



Course Syllabus

Course Information

BIO 219

Pathophysiology

3 credit hours

Calendar: [2023-2024](#)

The calendar lists pertinent dates regarding drop and withdrawal dates.

Instructor Information

Office Hours: Fridays at 3:00 pm CST via Zoom

Email Address: clara.fynbueggert@doane.edu

Slack Channel: <https://doaneolacours-ow2451.slack.com>

If you have questions of a personal nature such as relating a personal emergency, questioning a grade on an assignment, or something else that needs to be communicated privately, you are welcome to contact me via Slack direct message. Please allow 24 hours for me to respond to messages Monday-Friday and 48 hours on the weekend.

Communicating With the Instructor

When questions arise throughout the course, please remember to check the following resources for an answer **before** reaching out to me:

1. Course Syllabus
2. Course Schedule
3. Slack Channel

This policy will help you in potentially identifying answers before I can get back to you and it also helps your instructor from answering similar questions or concerns multiple times.

If you cannot find an answer to your question, please first post your question to the course-specific Slack channel. Here your question can be answered to the benefit of all students by either your fellow students who know the answer to your question or the instructor. You are encouraged to answer questions from other students in the discussion forum when you know the answer to a question in order to help provide timely assistance.

Please do not use the Canvas Inbox feature for communication with me, I will not reply.

I make every attempt to monitor my email inbox, however communications in the email format are often missed due to many emails not relating to course questions. Slack messages are a more efficient way to have your question answered in a timely manner.

Slack Discussion

The Slack Channel for your course is a great place for you to ask questions and get answers from your peers and from me. You are encouraged to post your questions here before reaching out directly to me unless it is a time-sensitive matter. If you have questions of a personal nature such as relating to a personal emergency, questioning a grade on an assignment, or something else that needs to be communicated privately, you are welcome to contact me directly via email or phone.

Response Time

If you need to contact me directly, my preference is that you will send me a Slack message (direct message). Please allow 24 hours for me to respond to messages Monday through Friday and 48 hours on the weekend.

If you have a question about the technology being used in the course, please contact the Doane University Service Center for assistance, their contact information is listed later in the syllabus.

Technology Help

If you have a question about the technology being used in the course, please contact the Doane University Service Center for assistance, their contact information is listed later in the syllabus. If there are third-party tools utilized in the course, please reach out to them directly.

Course Details

Catalog Description

An introduction to the basic concepts of pathophysiology. Students examine the phenomena that produce alterations in human physiologic function and the resulting human response. Upon completion of this course, students will understand pathophysiological changes including how pathological processes are manifested and progress in the body and the primary and secondary effects.

Course Prerequisites

BIO 215 and 216 or similar (Human anatomy and physiology I and II)

Course Textbook and Materials

Required

Nath, J., Braun, C. and Anderson, C. (2022) Applied Pathophysiology: A Conceptual Approach

Required Technology (if applicable, otherwise delete)

Reliable computer and internet connection

A web browser (Chrome or Mozilla Firefox)

Adobe Acrobat Reader (free)

Word processing software—Microsoft Word or Google Docs

Webcam and mic

*Course books and materials will be integrated into your Canvas portal

Learning Objectives and Course Outline

Course Objectives

By the end of the course, you will be able to:

1. Summarize and classify major pathophysiologic changes.
2. Identify and describe commonly-encountered and high-disease-burden conditions.
3. Differentiate “normal age-related changes” from pathophysiologic changes.
4. Explain how the treatment modalities used change the natural course of disease.
5. Evaluate the impact of social and environmental determinants of health in various commonly-encountered and high-disease-burden conditions.
6. Apply principles of pathophysiology to unfamiliar disease processes and infer general mechanisms of disease, appropriate treatment modalities.

Course Outline

BIOL 219 Weekly Assignments				
Module	What	Description	DUE DATE	Points
Introduction to pathophysiology, Infection and Inflammation				
1	Reading Guide	Module 1 fill-in reading guide	Thursday	6
	Concept Map	Fill-in Concept map: pathogens	Thursday	6
	Discussion Board	Social and environmental Determinants of health	Initial Thursday	23
	Audio Essay	Altered vs normal cell function	Friday	16
	Short Essay	Chain of infection	Friday	16
	Quiz	Module One	Saturday	15
	Discussion Board	Self-introduction	Saturday	5
	Reading	Chpts 1, 2, 3, 4 & 5 from Applied Pathophysiology: A Conceptual Approach to the Mechanisms of Disease		
Nutrition, acid-base/electrolyte imbalance, proliferative disease				
2	Reading Guide	Module 2 fill-in reading guide and reflection	Tuesday	6
	Concept map	Fill-in Concept Map: anemias	Tuesday	6
	Practice question sets	Neoplasia	Wednesday	10
	Journal Reflection and question sets	Changes in Inflammatory Biomarkers Across Weight Classes in a Representative US Population: A Link Between Obesity and Inflammation	Wednesday	15
	PBL Case and Discussion Board	Electrolytes, fluid balance, and inflammation	Initial Thursday	32
	Short Essay	Neoplastic changes and malignancies	Thursday	16

