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**Biology 202/203**

**Introduction to Plant Biology**

**Fall 2023**

**Class Time Kylie Stover**

Lecture: MWF 11:00 – 11:50 am Office: Dobbs 202

Lab: W 12:30 – 3:15 pm Phone: (770)720-5593

 Email: kylie.stover@reinhardt.edu

**Office Hours:**

Thursday: 12:30 – 4:00 pm

Friday: 12:00 – 4:00 pm

\*Other times by appointment

**Required Texts**

***Raven Biology of Plants*,** R. Evert and S. Eichhorn, W.H. Freeman and Company, 8th edition.

**Catalog Course Description**

This course is a survey of the plant kingdom with an emphasis on the structure and function of angiosperms. The course requires active field work. The course includes both lecture and laboratory instruction.

Prerequisite: BIO 120.

**Plant Biology Lab**

Plant biology is a lab intensive course. Typically, we will meet for most of the allotted lab time. There are no makeup labs, though concessions will be made for excused absences. We sometimes take “walks” both on and off campus throughout the semester. I will let you know in advance if we will be hiking on rugged terrain so that you can dress properly for the field. **It is important that you bring your book to each laboratory meeting.**

**Credit Hour Description**

BIO 202/203 is a 4-credit hour course. Over the 15 week semester, we will spend 150 minutes (2.5 hours) per week in lectures (37.5 hours for the semester) and up to 150 minutes in laboratory work - see description of lab meetings in section above. Instructional time includes a 3-hour final exam. Out-of-class work includes homework and preparation for exams, quizzes, class discussions and laboratory activities and will require around 350 minutes (~6 hrs) per week (87.5 hours for the semester).

**Students with Disabilities**

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. This legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. Reinhardt University is committed to providing reasonable accommodations for all persons with disabilities. Therefore, if you are seeking classroom accommodations under the Americans with Disabilities Act, you are required to register with the **Academic Support Office (ASO).** ASO is located in the basement of Lawson building. To receive academic accommodations for this class, please obtain the proper ASO documentation.

**The Center for Student Success**

The Center for Student Success (CSS) is located at the lower floor of Lawson, room 035. **CSS offers free peer and faculty tutoring for all subjects.** To view the tutoring and workshop schedule, visit the CSS webpage (accessible from the Quick Links menu on the Reinhardt home page).

**Important:**

All students, faculty, staff and administration at Reinhardt University are subject to changes in policies if mandated by the State of Georgia. Current policies and procedures can be found at: <https://www.reinhardt.edu/back-to-campus>

If you have any questions, please refer to the website or contact Reinhardt University at the numbers below.

Campus Nurse at Student Health Center - nurse@reinhardt.edu, 770-720-5542 or [www.reinhardt.edu/nurse](http://www.reinhardt.edu/nurse).

Public Safety

**Non-Emergency Phone:** 770.720.5789
**Emergency Phone:** 770.720.5911
publicsafety@reinhardt.edu

Dean of Students - deanofstudents@reinhardt.edu, 770-720-5540

Office of the Provost - provost@reinhardt.edu, 770-720-9102.

**Student Learning Outcomes**

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| **Course Learning Outcomes** | **Program Learning Outcomes** |
| Students will demonstrate an understanding of the characteristics that unite all plants (i.e. – what makes a plant a plant?). | PLO 3: Students will be able to identify the major groups of organisms, classify them within a phylogenetic framework and compare and contrast the characteristics of taxonomic groupings.  |
| Students will demonstrate an understanding of basic seed plant anatomy and morphology.  | PLO 5: Students will be able to use the theory of evolution to explain how descent with modification has shaped organismal morphology, physiology, and life history.  |
| Students will demonstrate an understanding of the differences between the phyla of plants and organisms that have traditionally been allied with plants (i.e. fungi, algae). | PLO 3: Students will be able to identify the major groups of organisms, classify them within a phylogenetic framework and compare and contrast the characteristics of taxonomic groupings.  |
| Students will demonstrate an understanding of plant and plant ally life cycles and variations on the alternation of generations. | PLO 3: Students will be able to identify the major groups of organisms, classify them within a phylogenetic framework and compare and contrast the characteristics of taxonomic groupings.  |
| Students will demonstrate an understanding of the reproductive morphology of flowering plants (flowers, fruits). | PLO 5: Students will be able to use the theory of evolution to explain how descent with modification has shaped organismal morphology, physiology, and life history.  |
| Students will demonstrate an understanding of basic plant physiological principles.  | PLO 5: Students will be able to use the theory of evolution to explain how descent with modification has shaped organismal morphology, physiology, and life history.  |

**Evaluation and Grading**

After receiving a grade, students have a week in which to ask questions or to make an appointment with the instructor. After the week window of any posted grade, the instructor will not consider any further grade changes.

