

SUSTAINABILITY (SUS)

SUS 600. Communications Workshop. (1 h)

Effective, persuasive communication requires clarity, engaging language, sound reasoning, and an informed appreciation of audience. To that end, this workshop seeks to equip students as change agents that can effectively articulate a vision for ways to invest in and contribute to creating a sustainable future. Specifically, the Communication Skills Workshop teaches you how to apply such concepts to forms of written (e.g., memos) and oral (e.g., PowerPoint presentations) communication typically found in business and non-profit organizational settings. The workshop includes numerous interactive lessons that focus on the essentials of dynamic and economical writing, argument and evidentiary analysis, engaging and well-researched oral presentations, and audience adaptation.

SUS 601. Professional&Leadership Skills. (1 h)

This workshop will support students in understanding and developing the skills required to be thought leaders in the sustainability field. Learning will focus on leadership skills required to create meaningful change in various organizational settings. Topics include influencing others, collaborating in teams, managing conflict and working across cultures. To enhance self-awareness we will employ self-assessments and the creation of a program-long development plan.

SUS 602. Scientific Literacy. (1 h)

In this course we will focus on the nature of scientific inquiry, and explore how it is pursued, reported, and applied. In particular, we will focus on the intersection of climate science and the scientific study of attitudes/beliefs about climate science. We will also explore the projected impacts on and policy responses from the state of North Carolina.

SUS 603. Natural Capital Valuation and Ecosystem Services. (1 h)

This workshop introduces the concept of Ecosystem Services and Natural Capital Valuation in theory and practice. It focuses broadly on the concept of natural capital and the process of valuing ecosystem services, and more closely on how the process is working at multiple scales in policy, markets and projects. Ecosystem services is a new and rapidly growing field that crosses science, policy and management. Practitioners have varied expertise; from spatial modelers, research scientist, and economists, to policy makers and social scientists. We will cover some of the historical development and current state of the ecosystem services markets specifically for carbon and water. Critical spatial tools of GIS and spatial modeling of ecosystem services are also introduced.

SUS 625. Environmental Decision-Making. (3 h)

The complex nature of the environment makes the choices made about environmental issues difficult and incomplete. The course offers a simple but comprehensive understanding of the important interplay between science, economics, and values that must be considered, when making informed environmental decisions. A selection of case studies from around the world are highlighted but emphasis will be given to case studies from the United States.

SUS 630. Global Coastal Management. (3 h)

Major issues impacting coastal zones of the world are explored. Management and governance themes used in shaping coastal behavior are emphasized from both an integrative and multi-disciplinary perspective. In particular, the following three issues are examined: the threat to coastal environments from a rapidly growing human population and pollution; the destruction of critical resources and vital ecosystems through unsustainable economic activities; and the difficult challenges governments face in crafting effective coastal management initiatives. The course takes a global perspective, but some emphasis will be given to coastal zones of the United States.

SUS 691. Special Topics. (1-3 h)

Examination of topics not covered in the regular curriculum.

SUS 694. Internship. (1-4 h)

Internships are available for a student who has completed one year of graduate study and desires experience working in the private sector or a nonprofit or government agency. Internships typically take place during the summer months and last for three months, although the timing and duration may be adjusted to satisfy each student's needs and the type of internship available. Credit hours are adjusted based on the length of the internship. The student receives a written evaluation from the host organization mentor and is required to submit a written report of his/her work. May be repeated for up to 4 credits.

SUS 695. Individual Study. (1-3 h)

Opportunity to pursue a topic covered in a regular course in greater depth or topics relevant to the student's field of concentration. Usually involves extensive reading and tutorial sessions with a faculty supervisor. Written papers may be required. May be repeated for up to 6 credits.

SUS 701. Global Human Systems. (3 h)

Sustainability is a human term with context specific connotations—in other words deployments of the term in the public sphere often tell us more about the perceptions and values of those utilizing the term than they do about what is central to achieving sustainability. In this course we will interrogate the ways in which uses of this human term intersect with earth systems and politics. Students will gain a basic understanding of earth systems science, gather historical data related to human impacts on earth systems, and study human values as they relate to the other-than-human entities with which they share their habitats. Fundamentally, the goal of this course is to go beyond the traditional disciplinary divides (natural science, social sciences, and humanities), to begin to sketch the outlines of each of these areas while highlighting important convergences and differences.

