

BI 102 General Biology

4 credits

Instructor: Melissa Scherr

Office: LC 206/WOH 210 (main campus)

Email: scherrm@linnbenton.edu

Tel: 541.602.6670 (emergency)

About the Course:

Introduction to basic concepts of biology and the scientific process. This course is designed for students at Linn-Benton Community College who are *non-science majors*. Students typically have little to no science background, yet are enrolled in this course to fulfill requirements needed for a degree and who desire to expand their knowledge and appreciation of the biological sciences. This course will fulfill your laboratory science distribution requirements at LBCC. This course focuses on processes of biology including understanding the importance of DNA, synthesis of other biological molecules, cell division, genetics, adaptation and evolution.

Outcomes

1. Distinguish between the groups of biomolecules
2. Be able 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. Explain how natural selection drives evolution

Prerequisite: MTH 065 (Elementary Algebra)

This course is taught as a discrete and separate course in biology. It is not necessary to have any other biology courses before taking this course for non-majors.

Required Materials/Texts:

- [Concepts of Biology](#), Open Stax College (ISBN: CB-1-004-DW)
- [Lab Book BI 102](#) General Biology 102 Course Packet, Revised August 2017
- 3 ring notebook

Grading:

Final grades for the course will be determined by each student's cumulative point total by the end of the term.

Assessments:

| | |
|----------------------------------|---------------------|
| 2 exams @ 75 points each | = 150 points |
| Pre-lab assignments @ 5 pts each | = 50 points |
| Lab Activities @ 5 pts each | = 50 points |
| Quizzes 2 @ 50 pts each | = 100 points |
| In-Class Activities | = 50 points |
| Social Media Project | = 50 points |
| <u>Final Comprehensive exam</u> | <u>= 100 points</u> |

Total = 550 points

Grading Scheme:

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

*As this is a 10X course, I will not be assigning +/- grades.

I. General Policies

Attendance: Students are required and expected to attend all lectures. No grade will be assigned for attendance but to do well in this course it is expected that you will attend ALL lectures and labs. If a situation arises that makes it necessary to miss class it is the student's responsibility to obtain notes from a peer. **No quizzes, lab work, or in-class assignments will be accepted for credit if you were not in attendance for the class when the work was performed. You must be present to turn in your own work.** This course is a lab science course and it is expected that you will attend at least 60% of the labs to gain a passing grade. If a student misses more than 4 lab periods⁺, the student will automatically fail the course, regardless of the overall percentage for the remainder of the course.

⁺assuming a regular 10 week lab progression.

Children are not allowed in the classroom while students are attending class in consideration of your peers for maintaining a professional learning environment.

Quizzes: As noted, there will be 2 quizzes over reading and lecture material. Quizzes will cover the lecture and reading material beginning from the last exam up to the quiz date. The quizzes will be closed book and closed note. You will be given 20 minutes at the beginning of the lecture day for taking the quiz.

Exams: Objective tests consisting of multiple choices, matching, short answer, binary decision, labeling, true/false, data analysis and graphing.

Make up exams

There will be **NO** make-up exams unless I am informed **in writing, prior** to the exam that you will need to miss it for a **documentable** reason. You need to talk with me directly for approval to make up an exam. Exams will not be scheduled BEFORE the exam date for any reason. Approved late-takes must be made up **before the next class** session following an exam. If an emergency arises on the exam day, you must call me and leave a message on my voice \\mail or send me an immediate text or e-mail, and then provide proper documentation at the scheduled time for the late-take. If you miss an exam without documentable reason, the grade is zero (exam grades are not dropped). Examine the schedule carefully and make appropriate

accommodations to take all exams on time.

II. Special Circumstances

Non-Attendance: Students enrolled in the class who do not attend class the first week of the term will be **dropped from the course** the second Monday of the term.

Late Adds: No student will be added to the course after the first week of classes. All material covered the first week, including labs, is subject to being on the unit quizzes and exams. Missing more than one week is very detrimental to a student's grade. If a person adds by the last day of the first week, that student must make an appointment with the instructor to get caught up with the lectures and lab and only then will the instructor sign the add form.

Incomplete Policy: An incomplete (IN) will only be issued when a student is unable to complete the last exam by the end of the term, and each incomplete grade will be accompanied by a signed contract specifying the conditions necessary to complete the course. This contract will be signed by the student and the instructor and placed on file in the SET division office. The Y grade can only be issued if the student has attended no more than 25% of class time and less than 25% of the coursework was submitted. The deadline to drop the course is the end of the 7th week.

Special Accommodations: Students who may need accommodations due to documented disabilities, or who have medical information which the instructor should know about, 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 Center for Accessibility Resources, 917-4789. If you have documented your disability, remember that you must **complete a "Request for Accommodations" form** every term in order to receive accommodations. It is the student's responsibility to make any needs known to me within the **first week** of the semester, *in writing*, so that I can give appropriate accommodation. This includes but is not limited to disabilities of visual, hearing, learning, dates needed for religious holidays, court dates etc.

