

## Introduction to Environmental Studies

*This course surveys the terrain of environmental studies, examining ecological, socioeconomic, political, cultural, aesthetic and technological factors that influence the quality of life on Earth.*

**Lectures**                      Tuesdays & Thursdays 12:30 – 1:45pm ~ Math 100

**Instructor**                      Max Boykoff  
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Fellow, Cooperative Institute for Research in Environmental Sciences (CIRES)  
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Teaching Assistant (TA) Name	Teaching Time & Location	Office Hours & Location	Email
Emily Nocito, Lead	8AM M DUAN G2B21 4PM M DUAN G2B60	Mondays, 1-3, Laughing Goat, Norlin Library	emily.nocito@colorado.edu
Emily Beam	3PM T EKLC E1B50 8AM W DUAN G2B21 5PM Th CLRE 209	Wednesdays, 9-10, Tuesdays, 1.50-2.50, Laughing Goat, Norlin Library	emily.beam@colorado.edu
Patrick Chandler	8AM T HUMN 125 4PM T KTCH 1B64 4PM Th KTCH 1B64	Tuesday, 1.45-3.45, CSTPR Rm 110	patrick.chandler@colorado.edu
Sebastian Duenas-Ocampo	4PM T EKLC E1B50 4PM Th ECCR 131 3PM F MUEN E130	Monday, 11-1, SEEC S101	sebastian.duenasocampo@colorado.edu
Alex Halverson	10AM M KTCH 1B71 9AM W STAD 136C 8AM Th MUEN E064	Wednesday 10.30-12.30, CSTPR Rm 202	alexander.halverson@colorado.edu
Olivia Pearman	8AM T MUEN E064 8AM W MCOL E158 8AM F DUAN G2B21	Tuesday & Thursday, 10-11, Laughing Goat, Norlin Library	olivia.pearman@colorado.edu

**The Course Web Page** can be accessed with your Identikey & password through canvas <http://canvas.colorado.edu> – the portal will have all quizzes, lecture and recitation slides, paper submission details, recitation attendance, clicker points, grades, a course calendar, and textbook reading material.

**Course Reading Materials** consist of selected chapters from an e-book *A Changing Planet* by Professor Jason Neff. The e-book is published by Pearson and the course link to purchase it will be provided in the Canvas course portal as well as in the first lecture on Tuesday, August 27. This is it as well <https://console.pearson.com/enrollment/pjwbz1>

To purchase the textbook you will need to purchase an access code from the CU bookstore OR you can buy a 18-month subscription directly through Pearson.

Follow the course link you will be provided, create a Pearson account or sign in, and click Join this Course. Enter the access code you purchased from the bookstore or buy one through the website.

Additional reading beyond the e-book may be posted in Canvas

**Additional short readings will be available (free via Canvas) as excerpts from McKibben, B. (ed) (2008) *American Earth: Environmental Writing Since Thoreau*. Penguin Putnam, New York, NY.**

If you have questions relating to the **lecture material or clickers**, communicate with Professor Boykoff. If you have questions about **canvas** as the portal relates to lecture, exams, communicate with Emily Nocito. If you have questions about **recitation** activities or grades, communicate with your individual TA.

## Overview

The class has three major components: 1) **lectures**, including learning new material, and partaking in clicker activities, 2) **recitations**, where you apply your knowledge, perspectives and viewpoints to a variety of situations and course discussions, and 3) **outside class activities**, including reading the texts and studying. Each of these parts of the class builds off the others; **it all counts**.

Grades for the course are based on the following totals. Note that more than half of the grade in this class is related to attendance and participation in lecture, recitations and scheduled online activities.

Clickers activities (including attendance and participation)	10 pts
Weekly reading quizzes (except in noted weeks [below])	12 pts
Recitation attendance, participation and writing assignments	30 pts
Semester exams (14 pts each)	28 pts
Final exam (Sunday, December 15 <sup>th</sup> @ 4:30pm)	20 pts
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<b>total: 100 points<sup>1</sup></b>	

Grades are as follows: 93 and greater = A, 90-92.99 = A-, 87-89.99 = B+, 83-87 = B, 80-82.99 = B-, 77-79.99 = C+, 73-77 = C, 70-72.99 = C-, 67-69.99 = D+, 63-67 = D, 60-62.99 = D-, 60 and below = F.

