



TECHNICAL COLLEGE OF THE LOWCOUNTRY

SUR 123 **Sterile Processing Technology**

Course Description

SUR 123 Sterile Processing Technology
Lec. 2 Lab. 1 Cr. 3

This course provides detailed study of the preparation and processing procedures of surgical instruments.

Co-requisites: SUR 101, SUR 125

Course Focus

This course focuses on the study of the Sterile Processing Department (SPD) technician and their roles and responsibilities. The course provides introduction material to Anatomy and Physiology, Microbiology, Infection Prevention, Decontamination, Disinfection Processes, processing of patient care equipment, preparation and packaging of instrumentation and devices, surgical instrumentation, specialty devices, sterilization, inventory control, storage and distribution, and sterile storage. Within the content of the course, during the course Medical terminology will be identified.

Text and References

1. The Basics of Sterile Processing, 6th Edition, Sterile Processing University, LLC, Nancy Chobin.
2. Surgical Instrumentation, An Interactive Approach, 3rd Edition, Renee Nemitz

No Purchase Necessary. Beginning Fall 2021, TCL implemented a new textbook model called First Day Complete (FDC). With FDC, a per credit hour book fee was added to your tuition at the time of registration. Please check your **new** TCL email account where you have been sent a link to reserve your books with the TCL College Store. Refer to this link for all details concerning FDC <https://www.tcl.edu/first-day-complete-textbook-program/>

PPE Requirements

Until further notice, there is a mask mandate in place indoors at TCL. Failure to adhere to the mask requirement will result in the following:

- First Offense: Verbal Warning
- Second Offense: You will be asked to leave class with an absence for that day.

- Third Offense: You will be asked to leave class and must meet with Associate Vice President Rodney Adams in Building 2 room 203 prior to returning to class.

In addition, all students will be required to wear PPE as deemed appropriate and necessary per clinical facility for the duration of the clinical experience. Students may also be required to wear additional PPE while participating in “on campus” lab activities to provide an environment that is representative of the program’s clinical facilities. Failure to adhere to this mandate will render the student ineligible to participate in clinical rotations or “on campus” activities, and therefore unable to progress in the program.

Course Goals

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

1. Identify the federal and state regulatory agencies that have jurisdiction over processing in healthcare facilities.
2. Identify and describe methods of quality assurance.
3. Define the purpose of a procedure manual and the difference between policies and procedures.
4. Outline the training procedures that should be followed to ensure familiarity with and competent performance of sterile processing procedures.
5. Understand the various symbols used in healthcare and in manufacturing of sterile products
6. Define anatomy and physiology and explain how they are related.
7. Describe the general functions of each organ system.
8. List the different systems in the human body.
9. Understand how anatomy and physiology relate to the work performed in SPD.
10. List ways in which microorganisms affect our lives.
11. Differentiate the major groups of organisms.
12. List beneficial activities of microorganisms.
13. Define pathology, etiology, infection, host and disease.
14. Understand the basic factors in disease transmission.
15. Describe the body’s defenses against infection, and the factors that affect the body’s susceptibility to disease.
16. Understand microbiological terminology as it relates to SPD.
17. Define healthcare-acquired (nosocomial) infection
18. Describe the modes of disease transmission
19. Describe important work principles and practices related to Standard Precautions
20. Learn the importance of handwashing
21. Explain blood borne pathogens and the safety precautions necessary in SPD
22. Discuss Transmission Based Precautions
23. Distinguish between regulated and non-regulated waste
24. Describe the functions performed during chemical disinfection.
25. Outline the standards required for a quality disinfection process.
26. Identify employee health and safety considerations associated with the disinfection process.