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 use the SIS system. (For classes that meet four to seven weeks, you must process the withdrawal by 5 p.m. on the Friday before the last week of the class. For example, if the class is scheduled to meet four weeks, the deadline to withdraw is 5 p.m. on the Friday of the third week of the class.) 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. Failure to drop a class may impact your grade point average and financial aid eligibility. Note: For classes meeting eight or more weeks, the deadline to withdraw from the class is 5p.m. on Friday of the seventh week of the term.

III. Behavioral Expectations

Cell Phones: As a courtesy to your fellow students and instructor, please turn off all cell phones and pagers during the instructional period. Cell phones are not to be used in class. It must be put away while class is in session. **If you leave class to answer/place a call/text message, you will be expected to leave for the rest of the day. Break times are the only exception.** Anyone who needs to have a phone connected (e.g., spouse close to labor, a child sick at home) must clear it with the instructor at the beginning of the class period. **Cell phones may not be used for calculators during class, labs, or exams** - you must use the calculators provided or bring your own – no exceptions.

Personal Computers (Notebook/Laptop/PDA): To use a computer such as a Tablet, Laptop or PDA for class notes please make an appointment to speak with the instructor outside of class time to fully understand the limitations and responsibilities for their use. Approved electronics can be used ONLY for course material during lecture and lab times - if you are using personal electronics for other activities during class time (including, but not limited to gaming, social media, class work for other classes, etc.), the student will be 1) warned; and then 2) asked to leave class (students will not be permitted to return to class without permission from the Dean). Under no circumstances should downloads of software be attempted, this may lead to disciplinary action due to a need to protect our class computers from viruses and to protect licensing privileges.

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 unapproved electronic device during exams, quizzes or to answer in lab summary questions.

Extra Credit will NOT be issued or allowed for missed work – there are no exceptions to this rule.

Timing of Assignments: Unless the instructor indicates otherwise, all pre-labs will be turned in within the first five minutes of the lab period. This item indicates preparation to start the lab. All lab reports will be turned in at the end of the lab period on the day of the lab, unless your instructor should advise differently because of follow up extension assignments or labs that continue into subsequent weeks i.e. ongoing experiments. Online homework assignments are due at 11:55 pm every Sunday night. You are not permitted to turn in work without attending classes without expressed permission from the instructor.

Late Work: Will NOT be accepted without supporting documentation to show your inability to meet deadlines e.g. a doctor's note or hospital admission form. You must be in class to turn in assignments.

Statement of Non-discrimination: LBCC prohibits unlawful discrimination based on race, color, religion, ethnicity, use of native language, national origin, sex, sexual orientation, marital status, disability, veteran status, age, or any other status protected under applicable federal, state, or local laws.

For further information: <http://po.linnbenton.edu/BPsandARs/>

Inclement Weather Policy: If the campus is open class will be given, including any scheduled exams. Only if the campus is closed will an exam be postponed, and this will occur on the next scheduled class date following the closure. No special exceptions will be made for those who could not make it to class - be prepared for alternate methods. Please listen to local media coverage for closure notices such as TV/ radio. If campus is closed for 2 or more successive days, online materials will be distributed via moodle and e-mail so that the course may continue on schedule.

APPROXIMATE SCHEDULE: There are always "off" days (holidays, In-service, etc.) that influence this schedule. Timing will be shifted to accommodate.

| Week | Reading Ch. | Topics | Lab |
|-------------|----------------------|---|---------------------|
| 1 | 1.2; 2.2-2.3 | Introductions; Macromolecules | Cells and Osmosis |
| 2 | 3.2-3.6 | Cells and Cell Membranes | Enzymes - Catalase |
| 3 | 4.1 -4.2; 5.1 | Quiz 1 Photosynthesis, Cell Respiration | Photosynthesis |
| 4 | 6.2; 7.1-7.2 | Cell Division and Genetics | Mitosis and Meiosis |
| 5 | 8.1-8.3; 7.3 | Exam #1 Genetics, con't. | Plant Genetics |

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|----|-------------------|---|---------------------------------------|
| 6 | 9.1, 9.4 | DNA, Genetic Codes and Proteins | Human Genetics: Inheritance of Height |
| 7 | 10.1-10.3 | Quiz #2 Biotechnology | DNA Electrophoresis |
| 8 | 11.1, 11.3 | Darwin and Evolution | Natural Selection |
| 9 | 11.2 | Exam 2 How Populations Evolve | Population Genetics/ Hardy-Weinberg |
| 10 | 11.4 | Evolution of New Species | Fossils |