



**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**

**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

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### 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

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Lecture: 3 hours per week

Seminar: 0

Lab: 0

### Course Learning Outcomes

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**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

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

### Note:

- Please allow 2 business days for a response. Include “NURS 116” in your subject line.
- Professional and respectful communication is expected.

### Communication:

It is the students’ responsibility to ensure that they check Moodle courses a 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. 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. Do not text or call your instructor unless you will be absent for clinical that day; inquiries related to assignments and course content will be sent in an email to your instructor.

## Online Course Information

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Due to the pandemic, COVID-19, this course will be delivered in an online format. Instructors will deliver course material by utilizing different platforms that best suits the course. Online resources may include Microsoft Teams, ZOOM, virtual simulation, Adobe Connect, or Voice-Over PowerPoint Presentations. Courses will remain interactive throughout the semester and may include video lectures, forum discussions and virtual group projects. Evaluation criteria will be listed in each course syllabus.

It is the responsibility of the student to ensure access to these resources and participate in course content fully. If technical difficulties arise it is the responsibility of the student to contact their instructor as soon as possible to inform them of such. Where possible instructors will seek mutual resolution in the best interests of the class as a whole

## Required textbooks

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El-Hussein, M. T., Power-Kean, K., Zettel, S., Huether, S. E., McCance, K. L., Brashers, V. L., & Rote, N.S. (2018). *Understanding Pathophysiology* (1<sup>st</sup> Canadian Ed.). Milton: Elsevier.

Lilley, L., Rainforth Collins, S., & Snyder, J. (2017). *Pharmacology for Canadian Health Care Practice* (3<sup>rd</sup> Ed.). Toronto: Elsevier.

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

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College and Association of Registered Nurses of Alberta. (2013). *Entry-to-practice competencies for the registered nurses profession*. Edmonton, AB: Author. Retrieved from [http://www.nurses.ab.ca/content/dam/carna/pdfs/DocumentList/Standards/RN\\_EntryPracticeCompetencies\\_May2013.pdf](http://www.nurses.ab.ca/content/dam/carna/pdfs/DocumentList/Standards/RN_EntryPracticeCompetencies_May2013.pdf)

College and Association of Registered Nurses of Alberta (2010). *Ethical decision-making for registered nurses in Alberta: Guidelines and recommendations*. Edmonton: Author. Retrieved from [http://www.nurses.ab.ca/content/dam/carna/pdfs/DocumentList/Guidelines/RN\\_EthicalDecisions\\_May2010.pdf](http://www.nurses.ab.ca/content/dam/carna/pdfs/DocumentList/Guidelines/RN_EthicalDecisions_May2010.pdf)

College and Association of Registered Nurses of Alberta. (2013). *Practice standards for regulated members with The Canadian Nurses Association code of ethics for registered nurses*. Edmonton: Author. Retrieved from [http://www.nurses.ab.ca/content/dam/carna/pdfs/DocumentList/Standards/PracticeStandards\\_CNA\\_Ethics\\_2008.pdf](http://www.nurses.ab.ca/content/dam/carna/pdfs/DocumentList/Standards/PracticeStandards_CNA_Ethics_2008.pdf)

College and Association of Registered Nurses of Alberta. (2008). *Primary health care*. Edmonton, AB: Author. Retrieved from [http://www.nurses.ab.ca/content/dam/carna/pdfs/DocumentList/Guidelines/PrimaryHealthCare\\_Sep2008.pdf](http://www.nurses.ab.ca/content/dam/carna/pdfs/DocumentList/Guidelines/PrimaryHealthCare_Sep2008.pdf)

College and Association of Registered Nurses of Alberta. (2011). *Professional boundaries for registered nurses: Guidelines for the nurse-client relationship*. Edmonton, AB: Author. Retrieved from [http://www.nurses.ab.ca/content/dam/carna/pdfs/DocumentList/Guidelines/RN\\_ProfessionalBoundaries\\_May2011.pdf](http://www.nurses.ab.ca/content/dam/carna/pdfs/DocumentList/Guidelines/RN_ProfessionalBoundaries_May2011.pdf)

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**

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Elsevier Evolve online Platform with textbooks that are included.

