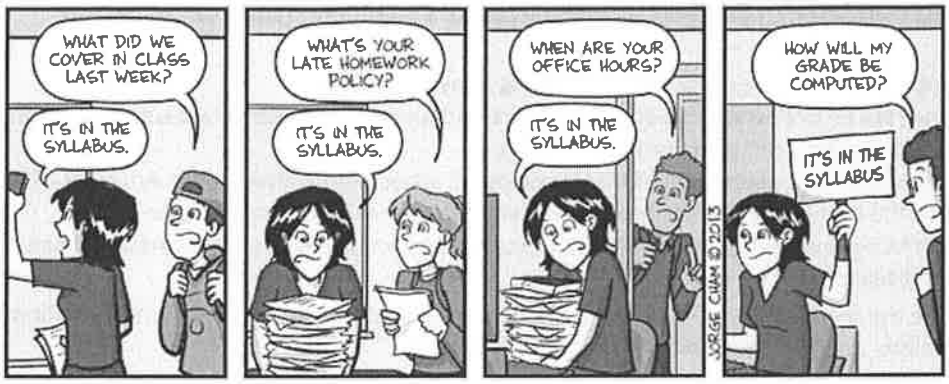


IT'S IN THE SYLLABUS

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# Course Syllabus and Orientation Information
# BMS 108 HUMAN PHYSIOLOGY

crn 40130 crn 40233

**Instructor**: Dr. Barry D. Tanowitz
**email**: tanowitz@sbcc.edu *(please do NOT email me in Canvas!)*
**Review Sessions** (via Zoom): Sunday 5:30-6:30 pm and Monday 5:30-6:30 pm

***Welcome to Human Physiology (Biomedical Sciences 108)!*** The study of the physiology of the human body. This course will offer an in-depth study into the basic functions and structures of the human body. This 4-unit course is designed toward students that are interested in a health science related career. It satisfies the SBCC General Education requirement in Natural Sciences, transfer to UC and CSU schools as a laboratory science course, and can be used as a prerequisite for entrance to health science careers (e.g. nursing or physical therapy). Note that Biomedical Sciences 108 also satisfies the Gen Ed requirement and is transferable to UC and CSU schools as a laboratory science course.

As the Spring Semester begins, I want to let you know about some of the philosophy, expectations, and mechanics of the course. The course is a full semester beginning on the week of **Monday, August 2$^{8t}$h and ending on Friday, December 8th**. The holidays are September 4th (Labor Day), November 11th (Veteran's Day holiday), and November 23rd-324th (Thanksgiving Holiday).

There are a lot of moving parts that I want to explain so you will feel comfortable with the course. You will have a lot of help -- **I** will be directing the courses but we have four highly trained and dedicated tutors, **Meghan Buddy, Danielle McGary** who will be available as well with lots of opportunities to facilitate your learning. I will try to be as flexible as I can, and I ask you to be as flexible and adaptable as you can, but there are certain constraints that I will have to be more rigid about. Although I will do most of the grading, **Chelsea O'Connell** (cnoconnell@sbcc.edu) will be our official grader. Questions regarding regrades should be directed to her [notes on grading and regrading are below].

**Human physiology** is a very fast-paced, time- and labor-intensive, fully integrated lecture and lab course that requires a lot of *analytical* and *critical* thinking. If you are not willing to put in significant time this semester, then your chances of success will be low. I always try to be as honest and forthright about the course as I can so that you understand what you are signing on for. My fundamental goal is to teach you a broad, but detailed, perspective of the human body's functions based on its gross, microscopic and chemical features.

**Student Learning Outcomes:** Upon completion of the course a successful student will be able to:

1. **Analyze** 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.

**Lecture**: Lectures are on campus in EBS 309 on Tuesday and Thursday from 11:10 am – 12:05 pm.

The lecture portion consists of **1 mini-exam, 3 midterms, a final exam, and 6 Post-Lecture Quizzes** (PLQs). The PLQs are simple 10-point 'pop' quizzes will occur occasionally in class and will test you on past material that you should have read in your textbook or seen in the lectures. This lets me know that you have been keeping up with the material. ***All exams and quizzes are cumulative.***

**Lab**: *On campus only.* A schedule of Labs is posted on Syllabus and Resources. The Laboratory portion of the course consists of **14 practical quizzes, 13 Exercise Lab assignments, 10 Canvas quizzes, and participation.**

Two practical quizzes will count as extra credit (I do not drop any quizzes, exams, or assignments in this course and all points are added to your total points for the course – see the Lab Syllabus). All lab quizzes are given at the beginning of lab and are cumulative. *There are no make-up labs or quizzes!* If you miss a quiz is will count as one of the extra credit quizzes. All Lab Assignments are due in your lab the following week.

