

## Course Syllabus

### Our Changing Climate: Past, Present, Future

Spring 2022

**Course Number:** HONR F125/NRM F125/ACNS F125

**Prerequisites:** Placement in WRTG F111X

**Credits:** Lecture + Lab + Other: 3 + 0 + 0

#### **Class Time and Location and associated CRN:**

Tu. & Th. 8:00 am - 9:30 am, Gruening Building 301

- Final exam period: 8:00 - 10:00 a.m., Tuesday, April 26, 2022
- 38972 - HONR F125 - 003

Tu. & Th. 11:30 am - 1:00 pm, Engineering Learning and Innovation Facility 301

- Final exam period: 1:00 - 3:00 p.m., Tuesday, April 26, 2022
- 34184 - ACNS F125 - 001
- 34683 - HONR F125 - 001
- 34964 - NRM F125 - 001

#### **Zoom Link (Only Use When Specified)**

Join Zoom Meeting

<https://alaska.zoom.us/j/89430049757>

Meeting ID: 894 3004 9757

One tap mobile

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+16699006833,,89430049757# US (San Jose)

Dial by your location

+1 669 900 6833 US (San Jose)

+1 253 215 8782 US (Tacoma)

+1 929 205 6099 US (New York)

+1 301 715 8592 US (Washington DC)

Meeting ID: 894 3004 9757

#### **Instructors**

Katie Spellman, PhD

Email: [klspellman@alaska.edu](mailto:klspellman@alaska.edu)

Office hours: Directly following class or by appointment

Office location: Akasofu 203

Kristin Timm, PhD

Email: [kmtimm@alaska.edu](mailto:kmtimm@alaska.edu)

Office hours: Directly following class or by appointment

Office location: Akasofu 408E

### **Course Catalog Description**

Examines the intersecting physical, social, ecological, economic, political, and cultural dimensions of climate change in Alaska and the Arctic, including both Indigenous and Western science perspectives. Includes project-based experiences in observation, data collection and analysis, assessment, planning, communication to shape the future in a time of unprecedented change.

### **Course Purpose**

This course examines how the biophysical impacts of climate change define and intersect with the social, ecological, economic, political, and cultural dimensions of our lives. We will investigate the multiple dimensions of global climate change, with a focus on the ways climate change affects the interconnected physical, biological, and human systems in Alaska and the Arctic. Through activities, guest speakers, readings, and lectures, it provides a foundation in both Indigenous and Western science perspectives of the causes, impacts, and feedbacks of a changing climate. We will critically examine scientific claims and the processes of generating climate science, developing an understanding of the scientific method through observation, data collection and analysis. We will also explore the ways in which climate change is shaped by history and presently shapes our culture. By looking at research from communication, human behavior, and social movements, we will investigate the multiple pathways of social change, with an emphasis on our own vision and agency to shape the future in a time of unprecedented change.

### **Learning Goals & Objectives**

**Course Big Idea:** We can listen, inquire, observe, and act to make a difference on climate change.

#### **Enduring Understandings:**

1. Climate change influences each of us personally.
2. Climate change influences earth systems at multiple interacting scales.
3. Climate change influences all dimensions of our lives- social, economic, cultural, and biophysical.
4. We can help our communities to respond to climate change and shape the future.

### **Unit Level Essential Questions and Learning Objectives**

Unit 1. What is our individual or personal connection to climate change and how does it connect with broader systems?

Students will be able to:

- Conduct elder visits following local protocol in a respectful manner
- Reflect on and articulate their personal observations of environmental change in place special to them
- Establish a baseline of individual and collective (i.e. across course students) prior knowledge on the topic of climate change

Unit 2. How do we know the climate is changing?

Students will be able to:

- Describe causes of climate change and key amplifying and stabilizing feedbacks (with emphasis on Arctic feedbacks)
- Identify key indicators and sources of evidence that form the baseline of evidence to understand climate change (including Indigenous and Western science knowledge)
- Collect and interpret ecological and social science data
- Understand mathematical models and projections of climate change

Unit 3. What are the impacts and feedbacks of a warming climate?

Students will be able to:

- Identify reputable sources of climate change information for a region
- Articulate key changes in disturbance patterns, livelihoods, species distributions and phenology influenced by a changing climate
- Describe the interactions and feedbacks between the above changes across local to global scales, and natural and social processes.

