

**BIOLOGY 2402 – ANATOMY & PHYSIOLOGY 2; FOUR CREDIT HOURS**  
**COURSE SYLLABUS, AMANDA R. RAKHSHANDEH, PH.D.**  
**SPRING 2020**

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

**Office hours:** M/W 10 AM – 11 AM & 1:30 PM – 2 PM, T/Th 5 PM – 6 PM; F 11 PM – 2 PM; or make an appointment for another time

**Course Meeting Times:**

Lecture –	M, W	11:00 AM – 12:15 PM	Science Building, Room 142
Lab –	M, W	12:15 PM – 1:30 PM	Science Building, Room 128

**Required Texts:**

- (1) Text: *Human Anatomy & Physiology*. Eleventh Edition. By Marieb & Hoehn.
- (2) Notes: *Human Anatomy & Physiology 2 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 2 is the second part of a two-course sequence. It is a study of the structure and function of the human body including the following systems: endocrine, cardiovascular, immune, lymphatic, respiratory, digestive (including nutrition), urinary (including fluid and electrolyte balance), and reproductive (including human development and genetics). Emphasis is on interrelationships among systems and regulation of physiological functions involved in maintaining homeostasis.

**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 2402 TENTATIVE IN-CLASS AGENDA SPRING 2020**

Date	Lecture	Laboratory
M Jan 13	Syllabus/The heart (Ch. 18)	The heart, con't
W Jan 15	The heart, con't	The heart, con't
M Jan 20	<i>Martin Luther King, Jr. day, College is closed</i>	
W Jan 22	The heart, con't	The heart, con't
M Jan 27	The heart, con't	The heart, con't
W Jan 29	Blood vessels (Ch. 19)	Blood vessels, con't
M Feb 3	Blood vessels, con't	Blood vessels, con't
W Feb 5	Blood vessels, con't	Blood vessels, con't
M Feb 10	<b>Lab practical 1 (Chs. 18 &amp; 19)</b>	Blood (Ch. 17)
W Feb 12	<b>Lecture exam 1 (Chs. 18 &amp; 19)</b>	Blood, con't
M Feb 17	Blood, con't	Lymphatic system & immunity (Chs. 20 & 21)
W Feb 19	Lymphatic system & immunity, con't	Lymphatic system & immunity, con't
M Feb 24	<b>Lecture exam 2 (Chs. 17, 20 &amp; 21)</b>	Endocrine system (Ch. 16)
W Feb 26	Endocrine system, con't	Endocrine system, con't
M Mar 2	Endocrine system, con't	Reproductive system (Ch. 27)
W Mar 4	Reproductive system, con't	Reproductive system, con't
M Mar 9	<b>Lab practical 2 (Chs. 16, 17, 20 &amp; 27)</b>	Reproductive system, con't
W Mar 11	<b>Lecture exam 3 (Chs. 16 &amp; 27)</b>	Digestive system & nutrition (Chs. 23 & 24)
M & W Mar 16 & 18	<i>Spring break holiday, College is closed</i>	
M Mar 23	Digestive system & nutrition, con't	Digestive system & nutrition, con't
W Mar 25	Digestive system & nutrition, con't	Digestive system & nutrition, con't
M Mar 30	<b>Lab practical 3 (Ch. 23)</b>	Respiratory system (Ch. 22)
W Apr 1	<b>Lecture exam 4 (Chs. 23 &amp; 24)</b>	Respiratory system, con't
M Apr 6	Respiratory system, con't	Respiratory system, con't
W Apr 8	Respiratory system, con't	Urinary system (Ch. 25)
M Apr 13	<i>Easter holiday, College is closed</i>	
W Apr 15	Urinary system, con't	Urinary system, con't
M Apr 20	Urinary system, con't	Urinary system, con't
W Apr 22	Fluid, electrolyte & acid-base balance (Ch. 26)	Fluid, electrolyte & acid-base balance, con't
M Apr 27	<b>Lab practical 4 (Ch. 22 &amp; 25)</b>	Fluid, electrolyte & acid-base balance, con't
W Apr 29	Review day	Review day
W May 6	<b>Lecture exam 5 (Chs. 22, 25 &amp; 26) AND Optional comprehensive final exam</b>	

