



**University  
of Victoria**

Earth & Ocean Sciences 408 CRN xxxxxx  
UNIVERSITY OF VICTORIA  
3-0-0 (1.5 UNITS)  
FALL TERM 2025

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*We acknowledge and respect the Lək̓ʷəŋən (Songhees and Esquimalt) Peoples on whose territory the university stands, and the Lək̓ʷəŋən and WSÁNEĆ Peoples whose historical relationships with the land continue to this day.*

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## **COURSE OUTLINE**

### **EOS408: Marine Geology**

Lectures: M/Th 10:00 to 11:20 PM in MacLaurin D103

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**PREREQUISITES:** EOS201, 1 of EOS310 or EOS316

**COREQUISITES:** NONE

#### **CONTACT INFO**

Instructor(s):	Blake Dyer
Email:	blakedyer@uvic.ca
Office:	BWC A419
Office Hours:	by appointment
Teaching Assistant(s):	none

#### **COURSE DESCRIPTION**

In this course, we will explore geological processes in a wide range of oceanic environments: mid-ocean ridges, mid-plate volcanoes and hot spots, coastlines, continental margins and abyssal plains. The lectures, readings, and your writing will cover seminal scientific works and recent journal publications.

This course is a science writing course. Clear writing is one of the most important skills in science as it clarifies our own understanding of a topic and provides a pathway to communicate our ideas to others. You will be required to submit writing and revisions to your writing almost every week. Your final grade in this course will largely reflect your ability to demonstrate your understanding of marine geology through your writing.

## LEARNING OUTCOMES

Below is a list of some specific knowledge and skills you can expect to gain through this course. This term you will:

- learn how to use the surface of the ocean to map the height and position of seamounts
- understand how the plume theory is necessary to explain many seafloor features that can not be explained by simple plate tectonics
- interpret sea-level histories from coastal sedimentary outcrops from the last interglacial period
- be able to predict the viscous and elastic consequences of ice-loading during glacial-interglacial cycles
- become an effective science communicator through both written and verbal presentations
- learn through writing workshops how to improve the clarity and precision of your writing

## COURSE MATERIALS

There is no required textbook. Readings will be made available through the course website.

## BRIGHTSPACE

You are expected to routinely check the Brightspace site. All announcements, materials, readings, and schedule changes will be posted to brightspace.

## EVALUATION

This course will use the [official UVic standard grading scale](#). Your final grade will be determined by your scores on in-class presentations, contributions to workshops, and writing submissions. There is no final exam.

Participation and contributions to workshops	12.5%
Review paper outline (Due Oct 13)	12.5%
Review paper first submission (Due Nov 17)	12.5%
Final paper submission (Due Dec 04)	42.5%
In class presentation	22.5%

## EVALUATION: REVIEW PAPER

Over the course of this term you will be writing a scientific review paper on a topic of your choosing within the scope of marine geology. The final paper should be between **2500 and 3500 words** and must have at least **two** original figures that you have created by combining data or concepts from your research. You will need to consult with the instructor and select an appropriate topic by Friday, September 22. We will be workshopping aspects of your paper and general science writing throughout the term. Your first submission of this review paper will be due on November 17. Your first submission will be reviewed by one of your peers for critical feedback. This feedback will be relayed back to you through the instructor and you will have the opportunity to respond and incorporate that feedback into your final submission on the last day of class, December 04. This review paper is a **required** component of the course. Failure to submit a review paper will result in a 'N' grade.

## EVALUATION: PARTICIPATION AND CONTRIBUTION TO WORKSHOPS

This course is at least half workshop-based, so it is especially important for everyone to participate and be heard. You should be honest with your classmates and with the instructor, respectful toward everyone's thoughts and opinions, and compassionate toward your subject matter and the views of your peers. A

pattern of showing up to workshops unprepared will result in a zero for this aspect of your final grade. More importantly, the workshops are designed to help you with the other graded aspects of the course, so failure to take advantage of the workshops will make it very tough to succeed in this course. To get the most out of this course, you should:

- be on time and well-prepared for lectures and workshops.
- participate consistently and democratically in class, both by listening attentively and contributing thoughtful comments and questions that build on classmates' responses.
- speak not only to the professor but to other students; work energetically in small group or pair activities; overall, improve the day-to-day quality of the course for everyone.
- write cover letters that reflect thoughtfully and critically of your own writing.
- submit thoughtful and complete pre-workshop assignments and drafts.
- write peer review letters that offer fellow students substantive, constructive feedback.

