

GEOG 504 LEC01 Oceanography

GFC Hours 3-2

Winter 2023 classes: January 9th – April 12th

Section	Days	Time	Location
LEC 01	MWF	2:00-2:50PM	ST27
B01	T	3:30-5:20PM	ES407
Instructor: Dr. John Yackel		Office: ES 444	
Telephone:		Email: yackel@ucalgary.ca	
Email communication will be through your UCalgary email address.		Office hours: M 1:00-1:45 and W 12:00-12:45	

The **Department of Geography** condemns the longstanding and continued injustices against those marginalized by racism, sexism, homophobia, transphobia, classism, xenophobia, able-bodied normativity, mental health profiling, and other forms of prejudice. We are pained by the fact that injustices are unevenly borne. <https://arts.ucalgary.ca/news/anti-racism-statement>

Territorial Acknowledgement

The Department of Geography would also like to acknowledge the traditional territories of the people of the Treaty 7 region in southern Alberta. The City of Calgary is also home to Métis Nation of Alberta, Region III. <https://www.ucalgary.ca/indigenous/cultural-protocol>

Official Course Description

Physical ocean processes including circulation, waves, and tides are examined as part of the Earth's climate system. These physical processes are then linked to controls on primary production in the ocean, and marine foodwebs/ecosystems. Chemical processes driven by circulation and biology are examined, with a focus on marine feedbacks related to past and present climate change.

Course Objectives

The objectives of this course are to 1) introduce the student to the physical, chemical, and biological processes operating within our world's oceans; 2) investigate these processes using lab-based approaches and 3) introduce the key process linkages between the physical, chemical, and biological oceanographic properties/characteristics **and** climate change and variability at multiple spatio-temporal scales. Interactions between human activities and ocean processes will be discussed. This course has special focus on Arctic oceanography.

Course Learning Outcomes

The Department of Geography is committed to student knowledge and skill development. The table below lists the key learning outcomes for this course, the program-learning outcomes to which they contribute, and the expected level of achievement.

Course Learning Outcomes	PLO(s)*	Level(s)**
Students in this course will learn to understand basic ocean circulation, and how it is controlled by air-sea interactions and the underlying properties of seawater.	4	2
Students in this course will learn to analyze how ocean circulation impacts on climate over various spatial and temporal scales.	4	2

Students in this course will learn to critically analyze and respond to reports (particularly non-scientific) about biological, chemical and physical Oceanography, climate change and variability.	7	3
Students in this course will learn to identify reliable sources of scientific information, and construct knowledge from primary sources.	7	2
Students in this course will learn to effectively communicate scientific ideas using sound technical writing techniques.	8	2

*PLOs = Program Learning Outcomes: 1 = reflect and communicate diverse human-environment perspectives, 2 = identify and explain human-environment processes, 3 = implement sampling, data collection, analyses and communication methods, 4 = analyze spatial and temporal aspects of human-environment systems, 5 = employ knowledge, arguments, and methodologies for solving human-environment problems, 6 = evaluate geospatial data and manipulate it to create cartographic products, 7 = communicate geographic concepts using oral, written, graphic, and cartographic modes, and 8 = demonstrate literacy skills.

**Levels: 1 = Introductory, 2 = Intermediate, and 3 = Advanced.

Prerequisites

3 units from Geography 305, 408

Some basic computer skills are required

Learning Resources

Required Textbook: Oceanography: An Invitation to Marine Science, 9th edition. Tom Garrison, Nelson Education, ISBN 9781305480575. Additional readings will be made available through D2L.

Assessment Methods

Lab Assignments:	30% (3 assignments @ 10% each)
Term Paper:	30% (due on or before April 16 th @ 11:59pm via D2L Dropbox folder)
Tests:	40% (2 tests @ 20% each)

There is no Registrar Scheduled Final Exam.

