

receiving either a C or a C+. However, if the class mean is 75% or higher, all scores of 90% and above will be at least an A-, all scores of 80% and above will be at least a B-, and all scores of 70% and above will be at least a C-.

If the point total on your exam was summed incorrectly, please see me **immediately**, and I will fix the problem. You should always ensure that your exam total is the sum of all the points you received on the exam.

If you think that you supplied a correct answer for a question, but did not receive points for that answer, you have **seven days** after receiving your graded exam in which to resubmit your exam to me, with a **written** explanation of which points you should receive and why you should receive them. I will not entertain verbal requests for additional points but am quite receptive if you write it out!

Exams will contain 10-20% multiple choice, 40-50% short answer, true-false, or matching questions. For all of the short-answer questions, **spelling counts**. If a word is spelled incorrectly, you will lose 1/4 of the points for that answer. Some of the short-answer questions will be based on diagrams/figures that you should be familiar with and able to interpret. The remaining portion of the exam (20-30%) will consist of essay-type questions; in many cases, you will be asked to illustrate your answer (please draw neatly!). Exam questions will be related to material covered in lecture; I will also give a few questions on every exam that will require you to integrate or apply knowledge in novel ways. Last year's exams will be available in the teaching and academic assistance center (TAAC). Since a number of students in this course have legitimate reasons for occasionally needing to schedule a make-up exam, **make-up exams will be given to students who see me at least 1 week before the exam, with a written explanation from their coach/instructor**. The Final Exam will cover the material since the previous exam (approx. 1/4th of the final), the remainder will be cumulative and cover the entire course. Policy for make-up exams on the Final is the same as what's in the catalog.

The laboratory portion of the course will comprise 1/4 of your grade, and will be determined from lab reports and lab quizzes. If you are re-taking this course, you may use your previous lab score rather than re-taking the lab – please see me if you are interested.

<u>Exams</u>	<u>Points</u>	<u>Lab Reports</u>	<u>Points</u>
Exam I	70	All	200
Exam II	110		
Exam III	110		
Exam IV	110		
Final Exam	<u>200</u>		
Total	600		

Total Points for Course: 800

Lab fees may be reimbursed only if the course is dropped within the first two weeks of the semester. A credit to your account will automatically be processed by Accounting Services.

How to Do Well:

This course covers a great deal of complex and interrelated material. You must understand topics covered early in the course to be able to comprehend information presented later in the course, and you will have to be able to integrate material that you learn throughout the course. Therefore it is imperative that you do not fall behind. You can take several steps to increase your ability to comprehend and remember material.

1). Do the assigned reading for a topic **before** the lecture covering that topic; being familiar with topics beforehand will allow you to get the most out of lecture. In addition, I will occasionally ask questions of class members to motivate you to do the reading before class. When reading a given chapter, first skim the “Chapter Summary” at the end of the chapter to get an overview of the important concepts, then read the chapter itself.

2). Although I will post detailed lecture notes on the web **before** each lecture, it will be to your advantage to **attend the lectures**. Why? First, much of the exam material is based on diagrams and illustrations and these will NOT be posted on the web and it will be to your advantage to work through these diagrams in class. ***This is not a correspondence- or web-based course.*** Students who attend class regularly get the most out of the course, and perform the best on the exams. Several of last year’s students found it best to jot down supplemental notes on the lecture notes provided, including any illustrations/diagrams, and then use these notes to review the material while fresh in their minds. Students really seemed to like this approach, and were able to listen in lecture and ask questions rather than furiously scribble down everything said in class. The lecture notes can also be used as study guides for exams. If you have last year’s lecture notes from a friend, fine, but enough changes are made each year that it will be worth your while to get the new ones. I apologize for not having these notes already prepared as a course-pack, but at least this way the notes are free! I will try to post 3 or so sets of notes at a time.

