

**Angelina College**  
**Science and Mathematics Division**  
**BIOL 2401 Anatomy and Physiology I – Internet**  
**Instructional Syllabus**

**I. BASIC COURSE INFORMATION****A. Course Description**

BIOL 2401. 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. Prerequisite: Prerequisite: TSI exempt, or passing scores on all sections of TSI Assessment Test (TSI complete). Three lecture and three lab hours each week. Lab fee.

**B. Intended Audience**

This course is the first semester of the two-semester human anatomy and physiology course sequence, continued as BIOL 2402. The intended audience is any student needing the first semester of a sophomore level course in human anatomy and physiology. It is a laboratory-based course designed for those pursuing a degree in health related careers and/or pre-professional course work.

**C. Instructor**

Instructor's Name: Mrs. Johnson

Office Location: S103

Office Hours: MTWR: 1:00 – 2:15; OTHER TIMES AVAILBLE BY APPONTMENT

Phone: (936)633-5259

E-mail Address: ajohnson@angelina.edu

**II. INTENDED STUDENT OUTCOMES:****A. Core Objectives Required for this Course**

1. **Critical Thinking:** To include creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information.
2. **Communication:** To include effective development, interpretation and expression of ideas through written, oral and visual communication.
3. **Empirical and Quantitative Skills:** To include the manipulation and analysis of numerical data or observable facts resulting in informed conclusions.
4. **Teamwork:** To include the ability to consider different points of view and to work effectively with others to support a shared purpose or goal.

**B. Course Learning Outcomes for all Sections** (ACGM Lower Division Academic Course Guide Manual; <http://www.theccb.state.tx.us/reports/pdf/6309.pdf?CFID=20849286&CFTOKEN=77757605>)  
**Upon successful completion of this course, students will:**

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.*

### **III. ASSESSMENT MEASURES:**

#### **A. Assessments for the Core Objectives**

- 1. Critical Thinking:** Students will identify, organize, and recall relevant information and demonstrate an in-depth understanding through completing an assignment/worksheet that is presented to them during a physiology topic. The Angelina College (AC) Critical Thinking Rubric will be used to assess each student's critical thinking skills and correctness.
- 2. Communication:** Students will organize, analyze, and convey effective communication through an exam essay question related to physiology. The Angelina College (AC) Communication Rubric will be used to assess each student's communication skills and correctness.
- 3. Empirical & Quantitative Skills:** Students will demonstrate their abilities to represent, calculate, interpret, and analyze empirical and quantitative data by completing an assignment/worksheet. The Angelina College (AC) Empirical & Quantitative Skills Rubric will be used to assess each student's empirical and quantitative skills and correctness.
- 4. Teamwork:** Students will demonstrate their abilities to communicate effectively with team members by evaluating one another after working through activities together. The Angelina College (AC) Teamwork Rubric will be used to assess each student's teamwork skills and correctness.

#### **B. Assessments for Course Learning Outcomes**

1. Students will use anatomical terminology to identify and describe locations of major organs of each system covered by answering written questions during lecture activities, on lecture exams, and by orally answering questions during presentations and class activities.
2. Students will explain interrelationships among molecular, cellular, tissue, and organ functions in each system by answering questions during lecture activities and on lecture exams.
3. Students will describe the interdependency and interactions of the systems by answering written questions during lecture activities and on lecture exams.
4. Students will explain contributions of organs and systems to the maintenance of homeostasis by answering written questions about case studies and on lecture exams.
5. Students will identify causes and effects of homeostatic imbalances by answering embedded exam questions and by answering written questions about case studies and current advances in medicine.
6. Students will describe modern technology and tools used to study anatomy and physiology by answering written questions about case studies or writing critical analyses of current medically related journal articles.
7. Students will demonstrate and apply appropriate safety and ethical standards by answering written questions during lab activities and by orally answering questions during lab activities.
8. Students locate and identify anatomical structures by answering written questions about simulated lab activities, dissections, and by identifying anatomical structures during lab exams.
9. Students will demonstrate the appropriate utilization of laboratory equipment such as microscopes, dissection tools, general lab ware, physiology data acquisition systems, and virtual simulations by answering written questions during lab activities and by orally answering questions during lab activities.
10. Students will work collaboratively to perform experiments and demonstrate teamwork ability by working together to answer questions during teamwork activities.
11. Students will demonstrate the steps involved in the scientific method by collecting laboratory data and performing elementary comparisons of that data, as well as, answering embedded lab exam questions.
12. Students will communicate results of scientific investigations, analyze data and formulate conclusions by orally answering questions and writing answers to questions during lab activities.
13. Students will demonstrate critical thinking and scientific problem solving skills to make decisions, recommendations, and projections by answering written questions about case studies.