The lab component must be passed to pass the course. The only acceptable reasons for missing an assignment in this class are illness, domestic affliction, or religious conviction. If you miss an assignment or examination for one of these reasons and provide me with the appropriate documentation (see M.1. Supporting Documentation and the Use of a Statutory Declaration in the University of Calgary Calendar) you will have one opportunity to make arrangements for the missed work. Without appropriate documentation, you will receive a zero for that portion of your grade. Late lab and term paper assignments will be penalized 20% per day. All lab related questions, including extensions for lab assignments due to unforeseen circumstances should be directed to our TA(s). Lecture, test, and term paper related questions should be directed to the instructor (Dr. Yackel). The two term tests will be administered in-class. The term paper is due on or before Sunday, April 16 @ 11:59pm via our D2L Dropbox folder as a PDF.

Writing materials and non-graphing calculators are permitted in exams. No other materials or devices are allowed.

Students are not allowed to use any of the following in exams:

- Phones, smartwatches, or wearable technology of any kind
- Portable/handheld computers, tablets, laptops, electronic writing pads
- Models with QWERTY (i.e., typewriter-like) keypads as part of hardware or software (e.g., TI-92 Plus, Voyage 200)
- Models with pen-input/stylus capability (e.g., Palm, PDAs, Casio ClassPad)
- Models with wireless, Bluetooth, or cellular capability
- Models that require an electrical outlet, "talk" or make noise, or have a paper tape
- Models that can access the internet
- Models that have cell phone capability or audio/video recording or playing capability

- Models that have a camera, scanning capability, or any other smartphone -type features
- Models with touch-screen capability that aren't on the list of approved graphing calculators (e.g., Casio ClassPad)
- Hardware peripherals such as a stylus, keyboard, or wireless adapter with an approved calculator

Grading System

96 – 100	A+	77 – 80	B	59 – 61	C-
90 – 95	A	71 – 76	B-	55 – 58	D+
86 – 89	A-	65 – 70	C+	50 – 54	D
81 – 85	B+	62 – 64	C	0 – 49	F

A+	4.00	Outstanding performance
A	4.00	Excellent performance
A-	3.70	Approaching excellent performance
B+	3.30	Exceeding good performance
B	3.00	Good performance
B-	2.70	Approaching good performance
C+	2.30	Exceeding satisfactory performance
C	2.00	Satisfactory performance
C-	1.70	Approaching satisfactory performance.
D+	1.30	Marginal pass. Insufficient preparation for subsequent courses in the same subject
D	1.00	Minimal Pass. Insufficient preparation for subsequent courses in the same subject.
F	0.00	Failure. Did not meet course requirements.

Flexible Grade Option (CG Grade)

<https://www.ucalgary.ca/pubs/calendar/current/f-1-3.html>

Additional Course Information

In the event that a student misses a midterm or any course work due to illness, supporting documentation, such as a medical note or a statutory declaration may be requested <https://www.ucalgary.ca/pubs/calendar/current/m-1.html>
Please refer to <https://www.ucalgary.ca/registrar/registration/appeals/student-faq> for frequently asked questions concerning the provision of a medical note/statutory declaration.

Exams & Deferrals

<https://www.ucalgary.ca/registrar/exams>

Referencing Standard

In written work presented in this class, the accepted method for referencing the work of others will be the Chicago Manual of Style: <https://www.chicagomanualofstyle.org/home.html>

Important Dates

The last day to drop this course and receive a tuition fee refund is **Thursday, January 19th, 2023**. The last day to add or swap a course for Winter 2023 is **Friday, January 20th, 2023**. The last day to withdraw from this course is **Wednesday, April 12th, 2023**. Please note that the University is closed on **Monday, February 20th** for Family Day. Term break is **February 19th – 25th**. The University is closed **Friday, April 7th** and **Monday, April 10th** for Easter.

For additional detailed course information posted by the instructor, visit the course Desire2Learn page online at <https://d2l.ucalgary.ca/d2l/home>.

Resources and Writing support

Please note writing support resources provided by the Student Success Centre <https://ucalgary.ca/ssc/resources/writing-support> and the library <https://libguides.ucalgary.ca/guides/>

University of Calgary Academic Integrity Policy

Academic integrity is the foundation of the development and acquisition of knowledge and is based on values of honesty, trust, responsibility, and respect. We expect members of our community to act with integrity. The University Calendar includes a statement on the principles of conduct expected of all members of the university community (including students, faculty, administrators, any category of staff, practicum supervisors, and volunteers), whether on or off university property. This statement applies in all situations where members of the university community are acting in their university capacities.

