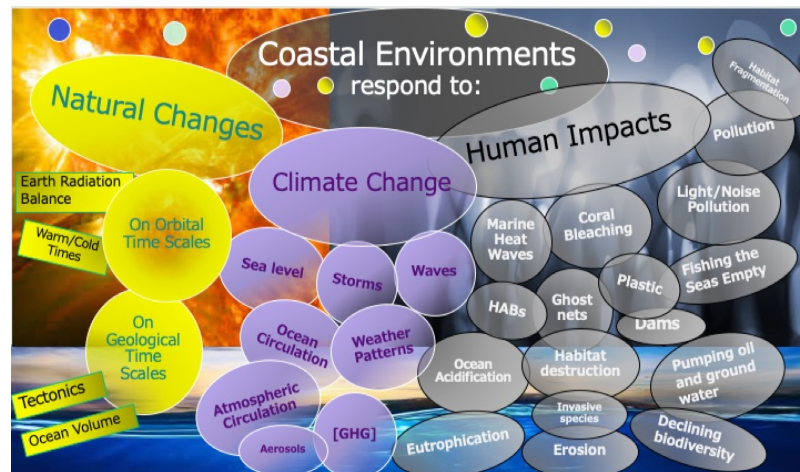




Instructor		Graduate Teaching Assistants	
<b>Name:</b>	Dr. Ursula Quillmann	Maya Velasco: <a href="mailto:Maya.Velasco@colostate.edu">Maya.Velasco@colostate.edu</a>	Karissa Courtney: <a href="mailto:Karissa.Courtney@colostate.edu">Karissa.Courtney@colostate.edu</a>
<b>Office:</b>	Virtual	GTAs' office hours posted on Canvas	
<b>E-Mail:</b>	ursula.quillmann@colostate.edu		
<b>Office:</b>	M-W-F 8:00-9:00AM		
<b>Hours:</b>	Sun 6:00- 8:00PM & by appointment		

<b>Term:</b>	Spring 2021
<b>Class Meeting Days:</b>	Tu and Th
<b>Class Meeting Hours:</b>	2:00-3:15PM
<b>Class Location:</b>	Synchronously/Asynchronously online, details in course schedule
<b>Course Credits:</b>	3



Visual Course Overview

## Important information for students on COVID-19:

All students are required to follow public health guidelines in any university space, and are encouraged to continue these practices when off-campus(es). Students also are required to report any COVID-19 symptoms to the university immediately, as well as if they have potentially been exposed or have tested positive at a non-CSU testing location. If you suspect you have symptoms, please fill out the COVID Reporter (<https://covid.colostate.edu/reporter/>). If you have COVID symptoms or know or believe you have been exposed, it is important for the health of yourself and others that you complete the online COVID Reporter. Do not ask your instructor to report for you; if you report to your instructor that you will not attend class due to symptoms or a potential exposure, you are required to also submit those concerns through the COVID Reporter. If you do not have access to the internet to fill out the online COVID-19 Reporter, please call (970)491-4600.

If you report symptoms or a positive test, your report is submitted to CSU's Public Health Office. You will receive immediate, initial instructions on what to do and then you will also be contacted by phone by a public health official. Based on your specific circumstances, the public health official may:

- choose to recommend that you be tested and help arrange for a test
- conduct contact tracing
- initiate any necessary public health requirements or recommendations and notify you if you need to take any steps

If you report a potential exposure, the public health official will help you determine if you are at risk of contracting COVID.

For the latest information about the University's COVID resources and information, please visit the CSU COVID-19 site (<https://covidrecovery.colostate.edu/>).

## New This Semester

This is an exciting semester to be enrolled in our course because the "Decade of Ocean Science for Sustainable Development" 2021–2030 has been just launched.

"The UN Decade of Ocean Science for Sustainable Development was born out of the recognition that much more needs to be done to reverse the cycle of decline in ocean health and create improved conditions for the sustainable development of the ocean, seas and coasts."

