical Assisting

I. Peri –Operative Care
  A. Pre-Operative Preparation
    1. Review Surgeon's preference card.
    2. Verify availability of surgery equipment (e.g. reserve equipment for surgery)
    3. Prepare and maintain operating room environment according to surgical procedure (e.g. temperature, light, suction and furniture).
    4. Utilize preoperative documentation (e.g. informed consent, advanced directives, allergies, and laboratory results).

5. Obtain and apply additional equipment (e.g. pneumatic tourniquet, sequential compression devices, and thermoregulatory devices).
6. Don personal protective equipment.
7. Obtain instruments, supplies, and equipment and verify readiness for surgery.
8. Check package integrity of sterile supplies.
9. Open sterile supplies/ instruments while maintaining aseptic techniques.
10. Perform surgical scrub (e.g., initial, waterless)
11. Assemble, inspect, and set up sterile instruments and supplies for surgical procedures.
12. Gown and glove sterile team members.
13. Participate in "Time Out".
14. Drape patient.
15. Transport patient to and from operating room utilizing correct patient positioning.
16. Transfer patient to operating room table.
17. Apply patient safety measures (e.g., safety strap, protective padding, and x-ray safety.
18. Apply patient monitoring devices.
19. Position the patient.
20. Prepare surgical site (e.g., hair removal, surgical preparation)
21. Consider patient needs (e.g., pediatrics, immunocompromised, patient allergies).
22. Don gown and gloves.
23. Perform medical hand wash.
24. Secure cords/tubing to drapes and apply light handles.
25. Drape specialty equipment (e.g., c-arm, Da Vinci, microscope).

B. Intra- Operative Procedure

1. Provide intra-operative assistance under direction of the surgeon.
2. Perform counts with circulator at appropriate interval.
3. 3. Identify Instruments by:
   Function
   Application
   Classification
4. Prepare bone and tissue grafts (e.g., allograft, autograft, synthetic.)
5. Anticipate the steps of surgical procedures.
6. Differentiate among the various methods and applications of hemostasis (e.g., mechanical, thermal, chemical).
7. Specify methods of operative exposure.
8. Place and secure retractors.
9. Verify with surgeon the correct type and /or size of implantable devices.
10. Pass instruments and supplies during surgery.
22. Apply thermal surgical techniques and safety precautions (e.g., cryo-surgery, laser surgery, and electrical surgery unit (ESU)).

III Basic Sciences

A. Anatomy and Physiology

1. Use appropriate medical terminology and abbreviations.
2. Demonstrate knowledge of anatomical systems as they relate to the surgical procedure.(a-n)
3. Demonstrate knowledge of human physiology as they relate to the surgical procedure. (a-n)
4. Identify the following pathologies:
   a. Abnormal anatomy
   b. Disease processes
   c. Traumatic injuries

National Center for Competency Testing (NCCT)

I. Pre-Operative Care

A. Pre-operative Preparation

1. Prepare the operating room environment and equipment according to the surgical procedure.
2. Verify the presence of surgical team members and the patient.
3. Gather specific surgical supplies, medications, and equipment based on the surgeon's preference card (pick list).
4. Check package integrity and expiration date of sterile supplies.
5. Obtain specialized patient equipment (e.g., sequential compression devices, pneumatic tourniquet, thermoregulatory devices).
6. Assemble and test positioning equipment.
7. Don personal protective equipment (e.g., mask, eye protection).
8. Follow the principles of aseptic technique while opening supplies for the surgery.
9. Perform surgical hand scrub.
10. Don sterile gown and gloves.
11. Set up and inspect sterile instruments and supplies for surgical procedures.
12. Perform pre-operative count with the circulating nurse (e.g., sutures, sharps, sponges, instruments).
13. Verify identity of the patient and operative site.
14. Transfer the patient to the operating room table.
15. Place the safety belt and pressure pads on the patient.
16. Assist the surgical team with gowning and gloving.
17. Assist with the draping the3 patient.
18. Verify and label medications and solutions at the sterile field pre-operatively
19. Perform surgical Time Out.
20. Initiate preventative and/or corrective actions in potentially hazardous pre-operative situations.
21. Perform appropriate actions during a pre-operative emergency.

B. Intra-Operative Procedure

1. Maintain the operating room environment according to surgical procedure (e.g., temperature, lights, suction, and furniture).
2. Verify and label medications and solutions at the sterile field intra-operatively.
3. Assemble and test specialty equipment during surgery (e.g., computer navigation systems, harmonic scalpel, endoscopic technology).
4. Anticipate the need for retraction to facilitate proper operative exposure.
5. Pass instruments and supplies as anticipated during surgery.
6. Provide intra-operative assistance when delegated by the surgeon.
7. Anticipate the need for and then implement sponging, suctioning, and irrigation.
8. Ensure aseptic technique is maintained by all OR team members throughout the surgical procedure.
9. Anticipate the need for various hemostatic agents based on the type of surgery.
10. Assemble internal stapling devices.
11. Prepare and cut suture materials as directed.
12. Verify with the surgeon and the circulating nurse the specific type and/or size of implantable devices.
13. Cauterize when directed by the surgeon (e.g., laser, cryo, ESU).
14. Obtain appropriate sutures/needles and stapling devices.
15. Handle specimens appropriately.
16. Prepare drains, catheters, and tubing for use at the end of the case.

17. Assist in the placement of wound drains.
18. Perform intra-operative counts with the circulating nurse (e.g., sutures, sharps, sponges, instruments).
19. Report the total amount of medications and solutions used during the procedure.
20. Assist with skin closure.
21. Connect and activate drains to the suction device.
22. Assemble and apply dressing material before transporting the patient to the recovery room.
23. Assist with application of casts, splints, braces, and similar devices.
24. Initiate preventative and/or corrective actions in potentially hazardous intra-operative situations.
25. Perform appropriate actions during an intra-operative emergency.
26. Provide the surgical team members the supplies and solutions required for the procedure.

