RICHLAND COLLEGE DEPARTMENT OF BIOLOGY
School of Mathematics, Science, and Health Professions
Course Syllabus For Biol 2401: Anatomy and Physiology I
4 credit hours (3 lec/3lab)

INSTRUCTOR'S INFORMATION
(Instructor reserves the right to amend this information as necessary.)

Semester and Year: Spring 2019
Meeting Dates: MWF
Section: 83004
Class time and days: Lecture: WF 12:45-2:05 Lab: M 12:45-3:35
Room: Lecture: WH265/Lab: SH131
Instructor: Ye Luo
Contact Info: Office: SH263
Email: yluo@dceduc.edu
Office phone: 972-761-6727

Office hours:
Last date to withdraw: April 17, 2019
Final Exam Day and time: Wednesday, May 15, 2019, 12:20-2:10

Evaluation Procedures:
Course grade is determined as follows:
- 3 Lecture exams (90 pts each) 270
- Final exam (last chapters (90 pts) + comprehensive (40pts)) 130
- 3 Lab practicals (70 pts each) 210
- 9 Mastering A&P online homework assignments (10 pts each) 90
- 9 online Pre-lab quizzes (10 pts each) 90
- Lecture & Lab activity and responsibility 10

Total Points 800

Final Grade Determination:
720-800 = A
640-719 = B
560-639 = C
480-559 = D
less than 480 = F

[This may change at the discretion of the instructor.]

Attendance Policy:
In order to be successful, students must attend and participate each class and lab. Attendance is necessary for class participation and course work. There will be no make-up opportunities for missed assignments.

If you are unable to complete this course, it is your responsibility to withdraw formally---by April 17, 2019. The withdrawal request must be received in the Registrar’s Office by the drop date. Failure to do so will result in your receiving a performance grade, usually an “F.”
Required Materials:

3 Options for students to buy:

Notes: Mastering Course ID: MAPLUO1983004

   - We are using custom shorter version that have eliminated lots of exercises that we do not use. Title from the Richland college bookstore’s website: Anatomy & Physiology Lab Book
   - If you would rather have one accessible to you, you can use the full lab book - 11th edition cat version.
   - We are using the mink for dissections in the course, which is very close to cat anatomically. We have some IN-LAB copies of *Dissection Guide and Atlas to the Mink*, by Smith and Schenck (available in the bookstore and online if you want to have one).
C. More Lab Documents - [http://delrio.dcccd.edu/jreynolds/](http://delrio.dcccd.edu/jreynolds/-) pictures, exercise handouts, practice samples, etc.

Class Calendar and Lab Schedule: on the last page.

Instructor Policies and Suggestions for Student Success:
   - Please turn off your mobile phones/devices during class periods.
   - No Food or drinks will be permitted in the laboratory.
   - You are expected to take good care of all the equipment/materials provided to you in the lab. It is your responsibility to keep your working area and materials clean.
   - You will be expected to utilize your time in the lecture/lab session efficiently. Conversations other than those related the topic of the lab session will not be allowed. Student(s) may be asked to leave the classroom/lab at the discretion of the instructor if persistent talking during class.
   - Be prepared to be an active independent learner and to work cooperatively with other students as well.
   - Consider this class as or more important than your job. It is not O.K. to leave lab early, or miss lab completely, because of work.
   - Attendance and note-taking will provide an efficient way to succeed in the class.
   - It is suggested that you will need to spend at least 2 hours of reading and self-study for each hour of lecture. If you cannot or will not do this, you might want to re-think this class. Be realistic about your work and class schedule when registering.

Academic Misconduct Regarding Exams & Lab Practicals:
Students should not leave during an exam or a lab practical to use the bathroom. Go BEFORE the test.
Cheating on tests and lab practicals include, but is not limited to, the following activities:
   - looking onto someone’s answer sheet, even if you do not use their answers,
   - knowingly allowing someone to look onto your answer sheet,
   - using a cheat sheet, or other unauthorized material or looking at cell phone,
   - talking to someone or otherwise exchanging information during an exam,
   - asking someone what is on a lab practical or telling someone what is on a lab practical,
   - waiting out in the hallway when people have just taken the exam to hear them discuss the lab exam.
   - removing from lab any material meant to stay in lab, e.g., models, dissected organs, etc.,
   - writing answers on the table
   - writing answers on the question card
   - going or looking into a lab where the lab practical is set up, and,
   - getting the answer key before the test.

