

**GREAT PLAINS TECHNOLOGY CENTER  
COURSE OF STUDY**

**Career Cluster:** Health Occupations (HL)

**Career Pathway:** Therapeutic Services (HL001)

**Career Major:** Surgical Technologist (HL0010017)

**Career Major Hours:** Adult Students: 1185 Hours

<b><u>Instructors:</u></b>	<b>Name</b>	<b>Office</b>	<b>E-Mail</b>
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**Academic Credit:** Adult Students: Transcript

**Prerequisites:** Must be a high school graduate or equivalent. Minimum age 18 and take the **WorkKeys test**.

**Career Major Description:**

Surgical technologists handle instruments, supplies and equipment necessary during the surgical procedure and work closely with surgeons, anesthesiologists, registered nurses, and other surgical personnel to deliver patient care before, during and after surgery. The major combines classroom instruction, laboratory practice, and clinical experience to ensure that each graduate meets entry-level competencies as a Surgical Technologist.

The Surgical Technologist Major is designed to prepare post-secondary adult students for entry-level employment as Surgical Technologists. The career major is structured to provide the students with a foundation in the basic sciences and subjects unique to the operating room. Upon completing the **career** major, the Graduate Surgical Technologist will be able to function as a member of the surgical team delivering direct patient care before, during, and after surgical intervention.

The instructional content, which is 1,185 hours of classroom and clinical instruction, is based on an occupational analysis of the surgical technology field, and is adjusted to reflect local employment; local employment needs as determined by the instructor, administrators, and advisory committee.

Upon successful completion of the career major, the Graduate will be eligible to sit for the National Surgical Technologist Certification Examination. The career major closely follows the guidelines of the Accreditation Review Committee on Education in Surgical Technology and Surgical Assisting and the Commission on Accreditation of Allied Health Education Programs.

**Clinical Rotations:**

Clinical rotation will be held at the following hospitals:

- Lawton, OK: - Comanche County Memorial Hospital
- Ambulatory Surgery **Center of Southwestern Medical Center**
- Public Health Service – Lawton Indian Hospital
- Southwestern Medical Center
- Altus, OK: - Jackson County Memorial Hospital
- Duncan, OK: - Duncan Regional Hospital

### **Career Major Goals:**

The goal of the Great Plains Technology Center Surgical Technologist Career Major is to graduate Surgical Technologists of the highest quality who are prepared for entry into the healthcare profession as a competent entry-level surgical technologist with advanced cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains. Graduates will be motivated, self-confident, and exhibit ethical behavior.

Upon achieving the goals of this career major, students will:

- Integrate acquired knowledge and skills to the role of the surgical technologist in caring for the surgical patient
- Contribute effectively as a member of the surgical team to provide quality patient care
- Comply with the policies and procedures established by the medical facility
- Employ appropriate ethical and professional values while performing employment responsibilities
- Demonstrate cognitive development by passing the National Surgical Technologist Certification Exam
- Promote personal and professional accountability by assuming responsibility for continued professional and educational growth

### **Related Career Opportunities:**

- Advancement to role of a surgical assistant
- Employment as a product representative
- Employment in material management or central supply area
- Surgical Technology educator

### **Career Major Objectives:**

The Surgical Technologist Major is designed to prepare the student to assume the responsibility to function in association with registered nurses, surgeons, and anesthesiologists to provide the best possible care for the surgical patient. A graduate of the Great Plains Technology Center Surgical Technologist Career Major will have the ability and skills to:

#### Level I – Specific Objectives

- Recognize, define, and differentiate between application of common and complex medical terms
- Analyze unfamiliar medical terms by applying knowledge of word parts
- Interpret verbal and nonverbal communication by demonstrating effective communication with instructors, classmates, and other surgical team members
- Recognize, contrast, and compare anatomical structures using anatomic references to identify body positions, planes, directions, cavities, and organs
- Differentiate normal and abnormal physiological functions relating to types of diseases and modes of disease transmission
- Describe and practice proper safety techniques to prevent accidents and exposure to blood-borne pathogens by consistently utilizing Standard Precautions in the classroom, lab, and clinical areas
- Demonstrate the cognitive understanding of the principles of asepsis by identifying and correcting breaks in technique during lab practice
- Identify the members of the surgical team and distinguishes between each members' role in the surgical intervention
- Understand the legal and ethical responsibilities and limitations of a surgical technologist by performing within the scope of the profession

