Anatomy & Physiology Lab II (BIOL 2102)

Credit: 1 semester credit hour (1 hour lab)

Prerequisite: BIOL 2101

Co-requisite: BIOL 2302.

Course Description
Study of the structure and function of human anatomy, including the neuroendocrine, integumentary, musculoskeletal, digestive, urinary, reproductive, respiratory, and circulatory systems. Content may be either integrated or specialized.

Required Textbook and Materials
1. Regular (non-mechanical) #2 pencils.
2. Calendar for recording assignment due dates, tests, projects, etc.
3. Small 0.5” - 1” spine notebook with pocket (three ring for binding lab quizzes, laboratory exercises and extra notes)
4. 3-hole punch
5. Pens, colored pencils and/or highlighters of various colors

Course Objectives
Upon completion of this course, the student will be able to:

SCANS Skills and Competencies
Beginning in the late 1980’s, the U.S. Department of Labor Secretary’s Commission on Achieving Necessary Skills (SCANS) conducted extensive research and interviews with business owners, union leaders, supervisors, and laborers in a wide variety of work settings to determine what knowledge workers needed in order to perform well on a job. In 1991 the Commission announced its findings in What Work Requires in Schools. In its research, the Commission determined that “workplace know-how” consists of two elements: foundation skills and workplace competencies.

Approved 08/2010
BIOL 2101
Course Syllabi

Course Outline
A. Chap 15 Endocrine
   1. Structures
   2. Functions
   3. Diagnose different diseases
B. Chap 16 Blood
   1. Types of blood cells
   2. Solve a crime based on a blood type
C. Chap 17 The Cardiovascular System: The Heart
   1. Structures
   2. Functions
   3. Blood Flow
   4. Electrical Conduction
   5. Deduce what is wrong with a patient’s heart by the ECG strip
D. Chap 18 The Cardiovascular System: Blood Vessels
   1. Name the major arteries on a model
   2. Name the major veins on a model
   3. Demonstrate how to take blood pressure with a sphygmomanometer
E. Chap 19 The Lymphatic System
   1. Structures
   2. Functions
   3. Diseases
F. Chap 21 The Respiratory System
   1. Structures
   2. Functions
   3. Use a spirometer to measure your lung capacity
G. Chap 22 The Digestive System
   1. Structures
   2. Functions
   3. Analyze a victim’s last meal by running forensic tests
H. Chap 23 Nutrition, Metabolism, and Body Temperature Regulation
   1. Current nutritional trends
   2. Problems
   3. Reading labels
I. Chap 24 The Urinary System
   1. Structures
   2. Functions
   3. Diagnose what is wrong with various patient’s by their urine samples
J. Chap 25 Fluid, Electrolyte, and Acid-Base Balance
   1. Fluid balance
   2. Role of the brain
   3. Are all sports drinks the same
K. Chap 26 The Reproductive System
   1. Structures
   2. Functions
Grading Scale
A  900 – 1000 points
B  800 – 899 points
C  700 – 799 points
D  600 – 699 points
F  599 points or less

Course Evaluation
Final grades will be calculated according to the following criteria:

1. 5 quizzes given (drop one with the lowest grade) = 4 quizzes at 100 points each or 400 points possible
2. Mid-Term Practicum (hands-on comprehensive test) = 200 points
3. Completed Laboratory Notebook (all assigned exercises) = 200 points
4. Final Exam Practicum (hands-on comprehensive test) = 200 points

Course Requirements
1. Five quizzes given with four grades recorded
2. Mid-Term
3. Completed Laboratory Notebook
4. Final Practicum

Course Policies
1. No Cell Phones. Students that use their cell phones for any purpose during class time will have their phone confiscated. First offense is a verbal warning. The second offense is dismissal from class for the duration of the semester.
2. Late assignments will not be accepted. Students will receive a zero for assignments not completed.
3. No makeup exams.
4. Discipline Policy. In the case of disruptive behavior, the instructor reserves the right to ask you to leave the classroom. Examples include side conversations, excessive talking in class, passing written notes to another classmate, chatting on cell phones or text messaging, loud yawning, gum popping, etc.
   a. The instructor may not allow you to return to class if disruptive behavior continues.
5. Food and/or Drinks are not allowed in the classroom. LIT Policy prohibits food and drinks in the Multi Purpose Building classrooms.
6. **Attendance Policy.** Roll will be taken daily. Your attendance is documented by signing your initial on the class roll every day. Do not initial/sign the roll for another student.

