

# Ocean/Marine and Climate Sciences Info Session

- Minor in Ocean Sciences
- Combined Major in Chemistry and Ocean Sciences
- Combined Major in Physics and Ocean/Atmosphere Sciences
- Marine Biology Concentration
- Climate Science Programs (2 streams)
- Bamfield summer and fall programs



# Jody Klymak – Ocean Sciences Mentor

Physical Oceanographer

Courses taught: EOS 314, 431, (Physical Oceanography), EOS 401 (field school), PHYS 426 (Fluid Mechanics), PHYS 411 (Time Series)



# Roberta Hamme – former Ocean Sciences Mentor

Chemical Oceanographer

Courses taught: EOS 110 (Oceans and Atmosphere), EOS 311 (Biological Oceanography), EOS 312 (Chemical Oceanography), EOS 401 (field school)



# **Diana Varela – Marine Biology Concentration Advisor**

**Biological Oceanographer**

**Associate Dean of Advising**



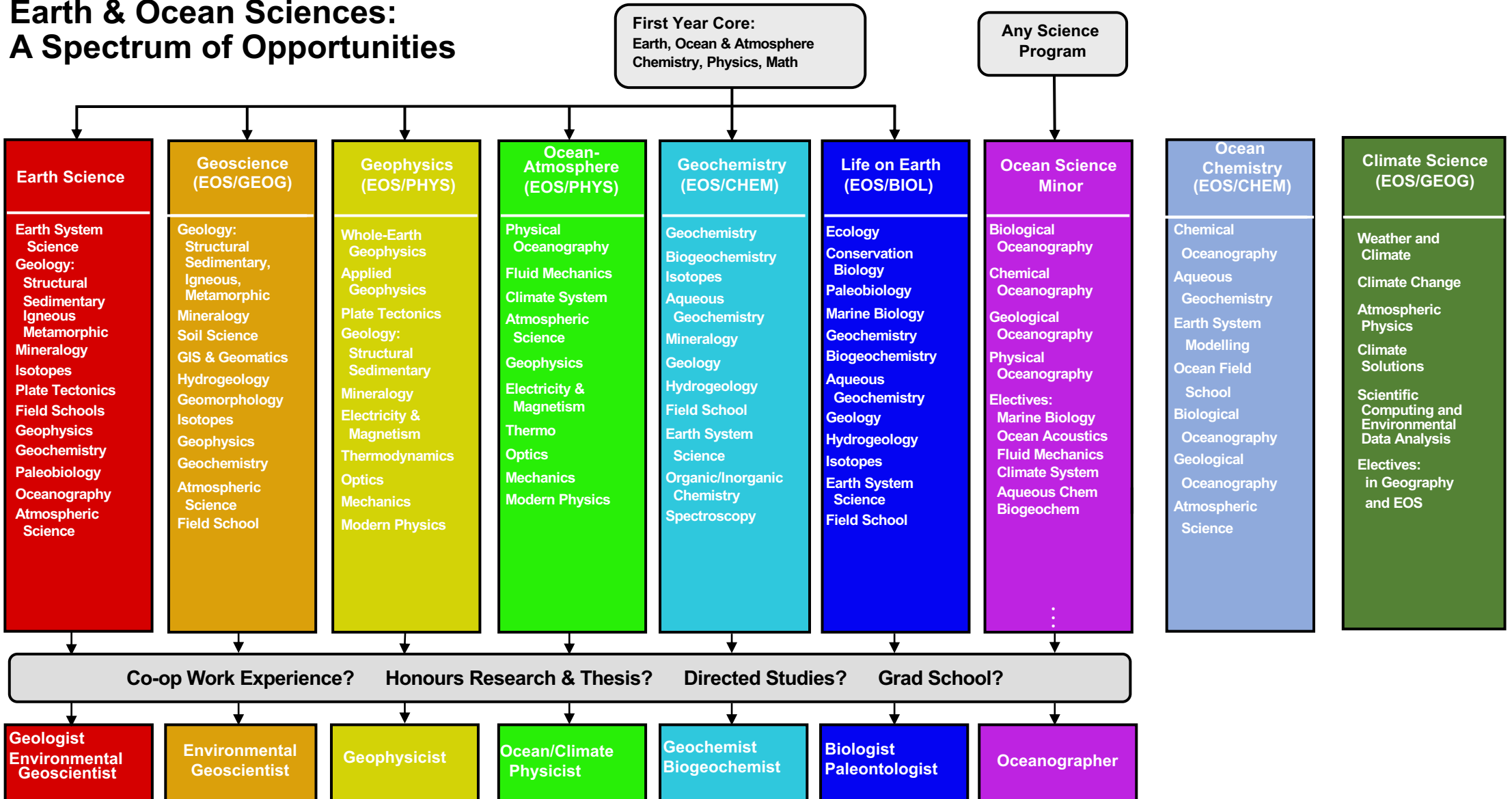
# **Andrew Weaver**

**Physical Climate Scientist**

**Courses taught: EOS 220 (Weather and Climate),  
EOS 365 (Climate and Society)**



# Earth & Ocean Sciences: A Spectrum of Opportunities



# Are there jobs?



Fisheries and Oceans  
Canada



Environment and  
Climate Change Canada



RBR



- **Degree Planning Worksheets** available at Academic Advising webpage:  
<http://www.uvic.ca/services/advising/choose-plan/program-outlines/index.php#worksheets>
- Once you have declared your program your **CAPP Report** is available through UVic MyPage and tracks your progress to completing degree requirements (very helpful!)

# Ocean Sciences Minor

- Designed to be combined with any science program
- Has been especially popular with Biology & EOS majors, but has been combined with many majors
- Extensive field experience



## Minor in Ocean Sciences (8 classes)

BIOL/EOS 311: Biological Oceanography

EOS 312: Chemical Oceanography

EOS 313: Geological Oceanography

EOS 314: Physical Oceanography

EOS 401: Oceanographic Field School

EOS 110: Oceans and Atmosphere\*

EOS 120: The Dynamic Earth

One ocean elective (4 in BIOL)

Orange classes all have focus on oceanographic field work





