Class 24: Climate Communication

- Mastering your audience
- How to do really well on your final paper
- Help us improve this class

Who’s your audience and how will you communicate what you have learned to make our Earth a better place?

Learning Objectives

- Understand the three most important skills for communicating your opinions (not only about climate)
- Get prepared for the final paper; hints to do as well as possible
- Get tips on how to do the best final paper from Guest Speaker, Josh Brown, UVM’s Environmental reporter

GEOLOGY 095, 195. Climate: past, present, future
Last Exam – NICE WORK!

- Mean = 85.1
- Median = 86.0

Scores will release at end of class.

If you have issues with grading, drop me (Paul) an email with a detailed explanation by Friday midnight.
“How much warming we are having today is pretty much right on where models have predicted,” says the study’s lead author, Zeke Hausfather, a graduate student at the University of California, Berkeley.
We found that climate models – even those published back in the 1970s – did remarkably well, with 14 out of the 17 projections statistically indistinguishable from what actually occurred.

“One of the earliest computer models, made in 1970, got a 91%. What’s so impressive about that is that at the time, climate change wasn’t noticeable in the yearly temperature records like it is now,” Hausfather said.
Review and our last clicker question! What’s your favorite denier strategy?

A. Fake experts
B. Logical Fallacies
C. Impossible expectations
D. Cherry Picking
E. Conspiracy Theories
Take action – 2 easy ways and one harder way you can help make change related to climate at UVM

Do these right now (and I’ll send an email later if you don’t have a device)

1. Sign the letter demanding UVM divest from fossil fuels. go.uvm.edu/divest

2. Sign the letter supporting a more diverse UVM Board of Trustees because that will make divestment more likely. go.uvm.edu/diversify

3. Write a GREAT Op-Ed and get it published.
Final Essay – your OP ED

Your assignment - write an OP-ED for your hometown paper.

Focusing on the same climate system you have considered all semester, write a 400-600 word persuasive essay. **GIVE YOUR ESSAY A CATCHY TITLE!**

In your OP-ED: 1) STATE the problem. 2) EXPLAIN how the system works including how it has changed in the past. 3) PROVIDE EVIDENCE that this problem is going to affect people now and in the future, and 4) most importantly, SUGGEST SOLUTIONS.

Your work needs to be well written, polished, and carefully proofread. SUBMIT ON BLACKBOARD by TUESDAY, DECEMBER 10, MIDNIGHT.

The folks at the Writing Center are your friends on this one. If you want some help, please, consult them. Here's the website: https://www.uvm.edu/undergradwriting
The Importance of **Framing**

How you present an issue

- Can help communicate why an issue might be a problem, who or what might be responsible, and what should be done
The Importance of Framing

How you present an issue

- Can help communicate why an issue might be a problem, who or what might be responsible, and what should be done

General Framing Principles:
- Choose a local frame (bring the message close to home)
The Importance of Framing

How you present an issue

• Can help communicate why an issue might be a problem, who or what might be responsible, and what should be done

General Framing Principles:

• Choose a local frame (bring the message close to home)
• Identify if your audience cares more for promotion or prevention
  • Promotion: want to maximize advances
  • Prevention: want to minimize losses (maintain the status quo)
Different framing of your message for:
- University students

We will either find a way or make one.
Know Your Audience

Different framing of your message for:
• University students
• Government employees
• Private industry workers
• Different political ideologies
• Family/friends
• Etc...

We will either find a way or make one.
## Know Your Audience

Different framing of your message for:
- University students
- Government employees
- Private industry workers
- Different political ideologies
- Family/friends
- Etc...

Example:
- Let’s talk about a carbon tax...
Know Your Audience

Different framing of your message for:
- University students
- Government employees
- Private industry workers
- Different political ideologies
- Family/friends
- Etc...

Example:
- Let’s talk about a carbon tax...
- Large national poll found that 52% of respondents supported ‘Carbon offsets’, while 35% supported a ‘Carbon tax’, even though the program description was identical.
Presenting Your Message

Ok, so you’ve identified your audience and understand how to frame your message.
Ok, so you’ve identified your audience and understand how to frame your message.