Unit 4. What are the solutions to climate change?

Students will be able to:

- Understand that human behavior is the product of individual actions, shaped by local context
- Articulate the pathways and levers that could be used to reach drawdowns and the pros and cons of each “lever”
- Identify the pathways by which societal change occurs in the U.S.

Unit 5. How do we make decisions in the face of climate change?

Students will be able to:

- Synthesize evidence to identify social and biophysical factors that influence local vulnerabilities to climate-related risks
- Take a scenario and describe the actions they would take using the RAD framework or other decision-making framework (e.g. adaptation toolkit)

Unit 6. What can I do about climate change in my community and how do we prepare for change?

Students will be able to:

- Understand and articulate a personal climate action plan
- Synthesize multiple lines of evidence to create a future scenario
- Apply theories of transformation to create a vision and action plan for the future

**Our Teaching Philosophy**

- Each of you brings valuable personal observations and knowledge with you to this class.
- We are partners and collaborators in the learning process, each responsible for sharing what we know with each other
- Our job as educators is to activate your personal connection and prior knowledge and challenge each of you to continue to build your understanding, advance your ability to apply and synthesize new scientific knowledge and skills, and identify pathways to solve the problems you care about most
- Our assignments are challenging, creative, and nurturing spaces to test your ideas and sharpen your skills. Problems like climate change never have one right solution, and you'll be assessed for engaging deeply versus finding a single, correct answer.
- We care deeply for your success in this class and beyond, and as such we expect you to bring equal energy to that goal, by being responsible for your own learning before, during, and after class.

**Diversity and Inclusion**

- People of color have been leaders in the movements for environmental justice and climate change, but are often not recognized for their contributions to this effort. We strive to provide opportunities to hear the voices of people of color in 50% of our weekly assignments and activities.
- The richness of this class would not be possible without Alaska Native Knowledge holders. We are grateful for the time they spend sharing their knowledge with us.
- We honor that students have a variety of skills, gifts, and abilities when it comes to learning, and we aim to provide resources that meet a variety of learning preferences (i.e. reading, watching, listening, experiencing, etc.)
- We acknowledge our positions of privilege as white, cis-gendered women in our society and we are actively learning and working towards creating an environment where we can listen and learn together. We aim to acknowledge and address issues of diversity, inclusion, and power within this class and the context of climate change.

**Course Policies**

*Participation and attendance*- Success in this course is dependent on your active participation and engagement. It is good practice to login to online courses several times a week to stay informed of news, announcements, grades, assignments, and other important course information. Students are required to participate in course related activities that may include, but not limited to reading announcements, participating in group work, submitting assignments, and joining the synchronous online class sessions.

*Technical Requirements* - Students must have regular access to a computer and internet to access course materials on Canvas and upload assignments. There will be a few class periods that will be held through Zoom. Students are strongly encouraged to have and use a webcam for class sessions on Zoom.

*Plagiarism/Academic Integrity Policy-* Acts of academic dishonesty include cheating on exams, using data or words of other students without permission, helping others to dishonestly cheat, plagiarizing, feigning illness to obtain an extension, and turning in work that was written for another class without permission. Plagiarism includes overt or covert use of other people's work, ideas or words without acknowledgement or quotation. Please read the UAF Code of Conduct in the UAF Catalog. Any person enrolled in the course who behaves dishonestly will receive an F for the class and the case will be presented to the University Disciplinary and Honor Code Committee for review.

*Email Policy-* In order to ensure that your email does not get sent to the spam folder, please use your University of Alaska-assigned email address for all email correspondence. We will respond to emails within 24 h Monday thru Friday between 9 am and 5 pm. All emails sent after 5 pm on Friday will be replied to by Monday 5 pm. Please use the course number in your email subject line so that we can better identify and respond to emails regarding this class. We may not see an email that does not contain this subject line.

*Late Policy-* Work turned in late will have a 5% deduction in points automatically, unless otherwise communicated with the instructors. Extensions will be granted for extenuating circumstances that are clearly communicated to the instructors per the email policy above.

