

Human Physiological Systems BIOL 839, Spring 2019

Instructor

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Course Description

General human physiology will be studied with an emphasis on systems. The integumentary, skeletal, muscular, nervous, endocrine, circulatory, lymphatic, respiratory, urinary, digestive, immune and reproductive systems will be discussed. Salient mechanical, physical and biochemical processes of organs, tissues and cells will be covered. Anatomy will be included at a level necessary to make sense of the system's function.

Learning Objectives

1. Students will be able to describe the function of each of the physiological systems.
2. Students will have a basic understanding of homeostasis in a healthy human and be able to explain how a system may contribute to a specific aspect of homeostasis.
3. An fundamental understanding of how cellular form and function ultimately control the activities of all physiological processes will be gained.
4. An understanding of the basic principles of chemistry as they apply to physiological processes will be developed.
5. Students will begin the process of understanding how disease relates to disturbances in normal physiological processes (pathophysiology).
6. The understanding of scientific investigations will be enhanced by evaluation of data presented in the primary literature.

Course Materials

Required Textbook: Saladin, K.S., Anatomy and Physiology: The Unity of Form and Function, 5th Edition, McGraw Hill, Boston, 2009/2010 (ISBN 978-0-07-352569-3). Students may opt for a newer edition if they wish, but need to be aware that chapters and pages may not match reading assignments listed in the schedule.

Computer and Software: Access to a computer, modern browser and Internet connection are required for the course. A word processor compatible with the instructor's software is needed for preparation of written assignments. Formatting problems should be expected when the instructor's comments are incorporated into documents. Details for submitting final versions will be provided with each written assignment.

Digital Imaging Device: Some method of producing digital images may be required for incorporating digital images into assignments. Good solutions include a flatbed scanner, digital camera, etc. Suggest that students not buy anything if possible as a photo from a cell phone will often produce satisfactory results for the purpose of this course.

Web Resources: Canvas, an online learning management system (LMS), is used for this course. Students will be responsible for becoming proficient at using the system. Instructions can be found online by searching the eCampus section of the University of Nebraska at Kearney web site. Students will be expected to check the Canvas site often for announcements and assignments. In addition,

students are required to use and check the email account assigned to them by the university (Lopermail).

Lecture AVIs and Provided Study Notes: Lectures are supplied as HTML5 video that will be compatible with a recent Firefox web browser. Support for mobile devices will be hit or miss, but students will be able to download the video if streaming does not work as anticipated. Note that much of the provided material is copyrighted by the authors. *Students should refrain from distributing the resources to others without proper permission from the copyright owner(s).* All links and access to course materials will expire shortly after the last day of class.

Legal: *The materials on this course website are only for the use of students enrolled in this course for purposes associated with this course and may not be retained or further disseminated. The materials on this course website may be protected by copyright, and any further use of this material may be in violation of federal copyright law.*

Grading

Quizzes: Numerous online quizzes are assigned throughout the semester and must be completed by the due date. Each quiz is multiple choice, fill in the blank, matching, short answer, etc. A time limit will be issued for each quiz, so studying before taking the quiz is advised.

Histology Quizzes: Several quizzes with emphasis on histology will be assigned. Histology quizzes are typically composed of questions about histology photographs.

Writing Assignments: Students will complete two mini-papers. The topics will be assigned by the instructor.

Online Exams: Time-limited online exams will be given. *Students will be able to take each exam only once.* Exams will incorporate features suggested by the Human Anatomy and Physiology Society for "Assessment Design and Cheating Risk in On-line Instruction" which mandate time limits and one question at a time formatting.

Final Exam: Students will be provided access to the final exam approximately one week before the due date. Late exams will not be accepted.

Point Distribution: The value of each assignment will be as follows:

Assignment	Points Each	Total Points
Quizzes	best 15 @ 20 pts	300 pts
Histology quizzes	3 @ 20 pts	60 pts
Mini-papers	2 @ 25 pts	50 pts
Online Exams	3 @ 150 pts	450 pts
Final	1 @ 140 pts	<u>140 pts</u>
	total	1000 pts

The final grade will be determined base on the number of earned points. **Percentages are not used when assigning final letter grades for the course.** In the event that assignments are changed, the scores will be normalized to 1000 pts (points earned / total possible x 1000). Grades will be assigned as follows:

A+ (1000-990), A (989-960), A- (959-930), B+ (929-900), B (899-870), B- (869-840), C+ (839-810), C (809-780), C- (779-750), D+ (749-720), D (719-690), D- (689-660), F (Below 659)

Course Information and Policies

Expectations: The breath of human physiology is immense. Once behind, even in an overview course, catching up is virtually impossible. Quizzes are posted in series with due dates throughout the semester to encourage students to keep current in their studies. As a graduate course, it is anticipated that students will have a reasonable understanding of basic biological and chemical principles. While the textbook has remedial chapters, under prepared students should plan on spending extra time and effort in these areas.

Due Dates: *Due dates will be clearly identified on Canvas and strictly enforced.* There will be no opportunity to make up missed quizzes or online exams, and a score of zero will be assessed. Late writing assignments will result in a loss of 10% of the maximum points per day. The final exam must be returned by the due date or a grade of zero will be given.

