

INSTRUCTOR INFORMATION

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Office Hours: Mon, & Wed 2-2:50, Fri 12-12:50 OR by appointment. Come see me during office hours, or email me if you ever have any questions or just want to chat. My aim is to work with you to help you achieve your goals, but that requires consistent effort and dedication from both of us.

Education is not the filling of a pail, but the lighting of a fire. ~ William Butler Yeats

Required Materials

Textbook:, Biology of Humans, Concepts, Applications & Issues: Custom Edition for LBCC

Student Study Packet: Ketchum, Lebsack, Lebsack and Skarda, [BI 112 Cell Biology for Health Occupations](#)

5 scantrons (1 for each exam)

Introduction

Cell Biology for Health Occupations introduces the Health Occupations student to the generalized human cell, including its structure, function, basic genetics and reproduction. The chemical and physical processes that affect the cell and its components will be examined throughout the course. This course covers the basic principles and vocabulary to prepare students for the study of human organ systems that occurs in Human Anatomy and Physiology BI 231, BI 232, and BI 233.

Course activities include lecture, discussions, homework, collaborative activities, developing models and being able to give explanations of those models to classmates, and written examinations.

Course Outcomes for Bi 112

Upon successful completion of this course the student will be able to 1) distinguish between the groups of biomolecules, 2) be able to describe selected key cell processes 3) be able to describe the patterns of inheritance 4) express how changes in the genome can affect the phenotype or traits within a population 5) relate the chemical basis of cell function to life processes and 6) describe homeostasis, and the importance and function of homeostatic mechanisms in the body.

GROUP MEETING (Mon, Wed, Fri)

Attending all the classes is essential for achieving a good grade in the course. There will be a variety of activities occurring during these meetings including: lecture, discussions, discovery worksheets, active learning, and group work. I encourage you to use your course calendar to identify the topics that we will focus on during class and scan the appropriate material in your textbook before class. You are also encouraged to bring to class information from other sources that relate to topics we are covering in class.

Course Assignments, Quizzes, Exams, and Grading

Course assignments and exams give you a chance to review and to be challenged by the material you have learned. During the term there will be five exams. Timeliness should be an important component of all that you do and this course will be no exception. **No late work is accepted in this class!!!** If you know that you are going to miss a class then you can fax or e-mail us your homework, you can turn it in the day before or you can give it to someone else to bring to class on the day when the assignment is due. If you email an assignment to me, I will respond to your email indicating that I received the assignment & could open it. If I **DO NOT** respond to your email, it means that I **DID NOT** receive your assignment & **it is your responsibility** to send it again or find another means for turning in the assignment on time!!!

Exams will consist entirely of multiple choice questions. Some questions will test your memory of structures and functions while others will require an application of your knowledge to unique situations and problems. If for any reason you are unable to take an exam at the scheduled time, and fail to make arrangements with the instructors prior to the exam, you will be given an essay make up exam and this will only be done once.

Study Suggestions

There are many study strategies that can help you be successful in this class. These include the following: **keep up** with the information presented in class by **reviewing** a little each day, **reading your textbook** when there are areas that we have covered in class that are unclear to you, and be sure to **turn assigned work in on time**. I strongly encourage students to form **study groups**. Almost all students who participate in study groups find the experience beneficial. Use your group to evaluate your learning prior to an exam. It is important for you to find out what you are clear on and what you don't understand before a quiz or exam: the study group allows you to do this in a non-threatening environment. If you are able to distribute your effort out over the entire term, rather than having to "cram" for exams you will learn better. You will find that every topic is connected to those that precede and follow. If you study and understand each topic as you go, you will have a firmer foundation for learning what comes next. More importantly, studying regularly helps you learn better.

Classmate Numbers OR Email

Attendance Policy

As a student you are responsible for your registration, attendance, study habits and keeping up with course work. If you miss class it is your responsibility to communicate with another student and then with me regarding any notes, materials, or assignments that you missed. I will not chase after each individual student to remind them to turn in assignments or study for exams. I will however provide students with ample and repeated warning regarding upcoming due dates and exam dates. Nonetheless, it is your responsibility to keep track of the schedule and to stay up to date with assignments and reading. To facilitate this goal a tentative schedule of topics, reading material and exam dates has been included on the last page of this syllabus.

Creating and Maintaining a Healthy Learning Environment

I value everyone as a learner in my classroom. I expect that you will as well. I ask that we do not tolerate any disrespectful behavior towards anyone else in the classroom. If you have a problem or witness anything in class please let me know. Maintaining a respectful and peaceful classroom atmosphere is an important component to facilitating your success as students.

The LBCC community is enriched by diversity. Everyone has the right to think, learn & work together in an environment of respect, tolerance & goodwill. I actively support this right regardless of race, creed, color, personal opinion, gender, sexual orientation, or any of the countless other ways in which we are diverse.

e-Learning Site (Moodle)

Moodle will be used extensively in this course as a means for communication and facilitation of success in this course. Throughout the term lecture materials, supplemental materials and assignments will be posted to the Moodle site. As such, it is the responsibility of the student to establish their access to the Moodle site and update their email address on the site to ensure they receive any correspondence from me or other students.

