

**Bossier Parish Community College
Master Syllabus**

Course Prefix and Number: STEC 102

Credits Hours: 3

Course Title: Introduction to Surgical Techniques

Prerequisites: STEC 100

Corequisite: STEC 102Lab

Clock Hours: 45 hours lecture

Time Increments: semester

Textbook: Fuller, J.K, Surgical Technology Principles and Practice, 7th edition.
Allhoff, T and Hinton, D.; Surgical Mayo Setups, 2nd edition
Rutherford, Colleen; Differentiating Surgical Instruments, 3rd edition
Rutherford, Colleen; Flashcards for Differentiating Surgical Instruments

Course Description:

This course continues educating the student on the equipment and furniture commonly found in the OR and on work place safety. This also introduces the student to asepsis and sterile technique and the role of each member of the surgical team, as well as basic instrumentation, scrubbing, gowning, gloving, positioning, prepping, draping and correct sponge, sharps and instrument counts. Enrollment in the Surgical Technology Program courses is limited to those students who have been selected and admitted to the program. Program courses are sequenced by semester and must be taken as a group each semester per program requirements and policies.

Methods of Teaching: Lecture, discussions, audio-visual, computer programs (Live-OR, Websurg).

Learning Outcomes:

At the end of this course, the student will

- A. integrate knowledge of disinfection and sterilization principles and practices with the pre – op, intra-op, and post – op duties of the surgical technologist;
- B. *demonstrate proper preparation and application of prep solutions and appropriate sterile draping for various surgical procedures*

To achieve the learning outcomes, the student will

1. distinguish between disinfection and sterilization. (A)

2. recognize the classification of patient-care equipment. (A)
3. recognize the hazards associated with the use of chemical disinfectants. (A,D)
4. describe different disinfectant agents. (A)
5. explain what sanitation is and how it is accomplished. (A)
6. describe the process of instrument decontamination. (A)
7. list the postoperative duties of the surgical technologist. (A,B)
8. apply standard precautions as they apply to decontamination. (A,B)
9. describe personal protective equipment. (A,B)
10. define sterility. (A,C,B)
11. distinguish between the process of sterilization and other processes that render objects clean or disinfected. (A)
12. describe the different methods of sterilization used in the operating room. (A)
13. explain how to properly load the steam sterilizer. (A)
14. list safety precautions when using any type of sterilizer. (A)
15. determine which sterilization process is approved for which equipment. (A)
16. understand the principles of gas sterilization. (A)
17. describe the environmental concerns associated with the use of the gas sterilizer. (A)
18. prepare equipment for sterilization. (A)
19. describe the rationale for practicing aseptic technique. (B)
20. clearly distinguish among sterile, non-sterile, and aseptic. (B)
21. explain surgical conscience. (B)
22. explain the concept of barriers. (B,C)
23. practice the rules of aseptic technique. (B)
24. explain the relationship between personal hygiene and aseptic technique. (B)
25. perform the surgical hand scrub correctly. (C)
26. demonstrate aseptic technique by donning gown and gloves. (C)
27. don sterile gloves using proper open gloving technique. (C)
28. remove gown and gloves using aseptic technique. (C)
29. remove contaminated gloves from another person. (C)
30. discuss reasons why personnel might not follow the rules of asepsis. (C,B)
31. list the characteristics of common surgical prep solutions. (D)
32. identify necessary precautions to prevent injury associated with skin preparation. (D)
33. identify the use of a “no touch” preparation technique. (D)
34. explain the concepts of body hair management prior to surgery. (D)
35. identify the proper procedure to perform the surgical skin preparation for all areas of the body. (D)
36. identify the proper aseptic technique to catheterize male and female patients. (D)
37. identify the proper technique for draping the patient for torso, limb, and lithotomy procedures. (D)
38. demonstrate the correct set-up of a surgical case. (A,E)
39. demonstrate methods to open surgical supplies correctly. (A,E)
40. describe the process to perform sponge, needle, instrument, and sharp counts correctly. (B)
41. demonstrate neutral zone (no-hands) technique. (B)
42. demonstrate passing instruments so they are properly oriented for use. (E)
43. identify methods to care for specimens correctly. (E)