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

**BIOLOGY 2402 TENTATIVE ASSIGNMENTS & TESTS SCHEDULE SPRING 2020**

Date		Homework, quiz or exam due	Testing location
M	Jan 13	Pre-course knowledge assessment	in class, at the beginning of lab
W	Jan 15	Scan-trons turned in	in class, at the beginning of lecture
T	Jan 21	Syllabus quiz Student learning survey Study schedule	submit on Blackboard by 11:59 PM submit on Blackboard by 11:59 PM submit on Blackboard by 11:59 PM
W	Jan 22	Lab quiz Ch. 18 terms	in class, at the beginning of lecture
M	Jan 27	Lecture quiz Ch. 18 concepts	in class, at the end of class
T	Jan 28	Chapter 18 quiz	submit on Blackboard by 11:59 PM
W	Feb 5	Lab quiz Ch. 19 terms	in class, at the beginning of lecture
		Lecture quiz Ch. 19 concepts	in class, at the end of class
Th	Feb 6	Chapter 19 quiz	submit on Blackboard by 11:59 PM
<b>M</b>	<b>Feb 10</b>	<b>Lab practical 1 (Chs. 18 &amp; 19)</b>	<b>in class, at the beginning of lecture</b>
<b>W</b>	<b>Feb 12</b>	<b>Lecture exam 1 (Chs. 18 &amp; 19)</b>	<b>in class, at the beginning of lecture</b>
M	Feb 17	Lecture quiz Ch. 17 concepts	in class, at the end of class
T	Feb 18	Chapter 17 quiz	submit on Blackboard by 11:59 PM
W	Feb 19	Lecture quiz Chs. 20 & 21 concepts	in class, at the end of class
Th	Feb 20	Chapter 20/21 quiz	submit on Blackboard by 11:59 PM
M	Feb 24	<b>Lecture exam 2 (Chs. 17, 20 &amp; 21)</b>	<b>in class, at the beginning of lecture</b>
W	Feb 26	Lab quiz Chs. 17, 20 & 21 terms	in class, at the beginning of lecture
M	Mar 2	Lecture quiz Ch. 16 concepts	in class, at the end of class
T	Mar 3	Chapter 16 quiz	submit on Blackboard by 11:59 PM
<b>M</b>	<b>Mar 9</b>	<b>Lab practical 2 (Chs. 16, 17, 20 &amp; 27)</b>	<b>in class, at the beginning of lecture</b>
<b>T</b>	<b>Mar 10</b>	<b>Chapter 27 quiz</b>	<b>submit on Blackboard by 11:59 PM</b>
<b>W</b>	<b>Mar 11</b>	<b>Lecture exam 3 (Chs. 16 &amp; 27)</b>	<b>in class, at the beginning of lecture</b>
W	Mar 25	Lab quiz Ch. 23 terms	in class, at the beginning of lecture
		Lecture quiz Chs. 23 & 24 concepts	in class, at the end of class
Th	Mar 26	Chapters 23 & 24 quizzes	submit on Blackboard by 11:59 PM
<b>M</b>	<b>Mar 30</b>	<b>Lab practical 3 (Ch. 23)</b>	<b>in class, at the beginning of lecture</b>
<b>W</b>	<b>Apr 1</b>	<b>Lecture exam 4 (Chs. 23 &amp; 24)</b>	<b>in class, at the beginning of lecture</b>
W	Apr 8	Lecture quiz Ch. 22 concepts	in class, at the end of class
Th	Apr 9	Chapter 22 quiz	submit on Blackboard by 11:59 PM
W	Apr 15	Lab quiz Ch. 22 terms	in class, at the beginning of lecture
M	Apr 20	Lecture quiz Ch. 25 concepts	in class, at the end of class
T	Apr 21	Chapter 25 quiz	submit on Blackboard by 11:59 PM
W	Apr 22	Lab quiz Ch. 25 terms	in class, at the beginning of lecture
<b>M</b>	<b>Apr 27</b>	<b>Lab practical 4 (Chs. 22 &amp; 25)</b>	<b>in class, at the beginning of lecture</b>
<b>T</b>	<b>Apr 28</b>	<b>Chapter 26 quiz</b>	<b>submit on Blackboard by 11:59 PM</b>
<b>W</b>	<b>May 6</b>	<b>Lecture exam 5 (Chs. 22, 25 &amp; 26)</b> <b>AND optional comprehensive final (Chs. 16 to 27)</b>	<b>10:15 AM – 12:30 PM (see final exam schedule)</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.
- **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 2 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.
  - 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. Your filled-out Note-taking guides can be used on Lecture quizzes only. Notes cannot be used on lab quizzes, nor will you be given a word-bank. 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.
- **Attendance (2%)** – Your attendance (including whether you arrive late or leave early) will be tracked and will count for 2% of your final grade.
- **Lecture examinations (63%)** – 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 placed 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 1. 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.