Plagiarism/Cheating Policy

Plagiarism will result in an F for the assignment. What is plagiarism? Turning in someone else's work as if it were your own: using sources (another person's ideas, words, or facts) without giving credit to them, and listing sources at the end of the paper or copying a paper off the Internet; etc. Although collaboration is important in learning, ultimately each student is responsible for demonstrating individual ability. **Cheating** on exams and copying homework/lab activity reports will result in a zero for that activity and may result in further disciplinary action.

Exam results will be reviewed in class, but students will not be allowed to keep the exam questions. Any student may come to my office to review their exams in more detail, but no documentation of specific exam questions is allowed. Copying exam questions, taking pictures of exams or other forms of documentation are strictly prohibited & any student engaging in such activities may face further disciplinary consequences.

Disability Statement

You should meet with your instructor during the first week of class if

- you have a documented disability and need accommodations,
- your instructor needs to know medical information about you, or
- you need special arrangements in the event of an emergency.

If you think you may need accommodation services, please, contact Disability Services, 917-4789.

Cell Phone Policy

Cell phones will not be allowed out during class please be sure the ringers are turned off at all times unless you have instructor permission. If instructor permission is granted, please step out of the classroom discretely to take your call. Text messaging and using your cell phone as a calculator will not be allowed. Calculators can be supplied by the instructor if needed.

Your Grade

Your grade will be determined by your performance in several categories. The percent contribution of each category toward the final grade is shown below:

Exams	160	A = 90 - 100%
Activities/Homework.....	40	B = 89 - 80%
Final Exam.....	100	C = 79 - 70%
		D = 69 - 60%
		F = 59% or below

The above distribution of points is only approximate and as with the course schedule subject to minor changes. Your grade will be determined by your point standing in the class, which will be figured on a percentage basis.

Student Evaluations of Teaching

Just a heads up, LBCC has moved the process of student evaluations of teaching to an online format. You will receive and email later in the term for each class that you are enrolled in to give feedback about your experience in class. For the record I find your evaluations to be a highly valuable source of feedback and input regarding the quality & practices I employ in class. I appreciate your constructive critiques & try always to adapt my courses to improve instruction.

Tentative Schedule (may be subject to minor adjustment)

	Monday	Wednesday	Friday
Week 1	9-28 Course Introduction, Organizing Principles & Homeostasis Ch 2 (2.3 Only), Ch 3	9-30 Homeostasis, Matter, Elements, Atoms, and Periodic Table Ch 3, Ch 4 (49-52), Ch 5 (71-75)	10-2 Matter, Elements, Atoms, and Periodic Table & Energy Levels
Week 2	10-5 Energy Levels, Chemical Bonding Notation & Equations Ch 4 (53-55) Ch 5 (76-78)	10-7 Balancing Equations, Types of Chemical Reactions & Energy Ch 5 (80-84)	10-9 Introduction to Water Ch 4 (56-57) Ch 5 (86-88)
Week 3	10-12 RECAP & EXAM # 1 Activity for Points	10-14 Properties of Water & Solutions Ch 4 (56-57) Ch 5 (86-88)	10-16 Solutes, pH & buffers Ch 4 (57-58) Ch (89-90)
Week 4	10-19 Buffers & Proteins Ch 4 (58-60) Ch 5(92-94)	10-21 Enzymes & Carbohydrates Ch 4 (58-60) Ch 5 (92-94)	10-23 Introduction to Lipids Ch 4 (60-63) Ch 5 (95-98)
Week 5	10-26 RECAP & EXAM # 2 Activity for Points	10-28 More on Proteins Ch 4 (64-66) Ch 5 (99-101)	10-30 Nucleic Acids (DNA VS RNA) Ch 4 (66-68) Ch 5 (102-104)
Week 6	11-2 DNA & Information, Cell Theory Finish Ch 4 & 5, start Ch 6	11-4 Cell Theory & Membranes Ch 6 (110-114) Ch 7 (132-136)	11-6 Introduction to Cell Organelles Ch 6 (118-124) Ch 7 (137-141)
Week 7	11-9 RECAP & EXAM # 3 Activity for Points	11-11 Membrane Permeability Diffusion/Osmosis Ch 6 (115-117) Ch 7 (153-157)	11-13 Permeability, Transport, & Membrane Potential Ch 6 (115-117) Ch 7 (153-157)
Week 8	11-16 DNA DNA, Information Storage & Protein Synthesis Ch 7 (142-151) Ch 10 (204-212)	11-18 Protein Synthesis, Cell Cycle/Cell Division Ch 7 (142-151) Ch 8 (162-177)	11-20 Meiosis/Crossing Over Gametogenesis Ch 8 (162-177)
Week 9	11-23 RECAP & EXAM #4 Activity for Points	11-25 Mutations Genetic disorders Ch 9 (187-199)	11-27 No School
Week 10	11-30 Genetics and Inheritance Ch 9 (187-199)	12-2 Inheritance of Blood Groups/Sex-Linkage	12-4 Determining your Phenotype, Karyotyping
Finals Week	12-7	12-9 Final Exam 8-9:50	