	Quiz	Module 2 quiz	Saturday	14
	Reading	Chpts 7, 8, 9, & 17 from Applied Pathophysiology: A Conceptual Approach to the Mechanisms of Disease Uthman, E. (1998). Understanding anemia (Understanding health and sickness series)		
Sensory alteration and neuronal transmission				
3	Reading summary	Module 3 summary and reflection	Tuesday	6
	Concept mapping	Mechanisms of injury	Tuesday	6
	Pain Matrix	Types of Pain	Tuesday	6
	Journal reflection and question sets	Therapeutic Basis of Clinical Pain Modulation	Wednesday	15
	PBL case and discussion board	Transmission and treatment of pain	Initial Thursday	32
	Short essay	Alterations in vision and hearing	Thursday	16
	Exam	Exam one	Saturday	60
	Reading	Chpts 10, 11, & 12 from Applied Pathophysiology: A Conceptual Approach to the Mechanisms of Disease		
Perfusion				
4	Reading summary	Module 4 summary and reflection	Tuesday	6
	Concept Mapping	Types of perfusion disorders	Tuesday	6
	Journal reflection and question set	Reducing heart disease through the vegetarian diet using primary prevention	Wednesday	15
	PBL case and discussion board 3	Disrupting a silent killer	Initial Thursday	32
	Short essay	Alterations in normal perfusion	Thursday	16
	Quiz	Module 4 quiz	Saturday	13
	Reading	Chpt 16 from Applied Pathophysiology: A Conceptual Approach to the Mechanisms of Disease		
Ventilation and diffusion				
5	Reading summary	Module 5 summary and reflection	Tuesday	6
	Concept mapping	Types of disorders of ventilation and diffusion	Tuesday	6

	Practice Journal reflection and question set	Differentiating chronic obstructive pulmonary disease from asthma and Immunoglobulin E-mediated airway inflammation is active in most patients with asthma	Wednesday	15
	Discussion Board	Concept mapping presentation	Initial Thursday	23
	Short essay	COPD and Asthma	Thursday	16
	Individual PBL case	Examining the connected nature of diffusion, ventilation, and perfusion	Thursday	32
	Quiz	Module 5 quiz	Saturday	15
	Reading	Chpt 15 from Applied Pathophysiology: A Conceptual Approach to the Mechanisms of Disease Goldhaber (2004). Pulmonary Embolism		
Elimination				
6	Reading Summary	Module 6 summary and reflection	Tuesday	6
	Concept map	Classifying altered elimination	Tuesday	6
	Journal reflection and question set	Management of Chronic Functional Constipation in Childhood	Wednesday	15
	Discussion board	Concept mapping	Initial Thursday	23
	Short essay	Nutrition and altered elimination	Thursday	16
	Individual PBL case	What happens when what goes in doesn't come out	Thursday	32
	Exam	Exam Two	Saturday	60
Reading	Chpt 18 from Applied Pathophysiology: A Conceptual Approach to the Mechanisms of Disease			
Hormonal/Metabolic				
7	Reading summary	Module 7 summary and reflection	Tuesday	6
	Concept mapping	Types of hormonal and metabolic dysfunction	Tuesday	6
	Journal reflection and question set	Polycystic Ovarian Syndrome: an evidence-based approach to reducing metabolic consequences	Wednesday	15
	Discussion Board	Concept mapping	Initial Thursday	23

	Short essay	Regulation and feedback	Thursday	16
	Individual PBL case	Hormonal and metabolic dysregulation	Thursday	32
	Quiz	Module 7 quiz	Saturday	15
	Reading	Chpts 13 & 14 from Applied Pathophysiology: A Conceptual Approach to the Mechanisms of Disease		
Aging, Complex pathophysiologic processes				
8	Reading Summary	Module 8 summary and reflection	Tuesday	6
	Concept mapping	Connecting the pieces with multi-system diseases (final project)	Tuesday	50
	Case study creation	Connecting the pieces with multi-system diseases (final project)	Friday	50
	Long essay	Connecting the pieces with multi-system diseases (final project)	Friday	120
	Exam	Exam Three	Saturday	60
	Reading	Chpts 19 & 20 from Applied Pathophysiology: A Conceptual Approach to the Mechanisms of Disease		

Course Requirements

This is an online course and there will **not be any face-to-face class sessions**. All communications, submissions of assignments, course interactions, and posting of grades will utilize Canvas LMS (<https://doane.instructure.com>). You must have a **reliable internet connection** throughout the duration of the course.

