

# PHT 58: FUNDAMENTALS OF PHARMACOLOGY

## Foothill College Course Outline of Record

Heading	Value
<b>Effective Term:</b>	Fall 2025
<b>Units:</b>	4
<b>Hours:</b>	4 lecture per week (48 total per quarter)
<b>Prerequisite:</b>	BIOL 40A, 40B and 40C or equivalent.
<b>Advisory:</b>	One of the following: ENGL C1000 or C1000H or ESLL 26; not open to students with credit in BIOL 46 or 58.
<b>Degree &amp; Credit Status:</b>	Degree-Applicable Credit Course
<b>Foothill GE:</b>	Non-GE
<b>Transferable:</b>	CSU
<b>Grade Type:</b>	Letter Grade (Request for Pass/No Pass)
<b>Repeatability:</b>	Not Repeatable

## Student Learning Outcomes

- Describe the basic functions and mechanism of action of drugs and the physiological responses of various body systems
- List the desirable, undesirable actions, side effects, adverse effects of drugs and the appropriate remedies of drug interactions.

## Description

This course is designed to support the entry-level student pursuing any healthcare profession. It recognizes the diverse range of knowledge, learning styles, and life/work experiences of an entry-level student. The course includes general principles of pharmacology with emphasis on drug-receptor interactions, second messenger systems, determinants of drug response, pharmacokinetics, bio transformation and excretion, pharmacogenetics, drug development, and legal aspects of drug distribution. Application of pharmacological principles and concepts with emphasis on the various pharmacological classes of drugs used to treat diverse patient populations.

## Course Objectives

The student will be able to:

- Describe the basic principles of pharmacokinetics and pharmacodynamics
- Discuss the structure and function of physiologic systems and the physiologic responses seen in cases of stimulation and depression of various physiologic systems
- Explain how drugs are used to affect and interact with physiologic systems in the treatment of disease, and their potential side effects and drug interactions affecting the lifespan of patient populations
- Describe the pharmacology of infectious diseases
- Recall the most commonly prescribed drugs currently used by diverse patient populations

## Course Content

- Basic pharmacology
  - Recall biological factors affecting the action of drugs
  - Explain basic principles of pharmacokinetics
  - Discuss geriatric and pediatric pharmacology considerations
- Physiologic structure, function, and responses to stimulation or depression
  - Central and peripheral nervous system
  - Cardiovascular system
  - Renal system
  - Respiratory system
  - Gastrointestinal system
  - Endocrine system
  - Immune system
- Clinical application of pharmaceutical agents, including drugs affecting the:
  - Central and peripheral nervous systems
  - Cardiovascular system
  - Renal system
  - Respiratory system
  - Gastrointestinal system
  - Endocrine system
  - Immune system
- Pharmacology of infectious disease
  - Antibacterial agents
  - Antiviral agents
  - Antifungal agents
- Drug identification: generic name, brand name, and classification of the 50 most commonly prescribed drugs on the market at this time

## Lab Content

Not applicable.

## Special Facilities and/or Equipment

Multimedia classroom

## Method(s) of Evaluation

Methods of Evaluation may include but are not limited to the following:

Objective assessments  
Quizzes  
Reflective essays

## Method(s) of Instruction

Methods of Instruction may include but are not limited to the following:

Interactive presentation lecture material/notes  
Small group recitation  
Cooperative in-class activity

## **Representative Text(s) and Other Materials**

Hitner, Henry, and Barbara Nagle. Pharmacology: An Introduction, 8th ed.. 2021.

Harvey, Richard, and Pamela Champe. Lippincott's Illustrated Reviews: Pharmacology, 8th ed.. 2022.

## **Types and/or Examples of Required Reading, Writing, and Outside of Class Assignments**

1. Interactive presentation of lecture material/notes
2. Weekly reading assignments
3. Group study sessions/collaborative learning

## **Discipline(s)**

Biological Sciences and Health