

El Paso Community College

Syllabus

Part II

Official Course Description

SUBJECT AREA	<u>Surgical Technology</u>
COURSE RUBRIC AND NUMBER	<u>SRGT 1405</u>
COURSE TITLE	<u>Introduction to Surgical Technology</u>
COURSE CREDIT HOURS	<u>4 4 : 1</u> Credits Lec Lab

I. Catalog Description

Orientation to surgical technology theory, surgical pharmacology and anesthesia, technological sciences, and patient care concepts. A grade of "C" or better is required in this course to take the next course.

Prerequisites: BIOL 2401 and HPRS 1206. Corequisite: SRGT 1509. (4:1). Lab fee.

II. Course Objectives

Upon satisfactory completion of this course, the student will be able to:

A. Unit I – Introduction to Surgical Technology

1. Discuss the reasons/goals for surgical intervention.
2. Trace the historical development of surgery and surgical technology.
3. Recognize members of the surgical team and their roles.
- 4.. Explain the physical working conditions and demands of a surgical technologist.
5. Explain the job responsibilities and expected behaviors of the surgical technologist.
6. List limitations of the surgical technologist.
7. List areas of employment for the surgical technologist.
8. Describe the surgical technology professional organizations: AST; ARC/STSA; NB/STSA: Texas State Assembly.
Analyze the components of effective teamwork and communication.
9. Interpret the concept of surgical conscience
10. Identify different types of health care facilities
11. Describe a typical hospital organizational chart.
12. Describe an organizational chart for the operating room.
13. Identify hospital departments on which the surgical suite depends to give continuity of patient care.
14. Identify national and professional organizations that impact the surgical technologist in his/her practice.

B. Unit II- Legal Concepts, Risk Management, and Ethical Issues

1. Review definitions of general legal terms.
2. Define principles /doctrines of law that affect the surgical technologist.
3. Identify areas of legal responsibility in surgery that may result in tort action.
4. Identify requirements for an informed surgical consent.
5. Discuss the importance of documentation as it relates to risk management.

6. Discuss the moral and ethical issues that may impact the surgical technologist.
7. Analyze scope of practice issues as they relate to surgical technology.
8. Explain the credentialing process and its importance to surgical technology.
9. Evaluate the roles of the risk management process in the health care facilities.
10. Explain the importance of professional standards that govern delivery of patient care.

C. Unit III- The Surgical Patient

1. Discuss patient response to illness and hospitalization for surgical intervention.
2. Discuss patient's responses to the process of death.
3. Identify the physical, spiritual, cultural, and psychological needs of a surgical patient.
4. Explain Maslow's Hierarchy of Needs.
5. Explain special considerations required in caring for the pediatric patient during surgical intervention.
6. Describe characteristics of patients with special needs: psychological, cultural, and physical.
7. Explain special considerations required in caring for the geriatric patient.
8. Summarize patient responses to the process of death.
9. Describe considerations and responsibilities required for care of the trauma patient.
10. Discuss the purpose of preoperative routines.
11. Explain preoperative procedures performed evening/morning before surgery.
12. Describe the method for patient identification.
13. Describe methods of patient transportation.
Describe the admission process to the pre-op holding area.

D.. Unit IV– Surgical Pharmacology

1. Explain terms related to basic pharmacology.
2. List sources of drugs and give an example of each.
3. List the forms that drugs come in and give examples.
4. Differentiate between types of names that a drug may have.
5. List four drug classification categories and identify several subcategories in each.
6. Discuss drug orders in surgery.
7. Discuss the drug distribution systems used in hospitals.
8. Discuss drug administration routes, especially those used in surgery.
9. Describe the four processes of pharmacokinetics.
10. Describe pharmacodynamic events and interactions.
11. Discuss federal and state roles in regulating drugs.
12. Characterize the phases of human drug testing.
13. Discuss sources for obtaining drug information.
14. Apply basic mathematics to convert values within and between measurement systems.

