

**DEPARTMENT OF NURSING EDUCATION AND HEALTH
STUDIES**

COURSE OUTLINE –WINTER 2020

NS1160 (A3/B3): Pathophysiology & Pharmacology I

3 (3-0-0) 45 Hours for 15 Weeks

INSTRUCTOR: Dr. Sean Irwin Ph.D.	PHONE: 780-539-2860
OFFICE: J224	E-MAIL: sirwin@gprc.ab.ca
CLASSROOM: A305 Tuesday A3/B3	

INSTRUCTOR: Bonnie Hessler RN, MN	PHONE: 780-539-2757
OFFICE: H202	E-MAIL: bhessler@gprc.ab.ca
CLASSROOM: A305 Wednesday A3/B3	

OFFICE HOURS: Please see instructor for specific dates and hours.

CALENDAR DESCRIPTION:

The focus is the application of human anatomy and physiology to the concepts of pathophysiology and pharmacology. The course focuses on alterations to normal physiology and introduces the concepts of pharmacokinetics and pharmacodynamics in relation to alterations in health. Note: Available only to nursing students in the Collaborative Program.

PREREQUISITE(S) NS1500, NS1205**COREQUISITE:** MI1330**REQUIRED TEXT/RESOURCE MATERIALS:**

Lilley, L.L., Rainforth-Collins, S., Snyder, J.S. & Swart, B. (2017). Pharmacology for Canadian health care practices. (3rd Canadian ed.). Toronto, ON: Elsevier.

Hannon, R.A. and Porth, C.M. (2017). Porth pathophysiology: Concepts of altered health states. (Second Canadian Ed.). Philadelphia, PA: Wolters Kluwer,

Understanding Alberta's Drug Schedules:

<https://pharmacists.ab.ca/nPharmacistResources/ABDrugSchedules.aspx>

Any current drug handbook or drug handbook software for a PDA or the electronic "Compendium of Pharmaceuticals and Specialties: e-CPS (available at through the library).

DELIVERY MODE(S): Lecture**LEARNING OUTCOMES:**

1. Link knowledge or anatomy and physiology to pathophysiological and pharmacotherapeutic concepts.
2. Demonstrate theoretical understanding of pharmacokinetic and pharmacodynamic principles.
3. Demonstrate theoretical understanding of altered physiology as it relates to changes in health status.
4. Describe the pharmacodynamic classification, nature, properties, and effects of drugs as they relate to altered physiology.
5. Explain the relationship between pathophysiological concepts and pharmacotherapeutic concepts at a novice level.
6. Identify the nursing implications in relation to pharmacotherapeutics and pathophysiology at a novice level.
7. Apply principles of pharmacotherapeutics and pathophysiology to focused non-complex clinical examples at a novice level.
8. Predict common trajectories in pathophysiological processes at a novice level.
9. Prospectively predict common side effects of major drug classes at a novice level.

EVALUATIONS:

Evaluation	Value	Date
Exam I	30%	Feb 4 – Pathophysiology Feb 5 - Pharmacology
Exam II	30%	Mar 10 – Pathophysiology Mar 11 - Pharmacology
Final Exam	30%	Date – TBA Patho/Pharm collectively
Class Activity/Participation	10%	All through the course

1. Exam I: (30%) February 4/5, 2020

- a. Exam I: Assesses concepts in the first four weeks of the course. The exam will be completed during the usual class time in a computer lab. For example; Pathophysiology will be during your usual class time on Tues, February 4 and Pharmacology will be during your usual class time on Wed, Feb 5 in a computer lab. Classroom TBA.

2. Exam II: (30%) March 10/11, 2010

- a. Exam II: Assesses concepts from week 6 – week 9 of the course. The exam will be completed within a scheduled class time. Pathophysiology will be during your usual class time on Tues, March 10 and Pharmacology will be during your usual class time on Wed, March 11 in a computer lab. Classroom TBA.