Grades may be curved upward at the end of the semester; they are never curved down. **Grades cannot be discussed over email with your TA or with Professor Boykoff. Schedule time to meet in our office hours to discuss grade questions.**

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<sup>1</sup> Fall semester, you can earn 1 pt of extra credit by attending a Wednesday noontime seminar at the Center for Science & Policy Research (up to 2 pts total). See the website for details: [https://sciencepolicy.colorado.edu/news/seminars\\_fall2019.html](https://sciencepolicy.colorado.edu/news/seminars_fall2019.html)

Because we value your presence, attention and participation in this class, **we enforce an electronics ban (e.g. laptops, cell phones, tablets) in the lecture hall during class time.** Our experience has been that electronics use in class has proven to be at times more distracting than helpful. Needless to say, confronting use of devices/electronic in class is uncomfortable and often embarrassing for those involved. While Prof Boykoff and the TAs seek to avoid this situation, we will address it when needed in order to optimize learning for everyone.

Also, because this is a larger course with limited time in lecture (150 minutes a week) and in recitation (50 minutes a week), we will just be able to discuss some selections from the many various dimensions and facets of the themes and readings in these sessions. So, it will be up to you to also engage critically with these topics outside of lectures and recitations to get the most out of the course. Expectations at CU Boulder are that students spend on average 3-4 hours reading, reviewing and studying for a course to 1 hour in the classroom each week. With lecture and recitations, you are in class about 3.5 hours/week. So for success in the course, plan to spend approximately 10.5-14 hours/week of reading, reviewing and studying outside of class each week. This will vary though week to week (e.g. week one v exam weeks).

We encourage you to self-organize into discussion and/or study groups to get the most out of the materials, themes, and issues that are raised in the classes. Please note that a careful understanding all class themes and topics – in lectures, recitations, readings – are vital for success in the course.

In this course the lecture slides will be placed on Canvas within 12 hours after the lectures. You will need to develop a note-taking strategy with this in mind.

#### **A few comments regarding email:**

- email inquiries sent *after* the final exam Dec 15 will be returned at the start of Spring 2020 term
- do not start any emails to Prof Boykoff or your TAs with the word 'hey'
- for general email etiquette with instructors, visit <http://www.wikihow.com/Email-a-Professor> and read this article <https://www.nytimes.com/2017/05/13/opinion/sunday/u-cant-talk-to-ur-professor-like-this.html>

#### **Attendance, Class Participation & Clickers**

This class deals with complex and contentious topics. **All opinions and perspectives are welcome and it is important that discussions are civil, respectful, and open.** Also, Math 100 auditorium can be a challenging place to hear and see, particularly if people around you are talking. It is a requirement to **be respectful of others.** If you have problems hearing the lectures, please let Prof Boykoff or a TA know.

You will need an iClicker for this class. You can register your iClicker by following the instructions at <http://oit.colorado.edu/node/779>. Clickers will be used starting our second session (August 29, 2019)! Clicker use in class factors into your attendance and participation grade for the course.

If you miss a day of class due to illness, if you forget your clicker etc., you can still receive credit for clickers for that day, **up to four times (e.g. cannot make up more than four lectures).** To get credit, review the lecture slides for that day. Then come to Prof Boykoff's or your Teaching Assistant's office hours ready to **discuss two key points** related to the material from that particular day. You will earn credit for your missed day if you **come within one week of the missed lecture.** If you are absent for an extended period of time (more than two lectures in a row), you can bring a document (e.g. doctor's note) to Prof Boykoff's office hours to discuss credit for those days.

Your participation in lectures and recitation is valued and will demonstrate your engagement with course material. As you prepare for the lectures and recitations, you may wish to explore questions like these:

- What are the main points or themes in the readings/topics for the day?
- How is this work similar to or different from other course material, your own ideas, or other information you have come across in the past?
- What is your critical assessment of the central assertions, theories, and/or ideas introduced?

