

sign up for my new

SUSTAINABILITY CLASS

and learn about the implementation!



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West Lafayette Jr./Sr. High School

Columbia University - The Earth Institute

Master of Science in Sustainability Management

In addition to obtaining an education at one of the world's most prestigious universities, those who enroll in Columbia University's Master of Science in Sustainability Management degree program receive interdisciplinary training that will allow them to advance in their professional careers and become leaders in their fields. Students learn the use of cutting-edge policy and management tools they can use to help public and private organizations and governments address environmental impacts and risks, pollution control, and remediation to achieve sustainability.

The curriculum emphasizes the physical dimensions of sustainability (e.g., water, energy, greenhouse gas emissions, and environmental infrastructure), general and financial management, economics, quantitative analysis, and policy so that students can thrive in the job market. Graduates have access to Columbia's unparalleled resources and network of sustainability professionals, along with its global alumni base.

Sustainability Management is a new program at Columbia designed to meet the growing demand for sustainability managers and to train students to bridge the gap between the principles of sustainable development and its practice.

Columbia's Earth Institute is the largest university-wide research organization in the world dedicated to sustainability research, practice, and education. Columbia offers more than 200 environmental and sustainability courses each year, more than any other university. The National Research Council ranks the graduate programs in Earth Science at Columbia number one in the United States. Columbia's global alumni network includes over 2,000 graduates associated with the Earth Institute's education programs.

Pennsylvania University - Penn Sustainability

Sustainability and Environmental Management Minor

The Undergraduate Minor in Sustainability and Environmental Management allows students to learn the nature of environmental constraints which face organizations and individuals in the modern world, and to understand how these constraints can be effectively considered as part of the decision-making process in for-profit and nonprofit organizations. Students in any of the four undergraduate schools may elect to take the minor.

Over the next five years, Penn faculty will continue to make sustainability scholarship a priority by expanding and strengthening existing academic programs, identifying opportunities for collaboration, and increasing access for undergraduate, graduate, and professional students to cutting edge research and policy analysis. For students, Penn's goal is to increase access to degree programs, research opportunities, career preparation, and educational pathways.

For faculty, the goal is to support excellence in scholarship and improve cooperation and collaboration among departments and academic centers. For the entire Penn community, the goal is to expand awareness of critical issues, highlighting Penn's leadership role in creating a more just and equitable local, regional, and global society. At the same time, the Sustainability Office will work with select faculty and students to identify and develop research opportunities that use Penn's campus as a living lab that, in promoting campus sustainability, have potential broader application beyond campus.

Northwestern University - Sustainability and Energy

Institute for Sustainability and Energy

The Institute for Sustainability and Energy at Northwestern (ISEN) advances global energy and sustainability solutions through transformational research, interdisciplinary education, and public engagement.

ISEN offers curriculum at the undergraduate and graduate levels, including an undergraduate certificate in sustainability and energy. The Certificate provides a means for any Northwestern undergraduate student to pursue interdisciplinary instruction in the increasingly important areas of sustainability and energy during their undergraduate coursework, while signaling broad topic proficiency to potential future employers. See more at isen.northwestern.edu/isen-certificate.

ISEN also offers a professional Master of Science in Energy and Sustainability (MSES), offered through the McCormick School of Engineering. The Master's program prepares graduate students for public and private sector leadership careers in energy and sustainability. The one-year degree combines a comprehensive, interdisciplinary core curriculum spanning technology, economics, and regulation with an elective specialization track, allowing content personalization for each student while maintaining an overall cohort experience.

ISEN offers for-credit and non-credit summer programs in China, Germany, and Israel, with a focus on renewable energy policy, green technology development, sustainable manufacturing, and water resource management.

Why am I Drawn to Them?

I am drawn to all of these programs because I am very interested in the organizational and policy side of sustainability. It would be amazing to work as a sustainability director for an organization or potentially be apart of a think tank that performs climate research implements advocacy. Also, each program has a unique aspect that I find interesting as explain for each school.

