

Introductory Plant Biology

COURSE: BIOL 127

SECT: 001

SCH NO: 006469

Course Time: Online ****CLASS RUNS FROM 8/26/19 to 12/18/2019****
Course Web Site: canvas.psu.edu
Course Location: Online
Instructor: Michael K. DeLong, Ph.D.
Phones: 724-983-2825 (This number will reach Melissa Fowler, administrative assistant at PSU Shenango, who will email me and pass on your message. Needless to say, it is much faster to reach me by emailing me directly.)
e-mail: mkd15@psu.edu
Office Location: Online
Office Hours: I typically check email several times a day. In most cases I will be able to respond within 24 hours, sometimes sooner.

Course Description: Cellular structure and organization; physiological processes; classification; reproduction and development; relationship of plant groups. Students who have passed BIOL 240W may not schedule this course.

Course Objectives: *During the course of the semester, the student will:*

1. Develop critical thinking skills, gather credible information, question ideas from a scientific viewpoint
2. Learn and integrate terms and concepts in plant biology
3. Understand how plant structure (cellular, organismal) and function (biochemical) are tied together
4. Learn how plants and humans interact and the outcomes of this interaction
5. Develop laboratory skills to investigate plant evolution, anatomy, and physiology
6. Design an experimental approach that addresses a concept in plant biology
7. Summarize, in the style of a scientific journal article, the design, rationale, results, interpretation, and conclusions of a scientific experiment or study

Required Texts/Materials:

1. Bidlack J., Jansky S., and Stern K. *Stern's Introductory Plant Biology*, 13th ed. ISBN-13: 978-0073369440, ISBN-10: 0073369446
 2. Carolina Biological Botany Lab Kits Purchase at: <https://www.carolina.com/carolina-distance-learning-science-kits/the-pennsylvania-state-university-introductory-plant-biology-biol-127/581864.pr>
 3. Digital camera with ability to upload pictures to Canvas
- *Additional videos that may be posted on Canvas

Attendance/Participation: You will be expected to check in every day or every other day for any announcements or updates. The amount of time spent looking over the material typically is correlated with quiz and exam grade: the more time spent studying usually translates into a better grade. Although this is an online course, you should expect to spend a similar amount of time on the material that you would for an in-person class. The general rule for studying is as follows: for every one hour of lecture, you should spend 2.5 to 3 hours studying the material. That means for a three-credit course, you should spend 7.5 to 9 hours per week studying and completing assignments if you intend to do well ("A" or "B" level).

Assignment Descriptions:

Labs: You will complete 11 labs related to the material covered during that week. The lab materials must be ordered through Carolina Biological Supplies, and will be delivered to your home. The labs are designed for you to complete at your home, with the exception of one lab, where you will be required to go to a local park, arboretum, or botanical garden. Though in some cases the lab will reinforce concepts covered in the book and in the PowerPoints, the lab may also cover a unique topic. For this reason, material covered in lab activities will be included on exams. If you have completed all 11 labs, only your 10 best scores will count towards your grade.

Weekly quizzes: Each week one or more short quizzes covering that week's chapter contents must be completed. The quizzes are designed to ensure that you keep up with your reading and study. The quizzes will be in a true/false, matching, or multiple-choice type format and are intended to reinforce the main concepts in each chapter. Utilize the weekly objectives as a study guide for the quizzes and exams. These quizzes will only be open for a limited time, so do not go for extended periods of time (days, weeks) without having logged into the course. I typically do not re-open quizzes unless in the case of technical difficulties from my end. If you miss one or a few quizzes, this will not negatively affect your grade. If you have taken all 23 quizzes, only your 20 best scores will count towards your grade.

Video Discussions: During the semester, you will watch two documentaries: The Botany of Desire, broken into four parts of 30 minutes each, and America's Lost Landscape: The Tallgrass Prairie which is 60 minutes. This is a total of five discussion forums. For each forum, you will be asked to post a response or answers questions. Your first post is due 24 hours prior to the due date for the assignment. If the post is late, no points will be awarded (see discussion instructions in the week 1 module on Canvas for more detailed instructions). The discussions are worth 25 points each.

