

D H 306: PHARMACOLOGY FOR THE DENTAL HYGIENIST

Foothill College Course Outline of Record

Heading	Value
Effective Term:	Fall 2026
Units:	2
Hours:	2 lecture per week (24 total per quarter)
Degree & Credit Status:	Degree-Applicable Credit Course
Foothill GE:	Non-GE
Transferable:	CSU
Grade Type:	Letter Grade Only
Repeatability:	Not Repeatable

Student Learning Outcomes

- Explain pharmacokinetic and pharmacodynamic principles as they relate to drug classes commonly encountered in dental hygiene practice
- Evaluate medication-related oral health effects and drug-dental treatment interactions to support safe dental hygiene care

Description

This course is designed to introduce students to the foundational concepts of pharmacology with a specific focus on drugs relevant to dental hygiene practice. The course emphasizes the dental considerations of commonly prescribed medications, including their oral health implications, potential interactions with dental treatments, and the impact on patient care and treatment planning. Topics include local anesthetics, antibiotics, analgesics, cardiovascular drugs, and endocrine drugs. Students will learn to integrate pharmacological knowledge into clinical dental hygiene practice to ensure safe and effective patient care. Intended for students in the Dental Hygiene Baccalaureate Degree Program; enrollment is limited to students accepted in the program.

Course Objectives

The student will be able to:

- Explain pharmacokinetics and pharmacodynamics and their relevance to dental hygiene.
- Identify common drug classifications encountered in dental hygiene practice.
- Discuss the oral health implications and side effects of commonly prescribed medications.
- Evaluate drug interactions with dental treatments.

Course Content

- Pharmacokinetics and pharmacodynamics
 - Overview of absorption, distribution, metabolism, and excretion of drugs
 - Mechanisms of drug action and the dose-response relationship
 - Relevance to dental hygiene, including effects on oral health and local anesthetics
- Common drug classifications in dental hygiene

- Analgesics
 - Mechanism of action
 - Indications
 - Contraindications
 - Oral and systemic side effects
- Antiinfective drugs
 - Mechanism of action
 - Indications
 - Contraindications
 - Oral and systemic side effects
- Hormonal-based pharmaceuticals
 - Mechanism of action
 - Indications
 - Contraindications
 - Oral and systemic side effects
- Cardiovascular drugs
 - Mechanism of action
 - Indications
 - Contraindications
 - Oral and systemic side effects
- Respiratory drugs
 - Mechanism of action
 - Indications
 - Contraindications
 - Oral and systemic side effects
- Gastrointestinal drugs
 - Mechanism of action
 - Indications
 - Contraindications
 - Oral and systemic side effects
- Autocoids and antihistamines
 - Mechanism of action
 - Indications
 - Contraindications
 - Oral and systemic side effects
- Anticonvulsant agents
 - Mechanism of action
 - Indications
 - Contraindications
 - Oral and systemic side effects
- Psychotherapeutic drugs
 - Mechanism of action
 - Indications
 - Contraindications
 - Oral and systemic side effects
- Anxiolytic drugs
 - Mechanism of action
 - Indications
 - Contraindications
 - Oral and systemic side effects
- Antineoplastic agents
 - Mechanism of action
 - Indications

- iii. Contraindications
 - iv. Oral and systemic side effects
- I. General anesthesia and conscious sedation
 - i. Mechanism of action
 - ii. Indications
 - iii. Contraindications
 - iv. Oral and systemic side effects
- m. Local anesthesia
 - i. Mechanism of action
 - ii. Indications
 - iii. Contraindications
 - iv. Oral and systemic side effects
- n. Supplements
 - i. Mechanism of action
 - ii. Oral and systemic side effects
 - iii. Contraindications
 - iv. Indications
- o. Drugs for managing medical emergencies in the dental office
 - i. Mechanism of action
 - ii. Indications
 - iii. Contraindications
 - iv. Oral and systemic side effects
- 3. Oral health implications of medications
 - a. Oral side effects: xerostomia, gingival hyperplasia, oral candidiasis, or taste alterations
 - b. Patient education to manage oral side effects
- 4. Drug interactions with dental treatments
 - a. Interactions between systemic medications and dental drugs
 - i. Local anesthesia
 - ii. Nitrous oxide oxygen analgesia
 - b. Polypharmacy
 - i. Patient care precautions
 - ii. Adjustments to patient care for risk mitigation

Representative Text(s) and Other Materials

Haveles, Elena Bablenis. Applied Pharmacology for Dental Hygienists, 9th ed.. 2023.

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

1. Weekly readings from textbook.
2. Project: create a patient education pamphlet/infographic for assigned drug that includes dosing regimen, oral and systemic side effects, and when to contact their healthcare provider.

Discipline(s)

Dental Technology

Lab Content

Not applicable.

Special Facilities and/or Equipment

When offered as an online/hybrid course, students need on-going access to a computer with internet access and an email address.

Method(s) of Evaluation

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

Weekly quizzes
Case studies

Method(s) of Instruction

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

Lectures
Discussions