

Montgomery County Community College
SUR 105
Surgical Technology I
7-6-4

COURSE DESCRIPTION:

This course is designed to introduce the student to the role of the Surgical Technologist in the health practice environment. Fundamental team skills are developed to assist the student to function during the care of patients having surgery. Communication utilizing medical terminology and basic computer functions is demonstrated and discussed in relation to its role in the operating room. The principles of aseptic techniques are introduced and demonstrated with the inclusion of the methods of sterilization, instrument identification, surgical set-up and instrumentation handling. Patient, equipment, and supply preparation are demonstrated and applied to the procedural stages, with basic concepts of robotics presented in relation to General, Colorectal, and Gynecologic/Obstetric Surgery. Accountability, responsibility and commitment to the surgical technologist profession are discussed. Concurrent clinical laboratory experiences introduce the student to the practice setting in the operating room as well as the sterile processing area.

PREREQUISITE(S):*Previous Course Requirements*

- MAT 011 Basic Algebra

Previous or Concurrent Course Requirements

- BIO 131 Human Anatomy and Physiology I
- BIO 140 Microbiology and Immunology

COURSE COMMENTS

Registration for this course requires attainment of Surgical Technology selective admissions criteria and admission into the Program

| LEARNING OUTCOMES Upon successful completion of this course, the student will be able to: | LEARNING ACTIVITIES | EVALUATION METHODS |
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| 1. Define the role and expectations of the Surgical Technologist within the operative team while delivering care to the patient. | Lecture with Visuals/Discussion Role Playing/Simulation in the Operating Room Learning Lab Reading assignments | Written Exams/Quizzes Clinical Performance |

| LEARNING OUTCOMES | LEARNING ACTIVITIES | EVALUATION METHODS |
|--|--|---|
| 2. Define conflict management and resolution strategies for effective stress management in the surgical environment. | Lecture with Visuals/Discussion including AV/Multimedia Materials Reading/Assignments Role Playing/Simulation in the Operating Room Learning Lab | Written Exams/Quizzes Discussion/Written Assignments |
| 3. Demonstrate proper written and verbal use of basic medical terminology. | Oral and Written Presentation of Case Study Assignments/Written Experiences Paralleling Clinical Experience Reading Assignments/ Case Studies Research Resources | Written Exams/Quizzes Written Report/Oral Presentation Discussion/Written Assignments |
| 4. Define the accountability, professional management, and environmental requirements of the Surgical Technologist's role. | Lecture with Visuals/Discussion including AV/Multimedia Materials Role Playing/Simulation in the Operating Room Learning Lab Reading Assignments | Written Exams/Quizzes Clinical Performance Discussion/Written Assignments |
| 5. Demonstrate the use of aseptic technique in preparing the patient for surgery. | Lecture with Visuals/Discussion including AV/Multimedia Materials Reading/Assignments Demonstration/ Role Playing/Simulation in the Operating Room Learning Lab | Written Exams/Quizzes Clinical Performance Discussion/Written Assignments Return Demonstration with Validation |

| LEARNING OUTCOMES | LEARNING ACTIVITIES | EVALUATION METHODS |
|---|---|---|
| 6. Demonstrate safe use of basic instruments, surgical equipment, and sterile supplies for surgical interventions. | Lecture with Visuals/Discussion including AV/Multimedia Materials Reading/Assignments Practice Demonstration Role Playing/Simulation in the Operating Room Learning Lab | Written Exams/Quizzes Clinical Performance Discussion/Written Assignments Return Demonstration with Validation |
| 7. Identify the medications, irrigants, anesthetic agents, and herbal/alternative supplements that impact the care of the surgical patient. | Lecture with Visuals/Discussion Reading Assignments/ Case Studies Role Playing/Simulation in the Operating Room Learning Lab | Written Exams/Quizzes Clinical Performance Discussion/Written Assignments |
| 8. Demonstrate the ability to prioritize and organize the surgical field for the intervention, while incorporating the knowledge of physiology to determine the urgency of care required. | Lecture with Visuals/Discussion including AV/Multimedia Materials Reading Assignments Case Studies Practice Demonstration Role Playing/Simulation in the Operating Room Learning Lab | Written Exams/Quizzes Clinical Performance Discussion/Written Assignments Return Demonstration with Validation |
| 9. Correlate anatomy and physiology of the gastrointestinal tract and genitourinary system, specific to gynecologic and obstetric surgery, to the procedural stages for surgical interventions. | Lecture with Visuals/Discussion including AV/Multimedia Materials Reading Assignments/ Case Studies Experiences/Case Studies Paralleling Clinical Experience | Written Exams/Quizzes Clinical Performance Discussion/Written Assignments |

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| 10. Perform basic information technology skills including robotics, lasers, and specialty equipment use for patient care practices in the operating room. | Lecture with Visuals/Discussion including AV/Multimedia Materials Reading/Assignments Demonstration/ Role Playing/Simulation in the Operating Room Learning Lab | Written Exams/Quizzes Clinical Performance Discussion/Written Assignments Return Demonstration with Validation |
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At the conclusion of each semester/session, assessment of the learning outcomes will be completed by course faculty using the listed evaluation method(s). Aggregated results will be submitted to the Associate Vice President of Academic Affairs. The benchmark for each learning outcome is that *70% of students will meet or exceed outcome criteria.*

