

Bloomsburg University of Pennsylvania  
Bloomsburg, PA 17815

**Anatomy and Physiology I**  
**Biology 50-173**  
**Spring 2006**

Instructor: John M. Hranitz, Ph.D.	Office hours: MW 9-10 a, MW 1-2 p, T 11-12, or by appointment.
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**Required Textbooks:** Martini, F.H. 2006. Fundamentals of Anatomy and Physiology, 7<sup>th</sup> Edition. Benjamin Cummings Publ. San Francisco.

**Packaged with your text book:**

InterActive Physiology and Anatomy 360°, two CD-ROMs to accompany Fundamentals of A&P. The CD contains tutorials, animations, case studies, and test questions. You may load the CD-ROM on computers on the second floor of the Andruss library.

**Companion Web Site:** [www.anatomyandphysiology.com](http://www.anatomyandphysiology.com)

The purchase of the textbook entitles the owner to an 18-month subscription to the web site. The pre-assigned access code is in the front of your text before the title page. After going to this web site and typing in the access code, you will select your own ID and password. This web site includes quizzes, image banks, links to other web sites, guided activities, and an e-book version of the text.

**Lecture Guide for Anatomy & Physiology I (required).** Spring 2006. The lecture guide provides lecture outlines and pictures to assist in note-taking.

Optional: Study Guide to Accompany Fundamentals of Anatomy and Physiology, Sixth Edition by Charles M. Seiger. 2004. Benjamin Cummings Publ. San Francisco.

A.D.A.M. Interactive Anatomy Student Laboratory Guide by Lafferty and Panella, 2<sup>nd</sup> Edition. (On reserve at Andruss Library under reserve numbers: 1997, 1998, 1999, 2000)

Other Materials: colored pens or pencils

**COURSE DESCRIPTION AND OBJECTIVES**

Anatomy and Physiology is an introduction to human form and function for students planning careers in exercise science, medicine, or the allied health professions. The first semester of the two-semester series, Anatomy and Physiology I, covers body organization, the chemical basis of life, the cell, tissues, integumentary system, skeletal system, muscular system, nervous system, and special senses. Lecture introduces students to terminology, anatomy, and physiological mechanisms. Laboratory provides students with hands-on experiences to better visualize topics from lecture.

**COURSE ORGANIZATION**

Anatomy and Physiology I is a 4 credit course consisting of three (3) 50-minute lectures per week and one (1) 3-hour laboratory per week.

Lecture: MWF 12:00-12:50 pm in HSC 134 (Dr. Hranitz)

Laboratory: Labs 1-7 in **HSC 163 (Maroon Lab)** and Labs 8-12 in **HSC 161 (Gold Lab)**

**Lab Section Times and Instructors:**

01- Tu 9:30a-12:15p (Ms. Diltz)      02 - Tu 2-4:50 p (Dr. Wassmer)      03 - W 1-3:50p (Dr. Amin)  
04 - W 6-8:50p (Dr. Wassmer)      05 - R 9:30a-12:15p (Ms. Diltz)      06 - T 6-8:50p (Dr. Amin)

**A & P I LABORATORY**

**Textbook:**      **Required:**      The Joy of Lab: Anatomy and Physiology I, Surmacz, Till, Shonis, and Hranitz. (2005) Burgess Publishing Company. Available shrink-wrapped with the textbook in the BU Bookstore.

**Optional:**      A Photographic Atlas for the Anatomy & Physiology Laboratory, 4<sup>th</sup> Edition. Van de Graaf and Crawley (2002), Morton Publishing Co.

**Materials:**

**Required for each of two students:**  
Dissection Kit (larger dissecting kit available at the University Store in school supplies area.)

**Bring the following to EACH lab session:**

1. Lab manual (read lab exercises before lab)
2. Lecture guide and text (to help relate lecture to the hands-on experiences in the lab)
3. Dissecting kit (shared by 2 students)
4. Lab notebook
5. Pencils, pens, colored pencils.
6. Gloves for dissection (These may be purchased at the University Store (\$0.19 per pair) or by the box at the local pharmacy)

**COMMUNICATION**

**Lecture:** Announcements will typically be made at the beginning of lecture each day. Course handouts, supplements, etc. will be made available on my BU web site (<http://facstaff.bloomu.edu/jhranitz>) or Blackboard. I also encourage e-mail communication by using Blackboard. All students have a Blackboard account (see below). Grades will be posted in Blackboard. Practice quizzes and practice exams will be posted on the Blackboard web site.

