

Course ID:	Course Title:	Winter 2021
ECOL 319	Terrestrial Communities and Ecosystems	Prerequisite: BIO 213, BIO 310
		Credits: 3

Class Information		Instructor Information		Important Dates	
Delivery:	In-class	Instructor:	Matthew Morris, PhD	First day of classes:	Mon, Jan 11
Days:	Tues/Thurs	Email:	Matthew.Morris@ambrose.edu	Last day to add/drop, or change to audit:	Sun, Jan 24
Time:	1:30-2:45 pm	Phone:	403-410-2000 ext. 6932	Last day to request revised final exam:	Mon, Mar 8
Room:	A2212	Office:	A2158	Last day to withdraw from course:	Fri, Mar 19
Lab/Tutorial:	3 hours/wk 12:30-3:30 A2212	Office Hours:	Wed/Fri 9-12	Last day to apply for coursework extension:	Mon, Mar 29
Final Exam:	None			Last day of classes:	Fri, Apr 16

Course Description

This course will explore patterns and processes that influence biotic interactions in terrestrial systems. Topics including succession, productivity, diversity, disturbance, and nutrient dynamics will be discussed as they relate to conservation and management.

Students will require a laptop for this class with an installed version of the free statistical software environment R (<https://www.r-project.org/>), with an installed data visualization package *ggplot2* for R (<https://ggplot2.tidyverse.org/>).

Expected Learning Outcomes

By the end of the class, students will be able to:

1. Define state factors and interactive controls, and understand their roles in shaping differences among Earth's biomes in terms of soil processes, energy flow, and nutrient cycling
2. Demonstrate competency in their understanding of terrestrial ecosystem processes and patterns
3. Interpret ecological data and graph it appropriately using *ggplot2* in R
4. Critique past and present land use practices for their impact on ecosystem services, and propose management strategies that mitigate harmful ecological effects

Textbooks

Chapin III FS, Matson PA, Vitousek PM (2011) *Principles of Terrestrial Ecosystem Ecology Second Edition*. Springer.

Additional scientific papers may be assigned.

Covid and the syllabus

This syllabus, including the schedule and grading scheme, must be considered tentative. Updated syllabi will be made available as needed – particularly if the university gets closed for the semester and the course and its labs move completely online.

Temporary closures (e.g. the lab must be quarantined for two weeks, or the instructor is self-isolating for two weeks) could result in less extreme modifications to the syllabus, particularly with regard to lab scheduling. The key this semester will be flexibility.

Attendance and covid

Students are required to do the AHS self-examination before entering Ambrose. The expectation is that students will attend all in-person classes and labs. Due to AHS guidelines, we are required to take attendance for all in-person arrivals to class or lab. If you are self-isolating due to suspected or confirmed covid infections, **all lectures will also be held live over Zoom**. They will not be recorded, so if you are self-isolating be sure to access the Zoom links that will be provided for each lecture on the Moodle course page, and log in during normal class times.

Zoom is more difficult to do for labs as the instructor has to move around the room, but opportunities will be granted to make up missed labs due to illness.

Doctor's notes are **not required**. **However, be sure to stay in constant touch with the instructor regarding absences.**

Course Schedule

Monday (lab)	Tuesday	Thursday
Jan 11 – No lab	Jan 12 – Introduction	Jan 14 – Terra firma (Ch 1)
Jan 18 – Terrestrial ecology of Ambrose	Jan 19 – State factors	Jan 21 – Climate (Ch 2)
Jan 25 – Grass: a tutorial on replicating scientific figures	Jan 26 – Climate continued	Jan 28 – Biomes
Feb 1 – Literature review	Feb 2 – Soil: formation and transformation (Ch 3)	Feb 4 – Hydrologic cycle (Ch 4)
Feb 8 - Measuring trees	Feb 8 – Photosynthesis	Feb 11 – Gross Primary Productivity (Ch 5)
Feb 15 – READING BREAK	Feb 16 – READING BREAK	Feb 18 – READING BREAK
Feb 22 – MIDTERM	Feb 23 – Net Primary Productivity (Ch 6)	Feb 25 – Decomposition (Ch 7)
March 1 – Measuring production	Mar 2 – NECB (Ch 7)	Mar 4 – Plants and nutrients (Ch 8)
March 8 – Measuring canopies	Mar 9 – Nutrient cycling (Ch 9)	Mar 11 – TBD
March 15 – <i>Sahara</i>	Mar 16 – Species effects on ecosystems (Ch 11)	Mar 18 – Why is land green? (Ch 10)
March 22 – Scavenger hunt	Mar 23 – Time (Ch 12)	Mar 25 – Landscape ecology (Ch 13)
March 29 – Data analysis	Mar 30 - Land management (Ch 14)	April 1 – Urban biome
Apr 5 – Easter Monday	Apr 6 – Urban processes	Apr 8 – Special topic
April 12 – Data presentations	April 13 – Special topic	April 15 – Special topic

Requirements:

Midterm – 25%

In-class participation – 10%

Labs – 45%

Ambrose – 3%

Grass – 5% (including 1% for prelab)

Literature review – 2%

Measuring trees – 5%

Measuring production – 5%

Canopy – 5%

Sahara – 2%

Scavenger hunt – 3%

Ambrose ecology data analysis – 10%

Ambrose ecology data presentation – 5%

Term paper – 20%

Attendance:

Missed lectures will result in deductions from your “participation” grade. Assignments done in class cannot be made up if missed. Zoom will be used for students needing to self-isolate; otherwise, unless AHS declares otherwise, this course will be conducted in-person.

