



UNIVERSITY OF ALBERTA
Faculty of Nursing Undergraduate Programs
BScN COLLABORATIVE PROGRAM
Grande Prairie Regional College, Keyano College,
Red Deer College, University of Alberta



NURS 116
PATHOPHYSIOLOGY AND PHARMACOLOGY I
COURSE OUTLINE
WINTER 2023

**Note: students are expected to familiarize themselves with this course outline,
the BScN Program Student Handbook and Moodle site.**

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NO PART OF THIS MODULE MAY BE ALTERED WITHOUT PERMISSION FROM THE DEPARTMENT CHAIR

Calendar statement

NURS 116 – Pathophysiology and Pharmacology I

★3 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. Students must achieve a **minimum grade of C+** in order to progress in the program.

Note: Available only to nursing students in the Collaborative Program.

Prerequisites: MMI 133, NURS 106, and NURS 120.

Course hours

Lecture: 3 hours per week

Seminar: 0

Lab: 0

Course Learning Outcomes

Upon completion of this course, the student will be able to:

1. Link knowledge of anatomy and physiology to pathophysiological and pharmacotherapeutic concepts.
2. Demonstrate theoretical understanding of pathophysiology as it relates to changes in health status.
3. Demonstrate theoretical understanding of pharmacokinetic and pharmacodynamic principles in pharmacotherapeutics.
4. Describe the pharmacotherapeutic classification, mechanism of action, properties, and effects of drugs.
5. Explain the relationship between pathophysiological concepts and pharmacotherapeutic concepts at a novice level.
6. Apply the pathophysiology and pharmacotherapeutic concepts to focused non-complex clinical examples at a novice level.
7. Identify the nursing implications in relation to pathophysiology and pharmacotherapeutics at a novice level.
8. Predict common trajectories for pathophysiological processes and pharmacotherapeutic treatments at a novice level.

Course Instructor

<u>Name</u>	<u>Office number</u>	<u>Phone number</u>	<u>Email</u>
Jennifer Courtney			jennifer.courtney@keyano.ca

Communication:

It is the students' responsibility to ensure that they check Moodle courses at minimum of twice daily, once in morning and evening. It is recommended to check Moodle more frequently. It is the students' responsibility to ensure thorough review of all resources and content on the Moodle course site. The instructors have placed many resources and documents to ensure the students' success in each course.

Instructors will communicate with the student group by announcements in the news forum on Moodle. Please ensure that you check this at least twice daily.

It is the students' responsibility to check their Keyano College email at minimum of twice daily, once in morning and again in evening. It is recommended to check email more frequently. Please note that the method to contact your instructor is email.

Note: Professional emails

- Please allow a 48 hour minimum response time from your instructor on business days.
- Instructors will not be checking emails on evenings and weekends/holidays.
- Include "NURS 116" in your subject line.
- Professional and respectful communication is expected.

Required textbooks

El-Hussein, M. T., Power-Kean, K., Zettel, S., Huether, S. E., McCance, K. L., Brashers, V. L., & Rote, N. S. (2018). *Understanding Pathophysiology*. Milton: Elsevier.

Giddens, J. F. (2017). *Concepts for Nursing Practice*. St. Louis, MO: Elsevier.

Lewis, S. L., Bucher, L., Heitkemper, M. M., Harding, M. M., Barry, M. A., Lok, J., Tyerman, J. & Goldsworthy, S. (2019). *Medical-Surgical Nursing in Canada*. Milton, ON: Elsevier.

Lilley, L. L., Collins, S. R., Snyder, J. S., & Swart, B. (2017). *Pharmacology for Canadian Health Care Practice*. Milton: Elsevier.

(Note: Foundations textbooks will be used as references throughout the program. Please retain your copies as they will be required resources in future courses).

Required resources

College of Registered Nurses of Alberta. (2013). *Entry-to-practice competencies for the registered nurses profession*. Edmonton, AB: Author.

College of Registered Nurses of Alberta (2010). *Ethical decision-making for registered nurses in Alberta: Guidelines and recommendations*. Edmonton: Author.

College of Registered Nurses of Alberta. (2013). *Practice standards for regulated members with The Canadian Nurses Association code of ethics for registered nurses*. Edmonton: Author.

College of Registered Nurses of Alberta. (2008). *Primary health care*. Edmonton, AB: Author.

College and Association of Registered Nurses of Alberta. (2011). *Professional boundaries for registered nurses: Guidelines for the nurse-client relationship*. Edmonton, AB: Author.

