

Course ID:	Course Title:	Fall 2019
Bot 203	Biology of Plants	Prerequisite:
		Credits: 3

Class Information		Instructor Information		Important Dates	
Days:	Wed/Fri	Instructor:	Diane Edwards, BSc(Agr), MSc, PhD, PAg.	First day of classes:	Wed, Sept 4
Time:	8:15-9:30 am	Email:	dedwards@ambrose.edu	Last day to add/drop, or change to audit:	Sun, Sept 15
Room:	A2212 & A2145	Phone:	403-305-5861	Last day to request revised final exam:	Fri, Nov 1
Lab/ Tutorial:	3 of hrs/wk	Office:	TBA	Last day to withdraw from course:	Mon, Nov 18
	Tues. 1-4 pm	Office Hours:	By appointment	Last day to apply for coursework extension:	Mon, Nov 25
Final Exam:	Tues, Dec 10 1-4 pm			Last day of classes:	Wed, Dec 11

Course Description

This course focuses on the plant-person interface, examining how plants have, are and will shape our lives and society. Through this lens students will explore plant biology (anatomy, morphology and physiology) and discover how plants fulfill their many roles in health, commercial products and the natural and urban environments. Prerequisite: BIO 133

Expected Learning Outcomes

Knowledge

- Identify and characterize plants and plant families that are a significant contribution of food, medicine, psychoactive, poisonous, allergy, fiber and ceremony.
- Explain the core principles of plant: growth, resource use, reproduction and reactivity with their environment.
- Discuss the major influences plants have had on shaping past and present society and their role in the local and global environment.

Skill

- Identify the body plan and specific anatomy of plants from the major groups of the plant kingdom.
- Practice basic plant identification techniques.
- Implement and practice critical thinking on prominent topics in the plant sciences.

Attitude

- Become a plant advocate, foster a lifelong appreciation of the beauty, and value the ecological, economic and social implications of plants.

Textbooks

Required: Capon, B. 2019. Botany for Gardeners. 3rd Edition. Timber Press.

Recommended: Levetin, E., McMahon, K. 2012. Plants & Society. 6th, 7th or 8th. McGraw Hill. Available on reserve in the library.

Course Schedule (tentative) - Lecture, Lab, Readings and Assignments

Date	Topic	Reading
Sept 4 Sept 6	1. Course & Plant Introduction 2. What is a plant / Role of plants	BC: 11-13 BC: 15-17
Sept 10 Sept 11 Sept 13	Lab 1. Introduction to Plant ID 3. The Plant Cell 4. Plant body – Tissues and organs	BC: 18-26 BC: 37-89
Sept 17 Sept 18 <i>Sept 19 @ 1pm</i> Sept 20	Lab 2. Plant Id and Flowers 5. Plant Physiology moving water, nutrients <i>Assignment 1. Book Selection for Critical Review</i> 6. Plant Physiology – photosynthesis / respiration	BC: 145-189
Sept 24 Sept 25 Sept 27	Lab 3. Introduction to Plant Families Spiritual Emphasis Days – No lecture 7. Plant Physiology – hormones /tropic	BC-148-162
Oct 1 Oct 2 <i>Oct 3 @ 1pm</i> Oct 4	Lab 4. Plant Family Bioblitz 8. Plant Life Cycles– flowers, fruits and seeds <i>Assignment 2. Plant Growth Regulators</i> 9. Plant Genetics	BC: 195-221, 26-36 BC: 222-239
Oct 8 Oct 9 Oct 11	Lab 5. Plant Architecture 10. Plant Systematics & evolution, adaptation 11. Diversity of Plant Life – lower plants, ferns, gymnosperms	BC: 242-246, 93-141 LM: 136-151
Oct 15 Oct 16 Oct 18	Lab 6. Open Lab 12. Review for Midterm MIDTERM	
Oct 22 Oct 23 <i>Oct 24 @ 1pm</i> Oct 25	Lab 7. Anatomy the plant cell - sectioning 13. Plant Domestication <i>Assignment 3. Grasses formed our civilization</i> 14. Grasses and grains	LM: 175-186 LM: 187-209
Oct 29 Oct 30 Nov 1	Lab 8. Anatomy – Simple tissues and staining 15. Starches & Oil Seeds 16. Legumes	LM: 224-240 LM: 210-223
Nov 5 Nov 6 Nov 8 <i>Nov 9 @ 1pm</i>	Lab 9. Critical analysis of book review – Book Club 17. Feeding a hungry world, Sustainable Agriculture, New Tech 18. Simulating Beverages <i>Assignment 4. Critical thinking about essential oils</i>	- LM: 241-270 LM: 271-288
Nov 12	Reading Week – no lab	

