

PHT 58: FUNDAMENTALS OF PHARMACOLOGY

Foothill College Course Outline of Record

Heading	Value
Effective Term:	Summer 2025
Units:	4
Hours:	4 lecture per week (48 total per quarter)
Prerequisite:	BIOL 40A, 40B and 40C or equivalent.
Advisory:	One of the following: ENGL 1A or 1AH or ESLL 26; not open to students with credit in BIOL 46 or 58.
Degree & Credit Status:	Degree-Applicable Credit Course
Foothill GE:	Non-GE
Transferable:	CSU
Grade Type:	Letter Grade (Request for Pass/No Pass)
Repeatability:	Not Repeatable

Student Learning Outcomes

- The student will be able to describe the basic functions and mechanism of action of drugs and the physiologic responses of various body systems
- The student will be able to list the side effects, desirable and undesirable actions and the appropriate remedies of drug interaction.

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