7. **Class Arrival Times**
   a. **Tardy.** Please be prompt! Students are expected to be in your seat, on time, when roll is taken. On test days, the instructor reserves the right not to administer a test to a student who arrives more than 15 minutes late.
   b. 4 tardies = 1 absence
   c. **Class Departure Time.** Students are required to stay the entire length of each lecture class unless dismissed, as a class, by the instructor. Do not ask to “leave class early” for doctor’s appointments, picking up children from day care/ school, etc. Pre-arrange for these things ahead of time. Students are expected to be in class the entire class period.
   d. **Class Absence.** It is the student’s responsibility to obtain missed lecture notes and class handouts. The instructor will not supply notes or handout to students that are absent. Xerox machines are available at the Mary and John Gray Library.
   e. **Absence on a Test Day.** One test may be excused and/or dropped per semester (NO EXCEPTIONS!) **NO TEST MAKE-UPS!** Documentation in support of your absence is required.

**Disabilities Statement**
The Americans with Disabilities Act of 1992 and Section 504 of the Rehabilitation Act of 1973 are federal anti-discrimination statutes that provide comprehensive civil rights for persons with disabilities. Among other things, these statutes require that all students with documented disabilities be guaranteed a learning environment that provides for reasonable accommodations for their disabilities. If you believe you have a disability requiring an accommodation, please contact the Special Populations Coordinator at (409) 880-1737 or visit the office located in the Cecil Beeson Building, room 116B.

**Course Schedule** *(Tentative)*

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<thead>
<tr>
<th>Week of</th>
<th>Topic</th>
<th>Reference</th>
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<tbody>
<tr>
<td>Jan 11 - 15</td>
<td>Go over syllabus; Microscope Review (Parts and How to Use)</td>
<td>Instructor Handout</td>
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<tr>
<td>Jan 18 - 22</td>
<td>Lab 1 - “Endocrine Disorders”</td>
<td>Instructor Handout</td>
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<td>Jan 25 - 29</td>
<td>Quiz 1 Lab 2 -“Blood: Using CSI Techniques to Solve Crimes”</td>
<td>Instructor Handout</td>
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<td>Feb 1 - 5</td>
<td>Lab 3 -“The Case of the Unhappy Heart”</td>
<td>Instructor Handout</td>
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<td>Feb 8 - 12</td>
<td>Quiz 2 Lab 4-“Circulatory System: I’m Under Pressure!”</td>
<td>Instructor Handout</td>
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<td>Feb 15 - 19</td>
<td>Lab 5 -“Lymphatic System and New Diseases That Threaten Our Society”</td>
<td>Instructor Handout</td>
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<tr>
<td>Week of</td>
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<td>Feb 22 - 26</td>
<td>Lab 6- “Respiratory System: Take a Deep Breath!”</td>
<td>Instructor Handout</td>
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<td>March 1 - 5</td>
<td>Quiz 3&lt;br&gt;Lab 7 – “Digestion: What Was the Victim’s Last Meal?”</td>
<td>Instructor Handout</td>
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<td>March 8 - 12</td>
<td>Spring Break (No Classes)</td>
<td>n/a</td>
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<td>March 15 - 19</td>
<td>Lab 8- “Using the Latest Nutrition Research to Optimize Health”</td>
<td>Instructor Handout</td>
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<td>March 22 - 26</td>
<td>Mid-Term Practicum</td>
<td>n/a</td>
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<tr>
<td>March 29 – April 2</td>
<td>Lab 9 - “Urinary System: What is Wrong with These Patients?”</td>
<td>Instructor Handout</td>
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<td>April 5 - 9</td>
<td>Lab 10 - “Fluid Balance: Are All Sports Drinks Created Equal?”</td>
<td>Instructor Handout</td>
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<td>April 12 - 16</td>
<td>Lab 11 – Reproduction (Part I)</td>
<td>Instructor Handout</td>
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<td>April 19 - 23</td>
<td>Quiz 4&lt;br&gt;Finish Lab 11 (Part 2 Meiosis)</td>
<td>Instructor Handout</td>
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<td>April 26 - 30</td>
<td>Lab 12 – Study/Review Week&lt;br&gt;Finish all Labs!&lt;br&gt;Completed Lab Notebooks Due</td>
<td>n/a</td>
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<td>May 3 – 5 (Last Class Day) May 6 (Finals Begin)</td>
<td>Final Practicum</td>
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**Contact Information**

Varies by Instructor.