Nursing Concepts online Course through Elsevier Evolve.

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

## **Performance Requirements**

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### **Student Responsibilities**

It is your responsibility as a student to contact the Office of the Registrar to complete the forms for Withdrawal or Change of Registration, and any other forms. Please refer to the list of important dates as noted in the Academic Schedule in the [Keyano College credit calendar](#).

The Keyano College credit calendar also has information about Student Rights and Code of Conduct. It is the responsibility of each student to be aware of the guidelines outlined in the Student Rights and Code of Conduct Policies.

### **Student Attendance**

Class attendance is useful for two reasons. First, class attendance maximizes a student's learning experience. Second, attending class is a good way to keep informed of matters relating to the administration of the course (e.g., the timing of assignments and exams). Ultimately, you are responsible for your own learning and performance in this course.

It is the responsibility of each student to be prepared for all classes. Students who miss classes are responsible for the material covered in those classes and for ensuring that they are prepared for the next class, including the completion of any assignments and notes that may be due.

### **Academic Misconduct**

Students are considered to be responsible adults and should adhere to principles of intellectual integrity. Intellectual dishonesty may take many forms, such as:

- Plagiarism or the submission of another person's work as one's 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;
- Handing in the same unchanged work as submitted 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.

In order to ensure your understanding of the concept of plagiarism, you must successfully complete the online tutorial found on ilearn.keyano.ca. Then print the certificate, sign it, and show it to each of your instructors. Your course work will not be graded until you show this signed certificate.

### **Late Assignments**

All assignments are to be submitted as indicated in the syllabus and timetable. Extensions on assignments may be granted; however, must be negotiated with the instructor prior to the due date and with a date specified for late submissions. Assignments not submitted on the day and time specified will incur a 5% deduction per day including weekends. This will be applied each day until the assignment is received by the instructor. Students can submit assignments by e-mail on weekends but must provide a paper copy on the first day following the weekend.

### **Specialized Supports**

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The Student Services department is committed to Keyano students and their academic success. There are a variety of student supports available at Keyano College. Due to the continuing situation with the Covid-19 pandemic, the offered support services will be implemented differently this semester by being provided mostly virtually. In-person service can be requested as needed. All Alberta Health Services guidelines will be followed for in-person appointments—wear a mask, maintain two meters of physical distance, use hand sanitizer, and stay home if you are unwell. All student services are available during Keyano business hours: Monday to Friday, 8h30-16h30.

#### **Accessibility Services**

This provides individual and group learning strategy instruction for all students. Meet with a Learning Strategist to learn studying and test-taking strategies for online classes.

Students with documented disabilities, or who suspect a disability, can meet with a Learning Strategist to discuss their current learning barriers and possible accommodations. Students who have accessed accommodations in the past are encouraged to contact us to request them for the semester. Please note that requesting accommodations is a process and requires time to arrange. Contact us as soon as you know you may require accommodations. For accessibility services supports and to book a virtual appointment, please contact [accessibility.services@keyano.ca](mailto:accessibility.services@keyano.ca).

Accessibility Services also provides individual and group learning strategy instruction for all students, as well as technology training and supports to enhance learning. Meet with a Learning Strategist to learn studying and test-taking strategies for online classes. Schedule an appointment with the Assistive Technology Specialist to explore technology tools for learning. Book an appointment today by emailing [accessibility.services@keyano.ca](mailto:accessibility.services@keyano.ca)

## **Academic Success Coaching**

Offers you support and access to resources for your academic success to help you to find the Keys to your Success. The Academic Success Coach will work with you to develop an academic success plan, develop your study and time management skills, and connect you with the right resources here at Keyano. [Academic.success@keyano.ca](mailto:Academic.success@keyano.ca) is the best way to access resources during virtual service delivery. The Academic Success Coach is located in the Skill Centre in CC-119 at the Clearwater Campus.

