SYLLABUS
Richland College
School of Mathematics, Science, and Health Professions

BIOL-2401-83502
Anatomy and Physiology 1
Spring 2019

Instructor Information:
Name: Nadia Nik-khoo
E-mail: nxn0003@dccc.edu
Class time and days: Lecture: Wed 7:45 –10:30 Pm / Lab: Mon7:45 –10:30 Pm
Room: Lecture: WH275 / Lab: SH131
Last date to withdraw: Wednesday, April 17
Final Exam Day: Wednesday, May 15
The best way to contact me is by e-mail, I will respond within 24 hours.

Announcements

Please check announcements daily for important information. A weekly announcement will be posted under the announcement tab to include any pertinent information, changes, or additional course instructions.

Required Materials for Biol 2401_ 2019_Spring:

   3 Options for students to buy:

(Notes:
   • The 11th edition updated in Fall 2017. Previous editions are OK.
   • The regular MAP system (not modified MAP) is used. Besides the above 3 options, students can buy the MAP access code directly from masteringaandp.com or https://www.pearsonmylabandmastering.com/northamerica/masteringaandp/.
   It is mandatory for the online "Homework & Prelab Quizzes".)


(Notes:
   • The full edition of the lab manual (new or used) or used customized lab manual is OK.
   • Please visit this link http://delrio.dccc.edu/jreynolds/A&P/index.html It has lab practical reviews and graphics that go along with lab manual. There are also MINK pictures at the delrio.dccc.edu/jreynolds website, along with some cat pics (when they are similar to the mink).
Grading:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Points</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lecture exams (4 @ 100pts. + 50 cumulative final)</td>
<td>450</td>
<td>50%</td>
</tr>
<tr>
<td>mini-lab practicals (3@70pts each)</td>
<td>210</td>
<td>23%</td>
</tr>
<tr>
<td>Pre-lab quizzes (in eCampus) (10 out of 11 – 1 drop)</td>
<td>100</td>
<td>11%</td>
</tr>
<tr>
<td>Mastering A&amp;P homework (8 out of 9 - 1 drop)</td>
<td>80</td>
<td>9%</td>
</tr>
<tr>
<td>Class lecture</td>
<td>60</td>
<td>6.5%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>900</td>
<td></td>
</tr>
</tbody>
</table>

A = 90-100%, 810-900
B = 80- 89%, 720- 809
C = 70- 79%, 630- 719
D = 60- 69%, 540- 629
F = less than 60%, < 540
This may change at the discretion of the instructor.

Class points:

- The pre-lab quizzes are due before lab starts. If you are not in lab that week, you get no pre-lab points: however, there will be a couple of extra ones you can use as drops. There are no make-ups for a missed mini-lab practical.

- WE DO NOT PROVIDE GLOVES FOR THE STUDENTS. Students must purchase their own gloves for dissection. The bookstore does have gloves to purchase or you can find them at any pharmacy store.

- You are expected to be in class every period. Missing a 3 hour weekly lab is going to affect your lab grade.

- If you are unable to complete this course, it is your responsibility to withdraw formally—by Wednesday April 17. 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.”

- 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. During an exam or lab practical, all phones will be put up and turned off. No text messaging during class time, please.

- You may bring some food or drink in lecture class, but no food or drink is allowed in the lab. Also, you are responsible to leave no trash and leftover in the class.
Course Objectives:
Biology 2401 is recommended as required or an elective course for biology majors, pre-medical/predental 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.

Institutional Policies:
Institutional Policies relating to this course can be accessed from the following link: [www.richlandcollege.edu/syllabipolicies](http://www.richlandcollege.edu/syllabipolicies)

**BIOLOGY 2401: ANATOMY & PHYSIOLOGY SPRING 2019**

<table>
<thead>
<tr>
<th>Week of</th>
<th>LECTURE TOPIC</th>
<th>CH.</th>
<th>LAB TOPIC</th>
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<tbody>
<tr>
<td>Jan 21</td>
<td>Martin Luther King Holiday on Monday Classes start on Tuesday Introduction Cells: structures, division &amp; transport</td>
<td>1</td>
<td>Safety &amp; Check-in The Language of Anatomy Organ Systems Overview Anatomage- Medical Terminology (Monday sections will do these next week)</td>
</tr>
<tr>
<td>Jan 28</td>
<td>Tissues</td>
<td>4</td>
<td>The Microscope The Cell: Anatomy and Division</td>
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<tr>
<td>Feb 4</td>
<td>Tissues continued</td>
<td>4</td>
<td>The Cell: Transport Mechanisms and Cell Permeability Classification of Tissues</td>
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<tr>
<td>Feb 11</td>
<td>LECTURE EXAM 1 (CHAPTER 1-4) Integumentary System</td>
<td>5</td>
<td>Classification of Tissues (continued) The Integumentary System Anatomage- Liposarcoma (suggested)</td>
</tr>
<tr>
<td>Feb 18</td>
<td>Osseous Tissue &amp; Bone Structure</td>
<td>6</td>
<td>LAB PRACTICAL 1</td>
</tr>
<tr>
<td>Feb 25</td>
<td>Skeleton No Class Thursday &amp; Friday (TCCTA Meetings)</td>
<td>7-8</td>
<td>Overview of the Skeleton The Axial Skeleton Anatomage- Skeletal System Identification Anatomage- Bullet through the Skull (suggested) (Thurs &amp; Friday sections will do these next week)</td>
</tr>
<tr>
<td>Mar 4</td>
<td>Articulations</td>
<td>9</td>
<td>The Appendicular Skeleton</td>
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<tr>
<td>Mar 11</td>
<td>No Class - Spring Break</td>
<td></td>
<td>No Lab-Spring Break</td>
</tr>
<tr>
<td>Mar 18</td>
<td>LECTURE EXAM 2 (CHAPTER 5-9) Muscle Tissue</td>
<td>10</td>
<td>Articulations and Body Movements Anatomage- Damaged Knee (suggested)</td>
</tr>
<tr>
<td>Apr 1</td>
<td>Neural Tissue</td>
<td>12</td>
<td>Gross Anatomy of the Muscular System (continued) Mink Muscle Dissection – bring gloves</td>
</tr>
<tr>
<td>Apr 8</td>
<td>Spinal Cord &amp; Spinal Nerves</td>
<td>13</td>
<td>LAB PRACTICAL 2</td>
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<tr>
<td>Date</td>
<td>Topic</td>
<td>Week</td>
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| 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)                                        |      |