

DeAnza College Biology Department

# BIOLOGY 40B

## Human Anatomy and Physiology

Instructor: Bob Kalpin

### COURSE SYLLABUS

Winter 2020

<b>Course:</b>	Biology 40B, section 35681 (#1) and 35682(#2)
<b>Location:</b>	Lecture Room MLC103 Lab Room SC2106
<b>Time:</b>	<b>Lecture</b> M/W 11:30-1:20 <b>Lab</b> M or W 8:30- 11:20
<b>Text:</b>	Tortora and Derrickson, "Principles of Anatomy and Physiology", (15th Ed.) ISBN: 9781119437130
<b>Lab Manual:</b>	Marieb, Elaine. "Human Anatomy and Physiol. Laboratory" (13th Ed), ISBN: 9780134806365.
<b>Instructor:</b>	Bob Kalpin
<b>Office Hours:</b>	Science Resource Center (SC3) Tues/Thurs 8:15-9:15 AM Mon/Wed 8-8:30 AM Mon/Wed 1:30-2:00 PM
<b>e-mail:</b>	<a href="mailto:kalpinbob@fhda.edu">kalpinbob@fhda.edu</a>

### Introduction

This course is the second of a three-part series of anatomy and physiology classes. Topics include the study of the nervous, circulatory, and respiratory systems with emphasis on homeostatic mechanisms.

### Course Aims and Objectives

- A. Compare and contrast the regulatory mechanisms of nervous and endocrine systems.
- B. Examine the microscopic anatomy of nervous tissue.
- C. Categorize the structures of the nervous system into central or peripheral divisions.
- D. Describe, compare, and contrast selected aspects of neurophysiology.
- E. Examine and describe the gross and microscopic anatomy of the spinal cord, spinal ganglia, spinal nerves, and spinal meninges.
- F. Analyze the role of the spinal cord and spinal nerves in information transfer.
- G. Identify and compare the structure and functions of the major brain regions and cranial nerves.
- H. Investigate the formation and circulation of CSF, blood-brain barrier, and cerebral circulation.
- I. Map the functional areas of the cerebral cortex and describe their functions.
- J. Examine and contrast the actions of representative neurotransmitters.
- K. Describe anatomical and physiological aspects of several of the special senses.
- L. Compare and contrast the somatic and autonomic nervous systems and investigate the control of visceral function by the sympathetic and parasympathetic branches of the ANS (autonomic nervous system).
- M. Examine and describe the organization of the cardiovascular system.
- N. Examine and recognize the components and characteristics of blood.
- O. Examine and describe the gross and microscopic anatomy of the heart.
- P. Investigate cardiac physiology; define and discuss cardiac output.
- Q. Examine the morphology of the blood vessels and relate morphology to function; investigate the physics of circulation and the control of blood pressure and blood flow.
- R. Identify and name the principal arteries, veins, and circulatory routes.
- S. Identify, examine and describe the gross and microscopic anatomy of the respiratory tract.
- T. Analyze the physiology and regulation of ventilation and gas exchange.

### Student Learning Outcomes

- Demonstrate the ability to apply basic knowledge regarding the structure and function of the respiratory system to predicting its responses in maintaining homeostasis.
- Appraise the role of the cardiovascular system in maintaining homeostasis.
- Apply the structural organization of the nervous system to how it processes information.

## **Bio40B Course Information**

**Prerequisites:** Biology 40A with a grade of C or better. Check with the BHES Division (Kirsch Center 408-864-8773) for pre-requisite information.

In addition, you are expected to read and write at the college level, be able to perform basic math, and read graphs and charts. Access to <https://deanza.instructure.com> required for obtaining course materials and submitting some assignments.

### **Attendance:**

One of the most important things you can do for your understanding of the material as well as your grade is to attend class. Not attending class will have a negative impact on your grade! You may not “make-up” a missed class. For any classes missed, you are responsible for any notes, assignments, or reading (hint: make a friend in class). If you miss more than 4 classes during the semester, you may be dropped from the course.

### **Tardiness:**

The class will start on time. If you do come to class late, please be quiet and courteous to those around you. Any handouts missed can be obtained after class.

### **Cell Phones/texting:**

Cell phones/texting must be turned off during class as this is extremely distracting.

### **Quizzes/Exams:**

Quizzes: There will be 6 quizzes given throughout the semester. Quizzes will be worth 10 points each. There are no make-up quizzes however, one quiz will be dropped. If you come in late, leave early or miss a quiz for any reason – you will receive a zero. Quizzes may be given at the beginning or end of the class.

Exams: Two midterm exams and two lab practical exams worth 100 points each will be given during the semester. A comprehensive final (100 points) will be given during final exam week. Exams will be announced at least one week prior to being given. No exams will be dropped. Make up exams are given for legitimate emergency absences only and are all-essay tests (you really don't want to take one of these!) It will be given within one week of the missed exam. Sleeping late, transportation problems etc. are not legitimate excuses.

### **Lab Reports and Participation:**

Nine lab reports will be due, each at the end of the day's lab. 6 points are earned for completion and participation in lab each week.

