RNRS 202: PHARMACOLOGY II

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:	RNRS 105, RNRS 106 and RNRS 107 for Generic track students, or RNRS 200 for Advanced Placement track students.
Corequisite:	RNRS 205 and RNRS 206.
Transferable to CSU:	Yes
Transferable to UC:	No
Grading Method:	Standard Letter

Catalog Course Description

This course continues the study of pharmacology from a conceptual approach as they relate to nursing management of drug therapy. Emphasis is placed on the drug classifications, prototypes, actions, interactions, adverse effects, and nursing implications. Complex curricular concepts related to pharmacological modalities are applied in lecture. Students are encouraged to utilize the nursing process and clinical reasoning 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 pharmacodynamics and pharmacokinetics of drugs that affect perfusion, inflammation, intracranial regulation, cellular regulation, mood and affect, stress and coping, comfort, cognition, and clotting.
- Integrate the application of the nursing process and clinical judgment in relation to drugs that affect perfusion, inflammation, intracranial regulation, cellular regulation, mood and affect, stress and coping, comfort, cognition, and clotting.
- Organize a teaching plan for a client who is on drugs that affect perfusion, inflammation, intracranial regulation, cellular regulation, mood and affect, stress and coping, comfort, cognition, and clotting.
- Prioritize responsible nursing decisions necessary for safe medication administration and to prevent errors and adverse outcomes.
- Differentiate legal and ethical responsibilities of the nurses related to safe drug administration.
- Compare and contrast lifespan (age-related) considerations in relation to drug efficacy, side effects, toxicities, and drug interactions, with special emphasis on dosage concerns.

Major Course Content
NCLEX Client Categories

- Pharmacological and Parenteral Therapy

Pharmacology Nursing Concepts and Exemplars:

- Pharmacokinetics - Absorption, distribution, metabolism, excretion.
- Pharmacodynamics - Onset/Peak/Duration, trough levels, therapeutic serum drug levels, therapeutic safety margins, toxicity, half-life, prescription/over the counter drugs/food/herb/ interactions, pharmacogenetics.
- Perfusion - Inotropics, antiarrythmics, thrombolytics, anti-anginals/ nitrates, cardiac glycosides.
- Inflammation - Immunosuppressants, immune modulators.
- Intracranial Regulation - Sympathomimetics, cholinergics, anticholinergics, antiadrenergics, osmotic diuretics, anticonvulsants.
- Cellular Regulation - Antineoplastics, cytotoxics, biologic antineoplastics, antineoplastic hormone inhibitors, cytoprotectants, pharmacogenetics.
- Mood and Affect, Stress and Coping, and Cognition - Mood stabilizers, antidepressants, antipsychotics, anxiolytics, antiparkinsonian drugs, cognition enhancing medications, central nervous system (CNS) stimulants.
- Clotting - Anticoagulants, Coagulation modifier agents.
- Comfort - General/local anesthesia, sedatives, hypnotics.
- Safety - Patient Controlled Analgesia (PCA), procedural/conscious sedation, additive/synergistic/antagonist effect.
- Legal and Ethical Concerns - Controlled Substance Act, scheduled categories of controlled substances, Nurse Practice Act, medication reconciliation, FDA, black box warning, high alert medications, cultural considerations.

Module Learning Outcomes

Pharmacokinetics

- 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, 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.
2. Define pharmacogenetics.
3. Discuss how people respond differently to drug therapy based on their genetic makeup or genes.

Perfusion

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

Intracranial Regulation
1. Discuss the core knowledge for drugs used in treating disorders affecting intracranial regulation.
2. Summarize nursing interventions to maximize the therapeutic effects and minimize adverse effects for drugs treating conditions of impaired intracranial regulation.
3. Generate a nursing plan of care from the interaction between core drug knowledge and core patient variables for drugs that affect intracranial regulation.

Cellular Regulation
1. Discuss the core knowledge for drugs used in treating disorders affecting cellular regulation.
2. Summarize nursing interventions to maximize the therapeutic effects and minimize adverse effects for drugs treating conditions of impaired cellular regulation.
3. Generate a nursing plan of care from the interaction between core drug knowledge and core patient variables for drugs that affect cellular regulation.

Clotting
1. Discuss the core knowledge for drugs used in treating disorders affecting clotting.
2. Summarize nursing interventions to maximize the therapeutic effects and minimize adverse effects for drugs treating conditions of impaired clotting.
3. Generate a nursing plan of care from the interaction between core drug knowledge and core patient variables for drugs that affect clotting.

Comfort
1. Discuss the core knowledge for drugs used to treat pain.
2. Summarize nursing interventions to maximize the therapeutic effects and minimize adverse effects for drugs used to treat pain.
3. Generate a nursing plan of care from the interaction between core drug knowledge and core patient variables for drugs that affect pain and comfort.

