

**BIOLOGY 2401 – ANATOMY & PHYSIOLOGY I; FOUR CREDIT HOURS**  
**COURSE SYLLABUS, AMANDA R. RAKHSHANDEH, PH.D.**  
**SPRING 2019**

**Faculty Information:** Science Building 135, (806) 716 – 2317, arakhshandeh@southplainscollege.edu

**Office hours:** M/W 1 PM – 2:30 PM, T/Th 3:30 PM – 4 PM; F Usually 11 AM – 2 PM, but check Blackboard for changes.

**Course Meeting Times:**

Lecture –	T, R	9:30 AM – 10:45 AM	Science Building, Room 143
Lab –	T, R	10:45 AM – 12:00 PM	Science Building, Room 151

**Required Texts:**

- (1) Text: *Human Anatomy & Physiology*. Eleventh Edition. By Marieb & Hoehn.
- (2) Notes: *Human Anatomy & Physiology 1 Study & Note-taking Guide*. Amanda Rakhshandeh. Available in the bookstore and on the course Blackboard site.
- (3) Test-taking materials: six unmarked, maroon 100-question scantrons

**Optional materials that some students find useful:**

- (1) Online Materials: *Mastering A&P – Human Anatomy & Physiology*; access code for online content. (Note: the purchase of a new textbook will include A Brief Atlas of the Human Body and the Mastering A&P access code. You may also buy the textbook and atlas used and then purchase a Mastering A&P access code separately online.)
- (2) Other resources: *A Brief Atlas of the Human Body*. Second edition. By Hutchinson, Mallatt, Marieb, & Wilhelm.

**Purpose:** To provide a general understanding of human anatomy and physiology for those students in the allied health fields and to meet requirements for an Associate of Arts Degree or Associate in Science Degree.

**Objectives:**

1. To help the students acquire knowledge of normal development, structures, and functions of the human body
2. To provide a foundation for the undergraduate college and university student
3. To provide a foundation for understanding deviations from the normal in physiological function.

**Course description (from State ACGM):** Anatomy and Physiology I is the first part of a two-course sequence. It is a study of the structure and function of the human body including cells, tissues and organs of the following systems: integumentary, skeletal, muscular, nervous and special senses. Emphasis is on interrelationships among systems and regulation of physiological functions involved in maintaining homeostasis. The lab provides hands-on learning experience for exploration of human system components and basic physiology.

**Learning Outcomes (from State ACGM):**

1. Use anatomical terminology to identify and describe locations of major organs of each system covered.
2. Explain interrelationships among molecular, cellular, tissue and organ functions in each system.
3. Describe the interdependency and interactions of the systems.
4. Explain contributions of organs and systems to the maintenance of homeostasis.
5. Identify causes and effects of homeostatic imbalances.
6. Describe modern technology and tools used to study anatomy and physiology.
7. Apply appropriate safety and ethical standards.
8. Locate and identify anatomical structures.
9. Appropriately utilize laboratory equipment, such as microscopes, dissection tools, general lab ware, physiology data acquisition systems and virtual simulations.
10. Work collaboratively to perform experiments.
11. Demonstrate the steps involved in the scientific method.
12. Communicate results of scientific investigations, analyze data and formulate conclusions.
13. Use critical thinking and scientific problem-solving skills, including, but not limited to, inferring, integrating, synthesizing and summarizing to make decisions, recommendations and predictions.

