**BIOL 2457 –Anatomy & Physiology I Fall Lecture: TTH 9:30-10:50am, Location LS 118**

## INSTRUCTOR

Dr. Nicholas Pollock (nicholas.pollock@uta.edu)
Phone: 817-272-5732, Life Sciences Building Room 466
**Office Hours:** M 11-12pm, T 1-2pm, TH 11-12pm, F 9-10am, or by appointment

## COURSE MATERIALS

**Text:** *Human Anatomy & Physiology, by Elaine Marieb & Katja Hoehn, 10th Ed. (2016). Pearson.* Hardcover ISBN: 978-0133968224; Looseleaf ISBN: 978-129096971

**Lab Manual:** *Human Anatomy & Physiology Laboratory Manual by Elaine Marieb & Lori Smith (Package for University of Texas – Arlington, 2nd Ed. (2016). Pearson.* ISBN: 978-1323571927

## COURSE DESCRIPTION

Anatomy is defined as the study of structure of body parts and their relationships to each other. Physiology is the study of how an organism functions. When all is said and done, physiology can only be explained in terms of the underlying anatomy. In this course, the general principles of physiological mechanisms on the cellular, tissue, organ, and organismal levels will be discussed with a focus on the human species. However, comparisons may be made to other vertebrate species to emphasize similarities and differences across vertebrate taxa. Topics will include the organization of the human body and anatomy and basic physiology of the integumentary, musculoskeletal, nervous, and sensory systems. Laboratory activities will complement lecture material and will explore both anatomical and physiological aspects of principles introduced in the lecture.

## COURSE OBJECTIVES

- Describe the levels of organization that comprise the human body.
- Understand and explain the functional morphologies of the integumentary, musculoskeletal, nervous, and sensory systems.
- Understand and appreciate the importance and relevance of physiology to everyday life.

## TENTATIVE SCHEDULE

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|---|---|---|---|
| | **WEEK 1: LECTURES** | | |
| Aug 24 | Intro & Overview | | |
| | **WEEK 2: LECTURES** | | |
| Aug 29 | Biochemistry I | (Chap 2) | **NO LAB** |
| Aug 31 | Biochemistry II | (Chap 2) | |
| | **WEEK 3: LECTURES** | | |
| Sept 5 | Cells: The Basic Living Unit I | (Chap 3) | **NO LAB** |
| Sept 7 | Cells: The Basic Living Unit II | (Chap 3) | |
| | **WEEK 4: LECTURES** | | **LAB WEEK 1** |
| Sept 12 | Tissue: The Living Fabric I | (Chap 4) | Anatomical Language, Organ Systems, Cells |
| Sept 14 | Tissue: The Living Fabric II | (Chap 4) | |
| | **WEEK 5: LECTURES** | | **LAB WEEK 2** |
| Sept 19 | The Integumentary System | (Chap 5) | Microscopy, Tissues, Integumentary System |
| Sept 21 | Catch-Up & Review | | **Quiz 1** |

