BI 221—PRINCIPLES OF BIOLOGY I
LBCC, Fall 2021

Instructor: Warren Coffeen, Ph.D.
Office: WOH 221
Email: coffeew@linnbenton.edu

Office Hours: Please contact me to set up an appointment.
Zoom link for office hours

Schedule:

Lecture: **Three lecture recordings will be posted each week. Typically they will be available Monday, Tuesday and Wednesday afternoon.**

Labs: Your lab time will be based on your CRN:

CRN 27537: Thur 11am - 1:50pm
CRN 27538: Thur 2:00pm - 4:50pm
CRN 27541: Fri 8am - 10:50am
CRN 27540: Fri 11am - 1:50pm

All labs will be in room WOH 214.

Prerequisite: The prerequisite for BI 221 is a term of college chemistry (CH 112, 121, 150, or 221). Classes may be taken concurrently.

Required textbooks:
**OpenStax Biology* Free Online book. Or any majors biology book will work (such as Campbell Biology or Raven Biology)
* Weekly Homework in Moodle
* *BI 221 Lab Material will be available on Moodle*

Assessments: (subject to change)

Labs (8@8 pts/lab)	=	64 points
Online Homework (6 pts/week)	=	60 points
7 Quizzes@ 10 points each	=	70 points
2 exams @ 75 points each	=	150 points
Final Comprehensive exam	=	100 points
Total	**=**	**444 points**

Course Learning Outcomes:
- ➢ Describe the building blocks and synthesis of the major classes of biomolecules and the contribution of their three-dimensional structure to their functions
- ➢ Describe and relate anabolic (photosynthesis) and catabolic (respiration and fermentation) pathways emphasizing the transformation of energy and matter..
- ➢ Describe how cells store, use, and transmit genomic information.
- ➢ Differentiate the various cellular processes that can affect gene expression.

Grading Scheme:

90 - 100%	A
80 – 89%	B
70 – 79%	C
60 – 69%	D
59.9 % and below	F

Quizzes
There will be seven 10 point quizzes given throughout the term. All quizzes will be administered through Moodle, the first 6 will be taken in person during lab, while the last quiz (week 10) will be remote. Quizzes are not open notes or open book.

Exams
There are two exams and one final cumulative exam. The exams will be on Monday 10/25/21 and 11/22/21 and the final on Monday 12/6/21. All exams will be taken remotely in Moodle and will be composed of multiple choice and short answer type questions. Exams will be open notes, but you will have a strict time limit, and if too much time is spent looking up answers you will run out of time.

Labs: All labs are three hours long and you are expected to be on time and remain in lab the entire time until all your work is done. You must attend and participate in the lab to receive credit for the lab. There are **NO** make ups for missed labs. Lab documents will be available in Moodle and will be filled out digitally during lab or after lab, and submitted via Moodle.

Missing Lab: You must attend and complete 6 of the 8 labs in order to pass the class.

COVID Policies:
Wear a mask or face covering indoors at all times. Your mask or face covering must be properly worn (fully covering nose and mouth and tight-fitting). Mesh masks, face shields, or face covering that incorporates a valve designed to facilitate easy exhalation are not acceptable. If you have a medical condition or a disability that prevents you from wearing a mask or cloth face covering, you must obtain an accommodation from CFAR (Center for Accessibility Resources) to be exempt from this requirement. State guidelines do not limit class size. Physical distancing accomodations can be made upon request and cleaning supplies are also available for personal use.

This course is a lab science course, so it is expected that you will attend & submit at least 70% of the labs to gain a passing grade. If a student misses more than TWO labs this can result in automatically failing the course, regardless of the overall percentage for the remainder of the course.

Students that must be absent from lab due to quarantine status or illness will be provided an opportunity to make up a lab, but must be in communication with your instructor as soon as the student or a live-in family member e.g. care of child(ren) in quarantine limits attendance of your lab class. You may be asked to provide documentation or further information, but I understand that in some cases this may not be possible. For the safety of our classroom environment, please do not attend class if you are sick, inform the instructor that you are unable to attend class within a timely manner (no later than the morning of lab). Your instructor will work with you; no labs will be provided retroactively, you must inform the instructor via email on the day of the lab, or in advance if this is possible, of your inability to attend lab. Documentation* may be requested to be eligible for an alternate lab – up to two labs maximum for extenuating circumstances; this is only with expressed communication of the instructor.

Online Homework: This class has an online homework requirement. You will be able to access the assignments through the course Moodle site. Each week you will have 20-30 questions within Moodle relating to the weekly material

Pre-Lab Assignment
Each week there will be a four question, two point pre-lab assignment, in Moodle, that will need to be completed by the beginning of your lab time. Pre-lab points are contingent to being on time to lab. If you are late to lab, pre-lab points may be deducted.

Attendance: Lab attendance is highly recommended, as there are no lab makeups..

Course Evaluations: Student feedback is important to improve this course and to help the instructor know how to change teaching methods. Changes will and have actually occurred as a result of student feedback. Starting this term student evaluations of teaching (SET) will be done electronically. It will be active weeks 5 - 9 of the term. The system is anonymous, and can be done from any electronic device. You will receive email notifications for each of your classes, please fill these surveys out in a timely manner – it takes approximately 10 minutes per each class and is a highly valued resource for guiding the progress and evolution of the course. Thank you in advance for your input!

