



## UCSC Earth Day Teach-In Fri 4.22.2022!

Sponsored by the UCSC Climate Coalition-[bit.ly/ucsccl](https://bit.ly/ucsccl)

Maps: [homepage](#) and [interactive](#). Parking lots noted [here](#).

(meters in most lots or daily pass available at kiosk at base of campus, \$10/day)

This document is also accessible as [bit.ly/EDTeach](https://bit.ly/EDTeach)

Note: Cervantes/Velasquez & Amah Mutsun rooms are in Bay Tree Conference Center (above Quarry Plaza).

Special thanks to the Writing Program and to the People of Color Sustainability Collective for arranging rooms...and to all the instructors for sharing their time and expertise with our campus community!

### Wed/Thurs – Teach-in agenda in brief (detailed descriptions below):

| When and where                                  | Teach-in                                                                                                                                                                           |
|-------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Wed 1:25-2:30 – CoastBio 203                    | Narwhals, Seismic Exploration, and the True Cost of Oil with Terrie Williams                                                                                                       |
| Wed 5:20-6:25 – SocSci2, 171                    | Travel and the Climate Crisis with Dina El Dessouky                                                                                                                                |
| Th 11:40-1:15 – Baskin 165                      | Race, Gender, and the Environment with Emily Murai                                                                                                                                 |
| Th 6:00-7:30 pm – <a href="#">register here</a> | Confronting Climate Change in Santa Cruz County, panel organized by the Soc Sci division with Sikina Jinnah, Katherine Seto, Borja Reguero, Sherrie Flumerfelt, and Valentin Lopez |

### Earth day! Friday April 22 – Teach-in agenda in brief (detailed descriptions below):

| When and where                                                        | Teach-in                                                                                                  |
|-----------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| 8 am – <a href="#">zoom via Eventbrite</a> , password UCGND           | A screening of <i>Coming Clean</i> with live Q&A with the filmmakers, Carolina Montejo and Andre Salehian |
| 9:20 am – Kresge 321 or via <a href="#">zoom</a><br>Passcode: METX135 | The Global Crisis of Plastics Pollution with Myra Finkelstein                                             |
| 9:20 am – Hum 206                                                     | Climate Change and Drought with Michael Loik                                                              |

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|--------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| 9:20 am – Hum 359 <a href="#">recording here</a>                                                 | Advocating Climate Education: The Case of LA Unified with Dan Linehan                           |
| 9:20 am – Hum 259 <a href="#">slides here</a>                                                    | The Role of Nuclear Energy in the Climate Battle with Stephen Williams                          |
| 9:20 am – <a href="#">zoom</a> link                                                              | How to End Greenhouse Emissions at UC with UCD prof Stephen Wheeler                             |
| 9:20 am - Quarry Amphitheater or, if rain, Amah Mutsun (BayTree ConfCtr)                         | Meditation to Rise Up Rooted: Self-Care Practice for Earth-Care Advocates with Michelle Merrill |
| 10 am – Interdisciplinary Sci Bldg 455                                                           | IPCC AR6's report on water impacts/vulnerability with Pam Rittelmeyer                           |
| 10:40 am – Amah Mutsun, Bay Tree Conference Center – <a href="#">slides here</a>                 | How to improve the outcomes of tree-growing campaigns with Karen Holl                           |
| 10:40 am – Hum 2: 359                                                                            | Strategies and Tactics of Climate Communication with Dan Linehan                                |
| 10:40 am – Hum 2: 259                                                                            | Climate Activism in the US with Ami Chen Mills                                                  |
| 10:40 am – Cowell 223                                                                            | Housing/Land Use and the Climate with student Zennon Ulyate-Crow                                |
| 10:40 am – Cervantes/Velasquez, Bay Tree Conference Center                                       | Colonialism, Supremacism, Capitalism with students of the PoCSC                                 |
| <b>12:15 pm - 3 pm QUARRY PLAZA</b>                                                              | <b>Student rally, speeches, art, and march through campus</b>                                   |
| 2:40-3:45 pm - Media Theater M110                                                                | Two Minutes to Midnight: Consequences of Increasing CO2 Emission, with William Scott            |
| 3 pm – <a href="#">zoom</a> link, <a href="#">recording here</a> and <a href="#">slides here</a> | Why Lowering Your Carbon Footprint Isn't Enough, with Andy Szasz                                |
| 4 pm – <a href="#">zoom</a> link, <a href="#">recording here</a>                                 | The Seymour Center as a Climate Resource with Jonathan Hicken                                   |
| 4 pm – PhySci 114 <a href="#">recording here</a>                                                 | Sensor Networks for Sustainability with Colleen Josephson                                       |
| 4 pm – Cowell 131 <a href="#">slides here</a>                                                    | Legal Mechanisms to Protect Natural Resources with Gary Patton                                  |
| 4 pm – Hum 250 <a href="#">Slides here</a>                                                       | Antarctica, Sea Level Rise, and What Students Can Do with Slawek Tulaczyk                       |
| 4 pm – Hum 1: 202                                                                                | The Borg, the Hive, and Corporate Hegemony with Steve Coulter                                   |
| 4 pm – Hum 1: 210                                                                                | Taking Environmental Activism to Political Action with Justin Cummings                          |

