



Western Technical College

## 10512125 Intro to Surgical Technology

### Course Outcome Summary

#### Course Information

<b>Description</b>	Provides the foundational knowledge of the occupational environment. Principles of sterilization and disinfection are learned. Surgical instruments are introduced. Preoperative patient care concepts are simulated. Lab practice is included.
<b>Career Cluster</b>	Health Science
<b>Instructional Level</b>	Associate Degree Courses
<b>Total Credits</b>	4
<b>Total Hours</b>	108

#### Pre/Corequisites

Prerequisite 10501101 Medical Terminology

#### Textbooks

*Alexander's Surgical Procedures*. Copyright 2012. Rothrock, Jane C. Publisher: Elsevier Science. **ISBN-13:** 978-0-323-07555-8. Required. (Part of Western Bundle Package **ISBN-13:** 978-0-323-78016-2)

*Suture and Surgical Hemostasis Pocket Guide*. Copyright 2006. Pieknik, Rebecca. Publisher: Elsevier Science. **ISBN-13:** 978-1-4160-2247-3. Required. (Part of Western Bundle Package **ISBN-13:** 978-0-323-78016-2)

*Pharmacology for Surgical Technologist – with Access*. 5th Edition. Copyright 2021. Howe, Tiffany and Angela Burton. Publisher: Elsevier Science. **ISBN-13:** 978-0-323-66121-8. Required. (Part of Western Bundle Package **ISBN-13:** 978-0-323-78016-2)

*Surgical Technology for the Surgical Technologist: A Positive Care Approach*. 5th Edition. Copyright 2018.

Association of Surgical Technologists. Publisher: Cengage Learning. **ISBN-13:** 978-1-305-95641-4. Required.

10-512-125: *Surgical Tech Lab Booklet*. Copyright 2023. Publisher: Xanedu. **ISBN-13:** 979-8-822-79230-2. Required.

## High Impact Practices

1. Technology-Enhanced Learning: this course will incorporate digital technologies like gamification, virtual reality experiences, or simulations. In addition, you will create technology-enhanced products such as ePortfolios, multimedia presentations, or other e-products to showcase your learning.

## Program Outcomes

1. Provide a safe, efficient, and supportive environment for the patient
2. Prepare the patient, operating room and surgical team for the preoperative phase

## Course Competencies

### 1. Examine hospital organization

#### Assessment Strategies

- 1.1. Written Objective Test

#### Criteria

*You will know you are successful when your*

- 1.1. you identify the organizational chart
- 1.2. you interpret the surgical department chain of command
- 1.3. you evaluate the function and purpose of each department
- 1.4. you identify hospital departments that provide direct patient care
- 1.5. you identify hospital departments that provide indirect patient care
- 1.6. you discuss various healthcare agencies
- 1.7. you compare types of health insurance
- 1.8. you indicate the function of prospective payment systems

#### Learning Objectives

- 1.a. Identify the proper chain of command in the operating room
- 1.b. Describe the healthcare facility (HCF) departments that provide direct and indirect patient care.
- 1.c. Describe the healthcare agencies that impact the provision of surgical services.

### 2. Outline the physical environment of the surgical suite within the healthcare facility

#### Assessment Strategies

- 2.1. Written Objective Test
- 2.2. by answering questions that require you to apply knowledge about this competency (Your instructor may require several written exams as part of this course. You will be notified in advance.)

#### Criteria

*You will know you are successful when your*

- 2.1. you explain the rationale for the design of the department
- 2.2. you can illustrate OR traffic patterns
- 2.3. illustration includes principles of surgical attire
- 2.4. illustration includes the equipment and furniture in the OR room (i.e. mayo stand, back table)
- 2.5. illustration notes location of supplies and waste receptacles in the OR room
- 2.6. illustration includes piped in systems and electrical outlets in the OR room
- 2.7. illustration includes lights and air ventilation systems in the OR room

### **Learning Objectives**

- 2.a. Discuss the location of the surgical services within the healthcare facility.
- 2.b. Describe basic floor plan designs for surgical services.
- 2.c. Explain the principles underlying the design of the surgical department.
- 2.d. Describe the floor plan of the operating room.
- 2.e. Summarize the components that compromise the environmental systems.
- 2.f. Describe the principles of environmental system safety controls.