C. Post-Operative Care
    1. Maintain the sterility of the back table and mayo stand until the patient leaves the room.
    2. Observe the patient post-operatively for any bleeding and relay status to the surgical team (e.g., bleeding at surgical site, hematoma).
    3. Remove the surgical drapes from the patient.
    4. Cleanse the patient's skin (e.g., blood, prep solution, body fluids).
    5. Remove surgical gown, gloves, and other personal protective equipment.
    6. Assist with patient transfer from the operating table to the stretcher.
    7. Comply with Standard Precautions when removing and discarding of drapes and waste.
    8. Dispose of all sharps after surgery in compliance with Standard Precautions and procedures.
    9. Assemble the instruments for the decontamination and sterilization process.
    10. Return unused supplies and equipment to the designated location.
    11. Perform room turnover after surgery.
    12. Initiate preventative and/or corrective actions in potentially hazardous post-operative situations.
    13. Perform appropriate actions during a post-operative emergency.

II. Additional Duties
    A. Administrative and Personnel
        1. Revise surgeon's preference card (pick list) as necessary
    B. Equipment Sterilization and Maintenance
        1. Operate sterilizing devices according to parameters and manufacturer's recommendations.
        2. Utilize and contain liquid sterilants and disinfectants according to parameters and manufacturer's recommendations.
        3. Manually decontaminate and clean instruments and equipment.
        4. Visually inspect and assemble any equipment and instruments used during the case for future use.
        5. Package, label, and sterilize instruments and equipment.
        6. Perform biological and DART air removal tests per second
        7. Update equipment records and logs.

Course Number and Name: **SUT 1539 Advanced Surgical Procedures**

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.

Hour Breakdown:

Semester Credit Hours	Lecture	Clinical	Contact Hours
9	4	15	285

Prerequisite: Instructor Approved

Student Learning Outcomes:

1. Discuss the relevant anatomy, indications for surgery, and patient preparation for Neurosurgery, thoracic, peripheral vascular and cardiovascular surgery.
    a. Correlate the relevant surgical anatomy and physiology to the surgical procedure.
    b. Correlate the relevant pathophysiology to the surgical procedure.
    c. Explain the diagnostic interventions that are utilized for obtaining a diagnosis.
    d. Discuss the perioperative considerations for the planned surgical procedure.
    e. Identify and discuss co-related surgical procedures.
    f. List the wound classifications and correlate to wound management.
2. Discuss equipment, supplies, and instruments for neurosurgery, thoracic, peripheral vascular, cardiovascular surgery.
    a. Identify instruments, equipment, and supplies.
    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.
    a. Explain the correct order of steps taken during surgical procedures.
    b. Identify possible complications.
    c. Demonstrate the sequence of procedures by anticipating the needs of the surgeon in each of the following roles in the clinical setting:
        (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.

5. Demonstrate employability and job retention skills.
    a. Discuss the transition from student to employee.
    b. Identify positive employee characteristics.
    c. Develop a professional resume.
    d. Demonstrate professional conduct
    e. Exhibit sound communication skills to include oral, written, and electronic.
    f. Demonstrate interpersonal relations with other health care professionals.
    g. Exhibit critical thinking skills.

6. Identify desirable characteristics of a surgical technologist.
    a. Examine legal and ethical issues that may affect the practice of surgical technology and appropriate actions.

b. Identify effective behaviors in relationship with team members.
c. Discuss conflict resolution in the workplace.)
d. Describe characteristics of an effective leader and team member.

7. Explore employment and employee responsibility.
    a. Prepare letters of application and resignation.
    b. Demonstrate through role-play appropriate behaviors in a job interview. (DOK 2)
    c. Discuss a typical hospital orientation program.
    d. Discuss "on call" and "call back" responsibilities.

8. Identify factors that promote effective transition from the role of student to the role of employee.
    a. Complete a student case log.
    b. Complete an application, and sit for national certification exam

National Board of Surgical Technology and Surgical Assisting

I. Peri –Operative Care
   A. Pre-Operative Preparation
      1. Review Surgeon's preference card.
      2. Verify availability of surgery equipment (e.g. reserve equipment for surgery)
      3. Prepare and maintain operating room environment according to surgical procedure (e.g. temperature, light, suction and furniture)..
      4. Utilize preoperative documentation (e.g. informed consent, advanced directives, allergies, and laboratory results).
      5. Obtain and apply additional equipment (e.g. pneumatic tourniquet, sequential compression devices, and thermoregulatory devices).
      6. Don personal protective equipment.
      7. Obtain instruments, supplies, and equipment and verify readiness for surgery.
      8. Check package integrity of sterile supplies.
      9. Open sterile supplies/ instruments while maintaining aseptic techniques.
      10. Perform surgical scrub (e.g., initial, waterless)
      11. Assemble, inspect, and set up sterile instruments and supplies for surgical procedures.
      12. Gown and glove sterile team members.
      13. Participate in "Time Out".
      14. Drape patient.
      15. Transport patient to and from operating room utilizing correct patient positioning.
      16. Transfer patient to operating room table.
      17. Apply patient safety measures (e.g., safety strap, protective padding, and x-ray safety.
      18. Apply patient monitoring devices.
      19. Position the patient.
      20. Prepare surgical site (e.g., hair removal, surgical preparation)
      21. Consider patient needs (e.g., pediatrics, immunocompromised, patient allergies).
      22. Don gown and gloves.
      23. Perform medical hand wash.
      24. Secure cords/tubing to drapes and apply light handles.
      25. Drape specialty equipment (e.g., c-arm, Da Vinci, microscope).

