

**Course Number/Title** BI276 Anatomy & Physiology I with  
BI276L Anatomy & Physiology I Laboratory

**Department:** Natural & Applied Sciences      **Year:** Fall 2012

**Credit Hours:** 4

**Required Texts:** Marieb, E. & Hoehn, K Human Anatomy and Physiology.  
9<sup>th</sup> ed. San Francisco: Benjamin Cummings Publishing;  
2013 ISBN 978-0-321-7426-8

**Recommended Resources:** A Visual Analogy of Anatomy and a for  
Physiology.

**Computer Requirements:** Worksheets are posted in PDF. Adobe  
Acrobat required to open

**Instructor:** Sandra Hill

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**CCC Website:** [www.colbycc.org](http://www.colbycc.org)

**Office Hours:** Posted on office door in Thomas Hall Office Complex

<b>Days/Time:</b>	<b>Room:</b>	Lecture	M-W 9:25 – 10:40 TH 411
			1:40 – 2:55 TH 411
	Lab	T	12:15 – 1:35 TH406
		W	3:00 – 4:20 TH406
		R	1:40 – 3:00 TH 406

**Placement:** Freshman/Sophomore

**Pre-requisite:** Completion of Biology and Chemistry strongly recommended

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### **Course Rationale:**

This introductory course, the first in a two part continuum, is designed to provide comprehensive coverage of the basics of human anatomy and physiology. This will encourage the learner to integrate details of form and structure with the mechanisms of function involved to provide a cohesive and broad understanding of the human body in the state of general health. This course is recommended for those pursuing careers in the biological sciences, the allied health sciences, and as a science elective.

**Description** This course introduces the integration of structure and function within the human body. An emphasis is placed on the correlation of gross and microscopic structure with functional maintenance of the following human organ systems. A holistic approach is used to encourage the student to develop an integrated understanding of the human body. Anatomy and Physiology I includes six hours of lecture and three hours of laboratory per week

This is a fast paced course and it is best if you have some general biology, chemistry and math background. **The student in this class will have to display independence and motivation.** This is a hybrid course with traditional lecture supplemented with online assignments, activities, and tests. Occasionally there will be an online lecture consisting of voice-over Power Point slides in order for the class to take part in group activities. There is also a weekly lab component which you will be required to fulfill; some online, some in the laboratory.

### **Course Outline**

The Human Body  
Biochemistry  
Cells  
Tissues  
Integumentary System  
Bones and Skeletal Tissues  
Skeleton  
Joints  
Muscles and Muscle Tissue  
Muscular System  
Fundamentals of the Nervous System and Nervous Tissue  
Nervous System  
Central Nervous System  
Peripheral Nervous System and Reflex Activity  
Autonomic Nervous System

## Assessed Lecture Outcomes

Upon completion of the class the student will be able to:

1. Identify the structural levels of the body
2. Identify the body planes and cavities including the regions of the abdominopelvic cavity
3. Explain the basic concepts of chemistry and the chemical changes as they relate to living matter
4. Explain the concept of homeostasis and how the body reacts to disturbances of the this state
5. Identify the major components and functions of human cells, body tissues, and membranes
6. Identify the structures and functions of the integumentary, skeletal, and muscular
7. Identify the various components and functions of the central, peripheral, and autonomic nervous systems

## Course Learning Objectives

Upon completion of this course (completion of parts I and II as a whole), the student will be have an understanding of a broad scope of topics essential to provide a firm basis for future expansion and application in the field of Human Anatomy and Physiology

## Competencies

This class will meet the course competencies set by the State of Kansas as adopted from Human Anatomy and Physiology Society

## Method of Instruction

In an effort to accommodate a variety of learning styles, the following methods of instruction will be used:

- a. Class lecture
- b. Class discussion
- c. Textbook reading - **all required readings are the student's responsibility and will be included on exams**
- d. Videos and DVDs
- e. Computer/Internet activities
- f. Anatomical model building
- g. Laboratory experiments & exercises
- h. Other Classroom activities

## Method of Evaluation

### Lecture - 80% of Overall Course Grade

There are 7 major examinations given during the semester (70% of lecture grade). Each examination will be based on a 100-point scale, and test items will consist of multiple choice questions. There may also be bonus questions that will usually be essay.. There will also be required homework assignments for each unit (20% of lecture grade). There will also be daily quizzes (10% of lecture grade). The bonus credits will added to the lecture total before the grade is figured. (See test policy below)

### Laboratory Grade - 30% of Overall Lecture Grade

The laboratory grade will be determined separately and will comprise 30% of the course grade. Assessment of your laboratory performance will be based on your score on completion of required **laboratory objectives/exercises (20%) and weekly lab quizzes (50%) and 2 lab practicals over the musculoskeletal systems (30%)**. Although laboratory is pass/fail, you must pass lab to pass the course. (Most programs require a minimum grade of C to constitute a pass) (See test policy below)

