

HUMAN PHYSIOLOGY (BIOLOGY 4)

LEC MW 11AM – 1PM B210, LAB T 1-4PM OR TH 9-12 B207

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OFFICE HOURS: MWTh 1-2PM, T 4-5PM (USUALLY IN B207) OR BY APPOINTMENT

MATERIALS REQUIRED

- Textbook: Human Physiology: From Cells to Systems, Sherwood, 9th ed.
- Lecture Notes
- Laboratory Exercises
- Laboratory Exercise Supplement
- Scantron forms, total of 6 for the semester (#882-E)

OBJECTIVE

To understand functions of the human body and its organ systems, and to build a foundation for your more advanced future work.

FORMAT AND GENERAL INFORMATION

Lecture will begin at 11 am on Monday and Wednesday. Plan to be in your seat and ready to take notes at that time. You may take notes in your lecture outline book. There will be a short break in the middle of each class. You should read the appropriate chapters of the text prior to exams, focusing on the diagrams that you have seen in lecture. You will note that the schedule (see attached page) does not give an exact date for each chapter, as we may move faster or slower depending on the amount of questions there are on the material. We will follow the general pattern of the schedule for lecture, and while chapter dates may vary, exam dates will not change. You should bring your text to lecture the day prior to each lecture exam.

Lab will begin at 1pm every Tuesday or 9am every Thursday. You must bring your laboratory exercise book with you. For certain labs you will also need to bring the supplement. You should look over the lab ahead of time. You are expected to budget your time to complete the day's assignment, and you can include a 15 minute break. Some days we may finish early, but you should expect to stay for the entire lab period most days. If you finish your lab assignment early, you are expected to use your time wisely for reviewing, homework, etc.

ATTENDANCE

You are required to attend every class, arrive on time, and stay until the end of class. For purposes of emergency or illness, you may miss up to 3 lab sessions and 5 lectures. If you miss more than this you will be dropped from the course. There is no such thing as an excused absence beyond the absences you are allowed for illness/emergency. Attendance will be accounted for by sign-in sheets. Each day of lecture or lab you are responsible for checking off your own name (do not check off other students). Remember, participation is part of your grade, and you can't participate if you don't attend.

ASSESSMENT (1000 POINTS TOTAL)

Syllabus Quiz

There will be a short quiz on the information in this syllabus, consisting of ten T/F questions. (50 points)

Lecture Exams

You must recognize and define terms used in class, synthesize information from lecture, and answer multiple choice, T/F and matching questions. Given a list of symptoms or set of circumstances, you must think critically and write logical, organized, detailed essays explaining imbalances and the body's responses and compensatory mechanisms. During the exam, if you feel a question is not clear, you may ask me to clarify. There will be four lecture exams, each worth 100 points, and graded on a typical straight scale (90 and above = A, 80-89 = B, etc.). There will be an opportunity for 10 points of extra credit on each exam. You may replace your lowest lecture exam score by taking an optional comprehensive final exam. If you miss an exam, you may not make it up under any circumstances, nor may you take an exam early. If you miss an exam, you must replace it with the comprehensive exam. (400 points)

Lab Practicals

You must work quickly to express concepts in concise terms, identify cells/tissues/other structures through the microscope, and state outcomes of experiments. Correct terminology and correct spelling are essential. Practicals require short written answers. There will be an opportunity for 10 points of extra credit on each practical exam. There will be two practical exams, each worth 100 points, graded on a typical straight scale (90 and above = A, 80-89 = B, etc.). You may not make up a practical exam. (200 points)

Homework

For each day of lecture, excluding exam days, you must write six multiple-choice questions that you might expect to see on an exam. Each question must have at least five possible choices (a-e), with one correct answer (may be "all of the above," for example), and the correct answer should be circled. Each question should integrate several concepts learned in that lecture period. You should write questions that you find challenging, and consider the time spent doing this assignment study time. You must clearly write your name and the date of the lecture the questions come from at the top of your paper. May be neatly hand-written or typed. The assignment is due at the beginning of the following lecture session. There must be a total of 25 assignments of six questions each for the whole semester. You are responsible for keeping track of the dates you did homework and making sure you turn in all your assignments. On the days we do critical thinking activities, the homework questions can come from the critical thinking exercise or any chapter. Late homework is accepted, but you may not turn in more than five assignments at the final, so be careful not to fall too far behind. (150 points)

Reading/Writing Assignments

Assignments #1 and #2: You must read an article and write an essay with clearly expressed and well-supported opinions on the assigned questions. Essay should include what you think and why. Answers to questions may be handled separately or in one coherent essay. Essay must show thorough, thoughtful consideration of each question, with opinions presented in an organized and logical way. Must be typed. An "A" paper is clear, organized, thoughtful, and gives detailed explanations. A "B" paper generally is mainly clear and organized but needs more detail. A "C" paper gives little explanation of opinions and may lack clarity and/or organization. A "D" or "F" indicates incomplete answers that lack clarity, organization and/or detail. (25 points each)

