

BIOLOGY 212: HUMAN PHYSIOLOGY (4 credits) SPRING 2019 COURSE SYLLABUS

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Office Hours: M 1350 -1450 , W 1350 - 1450 (also by appointment)

Lab Instructors **Mr. Andrew Bosma, HS 39, Email: bosmaa@uwosh.edu**
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Office hours to be announced at first lab meeting

Timetable

Lecture	M W	1500 - 1630	HS 109
Lab A01L	T	0940 - 1140	HS 120
Lab A02L	T	1320 - 1520	HS 120
Lab A03L	W	1020 - 1220	HS 120
Lab A04L	R	0940 - 1140	HS 120
Lab A05L	R	1320 - 1520	HS 120
Lab A06L	F	0800 - 1000	HS 120
Lab A07L	F	1020- 1220	HS 120

Textbook and Materials for the Class

REQUIRED: Fox, S.I. 2019. *Human Physiology, 15th edition*. McGraw-Hill, New York, NY.

REQUIRED: Cooper, S. J. 2018. *BIO 212 Human Physiology Lecture Outlines*.

REQUIRED: Cooper, S. J. and Merriman, D. 2018. *BIO 212 Human Physiology Lab Manual*. University of Wisconsin Oshkosh.

REQUIRED: A calculator.

RECOMMENDED: A pocket medical dictionary.

Course Description (from course catalog)

Structure/function relationships of the healthy human body, on the molecular, cellular, tissue, and organ-system levels. Prerequisite: Biology 211 or 323 with a grade of C or better. (3+2) (Fall/Spring) Special fees may apply.

Course Goals

This course is designed so that the student will achieve a general understanding of human physiology. This objective requires a synthesis of several areas within physiology (respiration, circulation, digestion, energy metabolism, etc.) as they apply to a human's ability to maintain homeostasis. Physiological topics will be examined on a molecular to organ system level and systems integration will be emphasized. This approach is important since Bio 212 is required for several programs at UW Oshkosh. Our concern, and the concern of those programs, is that each 212 student have the opportunity for quality preparation leading to successful licensing in his/her chosen field. The laboratory portion of this course will emphasize introductory exercises, experimental techniques, and data collection of physiological variables.

Learning Outcomes

1. Demonstrate knowledge of organ systems function.
2. Demonstrate knowledge of cellular function.
3. Demonstrate the ability to integrate physiology from the cellular and molecular level to the organ system and organismic level of organization.
4. Effectively read, evaluate and communicate scientific information.
5. Conduct and/or evaluate laboratory experiments in physiology.

About Lecture

During lecture hours, your Instructor will talk about the topics shown in the Schedule of Activities on page 5. Please feel free to stop your instructor to ask questions. Lectures will cover material in the text, but may also include outside material. Your lecture notes are of vital importance. Anything said in lecture could appear on an exam. If you miss a lecture, you should arrange to borrow another student's notes.

About Lab

You should plan on lab taking the full 2 hours each week. Do not register for this course if you have a class or work conflict with the lab. Lab exercises have been designed to supplement and/or reinforce concepts taught in lecture. Lab information will be included on exams given in lecture.

Cell Phones and other electronic devices

All cell phones must be turned off and put away during lecture and laboratory time. If you must leave it on in case of an EMERGENCY call (i.e. life or death), set it to vibrate. Let me be very clear, I do not want to see cell phones during lecture. I can see you texting and thus not paying attention to what I am lecturing about, and this is very insulting to me and disruptive to your neighboring students. I reserve the right to stop lecturing until all cell phones are stowed. This policy applies to both lecture and laboratory. To discourage you from using your cell phone especially during lab, **lab instructors will penalize you 5 points any time they see or hear your phone in the classroom. In addition, 5 points will be deducted if students are using a smart watch to text or use the internet in lab.** Smart watches must not be worn during lecture exams.

Items such as iPods, MP3 players and so forth cannot be used during lecture or lab and especially during exams, so turn them off and stow them at the beginning of class.