**Note that any student found using multiple clickers (e.g. one for you and one for a classmate) will be removed from the lecture hall and reported to the Honor Code office.** All students enrolled in a University of Colorado Boulder course are responsible for knowing and adhering to the Honor Code. Clicker fraud is included, see page 5 of the syllabus for more details.

### Weekly Reading Quizzes

Through Canvas, each week (except week sixteen, midterm exam weeks and Thanksgiving week) we will post a reading quiz on Canvas. These will open Tuesdays at 2pm. You will need to complete the quiz by Thursday at 12:30pm each week. There will be no make-up opportunities for quizzes.

### Examinations

The examinations will both be closed-book and no-note exams. Dates and times for the examinations are set so see Prof Boykoff or your Teaching Assistant immediately if you anticipate any kind of conflict or problem. **The final exam will be cumulative** in that it builds from concepts and foundations discussed throughout the semester. The content for these exams will come from material found in the lectures, recitations, in-class films, and required readings. All exams will be in Math 100. **Bring a pencil, an eraser, a photo ID and your student ID number (it's not the one on card: you can find your student ID number on mycuinfo under 'Profiles') to each exam session.**

**For all Disability Services questions regarding lectures and recitations, see the lead TA Emily Nocito.** Bring in a requisite letter ASAP so that we can begin to plan accordingly for the concurrent exam conditions. Students with a time conflict must take the exam earlier that day of the exam.

If you need to miss an exam due to event that are out of your control, let Prof Boykoff and the lead TA know ahead of time so we can schedule a make-up exam. If you miss an exam without prior notice, you'll need to have documentation for the reason.

### University Recommended Syllabus Statements: Additional Logistics

If you qualify for accommodations due to a disability, please submit to the lead TA and Prof Boykoff a letter from Disability Services in a timely manner so that your needs may be addressed.

**\*\* PLEASE NOTE:** a letter from Disability Services will need to be provided to **BOTH** lecture **AND** recitation instructors.

#### *Accommodation for Disabilities*

If you qualify for accommodations because of a disability, please submit your accommodation letter from Disability Services to your faculty member in a timely manner so that your needs can be addressed. Disability Services determines accommodations based on documented disabilities in the academic environment. Information on requesting accommodations is located on the [Disability Services website](#).

Contact Disability Services at 303-492-8671 or [dsinfo@colorado.edu](mailto:dsinfo@colorado.edu) for further assistance. If you have a temporary medical condition or injury, see [Temporary Medical Conditions](#) under the Students tab on the Disability Services website.

### *Classroom Behavior*

Students and faculty each have responsibility for maintaining an appropriate learning environment. Those who fail to adhere to such behavioral standards may be subject to discipline. Professional courtesy and sensitivity are especially important with respect to individuals and topics dealing with race, color, national origin, sex, pregnancy, age, disability, creed, religion, sexual orientation, gender identity, gender expression, veteran status, political affiliation or political philosophy. Class rosters are provided to the instructor with the student's legal name. I will gladly honor your request to address you by an alternate name or gender pronoun. Please advise me of this preference early in the semester so that I may make appropriate changes to my records. For more information, see the policies on classroom behavior here <https://www.colorado.edu/policies/student-classroom-and-course-related-behavior> and the Student Code of Conduct here <https://www.colorado.edu/osccr/>

### *Honor Code*

All students enrolled in a University of Colorado Boulder course are responsible for knowing and adhering to the Honor Code. Violations of the policy may include: plagiarism, cheating, fabrication, lying, bribery, threat, unauthorized access to academic materials, clicker fraud, submitting the same or similar work in more than one course without permission from all course instructors involved, and aiding academic dishonesty. All incidents of academic misconduct will be reported to the Honor Code ([honor@colorado.edu](mailto:honor@colorado.edu); 303-492-5550). Students who are found responsible for violating the academic integrity policy will be subject to nonacademic sanctions from the Honor Code as well as academic sanctions from the faculty member. Additional information regarding the Honor Code academic integrity policy can be found at the Honor Code Office site here <https://www.colorado.edu/osccr/honor-code>

