Course Information

General
Course title: Anatomy and Physiology 1
Semester/year: Summer 2019
Course number/section: BIOL 2401-8500
Course description: 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. The lab provides a hands-on learning experience for exploration of human system components and basic physiology. Emphasis is on interrelationships among systems and regulation of physiological functions involved in maintaining homeostasis. This is a transferable course intended for those seeking to complete a Bachelor's Degree.
Credit hours: 4 credit hours (3 Lec., 3 Lab.)
Location and Times: M-F Lecture 7:30-9:30am in Wichita Hall 265, M-F Lab 9:40-11:40am in Sabine Hall 131
Prerequisites: Prerequisite Required: BIOL 1406 with a grade of "C" or better within the last three years or satisfactory score on the Biology CLEP exam. Students must be college level ready in Reading and Writing.

Instructor Information
Instructor: Mrudula Ganga Ph.D, Professor of Biology
E-mail address: mganga@dccc.edu,
Telephone: 972-238-6012
Office hours: 7.00-7.30 am M-F
Office: Sabine Hall 261

Important dates:
- Certification Date: June 10
- Drop Date: June 25
- Final exam: July 3

Required Materials:
The Mastering A&P homework system is REQUIRED. You can buy an access code at Pearson's Mastering A&P website (http://www.masteringaandp.com). If you had access in 2401 before, DO NOT BUY ANOTHER CODE. By the way, the code is good for both semesters of A&P.

1. Textbook: FUNDAMENTALS OF ANATOMY & PHYSIOLOGY (11th ed.)—4 choices
   - Mastering A&P with eText - ISBN 013447869x or 9780134478692
   - Mastering A&P + 3 hole punch unbound print - ISBN 0134478754 or 9780134478753
   - Mastering A&P + clothbound text - ISBN 013439495x or 9780134394954
   - IF YOU ALREADY HAVE A TEXTBOOK, and just need the MAP access---can buy directly from masteringaandp.com (which then changes to https://www.pearsonmylabandmastering.com/northamerica/masteringaandp/, oddly enough).
EXERCISES THAT WE DO NOT USE—cheaper than the full lab book.

Be sure to bookmark this website—http://delrio.dcccd.edu/jreynolds/A&P/index.html. It has links to lab practical reviews, graphics that go along with the lab manual, and links for microbiology courses, also.

Get into Mastering A&P with http://masteringaandp.com register for the homework system, by using the COURSE ID GANGA2401SUMMER.

Core Curriculum Intellectual Competencies

READING: the ability to analyze and interpret a variety of printed materials - books, documents, and articles - above 12th grade level.

WRITING: the ability to produce clear, correct and coherent prose adapted to purpose, occasion and audience - above 12th grade level.

CRITICAL THINKING: think and analyze at a critical level.

COMPUTER LITERACY: understand our technological society, use computer based technology in communication, solving problems, acquiring information.

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, as well as regulation of physiological functions involved in maintaining homeostasis.

- Learn basic anatomical and physiological terminology. Use anatomical terminology to identify and describe locations of major organs of each system covered. Locate and identify anatomical structures.
- 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. Explain interrelationships among molecular, cellular, tissue, and organ functions in each system. Describe the interdependency and interactions of the systems.
- 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.
- Explain contributions of organs and systems to the maintenance of homeostasis. Identify causes and effects of homeostatic imbalances.
- Perform relevant lab activities or tests to apply the learned physiological principles in professional cases. Describe modern technology and tools used to study anatomy and physiology.
- Discuss the relevance of specific anatomical structures or their related functions to clinical applications to better understand the relationship between structure and function.
- Apply appropriate safety and ethical standards.
- Appropriately utilize laboratory equipment, such as microscopes, dissection tools, general lab ware, physiology data acquisition systems, and virtual simulations.
- Work collaboratively to perform experiments.
- Demonstrate the steps involved in the scientific method. Communicate results of scientific investigations, analyze data and formulate conclusions.
- 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.

Evaluation Procedures:

A = 90-100%, B = 80-90%, C = 70-80%, D = 60-70%, less than 60% = F.

This may change at the discretion of the instructor.