   B. Intra- Operative Procedure
      1. Provide intra-operative assistance under direction of the surgeon.
      2. Perform counts with circulator at appropriate interval.
      3. 3. Identify Instruments by:

Function
Application
Classification

4. Prepare bone and tissue grafts (e.g., allograft, autograft, synthetic.)
5. Anticipate the steps of surgical procedures.
6. Differentiate among the various methods and applications of hemostasis (e.g., mechanical, thermal, chemical).
7. Specify methods of operative exposure.
8. Place and secure retractors.
9. Verify with surgeon the correct type and /or size of implantable devices.
10. Pass instruments and supplies during surgery.

22. Apply thermal surgical techniques and safety precautions (e.g., cryo-surgery, laser surgery, and electrical surgery unit (ESU)).

III Basic Sciences

A. Anatomy and Physiology

1. Use appropriate medical terminology and abbreviations.
2. Demonstrate knowledge of anatomical systems as they relate to the surgical procedure.(a-n)
3. Demonstrate knowledge of human physiology as they relate to the surgical procedure. (a-n)
4. Identify the following pathologies:
   a. Abnormal anatomy
   b. Disease processes
   c. Traumatic injuries

National Center for Competency Testing (NCCT)

I. Pre-Operative Care

A. Pre-operative Preparation

1. Prepare the operating room environment and equipment according to the surgical procedure.
2. Verify the presence of surgical team members and the patient.
3. Gather specific surgical supplies, medications, and equipment based on the surgeon's preference card (pick list).
4. Check package integrity and expiration date of sterile supplies.
5. Obtain specialized patient equipment (e.g., sequential compression devices, pneumatic tourniquet, thermoregulatory devices).
6. Assemble and test positioning equipment.
7. Don personal protective equipment (e.g., mask, eye protection).
8. Follow the principles of aseptic technique while opening supplies for the surgery.
9. Perform surgical hand scrub.
10. Don sterile gown and gloves.
11. Set up and inspect sterile instruments and supplies for surgical procedures.
12. Perform pre-operative count with the circulating nurse (e.g., sutures, sharps, sponges, instruments).
13. Verify identity of the patient and operative site.
14. Transfer the patient to the operating room table.
15. Place the safety belt and pressure pads on the patient.
16. Assist the surgical team with gowning and gloving.
17. Assist with the draping the3 patient.
18. Verify and label medications and solutions at the sterile field pre-operatively
19. Perform surgical Time Out.

20. Initiate preventative and/or corrective actions in potentially hazardous pre-operative situations.
21. Perform appropriate actions during a pre-operative emergency.

B. Intra-Operative Procedure
    1. Maintain the operating room environment according to surgical procedure (e.g., temperature, lights, suction, and furniture).
    2. Verify and label medications and solutions at the sterile field intra-operatively.
    3. Assemble and test specialty equipment during surgery (e.g., computer navigation systems, harmonic scalpel, endoscopic technology).
    4. Anticipate the need for retraction to facilitate proper operative exposure.
    5. Pass instruments and supplies as anticipated during surgery.
    6. Provide intra-operative assistance when delegated by the surgeon.
    7. Anticipate the need for and then implement sponging, suctioning, and irrigation.
    8. Ensure aseptic technique is maintained by all OR team members throughout the surgical procedure.
    9. Anticipate the need for various hemostatic agents based on the type of surgery.
    10. Assemble internal stapling devices.
    11. Prepare and cut suture materials as directed.
    12. Verify with the surgeon and the circulating nurse the specific type and/or size of implantable devices.
    13. Cauterize when directed by the surgeon (e.g., laser, cryo, ESU).
    14. Obtain appropriate sutures/needles and stapling devices.
    15. Handle specimens appropriately.
    16. Prepare drains, catheters, and tubing for use at the end of the case.
    17. Assist in the placement of wound drains.
    18. Perform intra-operative counts with the circulating nurse (e.g., sutures, sharps, sponges, instruments).
    19. Report the total amount of medications and solutions used during the procedure.
    20. Assist with skin closure.
    21. Connect and activate drains to the suction device.
    22. Assemble and apply dressing material before transporting the patient to the recovery room.
    23. Assist with application of casts, splints, braces, and similar devices.
    24. Initiate preventative and/or corrective actions in potentially hazardous intra-operative situations.
    25. Perform appropriate actions during an intra-operative emergency.
    26. Provide the surgical team members the supplies and solutions required for the procedure.

C. Post-Operative Care
    1. Maintain the sterility of the back table and mayo stand until the patient leaves the room.
    2. Observe the patient post-operatively for any bleeding and relay status to the surgical team (e.g., bleeding at surgical site, hematoma).
    3. Remove the surgical drapes from the patient.
    4. Cleanse the patient's skin (e.g., blood, prep solution, body fluids).
    5. Remove surgical gown, gloves, and other personal protective equipment.
    6. Assist with patient transfer from the operating table to the stretcher.
    7. Comply with Standard Precautions when removing and discarding of drapes and waste.
    8. Dispose of all sharps after surgery in compliance with Standard Precautions and procedures.
    9. Assemble the instruments for the decontamination and sterilization process.
    10. Return unused supplies and equipment to the designated location.
    11. Perform room turnover after surgery.

12. Initiate preventative and/or corrective actions in potentially hazardous post-operative situations.
13. Perform appropriate actions during a post-operative emergency.

II. Additional Duties

A. Administrative and Personnel
   1. Revise surgeon's preference card (pick list) as necessary

B. Equipment Sterilization and Maintenance
   1. Operate sterilizing devices according to parameters and manufacturer's recommendations.
   2. Utilize and contain liquid sterilants and disinfectants according to parameters and manufacturer's recommendations.
   3. Manually decontaminate and clean instruments and equipment.
   4. Visually inspect and assemble any equipment and instruments used during the case for future use.
   5. Package, label, and sterilize instruments and equipment.
   6. Perform biological and DART air removal tests per second
   7. Update equipment records and logs.