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| | **WEEK 6: LECTURES** | | **LAB WEEK 3** |
| Sept 26 | **Exam 1** | | Bones, Axial Skeleton |
| Sept 28 | Bones & Skeletal Tissues I | (Chap 6) | **Quiz 2** |
| | **WEEK 7: LECTURES** | | **LAB WEEK 4** |
| Oct 3 | Bones & Skeletal Tissues II | (Chap 6) | Appendicular Skeleton |
| Oct 5 | The Human Skeleton & Joints | (Chap 7-8) | **Quiz 3** |
| | **WEEK 8: LECTURES** | | **LAB WEEK 5** |
| Oct 10 | Muscles & Muscle Tissue I | (Chap 9) | Skeletal Muscles |
| Oct 12 | Muscles & Muscle Tissue II | (Chap 9) | **Quiz 4** |
| | **WEEK 9: LECTURES** | | **LAB WEEK 6** |
| Oct 17 | The Muscular System | (Chap 10) | **Practical I** |
| Oct 19 | Catch-Up & Review | | |
| | **WEEK 10: LECTURES** | | **LAB WEEK 7** |
| Oct 24 | **Exam 2** | | Nervous Tissue, Central Nervous System, |
| Oct 26 | The Nervous System I | (Chap 11) | Cranial Nerves |
| | **WEEK 11: LECTURES** | | **LAB WEEK 8** |
| Oct 31 | The Nervous System II | (Chap 11) | Autonomic Nervous System |
| Nov 2 | The Central Nervous System I | (Chap 12) | **Quiz 5** |
| | **WEEK 12: LECTURES** | | **LAB WEEK 9** |
| Nov 7 | The Central Nervous System II | (Chap 12) | Sensory System |
| Nov 9 | The Peripheral Nervous System | (Chap 13) | **Quiz 6** |
| | **WEEK 13: LECTURES** | | **LAB WEEK 10** |
| Nov 14 | The Autonomic Nervous System | (Chap 14) | Group Presentations |
| Nov 16 | Catch-Up & Review | | Review |
| | **WEEK 14: LECTURES** | | |
| Nov 21 | **Exam 3** | | **NO LAB** |
| Nov 23 | NO CLASS.... HAPPY THANKSGIVING! | | |
| | **WEEK 15: LECTURES** | | **LAB WEEK 11** |
| Nov 28 | The Sensory System I | (Chap 15) | **Practical II** |
| Nov 30 | The Sensory Nervous System II | (Chap 15) | |
| | **WEEK 16: LECTURES** | | |
| Dec 5 | The Sensory Nervous System III | (Chap 15) | |

Final Exam Period (December 14, 8-10:30am): **Final Exam (Cumulative)**

**GRADES**

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|---|---|---|---|
| 10 Quizzes (@ 10 pts each) | 100 | Quizzes (6 @ 10 pts each) | 60 |
| 3 Lecture Exams (@ 100 pts each) | 300 | Lab Practicals (2@ 100 pts each) | 200 |
| Final Exam | 100 | Research Paper | 20 |
| **Lecture Total (65%):** | 510 points | Group Presentation | 20 |
| | | **Laboratory Total (35%):** | 300 points |

I do not curve grades, but I do round grades up from the 0.5% level (for example, if your final grade is 86.5%, you will be rounded up to 87%). Also, if you have regularly attended class, participated, and are within 1-2 points of the next letter grade, I am willing to bump you up. Grade cut-offs are as follows:

**A** 90 to 100%; **B** 80 to 89; **C** 70 TO 79; **D** 60 to 69; **F** Below 60

**ASSIGNMENTS & QUIZZES**

**Reading:** Please always read the flow chart (beginning of each chapter) and Chapter Summary (end of each chapter) for each assigned chapter BEFORE coming to class. The rest, you can either read before or after class, depending on your personal preference.

**Quizzes:** Quizzes will be all weeks except weeks 1, 6, 9, 10, 14, and 16. Quizzes will be administered in class, through Top Hat (see below). Quizzes will cover any material from the current week. Each quiz will consist of 10 multiple choice/identification questions and you will have a 30 seconds per question. You are NOT permitted to use your notes or other sources to answer the questions. The 30 second time limit will prevent this.

**EXAMS**

All exams are multiple choice and require a Scantron form 882-ES, a #2 pencil, and an ID (yes, you can use your license). If you know you have a schedule conflict with an exam date, you must notify me within the first week of class. There are 3 lecture exams, each with 50 multiple choice questions. The final exam is cumulative, and will consist of 100 multiple questions. However, if you receive A's on all lecture exams, then your final exam will only include questions dealing with the sensory system. Therefore, it is worth giving it everything you have to get those A's early on.

**TOP HAT**

We will be using the Top Hat (www.tophat.com) classroom response system in class. You will be able to submit answers to in-class questions using Apple or Android smartphones and tablets, laptops, or via text message (SMS).

You can visit tinyurl.com/TopHatStudentGuide for the Student Quick Start Guide, which outlines how you to register for a Top Hat account, as well as providing a brief overview to get you up and running on the system. An email invitation will be sent to your email account (if you don't receive this email, you can register by visiting our direct Top Hat course URL: app.tophat.com/e/731891

Top Hat will require a subscription. There are three options to choose from:

- $26 per semester
- $38 per calendar year
- $75 lifetime

**BLACKBOARD**

All class notes, grades, and information, including this syllabus can be found on Blackboard. If you have any questions, please check this syllabus and Blackboard first, if you still cannot find the information you are looking for, then you may email me.