**IV. INSTRUCTIONAL PROCEDURES:** The online format of Anatomy and Physiology requires a student to work independently to complete the information by required deadlines indicated in the course schedule below. THIS IS NOT A SELF-PACED COURSE. Instructors will provide reading guides, terminology lists, and optional recorded lectures. STUDENTS ARE RESPONSIBLE FOR USING THE PROVIDED MATERIALS TO PREPARE FOR EXAMS. \*\*\*SEE EXAM DESCRIPTION BELOW\*\*\*.

## V. COURSE REQUIREMENTS AND POLICIES:

### A. **Required Textbooks, Materials, and Equipment:**

1. Human Anatomy and Physiology by Elaine Marieb (Benjamin/Cummings), 10<sup>th</sup>/11<sup>th</sup> Edition.
2. Human Anatomy and Physiology Laboratory Manual by Elaine Marieb (Benjamin/Cummings), 11<sup>th</sup>/12<sup>th</sup> Edition.
3. Students will need a computer with internet capabilities (e.g. wifi) for the following class requirements:
  - a. **Access to Blackboard** (<https://angelina.blackboard.com/>). Obtaining a copy of the course Exams, Grades, Lecture Chapter Resources, and Lab Terminology List required.
  - b. **Access to Mastering A & P.** Registration instructions are located in Blackboard on the “Start Here” page.

### B. **Course Policies – (This course conforms to the policies of Angelina College as stated in the Angelina College Handbook.)**

1. **Educational Accommodations:** Educational Accommodations – If you have a disability (as cited in Section 504 of the Rehabilitation Act of 1973 or Title II of the Americans with Disabilities Act of 1990) that may affect your participation in this class, you may fill out the Educational Accommodations application within your AC Portal, under the “Student Services” tab. A Student Success team member will contact you once the application is received. At a post-secondary institution, you must self-identify as a person with a disability in order to receive services; for questions regarding the application process you can visit the Office of Student Success and Inclusion in the Student Center (Room 200) or email [access@angelina.edu](mailto:access@angelina.edu). To report any complaints related to accommodations, you should contact Annie Allen, Director of Student Success & Inclusion, in Room 200 of the Student Center. You may also contact Ms. Allen by calling (936) 633-4509 or by emailing [aallen@anglina.edu](mailto:aallen@anglina.edu). To report discrimination of any type, contact Steve Hudman, Dean of Student Affairs, at (936) 633-5292 or [shudman@angelina.edu](mailto:shudman@angelina.edu).
2. **Attendance:** Attendance is required as per Angelina College Policy and will be recorded. Online attendance is taken weekly by the instructor. Students not regularly logging into Blackboard, completing Mastering homework, and/or completing module exams will be dropped from the course. Records will be turned in to the academic dean at the end of the semester. Do not assume that non-attendance in class will always result in an instructor drop. **Students must officially drop a class or risk receiving an F;** this is official Angelina College Policy.

### **THE LAST DAY TO DROP WITH A “W” IS APRIL 1, 2019**

### 3. **Additional Policies Established by the Individual Instructor:**

#### **STUDENT CONDUCT**

A positive environment for learning will be maintained by students being courteous to each other and to the instructor.

