

Biology 3200: Human Physiology

Winter Semester, 2018

Lecturer: Dr. David Njus

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Fridays, 2 - 3 pm

GTA: Kendall Case

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Office hours: Tuesday & Thursday, 10:30 – 11:30 am

STEM Commons room 147/149

Lecture: Tuesdays & Thursdays 4:00 p.m. - 5:15 p.m., 0100 General Lectures

Course description:

This course will cover the functioning of the main physiological systems: endocrine, nervous, musculoskeletal, cardiovascular, respiratory, digestive, urinary, reproductive, immune and integumentary. The course is about the principles of physiology, so you must understand how and why these systems function as they do, and not just memorize facts. Physiology integrates what you have learned about biology at the molecular and cellular levels to explain the functioning and survival of the organism as a whole.

Course objectives:

The objectives of the course are for students to be able to explain how the major organ systems work. You will be able to integrate physical and chemical processes from molecular to organ levels. You will be able to analyze how physiological systems are regulated to maintain normal function. Finally, you will be able to explain what happens when physiological systems fail.

Prerequisites:

Students taking this course should have completed the prerequisite courses: BIO 2200 and BIO 2600 with a grade of C- or better or BIO 2870 with a grade of C- or better.

Required Materials:

Textbook: *Human Physiology: An Integrated Approach with Interactive Physiology*, Seventh Edition by Dee Unglaub Silverthorn.

iClicker: You will need an iClicker keypad or the REEF polling app for your smartphone or laptop. The keypad may be purchased from the bookstore or you may use one that you already have for another course. You should register your keypad on Blackboard, not on the iClicker website. The keypad will be used for “clicker questions,” which are intended to test your understanding of the material and especially to help you identify your misconceptions. Misconceptions in science cause confusion and make it harder to learn subsequent material, so it is important that you identify and correct these right away.

Course Web Site: Class announcements, lecture materials and exam results will be posted on the course web site. You may access this site through the WSU Blackboard System or <http://blackboard.wayne.edu>.

Exams and Grading: Grades will be based on a 1000 point scale as follows:

Exam 1	230
Exam 2	230
Exam 3	230
Final exam	230
Homework assignments	80
Clicker points (extra credit)	40
Total	1000 points

Grades will be calculated on the following scale:

A	92.5-100	(925-1000 points)
A-	90.0-92.4	(900-924)
B+	87.5-89.9	(875-899)
B	82.5-87.4	(825-874)
B-	80.0-82.4	(800-824)
C+	77.5-79.9	(775-799)
C	72.5-77.4	(725-774)
C-	70.0-72.4	(700-724)
D+	67.5-69.9	(675-699)
D	62.5-67.4	(625-674)
D-	60.0-62.4	(600-624)
F	0-59.9	(0-599)

Exams: There will be three midterm exams and a final exam. Each of the exams will consist of 46 multiple choice questions and be worth 230 points. Missed exams will be scored as zero, unless arrangements are made in advance or a valid excuse is documented. In this case, the missing exam score will be made up by doubling the score on the final exam. The cumulative final exam will be worth 230 points and cannot be dropped. There will be no make-up exams.

FINAL EXAM SCHEDULE:

Note that the final exam is scheduled during the final exam period as designated in the Schedule of Classes for this term. No other time will be available, and **no exceptions** will be made for conflicts.

Homework: There will be chapter reviews posted on Blackboard by the GTA which are intended to give you a chance to think about how specific physiological systems work. There will be much more than 80 total assigned homework points so your final score out of 80 will be determined at the end of the semester based on your final Blackboard quiz scores. Each chapter will have a quiz on blackboard so check the "TA Quizzes" folder frequently. You can view the correct answers after the due date by "viewing past attempts". Additionally, no make-up quizzes will be given. This includes any emergencies or internet outages. Any questions concerning the quizzes should be directed towards the GTA.