## 8 classes to complete minor

### Minor in Ocean Sciences

A student may declare a Minor in Ocean Sciences when enrolled in an Honours, Major, or General Program offered by SEOS or another department or school (which need not be in the Faculty of Science).

EOS 120 .....	1.5
One of EOS 110, 340, 365, PHYS 340 .....	1.5
<b>EOS 311, 312, 313, 314, 401 .....</b>	<b>7.5</b>
One of BIOL 319, 335, 461, 446; EOS 403, 408, 410, 425, 431, 433, PHYS 426, 441... ..	1.5
<b>Total .....</b>	<b>12.0</b>

*BIOL 490D, EOS 490 or 1.5 units of 400-level MRNE coursework offered through the Bamfield Marine Sciences Centre may be used in lieu of one of BIOL 319...PHYS 441 if an appropriate oceans-related topic is chosen, and with permission of the school.*

## Concentration in Marine Biology (only for Biology Majors)

BIOL/EOS 311: Biological Oceanography

BIOL 319: Marine Ecology

1 of: BIOL 322 - Biology of Marine Invertebrates,  
BIOL 335 – Ichthyology

4 of: BIOL 321 - Survey of Invertebrates,  
BIOL 322 - Biology of Marine Invertebrates,  
BIOL 335 – Ichthyology,  
BIOL 336 - Biology of Algae,  
BIOL 438 - Nutrient Cycling and Prokaryotes,  
BIOL 446 - Advanced Aquatic Ecology,  
BIOL 461 - Fisheries Ecology and Management,  
BIOL 466 - Frontiers in Marine Biology,  
BIOL 490D - Directed Studies and Research in Marine Biology

Many MRNE (Bamfield) options as well

# Combined Major/Honours in Chemistry and Ocean Sciences

## Combined Major/Honours in Physics and Ocean-Atmosphere Sciences

- Designed for 3<sup>rd</sup> year entry: First two years are nearly identical to Physics or Chemistry majors
- Heavy focus on core Physics or Chemistry training
- Most of the same 3<sup>rd</sup> year core courses and the new field school



# Combined Major/Honours in Chemistry and Ocean Sciences

All classes in first and second year are also required in Chemistry major

## First Year

CHEM 091 <sup>1</sup> .....	0.0
CHEM 101 and 102 <sup>2</sup> .....	3.0
BIOL 186 .....	1.5
MATH 100 or 109 .....	1.5
MATH 101 .....	1.5
Either PHYS 110 and 111 or PHYS 120 and 130 .....	3.0
Electives <sup>3</sup> .....	4.5
<b>Total .....</b>	<b>15.0</b>

## Second Year

CHEM 212, 225, 231, 234, 245, 260 .....	9.0
MATH 202 or (200 and 204) .....	1.5
Electives <sup>3</sup> .....	4.5
<b>Total .....</b>	<b>15.0</b>