**BIOLOGY 2401 TENTATIVE IN-CLASS AGENDA SPRING 2019**

Date	Lecture	Laboratory
T Jan 15	Syllabus/Introduction (Ch. 1)	The language of anatomy (Ch. 1)
Th Jan 17	Introduction to A&P, con't	Organ systems overview (Ch. 1)
T Jan 22	Chemicals of life (Ch. 2)	Chemicals of life, con't
Th Jan 24	Cells – anatomy (Ch. 3)	Cells – anatomy, con't
T Jan 29	<b>Lab practical 1</b>	Cell – transport (Ch. 3)
Th Jan 31	<b>Lecture exam 1</b>	Tissues (Ch. 4)
T Feb 5	Tissues, con't	Tissues, con't
Th Feb 7	Tissues, con't	Integumentary system (Ch. 5)
T Feb 12	Integumentary system, con't	Bones & skeletal tissues (Ch. 6)
Th Feb 14	Bones & skeletal tissues, con't	Overview of the skeleton (Ch. 7)
T Feb 19	<b>Lecture exam 2</b>	The axial skeleton (Ch. 7)
Th Feb 21	The axial skeleton, con't	The axial skeleton, con't
T Feb 26	The axial skeleton, con't	The appendicular skeleton (Ch. 7)
Th Feb 28	The appendicular skeleton, con't	The appendicular skeleton, con't
T Mar 5	Joints (Ch. 8)	Joints, con't
Th Mar 7	<b>Lab practical 2</b>	<b>Lab practical 2, con't</b>
T & Th Mar 12 & 14	<i>Spring Break holiday, College is closed</i>	
T Mar 19	<b>Lecture exam 3</b>	Nervous tissue (Ch. 11)
Th Mar 21	Nervous tissue, con't	Nervous tissue, con't
T Mar 26	Nervous tissue, con't	The central nervous system (Ch. 12)
Th Mar 28	The central nervous system, con't	The central nervous system, con't
T Apr 2	The central nervous system, con't	The central nervous system, con't
Th Apr 4	The peripheral nervous system (Ch. 13)	The peripheral nervous system, con't
T Apr 9	The peripheral nervous system, con't	Autonomic nervous system (Ch. 14)
Th Apr 11	<b>Lab practical 3</b>	Review on your own
T Apr 16	<b>Lecture exam 4</b>	Skeletal muscle tissue (Ch. 9)
Th Apr 18	Skeletal muscle tissue, con't	Muscular system (Ch. 10)
T Apr 23	Muscular system, con't	Muscular system, con't
Th Apr 25	Muscular system, con't	Muscular system, con't
T Apr 30	<b>Lab practical 4</b>	<b>Lab practical 4, con't</b>
Th May 2	Review	Review
T May 7	<b>Lecture exam 5 AND Optional comprehensive final exam</b>	

*The instructor reserves the right to make changes to this syllabus as necessary.*

**BIOLOGY 2401 TENTATIVE ASSIGNMENTS & TESTS SCHEDULE SPRING 2019**

Date	Homework, quiz or exam due	Testing location
T Jan 15	Pre-course knowledge assessment	in class, at the beginning of lab
Th Jan 17	Scan-trons turned in	in class, at the beginning of lecture
M Jan 21	Syllabus quiz Chapter 1 quiz Student learning survey Study schedule Before class video: Ch. 1	submit on the course website by midnight submit on the course website by midnight submit on the course website by midnight submit on the course website by midnight submit on the course website by midnight