### *Sexual Misconduct, Discrimination, Harassment and/or Related Retaliation*

The University of Colorado Boulder (CU Boulder) is committed to fostering a positive and welcoming learning, working, and living environment. CU Boulder will not tolerate acts of sexual misconduct (including sexual assault, exploitation, harassment, dating or domestic violence, and stalking), discrimination, and harassment by members of our community. Individuals who believe they have been subject to misconduct or retaliatory actions for reporting a concern should contact the Office of Institutional Equity and Compliance (OIEC) at 303-492-2127 or [cureport@colorado.edu](mailto:cureport@colorado.edu). Information about the OIEC, university policies, anonymous reporting, and the campus resources can be found on the OIEC website here <https://www.colorado.edu/institutionalequity/>

Please know that faculty and instructors have a responsibility to inform OIEC when made aware of incidents of sexual misconduct, discrimination, harassment and/or related retaliation, to ensure that individuals impacted receive information about options for reporting and support resources.

### *Religious Holidays*

Campus policy regarding religious observances requires that faculty make every effort to deal reasonably and fairly with all students who, because of religious obligations, have conflicts with scheduled exams, assignments or required attendance. See the campus policy regarding religious observances for full details <https://www.colorado.edu/policies/observance-religious-holidays-and-absences-classes-andor-exams>

# COURSE SCHEDULE

*This schedule may be modified during the semester so be sure to check the Canvas calendar for the most up-to-date information about readings and lectures*

## WEEK ONE INTRODUCTION

*Recitation*

*No Recitations*

Tues August 27  
Readings: Introduction to the class, different approaches to human-environment relations  
Rockström et al (2009), Orr (2003), Sengupta (2015)

Thurs August 29  
Readings: Sustainability for all?  
Steinbeck – Grapes of Wrath excerpt, Jacobs – Life and Death of American Cities

## WEEK TWO WHY PROTECT THE ENVIRONMENT? & ECOLOGY I

*Recitation*

*No Recitations*

Tues September 3  
Reading: Frames and Perspectives I  
Neff – Chapter: economics and values

Thurs September 5  
Ecology and Ecosystem Services  
guest: Prof. Carol Wessman, Environmental Studies Director

## WEEK THREE ECOLOGY II, FRAME & PERSPECTIVES

*Recitation*

*Introductions/Recitation Syllabus/Writing Workshop*

Tues September 10  
Reading: Frames and Perspectives II  
vignette guest: Emily Beam, TA for ENVS 1000  
Hardin – Tragedy of the Commons excerpt

Thurs September 12  
Reading: Applications in Ecology  
guest: Dr. Kirsten Rowell  
Neff – Chapter: ecosystems and biomes

## WEEK FOUR THE SCIENCE-POLICY INTERFACE

*Recitation*

*Tragedy of the Commons and the Policy Process: Fisheries*

Tues September 17  
Reading: Environmental Policy: Institutions and Processes  
vignette guest: Olivia Pearman, TA for ENVS 1000  
Neff – Chapter: environmental policy

Thurs September 19  
Reading: Environmental Policy: Scalar Dimensions to Governance  
vignette guest: Emily Nocito, Lead TA for ENVS 1000  
Neff – Chapter: environmental policy

## **WEEK FIVE                      OCEANS & ATMOSPHERE**

*Recitation*                      *Midterm exam #1 review / Ocean Acidification and the pH Scale*

Tues September 24                      Components of the Atmosphere  
vignette guest: Patrick Chandler, TA for ENVS 1000  
Reading:                      Neff – Chapter: the atmosphere and air pollution

Thurs September 26                      Ocean issues  
guest: Dr. Joanie Kleypas, Climate & Global Dynamics, National Center for  
Atmospheric Research (NCAR)  
Reading:                      Neff – Chapter: the oceans

## **WEEK SIX                      AIR POLLUTION**

*Recitation:*                      *Midterm exam #1 review / Ocean Acidification and the pH Scale*

Tues October 1                      Air Pollution at Multiple Scales  
Reading:                      Neff – Chapter: the atmosphere and air pollution

Thurs October 3                      **EXAM #1** *bring a #2 pencil, an eraser & your student ID number!*