44. discuss methods of wound irrigation. (E)
45. identify methods to achieve hemostasis during surgery. (E)
46. discuss the selection and preparation of wound drains. (E)
47. demonstrate preparation of the surgical wound dressing. (E)
48. describe safe techniques for handling tissues. (E)
49. describe the characteristics of tissue. (E)
50. identify classifications of instruments. (E)
51. differentiate types of instruments by their functions. (E)
52. identify the different types of finishes on surgical instruments. (E)
53. describe the care and handling of instruments. (E)
54. describe several methods of learning about instruments. (E)
55. develop a personal plan for learning instruments. (E)
56. read each chapter prior to class. (A,B,C,D,E)

Course Requirements: To earn a grade of “C” or higher the student must earn 70% of the total points for the course and meet all of the following course requirements.

- minimum 75% on each test
- satisfactory outlines for the 7 procedure videos

Outcome Assessment Methods:

- written exams,
- Elsevier Video outline

Course Grading Scale:

- A- 90% or more of total points with no test score less than 75% including the comprehensive final exam
- B- 80% or more of total points with no test score less than 75% including the comprehensive final exam
- C- 70% or more of total points with no test score less than 75% including the comprehensive final exam
- D- 60% or more of total points
- F- less than 60% of total possible points or less than 75% on any test

Attendance Policy: The college attendance policy (for the classroom) is available at <http://www.bpcc.edu/catalog/current/academicpolicies.html>, allows that “more restrictive attendance requirements may apply to some specialized classes such as laboratory, activity, and clinical courses because of the nature of those courses.” The attendance policy of the Surgical Technology program is described in the Surgical Technology Clinical Handbook.

Nondiscrimination Statement

Bossier Parish Community College does not discriminate on the basis of race, color, national origin, gender, age, religion, qualified disability, marital status, veteran's status, or sexual

orientation in admission to its programs, services, or activities, in access to them, in treatment of individuals, or in any aspect of its operations. Bossier Parish Community College does not discriminate in its hiring or employment practices.

COORDINATOR FOR SECTION 504 AND ADA

Angie Cao, Student and Disability Services Specialist

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Equity/Compliance Coordinator

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Hours: 8:00 a.m.-4:30 p.m. Monday - Friday, excluding holidays and weekends.

Course Content Outline:

Chapter10: Decontamination, Sterilization, and Disinfection

- I. Principles of Decontamination, Sterilization, and Disinfection
 - A. Basic Terms
 - B. Standards and Regulations
 - C. Selecting a Reprocessing Method
 - D. Best Practice for Reprocessing
 - E. Coordinating the Roles of Central Service and Perioperative Personnel
 - F. Cycle of Reprocessing
- II. Cleaning and Decontamination
 - A. Cleaning at the Point of use
 - B. Decontamination
- III. Processing in the Clean Work Area
 - A. Instrument Inspection
 - B. Instrument Set Assembly
 - C. Wrapping Equipment for Sterilization
- IV. Methods of Sterilization
 - A. Selecting a Method
 - B. Process-related Parameters of Sterilization
 - C. Quality Assurance in Sterilization Practices
 - D. Steam Sterilization
 - E. Ethylene Oxide Sterilization
 - F. Gas Plasma Sterilization
 - G. Liquid Peracetic Acid Sterilization
 - H. Instruments Exposed to Creutzfeldt-Jakob Disease (CJD) Prions

- I. Storage and handling of Sterile Goods
- V. Disinfection
 - A. Terms Related to Disinfection
 - B. Use of Chemical Disinfectants
 - C. High Level Disinfection
 - D. Chemical Disinfectants for Medical Devices
 - E. Low Level Disinfection: Noncritical Areas
 - F. Environmental Disinfectants
 - G. Environmental Cleaning
 - H. Routine Decontamination of the Surgical Suite.