Attendance/Participation

Attendance in an online course means logging into Canvas regularly and participating in all of the activities that are posted in the course. In addition, check your Doane University email account regularly, as I may send important information about the course.

Class Preparation

Preparation for class means reading the assigned readings and reviewing all information required for that module. You should plan to work on this course every day. Regular engagement is expected for online courses.

Netiquette Guidelines

At heart, Netiquette (etiquette for the Internet) is simple, good manners and business courtesy. Some of it may seem basic, but some infringements can result in major problems for others or can create an unintended insult to another user. The guidelines are adapted from The Core Rules of Netiquette by Virginia Shea (1994). For more information, please review the [Netiquette Guidelines](#) in the Student Resource Center.

Computer Requirements

For the successful use of Canvas please refer to Doane University's [minimum computer requirements](#). This also includes:

- Reliable computer and internet connection
- A web browser (Chrome or Mozilla Firefox)
- Adobe Acrobat Reader (free)
- Word processing software—Microsoft Word or Google Docs
- Webcam and mic*

*For privacy purposes, use of a webcam is **optional** during video conferencing and recording.

Campus Network or Canvas Outage

When access to Canvas is not available for an extended period of time (greater than one entire evening - 6 pm until 11 pm) you can reasonably expect that the due date for assignments will be changed to the next day.

Drop and Add Dates

If you feel it is necessary to withdraw from the course, please contact your advisor for full details on the types of withdrawals that are available and their procedures.

Federal requirements state that students must complete 75% of the coursework to be eligible to receive an incomplete for the course. If students fall more than two weeks behind, they cannot meet this requirement.

Academic Integrity

Fundamental to our mission, our core values, and our reputation, Doane University adheres to high academic standards. Students of Doane University are expected to conduct themselves in a manner reflecting personal and professional integrity. Disciplinary actions may be taken against students whose academic behavior is not congruent with the expectations of the University. Students are responsible for adhering to the standards detailed in this policy. Not being familiar with these standards does not mean that the students will not be accountable for adherence to them. Additional details on the Academic Integrity policy for violating academic integrity are published in the undergraduate and graduate catalogs. Please review [Doane University's Academic Integrity Policy](#).

Course Specific Academic Integrity (if applicable, otherwise delete)

Describe or list the specifics for this course.

Course Grading

Submitting Assignments

All assignments, unless otherwise communicated to me, must be submitted via Canvas. Each assignment will have a designated place to submit your work. All materials, assignments, and deadlines are subject to change without prior notice. It is your responsibility to stay in touch with me and review the course site, including Announcements, regularly to learn about changes to assignments or due dates.

Grading Scale

Assignment of letter grades is based on a percentage of points earned. The letter grade will correspond with the following percentages achieved. All course requirements must be completed before a grade is assigned.

A+ 97-100

A 93-96

A- 90-92

B+ 87-89

B 83-86

B- 80-82

C+ 77-79

C 73-76

C- 70-72

D+ 67-69

D 63-66

D- 60-62

F <60

Grading Scheme

The following outlines the weighted breakdown for how grades will be calculated:

5% - Reading guides/summary and reflection

10% - PBL Cases

10% - Non-PBL discussion boards

- 5% - Concept maps and pain matrix
- 25% - Quizzes and Exams
- 25% - Essays
- 5% - Case study creation
- 5% - Complex multi-system map
- 10% - Journal reflections and problem sets

Late or Missed Assignments

All assignment due dates are based in CST. Please adjust your Canvas settings to reflect due dates in your local time zone. If you have any questions about how to do this, please contact your instructor or ask a peer on Slack.

All assignments must be completed and turned in prior to the final day of the course to be eligible for points. All assignments submitted after the due date will be subject to a flat 20% penalty. **Because the penalty is a flat deduction, no extensions for late work are given.**

ALL assignments must be finished and turned in to complete the course. Unless the instructor is notified BEFORE the assignment is due and provides an opportunity for the student to submit his/her assignment late, points may be taken off for a late assignment.