Scientists tend to go into too much detail about their work.
Ok, so you’ve identified your audience and understand how to frame your message.

Scientists tend to go into too much detail about their work.

Focus instead on:
• What is the problem?
• Why does it matter?
• What are possible solutions?
• What are the benefits of the solutions?
Ok, so you’ve identified your audience and understand how to frame your message.

Scientists tend to go into too much detail about their work.

Focus instead on:
- What is the problem?
- Why does it matter?
- What are possible solutions?
- What are the benefits of the solutions?
My generation is going to be hit hard by the effects of climate change (whether you believe it or not).

Try to prevent worse climate impacts from happening!

We will have reduced economic opportunities and more societal unrest.

Better renewable energy technology

Economic stability

Make polluters pay for their pollution, allow free market to create innovation.
Greenland on Thin Ice?

Two studies in Nature open deep history of Greenland's ice sheet — and raise new questions about its stability

How much of Greenland's ice melted during past periods of global warming? Two first-of-their-kind studies in Nature look much deeper into the history of Greenland than ever before—including one led by UVM geologist Paul Bierman. "The melting we are seeing today," he says, "may be out of the bounds of how the Greenland ice sheet has behaved for many millions of years." (Photo: Joshua Brown)

The ice sheet covering Greenland is four times bigger than California — and holds enough water to raise global sea-level more than 20 feet if most of it were to melt. Today, sea levels are rising, and the melting of Greenland's ice sheet is only one reason why. What do the sediments in those ice sheets tell us about the past, and what can we learn from them about the future? (Photo: Joshua Brown)
ICE SHEETS ISOTOPES & MUSK-OX PIZZA

A polar scientist’s tour of Greenland

Story and photographs by
JOSHUA BROWN

It’s getting hot. Paul Burnett takes off his hat and waves his hand. They’re scrambling out of a stream and up a bank of soft snow. Alex Nathan holds open a plastic bag. Burnett carefully empties a “Naz” snow, telling the bag with sand from the bottom of the stream.

The air temperature feels like it’s about fifty degrees (Celsius). Burnett says how it feels to be in a Greenland. We’re in the stream in the Arctic Circle. Not far from the North Pole, it’s a strange feeling to have sand in the bag. Burnett is a bit discomforted with a two-metre-long stick. The sand feels thick.

Burnett: “Warm, but it’s getting hot.” That’s why Burnett, professor of geology at UVM since 2015, has led a team of scientists to this barren country. They’re collecting sand and salt, washing out from the snow and ice, that will help answer a little understood—but most important—question: how fast will Greenland melt in a warming world?

Still wading in the stream, Jenny Shukin, a researcher from Harvard, steps to collect more sand. A gremlin is imbedded in the stream, ghosting along the river. It’s a strange sight to see a Greenlandic hunter without a hat. Alex Nathan, Burnett’s graduate student, runs a GPS as a notebook. On the opposite side, Dylan Rood, a Canadian from the University of Cambridge, throws a bag with sand in a plastic bag.
Lake trout are making a comeback, and no one knows why
What do you care about?

• Conservation
• Social Justice
• Climate Change Mitigation
• That’s a topic, not a story.
Spiders?
Darwin’s Bark Spider

He can climb buildings like an arachnid.
condition for all future stories.

—David Roberts
Trump's failure to fight climate change is a crime against humanity

By Jeffrey Sachs

Updated 12:33 PM ET, Mon August 19, 2019
(CNN) — President Donald Trump, Florida Gov. Rick Scott, Florida Sen. Marco Rubio, and others who oppose action to address human-induced climate change should be held accountable for climate crimes against humanity. They are the authors and agents of systematic policies that deny basic human rights to their own citizens and people around the world, including the rights to life, health, and property. These politicians have blood on their hands, and the death toll continues to rise.

