BIO 102

General Biology

Spring 2021

CRN 43245-BI102:
Lecture: Friday, 9:00-9:50 (lecture) and Friday, 10:00 – 10:50 ZOOM meetings
Online moodle course

Instructor: Greg Coleman
Office: BC-201
Office hours: Zoom office hour Friday Noon. Also available for zoom appointments, email, text, or phone.
Office phone: (Cell) 541-760-5664
e-mail: greg.coleman@linnbenton.edu

Required Text and Packets (From the Bookstore):

- Text book : go to https://openstax.org/. Click on Science, then Concepts of Biology, and select the method of dissemination. – **Openstax is a product of** © 2013 by Rice University
- Lab Packet BI 102 General Biology Laboratory Course Packet: LBCC Biology Department - **supplied on moodle**
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Course Overview

Biology 102 is an introduction to cell biology, DNA, synthesis of biological molecules, genetics, genetic technologies, adaptation, and evolution This course is intended for **NON-Science majors.** If you plan on majoring in a field of science this is probably not the class for you. Check with your intended transfer school and program for their specific degree requirements. Biology 102 is the second course in a three-term sequence of general biology (101, 102, and 103). 100 level general biology courses are structured to be taken **in any** order. There are no prerequisites for this class.

"Warning"

This course requires extensive use of a computer with internet access, minimum requirements include:

- High speed internet or a wifi hotspot
- A computer with 128g SSD, 4G RAM, i3 6th gen processor (or equivalent functionality)
- Device with a microphone, camera, and speaker

Request for Special Needs or Accommodations
Direct questions about or requests for special needs or accommodations to the LBCC Disability Coordinator, RCH-105, 6500 Pacific Blvd. SW, Albany, Oregon 97321, Phone 541-917-4789 or via Oregon Telecommunications Relay TTD at 1-800-735-2900 or 1-800-735-1232. Make sign language interpreting or real-time transcribing requests 2-4 weeks in advance. Make all other requests at least 72 hours prior to the event. LBCC will make every effort to honor requests. LBCC is an equal opportunity educator and employer.

Important Dates:

1st Lecture Exam:	Friday, April 23rd @ 9:00 am on zoom
2nd Lecture Exam:	Friday, May 21 @ 9:00 am on zoom
Final Exam	Tuesday, June 8th @ 9:00 – 11:00 am (2 hours)

Grading:

All grading is based upon mastery of the subject matter of this course. Points towards your final grade will be awarded as follows:

		Grade cut-offs.	
First hour exam	100		
Second hour exam	100	A	90%
Final exam	200	B	80 - 90%
Pre-lab exercises 9 @ 5	45	C	70 - 80%
Labs 10@ 10	100	D	60 - 70%
ONLINE HOMEWORK	60	F	< 60%

Total 605 (actual total may be different)

Additional Grading Options:

Two additional grade assignments are possible: incomplete and Y. An incomplete will only be assigned when all course material except the final exam has been completed. The Y, which indicates insufficient basis for a grade, will only be assigned to students that completed less than 50% of the course and neglected to drop from the course.

Late Assignment Policy:

Lecture and lab assignments are due on the due date of the assignment unless otherwise indicated. The due date will be printed on the assignment or announced on Moodle. Any late assignment will be penalized at the rate of one letter grade (10%) per class period.

YOU MUST EARN AT least 60% on your lab assignments to pass this course. **Any student failing to turn in more than 2 labs during the term will fail the Course (missing 3 labs results in a failing grade)**.

Student Behavior

Collaboration and participation are essential components of this class. Learning is best accomplished through collaboration among students. College classes and life in general works best when the focus is on people's strength rather than their weakness. As such, **derogatory or condescending behavior or remarks towards other students will not be tolerated**.

Although collaboration and group activities are a central part of this course, each student is ultimately responsible to demonstrate their mastery of the subject matter. Assignments and activities submitted for credit, including exams and quizzes must be completed individually unless otherwise stated by the instructor.

If a student falls behind on class work, it is that student's responsibility to determine material missed, obtain handouts, make-up assignments (when possible), and to keep track of upcoming assignments and due dates.

Exams:

Two one-hour midterm exams will be given during regularly scheduled class times on zoom. These exams will consist of approximately 50 multiple choice questions. There will also 2 -10-point short essay questions. The first exam will cover material from the text readings, lecture slides, labs, and assignments for weeks one through three. The second exam will cover material from the text readings, lecture slides, labs, and assignments from week four through seven. The final exam will be cumulative covering all material throughout the term and your score will represent your mastery of the subject matter. All exams will be completed during a designated zoom meeting and will be posted online on MOODLE. The final exam will be worth twice the midterms.

Lab quizzes are all short answer or fill in the blank questions drawn from the previous weeks lab assignment. Quizzes will be posted on Moodle.

Lab Assignments

Lab assignments are due on the day of lab unless otherwise stated by the instructor. Exam and quiz questions will be formulated using material from the labs and students need to understand the material from any labs that were missed. Students may only miss two unexcused labs or they will automatically receive an "F' for this course. There are nine pre-labs due at the beginning of the lab period for which they are written (see schedule and lab packet).
These pre-labs are graded and are worth 5 points each. It is imperative that you come to lab prepared for that days activity in order to do well in the lab. Time constraints dictate that every student is prepared before lab starts because otherwise there would not be enough time to finish that lab assignment.
In order to pass this course, you must earn at least 60% of the lab points possible.