# Blue courses required in Chemistry major

## Red courses specific to Ocean Sciences

### Third and Fourth Years

CHEM 318, 361 .....	3.0
One of CHEM 362, 363, 364 .....	1.5
Three CHEM 400-level courses .....	4.5
EOS 312, 314, 401, 325, 425 .....	7.5
Two of EOS 311, 313, 340 .....	3.0
STAT 255 or 260 .....	1.5
Electives .....	9.0
<b>Total .....</b>	<b>30.0</b>



# Combined Major in Physics and Ocean-Atmosphere Sciences

Most classes in 1<sup>st</sup> & 2<sup>nd</sup> year also required in Physics major

Red courses specific to Ocean Sciences

## First Year

CHEM 101 or 150, 102 .....	3.0
CSC 110 or 111 .....	1.5
MATH 100 or 109, 101 .....	3.0
PHYS 120 and 130; or 110 and 111 .....	3.0
Electives <sup>2</sup> .....	4.5
<b>Total .....</b>	<b>15.0</b>

## Second Year

EOS 340 .....	1.5
MATH 200, 204, 211 .....	4.5
PHYS 215, 216, 229, 248, 317 .....	7.5
STAT 260 .....	1.5
<b>Total .....</b>	<b>15.0</b>

# Blue courses required in Physics major

# Red courses specific to Ocean Sciences

## Third and Fourth Years

Two of EOS 311, 312, 313 .....	3.0
EOS 401, 431 <sup>3</sup> .....	3.0
EOS 433 <sup>3</sup> or 451 <sup>3</sup> .....	1.5
MATH 342, 346 .....	3.0
PHYS 321A, 323, 325, 326 .....	6.0
PHYS 411, 426 .....	3.0
upper level PHYS or EOS electives .....	3.0
Electives .....	7.5
<b>Total .....</b>	<b>30.0</b>

*EOS 403, 408, 416, 420, 422, 425, 427, 431, 433, and 451 are normally offered in alternate years.*



# EOS 401: Oceanographic Field School

Prerequisites: 3 of EOS 311, 312, 313, 314/431

Offered every year at start of summer term  
late April / early May 2022

– starts day after spring term finals end  
Students will plan and carry out own field-based projects,  
analyze data, and present their results

Bamfield Marine Sciences Centre





# Tips when doing both Ocean Science Minor AND Marine Biology Concentration

Can take either BIOL 311 or EOS 311 – they are the same class  
wait list is combined for both classes

Can NOT count the same course in both your Minor and Concentration  
Need to take one extra marine course to replace BIOL 311 in the concentration  
since BIOL/EOS 311 will be counted toward your Minor  
Electives must also be different for Minor and Concentration

Your CAPP report will need manual adjustments by an academic advisor  
e-mail Advising at [advising@uvic.ca](mailto:advising@uvic.ca),  
tell them you are in both the Ocean Science Minor and the Marine Biology  
Concentration,  
ask for a manual evaluation / adjustment for your CAPP report

## Tips for getting into popular classes (BIOL)

### Declare your program

People in a declared program requiring BIOL/EOS 311 get priority to come off the wait list and register

### Register on time

You are more likely to get a spot without being on the waitlist at all

Your initial waitlist spot is tied to when you registered

### Get on the waitlist, be patient

### Be flexible for lab sections

You can't take the class if we can't find a spot in both the lecture and lab for you

Number of spots in BIOL/EOS 311 will be increased and waitlist reordered to favour declared programs after July registration

This worksheet is for PLANNING PURPOSES ONLY and does not replace your CAPP report once you have declared your program. In the event of any discrepancy, your CAPP report and the academic calendar will be considered the authority.

## Climate Science Combined Major (BSc), Physical Climate Science Stream

Faculty of Science, School of Earth & Ocean Sciences and Department of Geography

### Year 1

Course requirement	Units	Taken
BIOL 184	1.5	
CHEM 101	1.5	
CHEM 102	1.5	
MATH 100	1.5	
MATH 101	1.5	
PHYS 110	1.5	
PHYS 111	1.5	
One of EOS 110, EOS 130, GEOG 130, GEOG 103	1.5	
Approved AWR course (or elective)	1.5	
Elective (any level)	1.5	