T	Jan 22	Lab quiz 1 (Ch. 1 terms) Lecture quiz Ch. 2	in class, at the beginning of class in class, at the end of class
W	Jan 23	Before class video: Ch. 2 Chapter 2 quiz	submit on the course website by midnight submit on the course website by midnight
Th	Jan 24	Before class video: Ch. 3	submit on the course website before class begins
<b>T</b>	<b>Jan 29</b>	<b>Lab practical 1 (Chs. 1 &amp; 3 terms)</b>	<b>in class, at the beginning of class</b>
W	Jan 30	Chapter 3 quiz	submit on the course website by midnight
<b>Th</b>	<b>Jan 31</b>	<b>Lecture exam 1 (Chs. 1, 2 &amp; 3)</b>	<b>in class, at the beginning of class</b>
T	Feb 5	Before class video: Ch. 4	submit on the course website before class begins
Th	Feb 7	Before class video: Ch. 5 Lecture quiz Ch. 4	submit on the course website before class begins in class, at the end of class
F	Feb 8	Chapter 4 quiz	submit on the course website by midnight
T	Feb 12	Before class video: Ch. 6 Lecture quiz Ch. 5	submit on the course website before class begins in class, at the end of class
W	Feb 13	Chapter 5 quiz	submit on the course website by midnight
Th	Feb 14	Lab quiz 2 (Chs. 4 & 5 terms) Lecture quiz Ch. 6	in class, at the beginning of class in class, at the end of class
F	Feb 15	Chapter 6 quiz	submit on the course website by midnight
<b>T</b>	<b>Feb 19</b>	<b>Lecture exam 2 (Chs. 4, 5 &amp; 6)</b>	<b>in class, at the beginning of class</b>
Th	Feb 21	Before class video: Ch. 7	submit on the course website before class begins
F	Mar 1	Chapter 7 quiz	submit on the course website by midnight
T	Mar 5	Before class video: Ch. 8	submit on the course website before class begins
W	Mar 6	Chapter 8 quiz	submit on the course website by midnight
<b>Th</b>	<b>Mar 7</b>	<b>Lab practical 2 (Ch. 7 terms)</b>	<b>in class, at the beginning of class</b>
<b>T</b>	<b>Mar 19</b>	<b>Lecture exam 3 (Chs. 7 &amp; 8)</b>	<b>in class, at the beginning of class</b>
Th	Mar 21	Before class video: Ch. 11	submit on the course website before class begins
T	Mar 26	Lab quiz 3 (Ch. 11 terms) Lecture quiz Ch. 11	in class, at the beginning of class in class, at the end of class
W	Mar 27	Chapter 11 quiz	submit on the course website by midnight
Th	Mar 28	Before class video: Ch. 12	submit on the course website before class begins
T	Apr 2	Lecture quiz Ch. 12	in class, at the end of class
W	Apr 3	Chapter 12 quiz	submit on the course website by midnight
Th	Apr 4	Before class video: Ch. 13 Lab quiz 4 (Ch. 12 terms)	submit on the course website before class begins in class, at the beginning of class
T	Apr 9	Before class video: Ch. 14 Lecture quiz Ch. 13	submit on the course website before class begins in class, at the end of class
W	Apr 10	Chapters 13 & 14 quiz	submit on the course website by midnight
<b>Th</b>	<b>Apr 11</b>	<b>Lab practical 3 (Chs. 11, 12 &amp; 13 terms)</b>	<b>in class, at the beginning of class</b>
<b>T</b>	<b>Apr 16</b>	<b>Lecture exam 4 (Chs. 11, 12, 13 &amp; 14)</b>	<b>in class, at the beginning of class</b>
Th	Apr 18	Before class video: Ch. 9 Before class video: Ch. 10 Lab quiz 5 (Ch. 9 terms) Lecture quiz Ch. 9	submit on the course website before class begins submit on the course website before class begins in class, at the beginning of class in class, at the end of class
F	Apr 19	Chapter 9 quiz	submit on the course website by midnight
F	Apr 26	Chapter 10 quiz	submit on the course website by midnight
<b>T</b>	<b>Apr 30</b>	<b>Lab practical 4 (Ch. 10 terms)</b>	<b>in class, at the beginning of class</b>
<b>T</b>	<b>May 7</b>	<b>Lecture exam 5 (Chs. 9 &amp; 10)</b> <b>AND optional comprehensive final (Chs. 1 through 14)</b>	<b>in class, at 10:15 AM</b>