<https://www.oceandecade.org/about>. "[The Conversation](#) initiated "Ocean 21", a series that focuses on ocean sustainability. "Ocean 21" will take us on a virtual journey to the five major "oceans". We will explore the importance of each of the five oceans to global health. We will analyze the principle environmental threats the five principle oceans are facing and discuss solutions. (Figure 1). I will update our curriculum throughout the semester to incorporate the latest research.

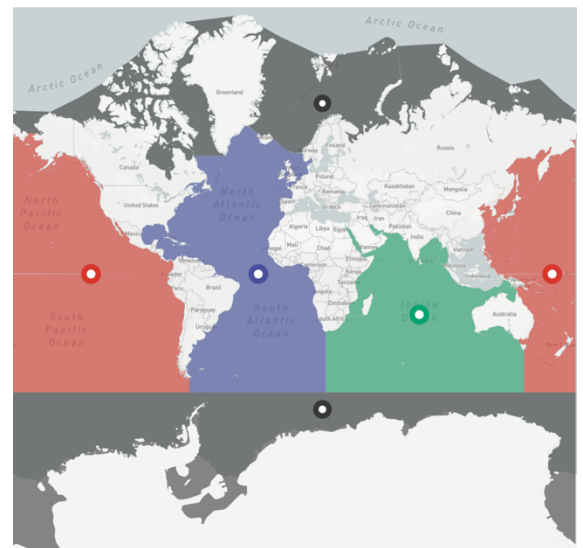


Figure 1: The five major divisions of the global ocean: Pacific Ocean (red), Atlantic Ocean (blue), Indian Ocean (green), Arctic Ocean and Southern Ocean (both charcoal).

## Course Overview

Over half the world's population lives concentrated in coastal areas. Yet, coastal areas encompass only ~10% of the earth's land surfaces. The coastal population is expected to rise, further intensifying the pressure human activity has on coastal zones.

Coastal areas are of great interest: here land and ocean meet. Any changes in either the oceans or on land will affect each other. It is in our best interest to manage and to protect our ecologically diverse coastal areas so they will sustain their value. But balancing human use of coastal areas with ecosystem health is a challenging task. Urban development leads to natural habitat loss, including the loss of wetlands, marshlands, mangrove forests, and sand dunes. The coastal ocean is the richest fishing ground, and overfishing in many parts of the world has led to the demise of fish. Pollution of water and air adds to the problem.

The list of physical resources found in coastal oceans is long and includes oil, gas, sand, gravel, and minerals. Harvesting these marine resources is dangerous and costly. Climate change imposes a major threat for coastal areas. Ocean temperatures are rising and ocean chemistry is changing. As a result marine species distribution is changing. Coral reefs are especially susceptible to climate change and ocean acidification. Ice sheets and glaciers melt and ocean water expands due to rising temperatures. Consequently sea level rises. Sea level rise poses many risks: low-lying coastal infrastructures will be flooded. Wind patterns are shifting and floods and storm surges will affect low-lying areas. Coastal environments are changing, affecting both marine and terrestrial ecosystems.

## Learning Objectives

By the end of the course, the successful student should be able to:

- Describe coastal processes by applying foundations of geological, physical, chemical, biological, and environmental oceanography.
- Explore the effects of human activities such as fishing, land development, pollution, farming, and international commerce on the coastal environment.
- Synthesize the compounding impacts of nature and human activities on coastal environments.
- Assess the impact of climate change on coastal environments, both at regional and global levels.
- Inform professionally about coastal environmental issues, both orally and in writing.

## Course Prerequisites

Chem 107 or equivalent

### CSU's Land Acknowledgment Statement

*Colorado State University acknowledges, with respect, that the land we are on today is the traditional and ancestral homelands of the Arapaho, Cheyenne, and Ute Nations and peoples. This was also a site of trade, gathering, and healing for numerous other Native tribes. We recognize the Indigenous peoples as original stewards of this land and all the relatives within it. As these words of acknowledgment are spoken and heard, the ties Nations have to their traditional homelands are renewed and reaffirmed.*

*CSU is founded as a land-grant institution, and we accept that our mission must encompass access to education and inclusion. And, significantly, that our founding came at a dire cost to Native Nations and peoples whose land this University was built upon. This acknowledgment is the education and inclusion we must practice in recognizing our institutional history, responsibility, and commitment.*

