

# PHT 58: FUNDAMENTALS OF PHARMACOLOGY

## Foothill College Course Outline of Record

Heading	Value
<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 1A, 1AH, or 1S & 1T; 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
<b>Formerly:</b>	BIOL 58

## 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

General principles of pharmacology. 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 in 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
- describe the pharmacology of infectious diseases
- recall the most commonly prescribed drugs in use at this time

## Course Content

- Basic pharmacology
  - recall biological factors affecting the action of drugs
  - explain basic principles of pharmacokinetics
  - discuss geriatric and pediatric pharmacology considerations

B. 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

C. 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
- D. Pharmacology of infectious disease

- antibacterial agents
- antiviral agents
- antifungal agents

E. 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:

- Objective exams
- Quizzes
- Essays

## Method(s) of Instruction

- Lecture presentations and classroom discussion regarding topics.
- Small group recitation sessions to discuss concepts.

## Representative Text(s) and Other Materials

Hitner, Henry, and Barbara Nagle. [Pharmacology: An Introduction](#). 7th ed. Boston, MA: McGraw Hill, 2015.

Harvey, Richard, and Pamela Champe. [Lippincott's Illustrated Reviews: Pharmacology](#). 7th ed. Philadelphia: Lippincott Williams & Wilkins, 2018.

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

- Weekly reading assignments from text.
- Weekly lecture covering subject matter from text assignment with extended topic information.

C. Class discussion is encouraged.

## **Discipline(s)**

Biological Sciences and Health