

# SUSTAINABILITY STUDIES (SUST)

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## SUST 101 - HUMANS AND NATURE

This seminar explores the complex and ever-changing relationship humans have forged with the natural world, as viewed from the perspective of sustainability: the capacity of the human community to persist and thrive over time without degrading or exhausting its natural resources, and to do so justly and equitably. Class activities will consist of discussion, student presentations, critical/interpretive writing, and a museum visit and/or urban nature field expedition.

Credits: 3

Attributes: Humanities, Social Science

Prerequisites: ENG 101

## SUST 210 - SUSTAINABLE FUTURE

Overview of sustainability as a concept and practice. Exploration of issues, controversies, trends, and case-studies in various systems and locales (urban/rural, local/national/global). Students develop a critical understanding of sustainability's various definitions; assess factors that contribute to and detract from environmental quality, community stability, economic and social equity, and sustainable development; and analyze the connections among topics such as food, water, waste, energy, biodiversity, climate change, and environmental justice.

Credits: 3

Attributes: Social Science

Prerequisites: ENG 101

## SUST 220 - WATER

Evaluation of water quality and sustainability issues through the analysis of local, regional, and global case studies. Key concepts include the water cycle; drinking water quality; water conservation strategies; wastewater treatment and watershed management; and wetlands ecology, restoration, and management. Students assess water as an environmental and cultural resource; and evaluate contemporary water management and policy issues, particularly those affecting Chicago's urban waterways as well as the Great Lakes ecosystem.

Credits: 3

Attributes: Social Science

Prerequisites: ENG 101

## SUST 230 - FOOD

Overview of sustainability issues surrounding food production, distribution, consumption, and policy. Students compare the ecological and economic impacts of chemical-intensive versus organic agriculture; analyze the advantages and challenges of local food production, the permaculture movement, and their relation to environmental and economic sustainability; evaluate the capacity of urban agriculture and community gardens for improving and sustaining of economically-distressed communities; and investigate the relationship between food and social justice.

Credits: 3

Attributes: Social Science

Prerequisites: ENG 101

## SUST 240 - WASTE

Exploration of the relationships among consumption, waste, pollution, and environmental justice. Students examine sustainability dilemmas involving waste management of various kinds (municipal, hazardous, toxic, and wastewater); assess consumption trends past and present; and explore the connection of waste production and disposal to environmental justice. Through activities such as measuring their own waste stream and assessing community-level waste management (landfilling, recycling and composting), students critically evaluate the economic, political, and ecological impacts of linear vs. circular waste stream practices.

Credits: 3

Attributes: Social Science

Prerequisites: ENG 101

## SUST 250 - THE SUSTAINABLE UNIVERSITY

RU's 2015 Strategic Sustainability Plan maps out how the university as a whole can become more sustainable, from academics to operations to community engagement. Student creativity and action are vital to this effort. While learning about campus-based sustainability innovations in the US and abroad, student teams design and complete projects that implement various aspects of RU's plan in a hands-on application of sustainability principles, service learning, and environmental activism.

Credits: 3

Attributes: Social Science

Prerequisites: ENG 102

## SUST 310 - ENERGY AND CLIMATE CHANGE

Investigation of the environmental implications of energy production and consumption, and assessment of current and future problems in the energy field. Students explore the natural phenomena and scientific principles that form our understanding climate change, such as the carbon cycle and the greenhouse effect, and assess the social and environmental consequences of energy production and consumption, whether fossil fuel-based or renewable. Key topics include the relation of current energy production and consumption to climate change; the development of clean energy production and distribution systems; and the economic and environmental justice consequences of fossil fuels.

Credits: 3

Attributes: Social Science

Prerequisites: ENG 102

## SUST 320 - SPRAWL, TRANSPORT, PLANNING

Students gain an understanding of the political-economic, spatial, and public policy issues relating to sprawl; learn the history, present use, and future prospects of urban planning and its potential to reshape the urban and suburban landscape in positive ways; evaluate current transportation systems in terms of efficiency, cost, and environmental impact; and develop critical tools and writing/presentation skills in order to propose alternative transportation initiatives, particularly at the community or regional levels.

