

SURT-1700: STERILE PROCESSING TECHNIQUES I

Cuyahoga Community College

Viewing: SURT-1700 : Sterile Processing Techniques I

Board of Trustees:

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Academic Term:

Fall 2024

Subject Code

SURT - Surgical Technology

Course Number:

1700

Title:

Sterile Processing Techniques I

Catalog Description:

Covers development and history of a modern sterile processing department, roles and responsibilities of sterile processing technicians and legal and ethical aspects of sterile processing practice. Review human anatomy and physiology in relation to processing of medical devices and patient care equipment. Discuss basic microbiology, common microbes and diseases found in today's health care environment, and infection control techniques in relation to disease transmission. Demonstrate decontamination techniques and protocols of medical devices and patient care equipment to eliminate the occurrence of a health care acquired infection. Discussion of federal and private organizations affecting daily functions of field of study.

Credit Hour(s):

4

Lecture Hour(s):

4

Requisites

Prerequisite and Corequisite

ENG-1010 College Composition I, or ENG-101H Honors College Composition I; and MA-1020 Medical Terminology I, and concurrent enrollment in SURT-1720 Introduction to Hospital Administration and departmental approval: Admission to program.

Outcomes

Course Outcome(s):

Describe and discuss the various elements of the sterile processing profession, including history, terminology, scope of practice and legal and ethical responsibilities of the sterile processing technician when working in the sterile processing department.

Essential Learning Outcome Mapping:

Not Applicable: No Essential Learning Outcomes mapped. This course does not require application-level assignments that demonstrate mastery in any of the Essential Learning Outcomes.

Objective(s):

- 1) Describe the role of the sterile processing department (SPD) or area within an organizational structure.
- 2) Describe the various functions of the sterile processing area.
- 3) Understand the professional standards, guidelines, requirements, standards of practice and ethics that guide sterile processing practices.
- 4) Identify the health and safety regulations, standards and guidelines that apply to the processing of medical devices and instrumentation.
- 5) Identify the federal and state regulatory agencies that have jurisdiction over processing in the healthcare facilities.
- 6) Identify and describe methods of quality assurance.
- 7) Define the purpose of a procedure manual and the difference between policies and procedures.
- 8) Outline the training procedures that should be followed to ensure familiarity with and competent performance of sterile processing procedures.
- 9) Understand the various symbols used in healthcare and in the manufacture of sterile products.

Course Outcome(s):

Explain knowledge of anatomy and physiology of the human body as it pertains to the relationship to the duties of a sterile processing technician.

Objective(s):

- 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) Explain how anatomy and physiology relate to the work performed in the sterile processing department.

Course Outcome(s):

Recognize the threat of disease transmission using principles of microbiology incorporated into the sterile processing profession.

Objective(s):

1. Identify the ways which microorganisms alter and affect our daily lives.
2. Identify and discuss the major groups of microorganisms found in the healthcare environment and the appropriate method of disinfection.
3. Discuss current methods for identification of microorganisms.
4. List the beneficial activities of microorganism.
5. Identify and demonstrate the factors involved in disease transmission and required protocols for prevention.
6. Define the terms of pathology, etiology, infection, host and disease.
7. Describe the body's defenses against infection and the factors that affect the body's susceptibility to disease.
8. Define standard precautions and their relationship to the prevention of disease transmission.
9. Discuss bloodborne pathogens and necessary safety precautions required by the sterile processing technician.
10. Discuss microbiology terminology and how it relates to the daily functions of a sterile processing technician.

Course Outcome(s):

Demonstrate the ability to follow the decontamination process to assure that medical devices are clean, disinfected and safe to handle without protective attire.

Objective(s):

1. Describe the functions of the decontamination process and the purpose of each function in regards to breaking the chain of disease transmission.
2. Identify technician health and safety considerations associated with the decontamination process.
3. Identify the appropriate dress code and role of personal protective equipment as it relates to OSHA regulations and employee safety and health.
4. Discuss the procedures and precautions that must be followed during the preparation and use of a variety of cleaning and disinfection agents used in the decontamination process.
5. Identify the cleaning methods and equipment used in the reprocessing of medical devices and patient care equipment.

Methods of Evaluation:

1. Quizzes
2. Examinations
3. Class presentation
4. Assignments
5. Class attendance and participation

Course Content Outline:

A. Orientation to Sterile Processing and Distribution Technology

1. History and development of the modern sterile processing department.
2. Current field of sterile processing and certification requirement.
3. Roles and responsibilities of the Sterile Processing Distribution (SPD) Technician and importance to infection control and inventory control.
4. Ethical concerns encountered by the SPD Technician and relevant resolutions.