Academic Honesty Policies

Policies are clearly defined at this institution and will be followed. Students are referred to the University of Wisconsin Oshkosh Student Discipline Code as detailed in specific provisions of Chapter 14 of the State of Wisconsin Administrative Code. Any student(s) found in violation of any aspect of the above Code (as defined in sections UWS 14.02 and 14.03) will receive a sanction as detailed in UWS 14.05 and 14.06. Examples of violations include: looking at another student's exam or answer sheet and copying the answers during an exam, talking or whispering to another student during an exam, receiving text messages during an exam on an electronic device, or listening to answers or information recorded on an electronic via earphones during an exam. Sanctions range from a grade of zero for the assignment in question to an oral reprimand to expulsion from the University of Wisconsin Oshkosh.

E-mail policy

Part of being a student and on the way to being a professional is learning how to communicate like a professional. Along those lines, any e-mail sent to me must be addressed to either Dr. Cooper or Professor Cooper, and must be written in complete sentences, use proper grammar, and not contain any text speak. I reserve the right to not respond to e-mails that do not meet these criteria. If I do not respond, go back and check the message you sent.

Lecture Exam/Quiz Policy

Bring and have ready a PHOTO ID to each exam. Lecture exams will be given only at the scheduled times in the scheduled rooms. Make up of exams will be given only when an acceptable written excuse is presented (hospital paperwork, obituary, etc.). If you provide the acceptable documentation there is one opportunity to make up a missed lecture exam which is the comprehensive make-up exam scheduled for Friday, 17 May 2019 in HS-120.

The exception is that I am required to provide to students engaged in *official university activities*. Such students should identify themselves to me immediately, and provide me with documentation from the pertinent faculty sponsor or coach, in order to make other arrangements.

There will be four "pop" quizzes in the lecture. These will be short multiple-choice quizzes (scantron) that will be given in lecture. These quizzes are designed to help students keep up on the lecture material so that they are more prepared for each lecture exam. Quizzes will not be given during exam weeks. Each quiz will cover material from one section of exam material.

Lecture exams will consist of 70 multiple-choice or True/False questions. Fifty of these questions per exam will be based on lecture material. Since Bio 212 lab exercises are designed to reinforce and supplement lecture material, 20 of the 70 exam questions for each exam will be based on laboratory materials. **Exam 1 will have questions on the first three labs (1,2, and 3); Exam 2 will contain questions from labs 4, 5, and 6; Exam 3 will contain questions from labs 7, 8, and 9; Exam 4 will have questions from labs 10, 11, 12, and 13.**

Laboratory Attendance/Participation and Data Worksheets

Students have the opportunity to earn 60 points for lab attendance/participation. For seven labs, 35 points will be possible based on class data table worksheets/discussion. For five labs that do not have class data table worksheets, 25 points will be possible for attending and fully participating.

Seven labs have class data table worksheets that will need to be filled in and turned in at the following lab for 5 points each. These worksheets are designed to encourage students to study and understand the data collected during lab exercises. On each worksheet, students are also required to write a short discussion of that lab exercise based on the data collected and the Instructor led discussion of the data. Five of the lab exercises do not have class data table worksheets but rather have a worksheet that will be handed out in lab and are due at the end of the lab period. Students can earn 5 points each for these participation worksheets. Lab Instructors will record these 60 possible points.

Students With Disabilities

Students with disabilities are welcome in this course. Please contact your lecture and lab instructors in the first week of class so that we may arrange all possible accommodations.

Early Alert

To provide you with early feedback on your performance, Bio 212 will participate in the university's Early Alert program. Early Alert Grade Reports will indicate if you have an academic performance or attendance issue that needs to be addressed. Should you receive an Early Alert, you should make arrangements to meet with the Bio 212 Instructor in order to develop an action plan to improve attendance and or academic performance in the course.

UW Oshkosh Disclosure Statement

Students are advised to see the following URL for disclosures about essential consumer protection items required by the Students Right to Know Act of 1990:
<https://uwosh.edu/financialaid/consumer-information/>

Tentative Lecture and Laboratory Schedule (The topic order is firm. However, we may go faster or slower in lecture than the schedule indicates.)

