Sustainability Studies (SUS)

Major and Minor in Sustainability Studies

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Sustainability Studies (SUS)
The Sustainability Studies major, leading to a Bachelor of Arts degree, provides the skills, knowledge, and preparation for students to understand and address the environmental, social, political, economic and ethical issues related to the transformation of our current societies to ones that are sustainable. The curriculum integrates principles and methodologies from social sciences, natural sciences, and humanities.

The major prepares students for entry-level employment in the public, private, or non-profit sectors in a variety of fields including economic development, foreign aid, public administration, law, diplomacy, public policy, public health, resource and energy conservation, business, finance, international trade, or eco-tourism. The major prepares students for graduate study in social science, political science, law, management and business.

The major builds on the interdisciplinary sustainability core curriculum. Students will enroll in major-specific courses in their junior and senior year. As part of the preparation, students will work in teams with students enrolled in related majors to collaboratively solve problems. Students are encouraged to take advantage of internships, project courses, independent research, and field courses to gain real-world experience.

Requirements for the Major in Sustainability Studies (SUS)
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A. Required Foundation Courses (32-33 credits)

• MAT 125 or MAT 131 or AMS 151. If students do not place into MAT 125 or 131 or AMS 151 on the basis of the math placement examination, MAT 123 is a required course for the major.
• ECO 108 Introduction to Economics
• PHI 104 Moral Reasoning
• POL 102 Introduction to American Government
• SBC 111 Introduction to Sustainability Studies
• SBC 115 Introduction to Human Demographics
• SBC 201 Systems and Models
• SBC 206 Economics and Sustainability
• SBC 113 Physical Geography
• BIO 201 Fundamentals of Biology: Organisms to Ecosystems
• CHE/ENV 115 Chemistry, Life, Environment (Note: CHE 115, 129, 131, 141, or 152 may be substituted for CHE/ENV 115)

B. Career and Leadership Skills (6 credits)

• CSK 302 Technical Writing and Communication
• CSK 305 Collective Action and Advocacy

C. Core Courses (27 credits)

Required:

• SUS 302 Integrative Assessment Models
• SUS 366 Philosophy of the Environment

Required seven (7) three-credit courses with a minimum of one (1) course in each of the following five groups:

Group 1: Physical Environment and Renewable and Non-Renewable Resources

• ENV 304 Environmental Global Change
• ENV 340 Contemporary Topics in Environmental Science
• SUS 342 Energy and Mineral Resource
• EHI 342 Materials in Natural and Human Environment
• EHI 343 Sustainable Natural Resources
• GEO 313 Understanding Water Resources for the 21st Century
• SUS 343 Age of the Anthropocene

Group 2: Ecology
• EHI 310 Preservation and Restoration of Ecosystems
• EHI 311 Ecosystem-Based Management
• EHI 340 Ecological and Social Dimensions of Disease
• EHI 350 Design Ecotoxicology Research
• EHI 351 Conduct Ecotoxicology Research
• ENS 311 Ecosystem Ecology and Global Environment
• BIO 351 Ecology

Group 3: Human Population
• EHI 321 Human Reproductive Ecology
• EHI 322 Human Ecology
• GSS 317 Geospatial Narratives: Deep Mapping for Humanities and Social Sciences
• SBC 310 Migration, Development and Population Redistribution
• SUS 303 Demographic Change and Sustainability

Group 4: Economics
• ECO 373 Economics of the Environment and Natural Resources
• EDP 303 Spatial Economics
• SUS 306 Business and Sustainability
• SUS 307 Environmental Economics and Management
• SUS 308 Economic Development

Group 5: Environment, Policy and Society
• EDP 305 Risk Assessment and Sustainable Development
• EHM 316 Cuba and Sustainability
• EHM 321 Utopia and Dystopia and the Environment in Literature and Culture
• ENS 312 Population, Technology and the Environment
• ENS 333 Environmental Law
• ENV 310 Sustainability and Renewable Energy in Costa Rica
• ENV 316 Coastal Zone Management
• ENV 339 Economics of Coastal and Marine Ecosystems
• HIS 352 Environmental History of China
• SBC 307 Environmental History of North America
• SBC 308 American Environmental Politics
• SBC 309 Global Environmental Politics
• SBC 311 Disasters and Society: A Global Perspective
• SBC 312 Environment, Society, and Health
• SBC 321 Ecology and Evolution in American Literature
• SUS 341 Environmental Treatises and Protocols
• SUS 350 Contemporary Topics in Sustainability
• SUS 487 Research
• SUS 488 Internship

D. Systems Courses (3 credits)
One course selected from the two choices below:
• SBC 401 Integrative, Collaborative Systems Project
• ENV 301 Sustainability of the Long Island Pine Barrens

E. Communications and Writing Requirement

Proficiency in writing, oral communication, and computer literacy will be encouraged in all students. In addition to CSK 302, these skills will be developed within the context of other formal coursework and no additional credits are required. To meet the upper-division writing requirement, students must submit two papers with letter grades of no lower than a B from any 300-level or 400-level course in the major to the director of the SUS Undergraduate Program.

