

**Faculty of Science Course Syllabus**  
**Department of Oceanography**  
**OCEA 1001 – Conversations with Ocean Scientists I**  
**Fall 2022**  
**TR 10:05 – 11:25am**

**Instructor:**

Sarah Fortune

[Sarah.Fortune@dal.ca](mailto:Sarah.Fortune@dal.ca)

LSC 4664

Office hours: W 8:30-9:30 on MS Teams

**Join on your computer or mobile app**

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Meeting ID: 258 837 456 443

Passcode: WtizUw

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**Teaching Assistants (TAs):**

T01 Sam Aucoin

[sam.aucoin@dal.ca](mailto:sam.aucoin@dal.ca)

TBD

Office hours: Thur 3-3:30 appt in-person or online

T02 Ruby Yee

[r.yee@dal.ca](mailto:r.yee@dal.ca)

LSC 5614

Office hours: Weds 10-10:30 appt in-person or online

T03 Alexis Bazinet

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

LSC 4672

Office hours: Tues 3-3:30 by appt in-person or online

**Lectures (Tues):** LSC C338

**Tutorials (Thur):** T01 – Campbell 1107

T02 – LSC C210

T03 – LSC P4208

**Course delivery:** In-person “flipped” (we are ready to go online if needed)

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**Course Description**

This course sequence was designed to introduce science communication, especially scientific writing, and to showcase the breadth of ocean sciences. You will learn about the challenges and conventions of scientific communication through interviews with a variety of ocean scientists and through the process of drafting an ocean-related review paper and bringing it through peer-review. We will also review some basic oceanography concepts to give you the background you need to navigate the literature and write your review paper. ***Both OCEA 1001 and 1002 must be taken***

*consecutively in order to get ANY credit*, and taking both courses fulfils the CAS general requirement for a writing course.

**Corequisites:** MATH 1000 or MATH 1215 or MATH/STAT 1060

### **Course Materials**

To complete this course, you will need reliable access to a computer with high-speed internet. This course sequence uses two required textbooks, one to overview basic oceanography concepts and one to overview the process of scientific writing.

1. *OCEANS: A Very Short Introduction (OAVSI)* by Dorrik Stow (ISBN: 978-0199655076)
2. *Writing in the Life Sciences (WITLS)* by Laurence Greene (ISBN: 978-0195170467)

### **Learning Outcomes**

After completing this course, you will be able to:

1. Understand conventions and challenges associated with different forms of scientific communication.
2. Appreciate the breadth of ocean science and explain core ocean concepts.
3. Read critically and for comprehension.
4. Construct scientific arguments that are supported by primary literature.
5. Describe and demonstrate different types of scientific communication, especially writing.
6. Give and accept constructive criticism, and then use this process to improve.

### **Course Format**

This course meets all together on Tuesdays for lecture lead by the course instructor and in smaller groups on Thursdays for tutorial lead by teaching assistants (TAs). Each week, you can expect three types of content:

1. **Ocean Core Concepts** – material about basic ocean science
2. **Science Communication** – material about science communication, mainly scientific writing but also oral presentations and figures
3. **Conversation with an Ocean Scientist** – a short audio interview with an ocean scientist

On Tuesdays, we will discuss Ocean Core Concepts material and the week's Conversation Interview in lecture.

- Ocean Core Concepts Reading Quizzes are due before class on Tuesdays.
- Participation will be graded each week.

On Thursdays, we will discuss Science Communication material and upcoming assignments in tutorial.

- Science Communication Reading Quizzes are due before class on Thursdays.
- Participation will be graded each week.
- Assignments are always due on Thursdays before class. You will have at least one week to complete each assignment.

**Assessment**

IMPORTANT: Your grade in this course is calculated cumulatively through both fall and winter semesters. An “MT” will temporarily appear on your transcript for OCEA 1001 (fall) until you complete OCEA 1002 (winter). Once you complete the winter term, your grade will appear for both the fall and winter terms. Because of this, some assessments listed below will occur in the winter term.