### **UAF Wide Course Policies**

*Disabilities Services-* The Office of Disability Services implements the Americans with Disabilities Act (ADA), and ensures that UAF students have equal access to the campus and course materials. Students and the instructor of this course may work with the Office of Disabilities Services to provide reasonable accommodation to students with disabilities.

*Student Protections Statement-* UAF embraces and grows a culture of respect, diversity, inclusion, and caring. Students at this university are protected against sexual harassment and discrimination (Title IX). Faculty members are designated as responsible employees which means they are required to report sexual misconduct. Graduate teaching assistants do not share the same reporting obligations. For more information on your rights as a student and the resources available to you to resolve problems, please go to the following site: <https://catalog.uaf.edu/academics-regulations/students-rights-responsibilities/>.

### **Courses in the Time of COVID**

These are uncertain times, and we understand that you may experience unexpected challenges during the semester. Please communicate with us if you are having challenges related to health, technology, caregiving responsibilities, or work responsibilities. We know it can be difficult to ask for help, but we will work with you to find a way to help you be successful in this course while maintaining the care for yourself and your loved ones during this semester. Please email us and we will respond in accordance with the Email Policy previously stated.

We also ask you to be patient with us if there is a need to make changes to the syllabus or the weekly course plan in response to the evolving situation with COVID19. We will strive to communicate any changes to the course to you as soon and as clearly as possible.

Please do not come to class if you are experiencing and COVID19 symptoms.

### Required Readings and Videos

You will be responsible for reading, watching, or listening to assigned materials prior to class on all days that readings are assigned.

The book *Saving Us: A Climate Scientist's Case for Hope and Healing in a Divided World*, by Dr. Katharine Hayhoe, is required reading for this course and available at the UAF bookstore or [through major book vendors](#).

All other required readings and course materials will be provided through Canvas.

### Assignments

All assignment descriptions and grading rubrics are available on Canvas. Unless otherwise noted, all assignments must be submitted using Canvas.

Assignment Name	Points	Percent of Grade	Due Date
<b>Start of Semester Survey</b>	5	2.5%	Due: 1/11
<b>In-class Participation and Discussion (1 point per class)</b> Come to each class having read the assigned readings (or watched or listened to assigned videos/audios) and are prepared to discuss them in class. Actively participate in discussions and in-class activities.	28	14%	Each Class
<b>Reading Reflection/Guided Notes (1 point each)</b> Read the assigned readings (or watch or listen to assigned video/audio) and submit a "circle-square-triangle" reading reflection or submit the guided notes before class.	22	11%	Each class that has assigned readings
<b>Personal Observations of Change Map</b> Draw and annotate a map of a place you know well and the social or ecological changes you have observed in that place.	10	5%	Assign: 1/11 Due: 1/13
<b>Elder Visit Reflection Paper</b> Write a brief reflection on the experience of visiting with an Alaska Native elder.	10	5%	Assign: 1/18 Due: 1/20
<b>Interviews with Climate Leaders</b> Choose two experts to interview and take notes. Write a 2-3 page essay to summarize what you learned from the interviews.	25	12.5%	Assign: 1/11 Due: 3/4

**In Person Section**

<p><b>Personal Action Essay</b> Use calculators to investigate your personal environmental impact, choose a personal behavior to change for the semester, and write an essay to reflect on your experience.</p>	25	12.5%	Assign: 1/11 Part 1 Due: 2/1 Part 2 Due: 4/12
<p><b>Final Paper/Project</b> Write a final paper, or create a video, audio, or multimedia expression that is a "Postcard from the Future." Prepare a 5 minute in-class presentation about your project.</p>	25	12.5%	Assign: 1/11 Due: 4/21
<p><b>Climate Impacts and Feedbacks Presentation</b> Research and create a presentation on an assigned climate change impact and its influence on the social or biophysical elements of a region or community.</p>	25	12.5%	Assign: 2/1 Due on the day you present.
<p><b>Citizen Science Project</b> Collect 3 river or lake ice observations OR make weekly observations of clouds for 3 weeks through the GLOBE Observer app. Analyze your data as a part of a global dataset at GLOBE.gov, and practice writing a scientific report on your data.</p>	25	12.5%	Assign: 2/1 Due: 2/24
	200	100%	

Grading Scheme: >90% = A; 80-89% = B; 70-79% = C; 60-69% = D; <60% = F

**Course Schedule**

This schedule may be subject to change.