Course grade is determined as follows:

<table>
<thead>
<tr>
<th>Component</th>
<th>Points</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lecture exams (3 @ 100pts. + cumulative final@200pts)</td>
<td>500</td>
<td>50%</td>
</tr>
<tr>
<td>Lab practicals (3@80pts each)</td>
<td>240</td>
<td>24%</td>
</tr>
<tr>
<td>Anatomage&amp;Dissections</td>
<td>30</td>
<td>3%</td>
</tr>
<tr>
<td>Pre-lab (10 @10pts)</td>
<td>100</td>
<td>10%</td>
</tr>
<tr>
<td>Mastering A&amp;P homeworks (13@10 pts)</td>
<td>130</td>
<td>13%</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>1000</strong></td>
<td><strong>100%</strong></td>
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Attendance Policy:

In order to be successful, students must attend and participate in enrolled courses. Attendance is necessary for class participation and course work. There will be no make-up opportunities for missed assignments. Thus, it is strongly recommended that students attend each class. However, there will be no official course grading policy on attendance. If there is a conflict in your schedule, contact me ASAP.

LAB points: The pre-lab quizzes are due before lab starts. If you are not in lab that week, you get no pre-lab points: There are no make-ups for a missed lab practical.

Exams: All of the sections of Biol 2401-2402 are organized the same way, same number of lecture tests, practicals, etc., including a cumulative final exam. No make-ups for exams after the fact, unless you have a doctor’s note.

If unable to complete this course, it is your responsibility to withdraw formally---by Tuesday, June 25.

Classroom Policies:

There are NO MAKE-UPS for lab practicals or lecture exams, unless you have a note from a doctor. A lecture exam that has to be made up will be done the WEEK BEFORE FINAL EXAMS.

Instructor Policies and Suggestions for Student Success:
Students pursuing careers in the Health Professions can find specific information on occupations, resources, financial aid, and programs at Texas institutions at this RLC Health Professions website: Richland College medical careers

This class DEMANDS group interactive skills, both in lab and lecture. Be aware that you will have to COOPERATE with lab partners, in addition to collaborative work groups in the lecture class. Be prepared to be an ACTIVE learner, and to work cooperatively with other students: IF YOU CANNOT OR WILL NOT DO THIS, YOU MIGHT WANT TO RE-THINK THIS CLASS.

MINK DISSECTIONS ARE PERFORMED IN THE LAB, PER TABLE: BE AWARE OF THIS REQUIREMENT. IT IS YOUR RESPONSIBILITY TO HAVE GLOVES WHEN NEEDED IN LAB.

You are expected to behave in an adult manner while in class. Inappropriate class behaviors include sleeping, working on other class assignments, talking incessantly, and cheating. If you behave in a nonadult, irresponsible manner, you will be asked to leave the classroom. Cheating on a lab quiz or lecture exam is absolutely forbidden and is grounds for giving you an F as a course grade.

Please be considerate enough to turn your cell telephones to vibrate, AND leave the room as quietly as possible to talk (ONLY IF ABSOLUTELY NECESSARY to talk right then and right there!). During an exam or lab practical, all phones will be put up and turned off. No text messaging during classtime, please.

FOOD AND DRINK IN THE CLASSROOM? You may bring in munchies and drinks IN, but you have to carry the trash from these items OUT! I will remind you about this if I see you leaving trash.

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.

NO WHINING IS ALLOWED!!!

"Academic dishonesty" is understood as any act of deceit bearing on one's own or another's academic work, where "academic work" is understood to mean any activity pertaining to the educational mission of the college. Such acts include, but are not limited to, plagiarism in any form; the use during an exam of information or materials not authorized by the instructor for such use and any other activities which are designed to deceive an instructor in the evaluation of the level of the student's achievement.

Academic Misconduct Regarding Exams & Lab Practicals:

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
- 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.

Students should not leave during an exam, quiz, or lab practical to use the bathroom. Go BEFORE the exam. If you have a health problem which your instructor needs to know about, to enable you to leave class to go to the restroom, please inform him/her at the beginning of the semester.

Any student violating any rule(s) above will get a ZERO on the lab practical exam.
Student Academic Progress
Students are encouraged to discuss academic goals and degree completion with their instructors. Specific advising is available throughout the semester from academic advisors and career specialists. Check Richland College Admissions [http://richlandcollege.edu/admissions] and Richland College Advising [http://richlandcollege.edu/advising] for more details.