**Laboratory objectives and exercises.** The laboratory exercises are designed to provide assistance in learning key concepts the assigned lab period for these objectives. **There are no makeups for missed labs. If a lab is missed for an excused absence (one recognized by CCC) a written assignment will be assigned. These will be due a week after the missed lab. The student is responsible for the information contained in the missed lab and will be expected to take the lab quiz over the missed material. The student will obtain the missed material from a lab classmate. If no written assignment is turned in, the student will receive a zero for the lab and will not be allowed to take the lab quiz.**

**Laboratory Quizzes** There will be weekly lab quizzes based upon the previous week's laboratory exercise. They will be worth 10 - 20 points apiece. The questions will include identification of tagged structures and specimens, microscope identification, analysis of sample data, short problem solving, and descriptions of laboratory procedures. Models, diagrams, and microscopic slides will be used. Discussion questions as well as bonus questions may be used. (See test policy below)

Lab Caution: Due to the presence of chemical preservatives and fungicides in laboratory specimens, students are strongly advised to wear protective clothing, gloves, and goggles. Sensitive individuals may experience allergic reactions to these chemicals. For women who are nursing of pregnant, please consult your health provider before attending laboratory.

Absolutely NO food, drink, or tobacco products or bare feet in the laboratory at anytime.

**Final Examination - 20% of Overall Course Grade:** A comprehensive final examination will be given at the end of the semester. It will consist of the same type of test items found on the major lecture examinations described above and will be based on 100-point scale. The final exam will comprise 20% of the overall course grade.

### **Assignment Policy**

All assignments **MUST** be handed by the due date. Late assignments will be counted down 10% for every day it is late. Assignments more than a week late will not be accepted and a grade of zero will be reported for that assignment.

### **Test policy**

It is the student's responsibility to contact the instructor if he/she is going to miss a lecture exam or a lab exam so arrangements can be made for the student to take the test in a timely manner. **If the student fails to contact the instructor before missing an exam, the student may not be allowed to make up the exam and will receive a zero as well as losing the privilege of dropping his/her low lecture exam score.** It is up to the discretion of the instructor if a student's excuse constitutes an excusable absence and if a make-up exam will be allowed. Said make-up exam will not be the same as the online exam and will be given at the earliest possible time after the student's return to class.

### **Course Grade:**

The following scale for grade distribution will determine your overall course grade:

90 - 100%	= A
80 - 89%	= B
70 - 79%	= C
60 - 69%	= D
59% and <	= F

Laboratory is pass/fail. Failure to pass lab will result in failure for the entire course

**60% - 100%	= pass
60% and below	= fail

**\*\*If the student has been admitted to a program he/she will be expected to pass lab with a minimum grade of C (70%) as required by the program. Grades below C will be reported to the program director.**

### **Course Requirements**

The student is expected to properly prepare for and participate fully in both class lectures/discussions and laboratory exercises. The student is responsible for all

material presented in lecture, lab, and from reading assignments as well as online. **Because this is a fast paced course the student will be responsible for learning some of the material from the text independently. Some exam questions may not be covered in lecture.**

### **Attendance Policy**

It is the policy of CCC to take attendance in every class. A student may be dismissed for excessive absenteeism. Please see your student handbook for the college policy.

Class attendance will be taken in both lecture and laboratory. It is in the student's best interest to attend all lecture and laboratory sessions. If a student does not hand in an assignment due to an unexcused absence, the assignment will receive a zero. Absences due to CCC sponsored activities will be excused however; **it is the student's responsibility to make advance arrangements regarding assignments and examinations.** Absences greater than three days due to illness must be documented by a note to that effect from the college nurse or other health care provider. Extenuating circumstances will be considered on a case-by-case basis.

### **Academic Integrity Policy**

Colby Community College defines academic integrity as learning that leads to the development of knowledge and/or skills without any form of cheating or plagiarism. This learning requires respect for Colby's institutional values of quality, service and integrity. All Colby Community students, faculty, staff, and administrators are responsible for upholding academic integrity.

**Cheating** is giving, receiving, or using unauthorized help on individual and group academic exercises such as papers, quizzes, tests, and presentations through any delivery system in any learning environment. This includes impersonating another student, sharing content without authorization, fabricating data, and altering academic documents, including records, with or without the use of personal and college electronic devices.

**Plagiarism** is representing or turning in someone else's work without proper citation of the source. This includes citing work that is not used and taking credit for a group project without contributing to it.

The following procedure will be used for students who violate the policy:

- First Offense - Student will receive a zero for the assignment and the student will be reported to the Dean of Academic Affairs
- Second Offense – The student will be reported to the Dean of Academic Affairs and removed from the class
- Third Offense - The student will be reported to the Dean of Academic Affairs and dismissed from the college.

Any questions about this policy may be referred to the Dean of Academic Affairs.

### **Assessment**

Colby Community College assesses student learning at several levels: general education, program, and course. The goal of these assessment activities is to

improve student learning. As a student in this course, you will participate in various assessment activities. An example of your work, a paper, some test questions, a presentation, or other work may be selected for assessment. This process will not affect your grade, will not require you do additional work and your evaluation will be confidentially handled. Results of these activities will be used to improve teaching and learning at Colby Community College.

### **Syllabus Information Disclaimer**

I reserve the right to change any information contained in this document, when necessary, with adequate notice given to the student. Notice shall be given in the classroom during class. No other notice is required. It is the student's responsibility to stay current with any changes, modifications, adjustments or amendments that are made to this document.