Date	Topic	Assignment Due Today
<b>Week 1</b>		
Jan. 11 (Tues)  Both	<p><b>Meet with Zoom</b>  <b>What are we going to do in this course?</b>  <b>What are my personal connections to climate change?</b></p> <p>Introduce <a href="#">personal action project</a> and climate expert interviews.</p>	Start of Semester Survey
Jan. 13 (Thurs)  Both	<p><b>Meet with Zoom</b>  <b>What are my personal connections to climate change?</b>  <b>How should we prepare for an Alaska Native Elder visit?</b></p> <ul style="list-style-type: none"> <li>● Personal observations maps</li> <li>● Analyzing maps, sorting by lenses (economic, cultural, biological, hydrological, etc)</li> <li>● Preparing for an elder visit discussion with guest speakers Kathleen Meckel (8:00 am) and Dr. Elena Sparrow (11:30 am)</li> </ul>	<p>Saving Us, Chapter 2, Who I Am</p> <p>Saving Us, Chapter 3, Who You Are</p> <p>Personal Map: Finish your map and post it to canvas. Write a short narrative or record an audio/video of your explanation of the map.</p>
<b>Week 2</b>		
Jan 18. (Tues)  Katie	<p><b>Meet with Zoom</b>  <b>What do Alaska Native Elders say about climate change?</b></p> <p>Guest speaker:              8:00 am Sam Demientieff (Holy Cross)              11:30 am Doreen Nutaaq Simmonds (Utqiagvik)</p> <p>Alaska Native elder visit and discussion</p>	<p>Watch <a href="#">Legacy of our Elders</a> Video on Sam Demientieff</p> <p>Watch <a href="#">Aakang, Aakang (Mama, Mama)</a> Poem by Doreen Nutaaq Simmonds video by Rachel Edwardson</p> <p>Read <a href="#">Guidelines for Respecting Cultural Knowledge</a> by the Alaska Native Knowledge Network</p> <p>Bonus: Watch <a href="#">Iñupiaq Elders Speak Out</a> Interview with Doreen Nutaaq Simmonds</p>



Jan. 20 (Thurs) Katie	<p><b>How are climate impacts connected to each other?</b></p> <p><b>What are the changes in key global indicators and feedback loops?</b></p> <ul style="list-style-type: none"> <li>● Personal connection related to broader system</li> <li>● Concept mapping of Alaska/Climate Climate Impacts</li> <li>● Key feedback loops <ul style="list-style-type: none"> <li>○ Ocean circulation</li> <li>○ Atmosphere / clouds</li> <li>○ Ice/ Albedo</li> <li>○ Methane / permafrost</li> </ul> </li> </ul>	Elder Visit Reflection Essay. 1 page minimum reflection on what the elder has shared with us. You may use the Square-Circle-Triangle format to structure your essay, or a free-form reflection.
Week 3		
Jan. 25 (Tues) Katie	<p><b>What are the causes of climate change?</b></p> <ul style="list-style-type: none"> <li>● Flows of energy at household, national and global scales</li> <li>● Greenhouse effect</li> <li>● Hot questions about greenhouse gases</li> </ul>	<p>Saving Us, Chapter 4 The Facts are the Facts</p> <p>Read Chapter 2, Key Message Sections 1, 2, and 10 of the 4th National Climate Assessment</p>
Jan. 27 (Thurs) Katie	<p><b>What are the main lines of evidence that climate is changing?</b></p> <p><b>Why should we trust this evidence?</b></p> <p><a href="https://gml.noaa.gov/ccgg/trends/history.html">https://gml.noaa.gov/ccgg/trends/history.html</a></p> <ul style="list-style-type: none"> <li>● Climate vs. weather/weather cycles</li> <li>● Paleorecords of climate change</li> <li>● Indigenous Knowledge</li> <li>● Keeling curve</li> <li>● Climate change indicators (sea ice, phenology, pollen records, tree rings)</li> <li>● Scientific consensus</li> </ul>	<p>Watch <a href="#">Why We Should Trust Science Most of the Time</a> by Naomi Oreskes</p> <p>Saving Us, Chapter 8- A Faraway Threat &amp; Chapter 9- Here and Now</p>
Week 4		
Feb. 1 (Tues) Katie	<p><b>How are biophysical climate change data collected?</b></p>	<p><a href="#">Personal Action Essay Part 1</a> due</p>

