

General Biology: BI 103
The Dynamic Plant
LBCC, Spring 2020

CRN: 23813 and 22274
Section: 01 Credits: 4 credits

Instructor: Diana Wheat
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Office Hours: 1:00 –2:00 pm Tuesday
Via email or Zoom is possible.



Introduction:

An introductory lab science course intended for majors in disciplines other than the biological sciences, structured particularly for those with an interest in horticulture or botany. The theme for this course is the structure and function of flowering plants, with emphasis on crop and ornamental plants. Topics include plant classification, cell biology, plant reproduction and plant diversity. Biology 101, 102 and 103 need not be taken in numerical order, but **only one theme course in Biology 103** can be used to meet graduation requirements i.e. a student cannot take two BI 103's.

Course Format: Lecture online delivery in Fall 2020.

Labs are on campus Wednesday.

CRN 22274 meets in Greenhouse* 10 am – 11:20 am

CRN 23813 meets in Greenhouse* 12 pm - 1:20 pm

***Greenhouse is located on ground floor just north of White Oak Hall.**

Lecture powerpoints and lecture guides to fill out with the lecture or videos supplied in Moodle. Quizzes and exams are also administered in Moodle

Recommended Prerequisite:

MTH 075 Variables and Linear Equations, college-level reading and writing also strongly recommended. 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.

Required Texts:

- Stern's Introductory Plant Biology, 14th ed. Bidlack & Jansky, McGraw Hill (2018)
Available via Direct Digital Access (cost is included in registration). Find in Moodle.
- Dynamic Plant Lab Manual – Produced by LBCC – Purchase from bookstore

Advised Materials:

- Three-ring notebook binder to collect all materials & handouts.
- Colored pencils 10-12 set package

Graduation limitation:

Students are *NOT permitted* to take two different BI 103 courses to fulfill graduation or transfer requirements. If a student has taken a different BI 103 course e.g. General Bio 103 Plant & Animal Structure & Function or Human Body 103 etc. then this general biology class will not gain the student credit – talk with the instructor for any necessary clarification. Disregarding this policy could cause graduation delays and financial aid issues. *Majors in biology or environmental science* are advised that 100 level biology courses will also not meet program requirements for graduation.

Grading: Final grades for the course will be determined by each student’s *cumulative* point total by the end of the term. The following is an approximation of points for each respective category, and is *subject to change*, as deemed appropriate by the instructor.

Assessments:

Midterm	= 45 pts
Weekly reading quizzes* 10 @ 10pts	= 90 pts (lowest quiz dropped)*
Vegetable Factsheet	= 15 pts
Prelabs 8 @ 2 pts each	= 16 pts
Labs 8 @ 10 pts each+	= 80 pts
Group Project Presentation	= 20 pts – Delivered week 10
Lab Test	= 10 pts – Week 10 (online)
Final Comprehensive exam	= 70-75 pts

Total	= ~350 points (Approximation)

*Lowest quiz score dropped – no retakes, no make-up quizzes, missed quiz is dropped.
+ **No on-campus labs** for week 7 (Veteran’s day) or week 10.

Grading Scheme:

A: 90 - 100%, B: 80 – 89%, C: 70 – 79%, D: 60 – 69%, F: 59.4% or below

Course Outcomes:

- ✓ List ways that organisms communicate or respond to the environment.
- ✓ Be able to explain the ways that organisms acquire and utilize nutrients.
- ✓ Be able to explain the role of transport in organisms.
- ✓ Be able relate an organisms structure to its functions.

I. Class Policies

Attendance:

Lecture: You are **required and expected to examine all lectures, which are delivered asynchronously in Moodle**. Attendance is not taken for the lectures, but to do well in the course you must view the lecture and use the corresponding lecture guide. Films are also typically delivered in lecture so you will view these on your own time and fill out any associated video guides, the ones that are marked “Required” on the schedule must be submitted via the Assignment box per a given week by the due date, which for Fall term will be Friday by 5 pm.