Unfortunately, I was not able to find the syllabi for the classes that I am interested in, but I was able to find a few lectures from the class online that I watched!

The main aspects that all programs had in common were that they emphasized action in the community, discussion amongst peers, and essays that are related to sustainability topics. I plan to combine these aspects into one class to make my dream course!

Main Themes and Overview

Footprint (Food, Plastic, and Water Usage): It is important that the students understand their role in the climate crisis before learning about how to fix it. So, before going into more specific ways students can fight the climate crisis, they will first learn how they contribute to the climate crisis.

Ways to Reduce Your Footprint (Zero Waste and Plant-Based): After learning about what students contribute to the climate crisis, they will learn about various ways they can fix their negative effects. It is important to do this so that the students are able to work on themselves first before asking other people to make changes.

Ways to Make Change Beyond Your Footprint (Climate Justice, Voting, Fast Fashion, and Economics): After the students have been educated about how their contribution to the climate crisis and how to reduce it, they will learn about how to stop others' contributions. This will be explored in a multitude of ways like fighting for climate justice, the end of fast fashion, and the corrupt political system that puts profits over people.

The class will focus on the individual student for the majority of the semester because it is necessary to know what role you play in climate change before stopping systemic issues like environmental racism, corrupt politics, and fast fashion. By the end of the class, the student will have a plethora of ways that they can change their lifestyle and the world to be more sustainable.

Weekly Schedule

The class will consist of ten weeks of projects, essays, and group discussions. A typical week will look like:

- **Monday:** Group discussion about a single guiding question so all of the students can learn from each other's perspectives and see how much they each know about the sustainability topic of the week.
- **Tuesday:** Lecture covering the class discussion and specific information regarding the sustainability topic of the week. The lectures will alternate between documentaries and guest speakers.
- **Wednesday:** Short essay (four paragraphs) answering the question from the group discussion. For this essay, they should be more than prepared to answer the question through the group discussion and the lecture.
- **Thursday and Friday:** Sustainability project that focuses on the action at home, school, or in the community. The students will brainstorm the project on Thursday and have Friday for work time. The project will be due at the beginning of the class on Monday.

This may seem like a rigorous schedule, but a lot of the homework can be completed in class and grading will be based on completion, effort, and participation. Teamwork and collaboration will be encouraged among students through discussion, and the projects for each week will sometimes be partner projects (especially later in the course when it focuses on changing systems put in place).

First Month Schedule

M

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W

T

F

Class Discussion:

What does sustainability mean to you?

Lecture:

Sustainability - Full Documentary (42 m)

Essay:

What does sustainability mean to you?

Brainstorm:

Educate others about sustainability in a creative way.

Work Day:

Work day for Project #1 about the brainstorm prompt.

Class Discussion:

What ways do you contribute to climate change
Project #1 Due

Lecture:

Dr. Nies who teaches EEE 355: Defining Sustainability at Purdue University

Essay:

What ways do you contribute to climate change

Brainstorm:

List three ways you contribute to climate change and implement solutions.

Work Day:

Work day for Project #2 about the brainstorm prompt.

Class Discussion:

What does water, plastic, and food consumption mean?
Project #2 Due

Lecture:

The Story of Plastic (1h 35m)
Finish as homework

Essay:

What does water, plastic, and food consumption mean?

Brainstorm:

Collect all of your waste for two days and reflect.

Work Day:

Work day for Project #3 about the brainstorm prompt.

Class Discussion:

What ways can you mitigate climate change?
Project #3 Due

Lecture:

Dr. Dukes who does research on sustainability at Purdue University.

Essay:

What ways can you mitigate climate change?

Brainstorm:

Research climate science topics. Then, create an experiment.

Work Day:

Work day for Project #4 about the brainstorm prompt.

Class Discussion:

What do zero-waste and plant-based mean?
Project #4 Due

Lecture:

No Impact Man (1h 33m)
Finish as homework

Essay:

What do zero-waste and plant-based mean?

Brainstorm:

Try convincing three people to make their lie more sustainable. Summarize your conversations.

Work Day:

Work day for Project #5 about the brainstorm prompt.