## Detailed Agenda and Talk Descriptions:

### Wed April 20

1:25-2:30 pm

#### Narwhals, Seismic Exploration, and the True Cost of Oil

CoastBio 203

Instructor: Terrie Williams, Ecology & Evolutionary Biology

[tmwillia@ucsc.edu](mailto:tmwillia@ucsc.edu)

In this talk Dr. Williams will discuss how human dependence on fossil fuels have impacted the daily lives of wild marine and terrestrial mammals from coastal sea otters to polar bears and narwhals of the high Arctic.

About the instructor: Dr. Williams explores the functional relationships between animals and their environment in order to understand the ecological significance of a species and the adaptive changes that may be necessary for its survival in the face of climate change. Current research projects in her laboratory include metabolic regulation in swimming and diving dolphins, hunting behavior and physiology of Weddell seals in the Antarctic, and the effects of pregnancy on nutritional status of declining populations of Steller sea lions.

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5:20-6:55 pm

#### Travel and the Climate Crisis: Letters from the Front

SocSci 2, 171

Dina El Dessouky, Writing Program

[deldesso@ucsc.edu](mailto:deldesso@ucsc.edu)

In our WRIT 1 class theme, "Journeys and Encounters," we regularly discuss texts concerned with how people move through the world and travel for different reasons—tourism, immigration, forced displacement. While reasons and motives for travel differ, each of these forms of travel intimately connects with the climate crisis in its own way. During this teach-in—which coincides with our discussion of the open letter genre—we'll examine and discuss open letters by climate activists and Indigenous community members.

About the instructor: Dr. El Dessouky is a Continuing Lecturer in the Writing Program.

### Thurs April 21:

11:40-1:15pm

#### Race, Gender and the Environment

Baskin 165

Emily Murai, Environmental Studies

[emurai1@ucsc.edu](mailto:emurai1@ucsc.edu)

This class for a Global Environmental History course will look at theories of scientific racism and sexism – and the specific fields of anatomy, phrenology and physiology - that emerged out of both 17-18th C Enlightenment philosophies and 19th C British colonization of Southern Africa as a means to produce "naturalized" race and gender hierarchies that persist to this day. We ask all attendees to RSVP in advance and complete the two required readings prior to coming to class, so as to fully participate in class discussion. Please email instructor Emily Murai ([emurai1@ucsc.edu](mailto:emurai1@ucsc.edu)) for these readings.

About the instructor: Dr. Murai is a lecturer in the Environmental Studies department and at College Nine. She is interested in social theories of the environment, composition and writing-across-the-curriculum and writing-in-the-disciplines (WAC/WID) and student success, broadly defined.