Course Number and Name: **SUT 1614 Basic and Related Surgical Procedures (Lecture)**

Description: This course includes instruction in regional anatomy, pathology, instrumentation, surgical techniques, and safe patient care in general surgery, gynecology, obstetrics, and genitourinary. This course prepares students for clinical experience.

Hour Breakdown:

Semester Credit Hours	Lecture	Clinical	Contact Hours
4	4	0	60

Prerequisite: Instructor Approved

Student Learning Outcomes:

1. Discuss the relevant anatomy, indications for surgery, and patient preparation for general, gynecological, obstetrical, and genitourinary procedures.

a. Correlate the relevant surgical anatomy and physiology to the surgical procedure.
b. Correlate the relevant pathophysiology to the surgical procedure.
c. Explain the diagnostic interventions that are utilized for obtaining a diagnosis.
d. Discuss the perioperative considerations for the planned surgical procedure.
e. Identify and discuss co-related surgical procedures.
f. List the wound classifications and correlate to wound management.

2. Discuss equipment, supplies, and instruments for general, gynecological, obstetrical, and genitourinary procedures.

a. Identify instruments, equipment, and supplies.

3. Discuss surgical procedures and possible complications for general, gynecological, obstetrical, and genitourinary procedures.

a. Explain the correct order of steps taken during surgical procedures.
b. Identify possible complications.

National Board of Surgical Technology and Surgical Assisting

III Basic Sciences
- A. Anatomy and Physiology
  1. Use appropriate medical terminology and abbreviations.
  2. Demonstrate knowledge of anatomical systems as they relate to the surgical procedure.(a-n)
  3. Demonstrate knowledge of human physiology as they relate to the surgical procedure. (a-n)
  4. Identify the following pathologies:
     a. Abnormal anatomy
     b. Disease processes
     c. Traumatic injuries

National Center for Competency Testing (NCCT)

I. Pre-Operative Care
- A. Pre-operative Preparation
  1. Prepare the operating room environment and equipment according to the surgical procedure.
  2. Verify the presence of surgical team members and the patient.
  3. Gather specific surgical supplies, medications, and equipment based on the surgeon's preference card (pick list).
  4. Check package integrity and expiration date of sterile supplies.

5. Obtain specialized patient equipment (e.g., sequential compression devices, pneumatic tourniquet, thermoregulatory devices).
6. Assemble and test positioning equipment.
7. Don personal protective equipment (e.g., mask, eye protection).
8. Follow the principles of aseptic technique while opening supplies for the surgery.
9. Perform surgical hand scrub.
10. Don sterile gown and gloves.
11. Set up and inspect sterile instruments and supplies for surgical procedures.
12. Perform pre-operative count with the circulating nurse (e.g., sutures, sharps, sponges, instruments).
13. Verify identity of the patient and operative site.
14. Transfer the patient to the operating room table.
15. Place the safety belt and pressure pads on the patient.
16. Assist the surgical team with gowning and gloving.
17. Assist with the draping the3 patient.
18. Verify and label medications and solutions at the sterile field pre-operatively
19. Perform surgical Time Out.
20. Initiate preventative and/or corrective actions in potentially hazardous pre-operative situations.
21. Perform appropriate actions during a pre-operative emergency.

B. Intra-Operative Procedure
1. Maintain the operating room environment according to surgical procedure (e.g., temperature, lights, suction, and furniture).
2. Verify and label medications and solutions at the sterile field intra-operatively.
3. Assemble and test specialty equipment during surgery (e.g., computer navigation systems, harmonic scalpel, endoscopic technology).
4. Anticipate the need for retraction to facilitate proper operative exposure.
5. Pass instruments and supplies as anticipated during surgery.
6. Provide intra-operative assistance when delegated by the surgeon.
7. Anticipate the need for and then implement sponging, suctioning, and irrigation.
8. Ensure aseptic technique is maintained by all OR team members throughout the surgical procedure.
9. Anticipate the need for various hemostatic agents based on the type of surgery.
10. Assemble internal stapling devices.
11. Prepare and cut suture materials as directed.
12. Verify with the surgeon and the circulating nurse the specific type and/or size of implantable devices.
13. Cauterize when directed by the surgeon (e.g., laser, cryo, ESU).
14. Obtain appropriate sutures/needles and stapling devices.
15. Handle specimens appropriately.
16. Prepare drains, catheters, and tubing for use at the end of the case.
17. Assist in the placement of wound drains.
18. Perform intra-operative counts with the circulating nurse (e.g., sutures, sharps, sponges, instruments).
19. Report the total amount of medications and solutions used during the procedure.
20. Assist with skin closure.
21. Connect and activate drains to the suction device.
22. Assemble and apply dressing material before transporting the patient to the recovery room.
23. Assist with application of casts, splints, braces, and similar devices.

24. Initiate preventative and/or corrective actions in potentially hazardous intra-operative situations.
25. Perform appropriate actions during an intra-operative emergency.
26. Provide the surgical team members the supplies and solutions required for the procedure.

C. Post-Operative Care
1. Maintain the sterility of the back table and mayo stand until the patient leaves the room.
2. Observe the patient post-operatively for any bleeding and relay status to the surgical team (e.g., bleeding at surgical site, hematoma).
3. Remove the surgical drapes from the patient.
4. Cleanse the patient's skin (e.g., blood, prep solution, body fluids).
5. Remove surgical gown, gloves, and other personal protective equipment.
6. Assist with patient transfer from the operating table to the stretcher.
7. Comply with Standard Precautions when removing and discarding of drapes and waste.
8. Dispose of all sharps after surgery in compliance with Standard Precautions and procedures.
9. Assemble the instruments for the decontamination and sterilization process.
10. Return unused supplies and equipment to the designated location.
11. Perform room turnover after surgery.
12. Initiate preventative and/or corrective actions in potentially hazardous post-operative situations.
13. Perform appropriate actions during a post-operative emergency.

