

BIOL 404: Pathophysiology

Spring 2021

Instructor: Dr. James J. Nagler
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Office hours: By appointment.

Course Overview: This course will cover the physiological basis for altered health, the study of the structural and functional changes in the body leading to disease states. Case studies will be presented and discussed in class to apply and understand the material learned.

Eligibility: Any student may take BIOL 404 provided they have the necessary pre- (BIOL 115, BIOL 115L, BIOL 227) and co-requisite courses (BIOL 228).

Credits: 3

Lectures: The class will meet as indicated in the Spring 2021 Class Schedule, MWF, 1:30-2:20 pm as a *Virtual Meeting* (<https://uidaho.zoom.us/j/83524657426>). Lectures topics will generally follow the weekly plan outlined below. Information will be presented primarily using PowerPoint although other media formats may be utilized (e.g., video) and all is fair game for examination purposes. Lectures will be recorded and posted after each class meeting. The concept of this course is informal and students are encouraged to ask questions about any course material they do not understand. Students that miss a class are responsible for learning the material missed on their own time.

Required Textbook: *Pathophysiology*. The Biologic Basis for Disease in Adults and Children. Eighth Edition. KL McCance and SE Huether. Elsevier; ISBN:978-0-323-58347-3.

Exams and Grading:

Exams- There will be three (3) in-class exams (Exam 1- 10/02/21; Exam 2- 10/03/21; Exam 3- 12/04/21) and a final exam (Tues., May 11, 12:45-2:45 pm). It is department policy that there are no early final exams. While exams will not be cumulative, the nature of this course is such that all material learned will be utilized as the course progresses.

Students are required to inform the instructor in advance of an exam absence. A **legitimate medical or personal reason** will be necessary before a make-up exam can

be scheduled. The make-up exam will be taken within a week of the exam date at a time agreed upon by the student and instructor.

Grading- The final numerical grade in this course will be determined as follows:

In class exams: 3 x 50 points each	= 150 points
Final exam:	= 50 points
TOTAL	= 200 points

Letter grades will be assigned as follows, based on the total points accumulated:

A	= 180-200 points
B	= 160-179 points
C	= 140-169 points
D	= 120-139 points
F	= 119 points or less

Course Learning Outcomes:

- Learn & Integrate: Students will apply their previous and gained knowledge of human anatomy and physiology to gain an understanding of the physiological mechanisms causing disease states.
- Think & Create: Students will be expected to apply the concepts and approaches learned here to describe the pathophysiology of human disease states.
- Communicate: Students will be expected to improve their communication with others about the basics of human pathophysiology.
- Clarify Purpose & Perspective: It is expected that all students will gain important insights into the study of pathophysiological mechanisms in the human.
- Practice Citizenship: It is every student's responsibility to share with others their knowledge and understanding of pathophysiological disease relationships in the human body.

Student Conduct:

This course and the instructor will comply will all Federal (i.e., FERPA), State, and University laws, rules, and policies. These include, but are not limited to the following:

Academic Integrity- Cheating, in any form, will not be tolerated in this course. Any student caught cheating will be dismissed from the course.

Students with Disabilities- Reasonable accommodations are available for students who have documented temporary or permanent disabilities through the *Center for Disability and Academic Resources* (CDAR). All accommodations must be approved by CDAR in order to notify the instructor regarding any accommodation(s) needed for the course.

Discrimination- No form of discrimination will be permitted in this course.

Classroom Civility- In any environment in which people gather to learn, it is essential that all members feel as free and safe as possible in their participation. To this end, it is expected that everyone in this course will be treated with mutual respect and civility, with an understanding that all of us (students, instructors, and guests) will be respectful and civil to one another in discussion, in action, in teaching, and in learning. Additional resources for expression of concern or to request support include the Dean of Students office and staff (5-6757), the UI Counseling & Testing Center's confidential services (5-6716), or the UI Office of Human Rights, Access, & Inclusion (5-4285). Students are expected to adhere to the University of Idaho Student Code of Conduct. If you have any questions or concerns regarding these topics, please contact the administrative offices of the University of Idaho found at <http://www.uidaho.edu/about/administration>.

Weekly Lecture Topics Plan:

<u>Week</u>	<u>Dates</u>	<u>Lecture Topics (textbook chapter)</u>
1.	13,15/01:	Course introduction, Altered cellular and tissue biology (Ch. 2)
2.	20,22/01:	Altered cellular and tissue biology (Ch. 2)
3.	25,27,29/01:	Case Study 1, Physiology of altered water and electrolyte balance (Ch. 3)
4.	01,03,05/02:	Physiology of altered acid-base balance (Ch. 3), Case Study 2
5.	08,10,12/02:	Innate Immunity (Ch. 7), EXAM 1 , Adaptive Immunity (Ch. 8,9)
6.	17,19/02:	Infection (Ch. 10)
7.	22,24,26/02:	Case Study 3, Cancer Biology (Ch. 12)
8.	01,03,05/03:	Integumentary (Ch. 47) and Musculoskeletal Disorders (Ch. 45), Case Study 4
9.	08,10,12/03:	Hematological Disorders (Ch. 28, 29), EXAM 2
10.		<i>Spring Recess- no classes this week</i>

11. 22,24,26/03: Lymphatic (Ch. 30, 32) and Cardiovascular Disorders (Ch. 33)
12. 29,31/03, 02/04: Case Study 5, Pulmonary Disorders (Ch. 36)
13. 05,07,09/04: Neurologic System Disorders (Ch. 16-18)
14. 12,14,16/04: **EXAM 3**, Case Study 6, Digestive System Disorders (Ch. 42)
15. 19,21,23/04: Digestive System and (Ch. 42) Reproductive Disorders (Ch. 25,26)
16. 26,28,30/04: Case Study 7, Renal System Disorders (Ch. 39)
17. 03,05,07/05: Endocrine System Disorders (Ch. 22); Case Study 8