



DEPARTMENT OF NURSING EDUCATION AND HEALTH STUDIES

COURSE OUTLINE – FALL 2020 & WINTER 2021

NS2160 (A2 B2 A3 B3): Pathophysiology and Pharmacology II– 6 (3-0-0) 90 Hours/30 Weeks

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| COURSE LEADER: | Eleni Hansen MN, RN, IBCLC | |
| INSTRUCTORS: | Dr. Sean Irwin PhD. (Pathophysiology) | Eleni Hansen MN, RN, IBCLC (Pharmacology) |
| PHONE: | 780-539-2860 (office) | 780-539-2045 (office) 780-978-8965 (cell) |
| OFFICE: | J224 | H229 |
| OFFICE HOURS: | <i>M/W 1 - 2:30 pm</i> | <i>By appointment only via Zoom</i> |
| EMAIL: | sirwin@gprc.ab.ca | ehansen@gprc.ab.ca |

CALENDAR DESCRIPTION:

The course explores selected episodic and chronic health alterations and the related pharmacological concepts. The focus is on applying foundational knowledge of pathophysiology and pharmacology to evidence-informed nursing practice. Available only to nursing students in the Collaborative Nursing Program.

DELIVERY:

FALL 2020 DELIVERY: Remote 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.

PREREQUISITE(S): NS1160

COREQUISITE: NS2200, NS2200

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.). Elsevier. ISBN 978-0-323-08789-6

Hannon, R.A. and Porth, C.M. (2017). *Porth Pathophysiology: Concepts of altered health states* (2nd Canadian ed.). Wolters Kluwer. ISBN 97845119896

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).

<https://www.etherapeutics.ca/home.whatsnew.action>

LEARNING OUTCOMES:

1. Link knowledge of 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.

TRANSFERABILITY:

UofA NURS216

***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/onlinerearch.html?SearchMode=S&step=2>

**** Please note that a grade less than C+ is not accepted for transfer to the U of A for NURS 216. A minimum grade of C+ is required to receive credit in NS2160.**

EVALUATIONS:

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|--|------|
| Exam I | 20% |
| Exam II | 25% |
| Exam III | 20% |
| Final Exam | 25% |
| <u>Participation/ quizzes/ in class activities</u> | 10% |
| Total | 100% |

| NS 2160 Exam Schedule | Pathophysiology | Pharmacology |
|------------------------------|--|--|
| Exam I | In class time during week 8 Oct 19 th – Oct 23 rd 0830-0950 | In class time during week 8 Oct 19 th – Oct 23 rd 1000-1120 |
| Exam II | TBD - during the final exam period | |
| Exam III | In class time during week 23 Feb 22 nd – Feb 26 th 0830-0950 | In class time during week 23 Feb 22 nd – Feb 26 th 1000-1120 |
| Final Exam | TBD - during the final exam period | |

GRADING CRITERIA:

| 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 |

COURSE SCHEDULE/TENTATIVE TIMELINE:

| Week | Pathophysiology | Pharmacology |
|-------|----------------------------|---|
| 1 | Musculoskeletal | Analgesics, muscle relaxants, anti-infectives, anemia, anti-inflammatories |
| 2 | | Vitamin and mineral supplements, anti-parkinsonian, biological response, anti-rheumatic, osteoporosis |
| 3 | Ophthalmic & Otic | Ophthalmic & Otic |
| 4 | Endocrine | Insulin, antihyperglycemic drugs, injectable antidiabetic drugs |
| 5 | | Glucocorticoids, mineralocorticoids |
| 6 | | Thyroid |
| 7 | Reading Week | |
| 8 | Exam | |
| 9 -14 | CNS | CNS depression, CNS stimulants, Anxiolytics, anti-depressants, mood-stabilizing drugs, psychotics, withdrawal medications |
| 15 | Exam | |
| 16 | Gastrointestinal | Antidiarrheals, probiotics, laxatives, antiemetics |
| 17 | | Antacids, h2 receptors, PPR, acid suppressants |
| 18 | Renal | Diuretics, volume expanders |
| 19 | Cardiac | Antihypertensives, antidysrhythmias, |
| 20 | | Adrenergic agonists, sympathomimetics |
| 21 | | Anticoagulants, antiplatelets, thrombolytics, fibrinolytics |
| 22 | Winter break | |
| 23 | Exam | |
| 24 | Nervous System | Cholinergic agonists and antagonists, |
| 25 | | Stroke treatment, meningitis and encephalitis |
| 26 | Male reproductive system | Androgens, androgen inhibitors, erectile dysfunction drugs |
| 27 | Female Reproductive System | Estrogen, progestins, contraceptive drugs, pituitary gonadotropin inhibitors, |
| 28 | Pregnancy | Infertility, preterm labor, fetal development |
| 29 | Development | Life span considerations |
| 30 | Exam | |

STUDENT RESPONSIBILITIES:

Refer to the College Policy on Student Rights and Responsibilities at:

www.gprc.ab.ca/d/STUDENTRESPONSIBILITIES

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.