## **3. Incorporate methods of infection control in the surgical environment**

### **Assessment Strategies**

- 3.1. Written Objective Test
- 3.2. by answering questions that require you to apply knowledge about this competency (Your instructor may require several written exams as part of this course. You will be notified in advance.)
- 3.3. Skill Demonstration

### **Criteria**

*You will know you are successful when*

- 3.1. you describe types of HAI (Hospital Acquired Infection) infections
- 3.2. you apply standard precautions
- 3.3. you evaluate potential causes and methods of transmitting infection (e.g., contact, airborne, common vehicle, vector-borne).
- 3.4. you confine, contain or reduce/eliminate the hazard
- 3.5. you prevent cross contamination
- 3.6. you perform the medical handwash
- 3.7. you correctly don and doff varying types of surgical attire

### **Learning Objectives**

- 3.a. Describe the terms related to asepsis and sterile technique
- 3.b. Apply concepts related to asepsis
- 3.c. Evaluate sources of contamination.
- 3.d. Discuss principles and practices of sterile technique.
- 3.e. Identify select types of surgical attire
- 3.f. Describe the purposes of surgical attire.
- 3.g. Describe the types of accessory attire.
  
- 3.h. Discuss restrictions involving surgical attire.

## **4. Apply principles of disinfection**

### **Assessment Strategies**

- 4.1. Written Objective Test
- 4.2. by answering questions that require you to apply knowledge about this competency [Your instructor may require several written exams as a part of this course. You will be notified in advance.]
- 4.3. Scenario Response

### **Criteria**

*You will know you are successful when*

- 4.1. you explain the purpose of disinfection
- 4.2. you choose a disinfection method
- 4.3. you explain why the disinfection method was appropriate
- 4.4. you select the correct equipment, agent, and supplies
- 4.5. you don personal protective equipment
- 4.6. you identify safety procedures
- 4.7. you provide an explanation of the process

### **Learning Objectives**

- 4.a. Describe the processes of decontamination
- 4.b. Describe the manual methods used for cleaning surgical instrumentation and equipment.
- 4.c. Describe the mechanical methods used for cleaning.
- 4.d. Describe the concepts of disinfection.

## 5. Apply principles of sterile processing

### Assessment Strategies

- 5.1. Written Objective Test
- 5.2. by answering questions that require you to apply knowledge about this competency [Your instructor may require several written exams as a part of this course. You will be notified in advance.]
- 5.3. Simulation

### Criteria

*You will know you are successful when*

- 5.1. you explain the purpose of sterilization
- 5.2. you choose a sterilization method
- 5.3. you explain why the sterilization method is appropriate
- 5.4. you select the correct sterilization equipment and supplies
- 5.5. you explain the sterilization parameters
- 5.6. you describe various process monitors
- 5.7. you identify safety procedures
- 5.8. you provide an explanation of the process
- 5.9. you describe sterile storage conditions and distribution of sterile items

### Learning Objectives

- 5.a. Define terms related to sterile processing.
- 5.b. Discuss the principles related to preparing items for sterilization.
- 5.c. Analyze the requirements for sterilizing items.
- 5.d. List the methods for preparing items for sterilization.
- 5.e. Discuss the principles of sterile storage
- 5.f. Discuss the principles of distributing sterile supplies.

## 6. Measure vital signs

### Assessment Strategies

- 6.1. Skill Demonstration
- 6.2. Written Objective Test

### Criteria

*You will know you are successful when*

- 6.1. you perform temperature, pulse, respirations, and blood pressure
- 6.2. you record vital signs
- 6.3. you state the normal range of temperature, pulse, respirations, and blood pressure for the adult
- 6.4. you note variants in range in children and geriatric patients

### Learning Objectives

- 6.a. State common pathological states that alter vital signs.
- 6.b. Identify the homeostatic parameters monitored in the operating room setting.
- 6.c. Demonstrate basic monitoring of patient homeostatic parameters.
- 6.d. Compare the varying intravascular catheters utilized within the operating room.
- 6.e. Correlate anesthesia monitoring devices with patient homeostasis

## 7. Evaluate common sources of documentation utilized in the OR

### Assessment Strategies

- 7.1. Written Objective Test
- 7.2. by answering questions that require you to apply knowledge about this competency (Your instructor may require several written exams as part of this course. You will be notified in advance.)

