RICHLAND COLLEGE DEPARTMENT OF BIOLOGY
School of Mathematics, Science, and Health Professions
Course Syllabus For
Biol 2402: Anatomy and Physiology 2
4 credit hours (3 lec/3lab)

Benjamin Miller, PhD Adjunct Instructor of Biology

Semester and Year: Summer 2017
Section: 2402-86003
Class time and days*: Lecture: MTWTh 11:50 - 1:50 pm Lab: MTWTh 2:00 - 4:00 pm
Room: Lecture: WH205 Lab: SH133
Instructor: Dr. Benjamin Miller
Contact Info: brm8401@dcccd.edu

Office/Office Hours: No office on campus, but can arrange a time agreeable to both of us to meet outside of class.

Last date to withdraw: Aug 4, 2017
Final Exam Day/time: August 10, 2017 at 11:50 pm
*Please note the first week is Tuesday through Friday!

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, but it will never mean a higher percentage is needed for your grade.]

Course grade is determined as follows:

<table>
<thead>
<tr>
<th>Component</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lecture exams (3 @ 100pts)</td>
<td>300</td>
</tr>
<tr>
<td>Mini-lab practicals (3 @ 70pts each)</td>
<td>210</td>
</tr>
<tr>
<td>Mastering A&amp;P homeworks (12 @ 20pts each)</td>
<td>240</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>750</strong></td>
</tr>
</tbody>
</table>

- **LAB points:** There are **no make-ups for a missed mini-lab practical.**
- **Exams:** All of the sections of Biol 2401-2402 are organized the same way, same number of lecture tests, min-lab practicals, etc., including the **final exam.** No make-ups for exams after the fact, unless you have a doctor’s note.

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. If some unforeseen (or foreseen, for that matter) problem keeps you from a class period which has a lecture test scheduled, there will be a **make-up at the END of the semester, in essay format.** There are no make-up lab practicals: if you cannot attend your own section’s scheduled lab practical, you will need to attend another lab period during the lab practical time period.

You are expected to be in class every period. Missing a 3 hour weekly lab is REALLY going to affect your lab grade, so try to go to another section to make the lab up. I can give you times of other sections. However, you need to introduce yourself to that instructor, and ask them if it is alright to attend their lab.

If you are unable to complete this course, it is your responsibility to withdraw formally---by August 10th. 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:
The Mastering A&P homework system is REQUIRED (comes w/ either NEW lecture text OR NEW lab text or bought stand- alone through Pearson website if you prefer to buy used text). The Mastering A&P homework system ISBN, as a standalone without text, is 1323004610. Available through bookstore.

   - If you had rather, you can buy a new print text: A new copy comes with Mastering A&P homework. The bookstore has both print copies and eText codes.
   - Alternatively, you can buy a used text or rent a text from the bookstore but that will not give you access to the above supplemental materials. In this case, you need a stand-alone Mastering A&P access code, ISBN 1323004610 for Modified Mastering code without eBook. If you bought access for 2401 here at Richland, it is still good for 2402.

2. Lab manual: Human Anatomy & Physiology Laboratory Manual--cat version-- by Elaine N. Marieb, et al. **WE ARE USING CUSTOM SHORTER VERSIONS THAT HAVE ELIMINATED LOTS OF EXERCISES THAT WE DO NOT USE—cheaper than the full lab book...** If you would rather or have one accessible to you, you can use the full lab book (11th edition). But be sure that it has cat dissections in it (they are very much like the mink that we dissect).

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, and links for microbiology courses, also.

You can enter Mastering A&P in 2 ways—through the link in eCampus, using the Mastering A&P button OR you can go DIRECTLY into MAP with [http://www.pearsonmylabandmastering.com/](http://www.pearsonmylabandmastering.com/).

Instructor Policies and Suggestions for Student Success:
- Students pursuing careers in the Health Professions can find specific information on occupations, resources, and programs at Texas institutions at this RLC Health Professions website: [www.rlc.dcccd.edu/medcareers](http://www.rlc.dcccd.edu/medcareers)
- 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.**
- Assignments are DUE at the beginning of class on the day it is due. If it is late, points will be taken off. If it is more than 2 days late, there will be no credit for the assignment.
- 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.
Plagiarism = deliberate use of someone else’s language, ideas, or other original (not common-knowledge) material without acknowledging its source. This definition applies to texts published in print or on-line, to manuscripts, and to the work of other student writers. Plagiarism is the taking of someone’s ideas and misrepresenting them as one’s own ideas. Most people know that this obviously includes word-for-word lifting of words, but it also includes lifting ideas (even paraphrasing them in your own words) without giving someone credit for them (either by footnoting, or in the Works Cited at end of the paper). Plagiarism is NOT allowed.

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.