## **Wellness Services**

This 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 offer a safe and confidential environment to seek help with personal concerns. All individual appointments will continue virtually.

Wellness Service welcomes students to participate in any of the virtual group sessions offered throughout the academic year addressing topics including mindfulness and test anxiety.

Individual virtual appointments can be made by emailing [wellness.services@keyano.ca](mailto:wellness.services@keyano.ca).

## **Library Services**

This provides students with research and information supports as they engage in their studies. Although the Keyano Library is physically closed, we remain open online. Library staff are available to support you both virtually and in person throughout the semester. For a detailed list of library supports and services, go to [www.keyano.ca/library](http://www.keyano.ca/library). For any inquiries, please email [askthelibrary@keyano.ca](mailto:askthelibrary@keyano.ca).

Begin your research with the [Library's FIND page](#). Search for sources using OneSearch, the Library's Catalogue, or by searching in a specific database selected from the [A-Z Database List](#).

Individual support with the Information Librarian is available virtually. Appointments can be requested by using the [Book A Librarian online form](#).

Research and Subject Guides are helpful resources when beginning your research or addressing other information needs. To view a subject or course specific guide, go to the Subject Guide webpage [here](#).

To access additional research resources, including Citation Guides (APA, MLA, Chicago, or IEEE), go to the [Research Help Library page](#).

The Loanable Technology collection is available to support students in their online learning pursuits. Items available for borrowing include mobile projectors, webcams, noise cancelling headphones, Chromebooks, and laptops. For an up-to-date list of technology available for borrowing, go to the Library's [Loanable Technology webpage](#).

## Skill Centre

Provides academic support services to students registered in credit programs at Keyano College in the form of tutoring, writing support groups, facilitated study groups, workshops and study space. Tutoring services are **free** to Keyano students. Tutoring is available for Math, Writing, English, and Science subject areas.

While most courses are being offered online, the Skill Center will be offering mostly virtual tutoring services and in-person sessions as requested. Please email [Skill.centre@keyano.ca](mailto:Skill.centre@keyano.ca) to get in contact with our tutoring staff. The Skill Centre is located in CC-119 at the Clearwater Campus.

For the most up to date information on how to book a tutoring session, please view the [Keyano Skill Centre homepage](#).

## E-Learning

Technology and internet will impact your online learning experience. It's important that you are able to watch an online video and other course materials, take online quizzes, and participant in a live class with your instructor and other students.

Keyano College operates in a Windows based environment and having the correct tools for online learning is important. Here's a list of recommended system requirements for Fall 2020.

## Internet Speed

Minimum Internet speeds of 5 Mbps.

Recommended Internet speeds of 25 Mbps (especially if you are sharing your internet at home). Check your internet speed with [Fast.com](http://Fast.com).

Chromebooks are **not** recommended as they are not compatible with testing lockdown browsers.

A Microsoft Surface or iPad or iPad Pro may be possible alternatives in some program areas.