Credits: 3

Attributes: Social Science

Prerequisites: ENG 102

**SUST 330 - BIODIVERSITY**

Exploration of biological diversity in the context of ecology, conservation, ecosystem restoration, and regional planning. Students learn about a variety of natural science concepts and theories relevant to understanding the biological and ecological significance of biodiversity, such as ecosystems, species, genes, ecological interactions, and evolution. Key topics include the importance of conserving biodiversity to the health of natural systems and human communities; and the value of open space, parklands, nature preserves, and wildlife refuges for preserving biodiversity, particularly in urban areas.

Credits: 3

Attributes: Natural Science

Prerequisites: ENG 102

**SUST 340 - POLICY, LAW, ETHICS**

Investigation of the political, legal, and ethical dimensions of sustainability through case studies in public policy, environmental law, and community activism. Topics include the impact of policies and laws upon communities, and the relevance of environmental policy and ethics to the development of sustainable agriculture, transportation, energy, and housing systems. Students will gain an understanding of the political terrain, the significant ethical debates, and the legal boundaries surrounding sustainability by critically evaluating policy questions in a sequence of critical writing projects.

Credits: 3

Attributes: Humanities, Social Science

Prerequisites: ENG 102

**SUST 350 - SERVICE AND SUSTAINABILITY**

Focuses on one of sustainability's "Three Es" – Equity – within the broad context of environmental stewardship and community resilience. Students partner with an outside organization, institution, or community – either as a group or through individual service projects – to perform transformational service learning work and address real-world sustainability problems and solutions. Students engage and debate matters of social equity and environmental justice in relation to sustainable development, community resilience, ecological conservation, and other issues. Course topics and community partners vary section by section.

Credits: 3

Attributes: Social Science

Prerequisites: ENG 102

**SUST 360 - WRITING URBAN NATURE**

Environmental literature & writing course featuring in-the-field explorations of various natural and urban environments in the Chicago region. Provides a unique immersive experience in "nature close at hand" at sites of local ecological and cultural significance. Emphasizes close observation of place and people; walking and exploring diverse landscapes and neighborhoods; and discussing as well as producing compelling ideas, stories, and images of urban nature, broadly defined.

Credits: 3

Attributes: Humanities

Prerequisites: ENG 102

**SUST 361 - URBAN ECOLOGY**

This field-based course provides training in the research tools of the social and ecological sciences using the city of Chicago as its laboratory. Students will learn how to monitor air, water, and/or soil quality; survey biodiversity; and assess green infrastructure within the built environment while exploring ecologically and culturally significant sites around Chicago. Combines in-class discussions with field work and prepares students in the rapidly growing field of Urban Ecology.

Credits: 3

Attributes: Social Science

Prerequisites: ENG 102

**SUST 370 - MAPPING FOR SUSTAINABILITY**

Maps can help us understand and prepare for many of the world's most pressing social and environmental problems, from climate change to deforestation. This course trains students in Geographic Information Science (GIS) mapping software so that we can better understand relationships and patterns in our world. Students in the course will be exposed to the rapidly growing world of spatial analysis and cartography using the industry's leading software tool, ArcGIS.

Credits: 3

Prerequisites: ENG 102

**SUST 390 - SPECIAL TOPICS IN SUSTAINABILITY**

In-depth seminars on specific topics in sustainability, including environmental literature and communication; the urban environment; sustainability and environmental history; parkland conservation; campus/institutional sustainability planning; and representations of sustainability in art, literature, film, and media.

Credits: 3

Prerequisites: ENG 102

**SUST 394 - INDEPENDENT STUDY**

Independent study course on a topic of interest related to sustainability, determined with faculty input and approval.

Credits: 1,3

Attributes: Social Science

Prerequisites: ENG 102

**SUST 395 - SUSTAINABILITY STUDIES INTERNSHIP**

Individually designed Sustainability Studies internships and/or service-learning experiences. With the approval of a faculty sponsor and the program director, students may participate in an appropriate internship in the field of Sustainability and earn credit. Internships must involve a minimum of 40 hours of work per credit hour. From 1-6 credits may be earned. Students are required to complete written work, as determined by the faculty sponsor, reflecting on their experience.

Credits: 1-6

Course Notes: Faculty sponsor and, program director approval required.