### Criteria

*You will know you are successful when*

- 7.1. summary includes a list of the required documentation
- 7.2. summary includes the purpose and normal values of lab work
- 7.3. summary includes the purpose of other diagnostic tests and interventions
- 7.4. summary includes the purpose of the history and physical

- 7.5. summary includes the purpose, types, contents, and legal guidelines of the surgical consent
- 7.6. summary includes the purpose of incident reports
- 7.7. summary includes the legal elements of proper documentation

#### **Learning Objectives**

- 7.a. Summarize the purpose of documentation
- 7.b. Discuss the purpose of informed consent
- 7.c. Describe the types of informed consent
- 7.d. Describe the purpose of the time-out procedure
- 7.e. Identify the sequence for the time-out procedure
- 7.f. Recall who will participate in the time-out procedure.
- 7.g. Identify the components to a time-out
- 7.h. Describe the documents found in the surgical patient's chart
- 7.i. State the purpose of patient identification
- 7.j. Describe the patient identification procedure according to the patient situation

### **8. Summarize preoperative preparation of the surgical patient**

#### **Assessment Strategies**

- 8.1. Written Objective Test
- 8.2. by answering questions that require you to apply knowledge about this competency (Your instructor may require several written exams as part of this course. You will be notified in advance.)

#### **Criteria**

*You will know you are successful when*

- 8.1. you choose the correct modes of patient transfer and transportation
- 8.2. you review patient chart
- 8.3. you identify items on the preoperative checklist
- 8.4. you follow the procedure for informed consent and site verification
- 8.5. you review patient lab and diagnostic routine
- 8.6. you introduce self to patient
- 8.7. you compare patient ID band/patient chart with surgery schedule
- 8.8. you participate in the time out procedure
- 8.9. you request patient to verbally state name and pertinent information
- 8.10. you report discrepancies

#### **Learning Objectives**

- 8.a. Examine the items on the pre-operative patient checklist.
- 8.b. Review patients chart for completeness of diagnostic tests and interventions as they relate to the perioperative patients diagnosis. (?)
- 8.c. Describe documents found in the surgical patient's chart
- 8.d. State the purpose of patient identification
- 8.e. Describe the patient identification procedure according to the patient situation
- 8.f. Describe the physical preparation that the surgical patient may receive before the surgical procedure

### **9. Demonstrate principles of safe patient transport/transfer**

#### **Assessment Strategies**

- 9.1. Written Objective Test
- 9.2. Skill Demonstration

#### **Criteria**

*You will know you are successful when*

- 9.1. you discuss various methods of patient transportation
- 9.2. you discuss the various methods of patient transfer and devices utilized
- 9.3. you demonstrate self transfer
- 9.4. you demonstrate assisted two-person transfer
- 9.5. you demonstrate assisted four-person transfer
- 9.6. you apply body mechanics
- 9.7. you maintain patient safety
- 9.8. you protect patient dignity

### Learning Objectives

- 9.a. Identify safe methods of safe patient transport/transfer
- 9.b. Discuss and demonstrate principles of safe patient transporting/transferring
- 9.c. Identify equipment utilized for safe transferring and transporting of the surgical patient

## 10. Assist the surgical team members with basic patient positioning

### Assessment Strategies

- 10.1. Written Objective Test
- 10.2. by answering questions that require you to apply knowledge about this competency (Your instructor may require several written exams as part of this course. You will be notified in advance.)
- 10.3. Skill Demonstration

### Criteria

*You will know you are successful when*

- 10.1. you discuss factors that affect positioning
- 10.2. you demonstrate supine positioning and modifications
- 10.3. you demonstrate lateral positioning and modifications
- 10.4. you demonstrate prone positioning and modifications
- 10.5. you apply positioning and protective devices
- 10.6. you apply body mechanics
- 10.7. you protect patient dignity
- 10.8. you maintain patient safety

### Learning Objectives

- 10.a. Explain factors to be taken under consideration when the patient position is selected
- 10.b. Identify the sections of the OR table
- 10.c. Explain the functions of an OR table
- 10.d. Describe various surgical positions
- 10.e. Describe the various types of accessory devices used to position the surgical patient
- 10.f. Evaluate the uses of accessory devices
- 10.g. Demonstrate safe patient positioning

## 11. Classify basic surgical instrumentation

### Assessment Strategies

- 11.1. Written Objective Test
- 11.2. by answering questions that require you to apply knowledge about this competency [Your instructor may require several written exams as a part of this course. You will be notified in advance.]