[University of Calgary : K. Integrity and Conduct \(ucalgary.ca\)](https://www.ucalgary.ca/k-integrity-and-conduct)

Plagiarism, Cheating, and Student Misconduct

Academic dishonesty is not an acceptable activity at the University of Calgary, and students are **strongly advised** to read the Student Misconduct section in the University Calendar at: www.ucalgary.ca/pubs/calendar/current/k-3.html. Often, students are unaware of what constitutes academic dishonesty or plagiarism. The most common are (1) presenting another student's work as your own, (2) presenting an author's work or ideas as your own without adequate citation, and (3) using work completed for another course. Such activities will not be tolerated in this course, and students suspected of academic misconduct will be dealt with according to the procedures outlined in the calendar at: <https://www.ucalgary.ca/legal-services/university-policies-procedures/student-academic-misconduct-procedure>

For information on what constitutes plagiarism and how to properly cite the work of others, the Department of Geography recommends that they attend Academic Integrity workshops offered through the Student Success Centre: <https://www.ucalgary.ca/student-services/student-success/learning/academic-integrity>

Instructor Intellectual Property

Information on Instructor Intellectual Property can be found at <https://www.ucalgary.ca/legal-services/university-policies-procedures/intellectual-property-policy>

Freedom of Information and Protection of Privacy

Freedom of Information and Protection of Privacy (FOIP) legislation in Alberta regulates the return of term assessments. Term assignments will be returned to students individually, during class or during the instructor's office hours; if students are unable to pick up their assignments from the instructor, they must provide the instructor with a stamped, self-addressed envelope to be used for the return of the assignment. Grades and assignments will not be available at the Department of Geography's main office and assignments cannot be dropped off at the Department Office.

Posting of Grades and Picking-up of Assignments

Graded assignments will be returned by the instructor or teaching assistant personally during scheduled lecture or laboratory periods, unless they are made available electronically through the course D2L webpage.

Academic Accommodations

It is the student's responsibility to request academic accommodations, according to the university policies and procedures listed in the University Calendar. The student accommodation policy can be found at: <https://www.ucalgary.ca/pubs/calendar/current/b-6-1.html>

Within the first week of classes, students needing an accommodation because of a disability or medical condition should register with Student Accessibility Services [Accessibility | Home | University of Calgary \(ucalgary.ca\)](https://www.ucalgary.ca/accessibility). Students needing an accommodation based on a protected ground other than disability should communicate this need, preferably in writing to their instructor or the Department Head (email: freeman@ucalgary.ca).

Learning Technologies and Requirements

In order to successfully engage in their learning experiences at the University of Calgary, students taking online, remote and blended courses are required to have reliable access to the following technology.

- A computer with a supported operating system, as well as the latest security and malware updates
- A current and updates web browser
- Broadband internet connection
- Optional technology: webcam (built in or external) / microphone and speaker (built in or external) or headset with microphone

Use of internet and electronic devices in class

Electronic devices with internet capabilities are permitted – and in some cases even required – in Geog 504. However, use of these devices in a manner that disrupts or distracts students (either yourself or those around you) is not allowed.

Off-task use of technology (e.g., communicating with friends or family; using social networking sites; playing games; accessing the internet on websites that do not relate to the course; reading an electronic book that is not related to the course; playing music or video, etc.) during instruction which are distracting to self or others are not permitted.

Guidelines for Zoom Sessions

Video sessions may be used in the event of instructor absence, for work within peer groups, or for other communication related to course obligations. To help ensure video sessions are private, do not share link or password with others via any medium, including social

media platforms. Links and passwords are only intended for students registered in the course. Recordings and materials presented, including any teaching materials, must not be shared, distributed or published without the instructor's permission.

The use of video conferencing programs relies on participants to act ethically, honestly and with integrity; and in accordance with the principles of fairness, good faith and respect (as per the [Code of Conduct](#)). When entering video conferencing sessions, you play a role in helping create an effective, safe and respectful learning environment.

