

CASPER COLLEGE COURSE SYLLABUS
BIOL 2023, Plant and Fungal Biology
Lab Syllabus

Fall/2015:

Lecture Hours: 10:00-11:15

Lab Hours: Lab A 1:00-3:30
Lab B 3:30-6:00

Credit Hours: 4

Class Time: TTH

Days: T

Room: Lecture EI 100
Lab EI 116

Instructor's Name: Lynn Moore Ph.D.

Instructor's Contact
Information: 307-262-9422

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Office Hours: Thursday 12:00 to 1:00 or by appointment

Lab Teaching Assistant: Haley Tolbert
email: hytolbert@hotmail.com

The lab section of *Plant and Fungal Biology* elaborates on the concepts that you will be discussing in lecture. It also equips students with a small set of practical laboratory skills. The lab activities are intended to stimulate your interest in plant and fungal biology and to keep you actively learning throughout the semester. We hope to challenge your thinking and provide you with a deeper understanding of the fascinating world of plants and fungi.

Methodology:

Class discussions, hand-outs, readings, observations, slides, models, computer simulations, videos, laboratories, etc.

Evaluation Criteria:

The lab is worth 40% of your total grade. Evaluation will be based upon weekly lab exercises, a lab report and two lab practical's.

Lab Report:

We will provide you with the materials and background information to complete one major inquiry-based lab experiment and written report. More details will be provided regarding report requirements.

Lab Participation:**How to complete lab exercises:**

We will be using Apple iPads and Google Classroom to complete and turn in lab assignments. A major part of the modern day work place, academia, and science is the ability to utilize available technology. A key part of this lab is learning how to photograph, label, make graphs, and turn in assignments digitally.

Each lab section will be divided into groups. These groups will be permanent groups. Student groups may work together on an exercise, however ***all students will hand in individual work, unless otherwise stated.*** Student groups can help each other with technical issues, photographing, labeling, data and graphs or if one of your group is absent. There will be an opportunity to evaluate each other in your groups; this evaluation will be part of your grade. So be nice to each other, do your own work, and help each other out....

Students may also use their own smart phone or tablet if desired; however students will need to download the appropriate apps. Students will still work within their group for various projects.

Lab exercises for each lab meeting will be available for download as a Google slide document directly from Google Classroom on the iPads or other device. Pictures can be taken in lab with the iPads, labeled, and uploaded to the appropriate lab section folder at the end of the day. ***ALL LAB WORK IS DUE AT THE END OF THE LAB UNLESS OTHERWISE STATED.***

Midterm and Final Exam:

Your midterm and final practical are cumulative and worth 30 points each. Please take time to review all of the concepts we discuss throughout the semester, so that you are well prepared for the laboratory exams. We may take some time to help you prepare for these exams during lab, but please contact your laboratory instructor if you would like further clarification on any subject.

Laboratory Safety:

We ask that children or other individuals who are not registered for this course do not attend lab for safety reasons. Please be considerate, and **refrain from using cell phones and mp3 players during lab** as they can be a distraction to others around you. Food and drink (including water) are not allowed during lab. While most of the materials we will be working with are generally harmless, please follow any safety precautions specific to each laboratory session.

Required Text and Materials:

Please come prepared to class each week. Aside from yourself and your desire to participate, please bring the following items with you to lab:

- Lecture notes
- Text book: *Raven, Biology of Plants* Evert, R. F., and S. E. Eichorn
- Pencil (preferred) or pen
- Optional: Digital camera (cell phone camera is fine), smart phone or tablet.

Course Outline:

Your lab instructor will try to follow this outline as closely as possible; however realize that it is subject to change at any time.

Week of	Laboratory Topic	Textbook reference chapters
August 25	Introduction to the 2023 Lab Plant and Fungal Diversity	Ch 14-19
September 1	Plant Growth Project, Part 1 Introduction to Microscope	Ch 22, Handout
September 8	Plant Cells: Plastids, Vacuoles, and Cell Walls. Plant Growth Project, Part 2	Ch 23
September 15	Plant Anatomy: Roots Plant Growth Project, Part 3	Ch 24
September 22	Plant Anatomy: Stems and Leaves Plant Growth Project, Part 4	Ch 25
September 29	Plant Anatomy: Wood Plant Growth Project, Part 5 Transpiration	Ch 26, 30
October 6	Photosynthesis: Algal Balls	Handout
October 13	Lab Midterm Plant Growth Project, Part 6	Handout
October 20	Fall Break No Class	
October 27	Fungi: Zygomycetes and Ascomycetes Fungi: The Pilobolus Project Plant Growth Project, Part 7	Ch 14
November 3	Fungi: Basidiomycetes and Symbiotic Fungi Decomposition	Ch 14
November 10	Algae Plant Growth Project, Part 8	Ch 15
November 17	Non-flowering Plants	Ch 16, 17, 18
November 24	Thanksgiving Week No Lab	
December 1	Flowering Plants-Film	Ch 19
December 8	Lab Final	<i>Review all material</i>