6-7:30 pm

## **Responding to the Impacts of Climate Change in Santa Cruz County** – “Confronting Climate Change”

UCSC-sponsored faculty panel with UCSC Professors Borja Reguero, Sikina Jinnah, Katherine Seto and Valentin Lopez of the Amah Mutsun Tribal Band and Sherry Flumerfelt of the Monterey Bay Fisheries Trust. Please pre-register [here](#).

## **Friday 4/22 Earth Day!**

### **Climate Solutions**

[Video link here!](#)

#### **Instructor: Michele Bigley, Writing Program**

[mbigley@ucsc.edu](mailto:mbigley@ucsc.edu)

Plastic pollution activist (and Santa Cruz resident!) Jacki Nunez took Writing Program faculty Michele Bigley and her family on a kayak trip in Elkhorn Slough. This interview is meant to inspire us all that we can take action on one small issue to tend to our planet.

About the instructor: Michele Bigley teaches in UCSC's Writing Program and writes about the intersection of climate solutions and the exploration of fragile ecosystems. Her work has appeared in the *New York Times*, *AFAR*, *Outside*, *Los Angeles Times* and more.

## **8:00-9:05 Classes**

### **A Screening of *Coming Clean: A Demand for a Fossil-Free UC*, followed by live Q&A with**

**filmmakers Carolina Montejó & Andre Salehian**

(Trailer [here](#))

[ONLINE via Eventbrite](#)

How is UC addressing the greatest crisis of all time -- climate change? In this riveting documentary, learn about the climate crisis, why UC purchases carbon offsets to cover its dependence on fracked methane, and what students and faculty system wide are doing to wake up UC campuses and help UC live up to its own ideals as an environmental leader. Live Q&A with filmmakers Carolina Montejó and Andre Salehian follows the zoom screening. **After you've registered, click on the "Access the event" button to the right of this screen to access the zoom meeting, and then if prompted, use password UCGND to join the meeting!**

## **9:20-10:25 Classes**

### **Crash Course on Climate Science**

**BT Conf Ctr: Cervantes/Velasquez**

**Instructor: Peter Weiss, Earth and Planetary Sciences**

[pweiss@ucsc.edu](mailto:pweiss@ucsc.edu)

This teach-in will discuss the basics of the earth's radiation balance, the greenhouse effect, feedbacks, albedo, climate, and weather. Much of the material comes from ENV5 23 that I'll be teaching Summer Session I.

About the instructor: Dr. Weiss, a researcher and lecturer at UCSC across several departments, is well known for his research on mercury in fog and its effects on mountain lions. Many students also know his song Do As You Otter and if he gets requests, he might sing to you at this teach in.

### **Climate Change and Drought**

**Hum 206**

**Michael Loik, Environmental Studies**

[mloik@ucsc.edu](mailto:mloik@ucsc.edu)

This class, part of ENV5 23 “The Physical and Chemical Environment,” welcomes visitors interested in learning about the physics and chemistry of the environment, and how they affect plants, animals, soils, ecosystems, people, and society.

About the instructor: Michael Loik is Professor of Environmental Studies at UC Santa Cruz. His research focuses on impacts of climate change and drought on plants and ecosystems, and developing new solar energy systems.

### **Yes We Can! How to End Greenhouse Gas Emissions at UC and Elsewhere** [Zoom link](#)

**Instructor: Stephen Wheeler, Human Ecology**

[smwheeler@ucdavis.edu](mailto:smwheeler@ucdavis.edu)

A brief history of climate activism UC-wide, what it would take to actually end UC's greenhouse gas emissions, likely obstacles and ways around those, and GHG-ending strategies in the broader world.

About the instructor: UC Davis professor Stephen Wheeler researches and teaches urban planning, urban design, and sustainable development. His books include *Reimagining Sustainable Cities* (UC Press, 2021), *Planning for Sustainability* (Routledge 2013), and *The Sustainable Urban Development Reader* (Routledge, 2014). He recently spearheaded the [Fossil Free UCD](#) initiative that has led to the UC Davis chancellor creating a special committee to develop a fossil-free (not just carbon neutral!) UC Davis energy plan.

