



"We must plant the sea and herd its animals using the sea as farmers instead of hunters. That is what civilization is all about - farming replacing hunting."

-Jacques Cousteau

Aquaculture in British Columbia

Dr. Cross

Contact: email: sfcross@uvic.ca

Dr. Flaherty Monday 1:30-3:30 PM. Thursday 1:30-3:30 PM

Contact: 250-721-7337 email: msf@uvic.ca

Lectures: Mondays, 14:30 - 17:30 **Classroom:** CLE. A312

Lectures will consist of Face-to-Face meetings and presentations via ZOOM.

COURSE DESCRIPTION

British Columbia is Canada's largest producer of farmed seafood, providing over half of Canada's output. This course examines current state and future development of BC's aquaculture industry. Students will be introduced to the industry's history, the species cultured, production methods (hatchery through seafood processing), technological innovations, business/economic considerations, marketing strategies, environmental impacts and their management, social issues (including First Nations), and the regulatory framework for this important agri-food industry. The lectures will be structured to encourage discussion around critical siting (resource management) and operation of the various industry sectors, and to allow an objective evaluation of the risks of this approach to seafood production in the context of global seafood demand.

LEARNING OUTCOMES

By the end of this course, students will be able to:

- understand how seafood is produced and the opportunities for further diversification,
- identify and discuss the major environmental interactions associated with different production systems, and to
- critically evaluate the major controversies surrounding aquaculture development.

LECTURES

The lecture topics listed below will be covered during the semester. Guest speakers from industry and government will also be invited to give you a broad perspective on the issues surrounding aquaculture. In order to accommodate guest speakers the lecture sequence may differ from that indicated.

January 7	Course Introduction; Aquaculture in Canada
10	Aquaculture in the Global Context
17	BC Aquaculture - Finfish and Shellfish Sectors
21	Aquaculture and the Environment
31	Site Selection and the Licensing Process in BC; Aquaculture Regulations
February 7	The Social License to Operate; First Nations Aquaculture – <i>Guest speaker(tba)</i>
14	Guest Speaker – <i>Industry and/or Government perspectives (tba)</i>
21	READING BREAK
28	Product marketing and sustainability
March 7	<i>TBA</i>
14	No lecture – Group 1 field trip 1 March 14 and 15
21	No lecture – Group 2 field trip 1 March 21 and 22
28	The future of Aquaculture in BC – round table
April 4	Class conference – paper presentations (<i>term papers due</i>)

REQUIRED TEXT BOOK

Because of the broad, interdisciplinary nature of this course no textbook is required.

REQUIRED READINGS

Course readings are available on Brightspace.

EMAIL POLICY

Course announcements will be sent to your UVIC email account. Students are expected to check their account frequently as some communications may be time critical. All inquiries to an instructor must originate from your UVIC email account. Inquiries sent from Hotmail, gmail etc. **will not be answered**. Inquiries seeking information that is available in the course outline **will not be answered**.

FIELD TRIP

Depending on COVID-19 restrictions, and the schedule of the host companies, students will have the opportunity to participate in a 2-day field excursion on Vancouver Island. We will visit facilities representative of all components of cultured seafood production (fish and shellfish hatcheries, growout sites, harvesting vessels, processing plants, and R&D sites). Owing to the limited capacity of some operations to accommodate visitors on site, we will split the class into

two and make separate trips. The tentative schedule is Group 1 on March 14 and 15, Group 2 on March 21 and 22. Signup sheets will be available once the dates are confirmed.

EVALUATION

Your grade will be based on four components:

- a) Assignments: 5% each. #1 fill in the blanks – expand 20 industry acronyms and provide definition for each. #2 Prepare a 4-page opinion piece on aquaculture as a fishery or a farming activity. Times 12 font, double spaced, PDF. Assignments can be submitted to the dropbox on Brightspace.
 - b) Aqua-Quiz: 25 multiple choice and 25 True or False questions. 10%
 - c) Research Paper: Due April 4 - 35%
Student pairs will prepare independent yet complementary papers, one on the Technical Considerations and the other on the Socio-Economic Considerations, for a potentially new aquaculture species for British Columbia (to be assigned in class). Each paper should be no more than 15-25 pages double-spaced (including tables/figures) plus references. Times 12 font, double spaced, PDF. Papers can be submitted in PDF files to the dropbox on Brightspace.
 - d) Oral Presentation: April 4 - 10%
The last class takes the format of an academic conference session. Each student pair will make a brief presentation (15 minute – 7.5 minutes each) that summarizes their Joint Feasibility Study research papers, followed by 5 minutes for questions. The session chair will ensure strict adherence to the time limits.
 - e) Final exam - 35%
Two hours. Short answer questions.
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GRADING SYSTEM

As per the Academic Calendar:

Grade	Grade point value	Grade scale	Description
A+	9	90-100%	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.
A	8	85-89%	
A-	7	80-84%	
B+	6	77-79%	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
B	5	73-76%	
B-	4	70-72%	

			excellent grasp in one area balanced with satisfactory grasp in the other area.
C+ C	3 2	65-69% 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 Advisor: geogadvising@uvic.ca
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POLICY ON LATE ASSIGNMENTS

Only the course instructor can grant exceptions.

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:

<http://web.uvic.ca/calendar/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.

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 (uvic.ca/services/cal/). The CAL 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.

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.

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)

AT the end of term you will have the opportunity to complete an anonymous survey regarding your learning experience (CES). This survey provides important feedback to me regarding the course and my teaching. The survey is accessed online and can be done on your laptop, tablet, or mobile device.

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