



COURSE OUTLINE

GEOGRAPHY 358: Landscape Ecology

Class Meetings: Tuesday, Wednesday, Friday 10:30-11:20 in DTB A104



Instructor: Matt Fuller

Office Hours: Wednesday and Thursdays, Noon-2pm (or by appointment)

Office Location: DTB B214

Contact: mtfuller@uvic.ca

We acknowledge with respect the Lekwungen-speaking peoples on whose traditional territory the university stands and the Songhees, Esquimalt and WSÁNEĆ peoples whose historical relationships with the land continue to this day.

Furthermore, UVic recognizes that colonization and associated attitudes, policies and institutions have significantly changed Indigenous peoples' relationship with this land. And for many years those same things served to exclude Indigenous students from higher education.

COURSE DESCRIPTION

This course will provide an introduction to the discipline of landscape ecology which focuses on the relationship between spatial pattern and ecological processes. In this course we will begin by examining the history of landscape ecology and related ecological thought. We will then explore (1) how to quantify spatial pattern, (2) drivers and factors influencing spatial pattern, and (3) how spatial pattern influences ecological processes and may change through time. There are many processes that affect spatial pattern including anthropogenic, biological, geomorphic, climatic and hydrological forces. The dynamic pattern-process relationship plays a critical role in the distribution and abundance of organisms, their habitat, and their behaviour, and influences ecosystem function and disturbance regimes. For example, habitat fragmentation and landscape heterogeneity, resulting from anthropogenic and natural disturbance, are important determinants of grizzly bear habitat selection, movement patterns, and population dynamics.

For students interested in applied science, the fundamental concepts of landscape ecology are an important prerequisite for decision making and problem solving in fields such as conservation sciences, resource management, remote sensing, spatial modelling and GIScience. ***To this end, we will be bringing in several guest lecturers throughout the term, faculty and grad students, to discuss with you how principles of landscape ecology are applied in their fields and sub-disciplines.***

Course text: The course has a required text that is well recognized as a great resource for Landscape Ecology. The text will parallel and supplement the lecture content. You will also be responsible for assigned research journal articles throughout the term, which will be posted on coursespaces.

Turner, M. G., and Gardner, R. H. (2015). *Landscape Ecology and In Theory and Practice*. Second Edition. New York: Springer.

This text is available as an ebook through the University of Victoria Library. Please visit the course reserves website, locate our course and you will find a link to the course text.

Course website: Please be sure to stay connected to announcements, postings and materials listed on our coursespaces website course management system (which can be found on your UVic account). Lecture materials and notes will be provided for some lectures there. Additional required and supplemental readings, web resources and media will also be posted.

Course Deliverables and Assessment:

1. Exams – 40%

Midterm Exam: 15%

DATE: Friday, February 7th

Final Exam: 25%

DATE: to be determined

2. Research Paper – 25%

Proposal: 5%

DUE: Friday, February 14th

Research Paper: 20%

DUE: Friday, March 27th

3. Group Project – 20%

Poster 16%

Presentations March 17th, 18th (possibly 20th)

Poster Presentation 4%

4. Critical Reading Reflections – 10%

Due: Feb 25th, March 10th

Reading Reflection #1: 5%

Reading Reflection #2: 5%

5. Participation/Active Engagement – 5%

Throughout the term, in class and group work

Assignment Descriptions:

Midterm exam: The exam will cover all material presented from the beginning of term, up to and including the material presented on February 5th.

Final exam: The final exam will be cumulative, however, and emphasis will be placed on the material presented after the midterm exam.