### **Plastic: Another Way Fossil Fuels Are Polluting Our Planet - Kresge Clrm 321 or [zoom](#) Pswd METX** **Myra Finkelstein, Microbiology & Environmental Toxicology**

[myra@ucsc.edu](mailto:myra@ucsc.edu)

Plastic pollution is a global crisis with plastic being found in the deepest waters of our ocean to the tops of our mountains. Myra will talk about the link between fossil fuels and plastic, the pervasiveness of plastic in the environment, and some of her research on marine plastic pollution. Overall, Myra will discuss the harm plastic is causing on human and wildlife health and what we can do to reduce plastic use in our daily lives.

About the Instructor: Dr. Finkelstein's research focuses on human impacts to wildlife with an emphasis on contaminant-induced effects.

### **The Greenest Energy: Nuclear**

**Hum 2: 259**

**Instructor: Stephen Williams**

[shwilliams54321@gmail.com](mailto:shwilliams54321@gmail.com)

Nuclear energy offers our best hope of limiting our impact on Earth's biosphere while also allowing humanity to flourish. It is our most powerful tool for mitigating global warming, yet its growth is stymied by a mountain of misinformation, not the least of which originated from the nuclear industry itself. This talk will explore why nuclear energy is safe, clean and, in fact, the greenest of all major energy sources.

About the Instructor: Stephen Williams is a former technical writer, retired software engineer and climate activist. He is a member of Generation Atomic and co-founded Monterey Bay for Nuclear Power, a local area group which advocates small-footprint, emissions-free nuclear energy for a better world.

### **Advocating Climate Education: The Case of LA Unified School District**

**Hum 1: 359**

**Instructor: Dan Linehan, writer and activist**

[dan@dslinehan.com](mailto:dan@dslinehan.com)

Learn how a small group of climate activists and educators formed the Climate Curricula Committee that helped pass the Los Angeles Unified School District (LAUSD) Climate Literacy Resolution on February 8, 2022. LAUSD is the second largest school district in the nation, and this resolution is one of the most comprehensive climate literacy resolution ever passed—all grades (K–12) and all subjects. The committee's success resulted from collaboration between different organizations, especially those that had passed previous climate literacy resolutions in Berkeley, Oakland, and Fremont. Find out about the challenges of implementing such resolutions and how possible new statewide funding can help.

About the instructor: As the communications chair and strategy advisor for the Climate Curricula Committee, **Dan Linehan** helped originate and pass the comprehensive Los Angeles Unified School District Climate Literacy Resolution. An author and professional writer and editor, he's focused on climate change education, outreach, and communications

for over two decades. Widely published, his work has appeared in newspapers, magazines, literary journals, books, and videos. He's given over a hundred presentations based on his work. And his latest book is *The Princess of the Bottom of the World*, an award-winning multimedia climate change series based on his climate change work in Antarctica and Argentina. [www.dslinehan.com](http://www.dslinehan.com)

**Meditation to Rise Up Rooted: Self-Care Practice for Earth-Care Advocates**      Quarry Amphitheater  
**Michelle Merrill**      [michelle@novasutras.org](mailto:michelle@novasutras.org)

*Note: if rain, workshop moves to Amah Mutsun in Bay Tree Conference Center.* Meditation is one self-care practice that can help us be more effective in our work and more present as we build community. This workshop teaches simple body scan and breathing practices to help you find a meditative state, and guides you into feelings of relaxation, gratitude, wonder, joy and deep connection with all living beings. Our meditation will focus on the health of forest ecosystems -- so important for maintaining our climate and improving our own well-being. This meditation practice will nurture you in your own work as an agent for positive change, cultivating a world where all people and all life on Earth may thrive.

