BI 112 - Cell Biology for Health Occupations – Fall 2021

CRN: 26857 **Class Format: On campus Labs Wednesday 2:00 – 3:20**
Class Website: MOODLE **Separate lecture material will be asynchronous on Moodle**
Instructor: Steven Skarda **e-mail**: skardas@linnbenton.edu

****PLEASE NOTE**: This class is a combination of required On-Campus class, plus recorded required lectures via Moodle. You must regularly check LBCC e-mail, and login regularly to Moodle for information and updates on assignments and due dates.

COURSE DESCRIPTION AND OBJECTIVES

Cell Biology for Health Occupations introduces students 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 needed to prepare students for the study of human organ systems that occurs in Human Anatomy and Physiology: BI 231, BI 232, and BI 233.

After successful completion of BI 112, students should be able to:

1. Describe the importance and function of homeostatic mechanisms in the body
2. Relate the chemical basis of cell function to life processes
3. Express how changes in the genome affect the phenotype within a population
4. Describe the patterns of inheritance
5. Describe selected key cell processes
6. Distinguish between the groups of biomolecules

REQUIRED MATERIAL BI 112: Cell Biology for Health Occupations Study Packet

GRADING determined by your performance in several categories. The distribution of points is only *approximate* and as with the course schedule, subject to change.

Exams.....200	A = 90 - 100%
Activities/Homework..... 110	B = 80 - 89%
Final Exam.....100	C = 70 - 79%
Total Points Possible.....410	D = 60 - 69%
	F = 59.9% or below

EXAMS will be mostly multiple-choice questions. Some will test your memory of structures and functions while others require an application of knowledge to unique situations. Exams and quizzes will be completed during the in-person class and are not offered virtually. You must be present to complete the assessments. No exams or quizzes are dropped and they do represent a significant portion of your class grade.

Cheating and Academic Dishonesty 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. Code of Conduct All participants in the course are bound by the Linn-Benton Community College Students' Rights Responsibilities and Conduct.

Please understand that the in-person lab experience may change. If I become ill or if the college changes policy regarding face-to-face offerings due to the pandemic, the lab and assessments may be changed to a remote format. I will communicate any such changes via email and with Moodle announcements. Check Moodle and your LBCC email regularly.

If you are ill, please do not attend class on campus. If you are unable to attend due to illness, please contact me *BEFORE CLASS TIME.* If you miss an exam, we will coordinate for you to take it through Student Assessment, on campus at a scheduled time, You must complete 70% of labs to pass this class.

FACE COVERINGS ARE REQUIRED BY ALL STUDENTS AND EMPLOYEES AT ALL TIMES WHILE IN THE CLASSROOM. *I cannot make individual exceptions for any reason*. Face shields are not considered acceptable face covering by the college. Masks will be available for students should they forget one. You are encouraged to wash your hands (or use hand sanitizer) prior to lab.

LECTURE

The lecture is a very important part of this course. Watching the posted lectures is *essential* for achieving a good grade. I encourage you to use your course schedule to identify the topics that we will focus on during the posted lecture and review the appropriate material in your e-textbook and Study Guide before watching the lecture.

DISABILITY SERVICES LBCC is committed to inclusiveness and equal access to education. If you have approved accommodations through the Center for Accessibility Resources (CFAR) and would like to use your accommodations in this class, please talk to me as soon as possible to discuss your needs. If you believe you may need accommodations, but are not yet registered with CFAR, please go to http://linnbenton.edu/cfar for steps on how to apply for services or call 541-917-4789.

There are 2 extra credit opportunities for using the Learning Center resources. You should use these resources to be successful, but if you use them by the Friday of week 4 and week 9, you can earn up to 5 points for each, 10 point max.

STUDY SUGGESTIONS that can help you be successful in this class. These include:

- **Rewrite class notes** in your own words each day so you can gauge your understanding and ask questions on material you do not understand.
- **Keep up** with the reading and information presented in lecture by **reviewing** each day.
- **Take exams and turn assigned work in on time**.

It is important that you keep up with material and not get behind. Most students find it helpful to participate in a **study group**. Use the study group to check your knowledge, to quiz each other, to ask points you don't understand, and to help each other learn difficult material. It is important for you to identify areas that are unclear and material you don't understand *before* a quiz or exam. Additional instructional services are available for all students at the Learning Center.

STUDENT BEHAVIOR

Although collaboration is important in learning, ultimately each student is responsible for demonstrating individual ability. **Cheating** on exams and copying homework/activities 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 at all times & any student engaging in such activities may face further disciplinary consequences. **Plagiarism** is also cheating and includes turning in someone else's work as if it were your own, using sources (another person's words) without giving credit or copying a paper off the Internet, etc. Further details about LBCC's policy on cheating may be found in the Administrative Rule: 7030-02, Academic Integrity. The basis for determining behavior and expectations in this class is outlined in the LBCC Student Handbook.

BI 112 - Cell Biology for Health Occupations Lecture and Exam Schedule, Fall 2020

Week	Recorded lecture on Moodle and Wednesday on-campus class activities
Week 1 **Sept 27**	Course Introduction, Scientific Method, Organizing Principles, Homeostasis Matter, Elements, Atoms, & Periodic Table
Week 2 **Oct. 4**	Chemical Bonding, Chemical Equations Balancing Equations, Metric System Chemical Reactions, Energy (I could use it!)
Week 3 **Oct. 11**	**Exam #1 Wednesday in class** Properties of Water Solutes, pH & Buffers, Enzymes
Week 4 **Oct. 18**	Enzymes, Organic Chemistry Biomolecules Protein, Carbohydrates
Week 5 **Oct. 25**	**Exam #2 Wednesday in class** Lipids, ATP Nucleic Acids DNA &RNA
Week 6 **Nov. 1**	Cell Theory DNA Replication Organization Membrane Structure, Membrane Permeability Cell Organelles, Osmosis
Week 7 **Nov. 8**	**Exam #3 Wednesday in class** Membrane Potential Membrane Transport DNA, Information Storage, DNA Replication
Week 8 **Nov. 15**	Protein Synthesis Cell Cycle/Cell Division Meiosis/Crossing Over Gametogenesis
Week 9 **Nov. 22**	**Exam #4 Wednesday in class** Genetics, Inheritance, Mutations, & Disorders
Week 10 **Nov. 29**	Inheritance of Blood Groups & Codominance Sex Linked Inheritance

Final Exam on-campus Wednesday, December 8th
2:00 to 3:50 pm – two hours – be prepared and efficient with your time