3) Be aware that the topics in this course build on each other. For example, you must understand electrochemical gradients to understand how neurons function, and you need to understand how neurons function to understand muscle function, and you need to understand muscle function to understand cardiac function. So make sure that when you study a topic, you understand it well enough to be able to remember it and use it later in the course. Do NOT fall behind in your reading and studying; you will find it difficult or even impossible to catch up once you fall behind in a course of this type. Another consensus of last year’s students was that there is a LOT of material covered and to learn this material, you WILL have to spend numerous hours outside of class reading and studying. Make sure you set aside regular times outside of class to work on the course material.

4) Attend the Help Sessions. This is your best opportunity to get help understanding the material, and my best opportunity to see if there are major problems with a particular subject. Even if you don’t think you have a question for the Help Session, you should attend anyway; your comrades may have noticed a problem that you haven’t yet. I will try to provide sufficient information about the structure and content of upcoming exams so that the Help Sessions don’t become “is yadda-yadda going to be on the exam?” sessions.

5) I recommend as study guides: a) the lecture notes, supplemented with your diagrams; b) last year's exams (at the TAAC and on reserve in the library); and c) the "facts and terms" and "reviewing concepts" exercises in each chapter of the web supplement to the textbook, www.prenhall.com/silverthorn.

Miscellaneous:

If you have a learning disability and require special teaching or testing conditions, **please see Dr. Stenkamp during the first week of class** so that we can make the needed arrangements.

If you are an observant member of a religion that has a holiday that conflicts with a lecture or a lab sometime during the semester, **please see Dr. Stenkamp during the first week of class** so that we can ensure that you do not miss any assignments or class notes. Also, please do not be late. We will begin class promptly at 8:30.

Organization of Course Material:

This course is built around two major themes: *Levels of Organization in the Body*, and *Homeostasis*. For each system covered, we will discuss basic structures and functions of that system, and then examine how the component parts work together to produce a fully functional system. We also will consider how that particular system contributes to maintaining homeostasis in the human body.

In order to understand how a system works, it is frequently useful to know what happens when that system fails to work properly. Therefore, in the class period prior to each exam, we will spend 20-25 minutes discussing the consequences of failure of some component of a system, a failure that results in human disease. There will always be a few questions on the exam that cover this discussion. The remainder of the period will be reserved as a question and answer period (Help Session) for those having last-minute difficulties with the material before the exam.

Please do not wait until the Help Session to begin studying; if you do this, you are likely to become hopelessly behind and the Help Session will be completely useless.

The material in this course is organized into 3 parts: *Molecular and Cellular Systems*; *Control Systems*; and *Organ and Body Systems*. In the first part, Molecular and Cellular Systems, we will discuss explicitly the two major themes of the course, review some essential chemical and quantitative information, and study basic cell physiology and metabolism. You will need to know this information before you can successfully study anything else in the course.

In the second part, Control Systems, we will talk about the two major control systems of the body: the nervous system, and the endocrine system. You will need to know this information in order to understand how each of the organ systems is controlled and regulated. In the third and largest part of the course, Organ and Body Systems, we will study each of the major systems of the body, and the manner in which they are regulated: Muscular; Cardiovascular; Respiratory; Digestive; Urinary; and Reproductive. There will be some redundancy with the physiology topics that were covered in Human Anatomy, since some review will be necessary to provide context for the new information. And since many students taking this course took a Human Anatomy course elsewhere, we are teaching Human Physiology with the assumption that students have not had any previous exposure to college-level physiology.

Biology 121 Course Schedule; Spring 2003

Date **Topic** **Professor** **Text**

Molecular and Cellular Systems

Wed, Jan 15	1) Introduction, Homeostasis	Stenkamp	Chapter 1
Fri, Jan 17	2) Chemistry Review	Stenkamp	Chapter 2
Mon, Jan 20	Holiday		
Wed, Jan 22	3) Cells and Tissues	Stenkamp	Chapter 3
Fri, Jan 24	4) Cell Membranes	Stenkamp	Chapter 5
Mon, Jan 27	5) Cellular Catabolism		Chapter 4
Wed, Jan 29	6) Integration and Regulation of Cellular Activities		Chapter 6
Fri, Jan 31	7) Physiology of Cystic Fibrosis; Help Session I	Stenkamp	Gray boxes p. 110, 115
<i>Mon, Feb 3</i>	<i>Exam I</i>		