## Tips for Success:

- **Plan to study 12 hours a week outside of class.** To pass this course, most students need to study around 12 hours per week outside of class. The best overall study strategy is to work consistently, in small doses. “Cramming” for an exam is rarely successful. I suggest that you plan your study time at the beginning of each week. Begin by marking down the times for each day that you have family or work commitments, as well as other non-negotiable time commitments. Then plan the specific days, hours, and places that you will study throughout the week. Be sure to pick a study location that is as free from distractions as possible. Stick to your plan and then reward yourself at the end of the week for a job well-done.
- **Work on material before I cover it in class.** I will require you to watch videos and answer questions embedded within those videos before we cover the material in class. You can also fill out your note-taking guide before class as you watch these videos. Write down questions about material that you do not understand. We will then work together during class to clarify any “fuzzy” concepts. I use this method of teaching to make better use of our in-class time together. By having some familiarity with the material prior to arriving to class, students report feeling less overwhelmed by new information during class and instead leave class with the information reinforced in their minds. Moreover, students can pre-identify areas of confusion prior to arriving to class and ask better questions. Therefore, I spend less time covering material that students can easily get on their own and more time covering those topics where students most need my help. Please note that this type of teaching style requires active engagement, participation and planning on your part. Students who do not make time to complete these before class assignments will struggle.
- **Take good notes.** During class, we will discuss the most significant concepts from your readings. At times, I will present examples that may not be given in your textbook. You are responsible for all of this information. Good note-taking will help you to remember which concepts were most important and why. Additionally, the act of note-taking is itself a learning exercise that helps you to stay actively engaged in the topic and better remember class discussions. The Note-taking guide is designed to help you structure your note-taking.
- **Ask questions.** Anatomy & Physiology I is a collaborative course. Therefore, if you don’t understand something discussed in class, ask questions in class, ask questions of your peers, form productive study groups, or arrange to meet with me. I welcome your questions, and if you’re struggling, it’s important to get help early. Additionally, by asking questions, you take charge of your own learning.
- **Use the tools that I provide.** As an instructor, I believe that my job is to help you rise up to the high standards of this course. Therefore, I will provide you with a number of tools to support you in your learning.
  - Note-taking guide – These guides help you structure your note taking during class, know when you have missed important points, and better review material when studying at home. You may use your filled-out note-taking guides on in-class lecture quizzes; therefore, I suggest you stay up-to-date in your note taking.
  - Online tutorials – The ‘extra practice’ section of the course contains online tutorials for each chapter of the course. These tutorials often write about tough topics in a slightly different way than the textbook, contain interactive games to help you test what you know, and have helpful videos from outside sources embedded within them.
  - Videos – Videos are provided that show me talking through course concepts, as I would in class. You may watch these videos at a pace that best fits your learning. Additionally, you can revisit these videos after class.
  - PowerPoint slides – The PowerPoint slides that I use for the course are included in the note-taking guide.
  - Lecture exam reviews – Each exam review lists topics from each chapter on which you will be tested. Exams cover only the topics listed on reviews.
  - Practical exam “terms to know” – Each chapter contains many anatomical structures. I will test you on only a subset of these structures, which are listed on the “terms to know” sheets for each chapter.
- **Study effectively.** Any biology course these days will have **a lot** of information, so making the most of your study time is key. Begin by making your own study aids. For example, make outlines and flash cards of course material as you read and review your notes. Create visual study aids where you draw out important structures and label key features. Doing this will help you to not only remember course concepts, but also better understand how they relate to each other. I also suggest that you practice writing out and linking concepts **by memory**, use blank versions of the note-taking guide as a study aid, create lists of questions that help you remember the material, and then practice answering those questions, filling out a blank note-taking guide, or recreating visual study aids **by memory**. Remember, all quizzes and exams are timed, so it’s important to know the material well before beginning an exam. You should do at least one or two of these activities each day. Finally, please note that reading text, notes, review guides, or images over and over again is the LEAST EFFECTIVE way to study for this class. Students who do not test their memories of course concepts when studying typically earn around a 40 to 50% on major examinations.

