

### Course Syllabus

COURSE: SRGT 1244 (2:2:0) Technological Sciences for the Surgical Technologist (2 Credit Hours)  
 SEMESTER: Summer 1 (June-August; 10 Week Semester)  
 CLASS TIMES: Thursday 1pm – 2:30pm Thursday Online  
 INSTRUCTOR: Paul Landsman, CST  
 OFFICE: RC 512  
 OFFICE HOURS: By appointment only Monday-Wednesday, Thursday 8:30-12:30, Friday 11:30-3:00  
 OFFICE PHONE: 806-716-4642  
 E-MAIL: [plandsman@southplainscollege.edu](mailto:plandsman@southplainscollege.edu)  
 PROGRAM FACEBOOK: <https://www.facebook.com/SPCSurgicalTechnology>

**The Surgical Technology Program has a Facebook page at <https://www.facebook.com/SPCSurgicalTechnology>. In addition to the South Plains College website, this Facebook page will be used to keep students up-to-date on program activities, weather delays, South Plains College announcements and will help with program recruitment. “Liking” the Surgical Technology Facebook page is not mandatory, nor are personal Facebook accounts, in order to access this page.**

Blackboard is an e-Education platform designed to enable educational innovations everywhere by connecting people and technology. This educational tool will be used in this course throughout the semester.

*“South Plains College improves each student’s life.”*

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## GENERAL COURSE INFORMATION

### COURSE DESCRIPTION

This course covers specialized surgical modalities. Areas covered include endoscopy, microsurgery, therapeutic surgical energies, and other integrated science technologies.

### STUDENT LEARNING OUTCOMES

Students will:
1. Demonstrate basic knowledge of sterilization F-1, F-2, F-5, F-6, C-18, C-19, C-20
2. Understand the basic concepts of electricity specific to equipment in the operating room. F-1, F-2, F-5, F-6, F-11, F-12, C-5, C-6, C-7, C-8, C-18, C-19, C-20
3. Display a working knowledge of suture and suturing techniques.F-1, F-2, F-5, F-6, F-7, F-11, F-12, C-5, C-6, C-7, C-15, C-18, C-19
4. Gain an introductory understanding of laparoscopic instrumentation and robotics in surgery.F-1, F-2, F-5, F-6, C-5, C-6, C-7, C-18, C-19, C-20
5. Prepare for the CST exam.F-1, F-2, F-4, F-5, F-6, F-7,F-8, F-9, F-10, F-11, F-12, C-5, C-6, C-7, C-8, C-15, C-16, C-17, C-18, C-19, C-20

### COURSE OBJECTIVES –

#### The Cognitive Domain Objectives:

- List and discuss the basic components and mechanisms of the laparoscopic and robotic systems
- Define electricity principles
- Define principles of LASERS and types of LASERS
- List the clinical applications of robotics in the operating room
- Outline basic concepts of robotics
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### **The Psychomotor Domain Objectives:**

- Apply electrical knowledge to safe patient care practices in the OR
- Explain different types of electrical current
- Explain terms related to LASERS

### **The Affective Domain Objectives:**

- Discuss the pros and cons of robotic cases
- Apply knowledge of electricity to safe practices in the operating room
- Apply principles of physics to safe patient care
- Discuss basic concepts related to robotics
- Apply knowledge of LASER surgery

### **OUTCOME ASSESSMENT METHODS**

Assessment methods for this course are both formative and summative.

#### **Formative assessments include:**

- Discussions
- Quizzes
- Unit exams
- Classroom activities
- Lab activities

#### **Summative assessment will be:**

- A comprehensive final research project
- A Comprehensive final group project

### **ACADEMIC INTEGRITY**

It is the aim of the faculty of South Plains College to foster a spirit of complete honesty and a high standard of integrity. The attempt of any student to present as his or her own any work which he or she has not honestly performed is regarded by the faculty and administration as a most serious offense and renders the offender liable to serious consequences, possibly suspension.

**Cheating** - Dishonesty of any kind on examinations or on written assignments, illegal possession of examinations, the use of unauthorized notes during an examination, obtaining information during an examination from the textbook or from the examination paper of another student, assisting others to cheat, alteration of grade records, illegal entry or unauthorized presence in the office are examples of cheating. Complete honesty is required of the student in the presentation of any and all phases of coursework. This applies to quizzes of whatever length, as well as final examinations, to daily reports and to term papers.

**Plagiarism** - Offering the work of another as one's own, without proper acknowledgment, is plagiarism; therefore, any student who fails to give credit for quotations or essentially identical expression of material taken from books, encyclopedias, magazines and other reference works, or from themes, reports or other writings of a fellow student, is guilty of plagiarism.

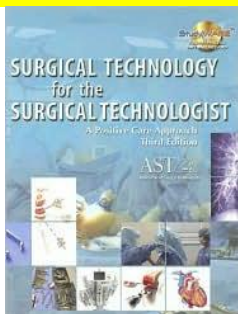
## SCANS and FOUNDATION SKILLS

Refer also to Course Objectives. SCANS and Foundation Skills attached.