## **EVALUATION: PRESENTATION**

Towards the end of the term, you will give a 12 minute presentation for the class on the topic of your review paper.

## **COURSE POLICIES**

If you need academic accommodation to address barriers to your education, please register with the Centre for Accessible Learning (CAL) as soon as possible. We work with the CAL to create a learning environment that is equitable, inclusive, and usable for all.

### **POLICY: CLASS CONDUCT**

Please follow the latest provincial and University guidelines with regard to COVID-19 protocols: [UVic COVID-19 information](#) and [what to do if you are ill](#). No materials from the course may be redistributed without written permission from the instructors (e.g., no posting of materials to sharing websites). If we are required to meet on Zoom, you should remain muted during lecture unless you are speaking to the class or instructors.

### **POLICY: LATE/MISSED ASSIGNMENTS OR EXAMINATIONS**

Assignment due dates are considered **hard deadlines**, except under extra-ordinary circumstances. If you have a known conflict that will make completing an assignment impossible, please notify the instructors well in advance of the due date.

### **POLICY: ATTENDANCE**

You are expected to be present and active in the lectures and workshops. Missing workshops without communication and justification to the instructor will result in a lower final workshop score (refer to the rubric on Brightspace). Moreover, the workshops are designed to help you with your writing assignments, so missing workshops can indirectly hurt your writing scores.

### **POLICY: 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.

If you have any questions or doubts, you can ask your course instructor or the [Centre for Academic Communication](#).

## COURSE FEEDBACK

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 for 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 online 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.

## COURSE WEEKLY CALENDAR

This calendar will get updated throughout the term (last updated on: **November 18, 2024**). Exam dates are set, but lecture and lab topics are subject to change.

Week	Date	Lecture Topic
1	Th Sep 7	"Lecture 1" ..... "Course introduction"
2	M Sep 11	"Lecture 2" ..... "Sea-floor depth and heat flow"
	Th Sep 14	"Workshop 1" ..... "Writing for clarity"
3	M Sep 18	"Lecture 3" ..... "Sea-floor depth and heat flow"
	Th Sep 21	"Workshop 2" ..... "Concept maps"
	F Sep 22	..... "Review paper topic due"
4	M Sep 25	..... " <i>cancelled in 2023 (Blake ill)</i> "
	Th Sep 28	..... " <i>cancelled in 2023 (Blake ill)</i> "
5	M Oct 2	..... " <i>National Day for Truth and Reconciliation</i> "
	Th Oct 5	"Workshop 3" ..... "The four questions"
6	M Oct 9	..... " <i>Thanksgiving Day</i> "
	Th Oct 12	"Lecture 4" ..... "Hot spots and other seamounts"
	F Oct 13	..... "Review paper outlines due"
7	M Oct 16	"Lecture 5" ..... "Hot spots and other seamounts"
	Th Oct 19	"Workshop 4" ..... "Three paragraph feedback"
8	M Oct 23	"Lecture 6" ..... "Hot spots and other seamounts"
	Th Oct 27	"Workshop 5" ..... "Your review paper figures"
	F Oct 13	..... "Introduction draft due"
9	M Oct 30	"Lecture 7" ..... "Coastal geology exercise"
	Th Nov 2	"Workshop 6" ..... "Introductions exchange and feedback"
10	M Nov 6	"Lecture 8" ..... "Coastal geology exercise"
	Th Nov 9	"Workshop 7" ..... "Selections from main text exchange and feedback"
11	M Nov 13	..... " <i>Remembrance Day, Reading Break</i> "
	Th Nov 16	"Lecture 9" ..... "Sea-level change"
	F Nov 17	..... "Review paper draft due"
12	M Nov 20	"Lecture 10" ..... "Sea-level change"
	Th Nov 23	..... "Student presentations"
13	M Nov 27	..... "Student presentations"
	Th Nov 30	..... "Student presentations"
14	M Dec 4	..... "Student presentations"
	M Dec 4	..... "Review paper revisions due"

