

Sustainability Studies (SUST)

SUST 1100. Problem Solving for a Sustainable Future. (4 Hours)

Presents a skills-based, interdisciplinary introduction to sustainable problem solving. Explores foundational problem-solving competencies and applies them to real-world case studies that investigate the interconnectedness of social, economic, and environmental systems. Studies how to analyze complex problems and propose actionable solutions that promote resilience, well-being, justice, and balance across communities, institutions, and ecosystems.

Attribute(s): NUpath Difference/Diversity, NUpath Societies/Institutions

SUST 1200. Climate Science and Policy in California. (4 Hours)

Introduces the physical science for understanding climate change including Earth's radiative energy balance; atmospheric and oceanic processes; the carbon cycle and greenhouse gases; and climate feedbacks, variability, and tipping points. Examines current and future climate change impacts and policy in California. Considers sustainable nature-based, societal, and economic solutions developed in and applied by California that may serve as models for other states and regions.

Attribute(s): NUpath Analyzing/Using Data, NUpath Natural/Designed World

SUST 1990. Elective. (1-4 Hours)

Offers elective credit for courses taken at other academic institutions.

SUST 2100. What Matters and Why: Values-Based Decision Making. (4 Hours)

Explores how values-based thinking can transform our understanding of sustainability. Examines the limitations of traditional metrics of prosperity that often neglect crucial social dimensions of human well-being, and explores alternative frameworks centered on equity and regenerative practices. Cultivates essential interpersonal skills through collaborative dialogue, effective communication practices, and methodologies that center community voices in sustainability decision making.

Attribute(s): NUpath Ethical Reasoning

SUST 2127. Mutual Aid Movements and Community Resilience. (4 Hours)

Examines mutual aid as a framework for community resilience and a tool to develop alternative, sustainable economic systems. Analyzes how communities organize to meet direct needs while building collective power outside traditional institutions. Investigates theoretical foundations distinguishing mutual aid from charity models. Studies organizational structures, challenges of effective mutual aid networks, and intersections with broader social movements. Applies critical frameworks to real-world case studies. Culminates in designing a mutual aid project that addresses community-identified needs with attention to equity and sustainability.

Attribute(s): NUpath Societies/Institutions

SUST 2200. Quantitative Methods for Sustainability Research. (4 Hours)

Offers students an opportunity to develop quantitative reasoning skills for analyzing sustainability problems. Emphasizes mathematical and statistical approaches to describing change, modeling relationships, and reasoning under uncertainty. Studies how to frame quantitative questions, apply probability and statistical inference, and construct and interpret models to understand economic, social, and environmental dynamics within sustainability contexts.

Attribute(s): NUpath Formal/Quant Reasoning

SUST 2510. China, Globalization, and the Environment. (4 Hours)

Explores the global impacts of China's reemergence as an economic, technological, and political leader. Takes a political ecology approach to examine chains of production and consumption connecting China with the rest of the global economic system. Discusses how global trade affects people and the environment where products are made, how U.S. and global trade policies shape international development, and how consumer choices can have wide-ranging environmental consequences.

Attribute(s): NUpath Societies/Institutions

SUST 2550. Sustainability in the Beauty Industry. (4 Hours)

Offers an interdisciplinary introduction to sustainability within the beauty industry. Examines challenges and opportunities in creating and marketing products that are environmentally responsible, ethical, and socially conscious. Explores scientific principles underlying sustainable formulation, the environmental impact of ingredients and packaging, and the social implications of beauty industry practices. Emphasizes systems thinking and ethical reasoning as students analyze how scientific innovation, environmental stewardship, and social responsibility can converge to transform traditional beauty industry paradigms.

Attribute(s): NUpath Ethical Reasoning

SUST 2725. Building a Sustainable Democracy. (4 Hours)

Investigates whether and how societies can build democratic systems capable of sustaining themselves, and evaluates whether those systems can effectively advance economic, social, and environmental sustainability. Applies values thinking, systems thinking, and futures thinking tools to assess the ethical and practical value of democracy, develop criteria for evaluating political systems, analyze how institutions and power structures shape democratic performance, and imagine alternative models that better equip societies to meet long-term challenges. Applies these insights to propose evidence-based reforms that support sustainable governance and a sustainable planet.

Attribute(s): NUpath Societies/Institutions

SUST 2810. Sustainability and Persuasion. (4 Hours)

Presents research and theories on changing individual and institutional behavior related to environmental sustainability and personal well-being. Introduces research on attitude change, attitude-behavior relations, persuasion and compliance principles, and resistance and obstacles to behavior change in both individuals and society. Exposes students to scientific case studies of educational and behavior change programs in sustainability and well-being. Offers students an opportunity to develop programs and campaigns to improve sustainability and well-being.

Prerequisite(s): PHTH 1260 (may be taken concurrently) with a minimum grade of C or PHTH 1261 (may be taken concurrently) with a minimum grade of C or NYC 151M (may be taken concurrently) with a minimum grade of C or PSYC 1101 (may be taken concurrently) with a minimum grade of C or (PSYC 101M (may be taken concurrently) with a minimum grade of C ; PSYC 102M (may be taken concurrently) with a minimum grade of C)

Attribute(s): NUpath Natural/Designed World

SUST 2820. Climate Change, Health, and Resilience. (4 Hours)

Examines how human behavior contributes to both climate change and chronic disease and how climate change exacerbates poor health trends and inequities, creating new health risks in the United States and around the globe. Considers the health impacts of environmental changes, such as changing temperatures, extreme events, and scarcity of resources. Presents strategies for building resilience and considers steps to adapt to and mitigate climate change that mutually enhance the health of individuals, communities, and the environment.