Faculty of Nursing, University of Alberta. (2017). *Graduate Competencies and Year-End Outcomes Condensed Version Rev. 2.0*. Retrieved from Moodle Nurse 001Skills/Resources/Policies/Surveys course.

Required Supplies

Drug Guide of your choosing.

Elsevier Evolve online Platform with textbooks that are included.

An electronic device that is equipped with a reliable internet connection, video recording capabilities (ie. A webcam) and a microphone

Performance Requirements & Student Services

Student Responsibilities

As a student, it is your responsibility to contact the Office of the Registrar to complete the required forms, including the Withdraw Course or Program or a Change of Registration form. Please refer to the important dates listed in the Academic Schedule in the [Keyano College credit calendar](#). The Keyano College credit calendar also has information about Student Rights and the Code of Conduct. It is the responsibility of each student to be aware of the guidelines outlined in the Student Rights and the Code of Conduct Policies.

Student Attendance

Class attendance is helpful for two reasons: First, class attendance maximizes a student's learning experience. Second, attending class is an excellent way to keep informed of matters relating to the course administration (e.g., the timing of assignments and exams). Ultimately, you are responsible for your learning and performance in this course. It is the responsibility of each student to be prepared for all classes. Absent students are responsible for the material covered in those classes, and students must ensure they are ready for their next class, including completing any missed assignments and notes.

Academic Misconduct

Students are considered responsible adults and should adhere to the principles of intellectual integrity. Intellectual dishonesty takes many forms:

- Plagiarism or the submission of another person's work as their own,
- The use of unauthorized aids in assignments or examinations (cheating),
- Collusion or the unauthorized collaboration with others in preparing work,
- The deliberate misrepresentation of qualifications,
- The willful distortion of results or data,
- Substitution in an examination by another person,
- Submitting unchanged work for another assignment, and
- Breach of confidentiality.

The consequences for academic misconduct range from a verbal reprimand to expulsion from the College. More specific descriptions and details are found in the Student Rights and Code of Conduct section of the Keyano College credit calendar. It is the responsibility of each student to be aware of the guidelines outlined in the Student Rights and Code of Conduct Policies. To ensure your understanding of plagiarism, you may be required to complete the online [Understanding Plagiarism tutorial](#) and submit the certificate of completion.

Online Learning

Technology and internet connectivity will impact your online learning experience. You may be required to watch online videos, take online quizzes, or participate in live online classes. Live/virtual courses will be hosted in Microsoft Teams or Zoom. For all course delivery types, you will access your course resources on Keyano's learning management system: Moodle (iLearn). Login in using your [Keyano username and password](#). Keyano College operates in a Windows-based environment and having access to the correct tools for online learning is essential.

Internet Speed

Minimum download and upload speeds of 10 Mbps. Recommended download speeds of 25 Mbps and upload speeds of 10 Mbps (if you are sharing your internet at home). You can check your internet speed with [Speedtest by Ookla](#).

Computer System Requirements

Keyano College software are Windows based.

Minimum Requirements and Recommended Upgrades for Windows (preferred system) and Apple devices

These minimum standards are required for a Windows computer/laptop (OS 10 or 11) and a Macintosh (OS 10.14 or above).

1. Windows 10 Operating System or above
2. 4GB of RAM. Recommended upgrade to 8GB of RAM.
3. 10GB+ available hard drive storage space. Note installing Microsoft Office 365 requires 3GB of available hard drive space.
 - a. Install the Microsoft Office 365 suite (~3GB) *
4. Microphone, webcam, and speakers (All modern laptops have these three accessories built-in. However, a headset or earbuds with a microphone is also recommended.
5. Windows has built-in anti-virus/malware software. It is essential to install system updates to keep your device secured regularly.

*[Microsoft Office 365](#) is free to Keyano students.

Tablets, iPads, and Chromebooks are **not** recommended: they may not be compatible with the testing lockdown browsers and Microsoft Office 365.

Specific Department Requirements

Business and OA programs require Windows 10 or higher.
Other programs may utilize Windows-based tools as well.

Computer Software

Students have access to Microsoft Office 365 and Read & Write for free using Keyano credentials.

See [Recommended Technology](#) for more information.

Recording of Lectures and Intellectual Property

Students may only record a lecture if explicit permission is provided by the instructor or Accessibility Services. Even if students have permission to record a lecture or lecture materials, students may not share, distribute, or publish any of the lectures or course materials; this includes any recordings, slides, instructor notes, etc., on any platform. Thus, no student is allowed to share, distribute, publish or sell course-related content without permission. It is important to recognize that the Canadian Copyright Act contains provisions for intellectual property. The [Academic Integrity Policy](#) provides additional information on Keyano College's expectations from students as members of the intellectual community.