Lecture Descriptions

Sustainability - Full Documentary (42 m)

This video explores the rise of the concept of sustainability as it has gone from the fringes to the mainstream within just a few short decades, driven by an environmental crisis on a global scale. In this short documentary film, we explore this new environmental context of the Anthropocene and the key structural transformations in our economy required to achieve sustainability in the age of globalization.

Dr. Loring F. Nies

Dr. Nies' research interests include optimizing the future capacities of interdependent urban infrastructure systems and the molecular genetic characterization of the structure and function of microbial communities. Dr. Nies' research group also develops molecular genetic tools to assess the effects of anthropogenic chemicals on microbial communities. These tools can be used to evaluate and monitor the progress of bioremediation projects by quantifying catabolic genes, or to investigate the potential toxic impacts of new chemicals.

The Story of Plastic (1 h 35 m)

A detailed look into the environmental damage and human rights abuses that occur throughout the lifecycle of plastic. What can companies, countries, and people do to fix the issues?

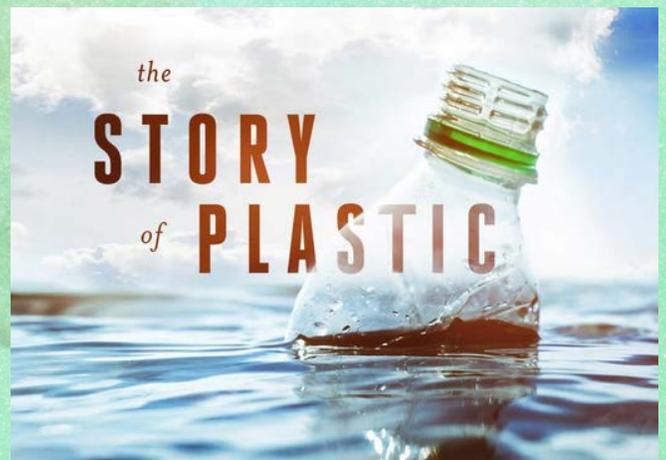
Lecture Descriptions

Dr. Jeffery Dukes

Professor of FNR & Biological Sciences, Dir. of Purdue Climate Change Research Center, Belcher Chair for Environmental Sustainability. Dukes directs the Boston-Area Climate Experiment (BACE), which characterizes ecosystem responses to gradients of climate change. Dukes also leads the INTERFACE research coordination network, which brings together experimentalists and modelers from around the world to advance global environmental change research. He is also active in his community by speaking to local politicians and helping out youth climate activists.

No Impact Man (1 h 33 m)

Self-proclaimed "No Impact Man," Colin Beavan swore off plastic and toxins, turned off his electricity, went organic, and started riding his bicycle exclusively for an entire year. Reviewed as a "sensational, funny, and consciousness-raising story,," "No Impact Man" is a fun way to learn about zero impact living.



Comments from Mrs. Mills

"First Ethan, I really like how you are laying out your main themes at the very beginning. People often hear the term "footprint" but don't really understand what that truly entails. By beginning here, students can identify where they are on the continuum and see what they can do to move toward activism."

"I would delete this and streamline the phrase: 'profits over people'. Political systems shouldn't own people; the people own the system."

"Alternating lecture platforms will create more interest. Good strategy."

"Your weekly plan is excellent to move students from discussion and talk about the climate crisis to responding and actively participating in climate activism."

"Love your organization of this course! Also students find comfort in routine and will come to class knowing what to expect. Great job:-)"

"You have a well-thought out plan with a steady methodology."

"Ethan, your lesson plan uses good teaching practice in that students are listening, learning, discussing and processing the information before they are producing anything. Informing the students through their own self-reflection is powerful:-)"

Sources

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sign up for my new

SUSTAINABILITY CLASS

and learn about the implementation!



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ethan.pgc Would you sign up for my sustainability course? Check this graphic out that outlines inspiration and implementation of the course. I would also like to give a huge shoutout to [@lisakeenmills](#) for leaving comments on my syllabus! 🏠🌍