<https://landacknowledgment.colostate.edu>

### This is an Inclusive Classroom

*Inclusive teaching involves deliberately cultivating a learning environment where all students are treated equitably, have equitable access to learning, and feel valued and supported in their learning. Such teaching attends to social identities and seeks to change the ways systemic inequities shape dynamics in teaching-learning spaces, affect individuals' experiences of those spaces, and influence course and curriculum design.*

– Adapted from <http://crlt.umich.edu/node/90467>

### CSU's Principles of Community

- **Inclusion:** We create and nurture inclusive environments and welcome, value and affirm all members of our community, including their various identities, skills, ideas, talents and contributions.
- **Integrity:** We are accountable for our actions and will act ethically and honestly in all our interactions.
- **Respect:** We honor the inherent dignity of all people within an environment where we are committed to freedom of expression, critical discourse, and the advancement of knowledge.
- **Service:** We are responsible, individually and collectively, to give of our time, talents, and resources to promote the well-being of each other and the development of our local, regional, and global communities.
- **Social Justice:** We have the right to be treated and the responsibility to treat others with fairness and equity, the duty to challenge prejudice, and to uphold the laws, policies and procedures that promote justice in all respects.

<https://diversity.colostate.edu/resources/principles-of-community/>

### Required Texts and Materials

Texts and materials will be posted on course Canvas site.

### Library & Research Help

The CSU Libraries Help Desk provides basic research and technical assistance either in person at Morgan Library or by phone at 970-491-1841. Virtual assistance is also available via the Libraries' Ask Us chat and email services (<http://lib.colostate.edu/help/ask-us>). Jocelyn Boice is the librarian supporting the Forest and Rangeland Stewardship Department and this course. Contact her for in-depth assistance at: [jocelyn.boice@colostate.edu](mailto:jocelyn.boice@colostate.edu).

## Important Dates to Remember

Last Day to Add/Drop Classes Without an Instructor Override: Sun, Jan 24, 2021

Registration Closes: Wed, Feb 3, 2021

Withdrawal/Repeat/Delete Deadline: Mon, March 22, 2021

Spring Recess: Sat, April 10 – Sun, April 18, 2021 (*all instruction and exams are remote after this*)

Last Day to Process a University Withdrawal: Fri, May 7, 2021

Final Examinations: Mon-Fri, May 14-16, 2021

### Course Specific Dates:

- Clearly outlined in course schedule below and on Canvas.

### Useful websites with important dates to remember

<https://registrar.colostate.edu/registration-dates/>

<https://www.online.colostate.edu/faqs/important-dates.dot>

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### COURSE SCHEDULE\*

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\*subject to change

Modules open up on Mondays, 12:00AM and remain open throughout the semester. Assignments (D, Q, E) will be available from Mondays, 12:00AM and are due by Sundays, 11:59PM.

- ◇ D = Online Discussions (initial post required by Wednesday, 11:59PM)
- ◇ Q = Quizzes (Content Checks – open book)
- ◇ E = Exit Polls

Time frames for student presentations, the midterm, and the final exam will be clearly communicated with students via announcements and posted on Canvas. New this semester are the ocean profiles. The United Nations has declared 2021-2030 the “Decade of Ocean Science for Sustainable Development”. We will strive to introduce you to the latest publications.

The course schedule also indicates whether we are meeting synchronously or asynchronously. Please mark your calendars.

WEEK 1: January 19 – January 24 (D; Q)

- Synchronously
  - Tu: Course Introductions
- Asynchronously:
  - Th: Role Of Plate Tectonics On Coastlines

WEEK 2: January 25 – January 31 (Q; D; E)

- Asynchronously:
  - Tu: Dynamic Coastlines
  - Th: Documentary “Sand Wars”

WEEK 3: February 1 – February 7 (E)

- Synchronously
  - Tu & Th Student Presentations #1: Types of Coasts

WEEK 4: February 8 – February 14 (D; Q)

- Asynchronously:
  - Tu: Earth's Radiation Balance
  - Th: A Closer Look At Carbon Dioxide, Greenhouse Gases, And Aerosols

