

Principles of Biology III: Populations

BI 223, CRN 27848

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Hybrid Course Format

Labs: Wednesday 9 am – 11:50am

Location: WOH 214

4 credits

About the course

This course covers fundamental biological concepts and theories about diversity, evolution, and ecology; specifically, evolutionary relationships, transformation of energy and matter, information flow and systems at a population level or above. More specifically, we answer questions including: How does natural selection result in adaptation? How did Eukaryotes emerge? How do we determine if populations are evolving? How do we represent relatedness between species? What roles do species play within an ecological community? How are ecosystems altered by climate change?

Prerequisite: BI 221 **AND** a term of college chemistry **completed** (CH 112, 121, 150 or 221) with a grade of C or better.

Course Format

All course lecture materials are presented on the course Moodle page using Waymaker (Lumen Learning), and all lab materials will be presented in person during lab time. Labs require in-person attendance and cannot be completed off campus or outside of scheduled lab hours.

Outcomes

- Articulate how the process of natural selection leads to evolution and helps to explain the reason for biodiversity and adaptations that influence biological fitness.
- Explain the relationships between population/species abundance and distribution in relation to biotic and abiotic factors in the environment.
- Interpret phylogenetic models correctly to represent relatedness between taxonomic groups using morphological, molecular and developmental evidence.
- Demonstrate competency using dichotomous keys to identify unknown organisms.
- Provide examples of human impacts on ecosystems.

Required Materials

1. Waymaker: Principles of Biology – LBCC from Lumen Learning

Purchasing Options

- Online: You can purchase Waymaker with a credit card for \$25 when you access your first quiz in this course.
- Bookstore: You can purchase a Waymaker access code from the school bookstore. Note that the bookstore price may be slightly higher than if you purchase online.

2. Lab Manual – there is no lab manual to purchase for this course, lab materials will be provided in person or via Moodle

Recommended Materials

It is recommended that students bring a laptop or tablet to Lab if possible – we have limited laptops available in the lab for use if necessary, but they cannot be checked out for use to complete labs after labs are complete.

A Note about Waymaker

This course uses Waymaker instead of a traditional textbook. Waymaker provides all course materials digitally as a part of the Moodle course. Students can access all readings, videos, study plans, quizzes and other activities through Moodle.

Getting Started with Waymaker

You will find a video and guide that walk you through how to access Waymaker and how to complete your readings and assignments here: lumenlearning.com/gettingstartedwithwaymaker

Grading

Midterms (2 @ 50pts each)	100
Waymaker Practice Quiz (18 @ 5 pts each)	90
Waymaker Quiz (18 @ 10 pts each)	180
Pre Lab Assignments (10 @ 5 pts each)	50
Lab Assignments (10 @ 15 pts each)	150
Lecture Assignments (3 @ 10 pts each)	30
Final Exam	100
	700 pts

Grading Scheme:

A - 90 - 100% , B -80 – 89%, C - 70 – 79%, D - 60 – 69%, F >60%

Assignments and Assessments

Waymaker Practice Quizzes and Topic Quizzes

At the beginning of each study plan, there is a “Why it Matters” section and a “Show What You Know” module. The “Show What You Know” module is a brief questionnaire that tests your previous knowledge of the subject to be studied. At the end of the study plan is a quiz over the material covered that is worth 5 points and is shown as a quiz grade for the module in the grade sheet. You can take this practice quiz as many times as you’d like to help with the material. Once you’ve finished with the study plan, there is a topic quiz on the moodle page that you will only be able to take twice, with the best score kept for the grade book. Though there are anywhere from 12-30 questions, the total point value is only 10 points for each topic. The deadline to complete all quizzes is **Sunday at 5pm**.

Pre-Labs and Labs

Each week, a pre-lab will be available in the materials. These can either be printed and completed by hand or completed using your device. The pre-labs must be completed before lab - they are due in the

first five minutes of lab beginning. Labs can be submitted either by PDF or handed in at the beginning of the lab period in person. Materials for the lab will be handed out in class and completed labs are due at the end of the lab period. Pre-Labs are worth 5 pts each and Labs are worth 15 points.

Lecture Assignments

These assignments are supplemental to encourage students to connect with the material presented in the study plan. There are three assignments, each worth 10 pts. They are due at the end of the week they are assigned by **Sunday at 5pm**.

Midterms and Final

There are two midterms during week 4 and week 8. The midterms will only cover the material presented in the previous 4 weeks - Midterm 1 covers material from weeks 1-4, and midterm 2 covers material from weeks 5-8. The final exam is comprehensive. Midterms and finals will happen in the Lab during scheduled lab times. They are closed notes, closed books, and phones will not be allowed. Midterms will have 1 hour to complete and are worth 50 pts each. The final will take 2 hours and is worth 100 points (14.2% of the total grade).

These exams are meant to be 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 voicemail or send me an immediate text/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.

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

Department and College Policies

Lab Courses: This is a lab credit course. Students must attend at least 70% (7 labs) in order to pass this course, regardless of your grade. This is a department policy and is not negotiable- any student who has missed more than 3 labs will automatically fail the course.

For the safety of our classroom environment, please do not attend class if you are sick or quarantined.

An alternate assignment can be provided on the day of the lab, or in advance if this is possible, if the student cannot attend the 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.

*Doctor's note, employer notification, school letter related to child's quarantine status etc.

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 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.

Behavioral Expectations

FACE COVERINGS ARE REQUIRED BY ALL STUDENTS AT ALL TIMES WHILE ON CAMPUS AND IN THE CLASSROOM. Individuals who do not comply with this college requirement, will be asked to leave the classroom and referred to the Dean of STEM.

Cell Phones: As a courtesy to your fellow students and instructor, please turn sound off on all cell phones during the instructional period. **Cell phones may not be used for calculators during exams** - you must use the calculators provided or bring your own – no exceptions.

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.

Professionalism: All students in this class will treat each other and faculty with professionalism. Distracting and disrespectful behavior will not be tolerated.

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.

Basic Needs Policy

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.

CRISIS? Don't hesitate to reach out to me. For anything. Anytime.