

Course plan under construction; please check back soon for revisions

Department of Environmental Sciences
College of the Environment
Western Washington University

ESCI 197C INTRODUCTION TO FIELD RESEARCH

3 Credits

One meeting per week, 3 hours

Instructor: John McLaughlin

[This syllabus is subject to change. Changes will be announced in class or online.]

Instructor Contact Information

Office: ES 434

Office hours: after class, and by arrangement

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Course Description

This course will immerse you in the practice of field science, using local field sites as our “classroom.” Field trips will include locally accessible environments, topics, processes, and ways of knowing. We will consider applications of science to inform human-nature relationships. The course will form a learning community, in which participants collaborate to understand the history, structure, and function of field sites. Students will develop scientific competency by designing, conducting, and presenting their own field research projects. Specialized outdoor gear is not required, except for a raincoat and footwear suitable for walking on trails.

Learning Outcomes

- 1 Competence in field observation and ability to discern environmental patterns and variability, including detailed field journaling.
- 2 Connection to local ecosystems and their inhabitants, including strategies for recognition.
- 3 Improved critical thinking ability and problem-solving skills.
- 4 Increased understanding of the nature of field science.
- 5 Understanding of scientific hypothesis structure and competence in formulating hypotheses.
- 6 Improved competence in field research project design and implementation.
- 7 Ability to present ideas effectively using visual and narrative modalities.
- 8 Increased comfort and confidence in field settings.
- 9 Experience and competence in equitable teamwork and scientific collaboration.
- 10 Develop identity as a scientist, and greater sense of belonging in the scientific community.

Prerequisites: none

Textbook

Mathews, D. 2021. *Cascadia Revealed: A Guide to the Plants, Animals, and Geology of the Pacific Northwest Mountains*. Timber Press, Portland, OR. ISBN 9781643261010

Required Equipment: writing implement and a sturdy field notebook with a waterproof cover.

Policies and Resources

This is primarily a field course, complemented by some presentations, discussions, and other activities. If you would find walking outside on trails for three hours to be an unreasonable physical challenge, please see the instructor before the second course meeting. Although the schedule may change according to the weather, you should come to class prepared to be outside regardless of weather conditions.

Safe learning environment: we will give priority to your learning success even as we venture beyond conventional classrooms. We must elevate our collective goals while also supporting respectful individual expression. A safe learning environment will allow all of us to take intellectual risks that facilitate discovery by expanding our comfort zones without fear of judgement. During the first class meeting, we will develop a set of group agreements to maintain or increase respect, honesty, inclusion, collaboration, and mutual support. See the following for an [agreement template](#).

COVID-19 Policies: we will practice COVID-19 safety throughout the course. Please make your health and the health of others in your sphere your highest priority.

If you feel sick, stay home, take care of yourself, and do not attend class meetings. No penalty will be applied for classes missed for health reasons, even if your illness turns out to be a mild cold.

Seek medical attention if your symptoms become severe, particularly high fever or difficulty breathing.

Please contact the instructor to arrange accommodations if you must miss multiple classes due to illness or self-isolation.

Additional guidelines may be added, following WWU policy and guidance for fall 2025, and updated information about the status of the pandemic. Please see [Field Course COVID policies](#) for details.

Information about COVID-19 symptoms, treatment, prevention, and safety are at the following web sites.

WWU: <https://www.wvu.edu/coronavirus>

WA Department of Health: <https://www.doh.wa.gov/Emergencies/NovelCoronavirusOutbreak2020/HealthEducation>

COVID-19 FAQ, WADOH: <https://www.doh.wa.gov/Portals/1/Documents/1600/coronavirus/COVIDExposed.pdf>

US CDC: https://www.cdc.gov/respiratory-viruses/guidance/?CDC_AAref_Val=https://www.cdc.gov/respiratory-viruses/guidance/respiratory-virus-guidance.html

WWU Course Policies: We will observe all university policies regarding academic honesty, disability accommodation, religious accommodation, equity, and equal opportunity. Please review those policies at the following site. <https://syllabi.wvu.edu/>

In particular, accommodation for students with documented disabilities should be established within the first week of class and arranged through the Disability Access Center: <https://disability.wvu.edu/>
Students seeking religious accommodation should provide written notice to the instructor within the first two weeks of the course.

WWU provides resources for additional student needs.

Students with medical needs may find help at the [Student Health Center](https://studenthealth.wvu.edu/): <https://studenthealth.wvu.edu/>

Students with emotional or psychological concerns may find help at the [Counseling and Wellness Center](https://cwc.wvu.edu/): <https://cwc.wvu.edu/>

The [Office of Student Life](https://wp.wvu.edu/officeofstudentlife/) can help with difficult personal or family issues and in navigating the university bureaucracy: <https://wp.wvu.edu/officeofstudentlife/>

Students with challenging personal circumstances are encouraged to contact the instructor before those issues impact work in the course, or as soon as possible. We will not consider this as weakness or a request for favors. We will have better opportunities to develop strategies to help you succeed if we begin early.

Course Schedule [To be revised soon]

Most course meetings will begin outside on campus or at local trailheads, particularly Sehome Arboretum. Meeting times and locations TBA. We will spend most class periods outside at field sites. There will be several brief indoor classroom meetings to access online information resources; classroom locations and times TBA.

Date	Topics	Readings	Assignments
Sept 26	Introductions: people, place, norms, logistics Field questions exercise Field questions discussion	Course norms Giracca 2016	Field questions
Oct 3	Identity and belonging in science Field observation introduction Field deduction exercise	Mathews 2021, pp.17-31 McGill et al. 2021	Field Journal Field deduction report
Oct 10	Field observation, measurement, inference PNW forests: composition, structure, function Literature search resources and strategies	Mathews 2021, pp.46-61,68-77,90-91,98-109/	Field Journal Lit.search reference list
Oct 17	Hypothesis development in field systems PNW animals: species, activities, evidence Discussion: research interests Literature reviews	Mathews 2021, pp.337-505 (selected)	Field Journal Literature review
Oct 24	Research proposal development PNW climate and geomorphology Field activities TBD, to support res. interests	Mathews 2021, pp.32-43, 506-517	Field Journal Research proposal
Oct 31	Research pilot studies Field activities TBD, to support res. interests		Field Journal Pilot study report
Nov 7	Field data analysis and interpretation Field activities TBD, to support res. interests	Article TBD	Field Journal
Nov 14	Guidelines for effective presentations Field activities TBD, to support res. interests	Article TBD	Field Journal
Nov 21	Report writing Research project completion workshop	Turbek et al. 2016 Grogan 2021	Field Journal
Nov 28	Holiday, no class		
Dec 5	Research project presentations Closing celebration		Research presentation Research report

Grading

Letter grades will be assigned based on performance on work listed below. Assignments should be submitted on Canvas in PDF, *.txt, or *.odt. Exception for the Field questions exercise, which may be submitted as handwritten questions following the field exercise.

Assignment	Due Date	Weight (%)
Field questions exercise	September 26	5
Field journal	weekly	10
Field deduction report	October 10	10
Literature search reference list	October 17	5
Literature review	October 24	10
Research proposal	October 31	10
Research pilot study report	November 7	5
Research presentation	December 5	15
Research report	December 5	20
Participation	throughout	10