Note on Technology: While not common, problems with technology do happen. This can be caused by instructor error, server crashes, weather-related power outages or problems with Internet connections. Verified problems with course technology will be dealt with fairly. If you find that the Canvas or web service is not responding or behaving improperly, notify the instructor immediately. If the problem is reasonably beyond the student's control, an opportunity to reclaim missed points *may* be provided. *Normally, assessments will only be reset once per student per semester.*

Other Policies of Interest

Exams and Quizzes: All online evaluations are ***closed book***. It is expected that students will not utilize notes, textbooks, the Internet, or any other source of information during an assessment. Note that use of the Internet during a quiz or exam has been the most commonly detected source of academic dishonesty by students. Point challenges will only be considered for 3 days after the due date and must be well supported by citing sources (short paragraph indicating why the question is mismarked). Fishing for points at the end of the semester will not be tolerated or considered for altering the letter grade to points earned mapping.

Plagiarism and Academic Dishonesty: Presenting someone else's work as your own is a serious academic offense. Any material containing plagiarism or reflecting academic dishonesty will receive a grade of zero and result in placing a record of the offense in the department's file. A second offense will result in assignment of an "F" for the course. All instances of plagiarism or academic dishonesty carry the risk of referral to the graduate committee, review of the student's file, and potentially expulsion from the program.

Withdraw and Incomplete Grades: Students should consult the academic calendar for the last day to withdraw from a course which will result in a grade of "W". Instructors are not permitted to withdraw a student; therefore, any student not continuing the class that fails to withdraw will receive a grade of "F". If unusual circumstances prevent completion of a course (such as major hospitalization, overseas deployment, etc.), students may request a grade of incomplete. *At the sole discretion of the instructor*, an "I" may be assigned for the course, and the the instructor will provide the student with an enumeration of requirements with a deadline for completing the course. Grades of incomplete are not for improving course performance and normally will not be considered for students not passing at the time of the request.

Students with Disabilities

It is the policy of the University of Nebraska at Kearney to provide flexible and individualized reasonable accommodation to students with documented disabilities. To receive accommodation services for a disability, students must be registered with UNK Disabilities Services Coordinator, David Brandt, in the Disability Services for Students office, 175 Memorial Student Affairs Building, 308-865-8214 or by email unkdso@unk.edu

Students Who are Pregnant

It is the policy of the University of Nebraska at Kearney to provide flexible and individualized reasonable accommodation to students who are pregnant. To receive accommodation services due to pregnancy, students must contact Sue Pedersen in Student Health, 308-865-8218. The following link provides information for students and faculty regarding pregnancy rights.

<http://www.nwlc.org/resource/pregnant-and-parenting-students-rights-faqs-college-and-graduate-students>

Reporting Student Sexual Harassment, Sexual Violence or Sexual Assault

Reporting allegations of rape, domestic violence, dating violence, sexual assault, sexual harassment, and stalking enables the University to promptly provide support to the impacted student(s), and to take appropriate action to prevent a recurrence of such sexual misconduct and protect the campus community. Confidentiality will be respected to the greatest degree possible. Any student who believes she or he may be the victim of sexual misconduct is encouraged to report to one or more of the following resources:

Local Domestic Violence, Sexual Assault Advocacy Agency 308-237-2599

Campus Police (or Security) 308-865-8911

Title IX Coordinator 308-865-8655

Retaliation against the student making the report, whether by students or University employees, will not be tolerated.

If you have questions regarding the information in this email please contact Mary Chinnock Petroski, Chief Compliance Officer (petroskimj@unk.edu or phone 8400).

Tentative Schedule

The sequence of lessons, notes and reading assignments are listed. Date and sequence are tentative and subject to change by the instructor. **Details for each assignment will be posted on Blackboard including due dates.** An "*" indicates that students should focus on the *physiological* aspects of the chapter.

Week/Date	Topic/Activities	Suggested Reading
1 January 7	Chemistry of Biological Systems Quiz 1 Cellular Form and Function Quiz 2	Chapter 2 Chapter 3
2 January 14	Histology Quiz 3 Histology Slides A Histology Quiz 1	Chapter 5
3 January 21	Integumentary System Quiz 4 Bone Tissue The Skeletal System Quiz 5	Chapter 6 Chapter 7 Chapter 8*
4 January 28	Joints Quiz 6 Muscular Tissue The Muscular System Quiz 7	Chapter 9* Chapter 11 Chapter 10*
5 February 4	Timed Exam 1	
6 February 11	Mini-paper 1 Quiz 8	
7 February 18	Nervous Tissue, Spinal Cord, Brain and Reflexes Quiz 9	Chapter 12 Chapter 13* Chapter 14* Chapter 15
8 February 25	The Endocrine System Quiz 10	Chapter 17
9 March 4	The Circulatory System: Blood The Circulatory System: Heart The Circulatory System: Blood Vessels Quiz 11 Histology Slides B Histology Quiz 2	Chapter 18 Chapter 19* Chapter 20*

Week/Date	Topic/Activities	Suggested Reading
10 March 11	Timed Exam 2	
11 March 18	Spring Break (3/17-3-24)	
12 March 25	Lymphatic and Immune Systems Quiz 12	Chapter 21*
13 April 1	The Respiratory System Quiz 13	Chapter 22*
14 April 8	The Urinary System Water, Electrolyte and Acid-Base Balance Quiz 14	Chapter 23 Chapter 24
15 April 15	The Digestive System Nutrition and Metabolism Quiz 15 Mini-paper 2 Quiz 16	Chapter 25* Chapter 26
16 April 22	Histology Slides C Histology Quiz 3 Timed Exam 3 Last day of classes (4/26)	
17 April 29	Final Exam Finals Week (4/29-5/2)	
Last Day of Course May 2	Note this is on Thursday afternoon (May 2, 2019). Course closes and becomes unavailable a few days later.	