WEEK 5: February 15 – February 21 (D; Q; E)

- Asynchronously
  - Tu & Th : Foundations Of Atmospheric and Oceanic Circulation With Focus On Coastal Regions

⇒ Ocean Profile: The Atlantic, The Driving Force Behind Ocean Circulation And Our Taste For Cod

WEEK 6: February 22 – February 28 (D; Q)

- ⇒ Asynchronously:
- Tu: Changes In Sea Level
  - Th Hurricanes And Monsoons

⇒ Ocean Profile: Indian Ocean, A Rich Archive Of History – Above And Below The Water Line

WEEK 7: March 1 – March 7 (E)

- Synchronously
  - Tu & Th: Student Presentations #2: Coastal Environments In Peril

WEEK 8: March 8 – March 14 (D; Q)

- Asynchronously:
  - Tu: Nutrients And Eutrophication
  - Tu: Case Study - Impacts Of Wildfires On Marine Environments
  - Th: The Other CO<sub>2</sub> Problem: Ocean Acidification

⇒ Ocean Profile: Southern Ocean, An Ocean Like No Other: Ecological Richness And Significance For Global Climate

WEEK 9: March 15 – March 21 (D; Q; E)

- OCEAN FILM FEST (Asynchronously & Synchronously)

- Tu: Asynchronously “Film: Chasing the Thunder”
- Th: Synchronously “Talk Back With The Director Of Chasing the Thunder”

WEEK 10: March 22 – March 28 (E)

- Synchronously
  - Tu & Th: Student Presentations #3: Where The River Meets The Sea

WEEK 11: March 29 – April 4 (D; Q)

- Asynchronously:
  - Tu: Plastic Ocean
  - Th: El Nino Southern Oscillation
  - WRITING ASSIGNMENT DUE ON WEDNESDAY, MARCH 31 AT 11:59PM

⇒ Ocean Profile: The Pacific, It Might Be The World’s Biggest Ocean, But The Mighty Pacific Is In Peril

WEEK 12: April 5 – April 11 (D; Q)

- Asynchronously:
  - Tu: Corals
  - Th: Chasing Corals (Film)

**SPRING RECESS: SATURDAY, APRIL 10 – SUNDAY, APRIL 18, 2021**

WEEK 13: April 19 – April 25 (D; E)

- Asynchronously:
  - Tu : Marine Light Pollution
  - Th : TBA

⇒ Ocean Profile: Arctic Ocean, Climate Change Is Flooding The Remote North With Light – And New Species

WEEK 14: April 26 – May 2 (E)

- Synchronously
  - Tu & Th Final: Ignite Presentations & Handouts

WEEK 15: May 3 – May 9 (E)

- Synchronously
  - Tu & Th: Final: Ignite Presentations & Handouts

WEEK 16: May 10 – May 14 (Finals Week)

- No meeting, unless we are not finished with the final presentations

## Basis for Final Grade

### Assignments:

Online discussions	20%
Presentations & write-ups (3)	30%
Exit Polls	5%
Quizzes: Content Checks	15%
Midterm: Writing assignment	10%
Final Exam: Ignite Presentation and Handout	20%

### Brief Description of Assignments:

Details, expectations, and rubrics will be clearly communicated with the students and posted on Canvas.

