

# SUSTAINABILITY (SUST)

Subject-area course lists indicate courses currently active for offering at the University of Louisville. Not all courses are scheduled in any given academic term. For class offerings in a specific semester, refer to the Schedule of Classes (<http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm>).

500-level courses generally are included in both the undergraduate- and graduate-level course listings; however, specific course/section offerings may vary between semesters. Students are responsible for ensuring that they enroll in courses that are applicable to their particular academic programs.

## Course Fees

Some courses may carry fees beyond the standard tuition costs to cover additional support or materials. Program-, subject- and course-specific fee information can be found on the Office of the Bursar website (<http://louisville.edu/bursar/tuitionfee/>).

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### SUST 101. Introduction to Sustainability - SB 3 Units

**Term Typically Offered:** Fall, Spring, Summer

**Description:** The study of sustainability is an interdisciplinary activity that examines interrelated environmental, political, economic, and social problems facing humans and society at local, regional and global scales. This course provides an introductory survey of the concepts, values, frameworks, and methodologies that contribute to understanding and responding to problems such as climate change, environmental degradation, and the issues of limited resource allocation.

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### SUST 201. Environmental Management 3 Units

**Term Typically Offered:** Occasionally Offered

**Prerequisite(s):** SUST 101.

**Description:** This course introduces students to major environmental problems in sustainability. Students will examine the biophysical or ecological properties, manifestations, and consequences of these problems at local, regional, and global scales. The course will take particular interest in human-environment interactions, understanding the role different ecosystems and environmental processes play in human well-being, as well as how humans interact with and influence biodiversity, structure, and function of natural systems worldwide.

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### SUST 202. Behavioral Dimensions of Environmental Decision-Making 3 Units

**Term Typically Offered:** Spring Only

**Prerequisite(s):** SUST 101.

**Description:** This course will examine sustainability through a behavioral lens, exploring the psychological processes, primary research methods, and behavioral solutions involved in environmentally responsible behavior and sustainability. Students will be introduced to key principles of motivation, perception, and decision-making to identify fundamental behavioral obstacles to sustainability.

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### SUST 301. Sustainable Built Environment - D1, SB 3 Units

**Term Typically Offered:** Spring Only

**Prerequisite(s):** SUST 101.

**Description:** The course will explore the issues of sustainability from the perspective of the built environment, our history of construction and expansion, and buildings and how they interact with the natural environment. These issues will be explored from building specific, as well as urban system, perspectives including urban design. Further, the course will focus on identifying and implementing practices that lead to more sustainable man-made modifications of natural environment for human purposes. The course will comprise of a discussion about sustainable sources for energy, water, air, materials for human habitat design and management.

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### SUST 303. Quantitative Research Methods in Sustainability and Urban Studies - QR 3 Units

**Term Typically Offered:** Fall Only

**Prerequisite(s):** ACT Math score of at least 19 or SAT Math score of at least 510 or KYOTE Math College Readiness score of at least 22 or GED Mathematical Reasoning score of at least 165 or ALEKS PPL score of at least 30 or high school GPA of at least 3.0 or a course indicating equivalent college math readiness.

**Description:** This course is designed to be an elementary introduction to statistics with an additional mixture of research methods fundamentals for sustainability and urban studies. Students will learn statistical techniques for quantitative data analysis as well as a basic understanding of how research is conducted. The statistics sections covers descriptive statistics, such as measures of central tendency and variation, some probability theory, and inferential statistics, such as hypothesis testing using t-tests. The focus of the research methods section is on quantitative research, such as sampling, measurement issues or experimental approaches, as they are relevant for sustainability and urban studies.

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### SUST 401. Independent Study Sustainability - CUE 1-3 Units

**Term Typically Offered:** Fall, Spring, Summer

**Prerequisite(s):** SUST 101, SUST 201, SUST 301, and permission of the instructor.

**Description:** By making arrangements with a faculty member, students can register for one to three hours of credit in SUST 401 to participate in research relevant to sustainability science or practice.

**Course Attribute(s):** CUE - This course fulfills the Culminating Undergraduate Experience (CUE) requirement for certain degree programs. CUE courses are advanced-level courses intended for majors with at least 90 earned credits/senior-level status.

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**SUST 402. Policy and Governance in Sustainability - WR 3 Units**

**Term Typically Offered:** Fall Only

**Prerequisite(s):** SUST 101, SUST 201, and SUST 202.

**Description:** The course will deal with policy making and governance, and explore the impacts of political economy on overall sustainability. Students will examine desired economic conditions, policies, and governance systems that may encourage adoption of best practices in sustainability, including city / county level policy making, state and federal level issues (e.g., EPA, renewable energy incentives), and grassroots political organizing.

**Note:** Approved for the Arts and Sciences upper-level requirement in written communication (WR).

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**SUST 403. Sustainable Societal Systems 3 Units**

**Term Typically Offered:** Spring Only

**Prerequisite(s):** SUST 101, SUST 201, and SUST 202.

**Description:** This course examines sustainability problems and processes as embedded within large social-ecological systems and societal frameworks in the U.S. and globally. Students will examine topics in sustainability from a holistic systems perspective, in which "sustainability" is seen to integrate multiple actors, social systems (e.g., culture, economy, communities, and governance), environmental processes, and built / technological infrastructures at multiple scales to archive human welfare and lasting environmental prosperity (i.e., "social-ecological sustainability").

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**SUST 404. Sustainability Internship - CUE 3 Units**

**Term Typically Offered:** Fall, Spring, Summer

**Prerequisite(s):** SUST 101, SUST 201, SUST 202, SUST 301, and permission of the instructor.

**Description:** The Sustainability Internship is a culminating learning experience for students to develop critical thinking skills, synthesize lessons learned from the BA in Sustainability, and apply the knowledge to real-world projects or activities in sustainability. Typical Internship sites and clients will include: local government agencies, community-based organizations, business organizations, and university committees or partnerships.

**Course Attribute(s):** CUE - This course fulfills the Culminating Undergraduate Experience (CUE) requirement for certain degree programs. CUE courses are advanced-level courses intended for majors with at least 90 earned credits/senior-level status.

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**SUST 480. Special Topics in Sustainability 3 Units**

**Term Typically Offered:** Occasionally Offered

**Prerequisite(s):** Consent of instructor.

**Description:** Examination of an advanced topic related to sustainability. Topics will vary depending on instructor.

**Note:** May be repeated for credit.

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**SUST 518. Urban Demography and GIS 3 Units**

**Term Typically Offered:** Spring Only

**Prerequisite(s):** SUST 101.

**Description:** This course will introduce students to geographic information systems (GIS) as an analytical tool with which to study urban demographic issues. The material will be geared towards students in the urban planning, public administration, and urban studies programs, with a focus on demographic data and issues frequently encountered by planners, policymakers, and policy analysts. Topics that will be covered include migration, housing and neighborhood development, segregation, and land use.

**Note:** Cross-listed with URBS 518, PLAN 618, PADM 621.

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**SUST 576. Sustainable Social-Ecological Systems 3 Units**

**Term Typically Offered:** Fall Only

**Prerequisite(s):** SUST 101, SUST 201 or SUST 202; and SUST 301; or consent of instructor.

**Description:** The course is designed to address the social ecological frameworks for understanding and applying sustainability concepts in both theory and practice.

**Note:** Cross-listed with PLAN 676, UPA 676, and PADM 676.

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