About the instructor: Michelle Merrill, Ph.D., founded [Novasutras](http://Novasutras.org) as an exploration of how we can connect with, learn from, and teach each other to co-create a more regenerative, resilient culture based in ecospirituality. She is an [Insight Timer meditation instructor](#), a climate activist, a community organizer, a workshop facilitator, and a public speaker with a background in anthropology, ecology and evolutionary biology. [Learn more...](#)

**10-11:30 am Senior Seminar** (please contact professor in advance: 10 visitors max, masks req'd)

**IPCC's Assessment Report 6, Working Group 2: "Impacts, Adaptations, Vulnerability: Water"**

**Interdisciplinary Sciences Building 455**

**Pam Rittelmeyer, Environmental Studies**

[prittelm@ucsc.edu](mailto:prittelm@ucsc.edu)

Do you wonder how to use the IPCC reports in college writing? This class, part of a regularly scheduled ENVS Senior Seminar, invites visitors to join a deep dive into the recently-released IPCC AR6 WG2's chapter on water, which "assesses current climate change impacts on the global water cycle, projected water-related risks for human and natural systems, and adaptation options and effectiveness." The instructor is one of the international panel of experts who authored this critical report. Students will facilitate the discussion of sections of the Chapter 4 of the 2022 IPCC AR6 WGII report that relate to their independent research project this quarter. Attendees will be welcome to join in the discussion.

About the instructor: Dr. Rittelmeyer researches climate change, science communication, and how communities perceive their risk of natural disasters, hoping thereby to improve understanding of how to integrate social values and local knowledge into anticipatory adaptation. She is one of the contributing authors to the critical new IPCC report on water impacts and vulnerability, referenced in the title to her talk above.

**10:40-11:45 Classes**

**Improving Outcomes of Tree Growing Campaigns**

**Bay Tree Conf Ctr: Amah Mutsun**

**Karen Holl, Environmental Studies**

[kholl@ucsc.edu](mailto:kholl@ucsc.edu)

A growing number of initiatives propose to plant millions, billions, or even trillions of trees as a simple solution to plant our way out of climate change, yet many tree planting projects fail or do more harm than good. Improving tree growing efforts could make it one tool in the toolbox to fight climate change, along with dramatic reductions in greenhouse gas emissions. I will discuss what tree growing efforts realistically can and cannot achieve and how to improve the outcomes of these projects.

About the instructor: Dr. Holl studies how to restore damaged ecosystems in the Latin American tropics and coastal California. Over the past two years, she has talked to dozens of reporters and advised several large NGOs and investment groups about how to improve tree growing programs.

## **Strategies and Tactics of Climate Communication**

**Hum 2: 359**

**Instructor: Dan Linehan**

[dan@dslinehan.com](mailto:dan@dslinehan.com)

The science is crystal clear and has been for decades. Is the problem science communication? In an age that has mastered the art of alternative facts and deliberate misinformation, how can facts that actually obey the laws of physics ever compete with the “facts” that obey the laws of opinion, sensationalism, and greed? Learn about practical, real-world strategies and tactics to improve climate communications by working to overcome barriers intentionally imposed or formed from lack of action, interest, and urgency. Most importantly, hear how strategic climate communications can grow the ranks of supporters and inspire positive actions that yield actual progress.

About the instructor: As the communications chair and strategy advisor for the Climate Curricula Committee, Dan Linehan helped originate and pass the comprehensive Los Angeles Unified School District Climate Literacy Resolution. An author and professional writer and editor, he’s focused on climate change education, outreach, and communications for over two decades. Widely published, his work has appeared in newspapers, magazines, literary journals, books, and videos. He’s given over a hundred presentations based on his work. And his latest book is *The Princess of the Bottom of the World*, an award-winning multimedia climate change series based on his climate change work in Antarctica and Argentina. [www.dslinehan.com](http://www.dslinehan.com)

## **Nonviolent, Direct Action, Electoral Politics and the Fight to Save Earth**

**Hum 2: 259**

**Ami Chen Mills**

[amichenmills@gmail.com](mailto:amichenmills@gmail.com)

Come hear a local and global direct action story from an Extinction Rebellion co-founder in Santa Cruz, and learn about the impact activism can have!