- **Online discussions** are designed to help students engage with the lecture topics. Lectures are generally delivered asynchronously online. Students may be required to read an article, listen to a podcast, engage with “ocean profiles”, or watch a Ted Talk. The discussions entail an initial post and a minimum of two replies to peers. Initial posts must be made by Wednesdays, 11:59PM and replies by Sundays, 11:59PM.
- **Presentations & write-ups** will give students the opportunity to research topics in small-groups and become more deeply engaged with their topic. Students present during our regular classtimes (synchronously). We will provide assistance, instructions with examples, and rubrics that guide students through the process.
- **Exit Polls** will allow me to gauge your interest and engagement in topics and adjust the topics we are covering in class to fit your needs.
- **Quizzes: Content Checks** will give students the opportunity to demonstrate that they understood the concepts. The content checks can be in form of multiple-choice and/or short answer questions. The quizzes are open book. The content checks allow me the opportunity to clarify content if necessary. Each quiz will contain a *reflection question*, which is designed to give me a chance to check in on the well-being of the student. Students will receive full points by submitting the reflection. If the student feels uncomfortable answering a reflection question, the student should indicate this on their submission to receive full points. Students should not feel obligated to answer the reflection questions.
- The **Writing assignment (midterm)** is designed for students to tackle a controversial topic. The assignment should result in a short yet alarm-raising paper (~750 words). The assignment is due on Wednesday, March 31 at 11:59PM.
- The **Final Exam** consists of two parts. The first part is for each student to prepare and to give an “ignite” presentation and the second part is to generate a handout. We will provide assistance, instructions with examples, and rubrics that guide students through the process. We will, as a class, decide on an overarching theme. In the past, themes included “The state of coral reefs”, “Key species in coastal environments”, and “The importance of arctic environments for our planet”. Each student signs up for a topic related to the theme. And, together we will explore the theme in depth.

### Grading scale:

Letter grade	% range
A+	97-100
A	93-96
A-	90-92
B+	87-89
B	83-86
B-	80-82



C+	77-79
C	70-76
D	60-69
F	<60

## Course Policies

### **Late Work Policy**

Late work will be accepted if student made arrangements with instructor beforehand or has to attend a university-sanction event.

### **Grades of "Incomplete"**

Per university policy, an instructor may assign temporary grade of Incomplete to a student who demonstrates that he or she could not complete the requirements of the course due to circumstances beyond the student's control and not reasonably foreseeable. A student must be passing a course at the time that an Incomplete is requested unless the instructor determines that there are extenuating circumstances to assign an Incomplete to a student who is not passing the course. When an instructor assigns an Incomplete, he or she shall specify in writing using the Department Incomplete Grade Form the requirements the student shall fulfill to complete the course as well as the reasons for granting an Incomplete when the student is not passing the course. The instructor shall retain a copy of this statement in his or her grade records and provide copies to the student and the department head or his or her designee. (Section I.6 of the *Academic Faculty and Administrative Professional Manual*). For more information: <https://registrar.colostate.edu/incomplete-grades/>

### **Disability Access**

Colorado State University is committed to providing reasonable accommodations for all persons with disabilities. Students with disabilities who need accommodations must first contact the Student Disability Center before requesting accommodations from the professor. The Student Disability Center (SDC; <https://disabilitycenter.colostate.edu/>) is located in room 121 of The Institute for Learning and Teaching (TILT) building. Their phone is (970) 491-6385 (V/TDD). Students who need accommodations in this course must contact the professor at the beginning of the semester to discuss needed accommodations.

### **Attendance Policy**

Students who will miss class due to participation in University-sanctioned extracurricular/co-curricular activities must inform their instructors prior to the anticipated absence and take the initiative to make up missed work in a timely fashion. Instructors must make reasonable efforts to enable students to make up work which must be accomplished under the instructor's supervision (e.g., examinations, laboratories). In the event of a conflict in regard to this policy, individuals may appeal using established University procedures.

For the purposes of this regulation, University-sanctioned activities include competitions, events and professional meetings in which students are officially representing the institution. Appropriate sanctioned activities include:

- a. Intercollegiate athletics;
- b. Collegiate club sports and competitions;
- c. Conferences and workshops recognized by the University not related to academics;
- d. Commitments on behalf of the University (ASCSU, band, etc.); and
- e. Professional activities recognized by the University related to academics.
- f. Department heads or their designated representatives must approve sanctioned professional and departmental activities. Other sanctioned activities must be approved by the appropriate program director on record with the Division of Student Affairs offices or the Department of Athletics.

### **Religious Accommodation**

Participation in official University activities, e.g., an out-of-town athletic event, or special religious observances may provide a legitimate reason for an excused absence. The student is responsible for discussing this with the instructor at the beginning of the semester.

### **Final Exam Policy**

Final examination week is part of the regular semester. Student attendance shall be consistent with University policy. If a student has three or more final examinations (not classes) scheduled for the same day or if conflicts of examination times occur, the student may negotiate a time change with the instructors involved. If the parties involved cannot find a mutually agreeable time, the Registrar's Office indicates which courses must be changed.