Labs: This term will occur on campus in the Greenhouse on Wednesdays – check your time slot for your associated CRN. Because of social distancing it is not permitted to visit the other lab, you must attend the lab for which you registered. Sometimes we will do microscope work in the nearby agriculture lab which is located in WOH 122. If you come to class late and we are not in the greenhouse please check this room (starting week 2).

This course is a lab science course, so it is expected that you will participate and submit 70% of the labs to gain a passing grade. We will have 8 labs on campus, lab 10 will be done remotely, so that means a total of 9 labs.

Note: Per department guidelines - If a student misses more than 3 lab periods this will result in automatically failing the course, regardless of the overall percentage for the remainder of the course.

Late Work: Will **NOT** be accepted without supporting documentation to show your inability to meet deadlines e.g. a doctor’s note, jury summons, military duty or hospital admission form. Generally lab reports can be turned in at the end of the lab period or Friday by 5 pm. This is a hard deadline, unless your instructor communicates otherwise.

II. Formal Assessments:

A. Moodle Quizzes

To be found in the Moodle course shell (bottom item per a given week). Quiz will open Monday at 12:01 pm. These will be due Saturday nights* at 11:55 pm. It is recommended that you finish all assigned reading prior to initiating the Moodle quiz if at all possible. Three attempts are allowed, the highest score will be recorded by your instructor to factor into your grade. The reason for Saturday midnight deadline is that Sundays should be spent starting the upcoming week’s readings rather than working on older material to prepare for a successful week. Quizzes will be 10 points in Moodle and be similar to what will be experienced on the exams, thus it is practice to prepare but also reinforcing of the material.

➔ **Note: With 6 days of flexibility *no extensions will be granted. In this class the weekly quizzes are a new feature in this course. The lowest quiz will be dropped or if you missed entering into a quiz that will be your dropped quiz.***

B. Exams: Will consist of one 45 pt midterm in week 5 and one 70-75 pt *final comprehensive* exam in week 11. Tests are objective consisting of, but not limited to, multiple choice (worth 2 pts each), matching (usually 5 in a set for 5 pts), fill in the blank, short answer, identification, labeling, short lists, analysis of data sets, identifying correlations/associations etc.

The final exam will also have a separate essay component. Tests are timed, one time take only and closed book & notes. Generally, a 12 hour window is granted for taking exams so it is up to you to decide when it is best to enter into the test. Academic integrity is expected i.e. the student represents their *own effort* to reflect learning, Tests and quizzes are not a group activity and will be scrambled, the instructor reserves the right to choose 'Respondus' for online proctoring at any time during the term, if it is applied then it will be used for ALL students, I won't single people out.

C. Labs: Require the lab manual – which is purchased from the LBCC bookstore. Plan to arrive in lab 1 with your lab manual ready. It is also a good idea to bring your electronic device (tablet or phone) to access the textbook in **Moodle**. Plan to be in the lab the entire time. Normally our labs are 2 hours but in the Fall of 2020 we will have 1 hour 20 min per a lab, and so we may not do all sections of the lab that are in the lab manual. Due to the Veteran's Day holiday we will have no labs week 7 and week 10 the time slot on Wednesdays will be used for an online lab practical and group presentations, but week 10 will not meet on campus either.

E. Vegetable Fact Sheet: This term students will be assigned a research project to investigate one specific vegetable that you wish to learn how to grow. You will not plant the vegetable for this class specifically, it may be a summer growing crop, so this project is not a growing experience, but rather learning and communicating about when the vegetable is planted, what method is used, the type of soil requirements necessary etc. You can use online tools such as Oregon State Extension, however, the student creates an original "product" of a one-page information sheet, complete with a photo that will be shared in a class folder. Instructions for this project will be posted in week 3 of the term and you will sign up for your topic choice in lab week 3 – only two students may investigate the same topic, so that we do not have the experience most of the class doing the same topic. Have several choices in mind when you are asked to sign up week 3. This assignment is due Friday of week 8 of the term, Nov 20th at 5 pm (the Friday before Thanksgiving week).