**All assignments must be submitted on Brightspace and are due at 10am on the due date.**

<b>Components</b>	<b>Weight (% of final grade)</b>	<b>Due Date</b>
<b>Library Skills Worksheets</b>	2% (2 total, 1% each)	Sept 22
<b>Science Blog Post</b>	4% (2 total, 2% each)	Sept 29 Feb 16
<b>News Briefs</b>	4% (2total, 2% each)	Oct 13 & Feb 3
<b>Core concepts group presentation</b>	4%	Sept 27 – April 4
<b>Opinion Piece</b>	2%	Mar 23
<b>Major Project Review Paper</b>	44% total	
Topic Proposal	2.5%	Oct 6
Reading List	2.5%	Oct 20
Paper Outline	5%	Nov 17
Presentation	5%	Nov 24 - Dec 1
Paper 1 <sup>st</sup> Submission “Draft”	10%	Dec 8
Self-Evaluation	2%	Jan 6
Response to Reviewers	2%	Apr 6
Final Revised Paper	15%	Apr 6
<b>Peer Reviews</b>	10% (2 total, 5% each)	Feb 9, Mar 9
<b>Lab Report</b>	10%	Jan 19
<b>Ocean Core Concepts Reading Quizzes</b>	5% (10 min)	weekly online
<b>Lecture Participation</b>	5%	weekly in-class
<b>Science Communication Reading Quizzes</b>	5% (10 min)	weekly online
<b>Tutorial Participation</b>	5%	weekly in-class

**Conversion of numerical grades to Final Letter Grades follows the Dalhousie Common Grade Scale**

<b>A+</b> (90-100)	<b>B+</b> (77-79)	<b>C+</b> (65-69)	<b>D</b>	(50-54)
<b>A</b> (85-89)	<b>B</b> (73-76)	<b>C</b> (60-64)	<b>F</b>	(<50)
<b>A-</b> (80-84)	<b>B-</b> (70-72)	<b>C-</b> (55-59)		

**Course Policies**

1. Include both your instructor and TA on email correspondence related to the class.
2. Please allow 24-48 business hours (M-F 9am-5pm excluding holidays) for replies to emails. We will try, but we cannot guarantee a quicker response time.
  - This means that if you email on Friday morning, you should not expect a response until Monday morning at the earliest.
  - This means that if you email on Monday evening, you should not expect a response until Wednesday morning at the earliest.

**Course Policies on Missed or Late Academic Requirements**

3. There will be no use of SDAs in this course.
4. The 2 lowest quiz grades in each online quiz category are dropped each term. There are no make-up quizzes.
5. There is a 72-hr grace period available on every assignment due date.
  - One grace period per assignment, use as many as you want
  - You are pre-approved – no communication required
  - Your Brightspace due dates will not be adjusted
  - This may influence your feedback timeline – by using the grace period you agree to accept any negative effects of feedback delay
6. Late penalties begin after the grace period. The late penalty is 5% for the first 24 hours and doubles every 24-hr increment thereafter.
7. Because of the grace period policy, extensions will only be given under extreme circumstances and documentation may be required.

**Course Policies Related to Academic Integrity**

8. All assignments should be completed individually. You may discuss material and exchange ideas with others, but you must submit individual, original work that is appropriately cited.
9. Plagiarism detection software will be used to monitor all written work submitted in this course and assist in plagiarism detection.
10. Accusations of plagiarism can be made at any point during the course, including after assignments have been marked and returned.
11. Plagiarized assignments will receive a zero, and students may be referred to a Faculty of Science Academic Integrity Officer for further discipline.