**Lecture Exams (35%):**There will be a total of 4-unit exams (**25%)** and a cumulative final exam **(10%)**. Each exam will entail a mixture of question types, including (but not limited to): short answer, essay, matching and multiple choice.

**Podcast Discussions (15%):** Every week there will be a podcast episode based on the recent lecture; we will hold an open discussion on Fridays as a class that is led by students. You will be graded based on participation and by leading a discussion.

**Biodiversity Project (15%):** See Biodiversity Project handout for more information.

**Lab Report (15%):** Students will be assigned a full lab report over one lab exercise to be announced later in the semester. Data will be collected as a group, yet reports are to be completed individually.

**Lab Participation (10%):**In most labs, students will be responsible for completing a set of lab activities. These may include labelling drawings, answering questions or collecting data. Before leaving class, I will review each person’s lab handout to ensure that all activities have been completed. Only then will you receive credit for that particular lab. **Points will be deducted from participation each time a student does not bring their textbook to the lab.**

**Discretionary Score (10%):** This score will be calculated based on attendance, promptness and overall behavior during the semester. There are a total of 10 points possible**.** Points will be deducted for excessive whining, excessive chatting, excessive cell phone use and lack of effort during lab.

**Grading Scale:**

89.5 – 100% A

79.5 – 89.4% B

69.5 – 79.4% C

59.5 – 69% D

Below 59.4% F

**Course Expectations**

**Class Attendance:** Students are encouraged to attend each class meeting. Due to the breadth of material covered in this course, missing a class session is likely to cause students to fall behind. Please do not plan holiday travel or appointments that will cause you to miss class. If you must miss a class, please LET ME KNOW IN ADVANCE!

**Behavior:** Excessive chatting is a hindrance to the quality of the course, the professor’s teaching ability and your fellow students’ ability to learn. I reserve the right to ask you to leave if your talking becomes too much of a distraction and you will be counted as an unexcused absence for that day.

**Effort:** This course is a requirement for biology majors, so I expect all students to bring their best effort. Remember that if you earn a D in any of your Biology courses, you will not be granted a Reinhardt Biology degree. *You will reap what you sow.* If you sow 100% effort into this course, you will likely reap an A.

**Electronics:** Plant Biology class will be an ELECTRONICS FREE ZONE!!!!! Cell phones should be turned off and put away once you enter class. You are young adults preparing for the professional world, and should behave as such. If you must use your cell phone, step outside the classroom. Students who are caught using their cell phones will receive a point deduction on the next quiz.

**Attitude:** You are expected to bring a positive attitude to this course, and you should come to each class meeting expecting to learn. Whining and complaining are counterproductive and will negatively impact your participation score. I would rather you stay home than come to class with a poor attitude.

**Open-Mindedness:** Try to get rid of any zoocentric leanings you may have. Animals are not better than plants, just different. If you approach the class with an open mind, you just may surprise yourself with how interesting plants can be (and improve your grade in the process)!

**Communication:** The majority of my communication with the class will be via Remind, a program that allows me to send course updates as text messages to your phone. Any emails from me will be sent to your Reinhardt accounts, so remember to check your Reinhardt email often. If you send me an email, always include a subject line, proper capitalization and punctuation, and complete sentences. It is also best to include a greeting and a closing in the initial email. Subsequent responses may be more informal. I do not guarantee that I will respond to improperly formatted emails.