Institutional Policies
Institutional Policies relating to this course can be accessed from the following link:

Institutional Policies [www.richlandcollege.edu/syllabipolicies]

Syllabus Change Disclaimer
The instructor reserves the right to amend a syllabus as necessary.
<table>
<thead>
<tr>
<th>DATE</th>
<th>LECTURE</th>
<th>LAB</th>
</tr>
</thead>
<tbody>
<tr>
<td>6/06 R</td>
<td>Introduction to A&amp;P-CH-1</td>
<td>Lab Safety, Lecture</td>
</tr>
<tr>
<td>6/07 F</td>
<td>Biochemistry (review gen chem yourself) Cells (review cell structure, cell transport, DNA/protein synthesis)-CH-2</td>
<td>Language of Anatomy Organ System Overview (Anatomage-Medical Terminology)</td>
</tr>
<tr>
<td>6/10 M</td>
<td>Cells -CH-3</td>
<td>Cell Anatomy/Division Microscope</td>
</tr>
<tr>
<td>6/11 T</td>
<td>Tissues -CH-4</td>
<td>Tissues</td>
</tr>
<tr>
<td>6/12 W</td>
<td>Tissues Integumentary system-CH-5</td>
<td>Tissues cont. Integumentary System</td>
</tr>
<tr>
<td>6/13 R</td>
<td>Integumentary system, start CH-6</td>
<td>PRACTICAL #1(6/13-THURSDAY)</td>
</tr>
<tr>
<td>6/14 F</td>
<td>Finish CH-6, start CH-9</td>
<td>Skeleton: Overview Axial Skeleton &amp; Fetal Skeleton</td>
</tr>
<tr>
<td>6/17 M</td>
<td>LECTURE EXAM-1 (CH 1-4) 6/17-M</td>
<td>Appendicular Skeleton (Anatomage: Bone ID)</td>
</tr>
<tr>
<td>6/18 T</td>
<td>Joints-CH-9</td>
<td>Articulations Muscles Intro Begin Muscles ID</td>
</tr>
<tr>
<td>6/19 W</td>
<td>Introduction to muscle tissue</td>
<td>Muscles: Human</td>
</tr>
<tr>
<td>6/20 R</td>
<td>Muscle tissue Muscular system (1st section on terms and levers)-CH-11</td>
<td>Muscles: Mink Dissection (Gloves!)</td>
</tr>
<tr>
<td>6/21 F</td>
<td>Introduction to Nervous tissue-CH-12</td>
<td>PRACTICAL #2 (6/21-FRIDAY)</td>
</tr>
<tr>
<td>6/24 M</td>
<td>LECTURE EXAM-2 (CH 5,6,9) 6/24-M</td>
<td>Nervous Tissue, Brain and Cranial Nerves (Anatomage: Brain ID)</td>
</tr>
<tr>
<td>6/25 T</td>
<td>Brain &amp; Cranial nerves-CH-14</td>
<td>Brain and Cranial Nerves, Sheep Brain Dissection (Gloves!)</td>
</tr>
<tr>
<td>6/26 W</td>
<td>Brain &amp; Cranial nerves, start CH-13</td>
<td>Spinal cord and spinal nerves Reflex Physiology (Anatomage: Sp Cord/nerves ID)</td>
</tr>
<tr>
<td>6/27 R</td>
<td>Finish CH-13, Start CH-17</td>
<td>Vision, Cow Eye Dissection (Gloves!)</td>
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<tr>
<td>6/28 F</td>
<td>LECTURE EXAM-3 (CH 10.11,12,14) 6/28-F)</td>
<td>Hearing and Equilibrium Taste/Olfaction</td>
</tr>
<tr>
<td>7/01 M</td>
<td>Special Senses-17</td>
<td>PRACTICAL #3 (07/01-MONDAY)</td>
</tr>
<tr>
<td>7/02 T</td>
<td>Autonomic NS and Higher Functions</td>
<td>NO LAB</td>
</tr>
<tr>
<td>7/03 W</td>
<td>FINAL EXAM (Cumulative 07/03-Wednesday, 7.30 am-9.30am)</td>
<td>NO LAB</td>
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