Nov 13	Reading Week – no Lecture	
Nov 15	Reading Week – no Lecture	
Nov 19	Lab 10. Fruit	
Nov 20	19. Herbs and spices	LM: 289-307
Nov 21 @ 1pm	Assignment 5. Secondary Metabolites	
Nov 22	20. Medicinal Plants	LM: 337-357
Nov 26	Lab 11. Critical analysis of book review – Peer Review of draft	
Nov 27	21. Psychoactive Plants	LM: 358-377
Nov 29	22. Poisonous and Allergy Plants	LM: 378-399
Dec 3	Lab 12. The Conifers	
Dec 4	23. Cloth, paper and wood	LM:308-336
Dec 5 @ 1pm	Assignment 6. Plants & flowers for ceremony	
Dec 6	24. Ornamental and Garden Plants	No ref
Dec 10	Lab 13. Final Exam	
Dec 11	25. Review for Final	
Dec 12 @ midnight	Critical Book Review due	

BC: Botany for Gardeners, L&M: Plants & Society 8 ed.

Requirements:

Learning from the lectures will be evaluated using one in class midterm (20%), a final exam (30%), six short take-home assignments (6%) and a critical book review (20%). Learning in the lab (24%, 1 or 2% per lab) will be evaluated through assignments and quizzes.

Exams: Midterm and final will consist of short answer and essay-style questions, drawing and labelling of plant structures and some multiple-choice style questions. The final exam will be cumulative but mostly weighted from the midterm onward.

Assignments: six short take home assignments will be delivered throughout the term. These are written, individual assignments submitted via email at least 24 hours prior to the class session listed in the schedule. These assignments should not exceed one typed page. The writing is to reflect a sincere effort to interact with the material to be covered in the following lecture session. Using current events in the world of Plant Science will be looked upon favorably. Be prepared to share an in-class aspect from this assignment.

Critical Book Review: learners will review one book from a list of popular non-fiction books on plants provided by the instructor or use a book of their choosing pending instructor approval. Guidance will be supplied by the instructor and content will be evaluated with a rubric supplied to students in advance. In class and laboratory time will be allocated for peer-review. The academic integrity of the final version of the review paper will be assessed by submission to **Turnitin**.

Learning in the laboratory will combine field and indoor components and will be evaluated through hand-in assignments normally due at the end of the lab session and a quiz held in the last laboratory session. The first few labs will be held outdoors, and students are expected to dress appropriately for all weather conditions.

Attendance:

Attendance of lectures will help ensure success on course exams and assignments. Attendance is compulsory for all laboratory exercises, presentations and exams. Allocated marks will not be awarded if a student is absent from any laboratory, presentation or exam without notice and sufficient reason.

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Grade Summary:

Assignments	6%
Midterm	20%
Final	30%
Laboratory	24%
Critical Book Review	20%

The available letters for course grades are as follows:

<u>Letter Grade</u>	<u>Description</u>	<u>Percentages %</u>	<u>Letter Grade</u>	<u>Description</u>	<u>Percentages%</u>
<u>A+</u>		<u>90-100</u>	<u>C+</u>		<u>64-66</u>
<u>A</u>	<u>Excellent</u>	<u>85-89</u>	<u>C</u>	<u>Satisfactory</u>	<u>60-63</u>
<u>A-</u>		<u>80-84</u>	<u>C-</u>		<u>56-59</u>
<u>B+</u>		<u>75-79</u>	<u>D+</u>		<u>53-55</u>
<u>B</u>	<u>Good</u>	<u>71-74</u>	<u>D</u>	<u>Minimal Pass</u>	<u>50-52</u>
<u>B-</u>		<u>67-70</u>	<u>F</u>	<u>Failure</u>	<u>Below 50%</u>

Because of the nature of the Alpha 4.00 system, there can be no uniform University-wide conversion scale. The relationship between raw scores (e.g. percentages) and the resultant letter grade will depend on the nature of the course and the instructor's assessment of the level of each class, compared to similar classes taught previously.

Please note that final grades will be available on student registration system. Printed grade sheets are not mailed out.

Other:

Occasionally students will be required to listen to podcasts or view online videos to augment class material.

