



**I. COURSE DESCRIPTION:**

This course builds upon the concepts presented in PNG234 (Pharmacology I) and introduces additional select medication classifications as they relate to individuals experiencing illnesses/medical situations across the lifespan. 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), which provides the learner the opportunity to discuss all pharmacologic concepts.

**II. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:**

Upon successful completion of this course, the student will demonstrate the ability to:

1. Relate the principles of basic pharmacological theory to the nursing process and the administration of medications.

Potential Elements of the Performance:

- 1.1 Apply the nursing process to the administration of medications across the lifespan.
  - 1.2 Apply the common terms used in pharmacology including the concepts of pharmaceutics, pharmacokinetics, pharmacodynamics and pharmacotherapeutics.
  - 1.3 Discuss the lifespan considerations associated with medication administration (including pregnant women, breastfeeding, infants, children and older adults).
  - 1.4 Incorporate Canadian legislation which governs the administration of medication (including the Food and Drug Act and Controlled Substances Act).
  - 1.5 Discuss the importance of patient education as a component of medication administration (including prescription medications, over the counter medications and natural health products).
2. Explain the action, therapeutic indications and nursing responsibilities of select medication classifications.

Potential Elements of the Performance:

- 2.1 Discuss medications that directly affect the genitourinary system (including diuretics, anticholinergic, antispasmodics).
- 2.2 Discuss medications that directly affect the neuromuscular system (including anticonvulsants, CNS stimulants, osmotic diuretics, antiparkinsonian agents, cholinesterase inhibitors, skeletal muscle relaxants).

- 2.3 Discuss medications that directly affect the male and female reproductive systems (including hormones, contraceptives).
  - 2.4 Discuss medications that directly affect the immune system (including immunosuppressants, immunizations).
  - 2.5 Discuss medications that directly affect the endocrine system (including antidiabetic agents, thyroid and antithyroid agents, antidiuretic hormones, adrenocorticosteroids, parathyroid agents).
  - 2.6 Discuss the medications used in the treatment of cancer (e.g. antineoplastics).
  - 2.7 Discuss the pharmacological management of the side effects associated with anti-neoplastic agents.
  - 2.8 Discuss the medications used in the treatment of psychiatric conditions (including antipsychotics, anxiolytics, antidepressants, hypnotics, mood stabilizers).
  - 2.9 Discuss the medications used in the treatment of attention disorders and dementia.
  - 2.10 Discuss the nursing responsibilities associated with the medications that are used in the treatment of alcohol withdrawal/substance abuse.
  - 2.11 Discuss the nursing responsibilities associated with the medications that are used in the treatment of an allergic reaction.
3. Apply provincial nursing legislation and standards which impact medication administration and nursing care.

Potential Elements of the Performance:

- 3.1 Discuss the ethical principles associated with medication administration.
  - 3.2 Discuss the professional implication of using medical directives.
  - 3.3 Describe the role of effective communication as a component of safe medication administration.
  - 3.4 Compare the role of the Registered Practical Nurse versus the role of the Registered Nurse in the administration of medications.
  - 3.5 Explain the Registered Practical Nurse's accountability in supervising Unregulated Care Providers who administer medications.
  - 3.6 Explain the process of medication reconciliation.
4. Apply basic math skills required to safely administer medications in the clinical setting to clients across the lifespan.

Potential Elements of the Performance:

- 4.1 Perform basic drug calculations across the lifespan.
- 4.2 Perform advanced drug calculations across the lifespan.

**III. TOPICS:**

## 1. Drugs Affecting Genitourinary System

- diuretics
- anticholinergics
- antibiotics
- antispasmodics

## 2. Drugs Affecting the Neuromusculoskeletal System

- anticonvulsants
- CNS stimulants
- osmotic diuretics
- calcium enhancers
- antiparkinson agents
- cholinesterase inhibitors
- skeletal muscle relaxants
- nonsteroidal anti-inflammatory drugs
- ophthalmic agents

## 3. Drugs Affecting the Reproductive system

- sex hormones
- abortifacients

## 4. Drugs Affecting the Immune System

- agents that provide active or passive immunity
- immunosuppressants

## 5. Drugs Affecting the Endocrine System

- antidiabetic agents
- thyroid enhancers
- thyroid inhibitors
- antidiuretic hormones
- adrenocorticosteroids
- parathyroids

## 6. Drugs Used in Treatments of Cancer

- antineoplastics

## 7. Psychotherapeutic Drugs

- antipsychotics
- anxiolytics
- antidepressants
- hypnotics
- mood stabilizers

## 8. Complimentary Medicine

- natural or herbal products
- interaction of pharmacologic agents and natural products

**IV. REQUIRED RESOURCES/TEXTS/MATERIALS:**

Lilley, L. L., Rainforth Collins, S., & Snyder, J. S. (2016). *Pharmacology for Canadian Health Care Practice*. (B. Swart Canadian Editor)(3<sup>rd</sup> ed.).

Toronto, ON: Elsevier Canada.

Lilley, L. L., Snyder, J. S. & Rainforth Collins, S. (2016). *Study Guide for Pharmacology for Canadian Health Care Practice* (B. Swart Canadian Editor)(3<sup>rd</sup> ed.). Toronto, ON: Elsevier Canada.

Karch, A (2017). *Lippincott's Nursing Drug Guide Canadian Version*.

Philadelphia, PA: Lippincott Williams and Wilkins.

***Recommended Resources:***

Burke, K. M., Mohn-Brown, E., Eby, L. (2016). *Medical surgical nursing care* (4<sup>th</sup> ed.). Toronto, ON: Pearson Education.

College of Nurses of Ontario (2015). *Medication* (2015). Toronto, ON:

Author. (available at [www.cno.org](http://www.cno.org) )

**V. EVALUATION PROCESS/GRADING SYSTEM:**

1. Pass mark for this course is 60%

2. Test #1	30%
Test #2	30%
<u>Final Exam</u>	<u>40%</u>

Total Grade 100%

3. There are no supplemental tests/rewrites in this course

The following semester grades will be assigned to students:

<u>Grade</u>	<u>Definition</u>	<u>Grade Point Equivalent</u>
A+	90 – 100%	4.00
A	80 – 89%	3.00
B	70 - 79%	2.00
C	60 - 69%	1.00
D	50 – 59%	0.00
F (Fail)	49% and below	
CR (Credit)	Credit for diploma requirements has been awarded.	
S	Satisfactory achievement in field /clinical placement or non-graded subject area.	
U	Unsatisfactory achievement in field/clinical placement or non-graded subject area.	
X	A temporary grade limited to situations with extenuating circumstances giving a student additional time to complete the requirements for a course.	
NR	Grade not reported to Registrar's office.	
W	Student has withdrawn from the course without academic penalty.	

If a faculty member determines that a student is at risk of not being successful in their academic pursuits and has exhausted all strategies available to faculty, student contact information may be confidentially provided to Student Services in an effort to offer even more assistance with options for success. Any student wishing to restrict the sharing of such information should make their wishes known to the coordinator or faculty member.

#### VI. SPECIAL NOTES:

##### Attendance:

Sault College is committed to student success. There is a direct correlation between academic performance and class attendance; therefore, for the benefit of all its constituents, all students are encouraged to attend all of their scheduled learning and evaluation sessions. This implies arriving on time and remaining for the duration of the scheduled session.

*It is the departmental policy that once the classroom door has been enclosed, the learning process has begun. Late arrivers will not be granted admission to the room.*

#### VII. COURSE OUTLINE ADDENDUM:

The provisions contained in the addendum located on the portal and LMS form part of this course outline.