II. Additional Duties

A. Administrative and Personnel
2. Revise surgeon's preference card (pick list) as necessary

B. Equipment Sterilization and Maintenance
1. Operate sterilizing devices according to parameters and manufacturer's recommendations.
2. Utilize and contain liquid sterilants and disinfectants according to parameters and manufacturer's recommendations.
3. Manually decontaminate and clean instruments and equipment.
4. Visually inspect and assemble any equipment and instruments used during the case for future use.
5. Package, label, and sterilize instruments and equipment.
6. Perform biological and DART air removal tests per second
7. Update equipment records and logs.

Course Number and Name: **SUT 1624** **Specialized Surgical Procedures (Lecture)**

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 prepares students for clinical experience in area hospital surgical suite and related departments.

Hour Breakdown:

Semester Credit Hours	Lecture	Clinical	Contact Hours
4	4	0	60

Prerequisite: Instructor Approved

Student Learning Outcomes:

1. Explain the relevant anatomy, indications for surgery, and patient preparation for ear, nose, throat, eye, plastics, orthopedics, and oral and maxillofacial surgery.
    a. Correlate the relevant surgical anatomy and physiology to the surgical procedure.
    b. Correlate the relevant pathophysiology to the surgical procedure.
    c. Explain the diagnostic interventions that are utilized for obtaining a diagnosis.
    d. Discuss the perioperative considerations for the planned surgical procedure.
    e. Identify and discuss co-related surgical procedures.
    f. List the wound classifications and correlate to wound management.

2. Explain equipment, supplies, and instruments for ear, nose, throat, eye, plastics, orthopedics, and oral and maxillofacial surgery.
    a. Identify instruments, equipment, and supplies.

3. Explain surgical procedures and possible complications for ear, nose, throat, eye, plastics, Orthopedics and oral and maxillofacial surgery.
    a. Explain the correct order of steps taken during the surgical procedures.
    b. Identify possible complications.

National Board of Surgical Technology and Surgical Assisting

III Basic Sciences

A. Anatomy and Physiology
    1. Use appropriate medical terminology and abbreviations.
    2. Demonstrate knowledge of anatomical systems as they relate to the surgical procedure.(a-n)
    3. Demonstrate knowledge of human physiology as they relate to the surgical procedure. (a-n)
    4. Identify the following pathologies:
        a. Abnormal anatomy
        b. Disease processes
        c. Traumatic injuries

National Center for Competency Testing (NCCT)

I. Pre-Operative Care
    A. Pre-operative Preparation

1. Prepare the operating room environment and equipment according to the surgical procedure.
2. Verify the presence of surgical team members and the patient.
3. Gather specific surgical supplies, medications, and equipment based on the surgeon's preference card (pick list).
4. Check package integrity and expiration date of sterile supplies.
5. Obtain specialized patient equipment (e.g., sequential compression devices, pneumatic tourniquet, thermoregulatory devices).
6. Assemble and test positioning equipment.
7. Don personal protective equipment (e.g., mask, eye protection).
8. Follow the principles of aseptic technique while opening supplies for the surgery.
9. Perform surgical hand scrub.
10. Don sterile gown and gloves.
11. Set up and inspect sterile instruments and supplies for surgical procedures.
12. Perform pre-operative count with the circulating nurse (e.g., sutures, sharps, sponges, instruments).
13. Verify identity of the patient and operative site.
14. Transfer the patient to the operating room table.
15. Place the safety belt and pressure pads on the patient.
16. Assist the surgical team with gowning and gloving.
17. Assist with the draping the3 patient.
18. Verify and label medications and solutions at the sterile field pre-operatively
19. Perform surgical Time Out.
20. Initiate preventative and/or corrective actions in potentially hazardous pre-operative situations.
21. Perform appropriate actions during a pre-operative emergency.

B. Intra-Operative Procedure
1. Maintain the operating room environment according to surgical procedure (e.g., temperature, lights, suction, and furniture).
2. Verify and label medications and solutions at the sterile field intra-operatively.
3. Assemble and test specialty equipment during surgery (e.g., computer navigation systems, harmonic scalpel, endoscopic technology).
4. Anticipate the need for retraction to facilitate proper operative exposure.
5. Pass instruments and supplies as anticipated during surgery.
6. Provide intra-operative assistance when delegated by the surgeon.
7. Anticipate the need for and then implement sponging, suctioning, and irrigation.
8. Ensure aseptic technique is maintained by all OR team members throughout the surgical procedure.
9. Anticipate the need for various hemostatic agents based on the type of surgery.
10. Assemble internal stapling devices.
11. Prepare and cut suture materials as directed.
12. Verify with the surgeon and the circulating nurse the specific type and/or size of implantable devices.
13. Cauterize when directed by the surgeon (e.g., laser, cryo, ESU).
14. Obtain appropriate sutures/needles and stapling devices.
15. Handle specimens appropriately.
16. Prepare drains, catheters, and tubing for use at the end of the case.
17. Assist in the placement of wound drains.
18. Perform intra-operative counts with the circulating nurse (e.g., sutures, sharps, sponges, instruments).
19. Report the total amount of medications and solutions used during the procedure.
20. Assist with skin closure.

21. Connect and activate drains to the suction device.
22. Assemble and apply dressing material before transporting the patient to the recovery room.
23. Assist with application of casts, splints, braces, and similar devices.
24. Initiate preventative and/or corrective actions in potentially hazardous intra-operative situations.
25. Perform appropriate actions during an intra-operative emergency.
26. Provide the surgical team members the supplies and solutions required for the procedure.