Students should consult with the department advisor to ensure that their plan for completing the Upper Division Writing Requirement is consistent with university graduation requirements for General Education. Students completing the Stony Brook Curriculum (SBC) must complete a course that satisfies the “Write Effectively within One's Discipline” (WRTD) learning objective to graduate. The Upper Division Writing Requirement is consistent in most cases with the SBC learning outcomes for WRTD.

Note:
All courses offered for the major must be passed with a letter grade of C or higher. Course taken with the Pass/NC option may not be applied to the major.

Stony Brook University: www.stonybrook.edu/ugbulletin
Study Abroad

Stony Brook University offers study abroad experiences that are focused on issues of sustainability in Costa Rica, Madagascar, and the Turkana Basin (Kenya). While issues of climate change, water and energy security, sustainable agriculture, environmental justice, sustainable economic development, conservation of unique and threatened ecosystems, population growth, and human health are important everywhere, viewing these issues through the lens of a different place and a different culture provides a valuable perspective. Students are encouraged to participate in study abroad experiences and to talk with their major director to determine how study abroad coursework can be used to fulfill some requirements for their major.

Minor in Sustainability Studies (SUS)

The Sustainability Studies minor is intended for students who seek to complement their chosen major with a foundation in the social, economic, and environmental aspects of sustainability.

Requirements for the Minor in Sustainability Studies (SUS)

At least 12 credits applied to the minor may not be applied to any major or other minor within the Sustainability Studies Program. No more than one three-credit course in the minor may be taken under the Pass/No Credit option. All upper-division courses offered for the minor must be passed with a letter grade of C or higher. Completion of the minor requires 18 credits.

1. Required three introductory courses:
   - SBC 111 Introduction to Sustainability Studies
   - SBC 206 Economics and Sustainability

   And one of the following four courses:
   - PHI 104 Moral Reasoning
   - SBC 115 Introduction to Human Demography
   - POL 102 Introduction to American Government
   - CHE/ENV 115 Chemistry, Life, Environment

2. Required three courses from the following:
   - ENS 311 Ecosystem Ecology and Global Environment
   - ENS 312 Population, Technology and the Environment
   - ENS 333 Environmental Law
   - ENV 301 Sustainability of the Long Island Pine Barrens
   - SUS 366 Philosophy of the Environment
   - SUS 306 Business and Sustainability
   - SUS 307 Environmental Economics and Management
   - ENV 340 Contemporary Topics in Environmental Science*
   - EDP 303 Spatial Economics
   - SBC 307 Environmental History of North America
   - SBC 309 Global Environmental Politics
   - SBC 310 Migration, Development and Population Redistribution
   - SBC 311 Disasters and Society: A Global Perspective
   - SBC 312 Environment, Society, and Health
   - SBC 321 Ecology and Evolution in American Literature
   - SBC 401 Integrative, Collaborative Systems Studies
   - GSS 317 Geospatial Narratives: Deep Mapping for Humanities and Social Sciences
   - SUS 341 Environmental Treatises and Protocols
   - SUS 350 Contemporary Topics in Sustainability*
   - EHI 311 Ecosystem-Based Management
   - ENV 310 Sustainable and Renewable Energy in Costa Rica or EHM 316 Cuba and Sustainability

*An Internship with significant practical experience [SBC 488 Internship] or an approved research project [SBC 487 Research] may be substituted for SUS 350 or ENV 340.

Declaration of the Minor

Students should declare the Sustainability Studies minor no later than the middle of their sophomore year, at which time they should consult with the minor coordinator or undergraduate director and plan their course of study for fulfillment of the requirements.
Sample Course Sequence for the Major in Sustainability Studies
A course planning guide for this major may be found here.