### Year 2

Course requirement	Units	Taken
EOS 220 or GEOG 220	1.5	
EOS 230 or GEOG 230	1.5	
GEOG 209	1.5	
GEOG 272	1.5	
EOS 261	1.5	
MATH 200	1.5	
MATH 204	1.5	
PHYS 317 or CHEM 245	1.5	
Elective (any level) *	3.0	

### Years 3 & 4

Course requirement	Units	Taken
EOS 325	1.5	
EOS 340	1.5	
EOS 365	1.5	
EOS 433	1.5	
GEOG 370	1.5	
GEOG 489	1.5	
Two of GEOG 313, 373, 405, 484	3.0	
GEOG or EOS course (300/400-level)	1.5	
Oceanography *	3.0	
One of ADMN 311, ADMN 316...STAT 359 *	1.5	
Electives (300/400-level)	3.0	
Electives (any level) *	9.0	
To graduate from the Faculty of Science, students need 33.0 units of Science coursework. When making program course selections and when choosing electives, ensure you will complete enough courses to meet this requirement.		
<b>Total units required for degree</b>	<b>60.0</b>	

This worksheet is based on the September 2023 calendar. Have questions? Visit [uvic.ca/academic-advising](http://uvic.ca/academic-advising)

### PROGRAM & COURSE NOTES

Course requirements with an asterisk (\*) have associated details; consult the program entry in the [Academic Calendar](#) for more information. It is your responsibility to ensure you are informed about all supplemental information related to courses, as they apply to your program, including prerequisites.

### FACULTY & UNIVERSITY REQUIREMENTS

In addition to the listed courses, you must satisfy all requirements for the Faculty of Science, as well as complete at least 30 of the minimum 60 required units at UVic. Within these 60 units, 21 units must be upper-level (300/400-level) courses, and 18 of those 21 units must be taken at UVic.

### ACADEMIC WRITING REQUIREMENT

If you have not already satisfied UVic's [Academic Writing Requirement \(AWR\)](#), you will need to complete one of ATWP 135, ENSH 101, ENSH 102, or another approved course. Some programs require these courses in addition to the AWR.

### DECLARING YOUR PROGRAM

Students are normally expected to request to declare their academic program at the end of first year. Declared students have access to a CAPP report for tracking graduation requirements.

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## Climate Science Combined Major (BSc), Impacts, Adaptations & Mitigation Stream

Faculty of Science, School of Earth & Ocean Sciences and Department of Geography

### Year 1

Course requirement	Units	Taken
BIOL 184	1.5	
CHEM 101	1.5	
CHEM 102	1.5	
MATH 100	1.5	
MATH 101	1.5	
PHYS 110	1.5	
PHYS 111	1.5	
One of EOS 110, EOS 130, GEOG 130, GEOG 103	1.5	
Approved AWR course (or elective)	1.5	
Elective (any level)	1.5	

### Year 2

Course requirement	Units	Taken
EOS 220 or GEOG 220	1.5	
EOS 230 or GEOG 230	1.5	
GEOG 209	1.5	
GEOG 272	1.5	
GEOG 222	1.5	
GEOG 228	1.5	
STAT 260	1.5	
One of CIVE 210, ES 200, HDCC 200	1.5	
Elective (any level)	3.0	

### Years 3 & 4

Course requirement	Units	Taken
EOS 365 or GEOG 314	1.5	
GEOG 301	1.5	
GEOG 323	1.5	
GEOG 328	1.5	
GEOG 370	1.5	
GEOG 371	1.5	
GEOG 373	1.5	
GEOG 450	1.5	
GEOG 489	1.5	
STAT 359	1.5	
One of ANTH 302, ADMN 311...POLI 351 *	1.5	
One of EOS 312, EOS 314...GEOG 405 *	1.5	
Electives (300/400-level)	3.0	
Electives (any level) *	9.0	
To graduate from the Faculty of Science, students need 33.0 units of Science coursework. When making program course selections and when choosing electives, ensure you will complete enough courses to meet this requirement.		
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# BMSC University Programs



[bamfieldmsc.com](http://bamfieldmsc.com)



**bmsc** BAMFIELD MARINE  
SCIENCES CENTRE



University  
of Victoria



THE UNIVERSITY  
OF BRITISH COLUMBIA



SFU  
SIMON FRASER  
UNIVERSITY



UNIVERSITY OF  
CALGARY



UNIVERSITY OF  
ALBERTA



## University Courses at BMSC

- Directly credited towards member university degree programs
- Pristine west coast environment
- Unique immersion experience
- Independent and team-based research opportunities
- Small class sizes
- Interactions with researchers and faculty

