

MCB 32 Introductory Human Physiology

Fall 2013

TuTh 9:30-11:00, 155 Dwinelle

Professors:

Robin Ball, rwbball@berkeley.edu, office hrs: Tues 11am-12pm at Free Speech Cafe

Terry Machen, tmachen@berkeley.edu, office hrs: M 2-3 or by appt. at 231 LSA

Graduate Student Instructors:

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Text: Stanfield, Principles of Human Physiology, 5th or 4th edition, Benjamin Cummings;

Course web site: <https://bspace.berkeley.edu/>

<u>Date</u>		<u>Lec</u>	<u>Topic</u>	<u>Chs</u>
8/29	Th	1	Cells-tissues-organs. Water. Homeostasis	1
9/3	Tu	2	Molecules and cell organelles	2
9/5	Th	3	Cellular metabolism: enzymes and energy	3
9/10	Tu	4	Cellular metabolism: glycolysis, Krebs cycle, oxidative phosphorylation	3
9/12	Th	5	Cellular membranes: properties and transport	4
9/17	Tu	6	Cellular signaling: principles, receptors, 2 nd messengers, responses	5
9/19	Th	7	Endocrine regulation: organs, hormones, regulation, incl metabolism	6, 21
9/24	Tu	8	Nervous system: membrane potential, channels and action potentials	7
9/26	Th	9	Nervous system: action potential conduction and synaptic transmission	7, 8
10/1	Tu	10	Central nervous system: anatomy and introduction to sensory systems	9, 10
10/3	Th	11	Sensory physiology: touch and vision	10
10/8	Tu	12	Autonomic nervous system and somatic motor system	11
10/10	Th	13	Skeletal muscle: contract and relax, skeletal reflexes, voluntary movement	12, 9
10/15	Tu		Review	
10/17	Th		Midterm Exam (Lecs 1-13, 100 pts)	
10/22	Tu	14	CV: Cardiac muscle and heart	12, 13
10/24	Th	15	CV: Smooth muscle and blood vessels; blood pressure and blood flow	12, 14
10/29	Tu	16	CV: regulation of blood flow and blood pressure	14
10/31	Th	17	Respiration: anatomy + mechanics of airflow	16
11/5	Tu	18	Respiration: O ₂ +CO ₂ transport	17
11/7	Th	19	Respiration: regulation and exercise	17
11/12	Tu	20	Renal: anatomy and renal exchange processes	18
11/14	Th	21	Renal: regional specializations of the renal tubule	18
11/19	Tu	22	Renal: fluid and electrolyte balance GI: absorption and regulation	19
11/21	Th	23	GI: anatomy and overview of motility, secretion, digestion absorption	20
11/26	Tu	24	GI: regulation	20
11/28	Th		Thanksgiving Holiday	
12/3	Tu	25	Review: Diabetes	21, 24
12/5	Th		Midterm Exam (Lecs 14-25, 100 pts)	
12/4	Tu		Review RRR Week	
12/6	Th		Review RRR Week	
12/17	Tu		Final Exam (150 pts), 3-6 pm	

Total score = midterms (200) + final (150) + best 6 (of 9) quizzes (60 pts) = 410 pts

Mastering A and P This web site (available if you purchase the Stanfield text book) has a wealth of study questions and other study aids. Although answering these questions does not count in your grade, some of the questions on the exams and quizzes may come directly from these questions on Mastering A and P.

Midterms: Two midterms (100 pts ea) covering material from roughly half the course each. These exams will be taken in class, 80 mins duration. Format will be primarily multiple choice, T-F, matching and similar questions. There will also be a few short answer questions. At least some of these questions will be quite similar to questions from the textbook website.

Final exam: Comprehensive exam covering material from the entire course. 150 pts.

Quizzes: Administered in discussion sections by the GSIs. There will be 9 brief quizzes, one each week in discussion section beginning Sept. 9 and ending Nov. 22. Each quiz counts 10 pts, top 6 scores are counted.

No make-up exams.

Grades: 369 (90%) = A, 328 (80%) = B, 287 (70%) = C, 246 (60%) = D

Honor Code Statement:

The student community at UC Berkeley has adopted the following Honor Code:

“As a member of the UC Berkeley community, I act with honesty, integrity, and respect for others.” The hope and expectation is that you will adhere to this code.

This statement will be placed on the first page of the exams: On my honor, I have neither given nor received assistance in the taking of this exam. Signed: _____

Collaboration and Independence: Reviewing lecture and reading materials and studying for exams can be enjoyable and enriching things to do with fellow students. This is recommended.

Cheating: A good lifetime strategy is always to act in such a way that no one would ever imagine that you would even consider cheating. Anyone caught cheating on a quiz or exam in this course will receive a failing grade in the course and will also be reported to the University Center for Student Conduct. In order to guarantee that you are not suspected of cheating, please keep your eyes on your own materials and do not converse with others during the quizzes and exams. Silence all electronic devices.

Plagiarism: To copy text or ideas from another source without appropriate reference is plagiarism and will result in a failing grade for your assignment and usually further disciplinary action. For additional information on plagiarism and how to avoid it, see:

<http://gsi.berkeley.edu/teachingguide/misconduct/prevent-plag.html>

Academic Integrity and Ethics: Cheating on exams and plagiarism are two common examples of dishonest, unethical behavior. Honesty and integrity are of great importance in all facets of life. They help to build a sense of self-confidence, and are key to building trust within relationships, whether personal or professional. There is no tolerance for dishonesty in the academic world, for it undermines what we are dedicated to doing – furthering knowledge for the benefit of humanity.

Your experience as a student at UC Berkeley is hopefully fueled by passion for learning and replete with fulfilling activities. And we also appreciate that being a student may be stressful. There may be times when there is temptation to engage in some kind of cheating in order to improve a grade or otherwise advance your career. This could be as blatant as having someone else sit for you in an exam, or submitting a written assignment that has been copied from another source. And it could be as subtle as glancing at a fellow student's exam when you are unsure of an answer to a question and are looking for some confirmation. One might do any of these things and potentially not get caught. However, if you cheat, no matter how much you may have learned in this class, you have failed to learn perhaps the most important lesson of all.