SUS 702. Sustainable Organizational Mgt. (3 h)

Are organizations part of the problem or part of the solution – or both? What practices will produce desirable organizational outcomes and improve the environment? This course will provide information to address these questions. It will include an overview of the presence and impact of sustainable practices in private and public sector organizations. The course information and experiences will equip participants with the ability to think critically about the trade-offs inherent in the relationship between certain organizational decisions and sustainability best practices.

SUS 703. Natural Science for Sustainability. (3 h)

Students will explore qualitative and quantitative chemical and physical aspects of sustainability for waste, water, air, and energy. The course provides an in-depth scientific understanding of the most important nonrenewable and renewable energy sources. Students will study the world's present and future energy needs, focus on energy production, consumption, and environmental impact, and explore ways in which these principles relate to sustainability. The sustainability and environmental trade off of different energy systems will be studied.

SUS 704. Environmental Law & Policy. (3 h)

To understand how we can move toward sustainability domestically and abroad, we must understand how and why law and policy are developed, challenged, and changed. This course will look at the historical development of environmentalism and the movements that provided the impetus for modern environmental legal regimes, as well as case studies illustrating contemporary environmental issues. We will cover common law and statutory remedies for private citizens, principles of federalism and separation of powers, agency rulemaking, the role of the judiciary in environmental law and policy, and international environmental law. Each case study in this course will emphasize one of the major U.S. environmental statutes, so that upon completion of the course you will not only have a foundation in law and policy processes but also a familiarity with the most significant U.S. statutory schemes.

SUS 705. Applied Sustainability 1. (2 h)

This course will introduce you to the practice of building sustainable systems in today's world. In it you should improve your ability to understand design principles for sustainability, assess sustainability actions of organizations at all levels, use different frameworks to track and assess sustainability, and apply your skill sin effectively managing change. The objective of this course is for us to learn how to advance sustainability today, see what might be done in the future, and identify opportunities that exist for each of us. We will use a variety of learning experiences, including site visits, group presentations and in class presentations by outside leaders.

SUS 706. Applied Sustainability: Creativity and Impact. (2 h)

Applied Sustainability is crafted to experience sustainability in action through Human Centered Design. Human Centered Design is a philosophy, a set of abilities, a set of mindsets, and a set of practices that proves invaluable in addressing the sustainability issues of our time. This way of working is a making based approach to problem solving and solution development. You will apply and practice the mindsets and abilities of design in different scenarios and different scales to address sustainability problems, and develop and build on new to the world ideas. This class is project oriented and team based. This course as a journey culminates with a client/community based sustainability practicum. Overall, this class emphasizes new ways of approaching work and life.

SUS 710. Sustainable Urban Planning and the Built Environment. (3 h)

This course will explore the tenets of sustainable construction and high performance building practices and prepare students for the U.S. Green Building Council's LEED Green Associate Exam. LEED, or Leadership in Energy & Environmental Design, is a certification program that recognizes best-in-class building strategies practices. Sustainable architecture and construction seeks to minimize the negative environmental impact of buildings by efficiency and moderation in the use of materials, energy, and development space. This course widens the conversation to include how buildings and other community planning impacts urban environments. The focus of this planning is to satisfy construction and design goals with sustainable outcomes.

SUS 715. Environmental Sustainability in a Global Context. (2 h)

Students will develop practical problem-solving skills that address the challenges of climate change in an international context. This experiential learning course employs a variety of interdisciplinary approaches to explore concepts related to climate change adaptation. Students will interact with practitioners and stakeholders in various economic and political sectors to develop a group client-based project that supports real policy and management decisions on sustainable practices. Students will have the opportunity to travel internationally to visit affected areas and meet with government officials, researchers, conservationists, and economic planners. This course offers students a firsthand opportunity to conduct field research, hone interviewing practices, draft policy reports, and engage clients.

SUS 720. Sustainability Practices & Policy in a National Context. (1 h)

This seminar is designed specifically for graduate students in sustainability, students who are early and mid-career professionals looking to transition into careers in sustainability or environmental protection through business, government, NGOs, policy institutes or non-profits. Students will hear from and meet with a range of experts in climate change and sustainability, learn about the work they do and get a clear understanding of the challenges they face (practically and politically) and the impact they can have. This seminar will model possible career paths and provide networking opportunities.

SUS 791. Thesis Research. (1-4 h)

Research directed toward fulfilling the capstone requirement. May be repeated for up to a total of 4 credits.