



## COURSE OUTLINE: PNG234 - PHARMACOLOGY I

Prepared: Gwen DiAngelo, Donna Alexander, updated by Andrew Metcalfe 2020

Approved: Bob Chapman, Chair, Health

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| <b>Course Code: Title</b>  | PNG234: PHARMACOLOGY I   |
| <b>Program Number: Name</b>  | 3024: PRACTICAL NURSING  |
| <b>Department:</b>   | PRACTICAL NURSING  |
| <b>Semesters/Terms:</b>  | 20F  |
| <b>Course Description:</b>   | This course introduces the learner to the concepts of pharmacology as selected drug groups are studied. The course will emphasize the role and responsibilities of the practical nurse in the administration and monitoring of client medications. The learner will study the mechanism of action, therapeutic indications and nursing responsibilities (including drug monitoring and management of adverse drug effects). In addition, this course will emphasize common medication dosages, drug calculations, nursing legislation and standards and health teaching. Furthermore, this course will detail the professional implications of medication administration, as learners prepare for their pre-graduate experience. This course is comprised of in-class lecture (theory) and simulation, which provides the learner the opportunity to discuss and apply pharmacologic concepts. |
| <b>Total Credits:</b>  | 3  |
| <b>Hours/Week:</b>   | 3  |
| <b>Total Hours:</b>  | 45   |
| <b>Prerequisites:</b>  | PNG111, PNG121, PNG127, PNG130, PNG131   |
| <b>Corequisites:</b>   | PNG233, PNG236, PNG238   |
| <b>This course is a pre-requisite for:</b>   | PNG250, PNG252, PNG253   |
| <b>Vocational Learning Outcomes (VLO's) addressed in this course:</b>                                | <b>3024 - PRACTICAL NURSING</b>  |
| <b>Please refer to program web page for a complete listing of program outcomes where applicable.</b> | VLO 1 Communicate therapeutically with clients and members of the health care team.  |
|  | VLO 2 Assess clients across the life span, in a systematic and holistic manner.  |
|  | VLO 3 Plan safe and competent nursing care, based upon a thorough analysis of available data and evidence-informed practice guidelines.  |
|  | VLO 4 Select and perform nursing interventions using clinical judgment, in collaboration with the client and, where appropriate, the health care team, that promote health and well-being, prevent disease and injury, maintain and/or restore health, promote rehabilitation, and/or provide palliation.  |
|  | VLO 5 Evaluate the outcomes resulting from all interventions in the nurse-client interaction and modify the plan of care as required.  |
|  | VLO 6 Act equitably and justly with clients and members of the health care team.   |
|  | VLO 7 Adapt to a variety of health care settings, using different leadership skills and styles as appropriate to each setting.   |
|  | VLO 9 Practise in a self-regulated, professional and ethical manner, complying with relevant   |

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legislation and with the standards of both the regulatory body and the practice setting to provide safe and competent client care.

**Essential Employability Skills (EES) addressed in this course:**

- EES 1 Communicate clearly, concisely and correctly in the written, spoken, and visual form that fulfills the purpose and meets the needs of the audience.
- EES 2 Respond to written, spoken, or visual messages in a manner that ensures effective communication.
- EES 3 Execute mathematical operations accurately.
- EES 4 Apply a systematic approach to solve problems.
- EES 5 Use a variety of thinking skills to anticipate and solve problems.
- EES 7 Analyze, evaluate, and apply relevant information from a variety of sources.
- EES 11 Take responsibility for ones own actions, decisions, and consequences.

**Course Evaluation:**

Passing Grade: 60%, C

A minimum program GPA of 2.0 or higher where program specific standards exist is required for graduation.

**Other Course Evaluation & Assessment Requirements:**

College of Nurses of Ontario (CNO) Registered Practical Nurse (RPN) Entry-to-Practice Competencies (ETPs) 1, 2, 18, 61, 62

**Books and Required Resources:**

Pharmacology for Canadian Health Care Practice by Linda Lane Lilley, Beth Swart, and Julie S. Snyder  
 Publisher: Elsevier Canada Edition: 3rd Edition  
 ISBN: 9781927406694  
 or 9781927406687

Mosby`s 2021 Nursing Drug Reference by Linda Skidmore-Roth  
 Publisher: Elsevier  
 ISBN: 9780323757331

Practice Standard Medication by College of Nurses of Ontario  
 Publisher: College of Nurses of Ontario Edition: 2019  
[https://www.cno.org/globalassets/docs/prac/41007\\_medication.pdf](https://www.cno.org/globalassets/docs/prac/41007_medication.pdf)

Pharmacology for Canadian Health Care Practice Study Guide by Lilley  
 Publisher: Elsevier Edition: 3rd  
 ISBN: 9781771721004  
 or 9781771720014

