CEOE OLLI CLASS Spring 2023
Let It Be Wild, Not Defiled:

Water, Land, and Food Systems in our Sustainable Future

Course description: This course will cover a variety of environmentally focused topics around water and the food supply. Topics include volcanoes and their impact on water, prescribed burns in marshes (including a discussion around DE marshes), harmful algae blooms, particularly in the DE bay, food sustainability, and microplastics in the DE bay and oceans. This class will be taught by masters and PhD students from the UD College of Earth, Ocean, and Environment.

Impact of Volcanic Eruptions on Water- April 7th
Abigail Nalesnik abnalesn@udel.edu

Communities living on volcanic landscapes are impacted by many hazards of volcanic eruptions. Different types of eruption deposits, from lava flows to ash falls, impact the cleanliness, usability, and availability of water resources. In this class, we will explore the local and regional impacts of volcanic eruptions on water resources based on eruption style (lava fountains, volcanic plume, lava flow).
Bio: PhD Candidate, Geological Sciences, University of Delaware. Researching explosive eruptions from Kīlauea Volcano, Hawaii.

Prescribed Burns in Marshes- April 14th

Chris Kelly cldkelly@udel.edu

Prescribed burns are a practice most often known in relation to more inland areas such as forests, but they are increasingly being utilized in Marsh systems. In this class, we will examine the reasons why this technique is being applied as well as how they are conducted. We will also go into the background of potential benefits from these burns and what is left behind by them.

Bio: Masters Student, Marine Studies with a concentration in Oceanography. Currently research black carbon created from prescribed burns in Delaware.

HABs in the Headlines- April 21st
Gretchen Johnson tabbag@udel.edu

Harmful Algal Blooms (HABs) occur all over the United States and the world, from coastal Delaware to landlocked freshwater systems. Sometimes, news articles about these devastating events can oversimplify the facts, or, conversely, fail to serve a broad audience. In this class, we'll get familiar with some established HAB science and touch on some ongoing research. We'll cover different algae that cause HABs, types of HABs, why HABs happen, and what we might be able to do about HABs as communities. The goal of the class is to provide a foundation of scientific knowledge to better understand and think critically about news coverage of HABs.

Bio:Master's Candidate, Marine Bioscience, University of Delaware. Research on development of HAB-control methodologies.

Climate Change and Food Systems- April 28th
Dongyang Weidywei@udel.edu and Bhoktear Khan bhoktear@udel.edu

Climate change can have a significant impact on the availability, and quality of food. Production, deforestation, and consumption: Consuming the same amount of food in the future may not provide the same level of nutrition. The future of food sustainability.

Bios: Dongyang: PhD Candidate, Geography, University of Delaware. Research on sustainable food systems. Bhoktear: 3rd yr PhD student, Geography, University of DelawarResearch on food security and sustainability in Nigeria

Microplastics in the DE Bay /Global Ocean – Following Sources from Production to Pollution- May 5th
Julia Fontana jfontana@udel.edu and Alan Mason ramason@udel.edu

Sources, fate, and biological impacts of plastics in the bay. Where microplastics come from (terrestrial manufacturing and litter), where and how they accumulate (modeled and collected material from locations of high accumulation based on wind, tides, currents etc), and biological impacts (accumulation of plastic in estuarine biota, physiological impacts in larval crabs and zooplankton, how plastics and organisms accumulate to similar regions in the bay. Plastic as tracers/opportunistic science

Bios: Julia: Masters Student, Marine Biosciences, University of Delaware. Interested in how plastic pollution impacts the environment. Alan: PhD Candidate, Marine Studies with a concentration in Physical Ocean Science and Engineering, University of Delaware. Researching currents and the fate of plastics in the Delaware Bay