**What you will need for the course**:

**Pipeline/SBCC email account: We are not allowed to use personal email accounts so everything goes through Pipeline.** This will give you access to your Canvas page. This is critical as everything will go through Canvas for lecture and lab. Check your Canvas calendar daily.

**Laboratory Manual:** The lab manual is required for this course. **Biomedical Sciences 108 Human Physiology Laboratory Manual, 2nd edition, by Tanowitz and Aguilar, Hayden-McNeil Publishers.**

**Textbook:** I require and recommend the textbook for this course. Human Physiology, 14th - 16th edition, S.I. Fox, McGraw-Hill Publishers. If you are going into the health sciences, I recommend having a good reference library and this can be part of it. The reading for the entire semester can be found in Canvas along with some important information relating to the reading.

## Other Important Information

**Attendance/Participation:** In order to gain full credit for participation, you will be required to: attend at least one (1) tutor Zoom session in the first three weeks, one (1) tutor Zoom session in the next six (6) weeks, and one (1) tutor Zoom session in the last six (6) weeks. You may attend as many tutor sessions as you would like (more is better) but you cannot earn any more than the maximum points for each of the required sessions. You also will be required to visit at least 3 (three) of my review sessions during the semester.

**Cheating:** Absolutely no form of academic dishonesty or plagiarism will be tolerated. It is unethical, unfair, against the College policy, and it chaps my hide. Violators will automatically fail the course and be referred to the Dean of Students for appropriate action. Don't do it.

**Make-up Exams Policy:** There are **NO** makeup exams or quizzes except in the case of death/illness of a family member or death/illness of yourself. *A written medical excuse will be required for all illnesses.* It is your responsibility to ensure that you have no conflicts in your exam schedule. The final exam time is set and the lecture exams are all scheduled (see the Syllabus). In the case of some unforeseen personal crisis, an accommodation will only be granted with my consent.

**Extra Credit:** Extra credit is built into the course through the two extra quizzes, some extra credit questions on quizzes and exams, occasional volunteer opportunities, and occasionally specific assignments in the laboratory. There is **NO** outside extra credit that can be done. The effort that you would be required to put forth for extra credit would be better used to actually study and spend time on the required material.

Canvas has no direct provision for extra credit and provides a false percentage (use the ***Grade Sheet*** I have provided for an accurate grade percentage). On quizzes and exams, I designate certain questions as extra credit. For example, a 20-point quiz could have 2-3 extra credit questions. I just take the total number of points you earn on a quiz and put those points into your total bin of points without designating those as extra credit. I do not separate EC from your scores.

**Grading:** Grading is based on exams, quizzes, and assignments. There are 1000 total points for the course, but as there is extra credit you may earn more than 1000 points. You can earn the following grades: **A-, B+, B, B-, C+, C, D, F.** The grading scale is:

| | | | |
|---|---|---|---|
| **A** | **940 points and above** | **C+** | **770 points – 799 points** |
| **A-** | **900 points – 939 points** | **C** | **700 points – 769 points** |
| **B+** | **870 points – 899 points** | **D** | **600 points – 699 points** |
| **B** | **840 points – 869 points** | **F** | **599 points and below** |
| **B-** | **800 points – 839 points** | | |

A significant amount of extra credit is provided in a number of designated ways as noted above and so NO adjustment of grades will be made. So, it is possible for you to earn more than 1000 points in the course (a number of students do this every semester). **NOTE:** Every quiz and exam will be reviewed for any changes in grading that is deemed necessary, so do NOT ask for a re-grade until after we have had a chance to review.

**Re-grading:** *ALL* requests for re-grades have a **2-week limit from time of completion or submission.** *No re-grades will be considered after that time.*

**Accommodations for Students with Disabilities:** Disabled Student Programs and Services (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 please contact DSPS to determine your eligibility for accommodations. DSPS is located in the Student Services (SS) Building, Room 162. Their phone number is 805.730.4164. If you are already registered with DSPS please submit your accommodation requests via the 'DSPS Online Services Student Portal' asap. Once submitted and confirmed please visit with me about your specific accommodations. Please complete this process in a timely manner to allow adequate time to provide accommodation.