**Course Outcomes and Learning Objectives:**

| Course Outcome 1  | Learning Objectives for Course Outcome 1  |
|---|---|
| 1. Relate the principles of basic pharmacological theory to the nursing process and the administration of medications.<br>CNO ETP RPN 1, 2, 8, 18, 61, 62 | 1.1 Apply the nursing process to the administration of medications across the lifespan.<br>1.2 Define the common terms used in the study of pharmacology.<br>1.3 Apply the common terms used in pharmacology including the concepts of pharmaceuticals, pharmacokinetics, pharmacodynamics and pharmacotherapeutics.<br>1.4 Discuss the lifespan considerations associated with |

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|   | <p>medication administration (including pregnant women, breastfeeding, infants, children and older adults).</p> <p>1.5 Incorporate Canadian legislation which governs the administration of medication (including the Food and Drug Act and the Controlled Substance Act).</p> <p>1.6 Discuss the impact of medication errors and the process involved in reporting a medication error.</p> <p>1.7 Discuss the importance of patient education as a component of medication administration including prescription medications, over the counter medications and natural health products.</p> <p>1.8 Understand the importance of medication administration in the treatment plan.</p> <p>1.9 Recognize assessment needs of the patient undergoing drug therapy.</p> <p>1.10 Identify how drug therapy is integrated into the safe evidence-based care of clients.</p> <p>1.11 Recognize gender, ethnic, and cultural influences impacting drug therapy.</p>   |
| <b>Course Outcome 2</b>   | <b>Learning Objectives for Course Outcome 2</b>   |
| <p>2. Explain the action, therapeutic indications and nursing responsibilities of select medication classifications.<br/>CNO ETP RPN 8, 61, 62</p>    | <p>2.1 Analgesic agents (non-opioids, opioids, partial opioid agonists and opioid antagonists).</p> <p>2.2 Non-steroidal anti-inflammatory agents.</p> <p>2.3 General/local anesthetic agents and moderate sedation.</p> <p>2.4 Antibiotic agents.</p> <p>2.5 Antifungal agents.</p> <p>2.6 Antiviral agents.</p> <p>2.7 Discuss medications that directly affect the respiratory system including antihistamines, decongestants, antitussives, expectorants, bronchodilators and other inhaled medications.</p> <p>2.8 Discuss medications that directly affect the cardiovascular system including select medications used in the treatment of uncomplicated arrhythmias, heart failure, chest pain, hypertension, fluid overload, hypotension and shock, hematological disease and hypercholesterolemia.</p> <p>2.9 Discuss medications that directly affect the gastrointestinal system including acid control agents, antidiarrheals, laxatives, antiemetics and antinausea agents.</p> <p>2.10 Discuss medications that directly affect the integumentary system (e.g. topical medications).</p> <p>2.11 Discuss the nursing responsibilities associated with medications that alter fluid and electrolyte balance.</p> |
| <b>Course Outcome 3</b>   | <b>Learning Objectives for Course Outcome 3</b>   |
| <p>3. Apply provincial nursing legislation and standards which impact medication administration and nursing care.<br/>CNO ETP RPN 1, 2, 8, 61, 62</p> | <p>3.1 Discuss the College of Nurses of Ontario's Medication Standard (revised 2019).</p> <p>3.2 Describe the College of Nurses of Ontario's Decision Tree: Deciding about medication administration.</p> <p>3.3 Discuss the ethical principles associated with medication administration.</p> <p>3.4 Describe the role of effective communication as a</p>   |

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|  | <p>component of safe medication administration.</p> <p>3.5 Explain the Registered Practical Nurse's accountability in supervising Unregulated Care Providers who administer medications.</p> <p>3.6 Compare the role of the Practical Nurse versus the role of the Registered Nurse in the administration of medications.</p> <p>3.7 Discuss the knowledge of pharmacology and principles of safe medication practice.</p> |
| <b>Course Outcome 4</b>  | <b>Learning Objectives for Course Outcome 4</b>  |
| 4. Apply basic math skills required to safely administer medications in the clinical setting to clients across the lifespan. | <p>4.1 Perform basic drug calculations across the lifespan.</p> <p>4.2 Perform advanced drug calculations across the lifespan.</p> <p>CNO ETP RPN 61, 62</p>   |

**Evaluation Process and Grading System:**

| Evaluation Type           | Evaluation Weight |
|---------------------------|-------------------|
| Drug Research Assignment  | 10%               |
| Final Exam                | 40%               |
| Mid-term Exam             | 40%               |
| Quizzes (2 each worth 5%) | 10%               |

**Date:** August 17, 2020

**Addendum:** Please refer to the course outline addendum on the Learning Management System for further information.

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