# University Programs 2024

## Summer Program

3 & 6 credit courses

- May 13 – Aug 23

## Fall Program

5 course semester

- Sept 3 – Dec 13

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**bmsc** BAMFIELD MARINE  
SCIENCES CENTRE



University  
of Victoria



THE UNIVERSITY  
OF BRITISH COLUMBIA



SFU  
SIMON FRASER  
UNIVERSITY



UNIVERSITY OF  
CALGARY



UNIVERSITY OF  
ALBERTA

# BMSC Summer 2024 Course Schedule

BLOCK I  
May 20 – June 21

BLOCK II  
June 24 – August 2

BLOCK III  
August 5 – 23

MARINE ECOLOGY  
May 27 – June 21

MARINE INVERTEBRATE  
ZOOLOGY

HISTORICAL ECOLOGY  
& COASTAL  
ARCHAEOLOGY

SUBTIDAL  
SCIENCE  
May 20 - June 7

ECOLOGICAL  
MODELS & DATA  
June 10 - 21

COASTAL  
BIODIVERSITY &  
CONSERVATION  
June 24 - July 12

TERRESTRIAL &  
FRESHWATER  
CONSERVATION  
July 15 - August 2

BIOLOGICAL  
OCEANOGRAPHY

BAMFIELD RESEARCH  
INTERNSHIPS  
June 10 - August 9



**bmsc**

BAMFIELD MARINE  
SCIENCES CENTRE



UNIVERSITY  
OF VICTORIA



THE UNIVERSITY  
OF BRITISH COLUMBIA



STU



UNIVERSITY OF  
CALGARY



UNIVERSITY OF  
ALBERTA

# Fall Program 2024\*



**bmsc** BAMFIELD MARINE SCIENCES CENTRE



University of Victoria



THE UNIVERSITY OF BRITISH COLUMBIA



SFU SIMON FRASER UNIVERSITY



UNIVERSITY OF CALGARY



UNIVERSITY OF ALBERTA



# How to Apply

- 1) Complete online application form - available in January
- 2) Statement of interest (300 words max)
- 3) Transcript(s)
- 4) Application fee (\$50)

Summer Applications due: March 1  
Fall Applications: Feb 1st to March 31

To be eligible for  
Scholarships

[bamfieldmsc.com](http://bamfieldmsc.com)

Samantha McBeth



**bmsc** BAMFIELD MARINE  
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University  
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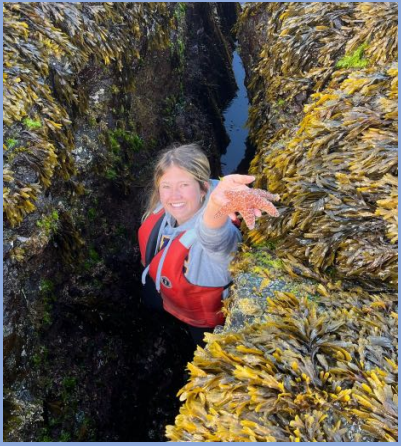
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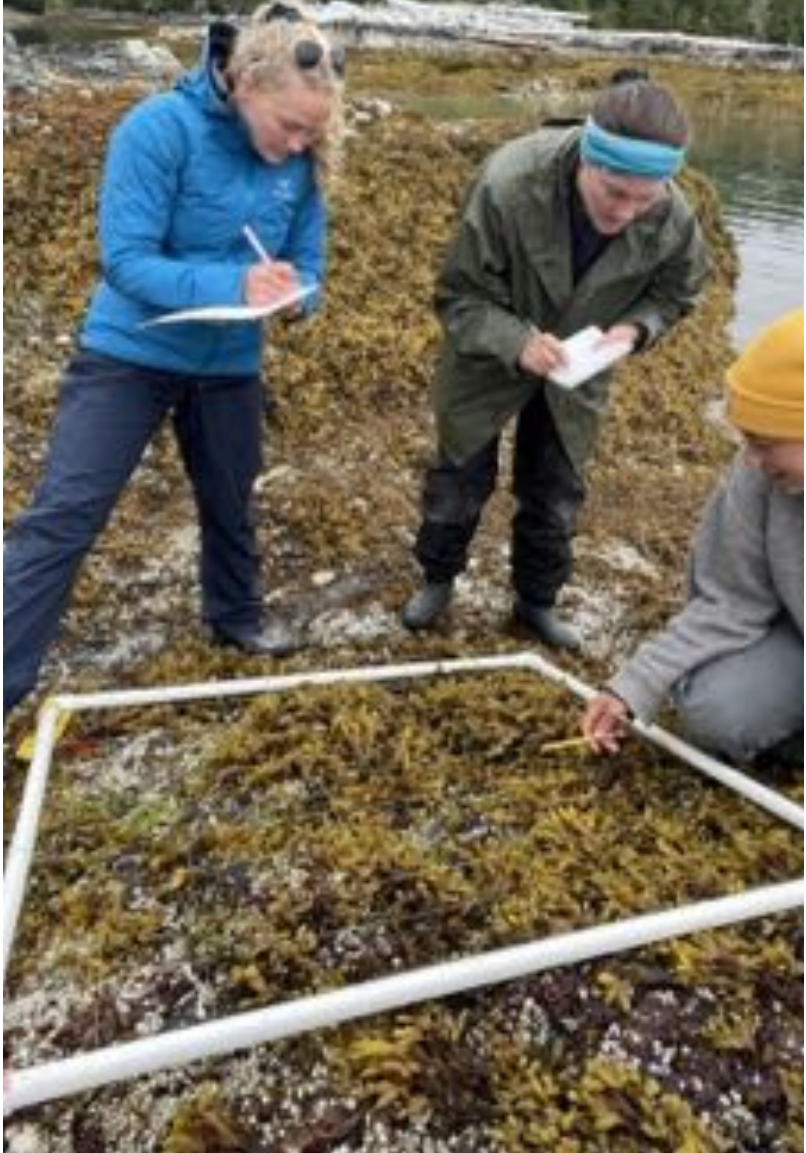