- Demonstrate the related nursing procedures by practicing vital signs and analyze any abnormality in the results
- Identify and discuss the specific needs and care of patients with special or complex needs
- Describe and demonstrate the pre-operative preparation to include obtaining an informed surgical consent, transportation, positioning, **clipping**, and prepping of the surgical patient during the preoperative phase
- Apply mathematical principles to solve problems involving dosage calculations and other applied mathematical concepts
- Distinguish between surgical pharmacological agents and describe each classification's effect on the human body
- Contrast and compare methods, agents, and techniques of anesthesia administration
- Discuss **the** anatomy, physiology, and pathophysiology of **basic** surgical procedures
- Analyze diagnostic and procedural steps for **basic** surgical procedures to include identification of surgical incisions, care of specimen, and post-operative considerations
- Identify the use of various supplies and equipment of the basic operating room
- Identify the classification, names, parts, materials, finishes, and uses of the basic surgical instrumentation
- Apply knowledge of the basic instrumentation to specific surgical procedures while practicing in lab setting
- Demonstrate the steps of surgical scrubbing, gowning, and gloving
- Demonstrate initial techniques for preparing instrumentation and supplies on the sterile field
- Employ the techniques, timing, methods, and legal responsibilities of counting instruments, sponges, needles, and other countable items on the sterile field
- Apply cognitive and psychomotor knowledge to Clinical Practicum I

#### Level II – Specific Objectives

- Integrate cognitive knowledge and psychomotor skills acquired from Level I to enhance proficiencies
- Analyze diagnostic and procedural steps for **basic** and **complex** surgical procedures to include identification of surgical incisions, care of specimen, and post-operative considerations by completing a weekly Surgical Case Management Plan
- Performing all essential activities of surgical patient care utilizing the principles of aseptic technique, critical thinking, and problem solving in order to adapt to the changing surgical environment
- Discuss **the** anatomy, physiology, and pathophysiology of **basic** and **complex** surgical procedures
- Assimilate knowledge of procedural step by selecting and organizing instruments, equipment, and supplies for the delivery of patient care during the **basic** and **complex** surgical procedures with limited assistance of another team member
- Demonstrate an understanding of electricity by applying safe patient care practices in the operating room
- Demonstrate an understanding of robotics by applying technology to safe patient care practices in the operating room
- Demonstrate an understanding of the principles of physics to safe patient care practices in the operating room
- Apply cognitive and psychomotor knowledge to Clinical Practicum II

### Level III – Specific Objectives

- Integrate cognitive knowledge and psychomotor skills acquired from Level II to enhance proficiencies
- Demonstrate the ability to prioritize procedural steps and independently organize the surgical field, while considering the relevant anatomy and physiology on all **surgical** procedures
- Apply principles of professional communication in a variety of demanding situations
- Utilizing decision-making and problem solving skills in the application of Surgical Technology principles
- Demonstrate professional behavior consistent with legal requirements and ethical expectations consistent with the AST Code of Ethics
- Formulate a plan for personal and professional growth by preparing a career portfolio and obtaining a position as a competent entry level Surgical Technologists
- Demonstrate achievement of advance cognitive, psychomotor, and affective skills from the Surgical Technologist Career Major core curriculum by successfully passing the national Surgical Technology certification exam