Trump remains in willful denial of the thousands of deaths caused by his government’s inept, under-funded, and under-motivated response to Hurricane Maria in Puerto Rico in 2017. The image that will remain in history is of the President gleefully throwing paper towels for a photo op as the people of Puerto Rico around him suffered and died of neglect. Last September, 2018 Hurricane Florence claimed at least 48 lives, with more likely to come in its aftermath. Soon after, Hurricane Michael claimed at least 32 lives, with more than a thousand people reportedly still missing. The final death toll will likely soar in the months ahead as the residual consequences of the storm become more clear.
What are you an expert on?
What are you an expert on?

• Your life....your story.
What are you an expert on?

• Your life....your story.
• How you’re changed by the world.
TODAY is my last day at Goldman Sachs. After almost 12 years at the firm — first as a summer intern while at Stanford, then in New York for 10 years, and now in London — I believe I have worked here long enough to understand the trajectory of its culture, its people and its identity. And I can honestly say that the environment now is as toxic and destructive as I have ever seen it.

To put the problem in the simplest terms, the interests of the client continue to be sidelined in the way the firm operates and thinks about making money. Goldman Sachs is one of the world’s largest and most important investment banks and it is too integral to global finance to continue to act this way. The firm has veered so far from the place I joined right out of college that I can no longer in good conscience say that I identify with what it stands for.
Opinion

BRITTANY BRONSON

Can You Be a Waitress and a Feminist?

By Brittany Bronson

April 17, 2015
Drivers, help us cyclists get home alive

By Guy Edwards

May 11, 2018 at 3:20 p.m. EDT

I had a hot date and was running late. And it had begun to rain. Damn it! No time for an Uber; I’d have to cycle. I pulled on my leather jacket. At least it was semi-waterproof, so I could arrive without resembling a bedraggled swamp monster.
What’s at stake?

I had a hot date and was running late. And it had begun to rain. Damn it! No time for an Uber; I’d have to cycle. I pulled on my leather jacket. At least it was semi-waterproof, so I could arrive without resembling a bedraggled swamp monster.

I needed to hop across town from Woodley Park to Shaw. If the lights were on my side, I’d be there in 15 minutes without having to go flat-out. Coasting down the hill on 16th Street NW alongside Meridian Hill Park, also known as Malcolm X Park, I was making good time. The lights were green on 16th Street at Florida Avenue. As I was turning left, there was no need to speed up and take the corner like a pod racer in “Star Wars.”

Then I saw it.

Too late.

I was going to crash. How bad is this going to hurt?
What exactly do you want people to do?
Say something unexpected

What if All That Flying Is Good for the Planet?

Without tourism, it’s easy to imagine the Serengeti turned into cattle ranches.

By Costas Christ
Mr. Christ is the founder of Beyond Green Travel.

Nov. 19, 2019
Why write (an op-ed)?

• Hope is a duty from which paleontologists are exempt.

Whoever tells the story, writes history.
The basic facts of climate change, established over decades of research, can be summarized in five key points:

- **Global warming is happening.**
- **Human activity is the main cause.**
- **There's scientific consensus on human-caused global warming.**
- **The impacts are serious and affect people.**
- **We have the technology needed to avoid the worst climate impacts.**
Keep in touch, we are here to help

• You have our emails...ask us about anything
• Geology Instagram is uvmgeology
• There’s still some space in spring Geology classes
  
  **GEOL 001** Earth System Science (4 credits)
  **GEOL 007** SU: Earth Hazards (3 credits)
  **GEOL 110** SU:Earth Materials (4 credits)
  **GEOL 195** Human Health/Geology (3 credits)
Quite the semester – Thank you’s all around
Thanks to you all for being engaged, excited, and pushing for change at UVM and around our world.

GO OUT AND DO GOOD THINGS!
Evaluations

This is a new class – we really need your feedback!

Help us keep what works and do better next time.

Fill out the forms, we’ll be in back to collect them.

They won’t be read until all the grades are in and keep your names off them!