Any student violating any rule(s) above will get a ZERO on the lecture exam and lab practical.
Institutional Policies:
Institutional Policies relating to this course can be accessed from the following link
www.richlandcollege.edu/syllabipolicies

RICHLAND COLLEGE’S QUALITY ENHANCEMENT PLAN ~ LEARNING TO LEARN:
DEVELOPING LEARNING POWER:
Richland College is piloting its Quality Enhancement Plan (QEP) in select classes. The QEP provides techniques, practices, and tools to help students develop the habits, traits or behaviors needed to be effective and successful lifelong learners in college and in life. For more information, please check QEP 2013 (http://www.richlandcollege.edu/qep)

ACADEMIC PROGRESS: Students are encouraged to discuss academic goals and degree completion with their instructors. Specific advising is available throughout the semester. Check Richland College Steps to Success (http://www.richlandcollege.edu/admissions/process.php)

DCCCD Catalog Course Description:
This is the second course of a two course sequence. Study of the structure and function of human anatomy, including the neuroendocrine, digestive, urinary, reproductive, respiratory, and circulatory systems. Emphasis is placed on the interrelationships of these systems. Content may be either integrated or specialized. This is a transferable course intended for those seeking to complete a Bachelor's Degree. (3 Lec., 3 Lab.)

Pre-requisites:
BIOL 1406 or SCIT 1407. One of the following must be met: (1) DREA 0093 AND DWRI 0093; (2) English as a Second Language (ESOL) 0044 AND 0054; or (3) have met Texas Success Initiative (TSI) in Reading and Writing standards AND the college Writing score prerequisite requirement.

Course Objectives
Biology 2401 is recommended as required or an elective course for biology majors, pre-medical/pre-dental students, nursing students, and others who are in the allied health professions. The semester covers the structure and function of the human body in both a lab and lecture format. In addition to the extensive lab coverage of human anatomy and histology, mink dissections will be a major component of the course. Biol 2401 examines cell structure and function, tissues, and the skeletal, muscular, and nervous systems. Emphasis is on structure, function, and the interrelationships of the human systems.

- Learn basic anatomical and physiological terminology.
- Learn the human structure at cellular, tissue, and system level (endocrine, circulatory, respiratory, digestive, urinary, reproductive systems for Biol 2402), and be able to identify major structures at human models and animal dissections.
- Understand how body systems are interrelated to maintain the homeostasis as a whole.
- Learn the concepts and mechanisms of normal physiological processes in endocrine, circulatory, respiratory, digestive, urinary, reproductive systems, and explain how those processes are impaired under abnormal conditions.
- Perform relevant lab activities or tests to apply the learned physiological principles in professional cases.
- Discuss the relevance of specific anatomical structures or their related functions to clinical applications to better understand the relationship between structure and function.

ACGM COURSE DESCRIPTION AND LEARNING OUTCOMES:
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 a hands-on learning experience for exploration of human system components and basic physiology. Systems to be studied include integumentary, skeletal, muscular, nervous, and special senses.
Learning Outcomes
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.

Upon successful completion of this course lab part, students will:
1. Apply appropriate safety and ethical standards.
2. Locate and identify anatomical structures.
3. Appropriately utilize laboratory equipment, such as microscopes, dissection tools, general lab ware, physiology data acquisition systems, and virtual simulations.
4. Work collaboratively to perform experiments.
5. Demonstrate the steps involved in the scientific method.
6. Communicate results of scientific investigations, analyze data and formulate conclusions.
7. Use critical thinking and scientific problem-solving skills, including, but not limited to, inferring, integrating, synthesizing, and summarizing, to make decisions, recommendations and predictions.