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### DESCRIPTION OF COURSES

<b><u>Course #</u></b>	<b><u>Course Name</u></b>	<b><u>ADT</u></b>	<b><u>ADL</u></b>	<b><u>Total</u></b>
<b>HL00342</b>	<b>Core Medical Terminology</b>	<b>45</b>	<b>0</b>	<b>45</b>
<p>Medical Terminology is designed to develop in the students a working knowledge of the language of medicine. Students acquire word building skills by learning prefixes, suffixes, roots and abbreviations. By relating terms to body systems, students identify proper uses of words in a medical environment. Knowledge of medical terminology enhances students' ability to successfully secure employment or pursue advanced education in healthcare.</p>				
<b>HL00046</b>	<b>Anatomy and Physiology</b>	<b>120</b>	<b>0</b>	<b>120</b>
<p>Anatomy/Physiology is the study of the structural complexity of the human body and its intricate functional mechanisms. This course is taught as a laboratory science. Students will conduct scientific investigations and fieldwork using scientific knowledge and methodology that will enable them to make educated conclusions based on higher-level critical thinking and problem solving skills. The areas studied will be an integration of biology and chemistry and will include, but are not limited to: Organization of the body, Chemical Basis for Life, Cells &amp; Tissues, Integumentary System, Skeletal system, Muscular system, Nervous system, Endocrine system, Blood, Circulatory system, Lymphatic &amp; Immune systems, Respiratory systems, Digestive system &amp; Metabolism, Urinary system, and Reproductive system. An emphasis should be placed on real-world applications and active-learning exercises should be included along with laboratory experiences.</p>				
<b>HL00034</b>	<b>Surgical Technology Orientation</b>	<b>15</b>	<b>0</b>	<b>15</b>
<p>Surgical Technology Orientation includes the basic safety concepts, individual learning styles, introduction to information technology and review of the surgical technology handbook.</p>				
<b>HL00047</b>	<b>Core Employability Skills</b>	<b>30</b>	<b>0</b>	<b>30</b>
<p>In this course students learn how employability skills enhance their employment opportunities and job satisfaction. Students are introduced to key employability skills and will learn the importance of maintaining and upgrading skills as needed.</p>				

**HL00112 Introduction to Surgical Technology 30 0 30**

This course is designed to provide information introducing the student to the roles and responsibilities of the surgical team and the health care system. Students will explore the ethical and legal concepts and professional responsibilities of the surgical technology field.

**HL00537 Disaster and Emergency Preparedness 15 0 15**

This course includes these aspects of emergency preparedness and disaster training: preparation and planning, detection and communication, incident management and support systems, safety and security, clinical/public health assessment and intervention, contingency, continuity and recovery and public health law and ethics. This is a new course for surgical technology, however it could be offered in any career major.

**HL00144 Essentials of Surgical Asepsis 32 28 60**

This course will introduce the student to the principles and practices of aseptic technique, scrubbing, gowning, gloving, sterilization and disinfection. Upon completion of this course, the student will be able to discuss and demonstrate the principles of aseptic technique.

**HL00145 Surgical Case Management 48 72 120**

This course will introduce the student to the supplies and equipment that are an integral part of their training as a Surgical Technologist, including instrumentation, suture, sponges, drains, counts, and the sterile field and draping of sterile field. Upon completion of the course, the student will be able to demonstrate competency in using supplies and equipment in the surgical environment.

**HL00202 Surgical Tech Practicum I 0 30 30**

Surgical Technologist Practicum I is an introduction to principles of surgical conscience in preparation for patient care. This course provides observational and practical experiences in the laboratory setting and/or clinical environment.

**HL00113 Surgical Patient Care 35 10 45**

Upon completion of this course the student will be able to demonstrate patient care skills in the surgical environment. The course enables the student to develop techniques used to safely transport, position, and prep the patient for surgery, and the proper care of surgical specimens. Students will apply these skills across the lifespan and to patients with complex needs.

**HL00203 Surgical Pharmacology 30 0 30**

This course familiarizes the student with the various drugs used in surgery and their administration. The student will demonstrate an understanding of basic anesthesia equipment, drugs, and methods in order to function effectively in the surgical setting. Upon course completion the student may assist the anesthesia personnel if required.

**HL00204 Microbiology and Wound Healing 30 0 30**

This course is designed to provide the student with a basic background in microbiology. This course will provide a better understanding of the relationship between microorganisms and the maintenance of health and/or the prevention of disease. The course of study includes a general introduction to microbiology, infection/immunology, and wound healing

**HL00114 Surgical Procedures I 90 0 90**

This course is designed to provide instruction in basic, intermediate, and advanced core procedures outlined in the Core Curriculum for Surgical Technologists by the Association of Surgical Technologists. The student will be able to apply and demonstrate the concepts related to the following surgical

procedures: General, Obstetric and Gynecological, Genitourinary, Otorhinolaryngologic, and Orthopedic Surgery.

