

RNRS 102: PHARMACOLOGY I

Citrus College Course Outline of Record

Heading	Value
Effective Term:	Fall 2025
Credits:	1.5
Total Contact Hours:	45
Lecture Hours :	18
Lab Hours:	27
Hours Arranged:	0
Outside of Class Hours:	36
Total Student Learning Hours:	81
Prerequisite:	Admission to the ADN program.
Corequisite:	RNRS 101.
Transferable to CSU:	No
Transferable to UC:	No
Grading Method:	Standard Letter

Catalog Course Description

This course introduces the student to pharmacologic nursing practice from a conceptual approach. Emphasis is placed on the drug classifications, prototypes, actions, interactions, adverse effects, and nursing implications. Curricular concepts, related to pharmacological modalities, are applied in lecture and laboratory settings. Students are encouraged to utilize the nursing process and clinical judgement while engaging with these curricular concepts. Upon completion of the course, students will apply pharmacological principles and interventions to provide safe and effective nursing care. 18 lecture hours, 27 lab hours.

Course Objectives

- Discuss pharmacokinetics and pharmacodynamics of drugs that affect perfusion, inflammation, infection, comfort, oxygenation, nutrition, and glucose regulation.
- Discuss pharmacological therapy and related nursing interventions in managing infection, inflammation, pain and discomfort, problems of impaired perfusion, oxygenation, and nutrition.
- Discuss the application of the nursing process and clinical judgment in relation to drugs that affect perfusion, inflammation, infection, comfort, oxygenation, nutrition, and glucose regulation.
- Outline the contents of a teaching plan for a patient who is on drugs that affect perfusion, inflammation, infection, comfort, oxygenation, nutrition, and glucose regulation.
- Identify responsible nursing decisions necessary for safe medication administration and to prevent errors and adverse outcomes.
- Recognize legal and ethical responsibilities of the nurses related to safe drug administration.
- Summarize lifespan (age-related) considerations in relation to drug efficacy, side effects, toxicities, and drug interactions, with special emphasis on dosage concerns.
- Describe concepts (nursing skills) to be applied to caring for a patient:
 1. Medication administration - PO, IM, SQ, ID, Eye, Ear, INH, Topical, PR, etc.
 2. Intravenous fluids and intravenous medication administration.
 3. Electrolyte replacement therapy.
 4. Drug dosage calculations.

Major Course Content

Pharmacokinetics

1. Discuss absorption, distribution, metabolism, excretion of drugs that affect perfusion, inflammation, intracranial regulation, cellular regulation, mood and affect, stress and coping, comfort, cognition, and clotting.

Pharmacodynamics

1. Discuss onset, peak, duration, trough levels, therapeutic serum drug levels, therapeutic safety margins, toxicity, half-life, prescription, over-the-counter (OTC) food, herb interactions and pharmacogenetics of drugs that affect perfusion inflammation, intracranial regulation, cellular regulation, mood and affect, stress and coping, comfort, cognition, and clotting.

Perfusion

1. Identify the core knowledge for drugs used in treating disorders of inflammation.
2. Describe nursing interventions to maximize the therapeutic effects and minimize adverse effects for drugs treating inflammatory conditions.
3. Outline a nursing plan of care from the interaction between core drug knowledge and core patient variables for drugs that affect perfusion.

Inflammation

1. Identify the core knowledge for drugs used in treating disorders of inflammation.
2. Describe nursing interventions to maximize the therapeutic effects and minimize adverse effects for drugs treating inflammatory conditions.
3. Outline a nursing plan of care from the interaction between core drug knowledge and core patient variables for ant-inflammatory drugs.

Infection

1. Identify the core knowledge for drugs used in treating infectious disorders.
2. Describe nursing interventions to maximize the therapeutic effects and minimize adverse effects for drugs treating infection.
3. Outline a nursing plan of care from the interaction between core drug knowledge and core patient variables for drugs that treat infection.

Comfort

1. Identify the core knowledge for drugs used to treat patients with discomfort.
2. Describe nursing interventions to maximize the therapeutic effects and minimize adverse effects for drugs used to treat pain.
3. Outline a nursing plan of care from the interaction between core drug knowledge and core patient variables for drugs that affect pain and comfort.

Oxygenation

1. Identify the core knowledge for drugs used in treating disorders affecting oxygenation.
2. Describe nursing interventions to maximize the therapeutic effects and minimize adverse effects for drugs treating conditions of impaired oxygenation.

3. Outline a nursing plan of care from the interaction between core drug knowledge and core patient variables for drugs that affect oxygenation.

Nutrition

1. Identify the core knowledge for drugs used in treating disorders affecting nutrition.
2. Describe nursing interventions to maximize the therapeutic effects and minimize adverse effects for drugs treating condition of impaired nutrition.
3. Outline a nursing plan of care from the interaction between core drug knowledge and core patient variables for drugs that affect nutrition.

Glucose Regulation

1. Identify the core knowledge for drugs used in treating disorders affecting glucose regulation.
2. Describe nursing interventions to maximize the therapeutic effects and minimize adverse effects for drugs treating conditions of impaired glucose regulation.
3. Outline a nursing plan of care from the interaction between core drug knowledge and core patient variables for drugs that affect glucose regulation.

Safety

1. Explain the nurse's responsibilities in safe and effective medication administration.
2. Describe the nurse's role in teaching patients about home safety.
3. Outline the nursing responsibilities for patient care before, during, and after the conscious sedation procedure.
4. Explain the rationale for use of Patient-Controlled Analgesia (PCA).
5. Discuss the nurse's responsibilities in PCA.

Developmental Concerns

1. Discuss the pediatric and geriatric considerations during antihypertensive therapy.
2. Discuss the pediatric and older adult considerations of opioids and non-opioid analgesics.
3. Discuss how age-related physiological changes affect drug action.
4. Describe principles of drug administration for the elderly person.
5. Identify the risk factors for polypharmacy.

Legal and Ethical Concerns

1. State the purpose and functions of the Food and Drug Administration (FDA).
2. State the purpose of medication reconciliation.
3. Describe federal legislation regarding medications.
4. Describe the schedules for controlled substances.
5. Identify the legal/ethical responsibilities of the nurses related to safe drug administration.

Lab Content

Safety

1. Preparing and administering medication through various routes including PO, IM, SQ, ID, Eye, Ear, INH, Topical, and PR.
2. Maintaining intravenous infusions.

Suggested Reading Other Than Required Textbook

Buchholz, S., Henke's med-math dosage calculation, preparation, and administration, 9th Ed., Pearson, 2020.

Examples of Required Writing Assignments

Drug cards, clinical judgment case studies

Examples of Outside Assignments

Reading, drug cards

Instruction Type(s)

Lab, Lecture