Term paper: You will write a term paper proposal and a final term paper. A selection of appropriate topics will be provided and assignment details will be posted on CourseSpaces. ***The grading rubric is posted on coursespaces.***

Group project: For this assignment you will form groups of three people. As a group you will create a descriptive and exciting poster on a landscape ecology-related topic/metric/statistic provided to you. You will present your poster informally in a conference style poster session in one of two classes. ***See rubric and details provided on coursespaces.***

Critical Reading Reflections: You will be asked to do two critical reading reflections throughout the term on some of our non-text book readings. One will be due in February and one in March, dates to be determined. Each reflection should be 600-800 words max. ***The rubric and parameters are posted on coursespaces.***

Participation/Active Engagement: Though this is a large class, we will be doing a lot of small group work and breakout sessions throughout the term. Your attendance and active participation will be considered, both for the in class lectures and activities and for your group project and presentation.

Course objectives:

The goal of the course is to provide you with an understanding of landscape ecology. Upon successful completion of the course you will be able to:

1. explain the history and fundamentals of landscape ecology and its relationship with other subfields of ecology and geography;
 2. describe methods for detecting and quantifying landscape patterns;
 3. understand the mechanisms by which pattern and process change through time; and
 4. analyze examples to describe the causes of landscape pattern and how these patterns influence populations, communities, and ecosystems.
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KEY THEMES AND CONTENT:

1. Introductory concepts (Jan 7th through Jan 21st)

- - A primer on ecological thought
- - Intro to emergence of landscape ecology
- - Introductory concepts
- - Scale and heterogeneity

2. Drivers of landscape pattern (Jan 22nd through Feb 5th)

- - What is landscape pattern
- - Abiotic and biotic factors
- - Landscape legacies and change

- Disturbance regimes

3. Quantifying landscape pattern (*Feb 10th through March 6th*)

- Technological applications
- Landscape metrics
- Spatial statistics
- Landscape dynamics

4. Influence of landscape structure (*March 10th through April 3rd*)

- Organisms and landscape pattern
 - Wildlife behaviour, habitat use, and movement ecology
 - Ecosystem processes and landscape heterogeneity
 - Conservation planning and resource management
 - Future directions in landscape ecology
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GRADING SYSTEM

As per the Academic Calendar:

Grade	Grade point value	Grade scale	Description
A+	9	90-100%	
A	8	85-89%	
A-	7	80-84%	Exceptional, outstanding and excellent performance. Normally achieved by a minority of students. These grades indicate a student who is self-initiating, exceeds expectation and has an insightful grasp of the subject matter.
B+	6	77-79%	
B	5	73-76%	
B-	4	70-72%	Very good, good and solid performance. Normally achieved by the largest number of students. These grades indicate a good grasp of the subject matter or excellent grasp in one area balanced with satisfactory grasp in the other area.
C+	3	65-69%	
C	2	60-64%	Satisfactory, or minimally satisfactory. These grades indicate a satisfactory performance and knowledge of the subject matter.
D	1	50-59%	Marginal Performance. A student receiving this grade demonstrated a superficial grasp of the subject matter.
F	0	0-49%	Unsatisfactory performance. Wrote final examination and completed course requirements; no supplemental.
N	0	0-49%	Did not write examination or complete course requirements by the end of term or session; no supplemental.

GEOGRAPHY DEPARTMENT INFO

- Geography Department website: uvic.ca/socialsciences/geography/
- Undergraduate Advising: geogadvising@uvic.ca

COURSESPACES

We will be using our coursespaces regularly and it is your responsibility to pay attention to the content and discussion there. Announcements, materials and links will be posted throughout the term there.

WEEKLY CALENDAR

Our weekly schedule is posted on coursespaces, alongside the required and recommended readings and all supplemental materials.

POSITIVITY AND SAFETY

The University of Victoria is committed to promoting, providing and protecting a positive and safe learning and working environment for all its members. This commitment extends into our classroom and we will discuss what makes for a safe, productive and positive learning community in our first meetings. Together we will come up with a class compact that will serve as a guiding document for how we treat one another in the learning community and in our academic spaces for the courses.

To serve this aim and this goal, we will be drafting and all signing off on a learning compact, to ensure a safe, positive and productive learning community for us all.