Please be mindful of how your behavior in these sessions may affect others. Participants are required to use names officially associated with their UCID (legal or preferred names listed in the Student Centre) when engaging in these activities. Instructors/moderators can remove those whose names do not appear on class rosters. Non-compliance may be investigated under relevant University of Calgary conduct policies (e.g. Student Non Academic Misconduct Policy). If participants have difficulties complying with this requirement, they should email the instructor of the class explaining why, so the instructor may consider whether to grant an exception, and on what terms. For more information on how to get the most out of your Zoom sessions visit: <https://elearn.ucalgary.ca/guidelines-for-zoom/>.

If you are unable to attend a session, please contact your instructor to arrange an alternative activity for the missed session (e.g., to review a recorded session). Please be prepared, as best as you are able, to join class in a quiet space that will allow you to be fully present and engaged in sessions. Students will be advised by their instructor when they are expected to turn on their webcam (for group work, presentations, etc.).

The instructor may record online class sessions for the purposes of supporting student learning in this class – such as making the recording available for review of the session or for students who miss a session. Students will be advised before the instructor initiates a recording of a class session. These recordings will be used to support student learning only and will not be shared or used for any other purpose.

Media Recording

https://elearn.ucalgary.ca/wp-content/uploads/2020/05/Media-Recording-in-Learning-Environments-OSP_FINAL.pdf

Course evaluations and student feedback

Student feedback will be sought at the end of the course through the standard University Student Ratings of Instruction (USRI) and Faculty course evaluation forms.

Accessibility

Students will need to see lectures (visually) in order to get all of the information.
YuJa not be used in Geog 485.

Copyright Legislation

All students are required to read the University of Calgary policy on Acceptable Use of Material Protected by Copyright <https://www.ucalgary.ca/legal-services/university-policies-procedures/acceptable-use-material-protected-copyright-policy> and requirements of the copyright act (<https://laws-lois.justice.gc.ca/eng/acts/C-42/index.html>) to ensure they are aware of the consequences of unauthorised sharing of course materials (including instructor notes, electronic versions of textbooks etc.). Students who use material protected by copyright in violation of this policy may be disciplined under the Non-Academic Misconduct Act.

Wellness and Mental Health Resources

Mental health plays a pivotal role in physical health, social connectedness, and academic success and aspires to create a caring and supportive campus community where individuals can freely talk about mental health and receive supports when needed. We encourage

you to explore the mental health resources available throughout the university community, such as counselling, self-help resources, peer support, or skills-building available through the SU Wellness Centre (Room 370, MacEwan Student Centre, <https://www.ucalgary.ca/wellnesscentre/services/mental-health-services> and the Campus Mental Health Strategy website (<http://www.ucalgary.ca/mentalhealth/>).

Students requiring assistance are encouraged to email the **Student at Risk line** if they or others appear to need wellness assistance: sar@ucalgary.ca For more immediate response, please call: 403-210-9355 and select option #2.

Sexual Violence Policy

All members of the University Community should be able to learn, work, teach and live in an environment where they are free from harassment, discrimination, and violence. Please see the policy available at <https://www.ucalgary.ca/legal-services/university-policies-procedures/sexual-and-gender-based-violence-policy>

Contact Information for Student and Faculty Representation

- Student Union VP Academic 403-220-3911, suvpaca@ucalgary.ca
- Students Union Representatives for the Faculty of Arts – 403-220-3913, arts1@su.ucalgary.ca, arts2@su.ucalgary.ca, arts3@su.ucalgary.ca, arts4@su.ucalgary.ca
- Student Ombuds Office information can be found at: www.ucalgary.ca/ombuds/

Emergency Evacuation/Assembly Points

Assembly points for emergencies have been identified across campus. Assembly points are designed to establish a location for information updates from the emergency responders to the evacuees; from the evacuated population to the emergency responders. For more information, see the University of Calgary's Emergency Management website: <https://www.ucalgary.ca/risk/emergency-management>

The Muster Point for lectures is Social Sciences Food Court.

The Muster Point for labs is the ICT Food Court.

Campus Safewalk

Campus Security, in partnership with the Students' Union, provides the Safewalk service, 24 hours a day, to any location on Campus, including the LRT station, parking lots, bus zones, and university residences. Contact Campus Security at 220-5333 or use a help phone, and Safewalkers or a Campus Security officer will accompany you to your campus destination.