GAVILAN COLLEGE
5055 Santa Teresa Blvd
Gilroy, CA 95023

# Course Outline

**COURSE:** NURS 110 DIVISION: 40 ALSO LISTED AS:

TERM EFFECTIVE: Summer 2026 CURRICULUM APPROVAL DATE: 12/08/2025

SHORT TITLE: PHARM

LONG TITLE: Pharmacology

| Units | Number of Weeks | Type | Contact Hours/Week | Total Contact Hours |
|---|---|---|---|---|
| 2 | 18 | Lecture: | 2 | 36 |
| | | Lab: | 0 | 0 |
| | | Other: | 0 | 0 |
| | | Total: | 2 | 36 |

| | |
|---|---|
| Out of Class Hrs: | 72.00 |
| Total Learning Hrs: | 108.00 |

**COURSE DESCRIPTION:**

This course introduces the principles of pharmacology and the safe administration of medications across the lifespan. Emphasis is placed on the mechanisms of drug action, routes of administration, therapeutic uses, adverse effects, interactions, and nursing responsibilities in medication management. Students will examine pharmacokinetics and pharmacodynamics, dosage calculations, and patient-specific considerations to promote safe, effective, and evidence- based care. The course integrates critical thinking and ethical decision-making to prepare students to apply pharmacologic knowledge in diverse clinical settings. PREREQUISITE: Admission to the ADN Program. COREQUISITES: NURS 111, NURS 112, NURS 113, NURS 114.

PREREQUISITES:

Admission to the ADN Program

COREQUISITES:

NURS 111
NURS 112
NURS 113
NURS 114

CREDIT STATUS: D - Credit - Degree Applicable

GRADING MODES

L - Standard Letter Grade

REPEATABILITY: N - Course may not be repeated

SCHEDULE TYPES:

02 - Lecture and/or discussion

05 - Hybrid

71 - Dist. Ed Internet Simultaneous

72 - Dist. Ed Internet Delayed

**STUDENT LEARNING OUTCOMES:**

By the end of this course, a student should:

1. Apply principles of pharmacology in safe medication administration.
2. Demonstrate evidence-informed principles that support safe and effective pharmacologic nursing care.
3. Identify nursing responsibilities related to drug classifications and side effects.

**COURSE OBJECTIVES:**

By the end of this course, a student should:

1. Identify best practices in communicating pharmacologic information to patients, families, and other team members.
2. Integrate patient-specific factors, such as age, comorbidities, and culture, into medication management plans.
3. Perform dosage calculation for a variety of patients.
4. Describe the mechanism of action, routes of administration, indications for use, cautions, contraindications, drug interactions, adverse effect, and toxic effects of

selected drugs.

5. Identify major classes and subclasses of medications, their therapeutic uses, adverse effects, and contraindications.
6. Identify ethical and legal considerations when administering medication for diverse patients.

**COURSE CONTENT:**
Curriculum Approval Date: 12/08/2025
Introduction to Pharmacological Principles
Generic vs Brand name
Adverse Drug Reaction
Tolerance
Toxicity
Precautions
Contraindications
Pharmacokinetics and Pharmacodynamics
Absorption
Distribution
Metabolism
Excretion
Drug-receptor Interactions
Drug Actions
Conversions
Time
Volume
Temperature
Weight
Medication Math/Dosage Calculations
Math Practice
Dosage Calculations
Medications Affecting the Respiratory System and Allergy Medications
Bronchodilators
Corticosteroids
Antihistamines
Asthma
COPD
Common Medications
Mechanisms of Action
Therapeutic Uses
Routes of Administration
Cautions
Contraindications
Drug Interactions
Toxic Effects
Evaluation of Effectiveness
Adverse Effects
Medications Affecting the Cardiovascular System, part 1
Antihypertensives
Common Medications
Mechanisms of Action
Therapeutic Uses
Routes of Administration
Cautions
Contraindications

**COURSE CONTENT(CONTINUED):**
Drug Interactions
Toxic Effects
Evaluation of Effectiveness
Adverse Effects
Medications Affecting the Cardiovascular System, part 2
Antiarrhythmics
Anticoagulants
Antiplatelet Agents
Common Medications
Mechanisms of Action
Therapeutic Uses
Routes of Administration
Cautions
Contraindications
Drug Interactions
Toxic Effects
Evaluation of Effectiveness
Adverse Effects
Medications Affecting the Hematologic System
Thrombolytics
Mechanisms of Action
Therapeutic Uses
Routes of Administration
Cautions
Contraindications
Drug Interactions
Toxic Effects
Evaluation of Effectiveness
Adverse Effects
Medications Affecting the Immune System
Vaccines
Immune Modulators
Common Medications
Mechanisms of Action
Therapeutic Uses
Routes of Administration
Cautions
Contraindications
Drug Interactions
Toxic Effects
Evaluation of Effectiveness
Adverse Effects
Medications Affecting the Nervous System
Sympathomimetics
Adrenergic Blockers
Parasympathomimetics
Common Medications