**Fall Course Schedule**

<b>Week</b>	<b>Ocean Core Concepts Reading</b>	<b>Reading Quiz</b>	<b>Ocean Core Concepts Topics</b>	<b>Science Communication Reading</b>	<b>Reading Quiz</b>	<b>Science Communication Topics</b>	<b>Assignment</b>	<b>Due Date</b>	<b>Interview Series</b>
1 : Sept 6-9	NONE	NONE	NONE	NONE	NONE	Library Skills	Library Skills Worksheets	Sept 22	NONE
2 : Sept 12-16	OAVSI pp. 1-14	Online	Ocean science history, ocean zonation, bathymetric features (passive continental margin), Heezen and Tharp 1977 world ocean floor map	WITLS pp. xix-xxiv and pp. 12-25	Online	Audience and Function	NONE		Convo #1
3 : Sept 19-23	OAVSI pp. 15-30	Online	Earth layers, isostasy, hypsometry and crust types, plate tectonics	WITLS pp. 25-42 and pp.42-57 (skim)	Online	Science News Writing	Science Blog Post #1	Sept 29	Convo #2
4 : Sept 26-30	OAVSI pp. 31-41	Online	Plate tectonics and bathymetry, sedimentation, life cycle of an ocean basin, geohazards	WITLS pp. 1-12	Online	Defining Your Writing Project	Major Project - Paper Proposal	Oct 6	Convo #3
5 : Oct 3-7	OAVSI pp. 42-46	Online	Seawater composition, salinity, Law of Constant Proportions	WITLS pp. 106-120	Online	Critical Reading I: Reading for Comprehension	News Brief #1	Oct 13	Convo #4
6 : Oct 11-14	OAVSI pp. 46-50	Online	Processes affecting salinity, salt sources and sinks, residence time	WITLS pp. 120-129	Online	Critical Reading II: Synthesizing Information	Major Project - Reading List	Oct 20	Convo #5

Note: In event of a CUPE strike, course administration and assessment will be modified.

<b>Week</b>	<b>Ocean Core Concepts Reading</b>	<b>Reading Quiz</b>	<b>Ocean Core Concepts Topics</b>	<b>Science Communication Reading</b>	<b>Reading Quiz</b>	<b>Science Communication Topics</b>	<b>Assignment</b>	<b>Due Date</b>	<b>Interview Series</b>
7 : Oct 17-21	OAVSI pp. 50-57	Online	Seawater density and vertical structure	WITLS pp. 129-147	Online	Critical Reading III: Scientific Arguments	NONE		Convo #6
8 : Oct 24-28	OAVSI pp. 58-66	Online	Circulation types and driving forces, waves, tides	WITLS pp. 149-171, pp. 379-397 and 437-452	Online	Content Organization and Outline Writing	Major Project - Paper Outline	Nov 17	Convo #7
9 : Oct 31- Nov 4	OAVS pp. 77-79	Online	Atmospheric circulation	WITLS pp. 172-210	Online	Writing a Draft	Major Project - Paper 1st Submission "Draft"	Dec 8	Convo #8
Fall Break: Nov 7-11									
10 : Nov 14-18	OAVSI pp. 67-70	Online	Descriptive oceanography, Coriolis, Ekman transport	WITLS pp.453-472	Online	Oral Presentations	Major Project - Oral Presentations	Nov 23	Convo #9
11 : Nov 21-25	OAVSI pp. 70-74	Online	Thermohaline circulation	NONE	NONE	Live Presentations	NONE		NONE
12 : Nov 28-Dec 2	NONE	NONE	Live Presentations	NONE	NONE	Live Presentations	NONE		NONE

Note: In event of a CUPE strike, course administration and assessment will be modified.

## University Policies and Statements

**This course is governed by the academic rules and regulations set forth in the University Calendar and by Senate**

### Academic Integrity

At Dalhousie University, we are guided in all of our work by the values of academic integrity: honesty, trust, fairness, responsibility and respect (The Center for Academic Integrity, Duke University, 1999). As a student, you are required to demonstrate these values in all of the work you do. The University provides policies and procedures that every member of the university community is required to follow to ensure academic integrity.

**Information:** [https://www.dal.ca/dept/university\\_secretariat/academic-integrity.html](https://www.dal.ca/dept/university_secretariat/academic-integrity.html)

### Accessibility

The Advising and Access Services Centre is Dalhousie's centre of expertise for student accessibility and accommodation. The advising team works with students who request accommodation as a result of a disability, religious obligation, or any barrier related to any other characteristic protected under Human Rights legislation (Canada and Nova Scotia).

**Information:** [https://www.dal.ca/campus\\_life/academic-support/accessibility.html](https://www.dal.ca/campus_life/academic-support/accessibility.html)

### Student Code of Conduct

Everyone at Dalhousie is expected to treat others with dignity and respect. The Code of Student Conduct allows Dalhousie to take disciplinary action if students don't follow this community expectation. When appropriate, violations of the code can be resolved in a reasonable and informal manner—perhaps through a restorative justice process. If an informal resolution can't be reached, or would be inappropriate, procedures exist for formal dispute resolution.