**HL00205 Surgical Procedures II 75 0 75**

This course is designed to provide instruction in basic, intermediate and advanced specialty procedures outlined in the Core Curriculum for Surgical Technologists by the Association of Surgical Technologists. The student should be able to apply and demonstrate the concepts related to each of the following surgical procedures: Neurosurgery, Cardiothoracic, Peripheral Vascular, Oral, Maxillofacial, Plastic and Ophthalmic Surgery.

**HL00207 Surgical Tech Practicum II 0 210 210**

This course provides clinical experience in the surgical environment. The student assumes responsibility as the first scrub role, handling instruments and supplies and equipment necessary for the surgical procedure. Emphasis is placed on core surgical procedures.

**HL00208 Surgical Tech Practicum III 0 240 240**

This course provides advanced clinical experience in the surgical environment with minimal assistance. Students will prepare for and complete the national certification exam.

<b>Career Major Total:</b>	<b>Theory</b>	<b>Lab/Clinical</b>	<b>Total</b>
Adult Student:	595	590	1185

**Evaluation Policy:**

As a formative evaluation tool the Surgical Technologist Career Major utilizes a program learning/management system called “Moodle” to provide feedback of didactic knowledge, skills performance evaluations and course information to the students. The grade book portion of Moodle records students’ test results, and provides immediate feedback and a detailed breakdown of responses to different questions.

Examples of formative evaluation tools used by the program to measure cognitive, psychomotor and affective behaviors include journaling, group discussions (question and answering sessions), pop quizzes, Study-ware quizzes and textbook assignments, workbook assignments, individual lab skill check-offs and weekly clinical evaluations feedback.

An example of summative evaluation tools utilized by the Surgical Technologist Career Major to assess the student’s overall progress includes a final comprehensive examination for each course within the program. Prior to the start of the clinical portion of the program, each student’s lab skills performance is evaluated by a faculty member and a clinical preceptor using a clearly defined performance rubric. Feedback and discussion of performance evaluation is provided immediately after skills assessment in a formal meeting with each student, clinical preceptor/evaluator, clinical instructor, and the Program Director. The evaluation tool verifying the post-evaluation conference includes the date and signatures of the student, evaluator, and program faculty.

Documentation of all completed student evaluations are maintained in each student’s permanent file. Other clinical evaluation tools include weekly clinical evaluations, clinical case verifications, case study assignments, clinical logs and daily informal student feedback.

Periodic evaluations of classroom and clinical performance are made so that the student will be aware of his/her status and can apply greater effort where indicated.

**Grading Standards:**

Periodic evaluations of classroom and clinical performance are made so that the student will be aware of his/her status and can apply greater effort where indicated.

Didactic Grading Scale

The grading scale as adopted by the Board of Educations is as follows:

- A = 93 - 100
- B = 85 - 92
- C = 77 - 84\*
- D = 70 - 76
- F = 60 and Below

Each individual course, as outlined in the Surgical Technologist career major, will be given a separate theory grade based on the following categories:

- Homework Grades ..... 5% of final grade
- Final Exam Grades..... 20% of final grade
- Employability Grades ..... 5% of final grade
- Lab Grades ..... 5% of final grade
- Clinical Grades ..... 30% of final grade
- Test Grades ..... 30% of final grade
- Quiz Grades ..... 5% of final grade

\*Students are required to maintain an 80% average in each course taught to pass from one level to the next in each semester and to complete the Surgical Technologist Career Major. Assignments turned in late results in 10 points loss on assignment grade. Late assignments, in excess of 1 week (7 consecutive days to include the weekend) will result in a "0" for that assignment grade.

If student is absent the day that assignments are made, it is the student's responsibility to contact instructor to review material covered during class or clinical and receive assignment, exams, or worksheets given.

Exams should be made up immediately upon return to class, unless advanced arrangements have been made with the instructor. Students must take exam within one week of the missed examination date. Any student missing an exam will have 10 points deducted from the makeup exam. If student fails to make up the exam during the specified time frame, it will result in a "0" for that exam grade. (It is the student's responsibility to make arrangements with the instructor for examination makeups.)

