

Human Physiology

COURSE SYLLABUS

Instructor: Heather J. Rose, Ph.D.

Phone: x2329 (805-965-0581)

Course: BMS 108; Human Physiology

Times: Mon/Wed 4:15 pm – 5:35 pm

Office hours: Mon 3 – 4:15pm; Tues 2:30 – 4:00pm; Wed 2:30 – 4:15pm; Thurs 2:30 – 3:00pm. Other times by appt.

Office: EBS-320

Email: hjrose@sbcc.edu

Term: Spring 2019

Class Location: EBS-309

Introduction: *Welcome to Human Physiology!* Human Anatomy is designed to teach you to name all the structures of the body. Human Physiology is concerned with *how those structures work*. Physiology is a challenging class that takes you beyond simple memorization and forces you to consider the detailed mechanisms by which the human body performs tasks such as seeing this page in front of you, feeling touch on your skin, contracting muscles to lift food to your mouth, and storing nutrients in the body.

Required Textbook: Human Physiology by Fox, 14thed. (11th ed. and more recent, including 15th ed., are fine, publisher: McGraw-Hill). Reading the textbook in Physiology is crucial because the more times (and ways) you hear or see material presented the more likely you are to understand difficult concepts. The syllabus will list the chapter(s)/topic(s) we will be studying each day, but in many cases we will not be covering the entire chapter, please see your class notes for more focus in your studying.

Required Lab Manual: BMS 108 by Tanowitz and Aguilar; available in the bookstore. You should bring your lab manual **and** textbook to every lab meeting.

Learning Goals for This Course: My goal is for you to leave this course with a firm understanding of the basic mechanisms utilized by the body. A successful student will leave this course with an understanding of enzymes, diffusion, cellular respiration, and chemical and electrical communication in the body. These processes are the foundation of how the skeletal, muscular, digestive, respiratory, cardiovascular, reproductive, nervous, and urinary systems work. The following are the Student Learning Outcomes determined by the BMS department.

1. **Analysis** of data, and the development and testing of hypotheses.
2. **Demonstrate** an understanding of the structure and function of electrically excitable cells found in the nervous, muscular, and cardiovascular systems.
3. **Demonstrate** an understanding of the physiological processes involved in the dynamics of fluids as they relate to the circulatory and urinary systems and the internal chemical environment.
4. **Explain** the various biological strategies utilized by the immune system to maintain human health and combat disease.
5. **Describe** the mechanisms of signaling molecules and signaling systems as they relate to homeostasis, metabolism, growth, development, and reproduction.

The Lecture: All lecture notes will be posted online prior to class. Lecture notes are NOT a substitute for attending class. Much of the important material will be written on the board and not be in the posted notes. Also, I often clearly stress material that you must know for the next exam in class. Posted notes are NOT a substitute for taking your own notes. You should augment the posted notes. The notes include the helpful “IQs” (Important Questions) that will help you review the material; you should consider these your study guide for each exam.

Quizzes: There will be **two lecture** quizzes to ensure that you are staying abreast the material. The **30 pt quizzes** will be brief (~30 minutes) and vary in format. The quizzes count for a **total of 60 pts**. Quizzes can only be made up following documented absences as described under exams below.

Assignments: You will complete three homework (HW) assignments outside of class; the due dates are listed on the schedule below. These are worth 10 points each, for a total of **30 HW points**. HW assignments will not be accepted late and are due at the beginning of lecture. HW 1 and 2 will be posted on Canvas and are self-contained. HW#3 utilizes PhysioEx software which is loaded on the computers in the Biology Computer Lab (EBS 215). Alternately, you can pay \$25 and access the online version of this software at www.physioex.com. Make sure to purchase For Human Physiology Version 8.

Exams: There will be **2 midterms and one final exam**. All exams will be cumulative. Midterm #1 will have an 80 point value. Midterm #2 will have a 130pt value. The final will be 150 points total. **You must be able to attend the final**. Do not schedule this class if you can not make the assigned final time (**Monday, May 6th, 2pm**). Exam concerns will addressed by re-grading the entire exam and any requests must be submitted within one week of exam return.

Make-up Exams: Make-up exams will be given in exceptional cases only, and will not necessarily be of the same form as the original exam. If you have to miss an exam you need to inform me *in writing* (preferably by email) before the scheduled exam and have a very good reason (determined by me) and have documents to prove your excuse. *You must take the make-up exam within one week of the scheduled exam for the class or you will receive a 15% deduction in your score.*

Grading: 550 points total in this course

Item	~% of Final Grade	Points Total
Midterm exam #1	~15%	80pts
Midterm exam #2	~23%	130pts
Final exam	~27 %	150 pts
2 Lecture Quizzes	~10%	60 pts (2@30pts each)
3 Assignments	~6%	30 pts (3@10pts each)
Laboratory Exercises	~10%	60 pts (12@5pts each)
Lab Presentation	~7%	40 pts

Grades will be assigned on the following scale.