27. Understand the appropriate dress code and the role of personal protective equipment (PPE) as it relates to OSHA regulations and employee safety and health.
28. Describe the procedures that must be followed and the precautions that must be observed during the preparation and use of the variety of disinfecting agents used in the decontamination process.
29. Identify the methods and equipment used in the high-level disinfection of medical devices.
30. Identify various types of patient care equipment (PCE) used in healthcare facilities that might be the responsibility of SPD personnel.
31. Describe the processes needed to clean, disinfect, store and distribute patient care equipment.
32. Review dress code requirements.
33. Review the physical environment of the preparation and packaging area.
34. List principles of packaging.
35. Describe the various types of packaging materials.
36. Describe the structure, use, and testing of rigid sterilization container systems.
37. Understand the organization of instrument sets and the preparation of basins and textile packs.
38. Discuss materials used to manufacture surgical instruments.
39. Describe the classes and categories of surgical instruments.
40. Understand the structure and grades of surgical instruments.
41. Understand the various types of equipment available to test devices.
42. Describe the various inspections needed to ensure proper working order of surgical instruments.
43. Discuss special considerations associated with powered instruments, endoscopic equipment, orthopedic and spinal sets, dental instruments and other specialty items.
44. Describe microbial inactivation in the sterilization process.
45. List the categories of medical devices for which each sterilization method is suitable.
46. Know the parameters of the various sterilization processes used in healthcare facilities.
47. Describe physical, chemical, and biological monitoring systems and how to use them.
48. Explain the reasons for the occurrence of wet packs in the steam sterilization process.
49. Develop the steps in an acceptable recall protocol.
50. Discuss the documentation needed for sterilization.
51. Describe safety precautions associated with each sterilization method.
52. Identify quality control and product testing procedures
53. Describe the various inventory control, stock distribution, and patient charge mechanisms used in healthcare facilities.
54. Understand the responsibilities of the receiving department.
55. Understand the importance of proper selection, handling, and transport of supplies.

56. Understand cost containment and the importance of a well-managed inventory system.
57. Define the “shelf life” of a sterile product and to identify the factors that affect shelf life and sterility maintenance.
58. Describe the environmental controls and cleaning protocols used in sterile storage areas.
59. Describe proper stock rotation mechanisms.
60. Describe how sterile items should be handled and transported.

Student Contributions

Classes are designed to employ a variety of teaching techniques. In order to maximize learning, required readings and Web enhanced sections should be done prior to class. If a student is falling behind in clinical performance and/or academic achievement, it is imperative to seek immediate assistance from the instructor.

Course Evaluation

7 Unit Tests	50%
8 Quizzes	35%
Final Exam	<u>15%</u>
	100%

Assessment tests are given to assist in the evaluation of individual student progress and to support student success. The dates for completion of these tests are posted on the course calendar. Students who do not achieve the required scores must meet with the course coordinator and/or clinical instructor and complete the prescribed remediation. The date for completion of remediation, when required, is due prior to the final exam. Failure to complete the testing or required remediation by the dates indicated above will result in a grade of **Incomplete** ("I") for the course and non-progression in the surgical technology curriculum. Students having difficulty with either the tests or remediation components of this course must speak personally with the course coordinator three (3) business days or more in advance of the published due dates. Refer to clinical notebook for detailed summary of Laboratory Competency Assessment requirements.

ADA Statement

The Technical College of the Lowcountry provides access, equal opportunity and reasonable accommodation in its services, programs, activities, education and employment for individuals with disabilities. To request disability accommodation, contact the counselor for students with disabilities at (843) 525-8228 during the first ten business days of the academic term.

Attendance

The College's statement of policy indicates that students must attend ninety percent of total class hours or they will be in violation of the attendance policy.

1. Students not physically attending class during the first ten calendar days from the start of the semester must be dropped from the class for NOT ATTENDING.

2. Students taking an online/internet class must sign in **and** communicate with the instructor within the first ten calendar days from the start of the semester to indicate attendance in the class. Students not attending class during the first ten calendar days from the start of the semester must be dropped from the class for NOT ATTENDING. In addition, for any online course, or component of a course, students are required to log into the course (at least once per week) and complete the required assignments to meet attendance requirements.
3. Reinstatement requires the signature of the division dean.
 - a. In the event it becomes necessary for a student to withdraw from the course **OR if a student stops attending class, it is the student's responsibility to initiate and complete the necessary paperwork.** Withdrawing from class may have consequences associated with financial aid and time to completion. Students are strongly encouraged to consult with Financial Aid prior to withdrawing from any class, particularly if the student is currently on a warning or probation status.
 - b. When a student exceeds the allowed absences, the student is in violation of the attendance policy. The instructor **MUST** withdrawal the student with a grade of "W", "WP", or "WF" depending on the date the student exceeded the allowed absences and the student's progress up to the last date of attendance