If a didactic examination results in the student's GPA falling below 80%, the student will be notified of this and allowed to remediate and retest. The student must retest within a week (7 consecutive days to include the weekend). The first and second test will be added together and divided by two for final grade. After remediation, if an 80% is not attained within the allotted time, the student will be placed on academic probation for a period of 2 weeks. If the student fails to achieve an 80% GPA after the probation period, the student will be recommended for dismissed from the program.

Academic didactic probation is used to provide the student with extra credit work, (20 points maximum) one time per semester per each course, in order to gain knowledge and experience necessary in

deficient surgical technology concepts to raise his/her grade up to the required academic standard of the 80% GPA, but not to exceed the 80%.

Specific requirements, during a counseling session, of the academic didactic probation, will be given to the student in writing. The student will be solely responsible for contacting instructors and getting extra credit work, scheduling of tutoring, individual instruction and verifying the time period for improving his/her grade. The academic didactic probation is in place to encourage students to seek extra help from instructor to continue improving future exam or assignment grades.

Extra credit work must be turned in within two weeks after the written academic probation counsel, or student will forfeit points.

If the final exam brings a student's final academic didactic GPA below the 80% in a course, then the student will be recommended for dismissal from the Surgical Technologist Career Major, regardless of prior probationary status.

## **TESTS, GRADES, AND EVALUATION**

Students may access grades at <https://www.gptech.org/grades>

ID = first initial of first name and last name, all in caps.

Ex. Jim Smith = JSMITH

PIN = last 4 numbers of your SSN.

At the end of the academic didactic, clinical, or disciplinary probation period, students not meeting the minimum standards established in the written counseling may be recommended for dismissal from the program.

## **CLINICAL GRADING POLICY:**

- Level II-III grades are derived from the clinical evaluation.
- Grades will be awarded by achievement of clinical objectives.
- There is a total of two hundred sixty three points possible for each clinical week.
- The grading system will be sub-divided into 3 main areas.
- Attendance – Five per day, Twenty-five possible per week.
- Professional Accountability – Twenty four possible points per week.
- Case Management Accountabilities – One hundred and four possible points per week.
- The student will be required to complete one Case Management Plan per week worth one hundred possible points.
- The student will receive fifteen points each week for completion of the Surgical Procedure Case Log (Checklist) and the Clinical Data Totals Form.

## **LEVEL I – PERFORMANCE CHECK OFFS**

Performance Evaluation grades are given in Level I for skills in Essentials of Surgical Asepsis, Surgical Patient Care, and Surgical Case Management.

Once student has completed practice on a specific skill, the following process will evaluate the student.

Performance evaluation - Once the student has satisfactorily completed the skill, the student will be rated using the following rubric. If the student's performance is unacceptable, the student will be



allowed to review the material and perform skill for evaluation again. A total of 3 tries will be allowed. Student must pass each skill evaluation attempt with a score of 100%.

## **LABORATORY SKILLS EVALUATION RUBRIC**

- A. Successful – 3 points  
Student is able to perform skills, following specified guidelines provided in class, independently (without guidance or suggestions from instructor), and should be able to identify own errors and correct errors without intervention from instructor.
- B. Needs Work – 2 points  
Student is able to perform skills, following specified guidelines provided in class, with minimal guidance or cuing (suggestions) from instructor. Student is able to identify own errors but requires assistance from instructor in correcting errors.
- C. Not Successful – 0 points  
Student requires multiple cues/guidance from instructor to perform skill, following specific guidelines in class. Requires assistance from instructor to identify errors. Student is able to perform skills during a second testing time with minimal guidance or cuing.

### **Make-Up Work Policy:**

**All Make-Up Work Is The Responsibility Of The Student.** Make-up work will be handled as specified in the Student Handbook. Please be sure to read and understand all student policies, especially make-up of assignments, tests and employability due to absences. Students should always arrange for any make-up work with the instructor as per the Student Handbook. Students should keep track of his or her progress and grades.

### **Attendance Policy:**

For specific information related to attendance and tardiness refer to the Student Handbook. Students should keep a written record of their absences and tardiness.

