



KEYANO COLLEGE

COURSE OUTLINE

PN 105

PATHOPHYSIOLOGY FOR HEALTH CARE PROFESSIONALS

WINTER 2021

January 7, 2021 – March 18, 2021

INSTRUCTOR: Marina Yanciw

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Curriculum Development, 10215 108 Street, Edmonton Alberta, T5J 1L6

PATHOPHYSIOLOGY 105
PATHOPHYSIOLOGY FOR HEALTH CARE PROFESSIONALS

Course Outline

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CALENDAR STATEMENT/COURSE DESCRIPTION

PATHOPHYSIOLOGY FOR HEALTH CARE PROFESSIONALS * Semester II

The Pathophysiology course focuses on the pathological processes underlying disease and disorders. The student is provided with a comprehensive foundation for understanding the phenomena that produce alterations in human physiologic function across the life span. Content in the course includes common disease entities as examples of the pathological processes. Each pathological process will be explained as a concept and illustrated by typical diseases and disorders. Diseases will be discussed in terms of manifestations, etiology and complications.

The diagnosis and management of disease processes associated with pathophysiological dysfunction/alterations is also introduced. This is a theory course.

Prerequisites: PN 100, PN 101

COURSE HOURS

TOTAL HOURS: 45 LECTURE 45 LAB: 0 CREDITS: 3

TUTOR INFORMATION

Instructor: Marina Yanciw
Phone (Office): 780-791-8932
E-mail: marina.yanciw@keyano.ca
Office Hours: Online, by appointment

GENERAL LEARNING OUTCOMES

Upon successful completion of this course, the learner will:

1. Describe common pathologic processes resulting in alteration of the structure and function of the body.
2. Correlate alterations in the physiologic function of the body to clinical presentation of signs and symptoms.
3. Identify common disease and disorders associated with pathophysiological processes.
4. Apply pathophysiologic principles to the interpretation and treatment of symptoms and disease processes.
5. Identify and prioritize actual and potential problems associated with the pathological process.
6. Describe common diagnostic assessments of pathological processes.
7. Identify medical treatments for common pathological processes.

Instructional Methods

- This course uses a variety of teaching/learning methods including: discussion, experiential exercises, learner presentations, role-plays, case studies, lectures, reflection, lab demonstration and practice, and group activities. These course activities provide the opportunity for learners to learn with and from others who are undergoing a similar learning experience.
- The course emphasizes pre-class preparation, participation in interactive classes, and post-class reflection and review. The learner is expected to take an active part in class discussions and take responsibility for his/her own learning. The instructor's role is to facilitate learning.

Performance Requirements

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 may not be graded until you show this signed certificate.

Statement on Plagiarism

All students must complete the Plagiarism/Tutorial Certificate found on Moodle or click the link below. To locate this information on Moodle, sign into Moodle and on the left side of the page under student the tutorial can be located.

Expectations:

1. All students must complete this tutorial. The certificate must be shown to the instructor prior to submitting any written assignment. Failure to show the instructor the certificate of completion could result in a late written assignment penalty. For online submissions of assignments, the student must submit a copy of the certificate in the designated drop box or email a copy of the certificate to the instructor as directed. For paper copy submission, the student must submit a copy of the certificate with each paper submission.

2. If you have completed this tutorial in a University Studies course you can show your instructor the certificate. The tutorial is required to be completed only once during your time at Keyano unless you have left the program and returned.

<https://plagiarism.iu.edu/>

Student Code Of Conduct

Please refer to the Student Handbook and review the Student Code of conduct Policy (Policy 110.0), Students 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 behaviours

Online Course Information

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.

Expectations of Students Writing On-Line Exams

1. All exams and quizzes will be written online due to the COVID-19 pandemic.
2. These are **not** open book exams. The quiz is to have been studied for prior to the quiz or exam date and is to be completed independently: that is by oneself, not in collaboration with or in the company of another person or persons. No photos of quiz questions are to be taken via phones.
3. Students who are writing from a location and computer of their choice are responsible for discussing any computer/internet issues with the instructor at least two days prior to the exam date listed in the course timetable.
4. Once the quiz/exam has started, the student will submit their answers immediately prior to going on to the next question.
5. Time for all quizzes and exams will be strictly adhered to. For example if a quiz is 30 minutes, the quiz will be open for exactly 30 minutes.