SEQUENCE OF TOPICS:

1. Orientation
2. Surgical Technologist Role
 - A. Criteria of Role
 - B. Team Membership
 - C. Communication Skills & Teamwork
 - D. Conflict Management & Resolution
 - E. Accountability
 - F. Professional Management: Discipline-specific & Related Organizations
 - G. Environmental Requirements
3. Information Technology
 - A. Computer Literacy
 - B. Healthcare Information Systems
 - C. Basic Application to the Surgical Environment
 - D. Robotics, Lasers, Endoscopy, and Specialty Equipment
4. Course Specific Medical Terminology
 - A. Introduction to Medical Terminology
 - B. Combining Prefixes, Word Root, & Suffixes to Create Medical Terms Related to Surgery
 - C. Constructing & Combining Compound Words
 - D. Pronunciation of Medical Terms Related to Surgery
 - E. Writing Medical Terms Related to Surgery
5. Patient Care
 - A. Emotional Response of Patient
 - B. Legal Issues, Documentation, & Risk Management
 - C. Identification of Patient & Site
 - D. Transportation of the Patient: Patient Safety & Family Considerations
 - E. Positioning of the Patient

- F. Temperature Control of the Patient
- G. Potential Fluid Loss & Control
- H. Skin Preparation
- I. Specimen Retrieval, Documentation & Disposal
- J. Medications, Irrigants, Anesthetic Agents, and Supplements
- 6. Aseptic Technique
 - A. Surgical Consciousness & Accountability
 - B. Methods of Sterilization
 - C. Cleaning of Instruments and Environment
 - D. Opening of Supplies Using Sterile Technique
 - E. Surgical Hand Scrub, Gowning, Gloving
 - F. Sterile Draping of the Patient
- 7. Equipment & Supplies Preparation
 - A. Wound Healing, Hemostatic Agents, and Tissue Replacement Materials
 - B. Indications for Types of Instruments in Relation to Types of Tissue
 - C. Set-Up, Counting, Handing of Instruments
 - D. Suture & Needles
 - E. Stapling Devices
 - F. Prioritizing & Organization
- 8. General, Colorectal, & Gynecologic Surgery
 - A. Anatomy & Relationship to Each Procedure
 - B. Instruments & Set-Up for Each Procedure
 - C. Procedural Stages for Surgical Interventions
 - D. Potential Complications
- 9. Minimally Invasive Surgery, Basic Robotics, and Interventional Radiography
 - A. Instruments & Set Up/Positioning for Each Procedure
 - B. Decontamination & Sterilization of Robotic Components
 - C. Diagnostic imaging & image-guided therapeutic procedures
 - D. Preparation of Equipment & Set Up for Each Procedure
 - E. Design & Troubleshooting
 - F. Procedural Stages for Surgical Intervention
 - G. Potential Complications

LEARNING MATERIALS:

- Schroeder, C.L., Ehrlich, L., Schroeder-Smith, K., Ehrlich, A. (2021). *Medical Terminology for Health Professions* (9th ed.). Boston, MA: Cengage Learning.
- Frey, K.B. (2018). *Surgical Technology for the Surgical Technologist: A Positive Care Approach* (5th ed.). Boston, MA: Cengage Learning.
- Rothrock, J.C. & Alexander, S. M. (2012). *Alexander's Surgical Procedures*. (1st ed.). St. Louis, MO: Mosby Elsevier Inc.

Other learning materials may be required and made available directly to the student and/or via the College's Libraries and/or course management system.

COURSE APPROVAL:

Prepared by: Beverly Siftar, RN, MSN, CNOR and
Dr. Victoria L. Bastecki-Perez Date: 1/2003

Revised by: Erin White, MS, CST Date: 1/2009

VPAA/Provost Compliance Verification: Dr. John C. Flynn, Jr. Date: 9/11/2009

Revised by: Erin White-Mincarelli, Doctoral Candidate, MS, CST Date: 5/2012

VPAA/Provost or designee Compliance Verification:
Victoria L. Bastecki-Perez, Ed.D. Date: 5/30/2012

Revised by: Erin White-Mincarelli, Doctoral Candidate, MS, CST Date: 10/2012

VPAA/Provost or designee Compliance Verification:
Victoria L. Bastecki-Perez, Ed.D. Date: 10/30/2012

Revised by: Erin White-Mincarelli, PhD, MS, CST Date: 9/12/2017

VPAA/Provost or designee Compliance Verification:
Victoria L. Bastecki-Perez, Ed.D. Date: 11/7/2017

Revised by: Erin White-Mincarelli, PhD, MS, CST, FAST Date: 11/20/2023

VPAA or designee Compliance Verification: Date: 11/29/2023



This course is consistent with Montgomery County Community College's mission. It was developed, approved and will be delivered in full compliance with the policies and procedures established by the College.