College Policies and Procedures:

For Institution Policies, please refer to Richland College Institution Policies (http://www.richlandcollege.edu/syllabusinfo/)

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) for more details. Also, consult the Advising Syllabus http://richlandcollege.edu/assets/uploads/2015/02/advising-syllabus.pdf regularly to check if you are on track.

Catalog Course Description

Course Description: This is the second course of a two course sequence. Structure and function as related to the human circulatory, respiratory, urinary, digestive, reproductive, and endocrine systems are studied. Emphasis is placed on the interrelationships of these systems. This is a transferable course intended for those seeking to complete a Bachelor's Degree. (3 Lec., 3 Lab.)

Pre-requisites: BIOL 2401. 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, 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.
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<thead>
<tr>
<th>DATE</th>
<th>LECTURE TOPIC</th>
<th>CH</th>
<th>LAB TOPIC</th>
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</thead>
<tbody>
<tr>
<td>07/11 T</td>
<td>Endocrine system</td>
<td>18</td>
<td>Safety &amp; Check-in, Lecture continued</td>
</tr>
<tr>
<td>07/12 W</td>
<td>Blood</td>
<td>19</td>
<td>Functional Anatomy of the Endocrine Glands Blood</td>
</tr>
<tr>
<td>07/13 R</td>
<td>Blood (continued)</td>
<td>20</td>
<td>Anatomy of the Heart</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>(Pig Heart Dissection – Bring Gloves)</td>
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<tr>
<td>07/14 F*</td>
<td>Heart</td>
<td>20</td>
<td>Anatomy of Blood Vessels – Human Vessel Identification</td>
</tr>
<tr>
<td>07/17 M</td>
<td>Heart</td>
<td>20</td>
<td>PRACTICAL 1</td>
</tr>
<tr>
<td></td>
<td>Blood Vessels &amp; Circulation</td>
<td>21</td>
<td></td>
</tr>
<tr>
<td>07/18 T</td>
<td>Blood Vessels &amp; Circulation</td>
<td>21</td>
<td>Mink Dissection (Endocrine, Blood Vessels) – Bring Gloves</td>
</tr>
<tr>
<td>07/19 W</td>
<td>Lymphatic system &amp; Immunity</td>
<td>22</td>
<td>Conduction System of the Heart and ECG</td>
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<td></td>
<td>Human Cardiovascular Physiology</td>
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<td></td>
<td>Lymphatic system</td>
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<tr>
<td>07/20 R</td>
<td>UNIT 1 EXAM (18-21)</td>
<td>23</td>
<td>Anatomy of the Respiratory System</td>
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<tr>
<td></td>
<td>Respiratory System</td>
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<td>Respiratory System Physiology</td>
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<tr>
<td>07/24 M</td>
<td>Respiratory system</td>
<td>23</td>
<td>Anatomy of Digestive System</td>
</tr>
<tr>
<td>07/25 T</td>
<td>Respiratory system</td>
<td>23</td>
<td>Mink Dissection (Respiratory &amp; Digestive) – Bring Gloves</td>
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<tr>
<td>07/26 W</td>
<td>Digestive system</td>
<td>24</td>
<td>PRACTICAL 2</td>
</tr>
<tr>
<td>07/27 R</td>
<td>Digestive system</td>
<td>24</td>
<td>Anatomy of the Urinary System</td>
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<tr>
<td></td>
<td>Metabolism</td>
<td>25</td>
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</tr>
<tr>
<td>07/31 M</td>
<td>UNIT 2 EXAM (22-25)</td>
<td>26</td>
<td>Urinalysis</td>
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<tr>
<td></td>
<td>Urinary system</td>
<td></td>
<td>Lecture continued</td>
</tr>
<tr>
<td>08/01 T</td>
<td>Urinary system</td>
<td>26</td>
<td>Anatomy of the Reproductive System</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Physiology of Reproduction</td>
</tr>
<tr>
<td>08/02 W</td>
<td>Fluid &amp; Electrolyte Balance</td>
<td>27</td>
<td>Mink Dissection (Urinary, Reproductive) – Bring Gloves</td>
</tr>
<tr>
<td>08/03 R</td>
<td>Reproductive System</td>
<td>28</td>
<td>Survey of Embryonic Development</td>
</tr>
<tr>
<td></td>
<td>LAST DAY TO DROP WITH W</td>
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</tr>
<tr>
<td>08/07 M</td>
<td>Reproductive System (continued)</td>
<td>28</td>
<td>Principles of Heredity</td>
</tr>
<tr>
<td>08/08 T</td>
<td>Development</td>
<td>29</td>
<td>PRACTICAL 3</td>
</tr>
<tr>
<td>08/09 W</td>
<td>Genetics</td>
<td>29</td>
<td>No Lab – Extra Lecture in Lab</td>
</tr>
<tr>
<td>08/10 R</td>
<td>FINAL EXAM (26-29)</td>
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*Note Friday class the first week.