**Sexual Misconduct/Title IX:** Sexual misconduct and gender discrimination are not tolerated at SBCC. Title IX is the law that prohibits this kind of behavior. Please contact our Title IX Coordinator, Linda Esparza Dozer, if you have questions or concerns regarding an incident, our reporting procedures, resources available to survivors, or if you just want to talk. Please contact Linda at either lmesparza@pipeline.sbcc.edu, or 805.730.4303.


## LECTURE SCHEDULE

## HUMAN PHYSIOLOGY ONLINE LECTURE
## Biomedical Sciences 108
## FALL SEMESTER 2023

**I will let you know in the announcements what chapters and subjects that you will be responsible for on an exam.**
***Remember that all exams and quizzes are cumulative.***

| Lectures for the week of: | Topic |
|---|---|
| August 28 - September 1 | Introduction, Organization of the body, Basic Concepts — Homeostasis and Feedback MechanismsBiochemistry, enzyme structure and function, energy |
| September 4 - September 8 | Cellular structure and organelle function<br>Body Fluids and Plasma Membrane transport mechanisms<br><br>**Symbols Test** (Tuesday, September 5th) |
| September 11 - September 15 | Cellular respiration and metabolism<br>Tissue structure and function <handout><br>Chemical Messengers<br>Introduction to the Nervous System |
| September 18 - September 22 | Introduction to the Nervous System<br>Nerve and neuronal structure and function<br>Membrane Potential<br>Graded Potentials<br>Action Potentials<br><br>**Midterm 1** (Thursday, September 21st) |
| September 25 - September 29 | Nerve impulse propagationSynapses: mechanism and reuptake<br>Autonomic Nervous System<br>Introduction to sensory physiology<br>Physiology of vision and hearing |
| October 2 - October 6 | Muscular System<br>Physiology of Muscle Gross Anatomy & histology of skeletal muscle<br>Physiology of skeletal muscle tissue |
| October 9 - October 13 | Physiology of The Cardiovascular System<br>Structural features of the Heart & cardiac muscle tissue<br>Circulation through the heart |
| October 16 - October 20 | Cardiovascular System —Physiology of the heart<br><br>**Midterm 2** (Thursday, October 19th) |
| October 23 - October 27 | Blood Vessels<br>Blood Vessel structure and function<br>Hemodynamics<br>The Blood |

| | |
|---|---|
| October 30 – November 3 | Endocrine Glands Structural and functional classification<br>Hormone Action<br>The Hypothalamus and the Pituitary Gland<br>The Thyroid Gland<br>The Pancreas<br>The Adrenal Gland |
| November 6 – November 10 | The Lymphatic System<br>Structural features<br>Fluid dynamics<br>Circulation through the body |
| November 13 - November 17 | The Lymphatic System–<br>Immunity<br><br>**Midterm 3** (Thursday, November 16th) |
| November 20 - November 24 | Urinary System<br>Structure and function of the kidney<br>Physiology of urine formation |
| November 27 - December 1 | Respiratory System<br>Gross Anatomy<br>Histology of the lungs<br>Physiology of respiration<br>Physiology of the Digestive System<br>Gross AnatomyHistology of the gastrointestinal tract<br>Physiology of digestion |
| December 4 - December 8 | Physiology of the Male Reproductive System<br>Gross Anatomy<br>Physiology<br>Physiology of the Female Reproductive System<br>Gross Anatomy<br>Physiology |
| December 12th 11am-1pm | **Final Lecture Examination** (200 points) |

**The lecture portion of the course accounts for 510 points.**
**The distribution of points is based on the following exams and quizzes:**

## Lecture Exam Schedule

| Exam | Date Given | Point Total |
|---|---|---|
| **Symbols mini-exam** | Tuesday, September 1st | = 30 points |
| **Lecture Midterm Exam 1** | Thursday, September 21st | = 75 points |
| **Lecture Midterm Exam 2** | Thursday, October 19th | = 75 points |
| **Lecture Midterm Exam 3** | Thursday, November 16th | = 75 points |
| **Final Exam:** | Tuesday, December 12th | = 200 points |
| **PLQs** | Scheduled on random weeks | = 30 points |
| **Participation** | See syllabus | = 25 points |


**LAB SYLLABUS**

**HUMAN PHYSIOLOGY LABORATORY — BIOMEDICAL SCIENCES 108**

**Fall SEMESTER 2023**

BMS 108 Human Physiology Lab Manual, 2nd ed. (eBook version or hard copy)
Barry D. Tanowitz, Ph.D. and Peter Aguilar, M.A., Hayden-McNeil Publ.