Or
 - c. Under extenuating circumstances and at the discretion of the faculty member teaching the class, allow the student to continue in the class and make-up the work. This exception must be documented at the time the allowed absences are exceeded.
 - d. Absences are counted from the first day of class. There are no "excused" absences. All absences are counted, regardless of the reason for the absence.
4. A student must take the final exam or be excused from the final exam in order to earn a non-withdrawal grade.
5. Students are expected to be in class *on time*. Arrival to class after the scheduled start time or leaving class prior to dismissal counts as a tardy. Three tardies and/or early departures are considered as one absence unless stated otherwise.
6. It is the student's responsibility to sign the roll/verify attendance with instructor upon entering the classroom. Failure to sign the roll/verify attendance results in a recorded absence. In the event of tardiness, it is the student's responsibility to insure that attendance is marked. **The student is responsible** for all material/announcements presented, whether present or absent.
7. Continuity of classroom and laboratory (which includes clinical experiences) is essential to the student's progress in providing safe and competent patient care. Students are expected to use appropriate judgment for participating in clinical activities.

To evaluate the student's knowledge and skills, it is necessary for the student to be present for all clinical experiences.

If absence does occur, the designated clinical site, in addition to the Division of Health Sciences Administrative Assistant, must be notified by telephone no later than 30 minutes prior to the start of the clinical experience.

The Division of Health Sciences telephone number is 843-525-8267.

A copy of TCL's STATEMENT OF POLICY NUMBER: 3-1-307 CLASS ATTENDANCE (WITHDRAWAL) is on file in the Division Office and in the Learning Resources Center.

Communication

All communication will be done via TCL email or phone (no text messaging) during normal office hours.

Any communication from an instructor will require acknowledgement of receipt.

Hazardous Weather

In case weather conditions are so severe that operation of the College may clearly pose a hardship on students and staff traveling to the College, notification of closing will be made through the following radio and television stations: WYKZ 98.7, WGCO 98.3, WGZO 103.1, WFXH 106.1, WWVW 106.9, WLOW 107.9, WGZR 104.9, WFXH 1130 AM, WLVA 101.1, WSOK 1230 AM, WAEV 97.3, WTOG TV, WTGS TV, WJWJ TV, and WSAV TV. Students, faculty, and staff are highly encouraged to opt in to the Emergency Text Message Alert System. <https://tcl.regroup.com/signup>

ACADEMIC DISHONESTY

Health care professionals hold the public trust. Academic misconduct by health science students' calls that trust into question and academic integrity is expected. Academic misconduct may result in withdrawal for related health science courses. In addition, depending on the severity of the student's academic misconduct, the student will not only be withdrawn from the program, but also will not be allowed for re-entry and/or reapplication to **all** Health Science programs. It is a fundamental requirement that any work presented by students will be their own. Examples of academic misconduct include but are not limited to:

1. Copying the work of another student or allowing another student to copy working papers, printed output, electronic files, quizzes, tests, or assignments.
2. Completing the work of another student or allowing another student to complete or contribute to working papers, printed output, electronic files, quizzes, tests, Scantron, or assignments.
3. Viewing another student's computer screen during a quiz or examination.
4. Talking or communicating with another student during a test.
5. Violating procedures prescribed by the instructor to protect the integrity of a quiz, test, or assignment.
6. Plagiarism in any form, including, but not limited to: copying/pasting from a website, textbook, previously submitted student work, or any instructor-prepared

class material; obvious violation of any copyright-protected materials. Safe Assignment is used to detect plagiarism.

7. Knowingly aiding a person involved in academic misconduct.
8. Providing false information to staff and/or faculty.
9. Entering an office unaccompanied by faculty or staff.
10. Misuse of electronic devices (including, but not limited to: cell phones, laptops, tablets, smart watches, etc.)