Academic Misconduct: This will not be tolerated and includes any form of cheating. The student is encouraged to read the college catalog for further details. If a student is found to have cheated on an exam, after due process the resulting grade may be a zero on the exam or quiz. All group work should still be written in the student's own handwriting and language. You must turn in your own interpretation and work even if doing teamwork projects. Repeat violations of this policy will be referred to the Dean of Science, Engineering and Technology Division. Violations of academic honesty will be met with severe measures that may include failing the assessment, the course or expulsion from the college. Academic misconduct includes using ANY electronic device during exams, quizzes or to answer in lab summary questions.

Basic Needs Syllabus Statement: Any student who has difficulty affording groceries or accessing sufficient food to eat every day, or who lacks a safe and stable place to live, and believes this may affect their performance in the course, is urged to contact the Roadrunner Resource Center for support (resources@linnbenton.edu , or visit us on the web www.linnbenton.edu/RRC under Student Support for Current Students). Our office can help students get connected to resources to help. Furthermore, please notify the professor if you are comfortable in doing so. This will enable them to provide any resources that they may possess.

Withdrawing from Classes (Dropping a Class After the Refund Deadline)
To drop a class or withdraw from school, you may turn in a Schedule Change form at the Registration Counter or at a community center or use the Webrunner system. If you withdraw from a course after the refund deadline, you will receive a "W" grade in the class, you will forfeit all claims to refunds, and you will be financially responsible for any tuition and fees. The last day to drop a class and receive a tuition refund is the Monday of the 2nd week. The last day to withdraw (no refund) is the last day of week 7.

Special Accommodations and Disability Services: LBCC is committed to inclusiveness and equal access to higher education. If you have approved accommodations through the Center for Accessibility Resources (CFAR) and would like to use your accommodations in the class, please talk to your instructor as soon as possible to discuss your needs. If you believe you may need

accommodations but are not yet registered with CFAR, please visit the CFAR Website for steps on how to apply for services or call 541-917-4789.

Linn-Benton Community College is an equal opportunity educator and employer.

BI 221 Lecture Schedule and Readings Assignments

Fall 2021 (Subject to change)

Warren Coffeen, coffeew@linnbenton.edu

Week	Monday	Tuesday	Wednesday	Lab (Thurs or Fri)
1 9/27-10/1	**Topic 1: Introduction, Scientific Method** Ch 1, LG, Lec Slides	**Topic 2: Chemistry of Life** Ch 2, LG, Lec Slides	**Topic 3: Macromolecules** Ch 3, LG, Lec Slides	Lab 1: **Atoms and Water** **QUIZ 1**
2 10/4-10/8	**Topic 3 cont.**	**Topic 4: DNA Structure & Function** Ch 14, LG, Lec Slides	**Topic 4 cont.**	Lab 2: **Macromolecules** **QUIZ 2**
3 10/11-10/15	**Topic 5: Cell Structure and Function** Ch 4, LG, Lec Slides	**Topic 5 cont.** **Topic 6: Cell Membranes and Transport** Ch 5, LG, Lec Slides	**Topic 6 cont.**	Lab 3: **Exploring Cells** **QUIZ 3**
4 10/18-10/22	**T7: Energy** **T8: Cellular Respiration** Ch 6, LG, Lec Slides Ch 7, LG, Lec Slides	**Topic 8 cont.**	**Topic 18 cont.**	Lab 4: **Cellular Respiration** **QUIZ 4**
5 10/25-10/29	**EXAM #1** **Topics 1-8**	**Topic 9: Photosynthesis** Ch 8, LG, Lec Slides	**Topic 19 cont.**	Lab 5: **Monkey Vision and Cell Division (remote)**
6 11/1-11/5	**Topic 10: Cell Division - Mitosis** Ch 10, LG, Lec Slides	**Topic 11: Meiosis** Ch 11, LG, Lec Slides	**Topic 11 cont.**	Lab 6: **Molecular Cloning part 1** **QUIZ 5**
7 11/8-11/12	**Topic 12: Genetic Inheritance** Ch 12, LG, Lec Slides	**Topic 12 cont.**	**Topic 12 cont.**	No Lab Veterans Day
8 11/15-11/19	**Topic 13: Chromosomes and Linkage** Ch 13, LG, Lec Slides	**Topic 13 cont.**	**Topic 14: Making Proteins** Ch 15, LG, Lec Slides	Lab 7: **Molecular Cloning part 2** **QUIZ 6**
9 11/22-11/26	**EXAM #2** **Topics 9-13**	**Topic 14 cont.**	**Thanksgiving**	**No lab Thanksgiving**
10 11/29-12/3	**Topic 14 cont.**	**Topic 15: Biotechnology** Ch 17 , LG, Lec Slides	**Topic 15 cont.**	Lab 8: **Bioinformatics (remote)** **QUIZ 7 Remote**
11 12/6-12/10	**FINAL EXAM** **Monday, Dec 6th Times TBA** Comprehensive Final			