C. Post-Operative Care
1. Maintain the sterility of the back table and mayo stand until the patient leaves the room.
2. Observe the patient post-operatively for any bleeding and relay status to the surgical team (e.g., bleeding at surgical site, hematoma).
3. Remove the surgical drapes from the patient.
4. Cleanse the patient's skin (e.g., blood, prep solution, body fluids).
5. Remove surgical gown, gloves, and other personal protective equipment.
6. Assist with patient transfer from the operating table to the stretcher.
7. Comply with Standard Precautions when removing and discarding of drapes and waste.
8. Dispose of all sharps after surgery in compliance with Standard Precautions and procedures.
9. Assemble the instruments for the decontamination and sterilization process.
10. Return unused supplies and equipment to the designated location.
11. Perform room turnover after surgery.
12. Initiate preventative and/or corrective actions in potentially hazardous post-operative situations.
13. Perform appropriate actions during a post-operative emergency.

III. Additional Duties

A. Administrative and Personnel
1. Revise surgeon's preference card (pick list) as necessary

B. Equipment Sterilization and Maintenance
1. Operate sterilizing devices according to parameters and manufacturer's recommendations.
2. Utilize and contain liquid sterilants and disinfectants according to parameters and manufacturer's recommendations.
3. Manually decontaminate and clean instruments and equipment.
4. Visually inspect and assemble any equipment and instruments used during the case for future use.
5. Package, label, and sterilize instruments and equipment.
6. Perform biological and DART air removal tests per second
7. Update equipment records and logs.

Course Number and Name: **SUT 1634 Advanced Surgical Procedures (Lecture)**

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 prepares the student for clinical experience in area hospital surgical suites and related departments and a comprehensive final examination.

Hour Breakdown:

Semester Credit Hours	Lecture	Clinical	Contact Hours
4	4	0	60

Prerequisite: Instructor Approved

Student Learning Outcomes:

1. Discuss the relevant anatomy, indications for surgery, and patient preparation for Neurosurgery, thoracic, peripheral vascular and cardiovascular surgery.
    a. Correlate the relevant surgical anatomy and physiology to the surgical procedure.
    b. Correlate the relevant pathophysiology to the surgical procedure.
    c. Explain the diagnostic interventions that are utilized for obtaining a diagnosis.
    d. Discuss the perioperative considerations for the planned surgical procedure.
    e. Identify and discuss co-related surgical procedures.
    f. List the wound classifications and correlate to wound management.
2. Discuss equipment, supplies, and instruments for neurosurgery, thoracic, peripheral vascular, cardiovascular surgery.
    a. Identify instruments, equipment, and supplies.

3. Discuss surgical procedures and possible complications for neurosurgery, thoracic, peripheral vascular, and cardiovascular surgery.
    a. Explain the correct order of steps taken during surgical procedures.
    b. Identify possible complications.

5. Demonstrate employability and job retention skills.
    a. Discuss the transition from student to employee.
    b. Identify positive employee characteristics.
    c. Develop a professional resume.

6. Identify desirable characteristics of a surgical technologist.
    a. Examine legal and ethical issues that may affect the practice of surgical technology and appropriate actions.
    b. Identify effective behaviors in relationship with team members.
    c. Discuss conflict resolution in the workplace.)
    d. Describe characteristics of an effective leader and team member.

7. Explore employment and employee responsibility.
    a. Prepare letters of application and resignation.
    b. Demonstrate through role-play appropriate behaviors in a job interview. (DOK 2)
    c. Discuss a typical hospital orientation program.
    d. Discuss “on call” and “call back” responsibilities.

8. Identify factors that promote effective transition from the role of student to the role of employee.
    a. Complete a student case log.
    b. Complete an application, and sit for national certification exam

National Board of Surgical Technology and Surgical Assisting

III Basic Sciences

B. Anatomy and Physiology
    1. Use appropriate medical terminology and abbreviations.
    2. Demonstrate knowledge of anatomical systems as they relate to the surgical procedure.(a-n)
    3. Demonstrate knowledge of human physiology as they relate to the surgical procedure. (a-n)
    4. Identify the following pathologies:
        a. Abnormal anatomy
        b. Disease processes
        c. Traumatic injuries

National Center for Competency Testing (NCCT)

I. Pre-Operative Care

A. Pre-operative Preparation
    1. Prepare the operating room environment and equipment according to the surgical procedure.
    2. Verify the presence of surgical team members and the patient.
    3. Gather specific surgical supplies, medications, and equipment based on the surgeon's preference card (pick list).
    4. Check package integrity and expiration date of sterile supplies.
    5. Obtain specialized patient equipment (e.g., sequential compression devices, pneumatic tourniquet, thermoregulatory devices).
    6. Assemble and test positioning equipment.
    7. Don personal protective equipment (e.g., mask, eye protection).
    8. Follow the principles of aseptic technique while opening supplies for the surgery.
    9. Perform surgical hand scrub.
    10. Don sterile gown and gloves.
    11. Set up and inspect sterile instruments and supplies for surgical procedures.
    12. Perform pre-operative count with the circulating nurse (e.g., sutures, sharps, sponges, instruments).
    13. Verify identity of the patient and operative site.
    14. Transfer the patient to the operating room table.
    15. Place the safety belt and pressure pads on the patient.
    16. Assist the surgical team with gowning and gloving.
    17. Assist with the draping the3 patient.
    18. Verify and label medications and solutions at the sterile field pre-operatively
    19. Perform surgical Time Out.
    20. Initiate preventative and/or corrective actions in potentially hazardous pre-operative situations.
    21. Perform appropriate actions during a pre-operative emergency.

B. Intra-Operative Procedure
    1. Maintain the operating room environment according to surgical procedure (e.g., temperature, lights, suction, and furniture).
    2. Verify and label medications and solutions at the sterile field intra-operatively.

