

**SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY**

**SAULT STE. MARIE, ONTARIO**



**SAULT  
COLLEGE**

**COURSE OUTLINE**

<b>COURSE TITLE:</b>	Pharmacology I		
<b>CODE NO. :</b>	PNG234	<b>SEMESTER:</b>	3
<b>PROGRAM:</b>	Practical Nursing		
<b>AUTHOR:</b>	Gwen DiAngelo, Barbara Thompson		
<b>DATE:</b>	Aug/14	<b>PREVIOUS OUTLINE DATED:</b>	Aug/13
<b>APPROVED:</b>	<i>"Marilyn King"</i>		<i>Aug. 2014</i>
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	<b>CHAIR HEALTH PROGRAMS</b>		<b>DATE</b>
<b>TOTAL CREDITS:</b>	3		
<b>PREREQUISITE(S):</b>	PNG121, PNG126		
<b>HOURS/WEEK:</b>	3		

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**I. COURSE DESCRIPTION:**

This course is comprised class lecture. This course introduces the learner to pharmacologic principles and select medication classifications as they relate to individuals experiencing acute illness across the lifespan. The learner will study the mechanism of action, therapeutic indications and nursing responsibilities including drug monitoring and the management of adverse drug effects. In addition, this course will emphasize common medication dosages, drug calculations, nursing legislation and standards and health teaching.

**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 Define the common terms used in the study of pharmacology.
  - 1.3 Apply the common terms used in pharmacology including the concepts of pharmaceuticals, pharmacokinetics, pharmacodynamics and pharmacotherapeutics.
  - 1.4 Discuss the lifespan considerations associated with medication administration (including pregnant women, breastfeeding, infants, children and older adults).
  - 1.5 Incorporate Canadian legislation which governs the administration of medication (including the Food and Drug Act and the Controlled Substance Act).
  - 1.6 Discuss the impact of medication errors and the process involved in reporting a medication error.
  - 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.
2. Explain the action, therapeutic indications and nursing responsibilities of select medication classifications.

Potential Elements of the Performance:

- 2.1 Analgesic agents (non-opioids, opioids, partial opioid agonists and opioid antagonists).
- 2.2 Non-steroidal anti-inflammatory agents
- 2.3 General/local anesthetic agents and moderate sedation
- 2.4 Antibiotic agents
- 2.5 Antifungal agents
- 2.6 Antiviral agents
- 2.7 Discuss medications that directly affect the respiratory system including antihistamines, decongestants, antitussives, expectorants, bronchodilators and other inhaled medications.

- 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.
  - 2.9 Discuss medications that directly affect the gastrointestinal system including acid control agents, antidiarrheals, laxatives, antiemetics and antinausea agents.
  - 2.10 Discuss medications that directly affect the integumentary system (e.g. topical medications).  
Discuss the nursing responsibilities associated with medications that alter fluid and electrolyte balance.
3. Apply provincial nursing legislation and standards which impact medication administration and nursing care.

Potential Elements of the Performance:

- 3.1 Discuss the College of Nurses of Ontario's Medication Standard (revised 2008).
  - 3.2 Describe the College of Nurses of Ontario's "Rights" of medication administration.
  - 3.3 Discuss the ethical principles associated with medication administration.
  - 3.4 Describe the role of effective communication as a component of safe medication administration.
  - 3.5 Compare the role of the Practical Nurse versus the role of the Registered Nurse in the administration of medications.
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. Antiinfectives and Antiinflammatory Agents
  - antibiotics
  - antivirals
  - antituberculars
  - antifungals
  - antimalarials, antiprotozoals, and anthelmintics
  - antiseptics and disinfectants
  - anti-inflammatory, antirheumatoid and related agents
2. Drugs Affecting Fluid and Electrolyte Balance
  - diuretics
  - agents affecting volume and ion content of body fluids
3. Anesthetics and Analgesics
  - local and general anesthetics
  - narcotic and non-narcotic analgesics

4. Drugs Affecting Integumentary System
  - topical medications
  
5. Drugs Affecting Respiratory System
  - bronchodilators
  - antihistamines
  - nasal decongestants
  - antitussives
  - mucolytics
  - cold remedies
  
6. Drugs Affecting Cardiovascular System
  - drugs to treat heart failure
  - antiarrhythmics
  - antianginals
  - antihypertensives
  - drugs used in hypotension and shock
  - drugs affecting blood coagulation
  - drugs for hyperlipidemia
  
7. Drugs Affecting Gastrointestinal System
  - antacids and acid controllers
  - laxatives
  - antiemetics
  - antidiarrheals
  - nutritional supplements
  - vitamins and minerals

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

Lilley, L. L., Harrington, S., & Snyder, J. S. (2011). *Pharmacology for Canadian Health Care Practice*. (B. Swart Canadian Editor)(2<sup>nd</sup> ed.). Toronto, ON: Elsevier Canada.

Lilley, L. L., Harrington, S., & Snyder, J. S. (2011). *Pharmacology for Canadian Health Care Practice Study Guide*. (B. Swart Canadian Editor)(2<sup>nd</sup> ed.). Toronto, ON: Elsevier Canada.

Karch, A (2015). *Lippicott's Nursing Drug Guide Canadian Version*. Philadelphia, PA: Lippincott Williams and Wilkins.

**Recommended Resources:**

Burke, K. M., LeMone, P. T., Mohn-Brown, E., Eby, L. (2011). *Medical surgical nursing care* (3<sup>rd</sup> ed.). Don Mills, ON: Pearson Education.

College of Nurses of Ontario (2014). *Medication* (2014). Toronto, ON: Author.  
(available at [www.cno.org](http://www.cno.org) )

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

1. The pass mark for this course is 60%.
2. Evaluation Methods:  
Tests (2 test 30% each, and a final comprehensive 40%) 100%
3. There are no supplemental tests/rewrites in this course.

The following semester grades will be assigned to students in post-secondary courses:

<u>Grade</u>	<u>Definition</u>	<u>Grade Point Equivalent</u>
A+	90 – 100%	
A	80 – 89%	4.00
B	70 - 79%	3.00
C	60 - 69%	2.00
D	50 – 59%	1.00
F (Fail)	49% and below	0.00
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.	

**Note:** For such reasons as program certification or program articulation, certain courses require minimums of greater than 50% and/or have mandatory components to achieve a passing grade.

**A minimum of a “C” grade is required to be successful in all PNG coded courses.**

It is also important to note, that the minimum overall GPA required in order to graduate from a Sault College program remains 2.0.

**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 closed, the learning process has begun. Late arrivals may not be granted admission to the room.*

**VII COURSE OUTLINE ADDENDUM:**

The provisions contained in the addendum located on the portal form part of this course outline. [www.mysaultcollege.ca](http://www.mysaultcollege.ca)