

Lassen Community College Course Outline

VN-50 Pharmacology

4.0 Units

I. Catalog Description

Introduction to the principles of pharmacology, medication administration, and computation of medication dosage. Includes the study of major drug categories. Access to a computer with internet access is required. Students must complete all course hours and must achieve a 75% on their final class grade and must achieve a final exam grade of 75% or better to be eligible to remain in the nursing program. This course has been approved for hybrid delivery and online delivery for emergency use only. If course is provided hybrid or online, per the board of nursing students must be displayed on camera throughout entire course.

Diversity Statement:

Our commitment to diversity requires that we strive to eliminate barriers to equity and that we act deliberately to create a safe and inclusive environment where individual and group differences are valued and leveraged for the growth and understanding as an educational community.

Co-requisite(s): VN 51 & VN52

Does not transfer to UC/CSU

68 Hours Lecture, 136 Expected Outside Class Hours, 204 Total Student Learning Hours.

II. Coding Information

Repeatability: Not Repeatable, Take 1 Time

Grading Option: Graded

Credit Type: Credit - Degree Applicable

TOP Code: 120100

III. Course Objectives

A. Course Student Learning Outcomes

Upon completion of this course the student will be able to:

1. Verbalize understanding of pharmacological principles as they pertain to the different classifications of medications used in the clinical setting. (Analytical skills)
2. Calculate accurate dosages of ordered medications to provide safe administration of medications.

B. Course Objectives

Upon completion of this course the student will be able to:

1. Define pharmacology and its relation to the nursing process
 - i. Describe the tasks of a Licensed Vocational Nurse
 - ii. Describe the nursing process
2. Identify patient teaching techniques and health literacy
 - i. Discuss compliance, noncompliance and concordance
 - ii. Identify communication techniques with patients
 - iii. Describe the process of patient education

3. Identify legal aspects affecting the administration of medication
 - i. Describe pharmacology and regulations
 - ii. Discuss medication errors and reporting procedures
 - iii. Describe legislation that protects healthcare workers
4. Define the foundations and principles of pharmacology
 - i. Identify actors that may affect drug actions
 - ii. Discuss women's health issues
 - iii. Identify products used throughout the lifespan
 - iv. Identify cultural influence related to medications
 - v. Define genetics
 - vi. Identify spiritual and religious factors related to medications
 - vii. Describe compliance with medications
5. Identify self-care aspects of over-the-counter products, herbal therapies, and drugs for health promotion
 - i. Discuss documentation of patients health care practices
 - ii. Identify over-the-counter medications
 - iii. Discuss complementary and alternative medicines including herbal therapies
 - iv. Identify drugs used in health promotions such as vitamins and minerals
6. Identify proper procedures for administration of medications
 - i. Properly calculate drug dosages
 - a. Identify calculation methods
 - b. Identify proper calculating of dosages for infants and children.
 - ii. Describe enteral medications
 - a. Discuss oral administration
 - b. Discuss nasogastric administration
 - c. Discuss rectal administration
 - iii. Identify parenteral medications
 - a. Describe standard precautions
 - b. Discuss parenteral medication administration
 - c. Identify basic equipment
 - d. Identify procedures for preparing and administering parenteral medications
 - iv. Identify percutaneous medications
 - a. Describe percutaneous medication administration
 - b. Identify procedures for administration of percutaneous medication administration
7. Identify drug groups
 - i. Identify medications used to treat disorders of the respiratory system and allergies
 - a. Describe antihistamines
 - b. Describe antitussives
 - c. Describe asthma medication
 - d. Describe decongestants
 - e. Describe expectorants
 - f. Describe topical intranasal steroids
 - ii. Identify anti-infective medications
 - a. Describe antibiotics
 - b. Describe miscellaneous anti-infective drugs