Mood and Affect
1. Discuss the core knowledge for drugs used in treating disorders affecting mood and affect.
2. Summarize nursing interventions to maximize the therapeutic effects and minimize adverse effects for drugs treating conditions of altered mood and affect.
3. Generate a nursing plan of care from the interaction between core drug knowledge and core patient variables for drugs that affect altered mood and affect.

Stress and Coping
1. Discuss the core knowledge for drugs used in treating disorders affecting stress and coping.
2. Summarize nursing interventions to maximize the therapeutic effects and minimize adverse effects for drugs treating conditions of altered stress and coping.
3. Generate a nursing plan of care from the interaction between core drug knowledge and core patient variables for drugs that affect stress and coping.

Cognition
1. Discuss the core knowledge for drugs used in treating disorders affecting cognition.
2. Summarize nursing interventions to maximize the therapeutic effects and minimize adverse effects for drugs treating conditions of altered cognition.
3. Generate a nursing plan of care from the interaction between core drug knowledge and core patient variables for drugs that affect stress and coping.

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

Legal and ethical concern
1. Review the purpose and function of the FDA (Ticket to class).
2. Explain medication Reconciliation.
3. Analyze federal legislation regarding medications.
4. Explain the schedules for controlled substances.
5. Summarize the legal/ethical responsibilities of the nurses related to safe drug administration.

Lab Content
Application of Concepts to Nursing Skills
Concepts and Exemplars
- Perfusion - Total parenteral nutrition (TPN), intravenous insertion
- Safety - Preparing and administering medication, administering oral medication, intravenous medication, adding fluid to containers, initiating infusion, maintaining infusion.

Clinical Course Learning Outcomes (Adopted from NOF Toolkit (https://drive.google.com/drive/u/0/folders/1gYVHYbhreZ4no_qnAPoZpKREOmwPXXDV/), 2016)
Patient-Centered Care:
Provide holistic care that recognizes an individual's preferences, values, and needs and respects the patient or designee as a full partner in providing compassionate, coordinated, age and culturally appropriate, safe and effective care.

Knowledge
1. Understands multiple dimensions of patient-centered care including:
    a. Patient/family/community preferences, and values.
    b. Coordination and integration of care.
    c. Information, communication, and education.
    d. Physical comfort and emotional support.
    e. Involvement of family and significant other.
    f. Care transition and continuity.

Attitudes/Behaviors
1. Values and respects assessing health care situation from the patient's perspective and belief systems.
2. Respects and encourages the patient's participation in decisions about health care and services.

Skills

- Assesses patient values, preferences, decisional capacity, and expressed needs as part of ongoing assessment, clinical interview, implementation of care plan, and evaluation of care.

Professionalism:
Demonstrate accountability for the delivery of standard-based nursing care that is consistent with moral, altruistic, legal, ethical, regulatory, and humanistic principles.

Knowledge
- Understands the professional standards of practice, the evaluation of that practice, and the responsibility and accountability for the outcome of practice.

Attitudes/Behaviors
1. Accepts responsibility for own behavior.
2. Respects others during clinical activities (i.e., no talking while others are talking, cell phones are silenced, and no inappropriate use of computers).

Skills
1. Demonstrates ability for reflection in action, reflection for action, and reflection on action.
2. Utilizes an ethical decision-making framework in clinical situations.
3. Complies with the Standards of Practice, policies, and procedures of the nursing program and clinical agencies.
4. Completes assignments as required and scheduled.
5. Participates in clinical activities as scheduled, arriving on time and prepared for the daily assignment.
6. Maintains confidentiality of all patient information in conversation, electronic, and written means.
7. Provides and receives constructive feedback to/from peers and instructors.

Leadership:
Influence the behavior of individuals or groups of individuals within their environment in a way that will facilitate the establishment and acquisition/achievement of shared goals.

Knowledge
- Identifies leadership skills essential to the practice of nursing.

Attitudes/Behaviors
1. Recognizes the role of the nurse as a leader.
2. Accepts accountability for nursing care delegated to others.
3. Recognizes the value of leadership to empower others and enhance collaboration and shared decision making.

Skills
- Outlines leadership skills of systems thinking, communication, and facilitating change in meeting patient care needs.

System-Based Practice:
Demonstrate an awareness of and responsiveness to the larger context of the healthcare system and will demonstrate the ability to effectively call on work unit resources to provide care that is of optimal quality and value (Adapted from ACGME, n.d.).

Knowledge
- Understands role and responsibilities as a member of the health care team in planning and using work unit resources to achieve quality patient outcomes.