### **Important Dates**

Sunday, Jan. 19

Last day to drop without a “W”

Friday, Feb. 28

Last day to drop with a “W”

Monday, March 23

Final Exam 11:30- 1:30 PM

## **Bio 40B Exam Policies**

1. Be on time for the exam.
2. Bring all items needed for exam with you (e.g. 2 pencils with erasers, scantron sheet, etc.)
3. All books, backpacks, purses etc. will be placed in the front of the class and picked up after the exam. No items should be under your seat.
4. If space permits, students will alternate seats for exams.
5. Turn cell phones/pagers off during the exam and place in backpacks or purses.
6. You may not leave the exam room for any reason once the exam has started. Use the restroom before the exam. Once you leave the room, I will grade what you have completed up to that point.
7. Once the first person leaves the exam room, no latecomers will be admitted to the exam.
8. **Cheating will result in a zero on the exam and probable expulsion from the class.**
9. Make-up exams are for **emergencies only**. You must notify me the day of the exam to let me know of your situation.
10. Make-up exams are in all-essay form and will be given within one week of the missed exam.
11. Do not schedule appointments etc. during an exam or any class time.

### **Helpful Suggestions:**

The following are suggestions from former students that are great ways to help you improve your chances of getting a good grade:

- Don't get behind in your studying
- Read topic information before and after lecture
- Do study guides as you get them
- Study with a friend or group, quiz each other or "teach" someone else
- Make sure you understand the topic, not just memorize facts
- Attend study sessions

**Exams and Grading:** All assignments are due on the dates specified in the assignment. No late submissions. Missed exams may not be made up without approval *prior to the test date*. Cheating of any sort (including plagiarism) will result in a grade of F without exception. Grading is based on:

- Six lecture quizzes (10 pts. each, lowest score dropped)
- Two midterm exams (100 pts. each)
- Comprehensive final exam (100 pts.)
- Laboratory reports and lab participation (50 pts.)
- Two laboratory practical exams (100 pts. each)

Grades for the course are calculated as follows:

Final Exam	100 pts.
Midterm Exams	2@ 100 pts. each
Lecture Quizzes	5@10 pts. each
Lab Practical Exams	2@ 100 pts. each
<u>Lab Reports and Participation</u>	<u>50 pts.</u>
Total	600 pts.

**Letter Grade Percentage**

<u>A+</u>	<u>97%</u>
<u>A</u>	<u>92-96%</u>
<u>A-</u>	<u>89-91%</u>
<u>B+</u>	<u>85-88%</u>
<u>B</u>	<u>82-84%</u>
<u>B-</u>	<u>79-81%</u>
<u>C+</u>	<u>71-78%</u>
<u>C</u>	<u>65-70%</u>
<u>D</u>	<u>55-64%</u>
<u>F</u>	<u>&lt;55%</u>

**Student Attendance Policy**

Students are expected to attend all sessions of each class. Instructors may drop students from the class if they fail to attend the first class meeting, or when accumulated unexcused hours of absences exceed ten percent of the total number of hours the class meets during the semester.

**Drop Policy**

Students are responsible for dropping a class and must fill out the appropriate paperwork by the above deadline to officially drop the course.

**Support Services**

DeAnza College makes reasonable accommodations for students with disabilities. Students should contact DSP&S (Disability Support Programs and Services): <http://deanza.edu/dsps>

**Other Services**

The DeAnza offers a wide variety of support services to help you through your college career. Services such as tutoring, short reading and writing skills classes, financial aid, programs in educational transition and help for disabled students are offered for your benefit:

<http://deanza.edu/studentservices>

<http://deanza.edu/studentssuccess>

**Hours By Arrangement**

In addition to time spent in lecture and lab, weekly hours by arrangement are available for supported study time utilizing tutors and electronic resources. These arranged hours will be made available to the student during scheduled open lab time. A schedule for arranged hours will be available and posted online at the beginning of each semester.

**Academic Dishonesty**

DeAnza College (and this instructor) has a strict no cheating/ plagiarism policy. Students found cheating or plagiarizing on class examinations, quizzes or homework will receive a grade of zero and be reported to the office of instruction and placed on probation. Students in this course must additionally abide by the rules set out in the student handbook put out by the Biological, Health, and Environmental Sciences Division.

<http://www.deanza.edu/bhes/StudentHandbook.pdf>

## Bio 40B Lecture Schedule

<u>Week</u>	<u>Topic</u>
Jan. 6/8	Nervous Tissue, Spinal Nerves
Jan. 13/15	Spinal Nerves, Brain and Cranial Nerves
Jan. 20/22	Brain and Cranial Nerves, Autonomic NS
Jan. 27/29	<b><u>Exam 1 Wednesday, Jan. 29</u></b>
Feb. 3/5	Sensory, Motor, and Integrative Systems
Feb. 10/12	Special Senses
Feb. 17/19	Cardiovascular System: Blood
Feb. 24/26	<b><u>Exam 2 Monday, Feb.24</u></b>
March 2/4	Cardiovascular System: The Heart
March 9/11	Cardiovascular System: Blood Vessels
March 16/18	Respiratory System
<b><u>Final Exam Monday March 23 11:30-1:30</u></b>	

## Bio 40B Lab Schedule

<u>Week</u>	<u>Lab Topic</u>
Jan. 6/8	Exercise 15: Histology of Nervous System
Jan. 13/15	Exercise 19: Spinal Cord and Spinal Nerves
Jan. 20/22	Exercise 17: Brain and Cranial Nerves
Jan. 27/29	Exercise 21/22: Reflex Physiology and General Senses
Feb. 3/5	<b><u>Lab Practical Exam 1</u></b>
Feb. 10/12	Exercise 23/24: Vision
Feb. 17/19	Exercise 25/26: Hearing, Equilibrium, Smell, Taste
Feb. 24/26	Exercise 29/30/31: Blood and Heart
March 2/4	Exercise 32/33: Blood Vessels and Blood Pressure
March 9/11	Exercise 36/37 Respiratory System
March 16/18	<b><u>Lab Practical Exam 2</u></b>

**Final Exam Monday, March 23 11:30-1:30**