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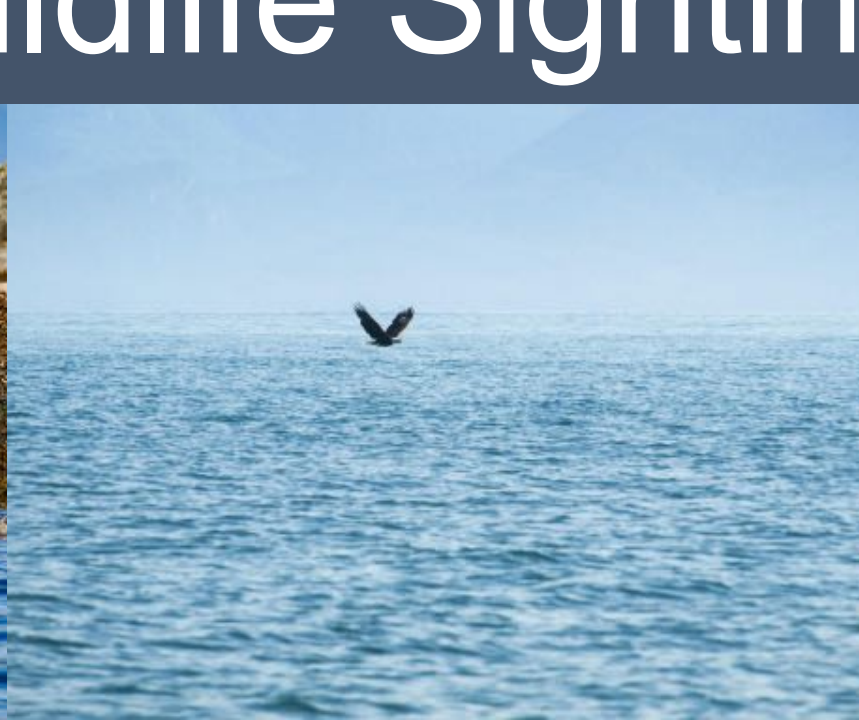
# Marine Invertebrate Zoology

# Independent Project





# Wildlife Sightings





Just For Fun

# Questions?

Ocean Science Programs

[seosoceansci@uvic.ca](mailto:seosoceansci@uvic.ca)

<https://www.uvic.ca/science/seos/undergrad/osp/>

Marine Biology Concentration

[biology.advice1@uvic.ca](mailto:biology.advice1@uvic.ca) (1<sup>st</sup>, 2<sup>nd</sup> years)

[biology.advice2@uvic.ca](mailto:biology.advice2@uvic.ca) (3<sup>rd</sup>, 4<sup>th</sup> years)

Climate Science Programs

[climateadvising@uvic.ca](mailto:climateadvising@uvic.ca)

Bamfield

<https://bamfieldmsc.com>