Control Systems

Wed, Feb 5	8) Neuronal Physiology/Graded and Action Potentials	Stenkamp	Chapter 8, pp 214-233
Fri, Feb 7	9) Synapses, Neurotransmitters and Neuronal Integration	Stenkamp	Chapter 8, pp 234-245
Mon, Feb 10	10) Afferent PNS; General Senses	Stenkamp	Chapter 10, pp 309-319; 298-306
Wed, Feb 12	11) Afferent PNS; Special Senses I	Stenkamp	Chapter 10, pp 281-195
Fri, Feb 14	12) CNS/Learning and Memory	Magnusson	Chapter 9; also p 243 of Chapter 8
Mon, Feb 17	Holiday		

Wed, Feb 19	13) Afferent PNS; Special Senses II	Stenkamp	Chapter 10, pp 306-308; 295-297
Fri, Feb 21	14) Efferent PNS	Stenkamp	Chapter 11
Mon, Feb 24	15) Reflexes	Stenkamp	Chapter 13
Wed, Feb 26	16) Introduction to the Endocrine System		Chapter 7; Chapter 21, pp 664-670
Fri, Feb 28	17) Physiology of Drug Addiction; Help Session II	Stenkamp	Gray boxes on pp 327, 328, 336, 340
Mon, Mar 3	Exam II		

Organ and Body Systems

Wed, Mar 5	18) Skeletal Muscle Physiology	Stenkamp	Chapter 12, pp 345-359
Fri, Mar 7	19) Whole (Skeletal) Muscle Physiology	Stenkamp	Chapter 12, pp 360-369
Mon, Mar 10	20) Smooth/Cardiac Muscle Physiology	Stenkamp	Chapter 12, pp 370-377
Wed, Mar 12	21) Cardiac Physiology – Electrical Activity	Stenkamp	Chapter 14, pp 423-435
Fri, Mar 14	22) Cardiac Physiology – Mechanics and Control	Stenkamp	Chapter 14, pp 403-420
Mar 17-21	Spring Break		
Mon, Mar 24	23) Blood Vessels	Ingermann	Chapter 15
Wed, Mar 26	24) Blood Vessels, Cont.	Ingermann	Chapter 15
Fri, Mar 28	25) Composition of Blood	Ingermann	Chapter 16
Mon, Mar 31	26) Respiratory System I	Ingermann	Chapter 17

Wed, Apr 2	27) Respiratory System II	Ingermann	Chapter 17
Fri, Apr 4	28) Respiratory System III	Ingermann	Chapter 17
Mon, Apr 7	29) High Altitude Physiology; Help Session III	Ingermann	Blue box on p 535
Wed, Apr 9	Exam III		
Fri, Apr 11	30) Urinary System I	Ingermann	Chapter 18
Mon, Apr 14	31) Urinary System II	Ingermann	Chapter 18
Wed, Apr 16	32) Fluid/Mineral Balance	Ingermann	Chapter 19
Fri, Apr 18	33) Acid/Base Balance	Ingermann	Chapter 19
Mon, Apr 21	34) Digestion I		Chapter 20
Wed, Apr 23	35) Digestion II		Chapter 20
Fri, Apr 25	36) Digestion III/Assimilation		Chapter 21, pp 648-663
Mon, Apr 28	37) Energy Balance/Thermoregulation		Chapter 21, pp 639-648
Wed, Apr 30	38) Physiology of Diabetes; Help Session IV		Chapter 21, pp 657-661
Fri, May 2	Exam IV		
Mon, May 5	39) Reproduction I	Ingermann	Chapter 24
Wed, May 7	40) Reproduction II; Pregnancy	Ingermann	Chapter 24
Fri, May 9	41) Final Review session	Ingermann	
?	Final Exam		