## VERIFICATION OF WORKPLACE COMPETENCIES

This course does not include a Capstone component

## SPECIFIC COURSE INFORMATION



Surgical Technology for the Surgical Technologist: A Positive Care Approach, 3<sup>rd</sup> ed., AST (Text)

## METHODS OF TEACHING

- Lecture
- PowerPoint Presentations
- Question and answer
- Review
- Quizzes
- Examinations

## ATTENDANCE POLICY

Class attendance is mandatory. Students are allowed three (3) absences and will be administratively withdrawn on the fourth (4<sup>th</sup>) absence. A tardy will be given if the student is not present for the class or lab within the first 5 minutes of the class period. Two (2) tardies equal one (1) absence. If a student misses more than 30 minutes of any class session, an absence will be given for the day.

## ASSIGNMENT POLICY

The student is responsible for being prepared for class, which means reading the assigned chapters and/or pages from the textbook. In some instances, information from the reading assignments not covered during class may be included on a test.

**GRADING POLICY** - Grades in this course will be determined using the following criteria:

The course grade will be determined by a combination of exams, quizzes, homework, a project, and a comprehensive final exam. Exam dates will be announced. The following guidelines will be followed regarding exams:

1. The student is expected to complete the exam at the scheduled time. Make-up exams will not be given.
2. Late assignments will not be accepted.

3. The Final exam is comprehensive.

(3)Homework	25%
(3)Exams	25%
(1) Final Project	50%

<i>Grading Scale</i>	<i>91-100 = A</i>
	<i>81-90 = B</i>
	<i>75-80 = C</i>
	<i>Below 75 is failing</i>

A grade average of C (75) must be maintained in all Surgical Technology classes. You must pass all courses to proceed to the next semester

Attendance is updated on MySPC daily. This helps the student keep track of absences at all times throughout the semester. If the student feels that any information regarding attendance is incorrect, please notify instructor within 24 hours, in writing.

#### **COMMUNICATION POLICY**

- Electronic communication between instructor and students in this course will utilize the South Plains College “My SPC” and email systems. Instructor will not initiate communication using private email accounts. Students are encouraged to check SPC email on a regular basis.

#### **STUDENT CONDUCT**

- Students in this class are expected to abide by the standards of student conduct as defined in the SPC Student Guide pages 11-14.

#### **SPECIAL REQUIREMENTS**

- **Cell Phones** – Cell phones are to be turned OFF during scheduled class periods, unless prior approval has been given from the instructor. This includes text messaging. Cell phones are to be used outside the classroom only.

## COURSE OUTLINE

Course Outline is subject to change by instructor.

### **Surgical Technologist Certifying Exam Study Guide**

#### **CST – Certification Surgical Technology**

The student will prepare for the national certification exam given by the NBSTSA one week before graduation. Students who pass this exam will have the credential of CST- Certified Surgical Technologist.

#### **Lecture Topics**

- A. Electricity
- B. LASERS
- C. Robotics
- D. Computers

#### **Week 1: 06/4/15**

**Signing of syllabus forms**

**Introduction to clinical paperwork and expectations**

**Discuss group project: Create a game that for review of CST certification**

**Discuss Group Project Guidelines: This will be a class presentation**

#### **Week 2: 06/11/15 *Lecture, PowerPoint Presentations, Question and answer***

**Understanding basics of Electricity**

- Fundamentals of electrical currents
- Fundamentals of electrical equipment in the OR
- Types of electrocautery used and safety when om use

#### **Week 3: 06/18/15 *Examination, lecture, PowerPoint Presentations, Question and answer***

**Exam: Electricity**

**Lecture: LASERS**

- Laser energy
- Laser standards and regulations
- Laser Safety
- Laser Precautions and Guidelines

#### **Week 4: 06/25/15 *Examination, lecture, PowerPoint Presentations, Question and answer***

**Exam: LASERS**

**Lecture: Robotics**

- Terminology
- Design
- Decontamination and Sterilization of Robotic Components
- Clinical Applications

**Week 5: 07/2/15** Examination, lecture, PowerPoint Presentations, Question and answer

**Exam: Robotics**

**Lecture: Computer in the OR**

- Use of computers in surgery
- EMR (Electric Medical Records)
- Advances in surgery due to computers

**Week 6: 07/9/14** Examination

**Work on group projects**

**Week 7: 7/16/14** Review, Question and answer

**Work on group projects**

**Week 8: 7/23/15** Review, Question and answer

**Work on group projects**

**Week 10: 07/30/15** Review, Question and answer

**Individual project Presentations**

**Group Project Presentations – Each group will choose a topic or topics in which they will create a minimum of 50 questions CST Exam Review to be presented to the class via a game. Late projects will not be accepted. (25% of overall grade)**

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## ACCOMMODATIONS

### DIVERSITY STATEMENT

In this class, the teacher will establish and support an environment that values and nurtures individual and group differences and encourages engagement and interaction. Understanding and respecting multiple experiences and perspectives will serve to challenge and stimulate all of us to learn about others, about the larger world and about ourselves. By promoting diversity and intellectual exchange, we will not only mirror society as it is, but also model society as it should and can be.