About the instructor: Ami Chen Mills is running for County Supervisor for the Third District (including UCSC) in Santa Cruz County. But she began her climate journey watching the Ochre sea stars dissolve in Mitchell's Cove, where her children played. Since then, she has been to DC, lobbying for Citizens Climate Lobby and growing frustrated with the too-slow pace of change.

Extinction Rebellion exploded globally in the spring of 2019; and Ami helped start the first local group, organize the first major climate strike in Santa Cruz (2019) with the local DSA and others; and the first 100+ person actions at Chase Bank (#1 funder of fossil fuels, globally). She went on to serve in the Extinction Rebellion Global Support Team during the Pandemic and then helped to organize the Santa Cruz Climate Justice Crew and monthly protests at Chase. Like Noam Chomsky, she believes nonviolent, direct action movements are our best hope for broad institutional divestment, climate justice and meaningful mitigation. She can also share her insights on running for office on a bold climate agenda.

## **The Largest Emitter No One Talks About: Tackling Housing and Land Use Policy to Solve the Climate Crisis**

**Zennon Ulyate-Crow ([zennonuc@gmail.com](mailto:zennonuc@gmail.com))**

**Cowell 223**

Transportation, water conservation, energy consumption reduction, ecosystem destruction, building electrification: what connects them all? Learn about how land use policy is the single largest contributor to the climate crisis and how we can drastically shift our carbon emissions at no cost.

About the instructor: Zennon Ulyate-Crow is a first-year Politics major, Executive Board Member of the College Democrats at UCSC, and President of the Student Housing Coalition. The Student Housing Coalition is a 500-activist organization based in Santa Cruz working to further intersectionality, sustainability, and access to opportunity, with the overall goal of securing housing as a human right.

## 11-11:30 am

### **Environmental Justice: Colonialism, Supremacism, Capitalism** BT Conf: Cervantes/Velasquez

**People of Color Sustainability Collective** [azbedoll](#), [mcaminad](#), and calang – all @ucsc.edu

We will discuss the effects of colonialism and how it feeds into supremacy and capitalism – i.e., what can essentially be thought of as a feedback loop that births many climate and environmental injustices.

About the instructors: ENVS PhD candidate Chris Lang researches the relationship between consumer behavior and environmental justice. ENVS major Azarely Bedolla is interested in solutions to environmental problems detrimental to both society and the environment. Anthro major and Climate Coalition Steering Committee member Maya Caminada is interested in the intersectionality of underrepresented peoples and climate change initiatives.

## 2:40-3:45 pm Classes

### **Two Minutes to Midnight: The molecular structure and properties of CO<sub>2</sub>, why CO<sub>2</sub> is a greenhouse gas, and the consequences of increasing CO<sub>2</sub> emission.**

**William G. Scott, Chemistry and Biochemistry**

**Media Theater M110**  
**wgscott@ucsc.edu**

This class, part of Chemistry 1B: Introductory Chemistry, will be conducted Live, in-person, and video recorded (Yuja link will be available shortly after). Everyone is welcome, but please wear a mask.

About the instructor: Prof. Scott is a physical chemist with an interest in atmospheric and environmental chemistry. His research is, however, focused on RNA structure, catalysis and the origin of life, and is currently developing anti-SARS-CoV-2 ribozymes as inexpensive, non-toxic and rapidly-scalable potential therapeutic agents to be made accessible world-wide. <http://scottlab.ucsc.edu/SARS-CoV-2/>

### **Lower Your Carbon Footprint? Sure...But Don't Stop There** **Andrew Szasz, Environmental Studies**

[Zoom link](#)  
**szasz@ucsc.edu**

**Begins at 3 pm.** It is a truism that we live in a consumer society. Shopping is no longer just about meeting basic needs, food, shelter, clothing: now, we shop to be younger looking and more attractive, to display the social identities we like to claim for ourselves, to advertise social status. So, no surprise that one response to the threat of climate change is that one should be a more mindful shopper, to consume in a way that lowers one's carbon footprint. And that's fine, but... In this talk, Szasz will explain why lower carbon footprint consuming is not enough.