E. Unit V - Anesthesia

1. Describe preanesthetic preparation of the patient.
2. Describe factors that influence anesthesia selection for individual patients.
3. Differentiate between various types of anesthesia administration.
4. Describe methods for administration of general anesthesia, including various agents used.
5. Describe phases of general anesthesia.
6. Distinguish among techniques used for regional anesthesia.
7. Identify agents used in regional anesthesia administration.
8. Describe adjunct equipment and its use during anesthesia.
9. Explain methods of patient monitoring.
10. Describe possible complications of anesthesia.
11. Explain the roles of the surgical technologist and professional nurse in the care of the anesthetized patient.

F. Unit VI Positioning the Surgical Patient

1. Identify the team member who
 - a. Chooses the position to be used
 - b. Gives permission to begin positioning
 - c. Is responsible for effecting the position
2. Discuss the safety measures to be observed when moving or positioning an awake or anesthetized patient.
3. Describe the impact on body systems when positioning a patient.
4. Identify table/bed parts and accessory attachments that are used in positioning a patient.
5. Describe the supine(dorsal recumbent) position including padding and safety measures that must be taken for patient safety.
6. Describe the modifications made on the supine position to safely achieve:
 - a. Trendelenberg position
 - b. Reverse Trendelenberg position
 - c. Fowler's (sitting position)
 - d. Semi-Fowler's (lawn-chair/semi-sitting) position
 - e. Lithotomy position
 - f. Orthopedic fracture table position
7. Describe the considerations involved in safely positioning a patient in a prone position and modifications to:
 - a. Jackknife/Kraske position
 - b. Laminectomy positioning with tables and frames
8. Describe the lateral position and its safety criteria, including padding and stabilization devices and modifications for:
 - a. Lateral chest surgery
 - b. Lateral kidney surgery
9. Discuss accommodations for the individuality of patients with respect to:
 - a. Morbid obesity
 - b. Amputated/missing limbs
 - c. Excess height
 - d. Pediatric patients
 - e. Elderly/frail patients
 - f. Paralyzed or immobile patients

G.. Unit VII Skin Prepping and Surgical Draping

1. Explain the purpose of skin preparation prior to surgery
2. Explain why and how bathing might be prescribed before going to the hospital for surgery
3. Describe the guidelines for hair removal including:
 - a. Clippers
 - b. Depilatory cream/lotion
 - c. Razors
4. List the contents of a skin scrub tray
5. Describe the characteristics of commonly used antiseptics
6. Describe the skin prep process incorporating the " clean to dirty" concept.
7. Explain the modification of the basic skin prep due to the inclusion of a "Contaminated area" within the prep area.
8. Identify special considerations when prepping:
 - a. Hand or arm
 - b. Vagina
 - c. Face or eyes
 - d. Foot or leg
 - e. Skin graft with graft site

9. Describe the characteristics of effective drapes
10. Describe the variety of drapes that are available for use
11. Compare woven and non-woven fabrics
12. Explain basic draping techniques
13. Identify procedures and components used to drape for procedures on various parts of the body.

H. Unit VIII Sterilization and Disinfection

1. Differentiate between disinfection, decontamination, and sterilization.
2. Discuss the classification of patient care equipment
3. Describe methods of surgical suite decontamination pre-, peri-, and post-operatively
4. Compare the properties of chemical disinfectants.
5. Explain efforts to confine contamination to the restricted area (OR room) during a surgical procedure
6. Describe after-case clean-up.
7. Describe terminal disinfection at the completion of the daily schedule
8. Identify the peripheral areas of the surgical suite which require weekly cleaning.
9. Explain the stage of the instrument/equipment processing cycle from point of use to subsequent point of use.
10. Identify and compare methods and parameters of sterilization including:
 - a. Steam under pressure
 - b. Ethylene oxide gas
 - c. Activated gluteraldehyde (Cidex)
 - d. Peracetic acid (Steris)
 - e. Hydrogen peroxide gas plasma (Sterrad)
 - f. Dry heat
 - g. Gamma irradiation
11. Describe processes for preparing instruments/equipment for sterilization
12. Discuss precautions and personnel exposure safety with sterilization methods.
13. Discuss sterilization process monitoring including:
 - a. Administrative
 - b. Mechanical controls
 - c. Chemical indicators/integrators
 - d. Biological indicators
14. Explain storage requirements of sterile supplies and shelf-life parameters
15. Discuss reprocessing of single use devices (SUDs).
16. Discuss special protocols for exposure to transmissible spongiform encephalopathy.