### Criteria

*You will know you are successful when*

- 11.1. you identify instrumentation by classification
- 11.2. you identify the parts of various instruments
- 11.3. you differentiate between various materials used to make instruments
- 11.4. You differentiate between the various types of instrument finishes

### Learning Objectives

- 11.a. Identify the manufacturing characteristics of surgical instruments
- 11.b. Compare the grades of surgical instruments
- 11.c. Describe the categories of surgical instruments
- 11.d. Apply knowledge of surgical instrumentation to specific surgical specialties
- 11.e. Evaluate perioperative instrumentation handling concepts
- 11.f. Demonstrate perioperative instrument handling
- 11.g. Demonstrate proper transport of instrumentation

## 12. Perform basic instrument identification

### Assessment Strategies

- 12.1. Written Objective Test by identifying surgical instruments and supplies
- 12.2. by answering questions that require you to apply knowledge about this competency [Your instructor may require several written exams as a part of this course. You will be notified in advance.]

## Criteria

*You will know you are successful when*

- 12.1. you identify the instruments by name
- 12.2. you identify the instrument classification
- 12.3. you identify the instrument function
- 12.4. you handle instruments correctly
- 12.5. you assemble selected instruments for use
- 12.6. you inspect instrument for proper usage

## Learning Objectives

- 12.a. Explore the relationship between instrument type and usage.
- 12.b. Identify the uses of basic surgical instrumentation.
- 12.c. Identify surgical supplies
- 12.d. Explain the usage of surgical supplies
- 12.e. Explain the principles of handling various types of surgical supplies
- 12.f. Evaluate the selection of surgical supplies

## 13. Adhere to the principles of asepsis and sterile technique

### Assessment Strategies

- 13.1. in an oral, written, demonstrative or graphic response
- 13.2. by answering questions that require you to apply knowledge about this competency (Your instructor may require several written exams as part of this course. You will be notified in advance.)
- 13.3. Demonstration

## Criteria

*You will know you are successful when*

- 13.1. you open up sterile packages
- 13.2. you differentiate between contaminated and clean/sterile areas
- 13.3. you maintain the sterile field
- 13.4. you identify a break in the sterile field
- 13.5. you initiate corrective action for breaks in sterile technique
- 13.6. you utilize concepts of aseptic technique

## Learning Objectives

- 13.a. Describe the terms related to asepsis and sterile technique
- 13.b. Apply concepts related to asepsis
- 13.c. Evaluate sources of contamination
- 13.d. Discuss principles and practices of sterile technique
- 13.e. Demonstrate proper sterile technique in a surgical environment

## 14. Open sterile supplies while maintaining aseptic technique

### Assessment Strategies

- 14.1. By applying learning objectives with Skill Demonstration
- 14.2. Written Product
- 14.3. by answering questions that require you to apply knowledge about this competency [Your instructor may require several written exams as a part of this course. You will be notified in advance.]

## Criteria

*You will know you are successful when*

- 14.1. you inspect the package for contents, sterility, and signs of integrity
- 14.2. you demonstrate an understanding of surgical conscience
- 14.3. you open back table cover/package on the backtable to create the sterile field
- 14.4. you match items with the surgeon's preference card
- 14.5. you open instrument set[s], gown and gloves, basins on appropriate surfaces
- 14.6. you deliver the contents of other needed supplies/packages to the appropriate area of the sterile field
- 14.7. you maintain sterility of supplies/packages
- 14.8. you identify breaks in aseptic technique

## Learning Objectives

- 14.a. Explain the steps for preparing an operating room
- 14.b. Describe the use of the surgeon's preference card
- 14.c. Describe the concepts that are applied for opening sterile items
- 14.d. Explain the sequence of opening sterile supplies
- 14.e. Demonstrate opening sterile supplies
- 14.f. Demonstrate the procedure to correct contaminations during the opening process
- 14.g. Describe the principles associated with establishing the sterile field