**Laboratory:** Announcements will be made in laboratory. Sign-up sheets for laboratory exams will be posted on the bulletin board outside of the lab (HSC 161-162). Check this bulletin board for other announcements throughout the course.

**Internet Resources:** Students will be required to use two internet resources throughout the semester:

1) Blackboard (<http://Blackboard.bloomu.edu/>): The Blackboard web site is a virtual classroom/e-learning system that I will use to post practice quizzes, practice exams, and to post grades. In order to access Blackboard, simply go to the web site and log in with your user id and password. E-mail me if you have difficulties with access to Blackboard.

2) A&P I at BU (<http://facstaff.bloomu.edu/jhranitz>): This is a web site that I maintain to provide class resources. All lecture guides and links to internet resources will be available here. I provide files in the Adobe Acrobat Reader format (5.0), PDF files. If you do not already have Adobe Acrobat Reader 5.0, it is available (freeware) on my web site. You will have to download the installation file and install the reader on your computer. To access the A&P I materials go to the web site and select the "Courses" link on the page.

**ASSIGNMENTS** - Assignments function to help you prepare for exams and are from a variety of sources to allow you to see course material from many different perspectives. Assignments will not be collected or graded.

**Lecture:** Reading assignments appear at the beginning of each chapter in the lecture guide. Lecture assignments are outlined in the lecture guide at the end of each chapter. Questions are from three sources: lecture guide (my own, home-made questions), textbook (end of the chapter review questions with answers in Appendix I), and study guide (optional study guide).

**A.D.A.M. Interactive Anatomy Assignments:** A.D.A.M. interactive anatomy is a multimedia software tool containing images of 20,000 anatomical structures dissectible in hundreds of layers and in four views. The packet A.D.A.M.'s APPLE describes how to access A.D.A.M. in the Andrus library and outlines various assignments using the A/A Student Lab Guide, 2<sup>nd</sup> Edition by Panella and Rafferty. A.D.A.M. is another tool by which you may review the anatomy for the course.

**InterActive Physiology/Anatomy 360°:** Two Interactive Physiology Modules (CD-ROMs) can help you understand the physiology (function, generally accepted as difficult) part of the course. These two modules will help with two of the more difficult topics: Muscle Physiology and Nervous System.

**Laboratory Assignments:** Reading assignments in the lab manual are outlined on the laboratory syllabus. It is essential that you READ EACH EXERCISE BEFORE COMING TO LABORATORY.

**ATTENDANCE** - Attendance of all lectures is required of all students. If you are absent, YOU are responsible for all information, announcements, handouts, quizzes, etc. from the classes missed. This includes being prepared with assignments or prepared for quizzes on your return. **Attendance will be taken on unannounced dates (0.5% per date).** Please be courteous in the following ways: (1) **no listening devices (e.g., walkman), (2) turn off cell phones, (3) nobody is permitted to sit in the back rows, (4) arrive to lecture on time, (5) NO INTERPERSONAL CONVERSATIONS DURING LECTURE.**

**GRADING** - For an average grade, I expect students to: 1) attend all classes, 2) work hard, and 3) master the basic material. I encourage you to set your goal on more ambitious grades and work to acquire the corresponding level of mastery of A&P. All grades are explained below.

A(>95%)/A-(89-94.9%)	Excellent	You are able to synthesize and apply the material in new situations.
B+(87-88.9%)/B(84-86.9%) B-(79-83.9%)	Good	You know and understand and can apply the material sometimes.
C+(75-78.9%)/C(69-74.9%)	Average	You know and understand the material. You are not as skilled in synthesis and application.
D+(65-68.9%)/D(59-64.9%)	Below	You have learned some of the material but do not have average competency in all the concepts.
E (<59%)	Failing	You may have learned, but not to a passable level.

## Schedule of Points to be Earned:

Evaluation Component	Tentative Date	Percent Value of Total Grade
	TBA=to be announced	
Unit 1 Exam	Monday - February 13, 2006	12%
Unit 2 Exam	Monday - March 6, 2006	12%
Unit 3 Exam	Friday - March 31, 2006	12%
Unit 4 Exam	Friday - April 28, 2006	12%
Final Exam	Tuesday, May 9, 2006	20%
Unit Quizzes <sup>1</sup>	TBA: complete before the unit exam	2%
Attendance	Taken four times on unannounced dates	2%
Laboratory (28%)	Lab Exam 1 - during lab on February 7-9.	6%
	Lab Exam 2 - W: March 1	6%
	Lab Exam 3 - W: April 5	6%
	Lab Exam 4 - W: May 3	6%
	Prequizzes (lowest prequiz dropped)	4%
Total Possible Percentage		100%

<sup>1</sup> = UNIT QUIZZES: two to four (2-4) quizzes per unit will be assigned. These must be completed in Blackboard (online).

