

# BIOLOGY 212: HUMAN PHYSIOLOGY

## SPRING 2013 COURSE SYLLABUS

**Instructor**                    **Dr. Sheldon J. Cooper**  
**HS 142A, 153, Phone 424-7091, E-mail: cooper@uwosh.edu**  
**Office Hours: M 1350 -1450 , W 1350 - 1450 (also by appointment)**

**Lab Instructors**            **Mr. Andrew Bosma, HS 39, E-mail: bosmaa@uwosh.edu**  
**Ms. Sonja Jeter, HS 256, Email: jeters@uwosh.edu**  
**Ms. Katrina Olsen, HS 44, E-mail: olsenk10@uwosh.edu**  
**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

### Textbook and Materials for the Class

REQUIRED: Fox, S.I. 2013. *Human Physiology, 13th edition*. McGraw-Hill, New York, NY.

REQUIRED: Cooper, S. J. 2012. *BIO 212 Human Physiology Lecture Outlines*.

REQUIRED: Cooper, S. J. 2012. *BIO 212 Human Physiology Lab Manual*. University of Wisconsin Oshkosh.

REQUIRED: A calculator.

RECOMMENDED: A pocket medical dictionary.

### Prerequisites

There are two prerequisites for BIO 212. BIOLOGY 105 "Introductory Biology: Unity". Based on this course, you are expected to know most of the material covered in the Physiology textbook in chapters 2, 3,4 and 5. This would include basic biochemistry (the nature of proteins, carbohydrates, lipids, and nucleic acids; anaerobic and aerobic respiration), basic cell biology (the parts of the cell and their functions), and basic genetics. The Bio 212 Instructor will not have time to review it.

BIOLOGY 211 "Human Anatomy". Based on this course, you are expected to already know the general anatomical arrangement of the organ systems of the body, histology, and material covered in chapter 1 of the physiology textbook.

**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.

**About Lecture**

During lecture hours, your Instructor will talk about the topics shown in the Schedule of Activities above. 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. In order to do well in this course, expect to spend 2-3 study hours per 1 lecture hour as you would in all of your college courses.

**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.

**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.

**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.

### Common Courtesy

A ringing cellular phone disrupts the learning process of your neighbors. Please turn off all cell phones and MP3 players prior to class. Keep them in your backpacks until class is finished. This policy applies to both lecture and laboratory.

### Lecture Exam/Lab Quiz Policy

Bring and have ready a PHOTO ID to each exam. The exams will not be handed out until your Instructor is satisfied with the seating arrangement and the room is quiet.

**You will be present for every scheduled exam.** No one should even *think* about missing an exam for any but the most extreme emergencies (*e.g.*, grievous illness or injury, death of a loved one). *If* such an emergency should arise, *if* you **notify** me of your intended absence **before** the start of the exam or immediately thereafter, and *if* your excuse is **documented** (hospital paperwork, obituary, etc.), then and *only* then will you be allowed to take the **comprehensive make-up exam** scheduled for Friday, 10 May 2013 in HS-120. ***This is the only opportunity to make up a missed exam, and will only be allowed if the above conditions are met. If you miss an exam and these conditions are not met, you will receive a zero for that exam.*** The sole exception is that which I am required to provide to athletes and others 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.

Lab quizzes will be given during the first 15 - 20 minutes of each lab. If you are late to lab you will not be allowed to make up the quiz.

In addition, 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.

\*\*Due to privacy concerns, I will NOT (1) give grades out over the phone, or (2) reveal grades in phone messages.

\*\*I WILL (1) post lecture exam grades and lecture quiz grades on D2L, or (2) reply to an e-mail inquiry that is from your published CAMPUS listing.

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

<b>Date</b>	<b>Lecture Topic</b>	<b>Text Chapter</b>	<b>Lab Topic</b>	<b>Lab Quiz</b>
01-28	Intro. & Physiol. Fundamentals	1,2	Hematology	
01-30	Blood	13		
02-04	Cardiovascular System	13	Heart Rate & Blood Pressure	1
02-06	Cardiovascular System	14		
02-11	Immune System	15	Immune System	2
02-13	Respiratory System	16		
02-18	Respiratory System, Q & A*	16	Blood Typing	3
02-20	<b>Exam 1</b>			
02-25	Nervous System	6, 7	Respiratory Function	4
02-27	Nervous System	7, 9		
03-04	Nervous System & ECG	8, 13	Membrane Potential, EEG, and Sleep	5
03-06	Sensory Mechanisms	10		
03-11	Sensory Mechanisms, Q & A*	10	ADAM: Cardiac Function	6
03-13	<b>Exam 2</b>		ECG Measurement	
03-18	Spring Break		No Lab - Spring Break	
03-20	Spring Break			
03-25	Endocrine System	11	Special Senses	7
03-27	Endocrine System	11		
04-01	Skeletal & Muscular System	12	Brain Imaging	8
04-03	Muscular System	12		
04-08	Muscular System	12	Reflexes	9
04-10	Osmoregulation, Q & A*	17		
04-15	<b>Exam 3</b>		ADAM: Skeletal Muscle	10
04-17	Osmoregulation	17	Muscle Function	
04-22	Digestion	18	Urinalysis	11
04-24	Digestion & Nutrition	18		
04-29	Metabolism & Thermoregulation		Metabolism and Digestion	12
05-01	Reproductive System	20		
05-06	Reproductive System, Q & A*	20	No Lab (Last Week of Class)	
05-08	<b>Exam 4</b>			

\*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	100
Exam 2	100
Exam 3	100
Exam 4	100
Lecture Quizzes (10 points each)	40
Lab Quizzes (20 points each)	240
Lab worksheets (5 points each)	35
Total Points = 715	

**Grading**

Total Points	Percentage	Grade
662-715	93- 100	A
641-661	90 - 92	A-
619-640	87 - 89	B+
591-618	83 - 86	B
569-590	80 - 82	B-
548-568	77 - 79	C+
519-547	73 - 76	C
498-518	70 - 72	C-
476-497	67 - 69	D+
448-475	63 - 66	D
426-447	60 - 62	D-
<426	<60	F

## Biology 212 Human Physiology Study and Exam Tips

- In order to do well in this course, expect to spend 2-3 hours studying per 1 lecture hour as you would in all of your college courses. 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.
- Bring your textbook to lab. There are several labs in which figures from the text will be shown as part of the lab exercise introduction.
- 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.
- Study for 20 minutes and then take a 5 minute break. After the 5 minute break continue this 20/5 minute pattern.
- 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 hand 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**

<b>Activity</b>	<b>Points Earned</b>	<b>Points Possible</b>	<b>Subtotal Points Earned</b>	<b>%</b>
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Lab Quiz 1		20		
Lab Quiz 2		20		
Lab Quiz 3		20		
Lecture Quiz 1		10		
Exam 1		100		
Lab Quiz 4		20		
Lab Quiz 5		20		
Lab Quiz 6		20		
Lecture Quiz 2		10		
Exam 2		100		
Lab Quiz 7		20		
Lab Quiz 8		20		
Lab Quiz 9		20		
Lecture Quiz 3		10		
Exam 3		100		
Lab Quiz 10		20		
Lab Quiz 11		20		
Lab Quiz 12		20		
Lab Worksheets		35		
Lecture Quiz 4		10		
Exam 4		100		