- Cheating on tests is not tolerated as per Angelina College policy and may result in expulsion from the course. Plagiarism is not tolerated and will result in a zero for any assignment in which it is detected. **Failure to follow this rule may result in the student receiving a grade of zero on the quiz or test. If the student receives a test score of zero due to failure to follow this rule, the zero test score cannot be replaced by the final exam.**
- *If a student does not log into Blackboard or complete Mastering homework, it is the student’s responsibility to contact the instructor.* **Failure to follow this rule may result in the student receiving a grade of zero on the quiz or test. If the student receives a test score of zero due to failure to follow this rule, the zero test score cannot be replaced by the final exam.**

**VI. COURSE CONTENT:**

*\*The schedule below provides the due dates for Mastering A & P homework, Group Activities, and Exams. Students are allowed and encouraged, to submit all assignments BEFORE the listed due dates.*

<b>MODULE 1: MARCH 18<sup>TH</sup> – MARCH 29<sup>TH</sup></b>		
<b>DATE</b>	<b>LECTURE CHAPTER</b>	<b>LAB EXERCISES</b>
3/18 – 3/20	Log into Blackboard Create your Mastering A & P account. The Human Body - Homework (Ch. 1)	The Language of Anatomy (Ex. 1); Organ Systems Overview (Ex. 2)
3/21 – 3/23	Chemistry (Ch. 2)	The Microscope (Ex. 3)
3/24 – 3/26	Cells (Ch. 3)	The Cell (Ex. 4); Classification of Tissues (Ex. 6)
3/27 – 3/29	Group Activity 1: A. Complete the Cell Cycle Worksheet with your assigned group members. B. Evaluated each group member using the Peer Evaluation Form.	
<b>EXAM 1</b>		
<b>MODULE 2: MARCH 30<sup>TH</sup> – APRIL 10<sup>TH</sup></b>		
<b>DATE</b>	<b>LECTURE CHAPTER</b>	<b>LAB EXERCISES</b>
3/30 – 4/1	Integumentary System (Ch. 5)	Integumentary System (Ex. 7); Overview of the Skeleton (Ex. 8)
4/2 – 4/4	Skeletal System (Ch. 6)	The Axial Skeleton (Ex. 9)
4/5 – 4/7	Skeletal System (Ch. 6)	Appendicular Skeleton (Ex. 10)
4/8 – 4/10	Group Activity 2: A. Complete the Bone Anatomy Worksheet with your assigned group members. B. Evaluated each group member using the Peer Evaluation Form.	
<b>EXAM 2</b>		
<b>MODULE 3: APRIL 11<sup>TH</sup> – APRIL 22<sup>ND</sup></b>		
<b>DATE</b>	<b>LECTURE CHAPTER</b>	<b>LAB EXERCISES</b>
4/11 – 4/13	Muscles (Ch. 9)	Articulations & Body Movements (Ex. 11)
4/14 – 4/16	Muscles (Ch. 9)	Gross Anatomy of the Muscular System (Ex. 13)
4/17 – 4/19	Fund. Of Nervous System (Ch. 11)	Gross Anatomy of the Muscular System (Ex. 13)
4/20 – 4/22	Group Activity 3: A. Complete the Muscle Physiology Essay with your assigned group members. B. Evaluated each group member using the Peer Evaluation Form.	
<b>EXAM 3</b>		
<b>MODULE 4: APRIL 23<sup>RD</sup> – MAY 4<sup>TH</sup></b>		
<b>DATE</b>	<b>LECTURE CHAPTER</b>	<b>LAB EXERCISES</b>
4/23 – 4/25	CNS (Ch. 12)	Histology of Nervous Tissue (Ex. 15); Gross Anatomy of the Brain and Cranial Nerves (Ex. 17)
4/26 – 4/28	PNS (Ch. 13)	The Spinal Cord and Spinal Nerves (Ex. 19)
4/29 – 5/1	ANS (Ch. 14) Special Senses (Ch. 15)	Anatomy of the Visual System (Ex. 23); Hearing and Equilibrium (Ex. 25); Olfaction and Taster (Ex. 26)
5/2 – 5/4	Group Activity 4: A. Complete the Membrane Potential Worksheet with your assigned group members. B. Evaluated each group member using the Peer Evaluation Form.	
<b>EXAM 4</b>		
<b>MODULE 5: MAY 5<sup>TH</sup> – MAY 8<sup>TH</sup></b>		
<b>DATE</b>	<b>LECTURE CHAPTER</b>	<b>LAB EXERCISES</b>
	REFERENCE YOUR CHAPTER SUMMARIES AND THE LECTURE FINAL EXAM REVIEW IN BLACKBOARD TO PREPARE FOR THE FINAL EXAM	REFERENCE THE LAB TERMINOLOGY DOCUMENT IN BLACKBOARD TO PREPARE FOR THE FINAL EXAM
5/5 – 5/8	<b>FINAL EXAM</b>	

