



Western Technical College

10512126 Surgical Tech Fundamentals 1

Course Outcome Summary

Course Information

Description	Focuses on preparing the patient and operating room for surgery. Principles of sterile technique are emphasized as the student moves into the scrub role. Lab practice is included.
Career Cluster	Health Science
Instructional Level	Associate Degree Courses
Total Credits	4
Total Hours	108

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.

512-120 & 512-125 Intro to Surgical Technology Lab and Instrumentation Booklet. Western. Publisher: Western. Required.

512-126 Surgical Technologist Clinical Booklet. Western. Publisher: Western. Required.

Learner Supplies

UVEX Astrospec 3000 Goggles - over glasses or no glasses style. **Vendor:** Campus Shop. Required.

Success Abilities

1. Cultivate Passion: Enhance Personal Connections
2. Cultivate Passion: Expand a Growth-Mindset
3. Cultivate Passion: Increase Self-Awareness
4. Live Responsibly: Develop Resilience
5. Live Responsibly: Embrace Sustainability
6. Live Responsibly: Foster Accountability
7. Refine Professionalism: Act Ethically
8. Refine Professionalism: Improve Critical Thinking
9. Refine Professionalism: Participate Collaboratively
10. Refine Professionalism: Practice Effective Communication

Program Outcomes

1. Maintain principles of sterile technique in the surgical environment.
2. Provide a safe, efficient, and supportive environment for the patient.
3. Prepare the patient, operating room, and surgical team for the preoperative phase.
4. Perform intraoperative case management in the scrub role.
5. Perform postoperative case management.

Course Competencies

1. Integrate safety controls to prevent or minimize surgical hazards.

Assessment Strategies

- 1.1. in an oral, written, demonstrative or graphic response
- 1.2. 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

- 1.1. you identify environmental hazards.
- 1.2. you identify physical hazards.
- 1.3. you identify chemical hazards.
- 1.4. you identify biological hazards.
- 1.5. you identify electrical hazards.
- 1.6. you choose an appropriate course of action for resolving or minimizing the hazard.

Learning Objectives

- 1.a. Describe the principles of electricity and electrical flow.
- 1.b. Demonstrate electrical knowledge as it relates to patient safety.
- 1.c. Describe types of environmental safety precautions.
- 1.d. Describe the components of OSHA and CDC guidelines.

2. Differentiate among methods and techniques of anesthesia.

Assessment Strategies

- 2.1. by applying the principles and skills in a role-play
- 2.2. in an oral, written, demonstrative or graphic response
- 2.3. 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

- 2.1. you identify routes of administration in your response.
- 2.2. you identify methods and techniques of anesthesia administration in your response.
- 2.3. you describe general anesthesia in your response.
- 2.4. you identify anesthesia equipment and supplies in your response.
- 2.5. you specify anesthetic agents in your response.
- 2.6. you identify topical, regional, and local agents in your response.
- 2.7. you list blood replacements and substitutes in your response.
- 2.8. you describe risks and complications associated with general anesthesia in your response.
- 2.9. you identify crystalloid IV agents in your response.

Learning Objectives

- 2.a. Examine the components of anesthesia preparation for the surgical patient.
- 2.b. Describe the homeostatic parameters in the operating room setting (anesthesia).
- 2.c. Analyze the principles of anesthesia administration.
- 2.d. Identify methods, agents, and techniques of anesthesia.
- 2.e. Correlate anesthesia monitoring devices with patient homeostasis.
- 2.f. Explain anesthesia complications and interventions.
- 2.g. Identify alternative anesthesia methods.

3. Create the sterile field.

Assessment Strategies

- 3.1. by applying the principles and skills in a role-play
- 3.2. in an oral, written, demonstrative or graphic response
- 3.3. by completion of competency on assignments and/or activities

Criteria

You will know you are successful when

- 3.1. you apply sterile technique in draping the mayo stand.
- 3.2. you place towels on mayo stand following facility practice.
- 3.3. you begin organization of back table by placing supplies in an efficient pattern based on routine.
- 3.4. you utilize good body mechanics in setting up.
- 3.5. you work in sections at the table.
- 3.6. you practice economy of time, motion, and materials.
- 3.7. you establish a routine(s).
- 3.8. you maintain sterile field by being aware of items and people moving about the area.
- 3.9. you face your sterile field.
- 3.10. you prioritize sequence of activities.

