Angelina College
Science and Mathematics Division
BIOL 2401 Anatomy and Physiology I - TR
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 sophmore 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: Todd Farmer
Office Location: S110 Lufkin
Office Hours: MW 11-12:00; TR 2-3:30
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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.thecb.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 a writing assignment 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:

This course will be taught using a combination of lectures and laboratory exercises that complement and supplement lecture material. Audio-visual materials, models, and dissection of specimens will be employed to enhance lecture and laboratory presentations.

V. COURSE REQUIREMENTS AND POLICIES:

A. Required Textbooks, Materials, and Equipment:

1. Human Anatomy and Physiology by Elaine Marieb (Benjamin/Cummings), **10th/11th Edition**.
2. Human Anatomy and Physiology Laboratory Manual by Elaine Marieb (Benjamin/Cummings), **11th/12th Edition**.
3. **Students will need a computer (e.g. laptop or similar device) internet capabilities (e.g. wifi) for the following class requirements:**
   a. ***PHYSIOEX 9.1 Computer Simulations,*** CD ROM - Packaged with textbook
   b. Access to Blackboard (https://angelina.blackboard.com/). Obtaining a copy of the course **Lab Study Guide** and **Images** is highly recommended by the instructor for success in the classroom.
4. Students are required to supply their own scantron forms for test taking. *FORM NO. 882-E scantrons* (100 question) will be used.

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

1. **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 (205A); text 936.463.8078; or email access@angelina.edu. To report any complaints of discrimination related to a disability, you should contact Mr. Steve Hudman, Dean of Student Affairs, in Room 101 of the Student Center. You may also contact Dean Hudman by calling (936) 633-5292 or by emailing shudman@angelina.edu.
2. **Attendance:** Attendance is required as per Angelina College Policy and will be recorded every day. Any student with three (3) consecutive absences of four (4) cumulative absences may be dropped from the class. 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. **You 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 NOVEMBER 5, 2018

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.

   - Arrive in class on time and do not prepare to leave before class is over, unless special arrangements have been made prior to class with the instructor.
   - *If a student does not attend a class, it is the student's responsibility to contact the instructor for missed material or information.*
   - Cell phones should be on "vibrate only" (silent mode) or turned off.
   - Only one person speaks at a time. Distracting conversations during lecture will not be allowed. Respect all members of the class.
   - Profanity will not be tolerated. Rude or provocative logos on clothing are not allowed in the classroom.
   - 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. **All smart devices are strictly prohibited during testing.** These prohibited electronic devices may include, but not be limited to: cell phones, smart watches or other electronic visual aids, audio players, recorders, tablets, notebooks, Google glass, or any other similar devices, any digital device that can be used to record, transmit, receive, or play back audio, photographic, text, or video content. **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:

Week (Day)	Lecture
1 08/28	1 (The Human Body)
08/30	2 (Chemistry Comes Alive)
2 09/04	2 (Chemistry Comes Alive)
09/06	2 (Chemistry Comes Alive)
3 09/11	3 (Cells)
09/13	3 (Cells)
4 09/18	3 (Cells)
09/20	**EXAM #1**
5 09/25	5 (Integumentary System)
09/27	5 (Integumentary System),
6 10/02	6 (Bones and Skeletal Tissues)
10/04	6 (Bones and Skeletal Tissues)
7 10/09	**EXAM #2**
10/11	9 (Muscles and Muscle Tissue)
8 10/16	9 (Muscles and Muscle Tissue)
10/18	9 (Muscles and Muscle Tissue)
9 10/23	11 (Fundamentals of the Nervous System and Nervous Tissue)
10/25	11 (Fundamentals of the Nervous System and Nervous Tissue)
10 10/30	11 (Fundamentals of the Nervous System and Nervous Tissue)
11/01	11 (Fundamentals of the Nervous System and Nervous Tissue)
11 11/06	**EXAM #3; MUSCLE PHYS. ESSAY**
11/08	12 (The Central Nervous System)
12 11/13	12 (The Central Nervous System)
11/15	12 (The Central Nervous System)
13 11/20	13 (The Peripheral Nervous System)
14 11/27	13 (The Peripheral Nervous System)
11/29	14 (Autonomic Nervous System)
15 12/04	15 (The Special Senses)
12/06	REVIEW
16	**FINAL**