Quizzes should be completed as soon as you have time to study the notes on the topic. **Recommended dates will be announced in class and in Blackboard.** All quizzes for each unit must be completed before the lecture exam for that unit (i.e., three unit 1 quizzes must be completed before the Unit 1 lecture exam, etc.). The lowest unit quiz will be dropped.

**EXAM POLICIES** - (1) Unit Exams will be 50 multiple-choice questions, each question worth two points. (2) **No make-up exams** will be given without prior arrangements with the instructor along with a documented and approved absence. (See The Pilot for the standards for approved absences.) (3) Make-up exams may be **essay format (at my discretion)**. (4) Bring a #2 pencil and a good eraser to the exams. (5) The exam results (scantron) will be returned but the exam questions will not be returned. **You are encouraged to review the exam questions** during my office hours (or by appointment if office hours conflict with your schedule). The Final Exam is part new material (about 30%) and part comprehensive (about 70%).

**ACADEMIC INTEGRITY POLICY** - (taken in part from the BU policy #3512; please see The Pilot, Student Standards for the full policy): "Academic integrity refers to the adherence to agreed upon moral and ethical principles when engaging in academic or scholarly pursuits. The university's academic integrity policy is part of an effort to nurture a community where trust, honesty, and personal integrity guide all of our dealings with one another. Personal integrity is vital to our pursuit of educating and becoming educated."

The policy then describes various forms of academic dishonesty (I offer a few examples below):

"Cheating: (a) Using notes, study aids, or information on an examination which are not approved by faculty; (b) Altering graded work after it has been returned and submitting the work for regrading; (c) Allowing another person to do one's work and submitting that work under one's own name; (d) Submitting identical or similar papers for credit in more than one course without prior permission from the course instructors."

"Impersonation: (a) Representing oneself as another student in an examination; (b) Signing another's name on an attendance roster; (c) In general doing the work required of another student and/or allowing another to do your work."

“Misrepresenting Circumstances: (a) Lying; (b) Presenting a professor (verbally or in writing) with false or incomplete information.”

Because **academic integrity is the cornerstone of a fair grading system** wherein you and your peers are evaluated honestly, I WILL support the letter and the spirit of the university policy strictly. This means I will take preventative measures as well as report violations to the Office of Student Standards. If you have questions about what constitutes academic dishonesty, ask in advance. Ignorance is no excuse.

**SPACE FOR GRADE RECORD-KEEPING**

Evaluation Component	(A) Earned Percentage on Evaluation (%)	(B) Percentage of Total Score X	(C) Percentage Points Earned (%)										
Unit 1 Exam		x 0.12											
Unit 2 Exam		x 0.12											
Unit 3 Exam		x 0.12											
Unit 4 Exam		x 0.12											
Final exam		x 0.20											
Unit Quizzes (drop lowest)	<table border="1" style="width:100%; height:100%; border-collapse: collapse;"> <tr> <td style="width:12.5%; height:20px;"></td> <td style="width:12.5%;"></td> <td style="width:12.5%;"></td> <td style="width:12.5%;"></td> <td style="width:12.5%;"></td> <td style="width:12.5%;"></td> <td style="width:12.5%;"></td> <td style="width:12.5%;"></td> <td style="width:12.5%;"></td> <td style="width:12.5%;"></td> </tr> </table>											avg. x 0.02	
Attendance	<table border="1" style="width:100%; height:100%; border-collapse: collapse;"> <tr> <td style="width:25%; height:20px;"></td> <td style="width:25%;"></td> <td style="width:25%;"></td> <td style="width:25%;"></td> </tr> </table>					0.5% each							
Lab Prequizzes	<table border="1" style="width:100%; height:100%; border-collapse: collapse;"> <tr> <td style="width:12.5%; height:20px;"></td> <td style="width:12.5%;"></td> <td style="width:12.5%;"></td> <td style="width:12.5%;"></td> <td style="width:12.5%;"></td> <td style="width:12.5%;"></td> <td style="width:12.5%;"></td> <td style="width:12.5%;"></td> <td style="width:12.5%;"></td> <td style="width:12.5%;"></td> </tr> </table>											avg. x 0.04	
Lab Exam 1		x 0.06											
Lab Exam 2		x 0.06											
Lab Exam 3		x 0.06											
Lab Exam 4		x 0.06											
Total		1.00											