**Code:** [https://www.dal.ca/dept/university\\_secretariat/policies/student-life/code-of-student-conduct.html](https://www.dal.ca/dept/university_secretariat/policies/student-life/code-of-student-conduct.html)

### Diversity and Inclusion – Culture of Respect

Every person at Dalhousie has a right to be respected and safe. We believe inclusiveness is fundamental to education. We stand for equality. Dalhousie is strengthened in our diversity. We are a respectful and inclusive community. We are committed to being a place where everyone feels welcome and supported, which is why our Strategic Direction prioritizes fostering a culture of diversity and inclusiveness

**Statement:** <http://www.dal.ca/cultureofrespect.html>

### Recognition of Mi'kmaq Territory

Dalhousie University would like to acknowledge that the University is on Traditional Mi'kmaq Territory. The Elders in Residence program provides students with access to First Nations elders for guidance, counsel and support. Visit or e-mail the Indigenous Student Centre (1321 Edward St) ([elders@dal.ca](mailto:elders@dal.ca)).

**Information:** [https://www.dal.ca/campus\\_life/communities/indigenous.html](https://www.dal.ca/campus_life/communities/indigenous.html)

### Important Dates in the Academic Year (including add/drop dates)

<https://academiccalendar.dal.ca/Catalog/ViewCatalog.aspx?pageid=viewcatalog&catalogid=117&chapterid=-1&topicgroupid=31821&loaduseredits=False>

### University Grading Practices

[https://www.dal.ca/dept/university\\_secretariat/policies/academic/grading-practices-policy.html](https://www.dal.ca/dept/university_secretariat/policies/academic/grading-practices-policy.html)

## Student Resources and Support

### Advising

**General Advising** [https://www.dal.ca/campus\\_life/academic-support/advising.html](https://www.dal.ca/campus_life/academic-support/advising.html)

**Science Program Advisors:** <https://www.dal.ca/faculty/science/current-students/academic-advising.html>

**Indigenous Student Centre:** [https://www.dal.ca/campus\\_life/communities/indigenous.html](https://www.dal.ca/campus_life/communities/indigenous.html)

**Black Students Advising Centre:** [https://www.dal.ca/campus\\_life/communities/black-student-advising.html](https://www.dal.ca/campus_life/communities/black-student-advising.html)

**International Centre:** [https://www.dal.ca/campus\\_life/international-centre/current-students.html](https://www.dal.ca/campus_life/international-centre/current-students.html)

### Academic supports

**Library:** <https://libraries.dal.ca/>

**Writing Centre:** [https://www.dal.ca/campus\\_life/academic-support/writing-and-study-skills.html](https://www.dal.ca/campus_life/academic-support/writing-and-study-skills.html)

**Studying for Success:** [https://www.dal.ca/campus\\_life/academic-support/study-skills-and-tutoring.html](https://www.dal.ca/campus_life/academic-support/study-skills-and-tutoring.html)

**Copyright Office:** <https://libraries.dal.ca/services/copyright-office.html>

**Fair Dealing Guidelines** <https://libraries.dal.ca/services/copyright-office/fair-dealing.html>

### Other supports and services

**Student Health & Wellness Centre:** [https://www.dal.ca/campus\\_life/health-and-wellness/services-support/student-health-and-wellness.html](https://www.dal.ca/campus_life/health-and-wellness/services-support/student-health-and-wellness.html)

**Student Advocacy:** <https://dsu.ca/dsas>

**Ombudsperson:** [https://www.dal.ca/campus\\_life/safety-respect/student-rights-and-responsibilities/where-to-get-help/ombudsperson.html](https://www.dal.ca/campus_life/safety-respect/student-rights-and-responsibilities/where-to-get-help/ombudsperson.html)

### Safety

**Biosafety:** <https://www.dal.ca/dept/safety/programs-services/biosafety.html>

**Chemical Safety:** <https://www.dal.ca/dept/safety/programs-services/chemical-safety.html>

**Radiation Safety:** <https://www.dal.ca/dept/safety/programs-services/radiation-safety.html>

**Scent-Free Program:** <https://www.dal.ca/dept/safety/programs-services/occupational-safety/scent-free.html>

**Dalhousie COVID-19 information and updates:** <https://www.dal.ca/covid-19-information-and-updates.html>