About the instructor: Andrew Szasz taught at UCSC from 1986 to 2019, as Professor of Sociology, then as Professor of Environmental Studies. He taught courses on Social Theory, Environmental Sociology, Environmental Justice, the American Environmental Movement, and the Sociology of Climate Change. He has written articles on environmental regulation, grassroots toxics movements, green consuming, environmental justice and the sociology of climate change; published two books, EcoPopulism: Toxic Waste and the Movement for Environmental Justice and Shopping Our Way to Safety: How We Changed from Protecting the Environment to Protecting Ourselves; and co-edited How the World's Religions are Responding to Climate Change: Social Scientific Investigations.

## 4-5:05 pm Classes

### **Après Nous, Le Déluge? Connecting Antarctica, Sea Level Rise, & Food Waste** Hum 2: 250

**Slawek Tulaczyk, Professor of Earth Sciences**

[stulaczy@ucsc.edu](mailto:stulaczy@ucsc.edu)

The enormous Antarctic ice sheet formed 34 million years ago when carbon dioxide concentration in Earth's atmosphere dropped below 600 ppm. During the last million years, atmospheric carbon dioxide concentration ranged from as low as 170 ppm during ice ages to as much as 300 ppm during warm climate periods, like the modern one. At the end of the last ice age, atmospheric carbon dioxide increased by ca. 100 ppm, and the Antarctic ice sheet lost enough ice to contribute ca. 70 feet (20 m) to global sea-level rise. In the last two hundred years, human activity has increased carbon dioxide concentration by an additional 140 ppm (to ca. 420 ppm). Scientists are in the process of evaluating how much and how fast the Antarctic ice sheet will shrink, and sea level will rise, in response to the anticipated climate warming. One way to help? The Environmental Protection Agency and the World Food Program has identified reduction of food waste, which reaches about 40% of total food production in the USA, as a powerful strategy for decreasing greenhouse gas emissions. In addition, reduction in food waste will save water and soil resources, decrease the need for landfills, and will contribute to making food available to all. So, buy only what you need and eat your leftovers!

About the instructor: Dr. Tulaczyk, grew up in a working-class family in Soviet-occupied Poland and was the first one in his family to complete high school and college education. He holds a Ph.D. in Glaciology from the California Institute of Technology and has worked at UCSC since the summer of 2000. Prof. Tulaczyk has been studying the sensitivity of polar glaciers and ice sheets to climate changes for thirty years. His field research has taken him to Antarctica a dozen times with additional field expeditions to Alaska, Canada, Greenland, Iceland.

### **Sensor Networks for Sustainability**

**Physical Sci 114**

**Instructor: Colleen Josephson, Electrical & Computer Eng.**

[cjosephson@ucsc.edu](mailto:cjosephson@ucsc.edu)

This class will explore the embodied and lifetime emissions in embedded devices, and applications of sensor networks in measuring and mitigating climate change.

About the instructor: Dr. Josephson's research interests include wireless communication and sensing systems, with a focus on technologies to enable and improve sustainable practices

### **Legal Mechanisms to Protect Natural Resources & the Natural World**

**Cowell 131**

**Instructor: Gary Patton, Legal Studies**

[gapatton@ucsc.edu](mailto:gapatton@ucsc.edu)

This presentation will focus on how attorneys and legal theorists are advancing path-breaking approaches to protect the "Rights of Nature," and how these pioneering techniques can provide ways to respond to the Climate Crisis.

About the instructor: Gary Patton is an environmental attorney who practices in Santa Cruz, California and teaches courses in the Legal Studies Program at UCSC. At age 29, Patton was elected to the Santa Cruz County Board of Supervisors, and then served on the Board for twenty years, from 1975 to 1995. Patton is the author of Santa Cruz County's voter-adopted Growth Management Program, which put all economically productive farmlands in the County off limits for development, and which mandated the production of affordable housing as developments are approved. He is credited with having "saved the Santa Cruz County North Coast," and led the successful citizen fight to Save Lighthouse Field, in the City of Santa Cruz. In 1999, the *Santa Cruz Sentinel* named Patton as one of the two most important people to have shaped the history of Santa Cruz County during the 20th Century. Patton writes a daily blog, "We Live in a Political World," available at [www.gapatton.net](http://www.gapatton.net).