Grade:	A+	A	A-	B+	B	B-	C+	C	D	F
%:	99+	91 – 99	89.5 – 91	88 – 89.5	81 – 88	79.5 – 81	78 – 79.5	69 – 78	59.5 – 69	<59.5

Email Etiquette: Email is the preferred form of communication with me. Especially if you are requesting special consideration, change in an exam date, etc... you **MUST** provide your request in writing via email. If you do not sign your name I will not reply to your email.

Basic Needs and Security: Any student who has difficulty affording groceries or accessing sufficient food to eat every day, or who lacks a safe and stable place to live, and believes this may affect their performance in the course, is urged to contact me if you are comfortable in doing so. This will enable me to direct you toward helpful resources.

Inclusiveness: The SBCC community supports ALL students without regard to race, ethnicity, religion, national origin, immigration status, age, gender identity, sexual orientation, language, socioeconomic status, medical status or disability. As your instructor, I want to state my commitment to you and to upholding these ideals to the best of my ability. If you face discrimination or hate inside or outside the classroom I encourage you to come to me and I will help you identify resources and determine a plan of action. I am here to fully support you in your scholastic, professional, and personal growth. You can read the details of the official SBCC statement here:

http://www.sbcc.edu/boardoftrustees/files/board_resolutions/Resol%2017%20Student%20Success%20Su

Classroom Etiquette: Talking, whispering or giggling during the lecture is very disruptive. If you must talk please leave the classroom. **The following policy is in effect:** the first time I have to call your name for disruptive behavior it a warning, the second time I will ask you to leave the classroom for the day, the 3rd time I will ask you to leave the classroom and you will not be allowed to return until you have had a meeting with the Dean of Students. Work missed due to poor behavior can not be made up and continued disruption will adversely affect your grade. Please turn your cell phones off, or to vibrate if you are expecting an emergency call.

Laptops: Laptop use is allowed in the classroom; however, you are *required to sit in the front three rows* to use a laptop in the classroom. You are **only** permitted to look at course notes during the lecture. Complaints of distracting computer use will result in suspension of laptop privileges.

Add/Drop: It is your responsibility to know the add/drop deadlines. Important dates are: Jan 26th is the last day to withdraw with no mark on your record and March 15th is the last day to withdraw with a "W". If you stop coming to class it is your responsibility to drop, by state law I am required to give you an 'F', not a 'W' if you stop attending and do not drop by March 15th. Please let me know if you are dropping.

Attendance: Lecture attendance is strongly encouraged. You will be learning difficult concepts that very few students can master on their own. Lab attendance is required.

Cheating and Plagiarism: Don't do it. It is disrespectful to you, fellow students, and the instructor. Cheating will be dealt with as severely as possible as outlined in the student handbook; the options include, but are not limited to: failure of that assignment, failure of the class, and recommendation to the Dean of Students for disciplinary action.

Canvas: Much of the information regarding exam results, study guides, current point totals, etc... will only be available through Canvas. All lecture notes will be posted on Canvas and should be printed and brought to class with you. You should check Canvas before each class for updates and announcements. If you haven't done so yet, please make it a priority to acquaint yourself with Canvas.

Accommodations for Students with Disabilities: Disability Services and Programs for Students (DSPS) coordinates all academic accommodations for students with documented disabilities at Santa Barbara City College. If you have or think you might have a disability that impacts your educational experience in this class, contact DSPS to determine your eligibility for accommodations. DSPS is located in the Student Services (SS) Building, Room 160. Their phone number is 805-730-4164. If you have already registered with DSPS, please submit your accommodation requests via the '**DSPS Online Services Student Portal**' as soon as possible. This needs to be done each semester. *If you have any questions or concerns about your accommodations, please make an appointment with a DSPS Counselor.*

Achieving Success and Study Groups: Most successful students work in study groups. Lab is a great place to make connections and get contact information from classmates. If you have to miss a class or lab, you will find having these connections invaluable! You **MUST** not fall behind in this class and **MUST** study daily to be successful. We will be covering a large amount of material at a relatively fast pace. **Start studying on day one.**

I am looking forward to an exciting and interesting semester. My goal is for you to succeed in this class and to learn skills that will help you in all your future endeavors. Please let me know what I can do to help. The more actively you are involved in your own learning the more fun and success you will have!

Human Physiology (Spring 2019)

