BI 112 Cell Biology Syllabus WINTER 2019

4 credits, CRN: 30662

Instructor: Dr. Gail M. Moraru email: morarug@linnbenton.edu

Class Time: WOH 212, MTWR 3:00-3:50 p.m.

Office Hours: WOH 219, **M 11 a.m.–12 p.m., TR 1:00–3:00 p.m.,** or by appointment

Materials (required):

- Textbook: Biology of Humans: Custom Edition for LBCC
- BI 112 Cell Biology for Health Occupations Study Packet
- 5 scantrons (1 for each exam)

Course outcomes:

Upon successful completion of this course, students will be able to:

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

Nature of course content, topics and order covered: 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.

Method of evaluation:

Assignments	40 pts
Exams	160 pts (40 pts per exam)
Final Exam	100 pts
TOTAL	**300 pts**

Grading: A= 90–100%, B= 80–89%, C= 70–79 %, D= 60–69%, F= 0–59%

Assignments: You will have weekly homework assignments. Questions/activities on these assignments are designed to help you in your preparation for exams. These are due every Thursday at the start of class, unless stated otherwise in class.

Exams: There will be four exams during the course of the term and one comprehensive final exam. Exam dates are listed in the class schedule (last page of the syllabus). If I am notified in advance that you cannot make it to an exam because of an unforeseen emergency, you will be given a makeup exam in the Student Assessment center (in Red Cedar Hall). Note, however, that a makeup exam cannot be given once exams have been handed back.

Study skills: You should be reading, practicing, critically thinking about what you learn, discussing the information with your classmates and friends, exploring the material with outside sources, and maybe even drawing, writing, singing, acting out, dancing, or any other means of helping yourself understand and remember the material that you may find works for you. Not every study method works for everyone. If you need help with study methods, please come speak with me, and I will give some suggestions and examples (probably not of a singing method).

The Learning Center (second floor of Willamette Hall) and Writing Center are also great resources here at LBCC. Please speak with me if you want more information about these.

Classmate(s) numbers/email

Policies

Attendance: You are college students, and a part of your college experience is determining how you learn best. I do not require attendance, but that means it is up to you to decide what is in your best interest. This course will cover a lot of ground very quickly and the exams will draw from all class material: readings, lectures, and classroom discussion. Participating in discussions and reflections in class is a good way to get thinking about the material and is part of your grade as well.

Classroom etiquette: Act like adults. My job is not to babysit you. Do not disrupt class. Respect others' desire to learn. I reserve the right to ask you to leave the classroom.

Late assignments are not accepted. Please turn in assignments on time and complete. This means that your assignment needs to be ready by the due date.

Accommodations: Students who may need accommodations due to documented disabilities, who have medical information that the instructor should know, or who need special arrangements in an emergency should speak with me during the first week of class. If you believe you may need accommodations but are not yet registered with CFAR, please visit the CFAR website at www.linnbenton.edu/cfar for steps on how to apply for services or call 541-917-4789.

Statement of inclusion: To promote academic excellence and learning environments that encourage multiple perspectives and the free exchange of ideas, all courses at LBCC will provide students the opportunity to interact with values, opinions, and/or beliefs different than their own in safe, positive and nurturing learning environments. LBCC is committed to producing culturally literate individuals capable of interacting, collaborating and problem-solving in an ever-changing community and diverse workforce.

To that end, if a pattern of disrespect develops, I reserve the right to discuss appropriate behavioral expectations with individuals who may not fully understand this responsibility. At no time will a hostile or condescending classroom environment or discussion be permitted.

Academic dishonesty: Please note that I take issues of academic and personal honesty very seriously. Any discovery of academic dishonesty will result in a grade of zero for the assignment and possible recommendation to the administration for further consequences.

Incomplete grade: An incomplete (IN) grade will only be considered if a student has talked to me in advance and a signed agreement between the student and me is completed. IN grades are assigned only if the student has a good reason for making the request, has only a minor amount of coursework to complete, and has scored a C or better on work that has already been submitted.