## APPENDIX

### SCHOOL OF EARTH AND OCEAN SCIENCES INFO

- SEOS Website: [uvic.ca/seos](http://uvic.ca/seos)
- SEOS Office: [seos@uvic.ca](mailto:seos@uvic.ca)
- SEOS Director: Dr. Jay Cullen, [seosdirector@uvic.ca](mailto:seosdirector@uvic.ca)
- SEOS Mental Health & Wellness Contact: Dr. Andy Fraass, [andyfraass@uvic.ca](mailto:andyfraass@uvic.ca)
- SEOS Undergraduate Advisor: Dr. Jon Husson, [seosadvisor@uvic.ca](mailto:seosadvisor@uvic.ca)
- SEOS Graduate Advisor: Dr. Roberta Hamme, [seosgradadvisor@uvic.ca](mailto:seosgradadvisor@uvic.ca)
- Ocean Science Mentor: Dr. Jody Klymak, [seosoceansci@uvic.ca](mailto:seosoceansci@uvic.ca)
- Climate Science Advisor: Dr. Colin Goldblatt, [climateadvising@uvic.ca](mailto:climateadvising@uvic.ca)

### UNIVERSITY STATEMENTS & POLICIES

- Academic Calendar: [Information for All Students](#)
- [Creating a respectful, inclusive, and productive learning environment](#)
- [Accommodation of Religious Observance](#)
- [Accommodation and Access for Students with Disabilities](#)
- [Student Conduct](#)
- [Non-academic Student Misconduct](#)
- [Accessibility](#)
- [Diversity / EDI](#)
- [Equity statement](#)
- [Sexualized Violence Prevention and Response](#)
- [Discrimination and Harassment Policy](#)

### UVIC GRADING SYSTEM

As per the Academic Calendar:

Grade	Grade point value	Grade scale	Description
<b>A+</b> <b>A</b> <b>A-</b>	9 8 7	90-100% 85-89% 80-84%	<b>Exceptional, outstanding</b> and <b>excellent</b> 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>B+</b> <b>B</b> <b>B-</b>	6 5 4	77-79% 73-76% 70-72%	<b>Very good, good</b> and <b>solid</b> 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.
<b>C+</b> <b>C</b>	3 2	65-69% 60-64%	<b>Satisfactory</b> , or <b>minimally satisfactory</b> . These grades indicate a satisfactory performance and knowledge of the subject matter.
<b>D</b>	1	50-59%	<b>Marginal</b> Performance. A student receiving this grade demonstrated a superficial grasp of the subject matter.
<b>F</b>	0	0-49%	<b>Unsatisfactory</b> performance. Wrote final examination and completed course requirements; no supplemental.
<b>N</b>	0	0-49%	Did not write examination or complete course requirements by the end of term or session; no supplemental.

## STUDENT RESOURCES

### 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.

[Student Groups & Resources](#)

### ACADEMIC RESOURCES

UVic Library - UVic Library offers many services and resources for undergraduate and graduate students. [uvic.ca/students/academics/library-services](http://uvic.ca/students/academics/library-services)

Learning Resources - UVic Learn Anywhere is the primary learning resource for students that offers many learning workshops and resources to help students with academics and learning strategies. [onlineacademiccommunity.uvic.ca/LearnAnywhere/learning-strategies](http://onlineacademiccommunity.uvic.ca/LearnAnywhere/learning-strategies)

Centre for Academic Communication - Offers online and in-person one-on-one tutorials, workshops, and more. [uvic.ca/learningandteaching/cac](http://uvic.ca/learningandteaching/cac)

Math & Stats Assistance Centre - Offers drop-in, face-to-face tutoring and a friendly, collaborative study space for 100- and 200-level math and stats courses. [uvic.ca/science/math-statistics/current-students/undergraduate/msac](http://uvic.ca/science/math-statistics/current-students/undergraduate/msac)

### MENTAL HEALTH & WELLNESS

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.