**System requirements:**

Microsoft Windows	Apple
<p><b>Minimum Requirements:</b></p> <p>A Windows 10 <b>computer/laptop</b></p> <ul style="list-style-type: none"> <li>· Minimum 4GB of RAM.</li> <li>· 10GB+ available hard drive storage.</li> <li>· Enough available hard drive space to install the Microsoft Office suite (approximately 3GB). <a href="#">Microsoft Office</a> software is free to all Keyano students and employees.</li> <li>· Microphone, webcam and speakers. A headset with a microphone is recommended.</li> <li>· System updates must be regularly installed.</li> <li>· Anti-Virus / Anti-Malware software</li> </ul>	<p><b>Minimum Requirements:</b></p> <p>A Macintosh (V10.14 and above) <b>computer/laptop</b></p> <ul style="list-style-type: none"> <li>· Minimum 4GB of RAM.</li> <li>· 10GB+ available hard drive storage.</li> <li>· Enough available hard drive space to install the Microsoft Office suite (approximately 3GB). <a href="#">Microsoft Office</a> software is free to all Keyano students and employees.</li> <li>· Microphone, webcam and speakers. A headset with a microphone is recommended.</li> <li>· System updates must be regularly installed.</li> <li>· Anti-Virus / Anti-Malware software.</li> </ul>
<p><b>Recommended Requirements</b></p> <ul style="list-style-type: none"> <li>· 8GB of RAM</li> <li>· A method of backing up/synchronizing to local or cloud-based storage such as OneDrive is highly recommended. This is included if you complete the setup of KeyanoMail and download MS Office using your Keyano email for free.</li> </ul>	<p><b>Recommended Requirements</b></p> <ul style="list-style-type: none"> <li>· 8GB of RAM</li> <li>· A method of backing up/synchronizing to local or cloud-based storage such as OneDrive is highly recommended. This is included if you complete the setup of KeyanoMail and download MS Office using your Keyano email for free.</li> </ul>
<p>Chromebooks are <b>not</b> recommended as they are not compatible with testing lockdown browsers.</p> <p>A Microsoft Surface or iPad or iPad Pro may be possible alternatives in some program areas.</p>	

**Specific department requirements:**

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

**Computer Software**

Students will be able to get access to Microsoft Office 365 for Free using Keyano Credentials by [clicking here](#).

## **Recording of lectures and Intellectual Property**

Students may only record a lecture if explicit permission is provided by the instructor or by Accessibility Services. Even if students have permission to record a lecture or lecture materials, students may not publish any of the lectures or lecture materials, this includes any recordings, slides, instructor notes, etc. on any platform. Thus no student is allowed to publish or sell instructor notes without formal written 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 are having issues with your student account, you can contact the ITS Helpdesk by emailing [its.helpdesk@keyano.ca](mailto:its.helpdesk@keyano.ca) or calling 780-791-4965.

## **Course Evaluation**

<b>Assignments/Course components</b>	<b>Dates</b>	<b>Weight</b>	<b>Course objectives no.</b>
1) Quizzes	Weekly	20%	1-8
2) Mastery Assessments in Nursing Concepts Online -Evolve Platform	Weekly	20%	1-8
3) Midterm Exam--Cumulative	March 3, 2021	25%	1-8
4) Final Exam--Cumulative	April Exam Week	35%	1-8

## **Assignments Descriptions**

### **1) In-class quizzes (20%)**

There will be 10 quizzes due by 2200hrs on the day of the lecture. These quizzes will be 10 questions and delivered on Moodle. Once the quiz has started, you will have 30 minutes to complete it. See class schedule for specific quiz dates. The total category is worth 20%, with each individual assessment equating to 2% each. In case of exams and quizzes, various question styles may be used.

### **2) Mastery Assessments and HESI Review (20%)**

Mastery Assessments and HESI patient review must be completed in order to receive the 20% participation marks. These assessments and review are completed in Elsevier/Evolve weekly with each opening on the Monday preceding the class and closing at midnight the Sunday after the class. These assessments can be found on the Evolve Webpage in the Nursing Concepts Online Course under the N116 course folder. (PASSWORD: 116).

### 3) Midterm Examination (25%):

100 questions. Covers all material discussed up to the date of the midterm. Respondus Lockdown Browser will be used.

### 4) Final Examination (35%):

100 questions. Covers all course material. Details will be announced in advance. Registrar's office scheduling date, time, and exam location. Time limitation is strictly applied. Respondus Lockdown Browser will be used.

## Using LockDown Browser and Respondus for Online Exams

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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

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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

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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.

## Policy Statements

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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.

Refer to the Student Handbook, 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