3. Final exam: (30%) During Final Exam Week - TBA

- a. Final Exam: Assesses concepts from week 11 – week 15. ALL students will be tested at the same time and date. Date, time, and location of the final examination is scheduled by the Office of the Registrar in accordance with Grande Prairie Regional College Calendar and will be available on MyGPRC.

Deferred final examinations may be granted when an examination has been missed or interrupted because of illness, or a conflict with religious beliefs. In the case of illness (physical, mental or emotional), medical documentation will be required. See page 42 of the 2019/2020 GPRC calendar for further information.

GRADING CRITERIA:

Please note that a grade less than C+ is not accepted for transfer to the U of A for NURS216. A minimum grade of C+ is required to receive credit in NS1160.

Alpha Grade	4-point Equivalent	Percentage Guidelines	Alpha Grade	4-point Equivalent	Percentage Guidelines
A+	4.0	90-100	C+	2.3	67-69
A	4.0	85-89	C	2.0	63-66
A-	3.7	80-84	C-	1.7	60-62
B+	3.3	77-79	D+	1.3	55-59
B	3.0	73-76	D	1.0	50-54
B-	2.7	70-72	F	0.0	00-49

TRANSFERABILITY:
U of A: NURS116

***Warning:** Although we strive to make the transferability information in this document up-to-date and accurate, **the student has the final responsibility for ensuring the transferability of this course to Alberta Colleges and Universities.** Please consult the Alberta Transfer Guide for more information. You may check to ensure the transferability of this course at Alberta Transfer Guide main page <http://www.transferalberta.ca> or, if you do not want to navigate through few links, at <http://alis.alberta.ca/ps/tsp/ta/tbi/onlineSearch.html?SearchMode=S&step=2>

**** Grade of D or D+ may not be acceptable for transfer to other post-secondary institutions. Students are cautioned that it is their responsibility to contact the receiving institutions to ensure transferability**

STUDENT RESPONSIBILITIES:

Refer to the College Policy on Student Rights and Responsibilities at:
<https://www.gprc.ab.ca/about/administration/policies/fetch.php?ID=69>:

For policies related to clinical absences, immunizations, uniforms, and other clinical requirements please see the GPRC Department of Nursing Education & Health Studies Student Handbook on Moodle.

STATEMENT ON PLAGIARISM AND CHEATING:

Cheating and plagiarism will not be tolerated and there will be penalties. For a more precise definition of plagiarism and its consequences, refer to the Student Conduct section of the College Calendar at <http://www.gprc.ab.ca/programs/calendar/> or the College Policy on Student Misconduct: Plagiarism and Cheating at <https://www.gprc.ab.ca/about/administration/policies>

****Note:** all Academic and Administrative policies are available on the same page.

COURSE SCHEDULE/TENTATIVE TIMELINE:

Week	Pathophysiology	Pharmacology
1	Introduction to cellular regulation Cellular Adaptation, Injury and Death	Nursing Practice in Canada and Drug Therapy
2	Genetic control of cell function and inheritance	Pharmacological Principles
3	Genetic and Congenital Disorders	Patient Focused Considerations Legal and Ethical Considerations in Pharmacology
4	Disorders of Hemostasis Disorders of RBCs	Medication Errors: Preventing and Responding; Medication Reconciliation Patient Education
5	Exam I	Exam I
6	Disorders of WBCs Disorders of Immune Response	Antibiotics: Part 1 & 2
7	Reading Week (no classes)	Reading Week (no classes)
8	Inflammation, Tissue Repair & Wound Healing	Antiviral Drugs Antitubercular Drugs Antifungal Drugs
9	Somatosensory Function, Pain and Headache	Analgesic Drugs Anti-inflammatory and Antigout Drugs
10	Exam II	Exam II
11	Alterations in Temperature Regulation	Antihistamines, Decongestants and Antitussives
12	Skin Disorders	Dermatological Drugs
13	Neoplasia	Antineoplastic Drugs Part 1 & 2
14	Disorders of Ventilation and Gas Exchange	Drugs affecting the Respiratory system
15	Disorders of thought, mood and memory	Psychotherapeutic Drugs
	Final Exam TBA	Final Exam TBA