Attitudes/Behaviors
1. Recognizes the complexity of individual and team practice on a work unit.
2. Appreciates role in identifying work unit inefficiencies and operational failures.

Skills
1. Plans, organizes, and delivers patient care in the context of the work unit.
2. Participates in solving work unit inefficiencies and operational failures that impact patient care, such as those involving supplies, medications, equipment, and information.
3. Considers resources available on the work unit when contributing to the plan of care for a patient or group of patients.
4. Collaborates with members of the health care team to prioritize resources, including one's own work time and activities delegated to others, for the purpose of achieving quality patient outcomes.
5. Evaluates outcomes of one's own nursing care.
6. Uses education and referral to assist the patient and family through care transitions.

Informatics and Technology:
Use advanced technology to analyze as well as synthesize information and collaborate in order to make critical decisions that optimize patient outcomes. (National Academies of Sciences, Engineering, and Medicine. 2015).

Knowledge
- Understands the use of electronic communication strategies among healthcare providers in the healthcare system.

Attitudes/Behaviors
- Values and protects confidentiality of protected health information.

Skills
1. Uses the electronic health record system to access relevant patient information, including accessing and interpreting patient history, diagnostic and laboratory findings.
2. Utilizes technology fully and accurately documents patient assessment, plan of care, referrals, and care provided.

Communication:
Interact effectively with patients, families, and colleagues, fostering mutual respect and shared decision making, to enhance patient satisfaction and health outcomes.

Therapeutic Communication
Knowledge
1. Understands the principles of effective communication through various means.
2. Knows grammar, spelling, and health care terminology.

Attitudes/Behaviors
- Values individual cultural and personal diversity.

Skills
1. Uses clear, concise, and effective written, electronic, and verbal communications.

2. Documents interventions and outcomes of care according to professional standards and work unit policy.
3. Demonstrates effective interviewing techniques and adapts communication as needed based on patient's response.

Collegial Communication
Skills
- Uses standardized communication approaches (e.g. SBAR) in all communications and in care transitions.

Teaching and Learning
Knowledge
- Understands the principles of teaching and learning.

Attitudes/Behaviors
- Values different means of communication used by patients and families.

Skills
- Assesses factors that influence the patient's and family's ability to learn, including readiness to learn, preferences for learning style, and levels of health literacy.

Teamwork and Collaboration:
- Function effectively within nursing and interdisciplinary teams, fostering open communication, mutual respect, shared decision-making, team learning, and development (Adapted from QSEN, 2007).

Knowledge
1. Identifies own strengths, limitations, and values in functioning as a member of a team.
2. Understands the impact of the effective collegial communication on patient outcomes.
3. Discusses how authority and hierarchy influence teamwork and patient safety.

Attitudes/Behaviors
- Appreciates the importance of collaboration.

Skills
1. Acts with honesty and integrity when working with patients, families, and team members.
2. Functions competently within own scope of practice as a member of the health care team.
3. Follows communication practices to minimize risks associated with transfers between providers during care transitions.
4. Contributes to effective team functioning.

Safety:
Minimize risk of harm to patients and providers through both system effectiveness and individual performance (QSEN, 2007).

Knowledge
1. Identifies human factors and basic safety design principles that affect safety.
2. Describes the benefits and limitations of commonly used safety technology.

Attitudes/Behaviors
- Recognizes that both individuals and systems are accountable for a safe culture.

Skills
1. Demonstrates effective use of technology and standardized practices that support safe practice.
2. Communicates observations or concerns related to hazards and errors involving patients, families, and/or health care team.
3. Sufficiently prepares for and completes laboratory assignments to implement safe and effective care.
4. Incorporates clinical judgment in the performance of care, skills, and education.

Quality Improvement:
Use data to monitor the outcomes of care processes and use improvement methods to design and test changes to continuously improve the quality and safety of health care systems (QSEN, 2007).

Knowledge
- Comprehends that nursing contributes to systems of care and processes that affect outcomes.

Attitudes/Behaviors
- Recognizes that quality improvement is an essential part of nursing.

Skills
- Actively seeks information about quality initiatives in their own care settings and organization.

Evidence-Based Practice:
Identify, evaluate, and use the best current evidence coupled with clinical expertise and consideration of patients' preferences, experience and values to make practice decisions (Adapted from QSEN, 2007).

Knowledge
- Identifies evidence-based rationale when developing and/or modifying clinical practices.

Attitudes/Behaviors
- Values the concept of evidence-based practice as integral to determining best clinical practice.

Skills
- Bases individualized care on best current evidence, patient values, and clinical expertise.

Suggested Reading Other Than Required Textbook

Bucholz, 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