**Note:** The Registrar's Office must be notified at least one week prior to Final Examination Week to allow instructors time to make appropriate accommodations. It is the student's responsibility to initiate negotiations.

<http://www.registrar.colostate.edu/final-exams>

### **Professionalism Policy**

Please review the core rules of [netiquette](#) for some guidelines and expectations on how to behave in an online learning environment.

### **Academic Integrity**

The Department of Forest and Rangeland Stewardship takes academic integrity seriously. At minimum, academic integrity means that no one will use another's work as their own. You can find an overview and CSU's definition of plagiarism on the CSU Writing Center website found here:

<https://writing.colostate.edu/guides/page.cfm?pageid=311&guideid=17>.

If you plagiarize in your work you could lose credit for the plagiarized work, fail the assignment, or fail the course. Each instance of plagiarism, classroom cheating, and other types of academic dishonesty will be addressed according to the principles published in the CSU General Catalog (under "Academic Integrity/Misconduct":

<http://catalog.colostate.edu/general-catalog/policies/students-responsibilities/>)

This course will adhere to the CSU Academic Integrity [Policies and Guiding Principles](#) as found in the General Catalog and the [Student Conduct Code](#).

Academic integrity lies at the core of our common goal: to create an intellectually honest and rigorous community. Because academic integrity, and the personal and social integrity of which academic integrity is an integral part, is so central to our mission as students, teachers, scholars, and citizens, I will ask that you affirm the CSU Honor Pledge as part of completing your work in this course.

Further information about Academic Integrity is available at CSU's Practicing Academic Integrity:

<https://tilt.colostate.edu/Integrity/StudentResources>

### **Title IX Information**

CSU's Student Sexual Harassment and Violence policy, following national guidance from the Office of Civil Rights, requires that faculty follow CSU policy as a "mandatory reporter" of any personal disclosure of sexual harassment, abuse, and/or violence related experiences or incidents shared with the faculty member in person, via email, and/or in classroom papers or homework exercises. These disclosures include but are not limited to reports of personal relational abuse, relational/domestic violence, and stalking. While faculty are often able to help students locate appropriate channels of assistance on campus (e.g., see the CSU Health Network link below), disclosure by the student to the faculty member requires that the faculty member inform appropriate CSU channels to help

ensure that the student's safety and welfare is being addressed, even if the student requests that the disclosure not be shared.

For counseling support and assistance, please see the CSU Health Network, which includes a variety of counseling services that can be accessed at: <http://www.health.colostate.edu/>. And, the Sexual Assault Victim Assistance Team is a confidential resource for students that does not have a reporting requirement and that can be of great help to students who have experienced sexual assault. Some helpful websites:

<https://safety.colostate.edu/sexual-assault-information/>

<https://wgac.colostate.edu/support/sexual-assault/>

### **Non-Discrimination Statement**

Colorado State University does not discriminate on the basis of race, age, creed, color, religion, national origin or ancestry, sex, gender, disability, veteran status, genetic information, sexual orientation, gender identity or expression, or pregnancy. The University complies with the Civil Rights Act of 1964, as amended, related Executive Orders 11246 and 11375, Title IX of the Education Amendments Act of 1972, Sections 503 and 504 of the Rehabilitation Act of 1973, Section 402 of the Vietnam Era Veterans' Readjustment Assistance Act of 1974, as amended, the Age Discrimination in Employment Act of 1967, as amended, The Pregnancy Discrimination Act of 1978, Americans with Disabilities Act of 1990, the Civil Rights Act of 1991, the ADA Amendments Act of 2008, the Genetic Information Nondiscrimination Act of 2008, and all civil rights laws of the State of Colorado. Accordingly, equal opportunity of employment and admission shall be extended to all persons. The University shall promote equal opportunity and treatment in employment through a positive and continuing affirmative action program for ethnic minorities, women, persons with disabilities, and veterans. The Office of Equal Opportunity is located in 101 Student Services. Source: <http://oeo.colostate.edu/non-discrimination-statement>