To join Remind for Intro to Plant Biology – **Text @plantsrfun** to **81010**

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| **BIO 202 Lecture Schedule and Calendar** \*\* This syllabus is subject to change at the discretion of the instructor. If large changes occur, a new syllabus will be distributed on Canvas and through email notifications. Some changes, such as change of date, will be only announced in-class or through email. |
| **Week** | **Dates** | **Topics** |
| 1 | M 8/14 W 8/16 F 8/18 | Syllabus DayCourse Intro - **Lecture 1 (**Ch. 1**)**Discussion  |
| 2 | M 8/21W 8/23F 8/25 | The Plant Cell & Cell Cycle – **Lecture 2 (**Ch 3, some from 2 & 4)Meiosis, Life Cycles and Systematics - **Lecture 3** (Ch 8 & 12)Discussion |
| 3 | M 8/28W 8/30F 9/1 | Algae – **Lecture 4 (**Ch 15) Fungi – **Lecture 5 (**Ch 14)Discussion |
| 4 | M 9/4W 9/6F 9/8 | Sep. 4th, No Class – Labor DayFungi – **Lecture 5 cont’d/review day**Discussion |
| 5 | M 9/11W 9/13F 9/15 | **EXAM I – September 11****Biodiversity workshop day (Check-in on 9/15)**Discussion |
| 6 | M 9/18W 9/20F 9/22 | Bryophytes – **Lecture 6 (**Ch 16)Seedless Vascular Plants – **Lecture 7 (**Ch 17)Discussion  |
| 7 | M 9/25W 9/27F 9/29 | Gymnosperms – **Lecture 8 (**Ch 18)Discussion **/review day****EXAM 2 – Sept 29** |
| 8 | 10/2 - 10/6 | October 2-6 – Fall Break **– NO CLASS!** |
| 9 | M 10/9W 10/11F 10/13 | Angiosperms 1 – **Lecture 9 (**Ch 19)Angiosperms 2 – **Lecture 11 (**Ch 19)Discussion  |
| 10 | M 10/16W 10/18F 10/20 | Fruits and Embryo Development – **Lecture 12** (Ch 20)Embryo and Seed development – **Lecture 13** (Ch 22)**10/20 - Biodiversity workshop day (Due by end of class)** |
| 11 | M 10/23W 10/25F 10/27 | Embryo and Seed development – **Lecture 13** **cont’d**Cells and Tissues of the Plant Body– **Lecture 14** (Ch 23)Discussion **/review day** |
| 12 | M 10/30W 11/1F 11/3 | **EXAM 3 – October 30th** Hormones and Tropisms – **Lecture 16 (**Ch 27 & 28)Discussion |
| 13 | M 11/6W 11/8F 11/10 | Leaves, Roots and Shoots – **Lecture 15 (**Ch 24 & 25)Leaves, Roots and Shoots – **Lecture 15 cont’d**Discussion |
| 14 | M 11/13W 11/15F 11/17 | Photosynthesis **- Lecture 17 (**Ch 7)Photosynthesis **- Lecture 17 cont’d**Discussion **/review day** |
| 15 | M 11/20W 11/22 – 11/24 | **EXAM 4 – Nov. 20th** November 22-24 – Thanksgiving Break – **NO CLASS!** |
| 16 | 11/30 | **Final Exam – Thursday, November 30th  8:00 - 11:00 AM** |

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| **BIO 203 Lab Schedule and Calendar**\*\* This syllabus is subject to change at the discretion of the instructor. If large changes occur, a new syllabus will be distributed on Canvas and through email notifications. Some changes, such as change of date, will be only announced in-class or through email. |
| **Week** | **Dates** | **Lab Topic** |
| 1 | August 16th | No Lab |
| 2 | August 23rd | The Plant Cell |
| 3 | August 30th | Algae |
| 4 | September 6th | Fungi |
| 5 | September 13th | Bryophytes |
| 6 | September 20th | Seedless Vascular Plants |
| 7 | September 27th | Gymnosperms |
| 8 | October 4th | **FALL BREAK – NO LABS!** |
| 9 | October 11th | Nutrient Deficiency in Fast Plants |
| 10 | October 18th | Flower Lab |
| 11 | October 25th | Fruits and Angiosperm Life Cycle |
| 12 | November 1st | Plant Anatomy and Morphology |
| 13 | November 8th | Workshop Day |
| 14 | November 15th | Scavenger Hunt**\*\*Lab Report due by 11:59 pm** |
| 15 | November 22nd | **THANKSGIVING BREAK – NO LABS!** |