**A&P I LECTURE SCHEDULE**–Spring 2006

DATE & WEEK		TOPIC	CHAPTER	PAGES
16-20 Jan	1	<b>MLK Day/</b> Introduction & Chemistry	Preface, 1, 2	xxii-xxxv, 1-14
23-27 Jan	2	Chemistry & Cell Biology	2	26-33, 36-56
30 Jan - 3 Feb	3	Cell Biology, Tissues, & Integument	3,4, 5	63-101, 107-132, 153-170, 173-175
6-10 Feb	4	Integument, Osseus Tissue	5, 6	179-201
13-17 Feb	5	<b>Unit 1 Exam/</b> Skeletal Structure & Axial Skeleton	6, 7	181-182, 205-234
20-24 Feb	6	Axial Skeleton & Appendicular Skeleton	7,8	238-255
27 Feb - 3 Mar	7	Articulations, Muscular System	9,11	255-268, 326-372
6-10 Mar	8	<b>Unit 2 Exam /</b> Muscular System & Muscles	11, 10	326-372, 283-320
13-17 Mar	9	<b>SPRING BREAK</b>		
20-24 Mar	10	Muscular System & Muscles	10	283-320
27-31 Mar	11	Muscular System & Muscles, Neural Tissue <b>Unit 3 Exam</b>	10, 12	379-387
3-7 Apr	12	Neural Tissue	12	390-423,
10-14 Apr	13	Brain/ <b>SPRING WEEKEND</b>	14	451-489
17-21 Apr	14	Brain and Cranial Nerves	14	451-489
24-28 Apr	15	Spinal Cord, Integration <b>Unit 4 Exam</b>	13, 15	421-446, 390-415
1-5 May	16	Integration, Autonomic Nervous System/ <b>READING DAYS</b>	15, 16	495-513, 517-534
8-12 May	17	Final Exam (Tues, May 9 @ 8-9:50 am)		

**A&P I LABORATORY SCHEDULE**–Spring 2006

01- Tu 9:30a-12:15p (Ms. Diltz)

02 - Tu 2-4:50 p (Dr. Wassmer)

03 - W 1-3:50p (Dr. Amin)

04 - W 6-8:50p (Dr. Wassmer)

05 - R 9:30a-12:15p (Ms. Diltz)

06 - T 6-8:50p (Dr. Amin)

WEEK	LAB	EXERCISE	DATES
1	1	The Human Body in the Laboratory (also read TEXT, p 15-22; do STUDY GUIDE, p7-9; 12).	17-19Jan
2	2	Microscopy: Observing the Details	24-26 Jan
3	3	It's A Cell World	31 Jan - 2 Feb
4	4	Lab Exam 1 (Labs 1-3): DURING REGULAR LAB TIME – followed by Integumentary System Lab	7-9 Feb
5	5	Skeletal System (Part 1)	14-16 Feb
6	6	Skeletal System (Part 2)	21-23 Feb
7		Lab Exam 2 (Labs 4-6): Wednesday (Mar 1) BY APPOINTMENT - <b>sign up for a time</b> to take the exam.	28 Feb - 2 Mar
8	7	Anatomy of Muscular System	7-9 Mar
9		<b>SPRING BREAK</b>	13-17 Mar
10	8	Structure and Function of Skeletal Muscle and Introduction to Physiological Instrumentation	21-23 Mar
11	9	Muscles in Motion	28-30 Mar
12		Lab Exam 3 (Labs 7-9): Wednesday (Apr 5) BY APPOINTMENT - <b>sign up for a time</b> to take the exam.	4-6 Apr
13	10	Neuroanatomy	11-13 Apr
		<b>SPRING WEEKEND</b>	
14	11	Neurophysiology	18-20 Apr
15	12	Special Senses	25-27 Apr
16		Lab Exam 4 (Labs 10-12): Wednesday (May 3) BY APPOINTMENT - <b>sign up for a time</b> to take the exam.	3 May