

**DEPARTMENT OF NURSING EDUCATION AND HEALTH
STUDIES**

COURSE OUTLINE –WINTER 2021

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:	Remote Monday A3/B3		

LEAD:	Eleni Hansen	EMAIL:	ehansen@gprc.ab.ca
INSTRUCTOR:	Janice King, BScN	PHONE:	780-539-2914
OFFICE:	H226	E-MAIL:	jaking@gprc.ab.ca
CLASSROOM:	Remote 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, Sealock, K., & Seneviratne, C. (2021). *Pharmacology for Canadian health care practice*. (4th 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**DELIVERY MODE:** Remote Delivery

WINTER 2021 DELIVERY: This course is delivered remotely. There are no face-to-face or onsite requirements. Students must have a computer with a webcam and reliable internet connection.

Technological support is available through helpdesk@gprc.ab.ca

Note: GPRC reserves the right to change the course delivery.

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
Midterm Exam	45%	Feb 10 – Pharmacology Feb 22 - Pathophysiology
Final Exam	45%	Date – TBA Patho/Pharm collectively
Class Activity/Participation/ Safe Medicate	10%	All through the course

1. Midterm exam: (45%) February 10/22, 2020

- a. Assesses concepts in the first five weeks of the course. The exam will be completed during the usual class time via remotely. For example; Pharmacology will be during your usual class time on Wednesday, February 10 and Pathophysiology will be during your usual class time on Monday, Feb 22 remotely.

2. Final exam: (45%) During Final Exam Week - TBA

- a. Final Exam: Assesses concepts from week 8 – week 13. 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](#).

Exams are supervised on Zoom and may utilize Lock Down Browser and/or Respondus to protect the integrity of the exam.

Safe Medicate

You will be completing a medication administration safety screen online prior to each clinical rotation starting this semester to the end of the program. You will need to purchase a Safe Medicate License in January that is good for 4 years. After completing the online registration, you will have access to learning modules that you can complete at your own pace but must be completed prior to the end of this semester. You will receive 5% participation marks for completing the modules. A Safe Medicate exam will be completed prior to each clinical rotation. You will have three attempts to achieve a 90% on the exam before being able to administer medications in clinical.

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 4 of the 2020/2021 GPRC Student Handbook 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 Myclass.

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.

SPECIALIZED SUPPORTS AND DUTY TO ACCOMMODATE

Disability Support Services: Learner Assistance Program If you have a documented disability or you think that you would benefit from some assistance from a disability's counselor, please call or visit the Disability Supports Office (780) 539-2722 to book an appointment. Services and accommodations are intended to assist you in your program of study, while maintaining the academic standards of GPRC. We can be of assistance to you in disclosing your disability to your instructor, providing accommodations, and supporting your overall success at GPRC College.

Specialized Supports and Duty to Accommodate:

Specialized Support and Duty to Accommodate are aligned with the office of Disability Support Services: Learner Assistance Program (LAP) guided by federal and provincial human rights legislation and defined by a number of GPRC Policies. GPRC is obligated by legislation to provide disability-related accommodations to students with identified disabilities to the point of undue hardship.

COURSE SCHEDULE/TENTATIVE TIMELINE:

Week	Pathophysiology	Pharmacology
1	No Class	Nursing Practice in Canada and Drug Therapy
2	Introduction to cellular regulation Cellular Adaptation, Injury and Death	Pharmacological Principles
3	Genetic control of cell function and inheritance	Patient Focused Considerations Legal and Ethical Considerations in Pharmacology
4	Genetic and Congenital Disorders	Medication Errors: Preventing and Responding; Medication Reconciliation Patient Education
5	Disorders of Hemostasis Disorders of RBCs	Antibiotics: Part 1
6	Disorders of WBCs Disorders of Immune Response	Midterm Exam
7	Reading Week (no classes)	Reading Week (no classes)
8	Midterm Exam	Antibiotics Part 2 Antitubercular Drugs
9	Inflammation, Tissue Repair & Wound Healing	Analgesic Drugs Anti-inflammatory and Antigoat Drugs

10	Somatosensory Function, Pain and Headache	Antihistamines, Decongestants and Antitussives
11	Alterations in Temperature Regulation	Tissue Integrity Dermatological Drugs
12	Tissue Integrity Skin Disorders	Antineoplastic Drugs Part 1 & 2
13	Neoplasia	Gas Exchange Drugs affecting the Respiratory system
14	Gas Exchange Disorders of Ventilation	Review
	Final Exam TBA	Final Exam TBA