

Bergen Community College
Division of Health Professions
Surgical Technology Associate Degree AAS.HP.SUR

SUR-208

Technological Sciences for The Surgical Technologist

Basic Information About the Course and Instructor:

SUR 208-001

Meeting Times and Locations:

HP-228

Office: HP-238

Course Description

This course introduces the student to the computer system in the operating room and its related hardware. It provides a broad base of knowledge including electricity and thermoregulatory devices used in the surgical environment. With the advancement of technology as it pertains to surgery, the student will be introduced to the fundamental principles of minimally invasive procedures, robotics, laser, image guided surgery and interventional radiology procedures.

Lecture- [3.00]

Credits- 3

Corequisites: SUR-204, SUR-212

Student Learning Outcomes

1. Identify components of a computer system related to information technology in the healthcare setting.
2. Apply the principles of electricity and lasers and their utilization in the operating room.
3. Evaluate the principles of robotics and safe patient care practices in the operating room.
4. Integrate methods of diagnostic imaging in interventional radiology requiring surgical intervention.

Integrate navigation practices to provide increased surgical precision.

Means of Assessment

Students in this course will:

Complete reading assignments with each new chapter and homework assignments.

There will be an exam following each chapter.

Surprise quizzes:

- * Exams and quizzes cannot be made up. Exceptions are at the discretion of the program director.

Computerized Quizzes

Course Texts and Study Material

Required Textbooks:

- * Surgical Technology for the Surgical Technologist “A Positive Care Approach” 6th Edition, AST Association of Surgical Technologists, ISBN 978-0-357-62573-6
Lang Q&A- Surgical Technology Examination 8th Edition
ISBN 978-1-260-47024-6
- * Other books and videos are available in the classroom and library for student use.

Required supplies for Lecture:

- * Notebook
- * Pen, pencil
- * Computer/laptop (as per the student’s discretion)

Audio taping is permissible, please just notify the instructor.

Research, Writing, and Examination Requirements

Homework Assignments

They are to be presented on time and typed and sent to the appropriate professor. If a hardcopy is required the student will be notified.

The assignment must be handed in regardless if it is late and the student will receive a zero.

Quizzes and Exams

Surprise quizzes will be given through the semester in this class. Exams will be given following each lecture.

There are no make-ups for quizzes and exams, any changes will be at the discretion of the Director of the Program

Final

The final will be cumulative.

Grading Policy

Anything below a 76% (C+) is not a passing grade for this program.

93-100 %	A
89-92 %	B+
80-88 %	B
76-79 %	C+
73-75 %	C

Exams: 50%

Homework Assignments/ Quizzes: 25%

Final Exam: 25%

Cumulative final exam

Attendance

BCC Attendance Policy

All students are expected to attend and be punctual for every scheduled meeting of each course in which the student is registered. Attendance and lateness policies and sanctions are to be determined by the director for each section of each course. These are in writing in the Policy and Procedure Student Handbook and in each course outline.

Other college, Divisional, and/or Departmental Policy Statements

Accommodations for Disabilities

Bergen community college aims to create inclusive learning environments where all students have maximum opportunities for success. Any student who feels he or she may need an accommodation based on a disability should contact the Office of Special Services.

Americans with Disabilities Act: Students who require accommodations by the Americans with Disabilities Act [ADA] can request support services from “The Office of Specialized Services of Bergen Community College] 201-612-5270/5269 or via email at ossinfo@bergen.edu.

Mental Health and Well Being

Mental Health concerns or stressful events may lead to diminished academic performance or reduce a student's ability to participate in daily activities. Bergen Community College has licensed personal counselors available to assist you with addressing these and other concerns you may be experiencing.

You can learn about the confidential mental health services available on campus via the Health and Wellness Center at [www.bergen.edu/personal counseling](http://www.bergen.edu/personal_counseling).

Department Policy Statements:

Student and Faculty Support Services

Tutoring/extra help

We the administrative department maintain office hours for counseling and are available to provide extra help to our students. The surgical technology program is structured to assist the student having difficulties and provide tutoring for student success.

Available Online and On-Campus Resources

Library- <https://bergen.edu/library/>

Academic support <https://bergen.edu/academics/pathway-scholars-program/academic-support>

The Writing center and Tutoring Center- L-125 [https://Bergen.edu/tutoring/writing center/](https://Bergen.edu/tutoring/writing_center/)

OWL (Online Writing Lab) <http://www.owl.english.perdue>

Free Time Computer Labs [https://Bergen.edu/technology assistance/computer lab availability/](https://Bergen.edu/technology_assistance/computer_lab_availability/)

The Center for student A-118 (Academic, Career, International, and Transfer Counselors)
<https://bergen.edu/center-for-student-success/>

Personal counseling HS-100 <https://bergen.edu/health-wellness-and-personal-counseling/personalcounseling/>

Sample Course Outline		
Week	Topic	Assessment
1-3	<p>Chapter 5- Technological Science Concepts</p> <p>Reading Assignment: Electronic Devices Electricity</p> <p>Lectures</p> <p>Homework Assignment: Case study questions from the text book. AST questions for Ch. 5 Lang Q&A- Ch 30 Boardvitals Quiz: To be determined.</p>	Exam to follow lectures
4-6	<p>Chapter 5- Technological Science Concepts</p> <p>Reading Assignment: Electrosurgical Unit (ESU) Alternative Energies</p> <p>Lectures</p> <p>Homework Assignment: AST questions for Ch. 6 Boardvitals Quiz: To be determined.</p>	Exam to follow lectures.
7-10	<p>Chapter 15 – Minimally Invasive Applications</p> <p>Reading Assignment: Minimally Invasive Surgery Ports of Entry Applications and Surgical Specialties</p> <p>Lecture: MIS Surgery (endoscopy, laparoscopic and robotic procedures) and Interventional Radiology</p> <p>Homework Assignment: Lang Q&A- Ch 32 Endoscopy, MIS, and Robotics Case Study Question/ Questions for Further Study Chapter 15 Boardvitals Quiz: To be determined.</p>	Exam to follow lectures.
11-14	<p>Chapter 14-Diagnostic Procedures</p> <p>Reading Assignment: Diagnostic Procedures</p> <p>Lecture</p> <p>Homework Assignment: Case Study Question Chapter 14</p>	Exam to follow lectures
15	Review	Cumulative Final Exam

Note to Students: This Course Outline and calendar is subject to change.

Revised 2025