

**BIOL 104 HUMAN PHYSIOLOGY (4 units) Fall 2009**

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.

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**Lecture:** Monday, Wednesday, and Friday 09:00 – 09:50 PAC 144

**Required Text:** Human Physiology with Essential Study Skills (custom text)  
Sherwood ISBN 13:978-1-4240-8735-8

<b>Grading:</b>	Online Quizzes	240 points (16 @ 15 points each Ch 1-9 & 13-19)
	Mid Term Exam	50 points (Ch 1-9)
	Final Exam	100 points (comprehensive)
	<b>Lecture Total</b>	<b>390 points</b>
	<b>Lab Total</b>	<b>370 points (Includes case study writing assignment points)</b>
	<b>Total Points Possible</b>	<b>760 points</b>

**Final grades will be curved based on the distribution as shown below where 100% = 840pts**

100% – 93 = A	760 – 707	79 – 75 = C+	607 – 570
92 – 90 = A-	706 – 684	74 – 70 = C	569 – 532
89 – 87 = B+	683 – 661	69 – 65 = C-	531 – 494
86 – 83 = B	660 – 631	64 – 55 = D+	493 – 418
82 – 80 = B-	630 – 608	54 – 50 = D	417 – 380
		< 50% = F*	379 – 0

**The chapter quizzes and the Final Exam are based on the reading assignments in the text and the material covered in lecture and laboratory.**

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."
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. Anyone with unexcused laboratory absences will have their final grade reduced by one letter grade for each absence.

<b>Lecture schedule:</b>		<b>Reading assignments</b>
August	24	Syllabus/Course Review
	26	Chap 1, Introduction to Physiology and Homeostasis
	28	
	31	Chap 2, Cell Physiology
September	2	
	4	<b>Furlough Day – No Class</b> <b>Read Chap 3, Plasma Membrane and Membrane Potential</b>
	7	<b>Labor Day – No Class</b>
	9	Ch 3, Plasma Membrane and Membrane Potential
	11	
	14	Chap 4, Principals of Neural and Hormonal Communication
	16	
	18	<b>LAST DAY TO DROP WITH SERIOUS COMPELLING REASON</b>
	21	Chap 5, The Central Nervous System
	23	
	25	Chap 6, The Peripheral Nervous System: Afferent Division; Special Senses
	28	
<b>October</b>	30	Chap 7, The Peripheral Nervous System: Efferent Division
	2	
	5	
	7	Ch 8, Muscle Physiology
	9	
	12	
	14	Chap 9, Cardiac Physiology
	16	
	19	
	21	Chap 13, The Respiratory System
	23	
	26	
	28	<b>Mid Term Exam Ch 1-9</b>
	30	<b>Furlough Day – No Class</b> <b>Read Chap 14, Urinary System</b>
<b>November</b>	2	<b>Campus Closed – No Class</b>
	4	Chap 14, The Urinary System
	6	
	9	Chap 15, Fluid and Acid Balance
	11	<b>Veteran’s Day – No Class</b>
	13	<b>Furlough Day – No Class</b> <b>Read Ch 16, The Digestive System</b>
	16	Chap 16, The Digestive System
	18	
	20	Chapter 17, Energy Balance and Temperature Regulation
	23-27	<b>Thanksgiving Break – No Class</b>
	30	
December	2	Chapter 18, Principles of Endocrinology: The Central Endocrine Glands
	4	<b>Furlough Day – No Class</b> <b>Read Ch 19, The Peripheral Endocrine System</b>
	7	Ch 19, The Peripheral Endocrine Glands
	9	
	11	
	14	<b>Comprehensive Final Exam Chap 13-19 &amp; 1-9 Questions Mon 10:00 – 11:50</b>

**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 stay current.**

**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](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 dramatically 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