SEOS Mental Health & Wellness Contact - Dr. Fraass is a faculty member who can act as a sympathetic ear and (more importantly) provide guidance about: how to access the multitude of University support services, and which are useful in different circumstances. Andy can be found by dropping by his office or lab (Bob Wright A431, B409). He is also available via email for questions or to arrange a time to have a chat. [andyfraass@uvic.ca](mailto:andyfraass@uvic.ca)

Student Wellness Centre - Our team of practitioners offers a variety of services to support students' mental, physical, and spiritual health. [uvic.ca/student-wellness](http://uvic.ca/student-wellness)

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/](http://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/](http://uvic.ca/services/health/)

### 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.

Centre for Accessible Learning - The CAL staff are 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. [uvic.ca/services/cal/](http://uvic.ca/services/cal/)

### ADVISING

For academic advising-related questions, students in the School of Earth and Ocean Sciences are also encouraged to meet with the SEOS Undergraduate Advisor ([seosadvisor@uvic.ca](mailto:seosadvisor@uvic.ca)) as well as an academic advisor in the Academic Advising Centre early in their studies to help map out a plan to declare a major and complete university program requirements.

Academic Advising Centre - Academic advice and support is currently available by phone, email and virtual or in-person appointments. [uvic.ca/services/advising](http://uvic.ca/services/advising)

Ombudsperson - The ombuds office is an independent, impartial, and confidential resource for undergraduate and graduate students and other members of the University of Victoria community. The ombudsperson helps resolve student problems or disputes fairly. [uvicombudsperson.ca](http://uvicombudsperson.ca)

### **ACADEMIC CONCESSION**

You can request an academic concession if your course requirements are affected by unexpected and unavoidable circumstances, or conflicting responsibilities. Concession requests can be for an in-course extension, deferral, withdrawal under extenuating circumstances, or an aegrotat. Please speak to an advisor at the Academic Advising Centre if you have questions on how requesting a concession will affect your academic program.

Undergraduate Academic Concessions - [uvic.ca/students/academics/academic-concessions-accommodations](http://uvic.ca/students/academics/academic-concessions-accommodations)

### **EQUITY AND HUMAN RIGHTS AT UVIC**

EQHR is a resource for students, staff, and faculty who have experienced sexualized violence, discrimination, and/or harassment and are looking for informal and/or formal resolution options as well as advice, coaching, and/or education. We are available for confidential consultations so that you can ask questions and learn your options.

EQHR – By email at [eqhr01@uvic.ca](mailto:eqhr01@uvic.ca) or in-person (Sedgewick C115). [uvic.ca/equity](http://uvic.ca/equity)

Sexualized Violence Resource Office – If you have been directly or indirectly impacted by sexualized violence, reach out to the SVRO for information, advice, resolution options (restorative and disciplinary) as well as support options and referrals. The SVRO is both survivor-centred and trauma-informed in their approach. You can reach us by phone at [250-721-8021](tel:250-721-8021) or by email at [eqhr01@uvic.ca](mailto:eqhr01@uvic.ca) to book either an in-person (Sedgewick C119) or online appointment. [uvic.ca/svp](http://uvic.ca/svp)

### **RESOURCES FOR INTERNATIONAL STUDENTS**

International Centre for Students - The primary office supporting international students on campus at the university-wide level. [uvic.ca/international-experiences](http://uvic.ca/international-experiences)

UVic Global Community Initiative - Provides various supportive programming, including a Mentorship Program and Conversation Partner Program. [uvic.ca/international-experiences/get-involved/uvic-global-community](http://uvic.ca/international-experiences/get-involved/uvic-global-community)

### **RESOURCES FOR INDIGENOUS STUDENTS**

Indigenous Student Support - UVic offers holistic services to Indigenous students throughout their academic journey. [uvic.ca/students/info-for/indigenous-students](http://uvic.ca/students/info-for/indigenous-students)

Elders in Residence - 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](http://uvic.ca/services/indigenous/students/programming/elders)