Moodle Homework

Moodle homework is required. Every week there will be mandatory Moodle Homework quizzes covering materials over that week's lectures. Moodle homework will be worth 10% of the final grade.

Obtaining Assistance:

Students may contact the instructor at any time through email or phone. Students may also arrange an appointment that best fits their schedule.

Disability Services:

Students who may need accommodations due to documented disabilities, who have medical information which the instructor should know, or who need special arrangements in an emergency, should **speak with the instructor** during the **first week of class**. If you have not accessed services and think you may need them, please contact Disability Services, 541-917-4789.

Plagiarism Policy

Plagiarism will result in an F for the assignment and, in serious cases, an F for the course. Plagiarism is turning in someone else's work as if it were your own. This includes copying from sources (or making only slight changes), including ideas, words, or facts, without giving credit to your source; copying papers from the internet; cutting and pasting large blocks of information; having someone else write your paper for you. You will receive no credit for something you did not write.

Cheating Policy

We will be performing much collaborative work in this course, and you are encouraged to form study groups prior to exams. However, each student is responsible for demonstrating individual mastery of the subject matter. Cheating on exams and verbatim copying of homework or lab activities will result in a zero grade for that assignment. Continued cheating may result in a failing grade for this course.

Homework Assignments

During the term you will be required to complete a variety of homework assignments. Homework will be due on their due date If you are unable to turn in the homework on the due date you can e-mail the homework to your instructor, turn it in early or ask for an extension.

Student Learning Expectations

Students completing biology 102 should be able to apply their biology skills to their own life, as well as display a fundamental grasp of the following concepts:

1. Explain the fundamental aspects of the theory of cell life.
2. Compare and contrast the structures and components of prokaryotic and eukaryotic cells as well as plant and animal cells.
3. Describe processes (Mitosis and Meiosis) of cellular reproduction.
4. Explain the basis for patterns of Mendelian and non-Mendelian inheritance.
5. Discuss the structure and function of DNA.
6. Explain how DNA and protein synthesis relates to gene expression.
7. Apply basic understanding of DNA structure to the process of genetic engineering.
8. Distinguish between macroevolution and microevolution.
9. Discuss fundamental patterns of behavior and explain their relevance to evolutionary processes and outcomes.

The LBCC community is enriched by diversity. Everyone has the right to think, learn, and work together in an environment of respect, tolerance, and 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. (related to Board Policy #1015)

BI 102 Spring 2021 Schedule

CRN 43245-BI102:

Lecture: Friday, 9:00– 9:50 zoom meeting and Lab: Friday 10:00 – 10:50 zoom meetings

Instructor: Greg Coleman greg.coleman@linnbenton.edu

Week/Date	Friday Lecture	Friday Lab	Readings
1 Mar. 29 - April 2	Introduction, expectations, The study of life Cell Structure and function	**Lab 1: Cells & Osmosis**	Ch. 1 & 3
Last day to drop and receive refund April 5th			
2 Apr. 5 - 9	Chemistry of life	**Prelab Due** **Lab 2: Enzymes and catalase**	Ch. 2
3 Apr. 12 – 16	How cells obtain energy Photosynthesis	**Prelab Due** **Lab 3: Photosynthesis**	Ch. 4 & 5

1st Midterm Exam Friday April 23 (Chpts. 1, 2, 3, 4 & 5)

Week/Date	Friday Lecture	Friday Lab	Readings
4 Apr. 19 – 23	**First Exam – Chpts.** **1, 2, 3, 4 & 5** Reproduction at the cellular level The cellular basis of inheritance	**Prelab Due** **Lab 4: Cell division Mitosis and Meiosis**	Ch. 6 & 7
5 Apr. 26 - 30	Patterns of inheritance	**Prelab Due** **Lab 5: Genetics**	Ch. 8
6 May 3 – 7	Molecular Biology	**Prelab Due** **Lab 6: DNA and genomics**	Ch. 9
7 May 10 - 14	Biotechnology	**Prelab Due** **Lab 7: DNA Electrophoresis**	Ch. 10
Last day to withdraw to receive a "W" rather than an "F" grade May 16th			

2nd Midterm Exam Friday, May 21 (Chpts. 6, 7, 8, 9 & 10)

Week/Date	Friday Lecture	Friday Lab	Readings
8 May 17 - 21	**2nd Midterm** **Chpts. 6, 7, 8, 9 & 10** Evolution and its processes	**Prelab Due** **Lab 8: Natural Selection**	Ch 11.1
9 May 24 - 28	Evolution and its processes	**Prelab Due** **Lab 9: Population Genetics**	Ch. 11.2
10 May 31 - June 4	Evolution and its processes	**Prelab Due** **Lab 10: Fossils**	Ch. 11.2 – 11.3
11 June 7 - 11	**"Final exam"** **Tuesday June 8th** **9:00 - 11:00 AM** **On zoom (The link will be on moodle)**	**FINALS WEEK** **Final covers everything from term** **"Cumulative**	

Final Exam (Tuesday, June 8th, 9:00– 11:00 AM, ON ZOOM

(All times and schedules are tentative and can be changed by the instructor at any time without notification)