### **The Seymour Center as a Climate Resource**

**ZOOM: PW: seymour**

**Instructor: Jonathan Hicken, Director of Seymour Center**

[jahicken@ucsc.edu](mailto:jahicken@ucsc.edu)

How does a science center become a community-centered *climate action hub*? By creating a vibrant, inclusive gathering place! Find collisions between UC Santa Cruz science with the coastal climate issues that matter to this community most. Give visitors a concrete action they can take home. At the Seymour Marine Discovery Center, we are

inviting public agencies, community organizations, and YOU to come share your research, your creativity, and your passion for protecting the ocean and the coastal climate we inhabit.

About the instructor: Jonathan is the Executive Director of the Seymour Marine Discovery Center, a public science center located at UC Santa Cruz's Coastal Science Campus.

### **Resistance is Futile: The Borg, the Hive, and Corporate Hegemony**

**Humanities 1: 210**

**Instructor: Steve Coulter, Writing Program**

**[sjcoulte@ucsc.edu](mailto:sjcoulte@ucsc.edu)**

The Borg, a collective of humanoid cyborgs linked together in a hive-mind and modeled on the earthly superorganisms of ant colonies and beehives, has been the most feared alien race in the Star Trek universe, astoundingly successful in assimilating their foes. Yet the Borg also serve as a metaphor for another collective of biological entities: the corporation.

In the Anthropocene epoch, corporations have become the most powerful force on the planet; their influence on the social world and the environment exceeds any government and may determine the continued sustainability of human life. Corporations have been described as people and as machines, but neither metaphor accurately describes their essence or contributes to an understanding that might resist their power. This class explores our understanding of the corporation by examining the metaphors that are used to describe it, and by suggesting an entirely new metaphor viewing the Borg and the corporation through the lens of sociobiology. Could corporations be a new form of superorganism that has become the dominant species on the planet, and could the immense, intractable power of a globalized, corporate hive-mind have become the principal obstacle to addressing the planetary emergency of climate change? Reframing our metaphoric understanding of corporations as biological entities in the planetary biosphere may enable us to imagine ways to resist their increasing dominance and create a sustainable future. You can find an article he's published on this subject [here](#).

About the instructor: Steve Coulter is a continuing lecturer with the UCSC Writing Program. His courses often focus on the environmental crisis and the climate emergency.

### **Taking Environmental Activism to Political Action**

**Humanities 1: 202**

**Justin Cummings**

**[cummingsj831@gmail.com](mailto:cummingsj831@gmail.com)**

UCSC is renowned for being an institution of change makers and organizers, but where does one begin? Join us as we learn about how Dr. Justin Cummings' life as a student organizer led him to become an environmental scientist, one of two black men elected for the first time in history to the Santa Cruz City Council in 2018, the first black person to serve as Mayor of Santa Cruz in 2020, and his quest to become the first black Santa Cruz County Supervisor.

About the instructor: Dr. Cummings is an environmental scientist with over 20 years of experience studying and working on issues such as climate change, habitat restoration, social and environmental justice, and environmental conservation. More recently he has transferred his skills to secure grants to create and manage non-profit STEM education and professional workforce development programs centered on promoting diversity, equity and inclusion in emerging tech and environmental conservation sectors. As a City Council member, Vice Mayor, and Mayor his work has focused on promoting affordable housing and protections for our most vulnerable community members, strengthening the relationship between public safety and communities of color, advocating for the expansion of alternatives to crisis response, environmental protection, and promoting diversity, equity, and inclusion in all policy decision making, among many other topics. Dr. Cummings is also a fluent Spanish speaker and holds a BA in Spanish and a BS in Biology from Eastern Illinois University, and a Ph.D in Ecology and Evolutionary Biology with a designated emphasis in Environmental Studies from UC Santa Cruz.