Attendance *is* compulsory for all laboratory exercises and exams; **missing two or more labs results in automatic failure of the course.**

Grade Summary:

The available letters for course grades are as follows:

Grad	Percent	Grade Point Value	Description
A+	96-100	4.00	Outstanding
A	92-96	4.00	Excellent - superior performance, showing comprehensive understanding of subject matter.
A-	88-92	3.70	
B+	83-88	3.30	
B	78-83	3.00	Good-clearly above average performance with knowledge of subject matter generally complete.
B-	73-78	2.70	
C+	68-73	2.30	
C	64-68	2.00	Satisfactory – basic understanding of the subject matter. Grade point average below 2.00 is not sufficient for promotion.
C-	60-64	1.70	Minimum grade required if needed as a prerequisite course
D+	55-60	1.30	
D	50-55	1.00	Minimal pass – marginal performance; generally insufficient preparation for subsequent courses in the same subject.
F	<50	0	Fail – unsatisfactory performance or failure to meet course requirements.

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.

Late assignment policies

Homework or lab assignments cannot be submitted late without cause and approval from the professor. Homework assigned during lecture is **due at the start of lecture** for which it is due; anything after the start of lecture will be considered late. Lab assignments are **due at the beginning of lab**; anything after the start of the lab will be considered late. The penalty for late homework or lab assignments are as follows:

- 20%/day for late assignments that are submitted within three days of the due date
- 0% on any assignments passed in three days after the due date, unless otherwise stated by the instructor. *These assignments will still be “graded” so that you can have feedback before the exam, even if your official grade is 0.*

If your name is not on the assignment, it will not be graded and you will receive a grade of 0 for failing to submit an assignment.

Missed midterms or final exams, without cause, cannot be made up. The only acceptable reason for missing an exam is illness, for which a doctor’s note will be required, or death of an immediate family member. Give yourself plenty of time to get to school on exam days. Traffic or weather is no reason for missing an exam.

Plagiarism policy

Some lab assignments will be submitted as a single copy per lab group. It is expected that all members of the group contribute equally to the assignment. This is a good opportunity to help your fellow students understand concepts they may be struggling with. Please ensure all members of the group are named on such assignments. **Group members whose names are not on the submitted assignment will receive a grade of zero.**

All other assignments will be submitted as one original piece of work per person. If you submit an assignment with only your name on it, it is assumed that you are the sole contributor of the work.

See below for Ambrose’s statement defining plagiarism and outlining its consequences. In brief, it is your responsibility as a citizen of Ambrose to be aware of the policies of Ambrose and abide by them. Ignorance is no excuse. Plagiarism will not be tolerated.

Examples of plagiarism include, but are not limited, to:

1. Copying an assignment from someone else and submitting it as your own work.
2. Working with a friend and writing down identical answers, whether you understand the content or not, and submitting the assignments separately.
3. Quoting directly from a source without supplying quotation marks or a citation.
4. Quoting directly from a source without supplying quotation marks, even if it is referenced.
5. Copying nearly word-for-word from a source, changing only the occasional word, without providing quotation marks, even if it is referenced.
6. Submitting an assignment in which >30% of the content is properly quoted; that is, at least 70% of the words in an assignment need to be your own. A general rule of thumb: for every line quoted, there should be three lines of your own material explaining that quote.

7. Submitting the same or similar assignment for more than one class, or more than one iteration of the same class.
8. Not citing illustrations used in a paper.

Penalties for plagiarism

For a first offense in any one of my classes, a zero on the assignment with no chance of rewriting it, and a note in your academic file.

For a second offense in any one of my classes, a zero in the class, and recommendation for a note on your transcript.

For a third offense in any one of my classes, a zero in the class and a recommendation for expulsion from the university.

Note that Ambrose has an appeals process in place if you feel that allegations of plagiarism are unfounded; these are for final marks only, and not for individual assignments.

Note that my record of a student's past plagiarism does not reset with each semester.

Classroom Etiquette:

It is expected that students will take an active role in the learning process. This includes: (a) regular class and lab attendance, (b) reading course material in advance of class or labs, and (c) engaging in discussions during class or labs.

In respect to the professor and to your fellow students, we ask that you:

- a) Turn your phone off during class and that you don't use it for texting during lecture or lab;
- b) Not have conversations with the people beside you during lecture – it is very distracting to the people around you;
- c) Use your laptops for lecture material and assignments only – that you are not using the internet or Facebook during class time;
- d) Arrive to lecture and lab on time;
- e) Don't listen to music in class or lab.

These will help to maximize the learning experience for you and your fellow students (and will keep your professor in a good mood).

Mental Health Support

All of us need a support system. We encourage students to build mental health supports and to reach out when help is needed.

On Campus:

- Counselling Services: ambrose.edu/counselling
- Peer Supportive Listening: One-to-one support in Student Life office. Hours posted at ambrose.edu/wellness.
- For immediate crisis support, there are staff on campus who are trained in Suicide Intervention and Mental Health First Aid. See ambrose.edu/crisissupport for a list of staff members.

Off Campus:

- Distress Centre - 403-266-4357
- Sheldon Chumir Health Care Centre - 403-955-6200
- Emergency - 911

Sexual Violence Support

All staff, faculty, and Residence student leaders have received *Sexual Violence Response to Disclosure* training. We will support you and help you find the resources you need. There is a website with on and off campus supports – ambrose.edu/sexual-violence-response-and-awareness.

Off Campus:

- Clinic: Sheldon Chumir Health Centre - 403-955-6200
- Calgary Communities Against Sexual Abuse - 403-237-5888

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.

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