	<ul style="list-style-type: none"> <li>● Framing the questions in climate change research</li> <li>● Study design (experimental vs. observational, controlling for bias)</li> <li>● Citizen science in climate change research</li> <li>● Introduce monitoring project, data collection and report</li> </ul>	
Feb. 3 (Thurs) Katie	<p><b>How is biophysical data analyzed in climate change research?</b></p> <ul style="list-style-type: none"> <li>● Making sense of data</li> <li>● Where do trendlines come from?</li> <li>● How is variation described?</li> <li>● What is a climate model?</li> </ul>	<p>Read <a href="#">“Science isn’t just for Scientists - we can all take part”</a> by Madeline Ostrander</p> <p>Read “How reliable are climate models?” and watch embedded videos in <a href="https://skepticalscience.com/climate-models.htm">https://skepticalscience.com/climate-models.htm</a></p> <p>Make a GLOBE Observer cloud or ice observation using the app</p>
Week 5		
Feb. 8 (Tues)  Kristin via zoom link at top of syllabus	<p><b>Meet with Zoom</b></p> <p><b>What do we [physically in the atmosphere] need to do to solve climate change?</b></p> <ul style="list-style-type: none"> <li>● Why does global warming need to be limited to 1.5 - 2 degrees C?</li> <li>● How much time do we have to make these changes?</li> <li>● What stands in the way of meeting these global greenhouse gas emissions targets?</li> </ul>	<p>Read <a href="#">Global Warming’s Terrifying New Math</a> by Bill McKibbon</p> <p>Read <a href="#">The New Climate Math: The Numbers Keep Getting More Frightening</a> by Bill McKibbon</p> <p>Saving Us, Chapter 10, No Time to Waste</p> <p>Saving Us, Chapter 17, Time to Speed Up</p>

<p>Feb. 10 (Thurs)</p> <p>Kristin via zoom link at top of syllabus</p>	<p><b>Meet with Zoom</b></p> <p><b>What are the solutions to climate change?</b></p> <ul style="list-style-type: none"> <li>• How much do different activities contribute to climate change?</li> <li>• What solutions can be used to reduce greenhouse gas emissions?</li> <li>• What are the pros and cons of different types of solutions?</li> </ul>	<p>Saving Us, Chapter 12, Why We Fear Solutions</p> <p>Saving Us, Chapter 13, Carbon and the Common Good</p> <p>Saving Us, Chapter 14, The Climate Potluck</p> <p>Make a GLOBE Observer ice or cloud Observation</p>
<p>Week 6</p>		
<p>Feb. 15 (Tues)</p> <p>Kristin</p>	<p><b>What needs to happen [in policy] to limit warming to 2 degrees?</b></p> <ul style="list-style-type: none"> <li>• EN-ROADS Simulation: conduct a climate change solutions negotiation simulation.</li> </ul>	<p>Saving Us, Chapter 15, Everyone Needs Energy</p> <p>Saving Us, Chapter 16, Cleaning Up Our Act</p> <p>Review the preparation materials for EnRoads (on Canvas) and familiarize yourself with the EnRoads platform with <a href="#">this video</a>.</p>
<p>Feb. 17 (Thurs)</p> <p>Katie</p>	<p><b>Meet with Zoom or in-person</b></p> <p><b>How do we make decisions in the face of climate change?</b></p> <ul style="list-style-type: none"> <li>• Guest Speaker John Morton, on land management decisions in rapid change</li> </ul> <p>Review Citizen Science data project assignment, demo data analysis in excel.</p>	<p>Read <a href="#">As Warming Alters Alaska, Can a Key Wildlife Refuge Adapt?</a> by Miranda Weiss</p> <p>Make a GLOBE Observer ice or cloud observation</p>
<p>Week 7</p>		
<p>Feb 22 (Tues)</p> <p>Kristin</p>	<p><b>How do we respectfully engage and collaborate with communities?</b></p> <ul style="list-style-type: none"> <li>• Guest speaker Darcy Peter, and respectful engagement with communities</li> </ul>	<p>Read <a href="#">Understanding Our Environment Requires an Indigenous Worldview</a> by Raychelle Daniel</p> <p>Read Guiding Principles for Working in Northern Communities 2020 by Darcy Peter (on Canvas)</p>