Week	Date	Lecture Topic	Readings (highlights from)	Lab and notes
1	M 1/14 W 1/16	Welcome! Homeostasis & Feedback Mechanisms Chemical Composition of the Body and Cells	Ch 1 Ch 2	L1.
2	M 1/21 W 1/23	Holiday – MLK Day Cell Structure (<i>own for exam</i>) Enzymes and Bioenergetics	Ch 3 <i>on own</i> Ch 4	(no Monday lab) Tues-Thurs lab catchup and review *HW #1 due Wed (1/23) at the start of lecture.
3	M 1/28 W 1/30	Quiz 1 (and finish Ch 4 or start Ch 5) Cellular Metabolism and Respiration	Ch 5	L2. HW#2 due Mon (1/28) at start of lecture.
4	M 2/4 W 2/6	Membrane Transport and Potential Wrap up and Review	Ch 6 and (bit of) 7	L3 HW#3 due Wed (2/6) start of lecture.
5	M 2/11 W 2/13	LECTURE EXAM 1 Nervous System	Ch 7	L4
6	M 2/18 W 2/20	<i>Holiday</i> Nervous System	Ch 7	No Monday lab; Tues – Thurs Exam 1 review
7	M 2/25 W 2/27	Nervous System Nervous System	Ch 7 Ch 7, 8	L5
8	M 3/4 W 3/6	Autonomic Nervous System Sensory Physiology	Ch 9 Ch 10	Neuron Exercise in lab
9	M 3/11 W 3/13	Quiz 2 Sensory Physiology Skeletal Muscle	Ch 10 Ch 12	L7
10	M 3/18 W 3/20	Skeletal Muscle Blood/Circulation	Ch 12 Ch 13	L6
	M 3/25 W 3/27	!!!Spring Break!!!		
11	M 4/1 W 4/3	LECTURE EXAM 2 Cardiac Output, Blood Flow & Pressure	Ch 14	L8
12	M 4/8 W 4/10	Cardiac Output, Blood Flow & Pressure Immune	Ch 14 Ch 15	L10
13	M 4/15 W 4/17	Respiratory System Renal System	Ch 16 Ch 17	Lab Presentations
14	M 4/22 W 4/24	Renal System Endocrine System	Ch 17 Ch 11	L12
15	M 4/29 W 5/1	Digestive System Reproduction	Ch 18 Ch 20	L11 and Renal Phys worksheet
Final	M 5/6	2 pm, Final Exam!		

** Schedule is subject to change. Please be flexible!

Human Physiology
Lab Schedule and Syllabus
Spring 2018
(supplements lecture syllabus)

Instructor: Heather J. Rose, Ph.D.

Phone: x2329 (805-965-0581)

Course: BMS 108; Human Physiology

Lab Times: Mon 6:00pm – 9:05pm, Tues, Wed, Thurs 11:10 – 2:15pm

Class Location (Lab): EBS-312 (except Thursday is in EBS210)

Office hours: Mon 3 – 4:15pm; Tues 2:30 – 4:00pm; Wed 2:30 – 4:15pm; Thurs 2:30 – 3:00pm. Other times by appt.

Office: EBS 320

Email: hjrose@sbcc.edu

Human Physiology Laboratory is primarily designed to give hands on, real-life examples of concepts learned in lecture. Since many of you are visual/hands-on learners this is a very important opportunity for you to reinforce and deepen your understanding of what you have studied in lecture. Additionally, some important concepts will only be introduced in the laboratory setting. You should bring your textbook with you to every lab meeting, as you will use it as a reference book answering lab questions.

Attendance: You **MUST** attend your assigned lab section every week. There will be weekly assignments that can only be turned in if you completed the lab in person. Additionally, you must stay until the entire class is dismissed for the day. Appropriate SAFETY and CLEAN UP are part of your lab responsibilities. If you leave prior to being dismissed and have not adequately cleaned your area, you will lose all points available in lab that day. Your lab partners are counting on your preparation and participation. There will be a wrap-up discussion at the end of each lab period *after every group has completed their experiment. Again, if you miss lab or leave early, any assignments turned in that day, or work based on a lab that you did not complete will not be accepted.*

Laboratory Exercises: Laboratory exercises are worth 5 pts each. There will be 12 labs for a total of **60 points**. Some weeks the labs will be due prior to leaving lab for the day, and other weeks you will be expected to complete them after lab and turn them in the following week. This will be announced each week.

Lab Presentation: Each student will give a final presentation as part of a group. This presentation will be valued at **40 pts**. Details to be announced.

BMS 108 Lab Schedule Spring 2019
H. Rose

Week	Monday Date	Lab Topic	Notes
1	1/14	L1: Tools of the Trade	
2	1/21	<i>Monday Holiday</i> Tues – Thurs labs catch up, chem/HW help, optional	
3	1/28	L2: Osmosis and Diffusion	Lecture Quiz 1 on Monday
4	2/4	L3: Special Senses	
5	2/11	L4: Reflexes	Lecture Exam 1 on Monday
6	2/18	Monday Holiday! Review Exam 1 in Tues – Thurs labs	
7	2/25	L5: Muscle Mechanics (no frog)	
8	3/4	Neuronal Physiology Assignment	
9	3/11	L7: Cardiac Physiology and the ECG	Lecture Quiz 2 on Monday
10	3/18	L6: The Frog Heart	
	3/25	Spring Break!	
11	4/1	L8: Hematology	Lecture Exam 2 on Monday
12	4/8	L10: Immune System – ELISA	
13	4/15	Lab Presentations	
14	4/22	L12: Respiratory Physiology	
15	4/29	L11: Urinalysis	Lab plus Renal Physiology sheet (two five point assignments completed this day)
Lecture Final: Mon, May 6th, 2pm			

**Schedule is subject to change. HWs may be altered and/or details announced as the semester progresses.