Ambrose University Academic Policies:

Communication

All students have received an Ambrose e-mail account upon registration. It is the student's responsibility to check this account regularly as the Ambrose email system will be the professor's instrument for notifying students of important matters (cancelled class sessions, extensions, requested appointments, etc.) between class sessions. If students do not wish to use their Ambrose accounts, they will need to forward all messages from the Ambrose account to another personal account.

Registration

During the **Registration Revision Period** students may enter a course without permission, change the designation of any class from credit

to audit and /or voluntary withdraw from a course without financial or academic penalty or record. Courses should be added or dropped on the student portal by the deadline date; please consult the List of Important Dates. After that date, the original status remains and the student is responsible for related fees.

Students intending to withdraw from a course after the Registration Revision Period must apply to the Office of the Registrar by submitting a "Request to Withdraw from a Course" form or by sending an email to the Registrar's Office by the **Withdrawal Deadline**; please consult the List of Important Dates on the my.ambrose.edu website. Students will not receive a tuition refund for courses from which they withdraw after the Registration Revision period. A grade of "W" will appear on their transcript.

Students wishing to withdraw from a course, but who fail to do so by the applicable date, will receive the grade earned in accordance with the course syllabus. A student obliged to withdraw from a course after the Withdrawal Deadline because of health or other reasons may apply to the Registrar for special consideration.

Exam Scheduling

Students, who find a conflict in their exam schedule must submit a Revised Examination Request form to the Registrar's Office by the deadline date; please consult the List of Important Dates. Requests will be considered for the following reasons only: 1) the scheduled final examination slot conflicts with another exam; 2) the student has three final exams within three consecutive exam time blocks; 3) the scheduled final exam slot conflicts with an exam at another institution; 4) extenuating circumstances. Travel is not considered a valid excuse for re-scheduling or missing a final exam.

Electronic Etiquette

Students are expected to treat their instructor, guest speakers, and fellow students with respect. It is disruptive to the learning goals of a course or seminar and disrespectful to fellow students and the instructor to use electronics for purposes unrelated to the course during a class session. Turn off all cell phones and other electronic devices during class. Laptops should be used for class-related purposes only. Do not use iPods, MP3 players, or headphones. Do not text, read, or send personal emails, go on Facebook or other social networks, search the internet, or play computer games during class. Some professors will not allow the use of any electronic devices in class. The professor has the right to disallow the student to use a laptop in future lectures and/or to ask a student to withdraw from the session if s/he does not comply with this policy. Repeat offenders will be directed to the Dean. If you are expecting communication due to an emergency, please speak with the professor before the class begins.

Academic Policies

It is the responsibility of all students to become familiar with and adhere to academic policies as stated in the Academic Calendar. Personal information (information about an individual that may be used to identify that individual) may be required as part of taking this class. Any information collected will only be used and disclosed for the purpose for which the collection was intended. For further information contact the Privacy Compliance Officer at privacy@ambrose.edu.

Extensions

Although extensions to coursework in the semester are at the discretion of the instructor, students may not turn in coursework for evaluation after the last day of the scheduled final examination period unless they have received permission for a course Extension from the Registrar's Office. Requests for course extensions or alternative examination time must be submitted to the Registrar's Office by the deadline date; please consult the List of Important Dates. Course extensions are only granted for serious issues that arise "due to circumstances beyond the student's control."

Appeal of Grade

An appeal for change of grade on any course work must be made to the course instructor within one week of receiving notification of the grade. An appeal for change of final grade must be submitted to the Registrar's Office in writing and providing the basis for appeal within 30 days of receiving notification of the final grade, providing the basis for appeal. A review fee of \$50.00 must accompany the appeal. If the appeal is sustained, the fee will be refunded.

Academic Integrity

We are committed to fostering personal integrity and will not overlook breaches of integrity such as plagiarism and cheating. Academic dishonesty is taken seriously at Ambrose University as it undermines our academic standards and affects the integrity of each member of our learning community. Any attempt to obtain credit for academic work through fraudulent, deceptive, or dishonest means is academic dishonesty. Plagiarism involves presenting someone else's ideas, words, or work as one's own. Plagiarism is fraud and theft, but plagiarism can also occur by accident when a student fails or forgets to acknowledge to another person's ideas or words. Plagiarism and cheating can result in a failing grade for an assignment, for the course, or immediate dismissal from the university. Students are expected to be familiar with the policies in the current Academic Calendar that deal with plagiarism, cheating, and the penalties and procedures for dealing with these matters. All cases of academic dishonesty are reported to the Academic Dean and become part of the student's permanent record.

Note: Students are strongly advised to retain this syllabus for their records.