SUMMER 2011 BIO 212 Human Physiology Lecture/Course Syllabus

You will receive a separate syllabus for lab.

LECTURER: Professor Dana Vaughan, Department of Biology & Microbiology
Office: Halsey 249 Phone: 424-3076 Email: vaughan@uwosh.edu
Schedule - including office hours - is posted on D2L Content.

BECAUSE THIS IS AN ACCELERATED COURSE,
only EMERGENCY absences (illness, bereavement) will be allowed.
This is in your best interest.

PREREQUISITES: BIO 105 "Introductory Biology: Unity", grade of C or better; and **BIO 211** "Human Anatomy", grade of C or better. Based on these prereqs, I make assumptions about what you already know. See D2L Content's file called "What you already know" to review.

REQUIRED MATERIALS:

- **TEXTBOOK**: Fox's Fundamentals of Physiology, 12th Ed 2011, McGraw-Hill. You are URGED by your major programs to KEEP it for reference in future courses in their departments.
- **LAB EXERCISES** posted on D2L Content.

TUTORS are not available during summer session. You need to come to class, listen hard, note your questions, and ask me during office hours or on the D2L Discussion board if you prefer.

STUDENTS WITH DISABILITIES ARE WELCOME IN THIS COURSE. Please contact Dr. Vaughan the FIRST DAY OF CLASS so that we may arrange all possible accommodation ahead of time.

EMAIL COMMUNICATION and D2L will be used frequently throughout the semester to communicate between Instructors and Students. Emails constitute legal, official University communication. Not checking your email is not an excuse for performance problems in the class. Contact Academic Computing for assistance with email and D2L.

LECTURE NOTES: Come to every lecture and take notes in your own words. I do not release my own notes to students but the Powerpoints will be posted on D2L for your convenience. I reserve the right to alter my Powerpoints from the posted version at any time, if I feel it serves the learning interests of the class.

ACADEMIC HONESTY policies are clearly defined at this University and all students are expected to abide by them. Penalties for violations are severe in this course, in part because so many students enrolled in it are aiming for employment in the health care field where honesty and integrity are a matter of life and death. Cheating on an exam (including looking at someone else's paper) at a MINIMUM leads to zero on that exam, with no opportunity for a make-up or extra credit. A second offense is an F in the course and a report to Dean of Students.

COURSE OBJECTIVES

1. To understand the central physiological principle of **HOMEOSTASIS**.
2. To understand physiological **SYSTEMS INTEGRATION**.
3. To understand physiology on **MOLECULAR to ORGAN SYSTEM** levels.
4. To build physiology **VOCABULARY & QUANTITATIVE SKILLS**.
5. To prepare students for **FURTHER PHYSIOLOGY COURSEWORK** such as Exercise Physiology or Pathophysiology.

ABOUT DOING YOUR BEST

1. Always attend class and take notes.
2. Read ahead, and re-read. Use the textbook's index and Table of Contents.
3. You can't forget what you learned in the first week. It's all important.
4. Join a study group (or work with a tutor) where you talk about the material and do problems out of the text to rehearse the material. The more time you spend with the material, the better you will learn it.
5. Look for the homeostatic patterns in everything you learn.
6. Recognize that physiology is not anatomy; memorization is of far less use in physiology; instead you must think about mechanisms in motion that you cannot see. Moreover, physiology content is like a spiderweb, not a line; information builds on information and "cross-links" with other information.
7. Rewrite your notes each week into "study posters" where you consolidate all the information given on a particular topic no matter what date it was taught. Working on study posters each week with your study group would be excellent. Examples of study poster topics are: Joe Cell, Making ATP, Red Blood Cells, Body pH, Digestion, Moving a Muscle. You'll think of others…

ABOUT READING

You are expected to read the Fox textbook nearly cover to cover this term. Knowing what to read, and when, is based on:

a. Lecture and lab topics in the order presented; see Table of Contents and Index for specific pages and illustrations
b. Diagrams from the text displayed in lecture or lab
c. Any specific assignment mentioned in lecture or lab
d. Your own individual learning needs (*e.g*. going back to review information that gave you problems on an exam)

Students taking this course as a major requirement for a particular major (*e.g.* Nursing, Athletic Training) are urged by their major programs to keep this book for reference during future courses in advanced aspects of human physiology.