Lab Report: One lab will require that you write a formal lab report. This is meant to give you practice at scientific writing. You will complete a peer-review draft, a rough draft, and a final draft (see the instruction in the Effects of Ethylene on Fruit Ripening Lab and the individual Lab Report assignments on Canvas for more details).

Exams: During the semester, you will have three exams and a final exam over the material covered. These exams will include true/false, multiple-choice, and/or matching questions; in addition there may be diagrams to label and/or short free-response questions. Exams will cover material for each "unit": Exam 1 will cover material from the beginning of the course until the first exam, Exam 2 will cover material after Exam 1 until the second exam, and so forth. The final will be similar in format to the midterm exams. The only differences will be that the final will be slightly (about 50%) longer, and will be *cumulative*. The cumulative section will be about 33% of the final, and the remainder will be material covered after the third midterm.

All exams will be delivered **online**, but they will be *proctored*, using Examity (see Examity section under University Policies). You will have a window of about 72 hours to take your exam, but you must schedule it in advance through the Examity tab in Canvas. If you make changes to your scheduled exam time less than 24 hours before the start of the exam window, Examity will charge you a fee of \$3.

Point and Grades Distributions:

ASSIGNMENT	POINTS
Labs: 11 x 25 pts, drop 1	225
Chapter Quizzes: 23 x 5 pts, drop 3	100
Video Discussions: 5 x 25 pts	125
Lab Report: 100 pts	100
Exams: 3 x 100 pts	300
Final Exam: 150 pts	150
Total	1000

*No extra credit is given in this class

GRADING SCALE BASED ON TOTAL POINTS EARNED	GRADE
930-1000	A
900-929	A-
870-899	B+
830-869	B
800-829	B-
770-799	C+
700-769	C
600-699	D
599 and Below	F

University Policies

Examity

Statement from Penn State about the use of monitoring software: This course may require you to take exams using certain proctoring software that uses your computer's webcam or other technology to monitor and/or record your activity during exams. The proctoring software may be listening to you, monitoring your computer screen, and viewing you and your surroundings. By enrolling in this course, you consent to the use of the proctoring software selected by your instructor, including but not limited to any audio and/or visual monitoring which may be recorded.

Statement from Penn State about the use of Examity: In this class you will take your tests remotely and they will be proctored by a service called Examity®. A Student Quick-Guide will be provided on how to use Examity®. (Link to Student Quick-Guide: [Examity Student Quick Guide](#)) Please log in as soon as possible to set up your profile. You will not be able to schedule exams until your profile is complete.

Examity® system requirements are:

- Desktop computer or laptop (not tablet)
- Webcam and microphone (built-in or external)—test your webcam at www.testmycam.com
- Connection to network with sufficient internet speed: at least 2 Mbps download speed and 2 Mbps upload—test internet speed at www.speedtest.net
- Operating systems: Windows XP–Windows 10, Mac OS X 10.8 (Mountain Lion)–10.11 (El Capitan)
- Browser with pop-up blocker disabled: Google Chrome v39 or later, Mozilla Firefox v34 or later, Internet Explorer v8 or later, Microsoft Edge, Apple Safari v6 or later.

If you have any questions or concerns, contact Examity's technical support team 24/7 via email at support@examity.com or phone at (855) 392-6489.

About Examity and Examity Proctors: "Examity as a whole aligns with The Family Educational Rights and Privacy Act (FERPA). This is a federal law that protects the privacy of student education records. Penn State and Examity® take the way data is handled and the protection of student information very seriously. In fact, Examity has a FERPA attorney on their advisory board.

Examity®'s proctors go through a rigorous process of selection and interviewing by members of Examity's leadership team, background check and comprehensive training. Each proctor has a college degree, advanced technical skills, have completed online courses and have strong communication skills. Proctors are in training for eight weeks before they are allowed to proctor an exam. The eight-week new hire proctor training includes proctoring process, data management process, data security training, customer service training, Examity® software training and training on tools used to perform their function as a proctor. The training includes several live simulations by senior staff within Examity®. All proctors are Examity employees that proctor from Examity centers, never from a remote site. Moreover, every

proctored exam is reviewed by Examity®'s auditing team and feedback from this process is used to support ongoing proctor development."

