ATS/GES440: Sea Level Rise and a Sustainable Future
(Updated for Spring semester, 2025)

I. Instruction

Instructor: Dr. Patrick Keys
Email: patrick.keys@colostate.edu
Class day and time: T, Th 9:30-10:45 am
Class location: Stadium Stadium 1213
Office hours & location: On demand

2. Course Focus

This course will provide an overview of sea level rise (SLR), with lectures on basic geophysics of SLR, the projected future impacts from climate models, and uncertainty around these projections. Likewise, the impacts of SLR will be discussed in a historical, present, and future context, focusing on social, cultural, economic, and political dimensions. **This course is highly interdisciplinary** and is designed to be accessible and engaging to students from across the university.

At the end of the course you will be able to:

1. Assess the physical basis for SLR
2. Interpret and use SLR projections to articulate potential policy responses.
3. Discuss ethical implications of SLR from cross-disciplinary perspectives.
4. Assess how future SLR projections will impact different geographic and economic regions.
5. Explore SLR from the perspective of the humanities, such as art, poetry, fiction, and film.

3. Scheduling

Lectures will be taught on Tuesdays and Thursdays from 9:30-10:45.

4. Course Expectations

The following list presents the minimum expectations for passing this course (See "7. Grading" for more):

- keep up with the reading
- pass quizzes
- complete all assignments on time
- complete all mid-semester and final projects on time

5. Course Web Page

The course web site will be used for posting lecture notes, homework assignments, and providing additional resources. The course web site is available through Canvas. I recommend bookmarking the web site.

6. Prerequisites

All-University Core Curriculum (AUCC) requirements should be satisfied for the following: 'Intermediate Writing', 'Mathematics', and 'Biological and Physical Sciences'. If a prerequisite

has not been met, and you think you still ought to be considered for the course, please contact the instructor.

7. Grading

It is expected that you will spend at least 2 hours of effort outside of class for each hour of class time. You are encouraged to interact with your classmates by sharing ideas and discussing the specifics of the homework, essays, and the projects. You are, however, expected to hand-in your own work, and it may not be a direct copy of your classmate's (for more clarity, see "10. Academic Integrity" below). The grade breakdown is as follows:

1000 points possible in the course.

~ 15% is regular quizzes

~ 50% is homework assignments

~30% is the Final Project

~5% TBD

The **short quizzes** are intended to gauge your understanding of the readings and lecture material and will be completed in class. The **homework assignments** are intended to gauge your grasp and ability to synthesize the course content. The mid-semester and final project will test your ability to synthesize content from the entire course.

A	100%	to 90%
B	< 90%	to 80%
C	< 80%	to 70%
D	< 70%	to 60%
F	< 60%	to 0%

8. Texts & Resources

The texts and web resources we will be using will be forthcoming and will include a mix of book chapters, academic journal articles, and web resources (e.g. news articles, short videos, documentaries).

9. Tentative Weekly Schedule

WEEK	***TOPIC***
1	Course overview, climate change and sea level rise intro
2	SLR: Past and Present
3	SLR: Future
4	Cryosphere and Adaptation Theory
5	Coastal Systems
6	Case-study of SLR: Bangladesh (country)
7	Case-study of SLR: Florida (state)
8	Case-study of SLR: Lagos (city)
9	Case-study of SLR: Kiribati (islands)

10	What about Colorado?
11	Critique and Trauma of SLR
12	Imagining 2100 (future projections, marine ecology 2100)
13	Imagining 2100 (geoengineering, marine policy 2100)
14	Synthesizing SLR
15	Project workshop
16	Final project presentations

10. Academic Integrity

At minimum, academic integrity means that no one will use another's work as their own. The CSU writing center defines plagiarism this way:

Plagiarism is the unauthorized or unacknowledged use of another person's academic or scholarly work. Done on purpose, it is cheating. Done accidentally, it is no less serious. Regardless of how it occurs, plagiarism is a theft of intellectual property and a violation of an ironclad rule demanding "credit be given where credit is due."

Source: Writing Guides: Understanding Plagiarism (Links to an external site.).

If you plagiarize in your work you will lose credit for the plagiarized work, you will fail the assignment, and you may fail the course. Plagiarism could result in expulsion from the university. 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 (Links to an external site.).

Of course, academic integrity means more than just avoiding plagiarism. It also involves doing your own reading and studying. It includes regular class attendance, careful consideration of all class materials, and engagement with the class and your fellow students. Homework must be individual work. It is ok to work with other students to understand the material, but you must write up your own homework assignments. Cheating will not be tolerated; examples include, but are not limited to:

- Turning in identical homework assignments.
- Plagiarizing from sources outside of the course. You may use information from books, articles or websites but must give correct attribution to the source. The attribution should be appropriately cited (the citation format is your choice – but it should be consistent). Wikipedia is often an excellent place to start on an unfamiliar subject, but you may not cite it as a source.
- Using one student's homework and changing some words in your version is plagiarism.

It does not matter who copied from whom. Both students will receive a zero for the entire assignment if both have knowingly participated