Learning Objectives

- 3.a. Demonstrate initial techniques for preparing instruments and supplies on the sterile field.
- 3.b. Drape furniture and equipment needed for the surgical procedure.
- 3.c. Apply the three principles of asepsis to the practice of sterile technique.

4. Perform surgical scrub.

Assessment Strategies

- 4.1. by applying the principles and skills in a role-play
- 4.2. by performing a surgical scrub in the lab
- 4.3. 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

- 4.1. you are appropriately attired for the surgical scrub.
- 4.2. you discuss various antiseptic agents.
- 4.3. you use the timed method.
- 4.4. you use the counted brush stroke method.

- 4.5. you use the brushless system.
- 4.6. you proceed to the operating room keeping hands and arms up and away from the body.
- 4.7. you recognize and correct breaks in technique.

Learning Objectives

- 4.a. Identify the preliminary preparations necessary for the surgical scrub.
- 4.b. Identify the critical elements of the surgical scrub.
- 4.c. Identify the different acceptable methods.
- 4.d. Follow healthcare facility policies and procedures.

5. Don sterile gown and gloves.

Assessment Strategies

- 5.1. by applying the principles and skills in a role-play
- 5.2. in an oral, written, demonstrative or graphic response
- 5.3. 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

- 5.1. you enter the operating room without contamination of self or the sterile field.
- 5.2. you dry hands and arms when applicable.
- 5.3. you gown self.
- 5.4. you don gloves using closed glove technique.
- 5.5. you complete the wrap-around gown process with assistance of an operating room team member.
- 5.6. you gown and glove others.
- 5.7. you perform open gloving.
- 5.8. you change a contaminated glove and/or gown when necessary.
- 5.9. you don a sterile sleeve when needed.
- 5.10. you remove gown and gloves adhering to principles of infection control.

Learning Objectives

- 5.a. Employ sterile technique when self gowning and/or gloving and when assisting other team members.
- 5.b. Demonstrate closed gloving.
- 5.c. Demonstrate open gloving.
- 5.d. Demonstrate how to correct contamination.

6. Demonstrate the procedures for counting instruments, sponges, needles, and other items in the field.

Assessment Strategies

- 6.1. by applying the principles and skills in a role-play
- 6.2. in an oral, written, demonstrative and/or graphic response
- 6.3. 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

- 6.1. you count materials in multiple units as they are packaged.
- 6.2. you separate and count different types of sponges.
- 6.3. you separate and count different types of instruments.
- 6.4. you separate and count different types of sharps.
- 6.5. you recognize that the surgical count is performed by the RN circulator and the STSR.
- 6.6. you recognize that the count is a permanent part of the surgical record.
- 6.7. you verify number of needles in a pack when a multi-pack is opened for use.
- 6.8. you organize counted items before closing counts.
- 6.9. you perform counts according to facility policy.
- 6.10. you initiate counts at specific times: before the procedure begins, during surgical procedures, and at the end.
- 6.11. you perform counts at specific times: before the procedure begins, during surgical procedures, and at the end.
- 6.12. you separate and safely count various items.

6.13. you report the results of the count.

Learning Objectives

- 6.a. Demonstrate the procedures for counting instruments, sponges, needles, and other items on the field.
- 6.b. Identify the purposes and legal responsibilities of counts.
- 6.c. Identify the techniques used to prevent foreign body retention.
- 6.d. Demonstrate when counts should be performed.
- 6.e. Demonstrate the methods for counting.

7. Demonstrate urinary catheterization.

Assessment Strategies

- 7.1. 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.]
- 7.2. in an oral, written, demonstrative or graphic response
- 7.3. by applying the principles and skills in a role-play

Criteria

You will know you are successful when

- 7.1. you assemble appropriate supplies for urinary catheterization.
- 7.2. you demonstrate the procedural steps of urinary catheterization.
- 7.3. you list the indications for urinary catheterization.
- 7.4. you demonstrate principles and skills of sterile technique.
- 7.5. you maintain patient privacy, dignity, and safety.

Learning Objectives

- 7.a. List the indications for urinary catheterization.
- 7.b. Discuss the basic considerations for urinary catheterization.
- 7.c. List the supplies required to perform urinary catheterization.
- 7.d. Demonstrate urinary catheterization insertion.
- 7.e. Discuss the principles of monitoring urine output.