Title IX

If you or another student are the victim of any form of sexual misconduct (including dating/domestic violence, stalking, sexual harassment) or any form of gender discrimination, LBCC can assist you. You can report a violation of our sexual misconduct policy directly to our Title IX Coordinator. You may also report the issue to a faculty member who is required to notify the Coordinator. You may additionally (or instead) make an appointment to speak confidentially to our Advising and Career Center by calling 541-917-4780.

Campus Police/Emergency Resources

You may review emergency services and resources at the LBCC Public Safety website. Campus Safety can be reached using the “code 2” button on any campus phone or by dialing x411 on campus or 541-917-4440 off campus. Dial 911 for off campus emergencies.

I reserve the right to change the contents of this syllabus due to unforeseen circumstances. You will be given notice of relevant changes in class, through a Sapling Announcement, or through LBCC e-mail.

Tentative schedule

Monday	Tuesday	Wednesday	Thursday
1/7 Introduction, Organizing principles *pages 5, 36-42, 27-30, 43-45*	1/8 Organizing principles, homeostasis *pages 5, 36-42, 27-30, 43-45*	1/9 Matter, elements, atoms *pages 49-52, 72-74, 52-56*	1/10 Energy levels, chemical bonding *pages 49-52, 72-74, 52-56* **homework #1 due**
1/14 Energy levels, chemical bonding *pages 72-74, 52-56*	1/15 Chemical reactions, balancing equations *pages 75-78, 80-81*	1/16 Chemical reactions, balancing equations *pages 75-78, 80-81*	1/17 Types of energy **homework #2 due**
1/21 **no class** MLK day	1/22 **Exam 1**	1/23 Properties of water *pages 54-57, 86-88*	1/24 Solutes, pH *pages 54-58, 86-90* **homework #3 due**
1/28 pH & buffers *pages 54-58, 86-90*	1/29 Carbohydrates *pages 58-60, 92-94, 60-64, 95-98*	1/30 Lipids *pages 60-64, 95-98*	1/31 Proteins *pages 64-66, 99-102* **homework #4 due**
2/4 Enzymes *pages 65-66, 101-102*	2/5 Enzymes *pages 65-66, 101-102*	2/6 **Exam 2** **homework #5 due**	2/7 Nucleic acids *pages 66-68, 103-104, 112-113, 134*
2/11 Nucleic acids *pages 66-68, 103-104, 112-113, 134*	2/12 Cell theory *pages 66-68, 103-104, 112-113, 134*	2/13 Cell structure *pages 112-113, 134* **homework #6 due**	2/14 Cell membrane *pages 112-113, 134*
2/18 **no class**	2/19 Cell membrane, transport *pages 136-137, 114-117, 154-157*	2/20 **Exam 3** **homework #7 due**	2/21 Cell organelles *pages 112-113, 134*
2/25 DNA information storage *pages 142-145, 147, 162-163, 203-212*	2/25 DNA replication, protein synthesis *pages 142-145, 147, 162-163, 203-212*	2/27 Cell cycle *pages 146-151, 163-167, 225-237*	2/28 Cell division *pages 146-151, 163-167, 225-237* **homework #8 due**
3/4 Cell division *pages 146-151, 163-167, 225-237*	3/5 Meiosis, gametogenesis *pages 167-173*	3/6 Meiosis, gametogenesis *pages 167-173*	3/7 **Exam 4** **homework #9 due**
3/11 Genetics, *pages 173-177, 187-201*	3/12 Genetics, inheritance, *pages 173-177, 187-201*	3/13 Mutations & disorders *pages 173-177, 187-201*	3/14 Mutations & disorders *pages 173-177, 187-201* **homework #10 due**

Final exam is March 20 from 3:00 to 4:50 p.m.

Note: Dates are subject to change based on how we advance in the course.