### **Course Requirements and Expectations:**

The general course requirements and expectations include:

- Be able to bend, walk, and stand for long periods of time
- Be able to lift, carry, push, and handle equipment, supplies, or patients exceeding 25 pounds
- Be able to work in environmental temperatures from 60 degrees to 80 degrees Fahrenheit range
- Be aware that exposure to latex gloves may cause the development of allergic reactions
- Be aware that their skin should be clear and free of conditions which would impair the integrity of skin
- Must demonstrate ability to functionally perceive the nature of sounds and the spoken word, may use adaptive techniques or devices
- Must demonstrate ability to functionally express self orally and/or in writing
- Must be able to demonstrate the functional ability to obtain impressions of shape, size, and motion by passing routine vision screening and to distinguish red and green colors, adaptive devices may be used
- Adhere to the policies and procedures as outlined in the Great Plains Technology Center Adult Student Handbook
- Successfully complete the National Certification Exam

### **Student Behavior Includes:**

- Student will demonstrate responsibility by being punctual and adhering to daily attendance requirements.
- Student will demonstrate responsibility for academic achievement by completing all required course work.
- Student will use appropriate language and effective communication skills, avoid gossip, and demonstrate patient and peer confidentiality.
- Student will maintain personal safety by wearing safety glasses and lead aprons. Student must practice sharp(s) precautions and must follow standard precautions at all times during lab and clinical practicum.

***NOTE: For additional information or questions regarding the GPTC School policies and procedures, please refer to the Student Handbook and/or the Instructor.***

### **Industry Alignments:**

- National Board of Surgical Technology and Surgical Assisting (NBSTA)
- Central Board for Sterile Processing and Distribution (CBSPD)
- National Consortium of Health Science Technology Education (NCHSTE)

### **Certification Outcomes:**

**Tier 1** – Certifications Recognized, Administered and/or Endorsed by Industry

- NBSTSA: **Certified Surgical Technologist (CST) (8711)**

**Tier 7** – National Career Readiness Certificate in Applied Mathematics, Locating Information and Reading for Information:

- Platinum Level – 6 or above in all three areas
- Gold Level – 5 or above in all three areas
- Silver Level – 4 or above in all three areas
- Bronze Level – 3 or above in all three areas

### **CIP Code and SOC Code Crosswalk:**

- CIP Code – 51.0909
- SOC Code – 29-2055.00

### **Instructional Materials and Supplies:**

*Students are required to purchase the following list of textbooks and/or supplemental reference materials. The prices listed are approximate and subject to change.*

#### **Textbooks:**

Ehrlich, Ann, and Carol L. Schroeder. Medical Terminology for Health Professions. 8<sup>th</sup> ed. 978-1305634350. Clifton Park: Delmar Cengage Learning, 2013. **(\$114.00)**

Fuller, Joanna R. Surgical Technology: Principles and Practice Textbook. 6<sup>th</sup> ed. 978-1455725069. St. Louis: Saunders/Elsevier, 2014. **(\$109.00)**

Nemitz, Renee. Surgical Instrumentation: An Interactive Approach. 2<sup>nd</sup> ed. 978-1455707195. St. Louis: Saunders/Elsevier, 2013. **(\$77.00)**

Phillips, Nancymarie. Berry & Kohn's Operating Room Technique. 13<sup>th</sup> ed. 978-0323399265. St. Louis: Saunders/Elsevier, 2014. (~~\$124.00~~)

Rogers, Emily M., Emily H. Boegli, and Kathy LaRue. Pearson's Surgical Technology Exam Review. 3<sup>rd</sup> ed. 978-0135000489. Upper Saddle River: Pearson Prentice Hall, 2012. (~~\$83.00~~)

Vaughn, Dean. Medical Terminology 350: Learning Guide. 2<sup>nd</sup> ed. 978-0914901129. Walpole: DCM Instructional Systems, 2013. (\$30.00)

### **CIMC-Career and Instructional Material Center**

Introduction to Surgical Technology. 4<sup>th</sup> ed. HO3018. Stillwater: MAVCC, 2014. (\$68.00)

Surgical Techniques. 4<sup>th</sup> ed. HO3019. Stillwater: MAVCC, 2014. (~~\$47.00~~)