Chapter 9: The Principles and Practice of Aseptic Technique

- I. Evidence-Based Practice
 - A. Evidence-Based Practice in Practice
 - B. Examples of Evidence-Based Practice
 - C. Learning to Use Evidence-Based Practice
- II. Standards and Recommendations
- III. Important Definitions
 - A. Asepsis
 - B. Sterility
 - C. Contamination
 - D. Surgical Conscience
 - E. Concept of Barriers
- IV. Personal Asepsis
 - A. Health and Hygiene
 - B. Jewelry
- V. Surgical Attire
 - A. Scrub Suit
 - B. Nonsterile Cover Jacket
 - C. Head Cap
 - D. Protective Eyewear and Face Shield
 - E. Mask
 - F. Shoes and Shoe Covers
- VI. Hand Hygiene
 - A. Purpose
 - B. Fingernails
 - C. Hand Washing
 - D. Hand Antisepsis
- VII. Surgical Hand Scrub/Rub
 - A. Surgical Scrub
 - B. Technique
 - C. Surgical Hand Rub
- VIII. Gowning and Gloving
 - A. Drying Your Hands
 - B. Gowning Yourself

- C. Gloving Yourself
- D. Double Gloving
- E. Closed Gloving
- F. Open Gloving
- G. Gowning and Gloving Other Team Members
- H. Replacing a Contaminated Glove
- I. Removing Sterile Attire
- IX. Opening a Case
 - A. Large Packs
 - B. Instrument Trays
 - C. Basins
- X. Intraoperative Techniques
 - A. Delivering Sterile Goods
 - B. Peel Pouches
 - C. Sharps
 - D. Solutions
 - E. Contamination During Surgery
- XI. Maintaining the Sterile Field
 - A. Reality versus Standards

Chapter 20: Case Planning and Intra-operative Routines

- I. Case Planning
 - A. Diagnostic Procedure
 - B. Reconstructive Surgery
 - C. Repair
 - D. Removal
 - E. Replacement or Implantation
- II. Case Preparation
 - A. Assignments
 - B. Gathering Supplies and Instruments
 - C. Surgeon's Preference Card
- III. Opening a Case
 - A. Preparing Nonsterile Equipment
 - B. Opening Sterile Supplies
 - C. Sterile Setup
 - D. Time-andEvent-Related Supplies
 - E. Suture Preparation
 - F. Instruments
 - G. Mayo Stand
 - H. Solutions and Drugs
 - I. Completing the Setup
- IV. Sponge, Sharps, and Instrument Count
 - A. Definition and Rationale
 - B. Responsibility for the Count
 - C. When to Perform the Count

- D. Who Performs the Count
- E. Counted Items
- F. Procedure for the Count
- G. Documentation
- H. Lost and Retained Items
- V. Starting the Case
- VI. Timeout
- VII. Managing the Surgical Field
 - A. Maintaining an Orderly Setup
 - B. Lighting
 - C. Sponges
 - D. Managing Sponges for a Count
 - E. Handling and Passing Instruments
 - F. Tissue management
 - G. Preventing Tissue Injury
- VIII. Management of Surgical Specimens
 - A. Responsibility for Specimens
 - B. Receiving Specimens from the Sterile Field
- IX. Wound Closure

Chapter 19: Surgical Skin Preparation and Draping

- I. Urinary Catheterization
 - A. Description
 - B. Supplies
 - C. Procedure
 - D. Risks of Catheterization
- II. The Surgical Skin Prep
 - A. Hair Removal
 - B. Recommended Guidelines for the Prep
 - C. Prepping Agents
 - D. Guidelines
 - E. Procedure for the Skin Prep
 - F. Risks Associated with the Surgical Prep
 - G. Specific Prep Sites
- III. Draping the Surgical Site
 - A. Rationale
 - B. Principles
 - C. Draping Fabrics and Materials
 - D. Techniques used in Draping
 - E. Aseptic Technique during Draping
 - F. Draping the Surgical Site
 - G. How to Drape Large Equipment
 - H. Removing Drapes

Chapter 11: Surgical Instruments

- I. Critical Thinking and Surgical Instrumentation
- II. Working with Instruments
- III. Instrument Manufacturing and Design
 - A. Manufacturing
 - B. Instrument Design
- IV. Types of Instruments by Function
 - A. Grasping and Holding Instruments
 - B. Clamping and Occluding Instruments
 - C. Cutting and Dissecting Instruments
 - D. Retracting (Exposing) Instruments
 - E. Dilators
 - F. Measuring Instruments
 - G. Suturing Instruments
 - H. Suction Tips
- V. Tissue Types and instrument Selection
 - A. Body Planes and Structure

Reviewed by: A. Smith, April 6, 2021