Assignment #3: You must read a journal article and explain the meaning of various statistical terms, in general and in the context of the specific reading assignment. Mathematical formulas/calculations are not necessary. The essay must give correct definitions of terms and explain clearly and concisely, in your own words, the reason the statistical values are useful. You should write the paper so that another student who does not have knowledge of statistics could understand it. Must be typed. An "A" paper answers the questions thoroughly, clearly and concisely with all facts correct. A "B" paper generally has facts correct but lacks the clarity of an "A" paper. A "C" paper has minimal clarity with factual errors or incomplete answers. A "D" or "F" indicates major factual errors, lack of clarity and/or incompleteness. (50 points)

Participation

You should ask well thought-out, relevant questions during lecture, lab and/or office hours. You must show enthusiasm for the topics and willingness to communicate with, help, and learn from other students, the instructor and instructor's student aide. You must work well independently and contribute significantly and positively to group work. You must take responsibility for your successes and your difficulties. You must attend lecture and lab regularly, be on time, and stay for the scheduled class period. You must keep your lab area clean and participate in keeping common use areas clean and organized.

In lab, you must set up and correctly execute experiments (wet labs and computer activities). You must demonstrate correct use of the microscope, including: choose an appropriate slide, place it on the microscope, focus and adjust lighting, and locate and identify cells/tissues/other structures and state functions. You must clean your microscope and put it away properly. (100 points)

ASKING QUESTIONS/ASKING FOR HELP

If you have a question while I am lecturing feel free to raise your hand. I will repeat things as often as necessary for the majority of students to catch on. If there is still confusion I will meet with you individually. Please don't be embarrassed to ask a question, because it shows you are really trying to grasp the material. I'll do my best to answer questions. If you have a question that is not related to the topic we are working on, or is not appropriate for the lecture period, or you need individual attention for any reason, see me during office hours. If at any time you have a problem that affects your performance in class, please talk with me about it as soon as possible. Prompt attention to a problem greatly increases your chances of having it resolved favorably.

OTHER ADMINISTRATIVE ITEMS

1. You must keep your lab area clean. Everyone is responsible for seeing that all common areas are clean and all equipment is in its proper place.
2. No eating or drinking in the classroom. Exception: you may bring a water bottle if it can be sealed.
3. Cheating will result in a zero for the assignment, possible notification of the Dean, and/or failure of the course and suspension from school. Don't talk during exams for any reason. Cell phones are not allowed out during exams or when keys are posted.
4. You are responsible for knowing all the information in this syllabus.
5. You should keep track of your absences and grades and let me know if you want help. Remember, it is your responsibility to get as much as you can from this course.
6. You must turn off the sound for cell phones and other devices while in the classroom. You may use electronic devices for educational purposes only, no personal use during class time. No electronic dictionaries are allowed during exams.

STUDENT LEARNING OUTCOMES

Upon completion of this course, the student will be able to...

1. Define and correctly use terminology in regard to structure and function of the human body, and explain issues of structure and function in a way that a medical patient could understand.
2. Synthesize information, think independently and critically, and reason through new material in a way that not only reflects facts learned about a particular topic but also an understanding of the overall structure and function of the human body.
3. Work well independently and in small groups, demonstrating both self-direction and motivation and contributing to group work.
4. Read and discuss articles related to current issues in physiology. Form opinions on these issues and express and defend those opinions clearly in discussions and written essays.

ADDITIONAL GOALS FOR PHYSIOLOGY STUDENTS

1. Describe the molecular, cellular, tissue, organ, organ system and organismal levels of structure and function for all human organ systems, and apply this information in discussions and on exams.
2. Describe the details of structure and function of the human body and be able to apply them to the "big picture" in discussions and on exams.
3. Synthesize information, think critically and solve critical thinking problems in discussions and written essays.
4. Explain the statistical terms "standard deviation" and "p-value" and their relevance to physiological research, in essay format.
5. Explain issues of structure and function in a way that a medical patient could understand.
6. Realize the value of studying every day, accept the responsibility for the learning process, and express that understanding in discussions.
7. Assess personal needs in regard to study time and methods, and discuss with instructor.
8. Create useful study materials that enhance learning of course topics. May include flashcards, drawings, diagrams, etc.

9. Correctly focus and adjust lighting on microscope slides, to locate and identify tissues and organs of the human body during laboratory.
10. Budget in-laboratory and at-home study time appropriately to learn the material, working at a level and pace that demonstrates preparation for success in professional school. Demonstrate such preparation with steady high scores on assignments or consistent improvements in course work.
11. Show proficiency in taking multiple-choice exams to prepare for testing at the professional school level and for state board exams.
12. Show proficiency in taking lab practical exams, responding to questions quickly and accurately, effectively handling the pressure of a timed exam.
13. Explain the details of and reasons for universal precautions, and apply universal precautions in the laboratory setting.