		<p>Read a summary of the <a href="#">Alaska Native Claims Settlement Act (ANCSA)</a></p> <p>Watch a <a href="#">short video about ANCSA</a> by Kendra Remsen</p> <p>Watch <a href="#">This Is The Story Of Alaska Natives' Fight For Their Land</a> by Al Jazeera News</p>
<p>Feb 24 (Thurs) Kristin</p>	<p><b>What does it mean to adapt and build resilience to climate change?</b></p>	<p><b><a href="#">Citizen Science data project report due</a></b></p> <p>Read <a href="#">Fourth National Climate Assessment - Ch. 28 Reducing Risks Through Adaptation Actions</a></p> <p><a href="#">Unequal Impact: The Deep Links Between Racism and Climate Change</a> by Beth Gardiner</p> <p>Read <a href="#">‘What choice do we have?’ As the Arctic warms, Alaska Inupiat adapt</a> by Jenna Kunze</p>
<p>Week 8</p>		
<p>Mar. 1 (Tues) Kristin</p>	<p><b>What do Americans think about climate change?</b></p>	<p>Saving Us, Chapter 1, Democrats and Dismissives</p> <p>Saving Us, Chapter 20, Why Talking Matters</p>
<p>Mar. 3 (Thurs) Kristin</p>	<p><b>How do human thoughts, feelings and behaviors relate to climate change?</b></p>	<p>Saving Us, Chapter 5, The Problem with Facts</p> <p>Saving Us, Chapter 6, The Fear Factor</p>

		Saving Us, Chapter 7, The Guilt Complex
Mar. 8 (Tues)	SPRING BREAK - NO CLASS	
Mar. 10 (Thurs)	SPRING BREAK - NO CLASS	
Week 9		
Mar. 15 (Tues)  Both	<b>Regroup and Refresh!</b> <ul style="list-style-type: none"> <li>● Debrief on interview assignment</li> <li>● Update concept map</li> <li>● Model presentations</li> <li>● Get help/catch up on work</li> </ul>	Bring your interview assignment and any work you started on your climate impacts and feedbacks presentation
Mar. 17 (Thurs)  Katie	<b>How is the marine environment changing?</b> <ul style="list-style-type: none"> <li>● Ocean Temperature</li> <li>● Ocean Acidification</li> <li>● Sea level rise</li> <li>● Marine life</li> </ul>	Climate Impacts/Feedback Presentation Due  8:00 class - Lydia, Linnaea, Amelia 11:30 class - Erica, Julie-Anne
Week 10		
Mar. 22 (Tues)  Katie	<b>How is the hydrosphere changing?</b> <ul style="list-style-type: none"> <li>● Deeper dive into precipitation change (timing, type)</li> <li>● Changes in rivers and lakes (dissolved oxygen, temperature, ice seasonality)</li> </ul>	Climate Impacts/Feedback Presentation Due  8:00 class - Marianna, Leo 11:30 class - Will, Aksiin
Mar. 24 (Thurs)  Kristin	<b>How is the pedosphere changing?</b> <ul style="list-style-type: none"> <li>● Soils</li> <li>● Permafrost</li> <li>● Chemical and biological processes</li> </ul>	Climate Impacts/Feedback Presentation Due  8:00 class - Trillium, Evan 11:30 class - Koen, Chloe, Grace
Week 11		
Mar. 29 (Tues)  Kristin	<b>How is human health affected by climate change?</b> <ul style="list-style-type: none"> <li>● Heat and the body</li> <li>● Extreme events</li> <li>● Vector borne disease</li> <li>● Food security</li> <li>● Mental health</li> </ul>	Saving Us, Chapter 11, The Sickness and the Cure  Climate Impacts/Feedback Presentation Due  8:00 class - River, Helen, Joy 11:30 class - Cole

