

Moravian College
Department of Biological Sciences
Human Physiology - BIO 350
Spring 2015

Instructor:	Dr. Cecilia M. Fox
Phone:	610-861-1426
E-mail:	cfox@moravian.edu
Office:	Collier Science - Room 311B
Lecture:	Online
Lab:	Physio Ex Virtual Labs <i>AND</i> select labs on campus Collier Room 303 – Saturday Mornings (see attached lab schedule) 10am-1pm
Prerequisites:	BIO 112, CHEM 113, 114
Textbook:	Human Physiology, 13th Edition by Widmaier, Raff and Strang McGraw Hill Publishing
Lab Manual:	PhysioEx. 9.0– Laboratory Simulations in Physiology By Stabler, Zao and Gibson Benjamin Cummings



Course Description: Biology 350 examines the functions of the vertebrate organ systems, with special emphasis on the human body. Topics include the nervous, sensory, muscular, endocrine, circulatory, respiratory, digestive, urinary and reproductive systems. Laboratory exercises emphasize experimental techniques and computer assisted analysis of human and animal physiology.

Course Objectives: Upon completion of this course, the student will be able to:

- a) understand the basic anatomy of the nervous, muscular, endocrine, circulatory, respiratory, digestive, urinary and reproductive systems of the human body
- b) comprehend the relationships between structure and function in the various systems
- c) recognize the importance of control mechanisms that regulate homeostatic processes in animal and human physiology
- d) understand the physiological mechanisms behind the body's response to normal and stressed situations
- e) investigate the mechanisms described in the various systems using hands-on experimentation, computer simulations and computer-assisted physiology data acquisition

Grading: The grading system is as follows: (+/- will be administered as the professor deems appropriate)

A = 90 - 100

B = 80 - 89

C = 70 - 79

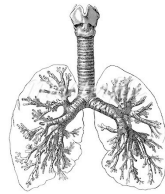
D = 60 - 69

Your final grade will be based on the following criteria:

Three lecture exams:	100 points each =	300 points
Physio Ex laboratory reports:	100 points each =	300 points
Chapter <i>Review Questions</i> assignments	=	250 points
Cumulative final lecture exam:		<u>200 points</u>
		1050 points

** Both lecture material and textbook readings are fair game for lecture exams.

** Please note: it is within the instructor's purview to apply qualitative judgment in determining grades for an assignment or the entire course



Expectations:

- Attendance: When scheduled, lab attendance is expected. Please be on time. Exams will take place at the end of our Saturday lab sessions. **No** make-up exams will be given unless you have an acceptable and documented reason (family emergency, illness, etc). If an emergency should arise, you must notify me prior to the exam and **not** after. If you miss a lab, 20 points will be deducted from your lab participation grade. **Please be aware that absences are not divided into excused and unexcused. Regardless of the reason, an absence from lab is counted as an absence.**
- Cheating: will not be tolerated. Students will be held to the highest standards as specified by the Moravian College Honor Code. Violations of this code will be handled in the most severe manner allowed by college policy.
- Reading/Review Question Assignments: Reading assignments should be completed as the course progresses. Please do your best to study the material on a weekly basis so you do not fall behind. Assigned *Review Questions* are due via email by 5pm on the scheduled Monday. You will receive an email one week ahead containing the specific questions of each chapter that you are to address. You are to complete these assignments **independently**.
- Laboratory Assignments: Your three Physio Ex lab reports must be typed and written **independently**. You are expected to answer all questions and complete all data charts (including the review sheets). Please proofread your work prior to submission. Be sure to cite all references used in answering the questions. For full credit, you are expected to use at least 2-3 primary literature sources to address the review questions at the end of the Physio Ex report. You may use as many secondary sources as you need. Please add your reference list to the end of the lab report.

- e) Cell Phones and Pagers: Please turn them off (or at the very least, set on vibrate) before walking into the laboratory. *Please refrain from texting during our time in lab.*
- f) Accommodations: Students who wish to request accommodations in this class for a disability should contact Ms. Elaine Mara, Assistant Director of Academic & Disability Support, located on the first floor of Monocacy Hall (extension 1401). Accommodations cannot be provided until authorization is received from the Academic & Disability Support office.

**** As the professor of this course, I reserve the right to alter this syllabus at any time during the semester****



Lecture Schedule

<u>Week of:</u>	<u>Topic</u>	<u>Reading Assignment</u>
January 19	Homeostasis – A Framework for Human Physiology	Chapter 1
Saturday, January 24*	Lab Session 1 – Introduction and Homeostasis	
January 26	Neuronal Signaling and Structure of The Nervous System	Chapter 6
February 2	Sensory Physiology Consciousness, The Brain And Behavior	Chapter 7 Chapter 8
February 9	Muscle Physiology	Chapter 9
February 16	Muscle Physiology (con't) Control of Body Movement	Chapter 10
Saturday, February 21*	Reflex and Sensory Testing Lab Exam 1 (Homestasis-Neuro)	
February 23	Endocrine System: Hormonal Control	Chapter 11
March 2	Cardiovascular Physiology	Chapter 12
<i>March 8-15</i>	<i>Spring Break</i>	
March 16	Cardiovascular Physiology	Chapter 12

	Respiratory Physiology	Chapter 13
Saturday, March 21*	Cardiovascular Physiology Lab Exam 2 (Muscle-Cardiovascular)	
March 23	Respiratory Physiology	Chapter 13
March 30	Renal Physiology	Chapter 14
<i>April 3-5</i>	<i>Easter Recess</i>	
April 6	Male Reproductive Physiology	Chapter 17
Saturday, April 11*	Urinalysis Lab Exam 3 (Respiratory-Renal)	
April 13, 20	Female Reproductive Physiology	Chapter 17
April 27	Final Review	
Saturday, May 2 *	Final Exam	

*** On Campus Labs – Saturday Mornings 10am-1pm**



Laboratory Schedule

<u>Due Date:</u>	<u>Topic</u>	<u>Laboratory Exercise</u>
January 24	Homeostasis	Exercise provided in lab
January 30	Neurophysiology of Nerve Impulses	PhysioEx 9.0 - Exercise 3
February 13	Skeletal Muscle Physiology	PhysioEx 9.0 – Exercise 2
February 21	Reflex and Sensory Testing	Exercise provided in lab
February 27	Endocrine Rat Lab	Exercise provided to support lecture concepts
March 6	Frog Cardiovascular Physiology	PhysioEx 9.0 – Exercise 5

March 21	Cardiovascular Physiology Lab	Exercise provided in lab
March 27	Respiratory System Mechanics	PhysioEx 9.0 – Exercise 7
April 11	Urinalysis	Exercise provided in lab
April 17	Renal Physiology – Function of the Nephron	PhysioEx 9.0 – Exercise 9

**** You may select 3 of the 5 Physio Ex reports to submit for a grade. ****

The lecture and laboratory schedules may be subject to change as the course progresses