3. Assemble and test specialty equipment during surgery (e.g., computer navigation systems, harmonic scalpel, endoscopic technology).
4. Anticipate the need for retraction to facilitate proper operative exposure.
5. Pass instruments and supplies as anticipated during surgery.
6. Provide intra-operative assistance when delegated by the surgeon.
7. Anticipate the need for and then implement sponging, suctioning, and irrigation.
8. Ensure aseptic technique is maintained by all OR team members throughout the surgical procedure.
9. Anticipate the need for various hemostatic agents based on the type of surgery.
10. Assemble internal stapling devices.
11. Prepare and cut suture materials as directed.
12. Verify with the surgeon and the circulating nurse the specific type and/or size of implantable devices.
13. Cauterize when directed by the surgeon (e.g., laser, cryo, ESU).
14. Obtain appropriate sutures/needles and stapling devices.
15. Handle specimens appropriately.
16. Prepare drains, catheters, and tubing for use at the end of the case.
17. Assist in the placement of wound drains.
18. Perform intra-operative counts with the circulating nurse (e.g., sutures, sharps, sponges, instruments).
19. Report the total amount of medications and solutions used during the procedure.
20. Assist with skin closure.
21. Connect and activate drains to the suction device.
22. Assemble and apply dressing material before transporting the patient to the recovery room.
23. Assist with application of casts, splints, braces, and similar devices.
24. Initiate preventative and/or corrective actions in potentially hazardous intra-operative situations.
25. Perform appropriate actions during an intra-operative emergency.
26. Provide the surgical team members the supplies and solutions required for the procedure.

C. Post-Operative Care
1. Maintain the sterility of the back table and mayo stand until the patient leaves the room.
2. Observe the patient post-operatively for any bleeding and relay status to the surgical team (e.g., bleeding at surgical site, hematoma).
3. Remove the surgical drapes from the patient.
4. Cleanse the patient's skin (e.g., blood, prep solution, body fluids).
5. Remove surgical gown, gloves, and other personal protective equipment.
6. Assist with patient transfer from the operating table to the stretcher.
7. Comply with Standard Precautions when removing and discarding of drapes and waste.
8. Dispose of all sharps after surgery in compliance with Standard Precautions and procedures.
9. Assemble the instruments for the decontamination and sterilization process.
10. Return unused supplies and equipment to the designated location.
11. Perform room turnover after surgery.
12. Initiate preventative and/or corrective actions in potentially hazardous post-operative situations.
13. Perform appropriate actions during a post-operative emergency.

II. Additional Duties

A. Administrative and Personnel
1. Revise surgeon's preference card (pick list) as necessary

B. Equipment Sterilization and Maintenance
1. Operate sterilizing devices according to parameters and manufacturer's recommendations.

2. Utilize and contain liquid sterilants and disinfectants according to parameters and manufacturer's recommendations.
3. Manually decontaminate and clean instruments and equipment.
4. Visually inspect and assemble any equipment and instruments used during the case for future use.
5. Package, label, and sterilize instruments and equipment.
6. Perform biological and DART air removal tests per second
7. Update equipment records and logs.

Course Number and Name: **SUT 1703 Certification and Role Transition**

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.

Hour Breakdown:

Semester Credit Hours	Lecture	Lab	Contact Hours
3	3	0	45

Prerequisite: Instructor Approved

Student Learning Outcomes:

1. Identify desirable characteristics of a surgical technologist.
    a. Examine legal and ethical issues that may affect the practice of surgical technology and appropriate actions.
    b. Identify effective behaviors in relationship with team members.
    c. Discuss conflict resolution in the workplace.
    d. Describe characteristics of an effective leader and team member.

2. Explore employment and employee responsibility.
    a. Prepare cover letters of application and resignation.
    b. Demonstrate through role-play appropriate behaviors in a job interview.
    c. Discuss a typical hospital orientation program.
    d. Discuss “on call” and “call back” responsibilities.

3. Identify factors that promote effective transition from the role of student to the role of employee.
    a. Complete a student case log.
    b. Complete an application, and sit for national certification exam.
    c. Utilize computer simulation to enhance critical-thinking skills.
    d. Discuss continuing education requirements for a CST.

Course Number and Name: **SUT 1714, SUT 1724, SUT 1735 Clinical Practice I, II, III**

Description: This course includes clinical practice and didactic instruction in a clinical affiliate. Surgical specialty areas covered include general gynecology, obstetrics, genitourinary, ear, nose, and throat; eye; oral and maxillofacial surgery; orthopedics; plastics; neurosurgery; thoracic; peripheral vascular and cardiovascular surgery.

Hour Breakdown:

Semester Credit Hours	Lecture	Clinical	Contact Hours
4	0	12	180
5	0	15	225

Prerequisite: Instructor Approved

Student Learning Outcomes:

1. Demonstrate use, care, and handling of instruments, equipment, and supplies in the following related departments:
    a. general
    b. obstetrics/gynecology
    c. genitourinary
    d. ear, nose, and throat
    e. eye
    f. oral and maxillofacial
    g. orthopedics
    h. plastics
    i. neurosurgery
    j. thoracic
    k. peripheral vascular and
    l. cardiovascular surgery

2. Demonstrate the sequence of procedures by anticipating the needs of the surgeon in each of the following roles in the clinical setting:
    a. Scrub-Surgical Technologist
    b. 2nd Assisting Surgical Technologist
    c. Circulating Surgical Technologist

3. Demonstrate knowledge of safe patient care and practices within the surgical environment in the clinical setting.

4. Demonstrate employability and job retention skills.
    a. Demonstrate professional conduct
    b. Exhibit sound communication skills to include oral, written, and electronic.
    c. Demonstrate interpersonal relations with other health care professionals.
    d. Exhibit critical thinking skills.