Mar. 31 (Thurs) Kristin	<p><b>How is the cryosphere changing?</b></p> <ul style="list-style-type: none"> <li>● Sea Ice</li> <li>● Glaciers</li> <li>● Snow and ice</li> </ul>	<p>Climate Impacts/Feedback Presentation Due</p> <p>8:00 class - Darya, Will, Hazel</p> <p>11:30 class - Hannah, Torin</p>
Week 12		
Apr. 5 (Tues) Katie	<p><b>How is the biosphere changing?</b></p> <ul style="list-style-type: none"> <li>● phenology shifts</li> <li>● changes in biodiversity (range shifts, biological invasions, etc.)</li> <li>● changes in primary production (greening and browning) and feedbacks to climate system</li> </ul>	<p>Climate Impacts/Feedback Presentation Due</p> <p>8:00 class - Katherine, Jason</p> <p>11:30 class - Matt, Josie, Julie-Anne (asked to do March 17)</p>
Apr. 7 (Thurs) Katie	<p><b>How is the atmosphere changing?</b></p> <p>Changes in the Atmosphere</p> <ul style="list-style-type: none"> <li>● Temperatures</li> <li>● Precipitation</li> <li>● Seasonality</li> <li>● Weather &amp; storms</li> </ul> <p>Activity: Investigate connections between global temperature, solar radiation, and precipitation data throughout an annual cycle using NASA datasets, then compare the influence of these variables on primary production, cloud cover and aerosols.</p>	<p>Climate Impacts/Feedback Presentation Due</p> <p>11:30 class - Jenessa</p>
Week 13		
April 12 (Tues) Kristin	<p><b>Can our personal actions help address climate change?</b></p> <ul style="list-style-type: none"> <li>● Discuss personal action plans</li> <li>● If there is one, what is the role for individual action in our climate future?</li> <li>● How do personal actions connect to broader changes and make a difference?</li> </ul>	<p><a href="#">Personal Action Essay Part 2</a> Due</p> <p>Saving Us, Chapter 18, Why You Matter</p> <p>Saving Us, Chapter 19, What I Do</p>

		<p><a href="#">I work in the environmental movement. I don't care if you recycle</a> by Mary Annaise Heglar</p> <p>Read <i>A Field Guide for Transformation</i> by Leah Caramore Stokes (on Canvas)</p>
<p>Apr. 14 (Thurs)</p> <p>Kristin</p>	<p><b>How can we scale up collective action?</b></p> <ul style="list-style-type: none"> <li>• How does a movement happen?</li> <li>• How do ideas and behaviors spread in society?</li> <li>• What have other movements done?</li> <li>• How should this shape our advocacy on climate change?</li> </ul>	<p><a href="#">The Environmental Movement Needs to Reckon with Its Racist History</a> by Julian Brave NoiseCat</p> <p>Read <a href="#">The 25% Tipping Point</a> <a href="#">New research reveals how to make social change</a> by Tracy Matsue Loeffelholz</p> <p>Read <i>Beyond Coal</i>, by Mary Anne Hitt (on Canvas)</p>
<p>Week 14</p>		
<p>Apr. 19 (Tues)</p> <p>Both</p>	<p><b>Course wrap up – How do we find hope and courage to solve the climate crisis?</b></p> <ul style="list-style-type: none"> <li>• Summarize what we have learned</li> <li>• Address additional questions</li> <li>• Discuss hope and courage</li> <li>• Course evaluations</li> </ul>	<p>Saving Us, Chapter 21, Bond, Connect, and Inspire</p> <p>Saving Us, Chapter 22, Finding Hope and Courage</p>
<p>Apr. 21 (Thurs)</p> <p>Both</p>	<p><b>Final Student Presentations: Postcards from the Future</b></p> <ul style="list-style-type: none"> <li>• 5 minute presentation or show video</li> </ul>	<p>Final Paper/Project &amp; Presentation due</p>
<p>Week 15</p>		
<p>If you are in Tu. &amp; Th. 8:00 am - 9:30 am, Final exam period: 8:00 - 10:00 a.m., Tuesday, April 26, 2022</p>	<p><b>Final Student Presentations: Postcards from the Future</b></p> <ul style="list-style-type: none"> <li>• 5 minute presentation or show video</li> </ul>	

If you are in Tu. & Th. 11:30 am - 1:00 pm, Final exam period: 1:00 - 3:00 p.m., Tuesday, April 26, 2022		
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