

General Biology: BI 103
The Dynamic Plant
LBCC, Fall 2021
CRN: 23813
Section: 01 Credits: 4 credits

Instructor: Diana Wheat
Email: WHEATD@linnbenton.edu

Office Hours: 4:00 –5:00 pm Tuesday
This is on Zoom – find link in Moodle.
On-campus office hours – Pending.



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.

Course Format: Lecture online delivery in Fall 2021.

Lab is on campus Wednesday. – Required attendance

CRN 23813 meets in Greenhouse* 10 am – 11:50 am

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

Moodle Components:

Lecture Power points via pdf and lecture guides to fill out by viewing the lecture (no audio). Weekly reading quizzes (shown as MQ on syllabus).

Lab Report turned in via Moodle submission as a scanned pdf or loaded word doc.

Other: Video links & video guides, project assignments.

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 (2017 edition) LBCC publication – Purchase from bookstore

Optional & Recommended Text:

- Plant Families: A Guide for Gardeners & Botanists, Bayton (2017)

Advised Materials:

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

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. This class has been used for a Plant Science substitution for university level horticulture programs – check with your advisor if you are in this major.

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 Exam	= 50 pts
Weekly reading quizzes* 10 @ 10pts	= 90 pts (lowest quiz dropped)*
Prelabs 9 @ 2 pts each	= 18 pts
Labs 9 @ 10 pts each+	= 90 pts
2 Plant Family lab quizzes @ 10 pts	= 20 pts
Video Guides* 3 or 4@ 3 pts each	= 9-12 pts (Only REQ on syllabus are turned in)
Food fact sheet project	= 15 pts (due week 9)
Lab test – week 10+ (on Zoom)	= 10 pts
Final Comprehensive exam	= 70-75 pts

Total	= ~375 points (Approximation)

*Lowest quiz score dropped – no retakes, no make-up quizzes, missed quiz is dropped.
 + **No on-campus labs** for week 10 following Thanksgiving. Lab 10 on Zoom.

Grading Scheme:

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

Course Outcomes:

- ✓ **List ways that plants communicate or respond to the environment.**
- ✓ **Be able to explain the ways that plants acquire and utilize nutrients.**
- ✓ **Be able to explain the role of transport in plants.**
- ✓ **Be able relate plant structures to their respective functions.**

I. Class Policies

Attendance: This is a hybrid course. Students are expected to attend on campus labs. In the Fall 2021 term, lectures will be provided online rather than in person. 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** lab reports 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 instructor.

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

➔ 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.

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. Pre-labs are due at the beginning of lab and should reflect your preparation for the lab, which requires you to examine the lab material for a given week as well as the textbook to answer the questions. Pre-labs are worth 2 pts each and will usually be scored by your instructor and often returned to you by the end of the lab. Lab reports can be turned in at the end of the lab if you finish them in the lab, or the student can scan **the lab report and turn in by Friday at 5 pm via Moodle dropbox**. All submissions in Moodle must be in pdf format, i.e. no google docs.

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 9 labs on campus. Lab 10 will be done remotely via Zoom and involves a seminar style type of round table sharing of your investigation on your individual project. A lab test will also be administered on Zoom in Week 10, there is *no make up for the lab quiz*, which will reflect your learning from all 10 weeks. The lab test is a visual recognition of plant structures delivered on Zoom in synchronous time i.e. must be immediately submitted in lab 10.

***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 exam, thus it is practice to prepare but also reinforcing of the material.

Note: With 6 days of flexibility **no quiz extensions will be granted.** 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 50 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. Week 10 will not meet on campus, it will meet via Zoom and is required for the course. There will be a 10 point lab quiz and a sharing out of your research findings regarding your Food Fact Sheet investigation

D. Videos: Occur approximately every 2 weeks, these are on your own, the ones marked REQ on the syllabus are turned in for credit. Use the library website to view.

E. Food Crop Fact Sheet: This term students will be assigned a research project to investigate one specific vegetable that you would like to learn how to grow. You will not plant the fruit or 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, best varieties for drought tolerance etc. You can use online tools such as Oregon State Extension, however, the objective is that the student will create 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 5 of the term (after the midterm) and you will sign up for your topic choice in lab week 6 – only one topic per student to avoid duplication. Have several choices in mind when you are asked to sign up week 6. This assignment is due Friday of week 9 of the term, Nov 22th at 5 pm (the Monday before Thanksgiving week).

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 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.

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 an 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, potometers, computer spreadsheets and models and dissection techniques.
- **Organize data** into tables and graphs, to extract information and find patterns to **draw sound conclusions**.
- **Observation and basic sketching** skills for capturing visual information. Photography can be employed supplementally, but the purpose of sketching is to carefully observe the intricate details that usually a image capture via photography does not provide.
- **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 cultivated 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.
- **Discover** and **appreciate** the unity, diversity, complexity and interdependence of life.
- **Recognize and categorize** up to 18 plant families based on their characteristic, physical traits.
- **Distinguish** the different forms of succession and **describe** the role that plants play in community structure.