***Lab Quiz numbers do not necessarily coordinate with the lab assignments. All quizzes are cumulative and usually include 1-2 questions relating to the lab for that week.***

| WEEK | ASSIGNMENT AVAILABLE | TOPIC | ASSIGNMENT DUE (in your lab) | QUIZ (in your lab) |
|---|---|---|---|---|
| 1 | August 30 | Introduction and *Tools of the Trade* | September 5 | no quiz |
| 2 | September 5 | Osmosis and Diffusion | September 12 | 1 |
| 3 | September 12 | Special Senses | September 19 | 2 |
| 4 | September 19 | Reflexes | September 26 | 3 |
| 5 | September 26 | Mandatory Lab and Lecture Review | none | 4 |
| 6 | October 4 | Muscle Physiology — Muscle Mechanics | October 11 | 5 |
| 7 | October 11 | Cardiovascular Physiology and the Frog Heart | October 18 | 6 |
| 8 | October 18 | Cardiovascular Physiology and the ECG | October 25 | 7 |
| 9 | October 25 | Mandatory Lab and Lecture Review | November 1 | 8 |
| 10 | November 1 | Hematology | November 8 | 9 |
| 11 | November 8 | Physiology of the Immune System — ELISA | November 15 | 10 |

| | | | | |
|---|---|---|---|---|
| 12 | November 15 | Endocrinology | November 22 | 11 |
| 13 | November 22 | Respiratory Physiology | November 29 | 12 |
| 14 | November 29 | Urinary Physiology | December 6 | 13 |
| 15 | December 6 | Digestive System Physiology — Nutrition & Digestion | December 6 | 14 |

## READ THIS CAREFULLY!

**The laboratory portion of the course will account for *490 points* of your grade. The breakdown of pointsis as follows:**

**There are 13 Lab Manual Assignments, each of which are worth 10 points each, for a total of *130 points.*They are due, without exception (unless noted by me otherwise), in your respective laboratories (see dates above). Once submitted, there will be NO regrades. Make sure that they are complete.**

**There are 14 Lab Quizzes, but only 12 will count directly toward your grade. Each of which are worth 10points each (usually with 2-3 extra credit points available), for a total of *240 points*.**

**The other two quizzes will count as *extra credit* and will be added to your total number of points. There will be *no* make-up quizzes. *NO exceptions!* If you miss a quiz, then that can count as one of the extra quizzes.**

> **The quiz questions will come from all previous labs and any pertinent material from lecture. They are intended to have you demonstrate your working knowledge and understanding of the lab and lecture material. There is often one or two questions on a quiz that are derived from the lab assignment that you are working on that week, so readyour lab BEFORE you do the lab.**
>
> **The numbered quiz may or may not correlate to the lab wehave just completed the week before. All material on quizzes is cumulative from previouslabs so review constantly.**

**There are 16 Canvas Lecture Exercise Quizzes. You can do any 12 of the 16 quizzes worth a total of *120points (10 points each).* I will grade all of the quizzes, but you cannot receive more than 120 points even if you do all of them. Once the quizzes are closed, they will not be opened again. They are useful for practice of the material.**

**Canvas Lecture Quizzes**
**BMS 108 FALL 2023**
**August 28 – December 8**

| EXERCISE NUMBER | EXERCISE | DATE OPEN | DATE CLOSED |
|---|---|---|---|
| 1 | **Introduction** | August 28 | September 10 |
| 2 | **Chemistry** | August 28 | September 10 |
| 3 | **Cells & Organelles** | September 4 | September 17 |
| 4 | **Enzymes & Energy** | September 4 | September 17 |
| 5 | **Cellular Respiration & Metabolism** | September 11 | September 24 |
| 6 | **Sensory Physiology** | September 18 | October 8 |
| 7 | **Nervous System Introduction** | September 25 | October 15 |
| 8 | **Autonomic Nervous System** | October 2 | October 22 |
| 9 | **Skeletal Muscle Physiology** | October 9 | October 29 |
| 10 | **Cardiovascular System – Heart** | October 16 | November 12 |
| 11 | **Blood Vessels** | October 23 | November 19 |
| 12 | **Blood** | October 23 | November 19 |
| 13 | **Endocrinology** | October 30 | November 26 |
| 14 | **Lymphatic System** | November 13 | December 3 |
| 15 | **Urinary Physiology** | November 20 | December 3 |
| 16 | **Reproductive Physiology** | Ddecember 4 | December 3 |

Each quiz is worth **10 points**. You may do any or all of these quizzes, but you cannot receive more than a total of **120 points** from a combination of quizzes.

These quizzes are **NOT** proctored so you may use any resources you would like including each other. Quizzes are **NOT** timed and you have two chances on each question.