F. Group Project: Every term I have students do an individual project and a group project; the group project is called a PBL – for Project Based Learning. Your group is given a horticultural "problem" or investigation to design an experiment to carry out. We supply the materials and plants and your group carries out the investigation with guidance from your instructor. This project will start week 2 and be completed by week 9. Lab 10 will be a report from your group (using Zoom) to the rest of the class AFTER the lab practical quiz which also occurs in Week 10. Students in the group must be present on presentation day to gain the points regardless of the amount of work that was carried out throughout the term.

III. Special Considerations

Special Accommodations: I will be happy to make accommodations for students with disabilities or those with special needs. 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. If you have not accessed disability services and think that you may need them, please contact CFAR (Center for Accessibility Resources) at 917-4789 or visit RCH 105. For those students with declared disabilities or note-taking needs a letter of accommodation should be brought to the instructor by the end of week 1.

Academic Misconduct: This will not be tolerated and includes any form of cheating. If a student is found to have cheated on a quiz or exam, after due process, the resulting grade may be a zero on the given assessment. All group work *must be written in the students own handwriting and language*. You must turn in your own interpretation and work even if doing team lab projects. When submitting group projects a rubric involving a score sheet and guidelines will be provided for expectations. Following group projects students will be expected to provide a self-critique report designed to communicate to your instructor the component of your individual contribution to a group project.

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, but has otherwise completed 75% of the work in class prior to the final exam. Each incomplete grade will be accompanied by a signed contract specifying the conditions necessary to complete the course. Incompletes are at the discretion of the instructor.

Withdrawing from Classes (Dropping a Class After the Refund Deadline)

To drop a class or withdraw from school, you must turn in a Schedule Change form at the Registration Counter or at a community center or use the SIS system. If you withdraw from a course after the refund deadline, you will receive a "W" grade in the class. The student will forfeit all claims to refunds, and will be financially responsible for any tuition & fees. Failure to drop a class may impact your grade point average and financial aid eligibility. Note: For classes meeting 8 or more weeks, the deadline to withdraw from the class is 5 p.m. on Friday of week 7.

Behavioral Expectations: To create an engaging, safe and respectful classroom environment we will honor and appreciate that LBCC offers a learning environment free of discrimination. This course will honor a diverse array of perspectives, free of judgment and encouraging of free discourse. All students are expected to contribute to the learning environment and to share viewpoints in a respectful manner. Please be mindful that a mature, college environment recognizes that though there are differences we all seek to be recognized as a valuable member of our community.

Comprehensive nondiscrimination policy: 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/>). Policy 1015.

Course Objectives:

By taking this course a student will be able to:

- **Recognize/Identify** plant structures on various scales.
- **Understand the relationship** between structure and function of plants, and then will be able to **explain this relationship** in terms of adaptation(s) to the environment.
- **Extract, interpret, critically evaluate** and **apply** biological information from various media, such as books, articles, lectures and the Internet.
- Safely and skillfully **use** basic biological equipment and techniques to **collect and evaluate data**. This includes but is not limited to plant specimens, microscopes, electrophoresis equipment, computer spreadsheets and models.
- **Organize data** into tables and graphs, to extract information and find patterns to **draw sound conclusions**.
- **Describe** symbiotic relationships between plants and other organisms such as pollinators and fungi and **understand** the inter-dependence of these relationships.
- **Discuss** how plants can be manipulated for food production, fiber production and aesthetic purposes.
- **Understand** how plant science may help address ecological and societal issues such as hunger and global warming.
- **Demonstrate** the basic principles of Mendelian genetics, and **explain** how traits/characteristics are expressed by the genes.
- **Paraphrase** in simple terms some the major techniques of recombinant DNA technology, and **describe applications** of DNA technology in various fields.
- **Identify** the opposing viewpoints regarding the controversies and ethical concerns related to recombinant DNA technology. Evaluating the benefits and potential dangers of this technology.
- **Discover** and **appreciate** the unity, diversity, complexity and interdependence of life.



"Gardening is a way of showing that you believe in tomorrow."