6. No grades will be released until the instructor has had time to review the quiz/exam stats. Once the review has been done, the marks will be released. Review of the quiz/exam questions in class will be done at the instructor's discretion.
7. If any problem arises during the taking of the quiz/exam, the student is to contact the instructor immediately at the time of the issue.
8. It is the responsibility of each student to be familiar with the contents of the Keyano College Student Code of Conduct. It is mandatory that all students sign a form identifying they have read/or are familiar with the Student Code of Conduct.

Using LockDown Browser 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 with 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

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 participate 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.

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](#).

System requirements:

Microsoft Windows	Apple
<p>Minimum Requirements:</p> <ul style="list-style-type: none"> · A Windows 10 computer/laptop · Minimum 4GB of RAM. · 10GB+ available hard drive storage. · Enough available hard drive space to install the Microsoft Office suite (approximately 3GB). <u>Microsoft Office</u> software is free to all Keyano students and employees. · Microphone, webcam and speakers. A headset with a microphone is recommended. · System updates must be regularly installed. · Anti-Virus / Anti-Malware software 	<p>Minimum Requirements:</p> <ul style="list-style-type: none"> · A Macintosh (V10.14 and above) computer/laptop · Minimum 4GB of RAM. · 10GB+ available hard drive storage. · Enough available hard drive space to install the Microsoft Office suite (approximately 3GB). <u>Microsoft Office</u> software is free to all Keyano students and employees. · Microphone, webcam and speakers. A headset with a microphone is recommended. · System updates must be regularly installed. · Anti-Virus / Anti-Malware software.
<p>Recommended Requirements</p> <ul style="list-style-type: none"> · 8GB of RAM · 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 	<p>Recommended Requirements</p> <ul style="list-style-type: none"> · 8GB of RAM · 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
<p>Chromebooks are not 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 share, distribute, or 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 share, distribute, publish or sell course related content (instructor, or students) 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 are having issues with your student account, you can contact the ITS Helpdesk by emailing its.helpdesk@keyano.ca or calling 780-791-4965.

PRACTICAL NURSING PROGRAM POLICIES

Please refer to Keyano College Practical Nurse Handbook for specific Practical Nursing Program policies and to Keyano College Calendar for general College policies.

LATE POLICY FOR ASSIGNMENTS

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 a designated dropbox on Moodle, e-mail the instructor, or submit a paper copy as directed by your instructor. If paper copy is requested, on weekends a copy can be emailed to the instructor, but must provide a paper copy on the first day following the weekend.

SPECIALIZED SUPPORTS & DUTY TO ACCOMMODATE

Specialized Supports

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: provides accommodations for students with disabilities. 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.

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

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

Wellness Services 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.

Library Services: provides students with research and information supports as they engage in their studies. 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. For any inquiries, please email 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, assignment/lab support, writing support groups, facilitated study groups, workshops, and study space. This service is free and is available for all Math, Sciences, Humanities and Trades courses offered at Keyano.

While most courses are being offered online, the Skill Centre will be offering mostly virtual services and in-person sessions as requested. Please email Skill@keyano.ca to get in contact with our Academic Content Specialists. The Skill Centre is located in CC-119 at the Clearwater Campus.

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

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 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.

OVERVIEW OF LEARNING EXPERIENCES

This course consists of the following units:

Unit 1: Cell Adaptation, Proliferation, and Differentiation

Topic 1.1: Introduction to Pathophysiology

Topic 1.2: Cell Injury, Adaptation, and Death

Topic 1.3: Alterations in Cellular Proliferation and

Differentiation Topic 1.4: Alterations in Genetics and Development

Topic 1.5: Alterations in Blood Cells

Unit 2: Alterations in Defence Mechanisms

Topic 2.1: Alterations in Skin

Integrity

Topic 2.2: Inflammatory Process – Tissue Reaction to Injury

Topic 2.3: Tissue Repair – Recovering From Injury

Topic 2.4: Infectious Processes

Topic 2.5: Alterations in Immunity

Unit 3: Alterations in Communication and Regulation

Topic 3.1: Alterations in Hormonal Messaging and Effects on Regulatory Functioning

Topic 3.2: Alterations in Neuronal Transmission and Effects on Regulatory Functioning