CORE CURRICULUM Statement of Purpose
Through the Texas Core Curriculum, students gain a foundation of knowledge of human cultures and the physical and natural world, develop principles of personal and social responsibility for living in a diverse world, and advance intellectual and practical skills that are essential for all learning.

Core Objectives for the Sciences:
- **Critical Thinking Skills** - to include creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information
- **Communication Skills** - to include effective development, interpretation and expression of ideas through written, oral and visual communication
- **Empirical and Quantitative Skills** - to include the manipulation and analysis of numerical data or observable facts resulting in informed conclusions
- **Teamwork** - to include the ability to consider different points of view and to work effectively with others to support a shared purpose or goal.
<table>
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<tr>
<th>Week of</th>
<th>LECTURE TOPIC</th>
<th>CH.</th>
<th>HW &amp; Prelab</th>
<th>LAB TOPIC</th>
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| Jan 21   | Martin Luther King Holiday on Monday Classes start on Tuesday Introduction Cells: structures, division & transport | 1   | 3           | Safety & Check-in
The Language of Anatomy
Organ Systems Overview
Anatomage- Medical Terminology
(Monday sections will do these next week) |
| Jan 28   | Tissues                                                                       | 4   |             | The Microscope
The Cell: Anatomy and Division                                           |
| Feb 4    | Tissues continued                                                             | 4   | √           | The Cell: Transport Mechanisms and Cell Permeability
Classification of Tissues                                                  |
| Feb 11   | LECTURE EXAM 1 (CHAPTER 1- 4) Integumentary System                            | 5   | √           | Classification of Tissues (continued)
The Integumentary System
Anatomage- Liposarcoma (suggested)                                         |
| Feb 18   | Osseous Tissue & Bone Structure                                               | 6   |             | LAB PRACTICAL 1                                                          |
| Feb 25   | Skeleton No Class Thursday & Friday (TCCTA Meetings)                          | 7-8 | √           | Overview of the Skeleton
The Axial Skeleton
Anatomage- Skeletal System Identification
Anatomage- Bullet through the Skull (suggested)
(Thurs & Friday sections will do these next week)                          |
| Mar 4    | Articulations                                                                 | 9   | √           | The Appendicular Skeleton                                                |
| Mar 11   | No Class - Spring Break                                                       |     |             | No Lab-Spring Break                                                      |
| Mar 18   | LECTURE EXAM 2 (CHAPTER 5-9) Muscle Tissue                                   | 10  | √           | Articulations and Body Movements
Anatomage- Damaged Knee (suggested)                                         |
| Mar 25   | Muscular System                                                               | 11  | √           | Microscopic Anatomy & Organization of Skeletal Muscle
Gross Anatomy of the Muscular System
Anatomage- Musculoskeletal exercise                                          |
| Apr 1    | Neural Tissue                                                                 | 12  | √           | Gross Anatomy of the Muscular System (continued)
Mink Muscle Dissection – bring gloves                                       |
| Apr 8    | Spinal Cord & Spinal Nerves                                                   | 13  |             | LAB PRACTICAL 2                                                          |
| Apr 15   | LECTURE EXAM 3 (CHAPTER 10- 13) Brain & Cranial Nerves April 17 – LAST DAY TO WITHDRAW No Class Friday - Spring Holiday | 14  | √           | Histology of Nervous Tissue
Gross Anatomy of the Brain and Cranial Nerves
The Spinal Cord and Spinal Nerves
Brain Dissection - bring gloves                                          |
| Apr 22   | Special Senses                                                                | 17  | √           | Special Senses: Olfaction and Taste
Human Reflex Physiology
Special Senses: Hearing and Equilibrium
Anatomage- Nerve Identification
Pain in the Butt (suggested)                                               |
| Apr 29   | Neural Integration                                                            | 15  |             | Special Senses: Anatomy of the Visual System
Special Senses: Visual Tests and Experiments
Cow Eye Dissection – bring gloves                                          |
| May 6    | Autonomic Nervous System                                                      | 16  |             | LAB PRACTICAL 3                                                          |
| May 13   | Final Exam (Chapter 14-17 + Cumulative)                                       |     |             |                                                                          |