**COURSE CONTENT(CONTINUED):**
Mechanisms of Action
Therapeutic Uses
Routes of Administration
Cautions
Contraindications
Drug Interactions
Toxic Effects
Evaluation of Effectiveness
Adverse Effects
Medications for Pain/Inflammation
NSAIDs
Opiods
Common Medications
Mechanisms of Action
Therapeutic Uses
Routes of Administration
Cautions
Contraindications
Drug Interactions
Toxic Effects
Evaluation of Effectiveness
Adverse Effects
Medications Affecting the Musculoskeletal System
Common Medications
Mechanisms of Action
Therapeutic Uses
Routes of Administration
Cautions
Contraindications
Drug Interactions
Toxic Effects
Evaluation of Effectiveness
Adverse Effects
Medications Affecting the Endocrine System
Insulin
Thyroid and Adrenal medications
Common Medications
Mechanisms of Action
Therapeutic Uses
Routes of Administration
Cautions
Contraindications
Drug Interactions
Toxic Effects
Evaluation of Effectiveness
Adverse Effects
Medications Affecting the GI System

**COURSE CONTENT(CONTINUED):**
Antacids
H2 Blockers
Proton Pump Inhibitors
Common Medications
Mechanisms of Action
Therapeutic Uses
Routes of Administration
Cautions
Contraindications
Drug Interactions
Toxic Effects
Evaluation of Effectiveness
Adverse Effects
Anti-Infectives
Common Medications
Mechanisms of Action
Therapeutic Uses
Routes of Administration
Cautions
Contraindications
Drug Interactions
Toxic Effects
Evaluation of Effectiveness
Adverse Effects
Chemotherapy
Common Medications
Mechanisms of Action
Therapeutic Uses
Routes of Administration
Cautions
Contraindications
Drug Interactions
Toxic Effects
Evaluation of Effectiveness
Adverse Effects
Final Exam

**METHODS OF INSTRUCTION:**

Lecture and discussion of weekly and course topics, Guided Practice; Readings and Videos

**OUT OF CLASS ASSIGNEMENTS:**

Required Outside Hours 72

Assignment Description

Students will engage in 72 hours of out-of-class assignments, including written assignments, studying, reading assignments, projects, case-studies, and discussion preparation.

**METHODS OF EVALUATION:**

Objective examinations

Evaluation Percent 30

Evaluation Description

In preparation for the NCLEX, students will demonstrate knowledge acquisition through quizzes and exams covering course material.

Problem-solving assignments

Evaluation Percent 35

Evaluation Description

Case studies and critical thinking assignments will be sprinkled throughout the course to ensure transference to the clinical environment. This will be rubric-graded.

Writing assignments

Evaluation Percent 35

Evaluation Description

Students will reflect, complete case studies, and otherwise demonstrate mastery of content through written assignments.

**REPRESENTATIVE TEXTBOOKS:**

Calculation of Drug Dosages: A Work Text , Ogden, S. J., OgdenN, S. J., & FluhartyN, L. , Elsevier, 2022 or a comparable textbook/material.

ISBN: 9780323826228

12 Grade Verified by: Publisher

Rang & Dale's Pharmacology, Rang, H. P., Dale, M. M., Ritter, J. M., Flower, R. J., & Henderson, G. , Elseivier, 2024 or a comparable textbook/material.

ISBN: 9780323873987

12 Grade Verified by: Publisher

Mosby's Drug Guide for Nursing Students, Linda Skidmore-Roth, Elsevier, 2025 or a comparable textbook/material.

ISBN: 9780443269646

12 Grade Verified by: Publisher

**ARTICULATION and CERTIFICATE INFORMATION**

CSU TRANSFER:

Transferable CSU

UC TRANSFER:

Not Transferable

**SUPPLEMENTAL DATA:**

Basic Skills: N
Classification: Y
Noncredit Category: Y
Cooperative Education: N
Program Status: 1 Program Applicable
Special Class Status: N
Prior to College Level: Y
Non Credit Enhanced Funding: N
Funding Agency Code: Y
In-Service: N
Occupational Course: C
Course Control Number: CCC000656829
Sports/Physical Education Course: N
Taxonomy of Program: 123000
CIP: 513801