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**SUS**

**Sustainability Studies**

**SUS 302: Integrative Assessment Models**
Use, evaluation, and development of integrated assessment models. These model typically integrate environmental concerns with variables from other disciplines for the purpose of providing policy advice to decision-makers. Students will learn about the most frequently used integrated assessment models and what we can learn from them. The models studies will include the World3 model, which was the basis of the famous book "The Limits to Growth."

*Prerequisite: SBC 206
3 credits*

**SUS 303: Demographic Change and Sustainability**
This course will assess the unprecedented demographic changes and diversity of the 21st century, through an interdisciplinary approach. It will explore themes such as population ageing and decline, migration in population replacement, demographic change and sustainable public health, social welfare programs, environmental degradation, and differential vulnerabilities (e.g., gender, poverty, age, education, ethnicity and race, empowerment and rights).

*Prerequisite: SBC 115
3 credits*

**SUS 306: Business and Sustainability**
This course examines the interface between business and sustainability. It considers opportunities for the development and growth of profit and not-for-profit businesses associated with the promotion of sustainability. It also covers how environmental concerns and related governmental regulations influence business operations and profitability. Students will apply career skills and concepts from environmental economics to understand how business functions (e.g., operations, public relations, sales, health and safety, and corporate social responsibility) are influenced by environmental concerns. The course will highlight current issues and cases, provide an overview of theory and practice, and generate research to test students' hypotheses, and generally explore opportunities and threats to business viability. Review of current affairs, case analyses, role plays, field trips, and guest speakers will be included along with required reading in seminal theory and research.

*Prerequisite: SBC 206
3 credits*

**SUS 307: Environmental Economics and Management**
This course presents advanced concepts in environmental economics and management through a series of detailed case studies. The cases include those concerning the US sulfur-dioxide permit trading system, the Kyoto Protocol, zoning, coastal fisheries, the use of ethanol in gasoline, tradable development rights in the Long Island Pine Barrens and the conservation of endangered species.

*Prerequisite: SBC 206
3 credits*

**SUS 308: Economic Development**
This course teaches students about economic development and its relationship to the environment. Students learn about both the theory of economic growth and the way development has proceeded in various regions of the world. Examples will come from the Asian tiger economies of East Asia and the development disasters in Sub-Saharan Africa. The relationships between the levels and rates of growth of output and various environmental indices will be explored.

*Prerequisite: SBC 206
3 credits*

**SUS 309: Environmental Politics**
A multi-disciplinary study of the scientific basis, objective, development, implementation, and intended and unintended consequences of a single major Environmental Treatise or Protocol, such as the Kyoto Protocol. Official documents, secondary literature, as well as commentary on the Treatise or Protocol are studied.

*Prerequisite: SBC 111, or ENS 101, or GEO 101, GEO 102, ENV 115, CHE 131
DEC: H
SBC: STAS
3 credits*

**SUS 320: Energy and Mineral Resources**
This class will explore the origin, distribution, and importance of energy and mineral resources to modern civilization, with an emphasis on fossil fuels and non-renewable mineral resources extracted from Earth. Geological processes responsible for the formation and distribution of energy and mineral resources, as well as current and future supply and demand are discussed. The environmental implications of the extraction and use of energy and mineral resources as well as techniques to minimize the impact on the environment will be discussed.

*Prerequisite: one D.E.C. E or SNW course
DEC: H
SBC: STAS
3 credits*

**SUS 341: Environmental Treaties and Protocols**
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 natural and anthropogenic. 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, sustainability, and beyond.

*Prerequisite: one of the following courses: SBC 111, SBC 113, ENS 101, GEO 101, GEO 102, ENV 115, CHE 131
DEC: H
SBC: STAS
3 credits*

**SUS 350: Contemporary Topics in Sustainability**
This course deals with the meaning and the application of the idea of sustainability. First, the mathematics of exponential and linear growth, and the concept of stability in complex systems will be developed. The idea of stable equilibrium and the long-term/short term distinction will also be discussed. Then, various subjects of sustainability—populations, species, habitats, ecosystems, resources, cultures, modes of production, economic systems, and political systems will be considered. Various purposes of sustainability for its own sake, for human welfare, for the welfare of nature will also be discussed. May be repeated as the topic changes.

*Prerequisite: SBC 111; U3/U4 status
3 credits*

**SUS 366: Philosophy of the Environment (III)**
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. This course is offered as both PHI 366 and SUS 366.