## **WEEK SEVEN                      CLIMATE**

*Recitation:*                      *What Causes NO<sub>x</sub> and SO<sub>x</sub>?*

Tues October 8                      Climate change: cycles and processes  
Reading:                      Neff – Chapter: the climate

Thurs October 10                      Current climate challenges  
Reading:                      Weart (2008) – The ‘Discovery’ of Global Warming excerpt

## **WEEK EIGHT                      HISTORIES OF ENVIRONMENTAL GOVERNANCE**

*Recitation*                      *Climate Change Adaptation and Mitigation*

Tues October 15                      Environmental Policy: Historical Considerations  
vignette guest: Alex Halverson, TA for ENVS 1000  
Reading:                      Carson – Silent Spring excerpt, Leopold – Sand County Almanac excerpt

Thurs October 17                      Environmental Governance: current challenges  
Reading:                      McKibben – The End of Nature excerpt, Thoreau – Walden excerpt

## **WEEK NINE                      BIOGEOCHEMICAL CYCLES**

*Recitation                      Biogeochemical Cycles in Aquatic Ecosystems (all recitations held at Boulder Creek)*

**Sun October 20                      Advocacy paper 1 due**

Tues October 22                      the carbon cycle  
Reading:                      Neff – Chapter: biogeochemical cycles

Thurs October 24                      Nitrogen and phosphorous cycles  
Reading:                      Neff – Chapter: biogeochemical cycles

## **WEEK TEN                      FOOD AND AGRICULTURE**

*Recitation                      GM Sugarbeets: A Boulder Controversy*

Tues October 29                      Food and the Environment  
vignette guest: Sebastian Duenas-Ocampo, TA for ENVS 1000  
Reading:                      Neff – Chapter: agriculture

Thurs October 31                      Agriculture and the Environment  
guest: Professor Pete Newton, Environmental Studies  
Reading:                      Pollan – The Omnivore's Dilemma excerpt

## **WEEK ELEVEN                      FRESH WATER**

*Recitation                      Midterm exam #2 review*

Tues November 5                      Freshwater I  
Reading:                      Neff – Chapter: freshwater, Reisner (1993) Cadillac Desert excerpts (links to YouTube)

Thurs November 7                      Freshwater II  
Reading:                      Neff – Chapter: freshwater  
guest: Dr. Benét Duncan, Western Water Assessment Managing Director

## **WEEK TWELVE                      HEALTH**

*Recitation                      Inequality and the Human/Environment Relationship*

Tues November 12                      toxics & health  
Neff – Chapter: human health and the environment  
guest: Professor Shelly Miller, Mechanical Engineering

Thurs November 14                      **EXAM #2** bring a #2 pencil, an eraser & your student ID number!



### **WEEK THIRTEEN POVERTY AND CONSUMPTION**

*Recitation*                      *Human Population Growth and Environmental Impacts*

Tues November 19      human population: demography and (in)equality  
    Reading:              Neff – Chapter: human populations

Thurs November 21      poverty and consumption in the 21<sup>st</sup> century  
    Reading:              Durning – The Dubious Rewards of Consumption

**\*\*\* WEEK FOURTEEN ~ NOVEMBER 23-DECEMBER 1 ~ FALL BREAK \*\*\***

### **WEEK FIFTEEN CARBON-BASED ENERGY**

*Recitation*                      *Energy Basics: The Demand Curve and Incorporating Renewables*

Tues December 3      the rise of the carbon economy  
    Reading:              Neff – Chapter: energy use

Thurs December 5      carbon-based energy & decarbonization  
    Reading:              Neff – Chapter: non-renewable energy

### **WEEK SIXTEEN DECARBONIZATION & RENEWABLE ENERGY**

*Recitation*                      *Review for Final Exam*

**Sun December 8      Advocacy paper 2 due**

Tues December 10      renewable energy  
    Reading:              guest: Dr. Rudy Kahsar, Environmental Studies  
    Neff – Chapter: renewable energy

Thurs December 12      concluding thoughts and good news

**FINAL EXAM      SUNDAY, DECEMBER 15<sup>TH</sup> 4:30-7:30PM** *bring #2 pencil, eraser & your student ID number!*