- **Spend time with lab models outside of class.** To effectively identify the anatomical structures for this course, you must spend time outside of class with the models from lab. Simply looking over images from the textbook is not sufficient. To assist you in this type of studying, you may look at models, bones, and other lab materials from four different locations: the Levelland campus library, the Reese campus, the Plainview campus and the main library at Texas Tech University. Please note that all lab practical exams will contain fill-in-the-blank questions and you will not be given a word bank. Therefore, you must have the names of all anatomical structures completely memorized.

#### Evaluation Criteria:

- **Quizzes (10%)** – Several quizzes will be given in lecture, in lab and online and will be a combination of multiple-choice, true/false, matching, identifications, fill-in-the-blank, and short answer questions. These quizzes are designed to give you a “heads-up” about how well you know course material, prior to major examinations, giving you time to adjust your study strategies. The lowest two quiz grades will be dropped; therefore, no make-up quizzes will be given. All other quiz grades will be averaged and will be worth 10% of your final grade.
- **Effort (5%)** – You will watch before class videos that have questions embedded within them. Your grades on these video questions will form a part of your effort grade. The lowest grade from the videos will be dropped; therefore, no make-up videos will be given. Additionally, your attendance (including whether you arrive late or leave early) will be tracked and will count toward your effort grade.
- **Lecture examinations (60%)** – Five lecture exams will be given throughout the course of the semester. The lecture exams will contain mostly multiple-choice questions. No lecture exam grades will be dropped and no make-up lecture exams are given. However, you may choose to take a comprehensive final exam to replace one and only one lecture exam score.
- **Practical examinations (25%)** – Your lab grade for the semester will be based on four lab practical examinations, which are all in the fill-in-the-blank format. Word banks will not be given. No lab practical grades will be dropped.

**Final grade determination:** Grades are not curved under any circumstances and extra credit is not given.

90 - 100% = A      80 - 89% = B      70 - 79% = C      60 - 69% = D      <60 = F

#### Class Policies:

1. **Attendance:** Regular attendance is necessary for satisfactory achievement. If you have four absences, you will be dropped from the course. Students who are dropped from this course by me will receive a grade of “X” or “F”, rather than “W”, on their transcripts. If you decide to stop attending class, it is your responsibility to immediately drop this course through the registrar’s office to avoid being dropped by me for non-attendance. It is your responsibility to verify that you are dropped from this course using your student online account.
2. **Electronic devices:** Please turn off all cell phones and other electronic devices prior to entering the classroom. If you would like to take notes on your personal laptop in class you must seek special permission from the instructor. Use of laptops for surfing the web, Facebook, Skype, or other networking/chat during class is not appropriate or respectful classroom behavior. More importantly, using electronic devices for non-school purposes during class can greatly interfere with your learning.
3. **Laboratory safety:** No food or drinks are allowed in the laboratories at any time.
4. **In-class quiz & exam protocol:** You should place all book bags, purses, and other belongings securing in a bag or under your desk while sitting for quizzes or exams. Desktops should be clear except for the materials needed and authorized for testing. Do not take any exam with notecards in your pockets or on your person. All cell phones are to be turned off and either in your bag or on the instructor’s bench. Do not write notes or study material, or anything that could be construed as these, on your body. Check for such notations and remove them before the exam time. A violation of any of these policies is considered a breach of the Student Conduct guidelines and could result in consequences up to and including failing the course. Students should feel free to ask for clarification about any question during quizzes, lecture exams or lab practical exams.
5. **Cheating:** Honesty and ethical behaviors are imperatives in any career. Therefore, cheating will not be tolerated. South Plains College’s “Student Conduct” guidelines will apply to all work in this course. Cheating includes, but is not limited, to all of the following:
  - Copying from another student’s paper.
  - Using test materials not authorized by the person administering the test.
  - Collaborating with or seeking aid from another student during a test without permission from the test administrator.
  - Knowingly using, buying, selling, stealing, or soliciting, in whole or in part, the contents of an unadministered test.