Clicker Questions: You will use iClickers to answer "clicker questions" during each lecture. The point of the clicker questions is to help you identify and correct misconceptions and misunderstandings you may have before the exam. A total of 40 points will be awarded for answering clicker questions; it does not matter whether your answer is right or wrong. We will begin using the clickers right away, but clicker points will be awarded (2 points per lecture) beginning on January 23 after everyone has had a chance to get used to the system.

General Policies:

1) Anyone caught cheating or plagiarizing will automatically receive a failing grade for the exam, paper or class, with no opportunity to drop or replace that score. A second episode of cheating will result in a grade of F for the course and may also result in initiation of university disciplinary action. For discussions of cheating and plagiarism, see the class blackboard site and the "Student Code of Conduct," which can be found at <https://doso.wayne.edu/conduct/studentcodeofconduct.pdf>.

2) Any special considerations (disabilities, religious holiday conflicts, etc.) must be brought to the attention of the instructor by January 18, 2018 or as soon as possible after the situation arises. If you have a disability that may interfere with your ability to successfully complete the requirements for this course, you are invited to contact Educational Accessibility Services (583 Student Center Building; 577-1851) to discuss appropriate accommodations on a confidential basis.

3) Conflicts regarding the grading of any exam or assignment must be brought to the attention of Dr. Njus in a concise and typed appeal within one week of the date the exam key is posted. Appeals regarding exam questions may be sent as an email.

4) Monday, January 22, 2018 is the last day you can drop the class and get your tuition refunded. Sunday, March 25, 2018 is the deadline for withdrawing from the course. Please note that "incomplete" grades will not be issued to students in poor standing who are seeking an alternative to a late drop.

5) Professional behavior is expected in lecture, which includes respecting your classmates by arriving on time, turning off cell phones and not talking, eating or drinking during class. All students must show respect in language and attitude towards the instructors and their fellow students. You are encouraged to discuss differences of opinion with each other, respectfully.

Disrespectful students will be asked to leave the lecture, and will lose their opportunity to turn in any missed assignments.

6) University closures will be publicized through:

- the University Newline (313) 577-5345,
- WSU Homepage (www.wayne.edu),
- WDET-FM (Public Radio 101.9) and
- other local radio and television stations.

If an exam is scheduled on a day and time when the University is officially closed, the exam will be held during the next scheduled lecture or as indicated on the class Blackboard site.

Lecture Schedule

Date	Topic	Reading
9-Jan	Introduction to Physiology	Chapter 1
11-Jan	Communication, Homeostasis	Chapter 6
16-Jan	Endocrine System	Chapter 7
18-Jan	Neurons	Chapter 8
23-Jan	Neurons	Chapter 8
25-Jan	Central Nervous System	Chapter 9
30-Jan	Sensory Physiology	Chapter 10
1-Feb	Exam 1	
6-Feb	Efferent Division	Chapter 11
8-Feb	Muscles	Chapter 12
13-Feb	Control of Body Movement	Chapter 13
15-Feb	Cardiovascular Physiology	Chapter 14
20-Feb	Cardiovascular Physiology	Chapter 14
22-Feb	Blood Flow and Pressure	Chapter 15
27-Feb	Exam 2	
1-Mar	Blood	Chapter 16
6-Mar	Mechanics of Breathing	Chapter 17
8-Mar	Gas Exchange and Transport	Chapter 18
20-Mar	The Kidneys	Chapter 19
22-Mar	The Kidneys	Chapter 19
27-Mar	Fluid & Electrolyte Balance	Chapter 20
29-Mar	Exam 3	
3-Apr	The Digestive System	Chapter 21
5-Apr	Metabolism & Energy Balance	Chapter 22
10-Apr	Endocrine Control of Growth	Chapter 23
12-Apr	The Immune System	Chapter 24
17-Apr	Reproduction & Development	Chapter 26
19-Apr	Reproduction & Development	Chapter 26
1-May	Final Exam from 2:45 pm-4:45 pm	