### **Accommodating Students with Disabilities**

According to the Americans with Disabilities Act, it is the responsibility of each student with a disability to notify the college of his/her disability and to request accommodation. If a member of the class has a documented learning disability or a physical disability and needs special accommodations, he/she should contact Student Support Services, which is located in the Student Union.

### **Cell phone/ laptop policy**

There no laptops or cell phones allowed during class period. Anyone using either during lecture or lab will be asked to put it away. A second warning will require the student to either surrender the device or leave class.

If the student absolutely must be in contact with family, babysitter, etc., he/she must put the cell phone on vibrate and leave the class if a call is received. This is for emergencies only and the privilege must not be abused or it will be lost.

### **Equipment**

The student is expected to become proficient with the proper use and care of the laboratory equipment, this includes but is not limited to, compound microscopes, dissection instruments, electronic balance, electronic testing equipment, centrifuge, and computers

### **Bibliography**

Marieb, E. Human Anatomy and Physiology. San Francisco: Benjamin Cummings Publishing; 2007

Marieb, E. Human Anatomy and Physiology Laboratory Manual, Pig Version. San Francisco; 2007

### **Recommended Resources**

The laboratory has two computers complete with internet access. The instructor also has many resources that can be used in her office complex.

Marieb, E. Human Anatomy and Physiology Coloring Workbook. San Francisco: Benjamin Cummings Publishing

Stone R, Stone J. Atlas of Skeletal Muscles. Dubuque: Wm. C. Brown Publishers; 2003

### **Anatomy and Physiology BI276**

<b>Week</b>	<b>Date</b>	<b>Lecture</b>	<b>Lecture Assignments</b>	<b>Lab Exercises</b>
<b>1</b>	<b>8/20-8/23</b>	<b>The Human Body Chemistry Comes Alive</b>	<b>Pgs. 1 - 32</b>	<b>Language of anatomy</b>
<b>2</b>	<b>8/27 - 8/30</b>	<b>Chemistry Comes Alive</b>	<b>Pgs. 33 - 63 Worksheets chpts 1 &amp; 2 due TBA</b>	<b>Organ Systems</b>
<b>3</b>	<b>9/3-9/6</b>	<b>No class 9/3 – Labor Day <u>exam 1chpts1 &amp; 2</u> TBA  Cells: The Living Units</b>	<b>Pgs. 64 - 97</b>	<b>The Microscope  The Cell</b>
<b>4</b>	<b>9/10- 9/13</b>	<b>Tissues</b>	<b>Pgs. 98 - 130</b>	<b>Tissues</b>
<b>5</b>	<b>9/17 - 9/20</b>	<b>Tissues  Integumentary System</b>	<b>Pgs. 130 - 174 Worksheets Chapters 3 -5 due TBA</b>	<b>Skeletal Overview</b>
<b>6</b>	<b>9/24 - 9/27</b>	<b>Exam 3 <u>chpts 3 - 5 TBA</u>  Bones and Skeletal Tissue</b>	<b>Pgs. 175 - 201</b>	<b>Axial Skeleton</b>
<b>7</b>	<b>10/1 - 10/4</b>	<b>Bones and Skeletal Tissue  The Skeleton</b>	<b>Pgs. 202 - 237</b>	<b>Appendicular Skeleton</b>



8	10/8 - 10/11	The Skeleton Articulations	Pgs. 237 - 278 Worksheets chapters 6-8 due TBA	Articulations
9	10/15 - 10/19	<u>exam 4</u> <u>chpts 6 - 8 TBA</u> Muscle Tissue	Pgs. 279 - 309	Skeletal Lab Practical Muscle Tissue Microscopic
10	10/22 - 10/25	The Muscle System	Pgs. 324 - 356	Gross Muscles of Head, Neck, Chest, & Arms,
11	10/29 - 11/1	The Muscle System	Pgs. 357 - 386 Worksheets chpts 9 & 10 due TBA	Gross Muscles of Back, Buttocks, and Legs
12	11/5 - 11/8	<u>exam 5</u> <u>chpts 9 &amp; 10 TBA</u> Fundamentals of the Nervous System	Pgs. 387 - 421	Nerve Histology
13	11/12 - 11/15	Central Nervous System	Pgs. 421 - 454	Brain and Cranial Nerves
14	11/19	No classes 11/21 & 11/22 Thanksgiving Central Nervous System	Pgs. 454 - 489 Worksheets chapters 11 & 12 due TBA	Spinal Nerves
15	11/26 - 11/29	<u>exam 6</u> <u>chpts 11 &amp; 12 TBA</u> Peripheral Nervous System	Pgs. 490 - 531	No labs
16	12/3 - 12/6	Autonomic Nervous System <u>Exam 7 chpts</u>	Pgs. 532 - 554 Worksheets chpts 13 - 15 due TBA	Spinal Nerves
17	12/10			
17	12/11-12/13	Final Exam 9:25 class – 12/13 at 8:00 Final Exam 1:40 class – 12/12 at 10:15		No Lab