ITS Helpdesk

If you have issues with your student account, you can contact the ITS Helpdesk by emailing its.helpdesk@keyano.ca or calling 780-791-4965.

Specialized Supports

The Student Services Department is committed to Keyano students and their academic success. There is a variety of student support available at Keyano. All student services are available during Keyano business hours: Monday to Friday, 8:30 a.m. to 4:30 p.m. The College is closed on statutory holidays. If you require support outside of regular business hours, please inform the support service team, and they will do their best to accommodate your needs.

Accessibility Services provides accommodations for students living with disabilities. Students with documented disabilities or who suspect a disability can meet with an Access Strategist to discuss their current learning barriers and possible accommodations. Students who have accessed accommodations in the past are encouraged to contact the department to request accommodations for the following semester. Please note that requesting accommodations is a process and requires time to arrange. Contact the department as soon as you know you may require accommodations. For accessibility supports and disability-based funding, please book an appointment by emailing us at: accessibility.services@keyano.ca.

Accessibility Services also provides individual and group learning strategy instruction for all students and technology training and support to enhance learning. You can meet with an Access Strategist to learn studying and test-taking strategies. In addition, you can schedule an appointment with the Assistive Technology Specialist to explore technology tools for learning. Book an appointment today by emailing: accessibility.services@keyano.ca

Wellness Services offers a caring, inclusive, and respectful environment where students can access free group and individual support to meet academic and life challenges. Mental Health Coordinators provide a safe and confidential environment for you to seek help with personal concerns. Our Wellness Navigator offers support with basic needs such as housing, financial and nutritional support, and outside referrals when needed. Wellness Services welcomes students to participate in group sessions that address topics including mindfulness and test anxiety throughout the academic year. Individual appointments can be made by emailing wellness.services@keyano.ca.

Library Services provides students with research, information, and educational technology supports as they engage in their studies. Library staff are available to help you online and in person throughout the semester. Librarians offer individual and small group consultations booked using the online [Book A Librarian calendar](#). The library also provides virtual research and subject guides to help you with your studies. Find the guide that supports your course-related research by viewing the complete list of online [Subject Guides](#). To start your research and access citation guides (APA, MLA, Chicago, or IEEE), visit the [Research Help page](#). The library's collections (including print and online materials) are searchable using [OneSearch](#). The library offers a Loanable Technology collection to support students accessing and using technology. For an up-to-date list of technology available for borrowing, visit the library's [Loanable Technology webpage](#). For a detailed list of library resources and services, go to www.keyano.ca/library. For all inquiries, please email askthelibrary@keyano.ca or [chat with us online](#).

The **Academic Success Centre** at Keyano College (CC-119) provides **free** academic support services to registered students, such as tutoring, writing support, facilitated study groups, workshops, and study space. Academic Content Specialists are available in Mathematics, Science, Trades, Power Engineering, Upgrading/College Prep, Human Services, English, Humanities, and more. Students are encouraged to visit the Academic Success Centre to discuss study strategies and academic concerns. For additional information, please email Academic.Success@keyano.ca.

The **Academic Success Coach** is located in the Academic Success Centre and works with students to develop academic success plans, time management skills, study strategies, and homework plans. For additional information, please email Academic.Success@keyano.ca.

Course Evaluation

Assignments/Course components	Dates	Weight	Course objectives no.
1) Medication Card Assignment	Feb 12 th , 2023	10%	1-8
2) EAQs/Sherpath Assignments	See Weekly Schedule	20%	1-8
3) Midterm Exam	March 1 st , 2023	30%	1-8
4) Final Exam--Cumulative	April Exam Week	40%	1-8

Assignment Descriptions

1) Medication Card Assignment (10%)

Choose a medication that is commonly used. Create your own medication card with information. Must include pharmacokinetics, pharmacodynamics, pharmacotherapeutic classification, mechanism of action, properties, common dosages, side and adverse effects, interactions, and any other important information. Assignment can be displayed however you choose so be creative! Assignment is out of 10 marks.

2) EAQ/Sherpath Assignments (20%)

EAQ/ Sherpath Assignments must be completed in order to receive the 20%. These assessments and reviews are completed weekly with each opening on the Monday preceding the class date and closing at midnight the Sunday after the class (**see weekly schedule**). These assessments can be found on the MyEvolve in either the Calculate with Confidence Sherpath, Potter Canadian Fundamentals Sherpath, or Understanding Pathophysiology Sherpath – **details in weekly schedule**.