Prerequisite(s): AFCS 1270 (may be taken concurrently) with a minimum grade of C or AFRS 1270 (may be taken concurrently) with a minimum grade of C or PHTH 1260 (may be taken concurrently) with a minimum grade of C or PHTH 1261 (may be taken concurrently) with a minimum grade of C or NYC 151M (may be taken concurrently) with a minimum grade of C or PHTH 1270 (may be taken concurrently) with a minimum grade of C or PSYC 1101 (may be taken concurrently) with a minimum grade of C or (PSYC 101M (may be taken concurrently) with a minimum grade of C ; PSYC 102M (may be taken concurrently) with a minimum grade of C)

Attribute(s): NUpath Natural/Designed World

SUST 2973. Topics in Sustainability Studies. (4 Hours)

Offers instruction on a sustainability-related topic not regularly taught in a formal course. Topics may vary from offering to offering. May be repeated twice.

SUST 2990. Elective. (1-4 Hours)

Offers elective credit for courses taken at other academic institutions.

SUST 3100. Thinking in Systems. (4 Hours)

Offers students an opportunity to develop systems thinking skills by examining how economic, social, and environmental systems interconnect in sustainability challenges. Engages students in a real-world project to practice the identification of system boundaries, mapping of interconnections and feedback loops, recognition of archetypes and patterns, location of high-leverage intervention points, and anticipation of unintended consequences.

Prerequisite(s): SUST 1100 with a minimum grade of D- or SUST 2100 with a minimum grade of D-

SUST 3200. Sustainable Futures: Theory and Practice. (4 Hours)

Offers students an opportunity to develop competence in futures thinking as both ethical imperative and essential sustainability skill. Introduces and practices practical foresight techniques such as scenario construction and simulation, trend analysis, and horizon scanning while engaging with theoretical and ethical frameworks of anticipatory decision making. Incorporates experiential learning through the analysis and development of simulations, games, and collaborative research skills.

Prerequisite(s): SUST 1100 with a minimum grade of D- or SUST 2100 with a minimum grade of D-

SUST 3300. Qualitative Methods for Sustainability Research. (4 Hours)

Introduces qualitative research approaches and their practical applications in socio-ecological sustainability contexts. Covers the design and implementation of ethical research projects with community partners and the selection and application of qualitative data collection methods including observation, interviewing, oral history, focus groups, visual methods, and archival research. Examines research motivations, paradigms, methodological choices, ethics review processes, and fieldwork experiences in academic and applied settings. Emphasizes critical analysis of results, communication of research findings, representation, voice, reflexivity, and researcher positioning. Offers students an opportunity to design original field research projects aligned with international sustainable development goals, incorporating qualitative methods through student-led learning and critical assessment of interdisciplinary research.

Prerequisite(s): SUST 2200 with a minimum grade of D-

Attribute(s): NUpath Analyzing/Using Data

SUST 3461. Quantitative Conservation Biology. (4 Hours)

Explores the foundational principles of the interdisciplinary field of conservation biology. Focuses on population biology, population genetics, community ecology, biogeography, and animal behavior. Relies on quantitative tools to answer important questions about species persistence in a rapidly changing world. Emphasizes developing and critiquing conservation solutions based on ecology, biology, genetics, and behavior, as well as recognizing differing perspectives and values.

Prerequisite(s): EEMB 1101 with a minimum grade of C- or EEMB 2302 with a minimum grade of C- or EEMB 2400 with a minimum grade of C- or ENVR 1101 with a minimum grade of C- or ENVM 115M with a minimum grade of C-

Attribute(s): NUpath Natural/Designed World

SUST 3654. Fire Ecology. (4 Hours)

Introduces students to the ecology of fire, one of the most common and important disturbance events in terrestrial ecosystems. Examines how fire affects individual plants and animals (e.g., physiology, growth, reproduction, etc.), populations, ecological communities, ecosystem processes (e.g., nutrient and hydrologic cycling), and how the interplay between the abiotic and biotic worlds shape fire regimes. Explores how humans interact with fire, including European-American fire suppression and indigenous use of fire. Discusses how (prescribed) fire is used in restoration and ecosystem management and how climate change alters our ability to use this tool.

Prerequisite(s): EEMB 1101 with a minimum grade of D- or EEMB 2302 with a minimum grade of D- or EEMB 2400 with a minimum grade of D-

Attribute(s): NUpath Natural/Designed World

SUST 3990. Elective. (1-4 Hours)

Offers elective credit for courses taken at other academic institutions.

SUST 4100. Strategy and Sustainability Leadership. (4 Hours)

Practices strategic thinking and integrated problem solving as crucial competencies for translating sustainability knowledge into effective action through a project for a campus, community, or industry partner. Emphasizes the development of deliberate, goal-oriented approaches to sustainability challenges such as setting clear objectives, identifying barriers, analyzing intervention opportunities, formulating action plans, and measuring progress toward sustainability goals. Designed to bridge theoretical understanding with practical implementation.

Prerequisite(s): SUST 1100 with a minimum grade of D- ; (SUST 2100 with a minimum grade of D- or SUST 3100 with a minimum grade of D- or SUST 3200 with a minimum grade of D-)

Attribute(s): NUpath Writing Intensive

SUST 4990. Elective. (1-4 Hours)

Offers elective credit for courses taken at other academic institutions.

SUST 6962. Elective. (1-4 Hours)

Offers elective credit for courses taken at other academic institutions.