Assignment & Assessment Feedback

Please allow 1-3 days for feedback on assignments. Be sure to review all of my feedback, as this will help you reflect on what you have learned while receiving suggestions for improvement.

Grade Appeals

Students who believe that their grade was miscalculated due to a mathematical error should contact the instructor within **ten (10) days of the grade posting**. A student is encouraged to talk with their advisor to offer an assessment of the concern and to clarify the steps of the appeal process. More information is published in the [Undergraduate and Graduate Catalogs](#).

Studying and Preparation Time

The course requires you to spend time preparing and completing assignments. A three-credit course requires 144 hours of student work. Therefore expect to spend approximately 9 hours a week preparing for and actively participating in this 16-week course.

Tutor Me

Students will have access to a free tutor me service within their Canvas account. You can connect with a live free tutor or submit a paper to get feedback before submitting.

Examity

Examity is Doane University's proctoring system. It may be used in your course to proctor quizzes and exams. You will be required to complete a quiz through Examity at the beginning of the course to verify your identity. Once you complete this quiz, you may begin your course.

Rewrites

Students may submit their assignments ahead of their due date for review by the instructor as long as the assignment is provided a minimum of three days prior to the course due date. The instructor will provide feedback on the assignment for consideration by the student.

Submitting Assignments

All assignments, unless otherwise announced by the instructor, **MUST** be submitted via Canvas. Each assignment will have a designated place to submit the assignment.

Support and Services

Technical Support

If you are in need of technical assistance, please access the [Self-Service Portal](#). You may reach the help desk at 402-826-8411 or by email at helpdesk@doane.edu.

Accessibility Statement

In compliance with the Rehabilitation Act of 1973, Section 504, and the Americans with Disabilities Act of 1990, professional disability specialists and support staff at Doane University facilitate a comprehensive range of academic support services and accommodations for qualified students with disabilities. Doane University staff coordinate student transitions from high schools and community colleges, conduct in-service training for faculty and staff, enable the resolution of accessibility issues, conduct community outreach, and facilitate collaboration among Doane University staff on disability policies, procedures, and accommodations.

Accommodations & Disability Services

[Doane University's Disability Services Office](#) will provide guidance on accommodations and universal access. To request accommodations please complete the [Self-Identification Form](#) and visit the website for additional information as soon as possible.

Academic Support

Doane University offers all of its students access to [Academic Support](#) services.

Title IX Requirements: Mandatory Reporting

At Doane, all university employees, including faculty, are considered Mandatory Reporters. As a Mandatory Reporter, I am required to report incidents of sexual misconduct and relationship violence to the Title IX Coordinator and, thus, cannot guarantee confidentiality. This means that if you tell me about an incident of sexual harassment, sexual assault, domestic violence, dating violence, stalking and/or other forms of prohibited discrimination, I have to share the information with the University's Title IX Coordinator. My report does not mean that you are officially reporting the incident. This process is in place to ensure you have access to and are able to receive the support and resources you need. For additional information, including confidential resources, please visit the [Campus Advocacy, Prevention, and Education \(CAPE\) Project](#).

Anti-Harassment Policy

Doane University, referred to as the "University", is committed to providing a safe and non-discriminatory learning, living, and working environment for all members of the University community. This policy addresses the University's responsibilities under Title IX, the Violence Against Women Reauthorization Act of 2013, and the Jeanne Clery Disclosure of Campus Security Policy and Campus Crime Statistics Act ("Clery Act"). More information is published in the [Student Handbooks](#).

Instructional Technology Accessibility and Privacy Policies

[Technology accessibility and privacy policies](#) are available on the Student Resource Center within the Canvas LMS.

Syllabus Addendum & Disclaimer

I (the instructor) view the course syllabus as an educational contract between myself and each student. Every effort will be made to avoid changing the course schedule but the possibility exists that unforeseen events will make syllabus changes necessary. I reserve the right to make changes to the syllabus as deemed necessary. Students will be notified in a timely manner of any syllabus changes via email or in the course site Announcements. Please remember to check your Doane University email and the course site Announcements often.

Syllabus Changes

The instructor and Doane University reserve the right to make changes as necessary to this course syllabus. All students will be notified of any changes.

Syllabus Addendum

Each student is responsible for being aware of the policies, resources, and expectations as specified in the [Doane Syllabus Addendum](#).
(<https://web.doane.edu/offices-services/registrar/syllabus-addendum>)