5. Government agencies affecting the field of study; Environmental Protection Agency (EPA), Food and Drug Administration (FDA), OSHA and Centers for Disease Control.
6. Private agencies affecting the field of study; JCAHO, Association for the Advancement of Medical Instrumentation (AMI), Association of perioperative Registered Nurses (AORN).
7. Professional organizations and certification procedures required of SPD Technicians.
8. Safety precautions and first aid procedures needed for the successful function of job duties.
9. Continuous Quality Improvement measures required to ensure proper care of equipment and instruments is maintained.
10. Appropriate dress code and personal hygiene required for SPD Technicians.

B. Anatomy and Physiology of the Human Body

1. Definition and description of the cellular level of the body.
2. Definition and description of the tissue level of the body.
3. Definition and description of the organ level of the body.
4. Definition and description of the system level of the body.
5. Functions and structures of the Skeletal system.
6. Functions and structures of the Muscular system.
7. Functions and structures of the Integumentary system.
8. Functions and structures of the Circulatory system.
9. Functions and structures of the Lymphatic system.
10. Functions and structures of the Respiratory system.
11. Functions and structures of the Digestive system.
12. Functions and structures of the Nervous system.
13. Functions and structures of the Endocrine system.
14. Functions and structures of the Reproductive system.

C. Microbiology

1. Historical development and contributions to the study of microbiology; Robert Hooke, Anton Van Leeuwenhoek, Rudolf Virchow, Louis Pasteur, Joseph Lister and Robert Koch.
2. Classification, naming and structure of bacteria based on staining properties, shape oxygen requirement and spore forming.
3. Classification and description of viruses and discussion of related diseases.
4. Classification and description of protozoa and discussion of related diseases.
5. Classification and description of fungi prevalent in the healthcare environment and related diseases.
6. Classification and description of prions prevalent in the healthcare environment and related diseases.
7. Implications of multi-resistant microorganisms and the cause and effect of their introduction into the community.

D. Infection Control

1. Definition and discussion of healthcare-acquired infections and ramifications to patients.
2. Discussion of the three reservoirs of infection including human, animal and nonliving.
3. Discussion of the three modes of disease transmission; Contact transmission, Vehicle transmission and Vector transmission.
4. Identification of the various portals of exit and portals of entry of pathogenic microorganisms to the human body.
5. Importance of handwashing to infection prevention and demonstration of appropriate technique.
6. Discussion of OSHA's current standard precautions and bloodborne pathogens.
7. Demonstration of appropriate use of personal protective equipment to prevent cross-contamination of biological pathogens.
8. Education and training of students on good hygiene and proper work practices to reduce opportunity for infection.
9. Discussion of the importance and protocol for the required Hepatitis B vaccination.
10. Discussion of hospital exposure control plans.
11. Discussion of student response to occupational exposure of blood or blood-borne fluid.

E. Decontamination Area and its functions

1. Discussion and explanation of the physical design of the decontamination area to prevent cross-contamination.
2. Demonstration of student safety measures to prevent exposure to biological hazards.
3. Discussion the appropriate method of selection of detergents, proper use and safety protocol.
4. Techniques for the proper transporting of contaminated items safely.
5. Discussion of the basic steps in the cleaning process; sorting, presoaking, washing, rinsing and drying.
6. Demonstration of the three appropriate methods of cleaning: manual cleaning, mechanical cleaning and ultrasonic cleaning.
7. Demonstration of special cleaning requirements for medical devices with lumens.
8. Demonstration of special cleaning requirements for orthopedic items.
9. Demonstration of special cleaning requirements for powered equipment.
10. Demonstration of special cleaning requirements of laparoscopic equipment.
11. Discussion of the protocol for selection of disinfectants, proper use and safety.

12. Safe handling of disinfectants and first aid measures
13. Explanation of Material Safety Data Sheets.
14. Quality assurance protocol in the decontamination area.

Resources

Sterile Processing University, LCC. *The Basics of Sterile Processing Textbook*. 7th ed. Lebanon, NJ: Sterile Processing University, LLC, 2019.

Sterile Processing University, LCC. *The Basics of Sterile Processing Workbook*. 7th ed. Lebanon, NJ: Sterile Processing University, LLC, 2019.

Steris, Instrument Management Services. *Surgical Instrument Flash Cards*. 1st ed. Birmingham, AL: Steris, 2016.

Healthcare Sterile Processing Association. *Sterile Processing Technical Manual (CRCST 9th edition)*. Healthcare Sterile Processing Association, 2023.

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