- c. Describe anti-tubercular drugs
 - d. Describe anti-parasitic drugs
- iii. Identify antivirals, antiretroviral and antifungal medications
 - a. Describe antivirals
 - b. Describe antiretroviral medications
 - c. Describe antifungal medications
- iv. Identify antineoplastic medication
- v. Identify cardiovascular and renal medications
 - a. Describe antianginals and peripheral vasodilators
 - b. Describe antidysrhythmics
 - c. Describe antihyperlipidemics
 - d. Describe cardiotonics
 - e. Describe antihypertensive, diuretics and other drugs affecting the urinary tract
 - f. Describe other non-diuretic drugs useful in treating urinary problems
 - g. Describe fluid and electrolytes
- vi. Identify central and peripheral nervous system medications
 - a. Discuss anti-migraine agents
 - b. Discuss anticonvulsants and antiepileptic drugs
 - c. Describe antiemetic and antivertigo agents
 - d. Discuss antiparkinsonian agents
 - e. Discuss psychotherapeutic agents
 - f. Describe sedative and hypnotic medications
- vii. Identify medications used for pain management and anesthesia
 - a. Describe opioid agonist analgesics
 - b. Describe opioid agonist and antagonists
 - c. Discuss nonopioid analgesics and combination analgesic drugs
 - d. Define drugs used for anesthesia
- viii. Identify anti-inflammatory, musculoskeletal and antiarthritis medications
 - a. Describe anti-inflammatory and analgesic agents
 - b. Describe muscle relaxants
 - c. Describe antiarthritis medications
- ix. Identify gastrointestinal medications
 - a. Discuss antacids, H₂-receptor antagonists, proton pump inhibitors
 - b. Discuss anticholinergics, antispasmodics, and antidiarrheal
 - c. Describe laxatives and miscellaneous gastrointestinal drugs
- x. Identify hematologic products
- xi. Identify hormones and steroids
 - a. Describe antidiabetic drugs
 - b. Describe drugs used with pregnancy and delivery
 - c. Describe pituitary and adrenocortical hormones
 - d. Describe sex hormones
 - e. Describe thyroid hormones
- xii. Identify immunologic medications
- xiii. Identify topical medications
- xiv. Identify vitamins and minerals
 - a. Discuss vitamins
 - b. Discuss minerals

- c. Describe vitamin and mineral deficiencies
8. Review of computation of doses
9. Nursing care plan and medications
10. Pharmacology review

IV. Course Content

1. Pharmacology and Nursing Process
2. Patient teaching and health literacy
3. Legal aspects affecting the administration of medications
4. Foundations and principles of pharmacology
5. Lifespan and cultural modifications
6. Self-care aspects of over-the counter products, herbal therapies and drugs for health promotion
7. Preparing and administering medications
8. Allergy and repertory medications
9. Anti-infective medications
10. Antivirals, antiretroviral and antifungal medications
11. Antineoplastic medications
12. Cardiovascular and renal medications
13. Central and peripheral nervous system medications
14. Medications for pain management and anesthesia
15. Anti-inflammatory, musculoskeletal and antiarthritis medications
16. Gastrointestinal medications
17. Hematologic medications
18. Hormones and steroids
19. Immunologic medications
20. Topical medications
21. Vitamins and minerals
22. Review of computation of doses
23. Nursing care plan and medications
24. Pharmacology review

V. Assignments

A. Appropriate Readings

Representative texts as assigned by instructor.

B. Writing Assignments

Written report on drug abuse in nursing

C. Expected Outside Assignments

Weekly reading assignments in the texts and journals

Drug cards

Weekly masteries

D. Specific Assignments that Demonstrate Critical Thinking

Oxygenation examination

Dosage calculation exam

VI. Methods of Evaluation

The student must maintain a 75% in the class and must pass any midterm or final exams with a 75% or better to continue on in the nursing Program.

Davis's Drug Guide for Nurses - 17th Edition
April Hazard Vallerand PhD, RN, FAAN, Cynthia A. Sanoski BS, PharmD, BCPS,
FCCP ISBN: 13: 9781719640053

Lippincott NCLEX-PN Pass Point, Wolters Kluwer Health
ISBN: 978-1-4698-7210-0

Fischbach's A Manual of Laboratory and Diagnostic Tests – 11th Edition, Frances Talaska
Fischbach, Margaret A. Fischbach (2022). Philadelphia, PA: Lippincott Williams & Wilkins.
ISBN-13 978-1975173425

IX. Discipline/s Assignment

Licensed Vocational Nursing, Nursing

X. Course Status

Current Status: Active

Original Approval Date: 5/26/2005

Revised By: Christi Myers

Curriculum/Academic Standards Committee Revision Date: 11/29/2022