

**Bossier Parish Community College
Master Syllabus**

Course Prefix and Number: STEC 121

Credit Hours: 3

Course Title: Surgical Specialties and Review

Course Prerequisites: STEC 110, STEC 111, STEC 112

Course Corequisites: STEC 120, STEC 122

Clock Hours: 45 hours lecture

Time Increments: semester

Textbooks: Fuller, J.; Surgical Technology Principles and Practice, 8th edition
Allmers, N. and Verderamne, J.; Lange Q & A for the
Surgical Technology Examination, 7th edition, George, Anbalagan and
Charleman, Joseph E.; Surgical Technology Exam Review.

Course Description:

This course introduces the student to Robotic-Assisted surgery. Additionally, the student will learn the role of the surgical technologists in Emergency Trauma Surgery. There will be an overall review of the curriculum, in preparation for taking the national certification exam. 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, textbooks, audio-visual, computer programs (Live-OR, Websurg), and group presentations and group workshops.

Learning Outcomes:

At the end of this course, the student will

- A. integrate knowledge of robotics with the preparation, set-up, care, and use of advanced technologies in the operating room; and
- B. Integrate knowledge as it applies to the roll of the surgical technologist in Emergency Trauma Surgery and Disaster Preparedness & Response
- C. integrate knowledge and skills in preparation for the National Surgical Technologist Certification Exam.

At the end of this course, the student will

1. discuss the basic concepts related to robotics. (A)
2. describe the concepts of geometry that are used in the design of surgical robots. (A)
3. identify the basic components and mechanisms of the robotic system. (A)
4. list the clinical applications of robotics in the OR. (A)
5. apply the principles of robotics to safe patient care practices in the OR. (A)
6. complete a structured review of the entire surgical technology program. (B)
7. discuss different types of disasters (B)
8. discuss the common features of a disaster (B)
9. explain the role of government agencies during a disaster (B)
10. explain what is meant by an all-hazards approach to disaster planning (B)
11. define the four phases of the disaster cycle (B)
12. locate documents useful for making a home disaster plan (B)
13. describe the main components and strategy used by communities to prepare their local disaster plan (B)
14. define the incident command system and explain how it works (B)
15. describe basic human needs in a disaster (B)
16. list the primary components of a health care facility disaster plan (B)
17. discuss ethical dilemmas that accompany disasters (B)
18. explain the possible roles of the surgical technologist during a disaster (B)

Course Requirements: To earn a grade of “C” or higher the student must earn 75% of the total points for the course and meet all of the following course requirements.

- minimum 75% average on test(s) with no test score less than 75%
- scantrons on all tests
- minimum average of 80% on mock certification tests from Lange Q & A
- achieve 70% score on CST practice exam
- complete the CST exam

Outcome Assessment Methods: Written exams and group presentations of the Lange Q&A, Surgical Technology Examination, utilizing a game delivery format.

Course Grading Scale:

- A- 90% or more of total possible points with no test score less than 75% and minimum average of 80% on mock certification exams
- B- 80% or more of total possible points with no test score less than 75% and minimum average of 80% on mock certification exams
- C- 70% or more of total possible points with no test score less than 75% and minimum average of 80% on mock certification exams

- D- 60% or more of total possible points with no test score less than 75% and minimum average of 80% on mock certification exams
- F- less than 60% of total possible points or one or more test scores less than 75% or less than 80% average on mock certification exams

Attendance Policy: The college attendance policy, which 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

Disability Services, F254, 6220 East Texas Street, Bossier City, LA 71111

318-678-6511

acao@bpcc.edu

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

Equity/Compliance Coordinator

Teri Bashara, Director of Human Resources

Human Resources Office, A-105

6220 East Texas Street

Bossier City, LA 71111

Phone: 318-678-6056

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

Course Content Outline:

Chapter 16: Physics and Information Technology

Technology and Medicine

I. Matter

A. Atomic structure

- B. States of matter
- II. Motion
 - A. Elements of Motion
 - B. Circular and Projectile Motion
- III. Energy
 - A. Potential Energy
 - B. Gravitational Energy
 - C. Mechanical Energy
 - D. Chemical energy
 - E. Electromagnetic Energy
 - F. Waves
- IV. Electricity
 - A. Application in Surgery
 - B. Nature of Electricity
 - C. Magnetism and Electricity
 - D. Conductivity
 - E. Insulators
 - F. Static Electricity
 - G. Electric Generators
 - H. Electrical Circuits
- V. Light
 - A. Properties of Visible Light
 - B. Lenses
- VI. Heat
 - A. Heat Transfer
- VII. Sound
 - A. Properties of Sound
- VIII. Computer Technology
 - A. Computers in Perioperative Environment
 - B. Computer Learning Tools
 - C. How Computers Work
 - D. Computer Terms and Language
 - E. Hardware (Physical Components)
 - F. Computer Software
 - G. Basic Computer Use

Chapter 36: Emergency Trauma Surgery

- I. Trauma Systems
- II. Trauma Injuries
- III. Trauma Pathophysiology
- IV. ATLS Principles of Trauma Management
- V. Management of Forensic Evidence
- VI. Damage Control Surgery
- VII. Case Planning for Trauma Surgery
- VIII. Preoperative Care of the Patient

- IX. Opening a Case and Sterile Setup
- XI. Managing the Sterile Field in Emergency Trauma
- XII. Laparotomy with Staged Closure
- XIII. Orthopedic Trauma
- XIV. Thoracic Injury
- XV. Major Peripheral Vascular Trauma
- XVI. Injuries of the Brain and Spinal Cord

Lange Q & A for the Surgical Technology Examination

- I. Group Presentation
 - A. Students are divided into three groups
 - B. Each group presents their section (approximately 130 questions) utilizing a game show format.
 - C. Upon completion of the three presentations, a written exam is given over the Material, (this is done for the entire book, 1267 total questions).

Reviewed by: A. Smith, May 23, 2022