BIOL 104  HUMAN PHYSIOLOGY (4 units)  Fall 2013

The purpose of this class is to provide students with sufficient knowledge of human physiology in the hope that each person will wish to become an informed and aware health care consumer or provider. This does not merely include knowledge of vocabulary, but more importantly, it requires an intellectual facility with physiological principles such as negative feedback, synaptic transmission and active transport.

Instructor:  Stephen K. Henderson, PhD
Office:  Holt 248 – Yolo 277
Office Hours:  M W 9-10AM  Holt 248 and T Th 11-12PM Yolo 277
Contact me by the email through Blackboard

Lecture:  Monday, Wednesday, and Friday  11:00 – 11:50  PAC 144

Required Text:  Vander’s  HUMAN PHYSIOLOGY LOOSE LEAF EDITION WITH CONNECT PLUS

Connect Plus Registration:  http://connect.mcgraw-hill.com/class/bio104

Grading:  
Online Quizzes  150 points (15 @ 10 points each)
Learn Smart  150 points (15 @ 10 points each)
3 Mid Term Exams  150 points (50 points each)
Final Exam  75 points (comprehensive)
Lecture Total  525 points
Lab Total  300 points
Total Points Possible  825 points

Final grades will be curved and based on the distribution as shown below

100% – 93 = A  
92 – 90 = A- 
89 – 87 = B+  
86 – 83 = B 
82 – 80 = B-  
< 50% = F*
79 – 75 = C+  
74 – 70 = C  
69 – 65 = C-  
64 – 55 = D+  
54 – 50 = D  
< 50% = F*

Occasional in class assignments are possible throughout the semester. These assignments cannot be made up. If you miss class you can miss the assignment.
The chapter quizzes, Learn Smart and all exams are based on the reading assignments in the text and the material covered in lecture.

Please note:

1. Dropping a course after the end of the **fourth** week of classes requires a "serious and compelling" reason. Therefore, before you request a late drop for this class, obtain written documentation of your reason for withdrawal. I can not consider any late drop without verification of "serious and compelling" reason.

2. **No make up assignments without prior authorization from your lecture professor and your Laboratory Teaching Assistant.** All personal and medical emergencies must be adequately documented in accordance with university policy. All in-class work, quizzes or exams cannot be made up regardless of the excuse.

3. This course requires daily maintenance on your part. You should study your notes each day. You must monitor “open and close dates” for online quizzes and homework. Complete all online work on a reliable internet connection. You cannot makeup this work.

4. Lab attendance is mandatory. Labs cannot be made up. Online lab quizzes cannot be made up

5. Student Services has programs to improve test taking and study skills. Tutors are also available. Take advantage of these services as your tuition dollars pay for them.

**Americans with Disabilities Act:**
If you need course adaptations or accommodations because of a disability or chronic illness, or if you need to make special arrangements in case the building must be evacuated, please make an appointment with me as soon as possible, or see me during office hours. Please also contact Disability Support Services (DSS) as they are the designated department responsible for approving and coordinating reasonable accommodations and services for students with disabilities. DSS will help you understand your rights and responsibilities under the Americans with Disabilities Act and provide you further assistance with requesting and arranging accommodations.”
All work submitted in this course is expected to be that of the student or students assigned as a project work group and to be appropriately documented according to APA format recognizing the source of the material. Any formal written assignments may be required to be submitted to Turnitin (details will be provided by the instructor). Two key principles for this course – 1) do your own work and 2) cite references properly. If you have any questions, please contact me. Any student involved in cheating on exams or assigned projects either individually or in group work in this course may result in an automatic dismissal from and “F” for the course.

**Student Accountability**

Plagiarism is a serious academic offense and will not be tolerated. If you consult the work of others, fraternity files, the Internet or other sources you do so at your own peril. If you care to work on class assignments with another student(s) you must obtain my permission. WORKING WITH OTHERS ON HOMEWORK REQUIRES A VALID REASON AND MY CONSENT! IF YOU DO SO WITHOUT MY CONSENT IT IS CHEATING!

What is “Plagiarism”?

**Definition**: “In an instructional setting, plagiarism occurs when a writer deliberately uses 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” invites investigation and possible sanctions from the Office of Student Judicial Affairs.

All students are accountable to the California State University, Chico Policy on Academic Integrity, which can be viewed at [http://www.asu.edu/studentlife/judicial/integrity.html](http://www.asu.edu/studentlife/judicial/integrity.html). I advise all students to become intimately familiar with the University guides on how to avoid plagiarism ([http://www.csuchico.edu/sjd/integrity/Avoiding%20Plagiarism.pdf](http://www.csuchico.edu/sjd/integrity/Avoiding%20Plagiarism.pdf) and [http://www.csuchico.edu/sjd/integrity/cheating.pdf](http://www.csuchico.edu/sjd/integrity/cheating.pdf)) and how to avoid unauthorized collaboration ([http://www.csuchico.edu/sjd/integrity/Unauthorized%20Collaboration.pdf](http://www.csuchico.edu/sjd/integrity/Unauthorized%20Collaboration.pdf)).

As detailed in these policies, depending on the act(s) of cheating or plagiarism students will meet with the sanctions encouraged by the University: Disciplinary Probation, Suspension, Expulsion or Special Conditions. In addition, as noted in these policies, “a file of the student’s record remains in the Office of Student Judicial Affairs and could jeopardize future opportunities such as employment or entrance into a graduate program.”