I. Unit IX Supplies and Techniques

1. Identify common sponges as to type, use, and preparation
2. Describe the various usages of accessory supplies including:
 - a. Hypodermic and spinal needles
 - b. Syringes
 - c. Irrigators
 - d. Basins and specimen containers
3. Describe the care and handling of medications to and on the sterile field
4. Explain in detail the procedure for counting sponges, sharps, instruments, and accessory items on the sterile field to prevent retained foreign objects.
5. Describe the responsibility for counts and their documentation.
6. Describe the safety rules for achieving accurate counts of sponges, sharps and instruments
7. Describe different types of specimens, their preparation and care.

III. THECB Learning Outcomes (WECM)

1. Explain the physical, interpersonal, and ethical aspects of the operating room environment.
2. Relate basic concepts of surgical pharmacology and anesthesia.
3. Identify basic concepts of technological sciences.
4. Demonstrate patient care concepts.

IV. Evaluation

- A. Preassessment
 1. Completion of all prerequisite courses with a minimum grade of C
 2. Completion of Specialized Admission Program Criteria.
- B. Postassessment
 1. Quizzes may be administered without prior announcement.
 2. Assignment sheets will be completed.
 3. Completion of Study Guide assignments (due at the end of each unit).
 4. Written midterm exam will be administered at the end of the first five (5) weeks.
 5. Written final exam will be administered at the end of the second five (5) weeks.
- C. Remediation

The instructor will provide individual procedures for students needing remediation after an individual conference has been scheduled. Such procedures may include, but are not limited to supplementary assignments, tutorial assistance, etc.
- D. Grading
 1. Eight (8) unit exams will be weighted equally and averaged to provide 55% of the final grade.
 2. Quizzes/assignment sheets will be averaged and weighted as an exam.
 3. Study Guide will be reviewed and weighted as 5% of the final grade.
 4. Midterm exam weighted 20%
Final exam weighted 20%.
 5. Grading Scale
A = 93 - 100
B = 85 - 92
C = 77 - 84
 6. Grades are rounded.
 7. SRGT 1405 must be completed with a "C" or above.

V. Disability Statement (American with/Disabilities Act [ADA])

EPCC offers a variety of services to persons with documented sensory, mental, physical, or temporary disabling conditions to promote success in classes. If you have a disability and believe you may need services, you are encouraged to contact the Center for Students with Disabilities to discuss your needs with a counselor. All discussions and documentation are kept confidential. Offices located: VV Rm C-112 (831-2426); TM Rm 1400 (831-5808); RG Rm B-201 (831-4198); NWC Rm M-54 (831-8815); and MDP Rm A-125 (831-7024).

VI. 6 Drop Rule

Students who began attending Texas public institutions of higher education for the first time during the Fall 2007 semester or later are subject to a 6-Drop limit for all undergraduate classes. Developmental, ESL, Dual Credit and Early College High School classes are exempt from this rule. All students should consult with their instructor before dropping a class. Academic assistance is available. Students are encouraged to see Counseling Services if dropping because exemptions may apply. Refer to the EPCC catalog and website for additional information.

VII. Title IX and Sex Discrimination

Title 9 (20 U.S.C. 1681 & 34 C.F.R. Part 106) states the following "No person in the United States shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any educational program or activity receiving Federal financial assistance." The Violence Against Women Act (VAWA) prohibits stalking, date violence, sexual violence, and domestic violence for all students, employees and visitors (male and female). If you have any concerns related to discrimination, harassment, or assault (of any type) you can contact the Assistant to the Vice President for Student and Enrollment Services at 915-831-2655. Employees can call the Manager of Employee Relations at 915-831-6458. Reports of sexual assault/violence may also be reported to EPCC Police at 915-831-2200.