

# SUS

## Sustainability Studies

### SUS 502: Perspectives on Sustainability

In this seminar course, students will analyze and discuss works that underpin research and practice in the interdisciplinary field of Sustainability. The scope of challenges and the ways in which they are interconnected will be highlighted.

*3 credits, Letter graded (A, A-, B+, etc.)*

### SUS 503: Research Methods in Sustainability

This course will provide a survey of quantitative and qualitative methods used in sustainability research in the natural sciences, social sciences, and humanities. Students will read primary literature and analyze the research design. Students will formulate research questions, identify appropriate methods to investigate the question, and develop a research proposal.

*3 credits, Letter graded (A, A-, B+, etc.)*

### SUS 543: Age of the Anthropocene

Anthropocene is the term coined to explain the current geologic era of our planet as shaped and defined by human activity. This course provides a deeper understanding of the ways in which humans have interacted with and transformed the planet during recent geologic time, including the Holocene, Industrial Revolution, and into the present. We consider Earth as a global ecosystem, characterized by interacting and dynamic systems, including biophysical and anthropogenic systems. This course critically examines the current interpretations and applications of the term Anthropocene, and identifies the key tenants and societal outcomes of this powerful and sometimes conflicting idea as applied today in science, socio-political discourse, sustainability, and beyond.

*3 credits, Letter graded (A, A-, B+, etc.)*

### SUS 548: Urban Climate Change Mitigation and Adaptation

Climate change, with its anthropogenic causes and devastating effects on human societies, is the grand challenge of our age. This course will consider how urbanized areas, especially coastal communities, can reduce their negative environmental impact while simultaneously working to adapt to the harmful effects of climate change that are already baked into earth's systems. Along the way we will develop a better understanding of the feedback loops that connect human activity with natural

systems and human well-being, analyze which varieties of urbanization actually have the worst environmental impacts, consider both incremental and extreme varieties of risk, and delve deeply into strategies and tactics for addressing the intertwined mitigation and adaptation challenges of climate change. Our focus will be on public sector actions and the public policy, urban planning and governance responses that will need to be made to regain equilibrium in our natural systems and adapting our social systems to new realities of life on Earth.

*3 credits, Letter graded (A, A-, B+, etc.)*

### SUS 550: Topics in Sustainability Studies

This is used to present special interest courses, including intensive short courses by visiting and adjunct faculty and courses requested by students. Topics can range from those that are relatively specific (e.g., Environmental Inequality), new methodological approaches, or other relevant skill development specific to the needs of Sustainability Studies graduate students.

*Fall and Spring, 1-4 credits, Letter graded (A, A-, B+, etc.)*

*May be repeated for credit.*

### SUS 551: Soil Ecotoxicology Research

Design and implement a unique project in ecotoxicology. Course covers literature review, experimental design, hypothesis formulation, data collection, data analysis, hypothesis testing and write up. Students will communicate their research orally and in writing. Projects vary by year and will involve ecotoxins such as acid rain, heavy metals, pesticides, plastics or herbicides and organisms such as soil microbes or earthworms. Course may be repeated once with instructor

*3 credits, Letter graded (A, A-, B+, etc.)*

*May be repeated 2 times FOR credit.*

### SUS 562: Resilient Communities

As population and investment increase in hazard-prone areas across the world, risks and vulnerability are increasing as well. Responding to increased risk and vulnerability involves enhancing resilience or our ability to withstand major shocks without long-term, debilitating physical, social, or economic damage. Resilience as a process can be embodied by communities who proactively prepare for, absorb, recover from, and adapt to actual or potential future adverse events, instead of bearing repeated damage and continuously demand for federal disaster assistance. This course explores the idea of resilience as an outcome and as a process from different perspectives and in different

contexts. We will first study resilience through the lens of sociopolitical ecology of risk and vulnerability. Then we will explore resilience in the face of natural, social and economic instabilities or shocks. Finally, we will discuss long term risk management, governance models, policies and politics involved in making our communities more resilient.

*3 credits, Letter graded (A, A-, B+, etc.)*

### SUS 566: Philosophy and the Environment

Philosophical questions raised by human relations with the natural world, ranging from basic concepts such as nature, ecology, the earth, and wilderness, to the ethical, economic, political, and religious dimensions of current environmental problems, including the question of whether there are values inherent in nature itself beyond those determined by human interests alone.

*3 credits, Letter graded (A, A-, B+, etc.)*

### SUS 580: Research Seminar

A weekly series of seminars presented by visiting sustainability researchers, SBU researchers, and sustainability graduate students.

*S/U grading*

*May be repeated for credit.*