### DISABILITIES STATEMENT

Students with disabilities, including but not limited to physical, psychiatric, or learning disabilities, who wish to request accommodations in this class should notify the Disability Services Office early in the semester so that the appropriate arrangements may be made. In accordance with federal law, a student requesting accommodations must provide acceptable documentation of his/her disability to the Disability Services Office. For more information, call or visit the Disability Services Office through the Guidance and Counseling Centers at Reese Center (Building 8) [716-4606](tel:716-4606), or Levelland (Student Services Building) [716-2577](tel:716-2577)

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## FOUNDATION SKILLS

### **BASIC SKILLS—Reads, Writes, Performs Arithmetic and Mathematical Operations, Listens and Speaks**

F-1 Reading—locates, understands, and interprets written information in prose and in documents such as manuals, graphs, and schedules.

F-2 Writing—communicates thoughts, ideas, information and messages in writing and creates documents such as letters, directions, manuals, reports, graphs, and flow charts.

F-3 Arithmetic—performs basic computations; uses basic numerical concepts such as whole numbers, etc.

F-4 Mathematics—approaches practical problems by choosing appropriately from a variety of mathematical techniques.

F-5 Listening—receives, attends to, interprets, and responds to verbal messages and other cues.

F-6 Speaking—organizes ideas and communicates orally.

### **THINKING SKILLS—Thinks Creatively, Makes Decisions, Solves Problems, Visualizes and Knows How to Learn and Reason**

F-7 Creative Thinking—generates new ideas.

F-8 Decision-Making—specifies goals and constraints, generates alternatives, considers risks, evaluates and chooses best alternative.

F-9 Problem Solving—recognizes problems, devises and implements plan of action.

F-10 Seeing Things in the Mind's Eye—organizes and processes symbols, pictures, graphs, objects, and other information.

F-11 Knowing How to Learn—uses efficient learning techniques to acquire and apply new knowledge and skills.

F-12 Reasoning—discovers a rule or principle underlying the relationship between two or more objects and applies it when solving a problem.

### **PERSONAL QUALITIES—Displays Responsibility, Self-Esteem, Sociability, Self-Management, Integrity and Honesty**

F-13 Responsibility—exerts a high level of effort and perseveres towards goal attainment.

F-14 Self-Esteem—believes in own self-worth and maintains a positive view of self.

F-15 Sociability—demonstrates understanding, friendliness, adaptability, empathy and politeness in group settings.

F-16 Self-Management—assesses self accurately, sets personal goals, monitors progress and exhibits self-control.

F-17 Integrity/Honesty—chooses ethical courses of action.

## SCANS COMPETENCIES

C-1 **TIME** - Selects goal - relevant activities, ranks them, allocates time, prepares and follows schedules.

C-2 **MONEY** - Uses or prepares budgets, makes forecasts, keeps records and makes adjustments to meet objectives.

C-3 **MATERIALS AND FACILITIES** - Acquires, stores, allocates, and uses materials or space efficiently.

C-4 **HUMAN RESOURCES** - Assesses skills and distributes work accordingly, evaluates performances and provides feedback.

### **INFORMATION - Acquires and Uses Information**

C-5 Acquires and evaluates information.

C-6 Organizes and maintains information.

C-7 Interprets and communicates information.

C-8 Uses computers to process information.

**INTERPERSONAL—Works With Others**

C-9 Participates as members of a team and contributes to group effort.

C-10 Teaches others new skills.

C-11 Serves Clients/Customers—works to satisfy customer's expectations.

C-12 Exercises Leadership—communicates ideas to justify position, persuades and convinces others, responsibly challenges existing procedures and policies.

C-13 Negotiates—works toward agreements involving exchanges of resources; resolves divergent interests.

C-14 Works With Diversity—works well with men and women from diverse backgrounds.

**SYSTEMS—Understands Complex Interrelationships**

C-15 Understands Systems—knows how social, organizational, and technological systems work and operates effectively with them.

C-16 Monitors and Corrects Performance—distinguishes trends, predicts impacts on system operations, diagnoses systems performance and corrects malfunctions.

C-17 Improves or Designs Systems—suggests modifications to existing systems and develops new or alternative systems to improve performance.

**TECHNOLOGY—Works with a Variety of Technologies**

C-18 Selects Technology—chooses procedures, tools, or equipment, including computers and related technologies.

C-19 Applies Technology to Task—understands overall intent and proper procedures for setup and operation of equipment.

C-20 Maintains and Troubleshoots Equipment—prevents, identifies, or solves problems with equipment, including computers and other technologies.





**SRGT – 1244 Technological Science for the Surgical Technologist**

I \_\_\_\_\_ have received a copy of the South Plains College Student Guide. I understand that I must comply with all areas of the Student Guide as a student in the Surgical Technology Program and South Plains College.

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Signature

\_\_\_\_\_  
Date