## VII. EVALUATION AND GRADING:

### A. **Grading Criteria** (*percents, extra credit, etc.*)

Failure complete homework or exams will result in a grade of zero

#### Lecture

4 Lecture Exams	= 100 points each
Homework/Core Assessments	= 100 points total (chapter homework average)
Lecture Comprehensive Final	= <u>100</u> points
	$600 \div 6 = 100$ points

#### Lab

4 Lab Exams	= 100 points each
Homework/Core Assessments	= 100 points total (exercise homework average)
Lab Comprehensive Final	= <u>100</u> points
	$600 \div 6 = 100$ points

Course average will be determined according to the following:

Lecture Average (60%)	$100 \times .60 = 60$
Lab Average (40%)	$100 \times .40 = \underline{40}$
	100

### B. **Determination of Grade** (*assignment of letter grades*)

Grades for the course will be based on the following guidelines:

A = 90 - 100 points

B = 80 - 89 points

C = 70 - 79 points

D = 60 - 69 points

F = 59 points

- c. **Exams:** There will be four exams covering information from the lecture chapters and lab exercises. Each portion will be worth a total of 100 points each, and must be taken on or before the dates listed above in the class schedule. These four exams will possibly include multiple-choice, short-answer, fill-in-the-blank, and / or lecture chapter questions, and fill-in-the-blank lab questions. A proctor is required for ALL exams. Students can test at the Angelina College Testing Center for FREE, online through ProctorU for a fee per exam, or at a pre-approved testing center (i.e. local public library, college or university, high school). Proctors outside of the AC testing center or ProctorU must be approved two week prior to the desired testing date. The process is initiated by contacting the instructor and continued by the student. The student is responsible for making testing arrangements. **Each proctoring procedure has detailed scheduling protocol and policies to schedule appointments.** Please see appropriate links in Blackboard for more details on making these appointments. All exams will require a password that only the arranged proctors will have, and will enter for the student to allow testing. Proctors can not be family members. **Make-up exams are to the discretion of the instructor.**
- D. **Final Exam:** The final exam includes 100 multiple choice lecture questions worth 1 point each and 50 matching lab questions worth 2 points each, and is 100% comprehensive. The grade on the comprehensive final exam can also replace the single lowest grade on the regular exams. All questions, lecture and lab, will be multiple-choice and matching. The final exam must be proctored like the other regular semester exams at the AC testing center, with ProctorU, or at a pre-approved testing center.
- E. **Homework:** All lecture and lab homework assignments are completed on Mastering A & P, and must be submitted on or before the dates listed in the class schedule above. (See the "Pearson Student Registration Instruction" document in Blackboard to setup your account.) All lecture chapters and lab

exercises will have a corresponding Mastering A & P homework assignment. Lecture homework assignments will be averaged to calculate one lecture exam grade, and lab homework assignments will be averaged to calculate one lab exam grade. The homework assignments could possibly take up to two hours, and students should not procrastinate in completing them. Most assignments will include helpful instructional videos or simulations on the more challenging subjects of the course. Utilize the books, chapter reading guide, and lab terminology list while completing the homework. ***THERE WILL BE NO MAKE-UPS FOR MISSED HOMEWORK.***

- F. Assessments:** An assessment measuring communication, critical thinking, empirical and quantitative, and teamwork will be given. Each assignment is required, and will be counted as homework grades toward the correlating portions of the course.

**VIII. SYLLABUS MODIFICATION:**

The instructor may modify the provisions of the syllabus to meet individual class needs by informing the class in advance as to the changes being made.