Student Accountability/Clinical Education Rotations

Students in the ST program must be eligible to complete their clinical education rotations at any available clinical site. During clinical education rotations, each student is a representative of the TCL ST program. As such, students must comply with all TCL and ST program policies when participating in clinical education. In addition, when students are at a clinical site, every effort will be made to ensure that students receive a fair and equitable learning experience and students are responsible for abiding by all policies and procedures of that clinical site.

Grading Policy

Grading scale	
93% - 100% A	W withdraw
85% - 92% B	WP withdraw with passing grade
78% - 84% C	WF withdraw with failing grade
70% - 77% D	I Incomplete
Below 70% F	

Grading Methodology

1. The final grade must be 78.00 or more in order to pass the course and progress in the program.
2. If a student is passing the didactic portion of the class but fails to achieve a "75" or higher in the lab practicum after two averaged attempts the student will receive an "F" in the class.
3. Students absent from an examination or presentation will receive a "0" grade for the examination unless other arrangements are made with the individual instructor prior to the examination or presentation day or on the examination or presentation day before the test/presentation is scheduled to be given.
4. It is the responsibility of the student to contact the appropriate instructor to arrange to make up the examination. Arrangements may be completed by telephone. If the instructor is not available, a message should be left on the instructor's voice mail AND with another member of the faculty or administrative assistant.
5. The instructor will decide the time and method of make-up examinations on an individual basis.
6. Messages sent by other students are unacceptable.
7. The student is responsible for notifying the instructor for the reason of the absence. Grades are posted on Blackboard within one week of administration of tests and examinations.

Course Policies/Procedures

1. It is clearly to the advantage of the student to attend class regularly. Test materials are weighted heavily in favor of lecture materials.
2. **All cell phones and pagers must be turned off during class (lecture and laboratory periods).** No pagers or phones are allowed in the clinical area. No exceptions are made to this rule.
3. ***All students are required to remove hats and ALL watches of any kind during exams and quizzes and place them in the front of the classroom with personal belongings and electronics.**
4. During on campus examinations, only answers transferred and completed on Scantron sheets will be graded electronically to count towards the test score.
5. **Honorlock Online Proctoring and Technology Requirements**
TCL uses an online test proctoring service called Honorlock to monitor some online tests as an alternative to in-person proctoring. Your instructor may elect to have some of your tests proctored using Honorlock. If so, you will need to make sure that you have access to the necessary equipment in order to take your online-proctored tests:
 - A computer with access to a high speed internet connection.
 - The ability to install the Honorlock extension on Google Chrome.
 - A webcam and microphone. A functioning webcam and microphone are required to complete proctored online tests.
 - Microsoft Office. Microsoft Office can be downloaded for free by accessing the Office 365 link in your TCL email account.
6. Students are held accountable for content in the **Surgical Technology** program student handbook.
7. Instructors will excuse a student from class who disrupts the class.
8. No course grades are posted in public areas. Grades are available through Self Service. The student must go to the college's website www.tcl.edu Select Quick Links then select Self Service. For questions, contact the TCL Help Desk at 843-525-8344.

Nature of Course Content

The student will gain insight on the roles and responsibilities of a Sterile Processing Technician. This will enable the student to prepare for the certification exam.

Core Competency Key Indicator

Students will be able to identify, define, and describe the roles of the Sterile Processing Technician. This content includes all phases of the SPD department.

Chapter 1: Roles and Responsibilities

1. Role of the Sterile Processing Department (SPD)
2. Functions of SPD
3. Professional Standards, guidelines, requirements, standards of practice, ethics the guide the processing practices.

4. Health and Safety Regulations, standards, and guidelines that apply to the processing of medical devices and instrumentation
5. Federal and State regulatory agencies and jurisdiction over processing in a healthcare facility
6. Identify and describe methods of quality assurance
7. Define the purpose of a procedural manual and the difference between policies and procedures
8. Outline the training procedures that should be followed to ensure competent performance of sterile processing procedures
9. Understand the various symbols used in health care and manufacturing of sterile products

Chapter 2: Anatomy and Physiology

1. Define anatomy and physiology and explain how they are related
2. Describe the general functions of each organ system
3. List the different systems in the human body
4. Understand how anatomy and physiology relate to the work performed in SPDs