**INSTRUCTOR ACCESSIBILITY**

I will be available for walk-in meetings or instant e-mail replies during the hours listed at the top of this document. For students who are unavailable during the hours listed, please email me for an appointment. If you come by my office and my door is open, please knock and I am likely to meet with you if I am not currently busy. In addition, I will respond to e-mails outside of those hours within reason. You can expect a response within 24 hours, usually less, for emails received during the week.

**COURSE EXPECTATIONS AND POLICIES**

**Lectures:** I expect you to attend lecture. Students who regularly attend lecture score significantly higher on tests than students who do not (e.g., C vs. B+), plus I am more likely to bump up your final grade. Regardless of whether you are in class or not, however, you are responsible for everything which is discussed in lecture, everything which is assigned as class reading, and any handouts which are given in class. You are expected to make your own arrangements for access to class notes or handouts that you missed. If you choose to use a laptop for taking notes during class, please refrain from checking email or browsing the internet – if you are caught doing so, I will ask you to put your computer away immediately.

**Also:**

- Laboratory attendance is mandatory.
- If you must miss an exam, you must clear it in advance directly with me. In many cases, I will require official documentation of your excuse (e.g., doctor's or dean's note).
- Missed exams without permission from the instructor will result in a grade of 0.
- **I expect you to check your email for class announcements.**
- **Academic dishonesty of any kind will not be tolerated (see below)!**

**HOW TO STUDY FOR MY CLASS**

I use my own Powerpoints that I have made using the textbook and other sources. The best way to study is to read the chapters before class, and attend lecture to gain a greater understanding of the material and to determine which information I deem most important (I tell you this in class). Outside of class, review your notes, mark any information you still don't understand, and get that taken care of first. Read that section of the book again, find and watch tutorial videos, and/or come to my office hours for help. Make outlines using the Powerpoints to organize the information so you can make connections among the various topics, and retain the information more efficiently. Start with learning all definitions and anatomical structures, then focus on and learn the physiological concepts and processes. Practice and review by using any practice questionss I post for you on Blackboard and those in the textbook. Overall, it is very important that you are able to recall the information from your brain and make sense out of the larger concepts by explaining them in your own words. Do not just read your notes or the textbook! Reading is passive learning, and does not work for 97% of people! Find active ways to study: recall, writing, drawing, speaking, teaching others, etc..

**CONFLICT RESOLUTION**

If you are experiencing an issue in lecture, you must first arrange a meeting with your instructor. If the issue remains unresolved after you have met with your instructor, you may then consult the Associate Chair of the Department of Biology, Dr. Laura Mydlarz. To do this you need to file a grievance at https://www.uta.edu/php-lib/machform/view.php?id=3403. You must file the form in order to have your issue heard. None of the listed personnel will discuss the issue with you until you have first consulted all of those preceding him/her.

**ACADEMIC HONOR CODE**

Each student has the responsibility to uphold the highest standards of academic integrity in their own work, to refuse to tolerate violations of academic integrity in the university community, and to foster a high sense of integrity and social responsibility on the part of the university community. Cheating and Plagiarism: Plagiarism is defined as the use of any information, published, or unpublished without acknowledgement. Cheating occurs when you use the work of another

student in place of your own. Neither will be tolerated. It is extremely important that you distinguish your own ideas from those of others. You must always acknowledge sources. If you have any questions, see me.

**AMERICANS WITH DISABILITIES ACT**

Lecture instructors are required by law to provide "reasonable accommodation" to students with disabilities, so as not to discriminate on the basis of disability. It is the student's responsibility to inform me that they require accommodation by the end of the second week of labs and prior to any assignments, quizzes, activities, or exams that require accommodation. Only students who have officially documented a need for an accommodation will have their request honored. Information regarding diagnostic criteria and policies for obtaining disability-based academic accommodations can be found at www.uta.edu/disability or by calling the Office for Students with Disabilities (University Hall, Room 102, 817-272-3364.

**TITLE IX**

The University of Texas at Arlington is committed to upholding U.S. Federal Law "Title IX" such that no member of the UT Arlington community shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity. For more information, visit www.uta.edu/titleIX.

**SYLLABUS CHANGE POLICY**

This syllabus is a guide for the course and is subject to change. Notice will be given. If you find an error, please contact me.