

# HUMAN PHYSIOLOGY - BIO 246

## Spring 2008

**Instructor:**

Dr. William I. Lutterschmidt  
Department of Biological Sciences  
Lee Drain Building, Room 114A  
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**Lecture:** T and Th 0800 - 0930 h  
Lee Drain Building (Room 220)

**Laboratory:** Lab 01: Th 1200 - 1400 h  
Lab 02: Th 1400 - 1600 h  
Lee Drain Building (Room 109)

**Office Hours:** Office hours are posted on my office door. Scheduling an appointment to see the instructor is recommended.

**Required Textbooks:**

Widmaier E.P., H.Raff, and K.T. Strang. 2008. Human Physiology: The Mechanisms of Body Function, 11<sup>th</sup> Edition. McGraw-Hill Co. Pp. 827.

Lutterschmidt, W.I. and D.I. Lutterschmidt. 2008. Laboratory Exercises in Human Physiology: A Clinical and Experimental Approach, 2<sup>nd</sup> Edition. McGraw-Hill Co. Pp. 224.

**COURSE DESCRIPTION**

**Prerequisites:** A minimal grade of C or better in Human Anatomy (BIO 245) and a course in chemistry are highly recommended. This course may not be applied for biology major credit and is open only to students pursuing degrees in nursing, physical therapy, physical education, or other related health fields.

**Lecture:** This lecture course will help students identify and understand the functional mechanisms of several important human organ systems and how these systems maintain homeostasis. This course is also designed to emphasize a clinical knowledge of physiology and clinical techniques as would be needed by students studying nursing, physical therapy, and related fields.

**Laboratory:** Laboratory sessions are an important part of your educational experience and will therefore account for a fourth of your grade in this course. Laboratory sessions will help you gain an understanding and appreciation of scientific investigation as you learn procedures and techniques used to study human physiology. Laboratory sessions will also introduce critical aspects of experimentation and how to collect, analyze, and evaluated data. Laboratory regulations, procedures, and requirements will be outlined in detail by your laboratory instructor during your first laboratory meeting.

**STUDY AIDS AND TECHNIQUES**

Scheduled lectures and laboratories are attached. Success in this course is directly proportional to the amount of time and effort dedicated to reading course material and studying. You should adopt a study schedule that allows for **three hours of study for each hour of lecture**. Textbook reading assignments are most important and should be completed prior to lecture. The textbook also includes study aids. Each chapter ends with a summary and questions which should receive you attention. Use of these aids will help you master the material in each chapter.

## EXAMINATIONS

There will be a total of three examinations (100 points each) which will assess your knowledge and understanding of lecture material and particular topics presented in the textbook. A comprehensive final exam (200 points) will be given during the week of scheduled examinations and will examine if students have mastered an understanding of the course material presented throughout the semester.

## HOMEWORK QUIZZES

Each chapter ends with a summary and a set of review questions. Upon completing the lectures on a chapter, the *Summary, Key Terms, Clinical Terms, Review Questions, Test Questions, and Thought Questions* for that chapter should be completed as homework prior to the next lecture. These questions will help you evaluate your understanding of material presented in the chapter. Your knowledge and understanding of each chapter may be evaluated with a 10 point homework quiz. A total of ten homework quizzes (10 points each) will be given over the course of the semester and will consist of 100 points of your final point total in this course. Thus your homework quiz grade will be equivalent to an exam grade. *All homework quizzes must be taken when given in class and there will be no make-ups. Missed quizzes will be a reflection of your attendance record for this course.*

## GRADING

Exam 1	100 points (12.5%)
Exam 2	100 points (12.5%)
Exam 3	100 points (12.5%)
Comprehensive Final Exam	200 points (25.0%)
Homework Quizzes	100 points (12.5%)
Laboratory	200 points (25.0%)
<b>Course Point Total</b>	<b>800 points (100%)</b>

## MISSED EXAMINATIONS

There will be *no make-up examinations*. If you miss an examination or assignment for medical reasons, a statement of your illness signed by your attending physician will be required for grading. If you miss examinations or assignments because of a non-medical emergency, submit appropriate *written* documentation. On the basis of the excuse, your missed examination may not count against you. Decisions concerning the missed examination and how to appropriately calculate your final grade will be under the discretion of the instructor. Excuses must be provided to the instructor no later than one week after the missed examination or laboratory assignment. *Excuses submitted after the deadline will not be accepted.*

## WITHDRAWAL POLICY AND ACADEMIC DISHONESTY

If grades of W(P), W(F), or I, are requested, University policy *will be* followed. Regulations and responsibilities stated in the *Student Code* and *Faculty Handbook* will be followed in the event of academic dishonesty.

## STUDENTS WITH DISABILITIES

Students with disabilities that may prevent them from fully demonstrating their abilities should contact the instructor as soon as possible to discuss the accommodations necessary to facilitate full participation and to ensure the each student's educational opportunity.

**NOTE:** This syllabus is subject to change at the discretion of the instructor.

# Syllabus

Week	Date	Topic	Textbook Readings
1	1-17 1-23	Introduction to the Course / What is Physiology? Homeostasis / Body Function and Organization	Chapter 1
2	1-22 1-24	Chemical Composition of the Body “	Chapter 2
3	1-29 1-31	Cell Structures and Genetic Control “	Chapter 3
4	2-5 2-7	“ Movement of Molecules Across Cell Membranes	“ Chapter 4
5	2-12 2-14	“ Control of Cells by Chemical Messengers	“ Chapter 5
6	2-19 <b>2-21</b>	“ <b>EXAM 1</b>	<b>Chapters 1 - 5</b>
7	2-26 2-28	Neuronal Signaling - Structure of the Nervous System “	Chapter 6 “
8	3-4 10-6	Sensory Physiology “	Chapter 7 “
9	<b>3-11</b> <b>3-13</b>	<b>SPRING BREAK</b> “	
10	3-18 3-20	Muscle Physiology “	Chapter 9
11	3-25 <b>3-27</b>	Control of Body Movement <b>EXAM 2</b>	Chapter 10 <b>Chapters 6, 7, 9, 10</b>
12	4-1 4-3	Endocrinology ”	Chapter 11 “
13	4-8 4-10	Cardiovascular Physiology “	Chapter 12 “
14	4-15 4-17	Respiratory Physiology “	Chapter 13 “
15	4-22 4-24	“ <b>EXAM 3</b>	“ <b>Chapters 11 -13</b>
16	4-29 5-1	Kidney Function and Osmoregulation “	Chapter 14 “
17	5-6 5-8	Digestion and Absorption Metabolism and Energy Balance	Chapter 15 Chapter 16
17	<b>5-15</b>	<b>FINAL COMPREHENSIVE EXAM (0800 - 1000 h)</b>	