Date	Lecture Topic	Text Chapter	Lab Topic (#)
02-04	Intro. & Physiol. Fundamentals	1, 2, 5	Hematology 1
02-06	Blood	13	
02-11	Cardiovascular System	13	Heart Rate & Blood Pressure 2
02-13	Cardiovascular System	14	
02-18	Immune System	15	Immune System 3
02-20	Respiratory System	16	
02-25	Respiratory System, Q & A*	16	Blood Typing 4
02-27	Exam 1		
03-04	Nervous System	6, 7	Respiratory Function 5
03-06	Nervous System	7, 9	
03-11	Nervous System	8, 13	Membrane Potential, EEG, and Sleep 6
03-13	Sensory Mechanisms	10	
03-18	Sensory Mechanisms, Q & A*	10	Brain Imaging 7
03-20	Exam 2		
03-25	Spring Break		No Lab - Spring Break
03-27	Spring Break		
04-01	Endocrine System	11	Senses 8
04-03	Endocrine System	11	
04-08	Skeletal & Muscular System	12	Reflexes 9
04-10	Muscular System	12	
04-15	Muscular System, ECG	12, 13	Skeletal Muscle Function 10
04-17	Osmoregulation	17	EMG Measurement
04-22	Osmoregulation, Q & A*	17	Cardiac Muscle Function 11
04-24	Exam 3		ECG Measurement
04-29	Digestion	18	Urinalysis 12
05-01	Digestion & Nutrition	18	
05-06	Metabolism & Thermoregulation		Digestion 13
05-08	Reproductive System	20	
05-13	Reproductive System, Q & A*	20	No Lab (Last Week of Class)
05-15	Exam 4		

*Q&A means time for question and answer during the last 30 - 45 minutes of lecture. These will take place instead of having separate review sessions.

Point Allocation in the Course

Assignment	Points
Exam 1	140
Exam 2	140
Exam 3	140
Exam 4	140
Lecture Quizzes (10 points each)	40
Lab worksheets (7 x 5 points each)	35
Participation for non worksheet labs	25
Total Points = 660	

Grading

Total Points	Percentage	Grade
611-660	93- 100	A
591-610	90 - 92	A-
571-590	87 - 89	B+
545-570	83 - 86	B
525-544	80 - 82	B-
505-524	77 - 79	C+
479-523	73 - 76	C
459-478	70 - 72	C-
439-458	67 - 69	D+
413-438	63 - 66	D
393-412	60 - 62	D-
<392	<60	F

Biology 212 Human Physiology Study and Exam Tips

- Attend all lectures and take good notes. This cannot be emphasized enough.
- Attend SI sessions.
- Do not expect to do well in the course if you just “cram” the night before an exam.
- Bring your lecture outlines to every lecture. This will help you keep your notes organized.
- Bring your textbook to lecture so that you can look at the figures while they are being projected. Writing down information on the figure or in the margins is a useful way to have the instructor’s explanation of the figure directly attached to the figure material.
- Use written rehearsal to study. A good way to do this is to first look over one section or day of notes and then put them away and write down what you remember. Start out by writing main themes and terms in outline or flowchart format. Then go back to your notes and see what you did not remember. Then go back and write more detail into your outline or flowchart until you have gotten down the material.
- Form study groups to go over the lecture and laboratory material.
- Be prepared to ask questions in class and during Q&A. If you have questions over the material that you have studied, bring them to class and ask them.
- Take your time on exams. Slow down and read each question carefully.
- If you don’t know the answer to a question, skip the question until the end of the test.
- On multiple choice questions, cover the possible answers with your scantron sheet and read the question. Give yourself time to come up with an answer. Look for an answer that matches your idea from the possible choices listed.

Summary Sheet of Biology 212 Points

Activity	Points Earned	Points Possible	Subtotal Pts. Earned (C)	Subtotal Pts. Possible (D)	% (%=C/Dx100)
Lecture Quiz 1		10		10	
Exam 1		140		150	
Lecture Quiz 2		10		160	
Exam 2		140		300	
Lecture Quiz 3		10		310	
Exam 3		140		450	
Lecture Quiz 4		10		460	
Exam 4		140		600	
Lab Data Worksheets		35		635	
Lab Participation		25		660	