Disability Statement

Penn State is committed to providing access to a quality education for all students, including those with documented disabilities. If a student has a disability and wishes an accommodation for a course, it is the student's responsibility to obtain a University letter confirming the disability and suggesting appropriate accommodation. This letter can be requested from the World Campus Disability Contact Liaison, Terry L. Watson (TerryWatson@outreach.psu.edu), 814-863-3070, or 814-863-1807 (V/TTY). Students are encouraged to request accommodation early in the semester so that, once identified, reasonable accommodation can be implemented in a timely manner.

Information on Counseling and Psychological Services at Penn State

Personal counseling offers a variety of confidential and free services for Penn State students, including individual counseling, community referrals, and programs on well-being. To schedule a confidential appointment, please see the following website: <https://student.worldcampus.psu.edu/student-services/mental-health-services>. If you are concerned that you may harm yourself or someone else, get help immediately, no matter the time of day or night by calling 911, by contacting the Penn State's 24/7 crisis hotline at 877-229-6400, by texting "LIONS" to 741741, or by going to your local Emergency Room. You can also call or stop by your local campus police department.

Diversity Statement and Reporting Bias

The faculty and staff of Penn State value and are committed to fostering diversity in the classroom and the University. By respecting differences in culture, political conviction, age, gender, gender expression, race, ethnicity, national origin, disabling condition, sexual orientation, veteran status, and religious affiliation, we enrich the learning environment, and improve the practice and profession of whatever field of study is chosen. Diversity that students bring to the classroom is viewed as an important resource, strength, and benefit to the entire campus. Penn State takes great pride to foster a diverse and inclusive environment for students, faculty, and staff. Acts of intolerance, discrimination, harassment, and/or incivility due to age, ancestry, color, disability, gender, gender identity, national origin, race, religious belief, sexual orientation, or veteran status are not tolerated and can be reported through Educational Equity at the Report Bias site: <http://equity.psu.edu/reportbias/statement>.

Code of Mutual Respect and Cooperation

The Eberly College of Science is a community dedicated to personal and academic excellence. The Code of Mutual Respect and Cooperation was developed to embody the values that we hope our faculty, staff, and students possess, consistent with the aspirational goals expressed in the Penn State Principles. The University is strongly committed to freedom of expression, and consequently, the Code does not constitute University or College policy, and is not intended to interfere in any way with an individual's academic or personal freedoms. We hope, however, that individuals will voluntarily endorse the 12 principles set forth in the Code, thereby helping us make The Eberly College of Science a place where every individual feels respected and valued, as well as challenged and rewarded.

Academic Integrity

All students are expected to act with civility, personal integrity; respect other students' dignity, rights and property; and help create and maintain an environment in which all can succeed through the fruits of their own efforts. An environment of academic integrity is requisite to respect for self and others and a civil community.

Academic integrity includes a commitment to not engage in or tolerate acts of falsification, misrepresentation or deception. Such acts of dishonesty include cheating or copying, plagiarizing, submitting another persons' work as one's own, using Internet sources without citation, fabricating field data or citations, "ghosting" (taking or having another student take an exam), stealing examinations, tampering with the academic work of another student, facilitating other students' acts of academic dishonesty, etc.

Students charged with a breach of academic integrity will receive due process and, if the charge is found valid, academic sanctions may range, depending on the severity of the offense, from F for the assignment to F for the course.

The University's statement on academic integrity, from which the above statement is drawn, is available at <http://www.psu.edu/dept/oue/aappm/G-9.htm>

Statement on Dropping the Class

If you run into difficulty with this or any class, please talk to your professor(s) and/or advisor. There are support services available on campus that may be able to help you with those problems. Please note that there are 7 days to add/drop a course without financial repercussions. You may still drop a course after this period, but we recommend you take the following actions before doing so:

- Talk to your advisor to ensure that this action will not delay your potential graduation date or jeopardize your academic standing within your major. Many courses are sequential. Be sure you understand all of the possible consequences of dropping this class.
- Contact the offices of Student Aid and the Bursar to assess what, if any, financial effect the drop may cause. Your tuition and/or financial aid package may be altered retroactively as a result of such a drop which may lead to a cash balance owed to the university. Tuition adjustment is based on how many credits are dropped and what week of the semester the credits are dropped. Please refer www.bursar.psu.edu and click on the "Tuition - Tuition Adjustment" link to view the Tuition Adjustment Calendar.
- Notify the professor that you are planning to drop the class, as a courtesy.
- Go to the Registrar's Office or use Lionpath to officially drop the class*. You are not automatically dropped from the class for non-attendance. If you stop attending a class but do not officially drop the class, you will receive an F for this course that will remain on your permanent record and will be factored into your GPA. Further, you will be liable for the total cost of this class and you could lose your eligibility for current and future financial aid and scholarships.