ABOUT LECTURE

- Summer session lectures are long: 90 minutes. We will NOT be taking ANY breaks! Figure out what it takes for you to remain alert throughout. A small protein-rich meal ahead of class is the best idea.
- Attend every lecture and remain engaged by taking notes. I will teach you useful shorthand to help improve your note-taking. You will find the weekly lecture reviews that I post on D2L very helpful in ensuring completeness.
- Read the textbook cover to cover to supplement lecture and lab.
- I will take questions during lecture but also be sure to ask questions during lab, during office hours, or on the D2L discussion board. Do not wait until right before an exam to ask a question; learning takes time to "sink in" (the formal term for this is "memory consolidation").
- Please do not chat during lecture as this disturbs other students.

ABOUT EXAMS

- Lecture exams will occur during three evenly-spaced lecture periods of our summer term. The 30 minutes prior to each exam will be review plus open Q&A, then each exam will last 60 minutes. If there are no questions, we'll dive right into the exam and then continue with lecture for the remaining time.
    - Tuesday June 28
    - Monday July 18
    - Thursday August 4
- Attendance is required at all exams.
    - Take exam early? **NEVER**. Please don't even ask.
    - Take exam late? **RARE**, requires documented medical/bereavement excuse.
- Exams are NO notes, NO book, NO hat, NO electronics, NO neighbor.
- Question format will be Multiple-Choice, All-That-Apply. On your scantron, you will mark "A" if you Agree with a statement or "B" if you Disagree with a statement. To help you learn this type of examination, a full-length actual Exam 1 is posted on D2L (but *not the answers*; working those out should be part of your study strategy).

ABOUT LAB

During summer session, you will attend two 2-hour labs per week. Quizzes will be given in lab over the previous lab. Attendance is required at all labs just as it is in lecture. Ask me for permission to switch to a different lab section. **You will receive a separate syllabus for your lab section; read it carefully and be sure you understand it.** Lab grades will be combined to contribute 30% of your final course grade.

LABS FIRST MEET on Wed June 15-Thu June 16.

LABS DO NOT MEET on Mon July 4 or Tue July 5.

LABS DO NOT MEET on Wed July 27 or Thu July 28.

LABS LAST MEET on Mon Aug 1-Tue Aug 2.

ABOUT FINAL COURSE GRADES

Grades for each exam will be posted on D2L and converted to percentages. Then they will be added together in a weighted fashion as follows: Exam 1 = 10%; Exam 2 = 20%; Exam 3 = 40%; Lab = 30%. To compute your final course grade, I'll use the +/- letter grade format shown below. If in my opinion a student has shown significant, sustained improvement from Exam 1 to 2 to 3, I reserve the right to award a higher grade than the points earned indicate. .

Letter Grade	%	Grade Points per Unit (cr.)
A	92.0-100	4.00
A-	90.0-91.9	3.67
B+	88-89.9	3.33
B	82.0-87.9	3.00
B-	80.0-81.9	2.67
C+	78.0-79.9	2.33
C	72.0-77.9	2.00
C-	70.0-71.9	1.67
D+	68.0-69.9	1.33
D	62.0-67.9	1.00
D-	60.0-61.9	0.67
F (Failure)	<60.0	0.00

Lecture Topic Order

- Calendar dates are not defined as it's hard to know exactly how long a unit will take.
- Examinations are date-based, not content-based.
- These topics will be taught in lab as well. We will do our best to have lab and lecture topic synchronized but this cannot be guaranteed.

1. Organizing principles of Physiology (Ch 1)
2. Basic Biochemistry (Ch 2)
3. Membrane Transport (Ch 3)
4. Neurophysiology (Ch 4-5-6)
5. Sensory Physiology (Ch 7)
6. Endocrinology (Ch 8)
7. Muscle Physiology (Ch 9)
8. Cardiovascular Physiology (Ch 10)
9. Respiratory Physiology (Ch 12)
10. Osmoregulatory Physiology (Ch 13)
11. Gastrointestinal Physiology (Ch 14)
12. Immunology (Ch 11)
13. Reproductive Physiology (Ch 15)

Should you become particularly interested in certain fields of physiology, you may want to check out:

BIO 306 Neurobiology, 3 credits, spring semester, instructor Vaughan.

BIO 310 Biology of Gender, 3 credits, spring semester, instructor Vaughan.

BIO 341 Immunology, 3 credits, fall semester, instructor McDermott.

KIN 331 Motor Learning, 3 credits, fall semester, instructor Mrotek.

KIN 350 Physiology of Exercise, 3 credits, fall and spring semesters, instructors Biwer, Schmidt