POLICY ON LATE ASSIGNMENTS

Deadlines are important to keep you on track in this course and to be fair to all students. All assignments are due at the start of class or at their pre-determined time posted online on coursespaces. For each day an assignment is late there will be a 10% penalty. I understand that challenging moments arise in our day to day lives, whether it might be medical situations or other personal circumstances, and that many of you work hard on top of full-time school. The earlier you come to speak to me the better I can help you.

POLICY ON ATTENDANCE

I will not be taking attendance every day but we will have weekly class and group activities, sometimes unannounced, that will require your active participation and contributions. These may take the form of reading discussions, question/answer prompts, etc, etc. 5% of your grade relates to participation, attendance and active engagement.

ACADEMIC INTEGRITY

It is every student's responsibility to be aware of the university's policies on academic integrity, including policies on **cheating, plagiarism, unauthorized use of an editor, multiple submission, and aiding others to cheat**.

Policy on Academic Integrity:

web.uvic.ca/calendar2019-09/undergrad/info/regulations/academic-integrity.html

If you have any questions or doubts, talk to me, your course instructor. For more information, see uvic.ca/learningandteaching/cac/index.php.

Any information that you would explicitly like to state about plagiarism, unauthorized use of an editor, or other aspects of academic integrity goes here.

ACCESSIBILITY

Students with diverse learning styles and needs are welcome in this course. In particular, if you have a documented disability or health consideration that may require accommodations, please feel free to approach me and/or the Centre for Accessible Learning (CAL as soon as possible <https://www.uvic.ca/services/cal/>). The RCSD staff is available by appointment to assess specific needs, provide referrals, and arrange appropriate accommodations. The sooner you let us know your needs, the quicker we can assist you in achieving your learning goals in this course.

SEXUALIZED VIOLENCE PREVENTION AND RESPONSE AT UVIC

UVic takes sexualized violence seriously, and has raised the bar for what is considered acceptable behaviour. We encourage students to learn more about how the university defines sexualized violence and its overall approach by visiting uvic.ca/svp. If you or someone you know has been impacted by sexualized violence and needs information, advice, and/or support please contact the sexualized violence resource office in Equity and Human Rights (EQHR). Whether or not you have been directly impacted, if you want to take part in the important prevention work taking place on campus, you can also reach out:

Where: Sexualized violence resource office in EQHR; Sedgewick C119
Phone: 250.721.8021
Email: svpcoordinator@uvic.ca
Web: uvic.ca/svp

COURSE EXPERIENCE SURVEY (CES)

I value your feedback on this course. Towards the end of term, as in all other courses at UVic, you will have the opportunity to complete an anonymous survey regarding your learning experience (CES). The survey is vital to providing feedback to me regarding the course and my teaching, as well as to help the department improve the overall program for students in the future. The survey is accessed via MyPage and can be done on your laptop, tablet, or mobile device. I will remind you and provide you with more detailed information nearer the time but please be thinking about this important activity during the course.

DISCLAIMER

The above schedule, policies, procedures, and assignments in this course are subject to change in the event of extenuating circumstances.

NOTE:

A note to remind you to take care of yourself. Do your best to maintain a healthy lifestyle this semester by eating well, exercising, getting enough sleep and taking some time to relax. This will help you achieve your goals and cope with stress. All of us benefit from support during times of struggle. You are not alone.

Counselling Services - Counselling Services can help you make the most of your university experience. They offer free professional, confidential, inclusive support to currently registered UVic students. uvic.ca/services/counselling/

Health Services - University Health Services (UHS) provides a full service primary health clinic for students, and coordinates healthy student and campus initiatives. uvic.ca/services/health/

Centre for Accessible Learning - The CAL staff are available by appointment to assess specific needs, provide referrals and arrange appropriate accommodations uvic.ca/services/cal/. The sooner you let us know your needs the quicker we can assist you in achieving your learning goals in this course.

Elders' Voices - The Office of Indigenous Academic and Community Engagement (IACE) has the privilege of assembling a group of Elders from local communities to guide students, staff, faculty and administration in Indigenous ways of knowing and being.

uvic.ca/services/indigenous/students/programming/elders/index.php