

Course Code: SUR 158

Course Title: Pharmacology for the Surgical Technologist

Department: Allied Health

Effective Date: Summer 2026

PCS Code: 1.2 - Occupational/Technical Instruction

CIP Code: 51.0909

Repeatability: 0

Credit Hours

Catalog Notation: 1-0-1

Credit Hour Distribution:

Lecture: 1

Lab: 0

Clinical: 0

Total: 1

General Course Information

Catalog Description

Introduction to basic pharmacology principles. Medication classifications and use in the surgical setting and how they may alter or influence surgical intervention. Emphasis on the surgical technologist's role in handling medications and how medications are regulated.

General Course Objectives

1. Explain basic pharmacology principles.
2. Define and describe terms related to pharmacology.
3. Describe the medication development process, labeling, and regulations related to pharmacology.
4. Explain the role of the surgical technologist with medication administration including safe dispensing of medications, supplies for administration, and legal aspects of accepting and delivery of medications.
5. Identify how drugs alter cellular function through the study of pharmacodynamics.
6. Determine how the body handles drugs through pharmacokinetic processes such as administration, distribution, metabolism, and elimination.
7. Name the major pharmacology medication classifications and provide examples, mechanisms of action, adverse effects, indications, and contraindications for those medications used in surgery.

Minimum Placement Levels

English	Reading	Math
Placement out of ENG 099	Placement out of CCS 099	Placement out of MAT 060

Prerequisites

Credit in SUR 116 and SUR 150

Concurrent enrollment in SUR 118, SUR 130, and SUR 170

Admission into the Surgical Technology program

Recommended before enrolling (not required):

Credit or concurrent enrollment in BIO 123 and ENG 102

Methods of Evaluation

5-7 exams and 3-4 worksheets.

Instructional Materials and Additional Supplies

Pharmacology for the Surgical Technologist textbook, Howe and Burton, Elsevier, current edition.

Course Content

General Learning Outcomes (GLOs)

- Critical Thinking and Information Literacy: Students will demonstrate the ability to evaluate perspectives, evidence, and implications, and to locate, assess, and use information effectively.

Course Segments and Student Learning Outcomes

Course Segment	Learning Outcomes	Lecture Hours	Lab Hours	Clinical Hours
Basic Pharmacology	1. Identify the sources of medications. 2. Define and describe routes of medication administration. 3. Identify the various forms of medications.	1	0	0
Pharmacology Terminology	1. Define and describe pharmacokinetics and pharmacodynamics. 2. Identify common abbreviations associated with medication use. 3. Identify medication actions and their effects. 4. Describe the processes of pharmacokinetics.	2	0	0
Medication Regulation and Administration	1. Explain the legal ramifications of improper drug/solution handling. 2. Discuss the care and precautions required in identifying drugs and solutions. 3. Describe the surgical technologist's legal responsibility in the handling of drugs and solutions.	1	0	0
Medication Packaging	1. Identify the ways medications are packaged, measured, and delivered. 2. Describe how to prepare and manage medications and solutions. 3. Explain the use of medications in the care of the surgical patient.	2	0	0
Preoperative Medications	1. Describe the routes of administration, drug actions, and uses for medications used in the care of the surgical patient preoperatively. 2. Name the trade and generic names for common preoperative medications. 3. Describe the side effects and contraindications for use of preoperative medications.	1	0	0

Course Segment	Learning Outcomes	Lecture Hours	Lab Hours	Clinical Hours
Antibiotics	1. Describe the routes of administration, drug actions, and uses for antibiotic medications used in the care of the surgical patient. 2. Name the trade and generic names for common antibiotic medications. 3. Describe the side effects and contraindications for use of antibiotics.	2	0	0
Contrast Media, Dyes, and Stains	1. Describe the routes of administration, drug actions, and uses for contrast media, dyes, and stain medications used in the care of the surgical patient. 2. Name the trade and generic names for common contrast media, dyes, and stain medications. 3. Describe the side effects and contraindications for use of contrast media, dyes, and stains.	1	0	0
Diuretics and Hormones	1. Describe the routes of administration, drug actions, and uses for diuretic and hormone medications used in the care of the surgical patient. 2. Name the trade and generic names for common diuretic and hormone medications. 3. Describe the side effects and contraindications for use of diuretics and hormones.	2	0	0
Anticoagulants, Fibrinolytics, and Ophthalmic Medications	1. Describe the routes of administration, drug actions, and uses for anticoagulant and fibrinolytic medications used in the care of the surgical patient. 2. Name the trade and generic names for common anticoagulant and fibrinolytic medications. 3. Describe the side effects and contraindications for use of anticoagulants and fibrinolytics. 4. Describe the routes of administration, drug actions, and uses for ophthalmic medications used in the care of the surgical patient. 5. Name the trade and generic names for common ophthalmic medications. 6. Describe the side effects and contraindications for use of ophthalmic medications.	1	0	0
Irrigation Fluids, IV Fluids, and Blood Products	1. Describe the routes of administration, drug actions, and uses for irrigation and IV fluids used in the care of the surgical patient. 2. Name the trade and generic names for common irrigation and IV fluids. 3. Describe the contraindications for irrigation and IV fluids. 4. Explain the principles and techniques utilized for blood product administration. 5. Define and describe blood components used for transfusion. 6. Define and describe the products used for artificial blood replacement.	2	0	0

Total Contact Hours

Lecture Hours	Lab Hours	Clinical Hours
15	0	0