II. Peri-Operative Care
    A. Pre-Operative Preparation

        1. Review Surgeon's preference card.
        2. verify availability of surgery equipment (e.g. reserve equipment for surgery)
        3. Prepare and maintain operating room environment according to surgical procedure (e.g. temperature, light, suction and furniture).

4. Utilize preoperative documentation (e.g. informed consent, advanced directives, allergies, and laboratory results).
5. Obtain and apply additional equipment (e.g. pneumatic tourniquet, sequential compression devices, and thermoregulatory devices).
6. Don personal protective equipment.
7. Obtain instruments, supplies, and equipment and verify readiness for surgery.
8. Check package integrity of sterile supplies.
9. Open sterile supplies/ instruments while maintaining aseptic techniques.
10. Perform surgical scrub (e.g., initial, waterless)
11. Assemble, inspect, and set up sterile instruments and supplies for surgical procedures.
12. Gown and glove sterile team members.
13. Participate in "Time Out".
14. Drape patient.
15. Transport patient to and from operating room utilizing correct patient positioning.
16. Transfer patient to operating room table.
17. Apply patient safety measures (e.g., safety strap, protective padding, and x-ray safety.
18. Apply patient monitoring devices.
19. Position the patient.
20. Prepare surgical site (e.g., hair removal, surgical preparation)
21. Consider patient needs (e.g., pediatrics, immunocompromised, patient allergies).
22. Don gown and gloves.
23. Perform medical hand wash.
24. Secure cords/tubing to drapes and apply light handles.
25. Drape specialty equipment (e.g., c-arm, Da Vinci, microscope).

B. Intra- Operative Procedure

1. Provide intra-operative assistance under direction of the surgeon.
2. Perform counts with circulator at appropriate interval.
3. . Identify Instruments by: Function Application Classification
4. Prepare bone and tissue grafts (e.g., allograft, autograft, synthetic.)
5. Anticipate the steps of surgical procedures.
6. Differentiate among the various methods and applications of hemostasis (e.g., mechanical, thermal, chemical).
7. Specify methods of operative exposure.
8. Place and secure retractors.
9. Verify with surgeon the correct type and /or size of implantable devices.
22. Apply thermal surgical techniques and safety precautions (e.g., cryo-surgery, laser surgery, and electrical surgery unit (ESU)).
25. Identify appropriate usage of structures. Needles and stapling devices.

Peri-Operative Care

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25. Identify appropriate usage of structures. needles and stapling devices.

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 stands (2 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 arm boards (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 access, with CD-ROM and super VGA color monitor (1 per 3 students)
27. Printer access, 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
33. Closed Case Cart (1)
34. Surgical scrub sink

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. Kick bucket with coasters (2 per room)
6. Pneumatic tourniquet cuffs (1 double adult, 1 upper extremity adult, 1 lower extremity adult per program)
7. Thermometer, electronic digital (1 per program)
8. Straps, restraint (1 set per room)
9. Sitting stool (2 per program)
10. Ear model (1 per program)
11. Eye model (1 per program)

12. Heart model (1 per program)
13. Model, teaching, adult (Internal Organ) (1 per program)
14. Model, knee joint (1 per program)
15. Human lumbar spine (1 per program)
16. Laminated anatomy posters (1 set per program)
17. Laminated instrument posters (1 set per program)
18. Stethoscope, dual training (2 per program)
19. Glo-germ light kit (1 per program)
20. Scrub solution dispenser

* The use of refurbished or demonstration equipment is recommended.

Recommended Instructional Aids

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

CURRICULUM DEFINITIONS AND TERMS

- Course Name – A common name that will be used by all community 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 Certificate Required Course – A required course for all students completing a career certificate.
    - Technical Certificate Required Course – A required course for all students completing a technical certificate.
    - Technical Elective – Elective courses that are available for colleges to offer to students.

- Description – A short narrative that includes the major purpose(s) of the course

- 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

- Student Learning Outcomes – A listing of the student outcomes (major concepts and performances) 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 college. 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 all of the required Career Certificate courses, 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 their college.

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

    - Adding new student learning outcomes to complement the existing competencies and suggested objectives in the program framework
    - Revising or extending the student learning outcomes
    - 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)

COURSE CROSSWALK

Course Crosswalk Surgical Technology CIP 51.0909– Surgical Technology/Technologist					
Note: Courses that have been added or changed in the 2016 curriculum are highlighted.					
Existing			**Revised**		
2012 MS Curriculum Framework			**2017 MS Curriculum Framework**		
Course Number	**Course Title**	**Hours**	**Course Number**	**Course Title**	**Hours**
SUT 1113	Fundamentals of Surgical Technology	3	SUT 1113	Fundamentals of Surgical Technology	3
SUT 1216	Principles of Surgical Technique	6	SUT 1217	Principles of Surgical Technique	7
			SUT 1223	Medical Terminology for Surgical Technologists	3
SUT 1314	Surgical Anatomy	4	SUT 1314	Surgical Anatomy	4
SUT 1413	Surgical Microbiology	3	SUT 1413	Surgical Microbiology	3
SUT 1518	Basic and Related Surgical Procedures	8	SUT 1518	Basic and Related Surgical Procedures	8
SUT 1528	Specialized Surgical Procedures	8	SUT 1528	Specialized Surgical Procedures	8
SUT 1538	Advanced Surgical Procedures	8	SUT 1539	Advanced Surgical Procedures	9
			SUT 1614	Basic and Related Surgical Procedures	4
			SUT 1624	Specialized Surgical Procedures	4
			SUT 1634	Advanced Surgical Procedures	4
SUT 1703	Certification and Role Transition	3	SUT 1703	Certification and Role Transition	3
			SUT 1714	Clinical I	4
			SUT 1724	Clinical II	4
			SUT 1735	Clinical III	5