Chapter 3: Microbiology

1. List ways in which microorganisms affect our lives
2. Differentiate the major groups of organisms
3. List beneficial activities of microorganisms
4. Understand the basic factors in disease transmission
5. Describe the body's defenses against infection and the factors that affect the body's susceptibility to disease
6. Understand microbiological terminology as it relates to SPD
7. Discuss the Ebola virus and disease
8. Discuss carbapenem-resistant enterobacteriaceae microorganisms
9. Discuss the Zika virus and its transmission

Chapter 4: Infection Prevention

1. Define healthcare-associated (nosocomial) infection
2. Describe the modes of disease transmission
3. Describe important work principles and practices related to Standard Precautions
4. Learn the importance of handwashing
5. Explain blood borne pathogens and the safety precautions necessary in SPD
6. Discuss Transmission-Based Precautions
7. Distinguish between regulated medical waste and non-Infectious waste

Chapter 5: Decontamination

1. Describe the functions performed within the decontamination area
2. Outline the standards required for a quality decontamination process
3. Identify employee health and safety consideration associated with the decontamination process
4. Understand the appropriate dress code and the role of personal protective equipment(PPE) as it relates to OSHA regulations and employee safety and health

5. Describe the procedures that must be followed and the precautions that must be observed during the preparation and use of the variety of cleaning agents used in the decontamination process
6. Identify the cleaning methods and equipment used in reprocessing medical devices

Chapter 6: Disinfection

1. Describe the functions performed during chemical disinfection
2. Outline the standards required for a quality disinfection process
3. Understand the appropriate dress code and the role of the personal protective equipment(PPE) as it relates to OSHA regulations and employee safety and health
4. Describe procedures that must be followed and the precautions that must be observed during the preparation and use of the variety of disinfecting agents used in the decontamination process
5. Identify the methods and equipment used in the high-level disinfection of medical devices

Chapter 7: Processing Patient Care Equipment

1. Identify the various types of movable patient care equipment in use in the healthcare facilities that might be the responsibility of SPD personnel
2. Describe the processes needed to effectively disassemble, clean, disinfect, inspect, reassemble, test, store, and distribute movable patient care equipment

Chapter 8: Preparation and Packaging of Instruments and Devices

1. Identify dress code requirements
2. Review the physical environment of the preparation and packaging area
3. List the basic principles of packaging
4. Describe the structure, use, and testing of rigid sterilization container systems
5. Understand the organization of instrument sets and the preparation of basins and textile packs

Chapter 9: Types of Surgical Instruments and Specialty Devices

1. Discuss the material used to manufacture surgical instruments
2. Describe the classes and categories of surgical instruments
3. Understand the structure and grades of surgical instruments
4. Understand the various types of equipment available to test devices
5. Describe the various inspections needed to ensure proper working order of surgical instruments
6. Discuss special considerations associated with orthopedic and spinal sets, powered instruments, endoscopic equipment, dental instruments, and other specialty items.

Chapter 10: Sterilization

1. Describe microbial inactivation in the sterilization process
2. List the categories of medical devices for which each sterilization methods is suitable

3. Know the parameters of the various sterilization processes used in healthcare facilities
4. Describe the physical, chemical, and biological monitoring systems and how to use them
5. Explain the reasons for the occurrence of wet packs in the steam sterilization process
6. Develop the steps in an acceptable recall protocol
7. Discuss the documentation needed for sterilization
8. Describe safety precautions associated with each sterilization method
9. Identify control and product testing procedures

Chapter 11: Inventory Control, Storage, and Distribution

1. Describe the various inventory control, stock distribution, and patient charge mechanisms used in healthcare facilities
2. Understand the responsibilities of the receiving department
3. Understand the importance of proper storage, selection, handling, and transport of supplies
4. Understand surgical case carts as a distribution method
5. Understand cost containment and the importance of a well- managed inventory system

Chapter 12: Sterile Storage

1. Define the “shelf life” of a sterile product and identify the factors that affect shelf life and sterility maintenance
2. Describe the environmental controls and cleaning protocols used in sterile storage areas
3. Describe proper stock rotation mechanisms
4. Describe how sterile items should be handled and transported