Week (Day)		Lecture
1	08/28	1 (The Language of Anatomy), 2 (Organ Systems)
	08/30	
2	09/04	3 (The Microscope), 4 (The Cell); Critical Thinking and Empirical/Quantitative Skills Assessment Assigned
	09/06	
3	09/11	6 (Histology); Critical Thinking and Empirical/Quantitative Skills Assessment Due
	09/13	
4	09/18	6 (Histology), 7 (The Integumentary System)
	09/20	**EXAM #1**
5	09/25	8 (Overview of the Skeleton), 9 (The Axial Skeleton)
	09/27	
6	10/02	9 (The Axial Skeleton), 10 (The Appendicular Skeleton)
	10/04	
7	10/09	9 (The Axial Skeleton), 10 (The Appendicular Skeleton)
	10/11	
8	10/16	9 (The Axial Skeleton), 10 (The Appendicular Skeleton)
	10/18	**EXAM #2**
9	10/23	11 (Articulations & Body Movements), 13 (Gross Anatomy of the Muscular System)
	10/25	
10	10/30	13 (Gross Anatomy of the Muscular System)
	11/01	
11	11/06	13 (Gross Anatomy of the Muscular System)
	11/08	**EXAM #3**
12	11/13	15 (Histology of Nervous Tissue), 17 (Gross Anatomy of the Brain & Cranial Nerves)
	11/15	
13	11/20	19 (The Spinal Cord and Spinal Nerves)
14	11/27	19 (The Spinal Cord and Spinal Nerves)
	11/29	23 (Visual System), 25 (Hearing and Equilibrium), 26 (Olfaction & Taste); Teamwork Assessment
15	12/04	23 (Visual System), 25 (Hearing and Equilibrium), 26 (Olfaction & Taste)
	12/06	**EXAM #4**
16		**FINAL**

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VII. EVALUATION AND GRADING:

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

Questions for lecture exams and quizzes will be taken from lecture notes and textbook chapters. *It is important for the student to understand that not all of the textbook information will be discussed in class, thus it is the students responsibility to read and study all chapter material (besides lecture notes) in preparation for an exam.* Combined scores from lecture and laboratory constitute the final grade in the course:

Lecture

4 Lecture Exams	= 100 points each
Quizzes/Homework/Core Assessments	= 100 points total (quizzes averaged to reach this total)*
Lecture Comprehensive Final	= 100 points
	600 ÷ 6 = 100 points

Lab

4 Lab Exams	= 100 points each
Quizzes/Homework/Core Assessments	= 100 points total (quizzes averaged to reach this total)*
Lab Comprehensive Final	= 100 points
	600 ÷ 6 = 100 points

Course average will be determined according to the following:

Lecture Average (60%)	100 x .60 = 60
Lab Average (40%)	100 x .40 = 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. Lecture Exams: There will be four lecture exams (worth a total of 100 points each) that will be given as shown on the class schedule. Exams include multiple-choice questions. The final exam is worth 100 points and will be 100% comprehensive. The grade on the lecture comprehensive final exam can replace the single lowest grade on the regular lecture exams. **NO make-up exams will be given for any reason. If you miss a lecture exam, the LECTURE FINAL EXAM grade will replace the grade of that missed exam.**

D. Quizzes/Homework: A series of quizzes will be given during lecture and lab. Lecture and lab quizzes will cover material from the previous week's lesson. At least **one** lowest lecture and lab quiz grade for the semester will be dropped. *The average of these quizzes/homework will count as another exam grade. ***THERE WILL BE NO MAKE-UPS FOR MISSED QUIZZES WHETHER ONLINE OR IN CLASS*.**

E. Assessments: An assessment measuring communication will be given during lecture, and assessments measuring critical thinking, empirical and quantitative, and teamwork will be given during lab. Each assignment is required, and will be counted as quiz/homework grades toward the correlating portions of the course.

Due dates:

- Communication (lecture): November 6, 2018
- Critical Thinking (lab): see lab syllabus
- Empirical & Quantitative Skills (lab): see lab syllabus
- Teamwork (lab): see lab syllabus

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.