- The unauthorized transporting or removal, in whole or in part, of the contents of the unadministered test.
- Substituting for another student, or permitting another student to substitute for one's self, to take a test.
- Bribing another person to obtain an unadministered test or information about an unadministered test.
- The use of any testing materials that are prohibited.

If you have any questions about what constitutes your own work, definitely ask!

- 6. Make-up exam policy:** If you miss a lecture exam you will not be able to make up the exam and you will receive a zero on the exam. However, you are welcome to take a comprehensive final exam at the end of the course to replace one and only one missed lecture exam. One and only one lab practical exam can be made up if documentation of a serious life event is provided. The make-up day for any lab practical exam is Friday, May 3. It is the student's responsibility to schedule an appointment with me for that day by email. Exams scheduled for the final exam period cannot be made up or dropped and will result in a zero if missed. If you already know of a conflict with an exam date, you are welcome to contact me at least 48 hours prior to the start of the exam and make arrangements to take it early.
- 7. Diversity Statement:** In this class, the teacher will establish and support an environment that values and nurtures individual and group differences and encourages engagement and interaction. Understanding and respecting multiple experiences and perspectives will serve to challenge and stimulate all of us to learn about others, about the larger world and about ourselves. By promoting diversity and intellectual exchange, we will not only mirror society as it is, but also model society as it should and can be.
- 8. Disabilities Statement:** Students with disabilities, including but not limited to physical, psychiatric, or learning disabilities, who wish to request accommodations in this class should notify the Disability Services Office early in the semester so that the appropriate arrangements may be made. In accordance with federal law, a student requesting accommodations must provide acceptable documentation of his/her disability to the Disability Services Office. For more information, call or visit the Disability Services Office at Levelland (Student Health & Wellness Office) 806-716-2577, Reese Center (Building 8) 806-716-4675, or Plainview Center (Main Office) 806-716-4302 or 806-296-9611.
- 9. Non-Discrimination Statement:** South Plains College does not discriminate on the basis of race, color, national origin, sex, disability or age in its programs and activities. The following person has been designated to handle inquiries regarding the non-discrimination policies: Vice President for Student Affairs, South Plains College, 1401 College Avenue, Box 5, Levelland, TX 79336. Phone number 806-716-2360.
- 10. Sexual Harassment Statement:** South Plains College seeks to provide an environment that is free of bias, discrimination, and harassment. If you have been the victim of sexual harassment, misconduct or assault, South Plains College encourages you to report it. If you tell me that you have been a victim of sexual harassment, misconduct or assault, I am required by law to report it to the College's Title IX coordinator. If you wish to speak to someone in confidence, you may visit with a personal counselor or health professional in the SPC Health and Wellness Center.
- 11. Title IX Pregnancy Accommodations Statement:** If you are pregnant, or have given birth within six months, Under Title IX you have a right to reasonable accommodations to help continue your education. To activate accommodations you must submit a Title IX pregnancy accommodations request, along with specific medical documentation, to the Director of Health and Wellness. Once approved, notification will be sent to the student and instructors. It is the student's responsibility to work with the instructor to arrange accommodations. Contact the Director of Health and Wellness at 806-716-2362 for assistance.
- 12. Guns in the classroom:** Texas Senate Bill - 11 (Government Code 411.2031, et al.) authorizes the carrying of a concealed handgun in South Plains College buildings only by persons who have been issued and are in possession of a Texas License to Carry a Handgun. Qualified law enforcement officers or those who are otherwise authorized to carry a concealed handgun in the State of Texas are also permitted to do so. Pursuant to Penal Code (PC) 46.035 and South Plains College policy, license holders may not carry a concealed handgun in restricted locations. For a list of locations and Frequently Asked Questions, please refer to the Campus Carry page at: <https://www.southplainscollege.edu/campuscarry.php>. Pursuant to PC 46.035, the open carrying of handguns is prohibited on all South Plains College campuses. Report violations to the College Police Department at 806-716-2396 or 9-1-1.