Topic 3.3: Alterations in Fluid, Electrolyte, and Acid-Base Balance

Unit 4: Alterations in Communication, Regulation, and Patency

Topic 4.1: Alterations in Ventilation and Diffusion

Topic 4.2: Alterations in Perfusion

Unit 5: Alterations in Communication, Regulation, Patency, and Motility

Unit 6: Alterations in Communication, Regulation, Filtration, Transport, and Nutrient Metabolism

Topic 6.1: Alterations in Filtration

Topic 6.2: Alterations in Absorption, Secretion, and Nutrient Metabolism

Unit 7: Application of Combined Pathophysiologic Concepts

Unit 8: Alterations in Body Support and Movement

Unit 9: Alterations in Sensory Function and Pain Perception

Unit 10: Degenerative Changes in Aging

OVERVIEW OF COURSE ASSESSMENT

To complete course requirements for PN105 Pathophysiology for Health-Care Professions, you will be required to complete two exams and a final exam.

DISTRIBUTION OF MARKS

Assessment Method	Description	Value	Date
Exam 1 Multiple choice	Demonstrate knowledge of course content (Units 1–3)	30%	Feb 22
Exam 2 Multiple choice	Demonstrate knowledge of course content (Units 4–6)	30%	Mar 15
Final Exam Cumulative; multiple choice	Demonstrate knowledge of course content	40%	Mar 18
	Total	100%	

PASSING LEVEL AND GRADING SCALE

A student must achieve a minimum grade of 1.7 (C-) or 60% to receive credit for PN 105 Pathophysiology for Health-Care Professions.

Students must complete all assignments and examinations to receive a final course grade. Students will not be allowed to rewrite the assignments or exam to raise their course grade.

Refer to the Practical Nurse Handbook and Keyano College Calendar for information regarding grading scale, extensions, writing exams, supplemental exams and other program/College standard practices.

Important Additional Information

Note to all Learners: It is the learner's responsibility to retain course outlines for possible future use in support of applications for transfer credit to other educational institutions.

REQUIRED TEXTS

Required Textbooks and Resources

Braun, C.A., & Anderson, C.M. (2011). *Pathophysiology: A clinical approach* (3rd ed.).

Philadelphia, PA: Lippincott Williams & Wilkins.

McConnell, T.H. (2014). *The nature of disease: Pathology for the Health Professions* (2nd ed.). Philadelphia, PA: Lippincott Williams & Wilkins.

Medical dictionary

Access to Internet

REQUIRED INTERNET READINGS

LIBRARY DATABASE

Matteucci, R. & Caple, C. (2011). Deep vein thrombosis: Prevention. In *Evidence-Based Care Sheet* series. Glendale, CA: CINAHL Information Systems. Retrieved from CINAHL Plus with Full Text database.

Buckley, L., & Schub, T. (2010). Stroke, ischemic: Treatment with thrombolysis. In *Evidence-Based Care Sheet* series. Glendale, CA: CINAHL Information Systems. Retrieved from CINAHL Plus with Full Text database.

Caple, C. & Schub, T. (2011). Diabetes mellitus, type 2: Cardiovascular risk. In *Evidence-Based Care Sheet* series. Glendale, CA: CINAHL Information Systems. Retrieved from CINAHL Plus with Full Text database.

Buckley, L. & Caple, C. (2011). Diabetes mellitus, type 1: Prevention. In *Evidence-Based Care Sheet* series. Glendale, CA: CINAHL Information Systems. Retrieved from CINAHL Plus with Full Text database.

Strayer, D., & Caple, C. (2011). Crohn's disease: Inducing/maintaining remission with medications. In *Evidence-Based Care Sheet* series. Glendale, CA: CINAHL Information Systems. Retrieved from CINAHL Plus with Full Text database.

Caple, C. & Cabrera, G. (2011). Asthma: Management in older adults. In *Evidence-Based Care Sheet* series. Glendale, CA: CINAHL Information Systems. Retrieved from CINAHL Plus with Full Text database.

Caple, C., & Schub, T. (2011). Diabetes mellitus, type 2: Prevention. In *Evidence-Based Care Sheet* series. Glendale, CA: CINAHL Information Systems. Retrieved from CINAHL Plus with Full Text database.

Strayer, D., & Caple, C. . (2011). Diabetes mellitus, type 2: Treatment adherence. In *Evidence-Based Care Sheet* series. Glendale, CA: CINAHL Information Systems. Retrieved from CINAHL Plus with Full Text database.