*If you are a Dual Enrollment (high school) student, **DO NOT DROP COURSES VIA LIONPATH**. Please contact the admissions office if you need to drop a course for any reason and they can coordinate this action with your high school.

Course Schedule

Week & Start Date	Bidlack Chapter Reading	Topic	Assignment Due Dates
Week 1 8/26	1 2	What is Plant Biology? The Nature of Life	Th 8/29: Ch 1 & 2 Quizzes
Week 2 9/2	3	Cells	Th 9/5: Ch 3 Quiz F 9/6: Discussion forum: BOD - Apple Sa 9/7: Introduction to Science and Plants Lab
Week 3 9/9	4	Tissues	Th 9/12: Ch 4 Quizzes Sa 9/14: Cells and Tissues Lab
Week 4 9/16	5 6	Roots and Soils Stems	Th 9/19: Ch 5 & 6 Quizzes Sa 9/21: Roots and Stems Lab
EXAM 1: Opens Sunday, September 22 at 12:01am EST, Closes Tuesday, September 24 at 11:59pm EST			
Week 5 9/23	7 8	Leaves Flowers, Fruits, and Seeds	Th 9/26: Ch 7 & 8 Quizzes F 9/27: Discussion Forum: BOD - Tulip Sa 9/28: Leaves, Flowers, Fruits, and Seeds Lab
Week 6 9/30	9 10	Water in Plants Plant Metabolism	Th 10/3: Ch 9 & 10 Quizzes Sa 10/5: Plant Metabolism lab
Week 7 10/7	11	Growth and Development	Th 10/10: Ch 11 Quiz
Week 8 10/14	12	Meiosis and Alternation of Generations	Th 10/17: Ch 12 Quiz Sa 10/19: Effects of Ethylene on Fruit Ripening Lab
EXAM 2: Opens Sunday, October 20 at 12:01am EST, Closes Tuesday, October 22 at 11:59pm EST			
Week 9 10/21	13	Genetics and Molecular Biology	Th 10/24: Ch 13 Quiz Sa 10/26: Genetics and Molecular Biology Lab Su 10/27: Lab Report Rough Draft
Week 10 10/28	14	Plant Breeding, Propagation, and Biotechnology	Th 10/31: Ch 14 Quiz F 11/1: Discussion Forum: BOD - Potato Sa 11/2: Plant Breeding, Propagation, and Biotechnology Lab
Week 11 11/4	15 16	Evolution Plant Names and Classification	Th 11/7: Ch 15 & 16 Quizzes Sa 11/9: Evolution and Classification Lab Su 11/10: Upload lab report for peer-review
Week 12 11/11	20 21	Introduction to the Plant Kingdom: Bryophytes Seedless Vascular Plants: Ferns and Their Relatives	Th 11/14: Ch 20 & 21 Quizzes Su 11/17: Complete Lab Report Peer-reviews
EXAM 3: Opens Sunday, November 17 at 12:01am EST, Closes Tuesday, November 19 at 11:59pm EST			
Week 13 11/18	22 23	Introduction to Seed Plants: Gymnosperms Seed Plants: Angiosperms	Th 11/21: Ch 22 & 23 Quizzes Sa 11/23: Plant Diversity Lab Su 11/24: Lab Report Final Draft
Thanksgiving Break Sunday, November 24-Saturday, November 30			
Week 14 12/2	24	Flowering Plants and Civilization	Th 12/5: Ch 24 Quiz F 12/6: Discussion Forum: BOD - Cannabis Sa 12/7: Flowering Plants and Civilization Lab
Week 15 12/9	25 26	Ecology Biomes	Th 12/12: Ch 25 & 26 Quiz F 12/13: Discussion Forum: Tallgrass prairie
FINAL EXAM: Opens Monday, December 16 at 12:01am EST, Closes Wednesday, December 18 at 11:59pm EST			