3) Midterm Examination (30%):

100 questions. Covers all material discussed up to the date of the midterm. Respondus Lockdown Browser will be used and will be completed in person in classroom. Own device is necessary. If you require more than the 3 hrs allotted in class time – you must book in with Testing Services.

4) Final Examination (40%):

100 questions. Covers all course material. Will be schedule by the Office of the Registrar during final exam week in April. Time limitation is strictly applied. Respondus Lockdown Browser will be used and will be completed in person in classroom. Own device is necessary. If you require more than the 3 hrs allotted in class time – you must book in with Testing Services.

Using LockDown Browser and Respondus for Online Exams

This course requires the use of LockDown Browser for online exams. Watch this [short video](#) to get a basic understanding of LockDown Browser and the optional webcam feature (which may be required for some exams).

Then download and install LockDown Browser from this link:

<https://ilearn.keyano.ca/course/view.php?id=28874#section-7>

To take an online test, start LockDown Browser and navigate to the exam. (You won't be able to access the exam with a standard web browser.) For additional details on using LockDown Browser, review this Student Quick Start Guide (PDF)

Finally, when taking an online exam, follow these guidelines:

- Select a location where you won't be interrupted
- Before starting the test, know how much time is available for it, and that you've allotted sufficient time to complete it
- Turn off all mobile devices, phones, etc. and don't have them within reach
- Clear your area of all external materials — books, papers, other computers, or devices
- Remain at your desk or workstation for the duration of the test
- LockDown Browser will prevent you from accessing other websites or applications; you will be unable to exit the test until all questions are completed and submitted
- Do not click on any links that may appear in questions as it will terminate the exam.

Final grades

The assignments are marked as raw scores according to the percentage weight assigned to each. The marks on course assignments will contribute to the overall letter grade according to the percentage that each assignment is weighted in the course. At the end of the course, all assignment scores are totaled for a term summary mark in the course based on the grading scale below. The FINAL COURSE GRADE is based on the cumulative total of individual student's weighted assignment marks.

Grading rubric is located in Appendix A.

Deferred Final Exams:

A student who has missed a final exam because of incapacitating mental and/or physical illness, severe domestic affliction or for circumstances as described in Keyano College's Examination Policy in the Credit Calendar. Students are required to follow the process outlined in the policy should they wish to apply for a deferred exam.

Policy Statements:

The course outline acts as an agreement between the student and the instructor of this class regarding the details of the course.

Keyano College is committed to the highest standards of academic integrity and honesty. Students are expected to be familiar with these standards regarding academic honesty and to uphold the policies of the College in this respect. Students are particularly urged to familiarize themselves with the provisions of the Academic Policies and Student Rights and Code of Conduct and avoid any behavior which could potentially result in suspicions of cheating, plagiarism, misrepresentation of facts and/or participation in an offence. Academic dishonesty is a serious offence and can result in suspension or expulsion from the College.

Audio or video recording, digital or otherwise, of lectures, labs, seminars or any other teaching environment by students is allowed only with the prior written consent of the instructor or as a part of an approved accommodation plan. Student or instructor content, digital or otherwise, created and/or used within the context of the course is to be used solely for personal study, and is not to be used or distributed for any other purpose without prior written consent from the content author(s).

Students wishing to proceed in the Nursing program must achieve a grade of at least C+ in the foundational Nursing courses. Policy regarding the foundational course minimum pass can be found in the Keyano College Credit Calendar.

Please refer to the Nursing Program Student Handbook for specific Nursing Program Policies, including, attendance, examinations, withdrawal dates for classes, and plagiarism.

Refer to Keyano College Calendar for Student Rights and Responsibilities, Misconduct and Discipline, and Student Appeal Procedure.

Please refer to the Student Handbook and review the Student Code of Conduct Policy (Policy 110.0), Student Rights Policy (Policy 111.0) and Student Code of Conduct Procedure (110.1). It is expected that you will review and be aware of expectations relative to student rights, responsibilities and behavior.

APPENDIX A

Keyano College Percentage – Alpha Grading System

Descriptor	Percentage Scale	Alpha Scale
Excellent	96-100	A+
	90-95	A
	85-89	A-
Good	80-84	B+
	76-79	B
	72-75	B-
Satisfactory	68-71	C+
	64-67	C
Minimum Pass	60-63	C-
Poor	55-59	D+
	50-54	D
Failure	0-49	F