8. Perform skin preparation for surgical procedure.

Assessment Strategies

- 8.1. in an oral, written, demonstrative or graphic response
- 8.2. by applying the principles and skills in a role-play
- 8.3. 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 assemble and prepare supplies, equipment, and solutions.
- 8.2. you identify prep parameters.
- 8.3. you expose the site to be prepped.
- 8.4. you create sterile field.
- 8.5. you open glove.
- 8.6. you place protective pads/drapes.
- 8.7. you scrub the skin starting at incision site.
- 8.8. you demonstrate the correct sequence of events for a surgical skin prep.
- 8.9. you document the preparation.
- 8.10. you demonstrate principles and skills of sterile technique.
- 8.11. you maintain patient privacy, dignity, and safety.

Learning Objectives

- 8.a. Identify different types of skin preparations.
- 8.b. Identify different chemical agents used for skin preparation.
- 8.c. Demonstrate the steps and rationales for surgical skin preparation.

9. Prepare the operating room.

Assessment Strategies

- 9.1. in an oral, written, demonstrative or graphic response

- 9.2. by applying the principles and skills in a role-play
- 9.3. 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

- 9.1. you are appropriately attired to enter the operating room.
- 9.2. you use surgeon's preference card to pull needed supplies.
- 9.3. you select appropriate supplies to be opened.
- 9.4. you arrange operating room furniture, back table, and mayo stand.
- 9.5. you distribute instruments and supplies to appropriate place.
- 9.6. you place appropriate equipment in the operating room.
- 9.7. you apply principles of disinfection as needed.

Learning Objectives

- 9.a. Interpret surgeon's preference cards.
- 9.b. Select instruments, supplies, and equipment needed for a procedure.
- 9.c. Demonstrate methods utilized to analyze and plan for the needs of the surgical case.

10. Demonstrate care and utilization of surgical supplies.

Assessment Strategies

- 10.1. by applying the principles and skills in a role-play
- 10.2. in an oral, written, demonstrative or graphic response
- 10.3. 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

- 10.1. you identify surgical supplies (i.e. sponges, tapes).
- 10.2. you explain function of the supply.
- 10.3. you prepare supplies for use at the field at appropriate times [i.e. having irrigation ready].
- 10.4. you prepare and pass the supply.
- 10.5. you demonstrated limited handling of supplies.

Learning Objectives

- 10.a. Identify the use of various supplies and accessory supplies in the operative environment.
- 10.b. Identify the recycling process for disposable supplies.

11. Perform assistant circulator role in the preoperative phase.

Assessment Strategies

- 11.1. by applying the principles and skills in a role-play
- 11.2. in an oral, written, demonstrative or graphic response
- 11.3. 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

- 11.1. you read the preference card.
- 11.2. you prepare the operating room.
- 11.3. you perform the initial count.
- 11.4. you transport the patient to the operating room.
- 11.5. you safely transfer the patient to and from the operating table.
- 11.6. you position the patient.
- 11.7. you assist the anesthesia provider.
- 11.8. you prep the patient.
- 11.9. you connect various cords and tubing from sterile field.
- 11.10. you reference patient documentation.
- 11.11. you monitor the sterile field.
- 11.12. you provide additional items to the sterile field during the procedure.

- 11.13. you demonstrate an understanding of patient charting methods.
- 11.14. you care for specimens.
- 11.15. you demonstrate proper application of surgical dressings.
- 11.16. you return equipment and supplies to their appropriate location.

Learning Objectives

- 11.a. Identify the perioperative duties of the assistant circulator.
- 11.b. Identify the operating room documentation to be completed by the assistant circulator.
- 11.c. Demonstrate the duties of the assistant circulator including completion of documentation.

12. Perform instrument identification.

Assessment Strategies

- 12.1. in an oral, written, demonstrative or graphic response
- 12.2. using pictures, instruments, and/or descriptions
- 12.3. by applying the principles and skills in a role-play
- 12.4. 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 type.
- 12.3. you handle instruments correctly.
- 12.4. you identify the instrument function.
- 12.5. you assemble instruments for use.

Learning Objectives

- 12.a. Apply knowledge of basic surgical instrumentation to specific surgical procedures.
- 12.b. Explain relationship between instrument type and usage.
- 12.c. Identify names, parts, and uses of surgical instrumentation.