Students should also develop familiarity with the **Student Code of Conduct**, which can be viewed at [http://www.csuchico.edu/sjd/policies/970.pdf](http://www.csuchico.edu/sjd/policies/970.pdf), and the **Policy on Use of Computing and Communications Technology**, which can be viewed at [http://www.csuchico.edu/computing/netpolicy.html](http://www.csuchico.edu/computing/netpolicy.html) and [http://www.csuchico.edu/prs/EMs/EM97/em97_18.htm](http://www.csuchico.edu/prs/EMs/EM97/em97_18.htm).
# Tentative Schedule for the Semester

<table>
<thead>
<tr>
<th>Lecture schedule:</th>
<th>Reading assignments</th>
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<tbody>
<tr>
<td><strong>August</strong> 26</td>
<td>Syllabus/Course Review</td>
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<tr>
<td>28</td>
<td>Chap 1 Homeostasis</td>
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<td>30</td>
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<tr>
<td><strong>September</strong> 2</td>
<td>Labor Day – No Class</td>
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<tr>
<td>4</td>
<td>Chap 2, Chemical Composition of the Body</td>
</tr>
<tr>
<td>9</td>
<td>Chap 3, Cellular Structure, Proteins and Metabolism</td>
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<tr>
<td>11</td>
<td>Chap 4, Movement of Molecules Across Cell Membranes</td>
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<tr>
<td>18</td>
<td>Chap 5, Control of Cells and Chemical Messengers</td>
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<tr>
<td>20</td>
<td><strong>Last Day to Drop without serious compelling reason</strong></td>
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<tr>
<td>23</td>
<td>Chap 6 Neural Signaling and Structure of the Nervous System/Exam Review</td>
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<tr>
<td>27</td>
<td><strong>Exam 1, Chapters 1-5</strong></td>
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<tr>
<td>30</td>
<td>Chap, 9 Muscle Physiology</td>
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<tr>
<td><strong>October</strong> 2</td>
<td>Chap 10, Control of Movement</td>
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<td>4</td>
<td>Chap 11, Endocrine System</td>
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<td>7</td>
<td>Chap 12, Cardiovascular Physiology</td>
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<tr>
<td>14</td>
<td>Review</td>
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<tr>
<td>25</td>
<td><strong>Exam 2, Chapters 6, 9, 10, 11 and 12</strong></td>
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<tr>
<td>28</td>
<td>Chap 13 The Respiratory Physiology/Exam Review</td>
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<td><strong>November</strong> 1</td>
<td>Chap 14 The Urinary System</td>
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<tr>
<td>4</td>
<td>Chap 15, Digestion and Absorption of Food</td>
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<td>8</td>
<td>Chap 16, Regulation of Organic Metabolism and Energy Balance</td>
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<td>11</td>
<td>Veteran’s Day – No Class</td>
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<td>13</td>
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<td>18</td>
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<td>20</td>
<td>Thanksgiving Break</td>
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<tr>
<td><strong>December</strong> 2</td>
<td>Chap 17, Reproduction</td>
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<td>4</td>
<td>Review</td>
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<td>16</td>
<td><strong>Final Exam, Chap 13, 14, 15, 16, 17 and Comprehensive Chapters Mon 12:00 – 1:50</strong></td>
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- This schedule is only a guideline and is **subject to change**. You are responsible for noting any changes presented by your professor. Failure to attend class will hinder your opportunity to experience success in this class.
The successful students will:
1) Thoroughly scan the reading assignment prior to lecture and make a rough outline of the topics that will be discussed that day. Leave sufficient space to fill in the outline during lecture. This will save time when you are trying to take notes during class, and it will illustrate which topics in each chapter are the most important.

2) Copy over lecture notes with book open. Use the appropriate sections of the text and figures to embellish the lecture notes with additional details. The best results are obtained if this task is completed prior to the next lecture. This will produce a neat and orderly set of notes for further study. A key to the quizzes is to answer the review questions at the back of each chapter.

This is an approved general education course in Area B2: Life Forms. All students need to complete at least 6 semester units with some laboratory activity.

General Education (GE) Objectives: The primary goals of the GE program are identified in the university catalogue and include improving reading, writing, critical thinking, instilling intellectual curiosity, broadening, enhancing, and integrating general knowledge about the universe and humanity, and showing the coherence and connectedness within the broad area of undergraduate education.

You may visit this website for more information about the GE requirements:
http://www.csuchico.edu/catalog/cat01/req/ge_req.html

The general goals of this course are:
1. address concepts of well being, health, and disease;
2. focus attention on how class, ethnicity, and gender affect selected health problems;
3. teach methods for distinguishing hearsay from valid information;
4. develop knowledge and skills for making effective decisions that enhance health, and facilitate change and understanding of public policy;
5. address the impact of biology, ethics, morality, politics, economics, and culture upon health, health care, and health policy.

Specific BIOL 104 Course Objectives:
At the completion of the course, the student will have:
- improved reading, writing, and critical thinking skills,
- the desire to learn more about organ systems and human biology
- an ability to apply a biological perspective to everyday life,
- an understanding of how individuals, communities, and political units can dramatic alter human health,
- an understanding of how genes and environment/lifestyle impact human health,
- an awareness of the importance of distinguishing between valid and incomplete or invalid information.

Student Learning Objectives (SLOs)

1) Describe characteristics of amphipathic molecules.
2) Define a covalent bond and its use in protein structure.
3) Define physiology as a discipline.
4) List the major functions of the Nervous system.
5) Define osmosis.
6) List the physiologically most important ions found in the body and how they are regulated.
7) Describe the organization of contractile proteins in a muscle cell.
8) Understand how resistance to blood flow in systemic vessels changes.
9) List the functions of the cell membrane.
10) Describe the organization of the nervous system.
11) Define a “motor unit”.
12) Understand basic receptor/ligand binding mechanisms.
13) Understand basic egg/sperm interactions.
14) Describe the production of ATP by mitochondria