**Prerequisite:** PHI 104 or two PHI courses; or permission of the department

**DEC:** G  
**SBC:** CER, HFA+

### 3 credits

#### SUS 444: Experiential Learning
This course is designed for students who engage in a substantial, structured experiential learning activity in conjunction with another class. Experiential learning occurs when knowledge acquired through formal learning and past experience are applied to a “real-world” setting or problem to create new knowledge through a process of reflection, critical analysis, feedback and synthesis. Beyond-the-classroom experiences that support experiential learning may include: service learning, mentored research, field work, or an internship.

**Prerequisite:** WRT 102 or equivalent; permission of the instructor and approval of the EXP+ contract (http://sb.cc.stonybrook.edu/bulletin/current/policiesandregulations/degree_requirements/EXPplus.php)

**SBC:** EXP+  
**0 credit, S/U grading**

#### SUS 487: Research in Sustainability Studies
Qualified advanced undergraduates may carry out individual research projects under the direct supervision of a faculty member. May be repeated.

**Prerequisite:** Permission of instructor

**SBC:** EXP+  
**1-6 credits, S/U grading**

#### SUS 488: Internship in Sustainability Studies
Participation in local, state, and national public and private agencies and organizations. May be repeated to a limit of 12 credits.

**Prerequisites:** U3/U4 status and permission of the Undergraduate Program Director

**SBC:** EXP+  
**0-12 credits, S/U grading**

### SBC

#### Sustainability Block Curriculum

**SBC 111: Introduction to Sustainability Studies**

Survey course introduces concept of sustainability. Sustainability is often defined as the ability to provide for the needs of the world's current population without damaging the ability of future generations to provide for themselves. This course reviews the needs of the current population and future generations, trends that affect our ability to provide those needs, and possible solutions that are environmentally, economically, and socially acceptable.

**SBC:** SNW  
**3 credits**

#### SBC 113: Physical Geography Lecture
This study of ecosystems examines modern environmental problems through quantitative methods, analysis, and modeling grounded in basic and applied science and research. The goal of the course is to introduce students to the fundamental processes that dominate the atmosphere, hydrosphere, lithosphere, and biosphere, their characteristics and complex interactions, and their impact on human life and society.

**DEC:** E  
**SBC:** SNW  
**3 credits**

#### SBC 114: Physical Geography Lab
This laboratory course provides hands on experience in understanding the geosystems, including distribution and interrelationships of climate, vegetation, soils, and landforms.

**Pre- or corequisite:** SBC 113  
**1 credit**

#### SBC 115: Introduction to Human Demography
An introductory course on the study of human population. Measurement issues and data in demographic analysis, as well as demographic perspectives on the basis of a review of major sources of information about population studies will be presented. Theories incorporating social, economic and political explanations for influences on human population growth will be considered. Population processes, with focus on fertility, mortality and migration, are reviewed. Population structure and characteristics, the interaction of the population processes and the number of people in a society of a given age, sex, race, ethnicity, socioeconomic levels, marital status, and gender, are reviewed. Major issues related to sustainability (such as economic development, food and pollution, urbanization, gender and minority empowerment, and the human relationship and ecology with other organisms and species) are reviewed.

**Prerequisite:** MAT 125, MAT 131, MAT 132, or level 6 or higher on math placement exam.

**SBC:** SBS  
**3 credits**

#### SBC 116: Introduction to Human Geography
Survey course introduces geography as a social science by emphasizing the relevance of geographic concepts to human problems. Course emphasizes globalization and cultural diversity.

**DEC:** F  
**SBC:** SBS  
**3 credits**

#### SBC 117: Design Drawing
This introductory course exposes the student to the fundamental theories and practices employed in visually representing design concepts from observational through technical and speculative drawing. The course content introduces the student to contour drawing, rendering, orthographic projection, and pictorial drawing. Project work engages the student in the application of the above-mentioned drawing techniques and develops skills through the solution of student tailored problems.

**DEC:** D  
**SBC:** TECH  
**3 credits**

#### SBC 200: Human Settlement: History and Future
The history of city growth over the millennia as affected by technological change is a basis for understanding the future of human settlement. More than half of the world's population currently lives in cities and urbanization continues on a global scale. The universalism of urban development and resulting patterns will be presented as well as limits on growth of cities. Architectonic and socioeconomic planning theories and strategies for sustainable growth are presented. The development of Long Island, which is a microcosm of national and global patterns, will be discussed in detail.

**DEC:** F  
**SBC:** SBS  
**3 credits**

#### SBC 201: Systems and Models
Introduction to the dynamic modeling of complex systems. Students will learn to use simulation software that facilitates the
visualization, formulation, and analysis of systems. Students will learn about systems with positive and negative feedbacks, the effects lags on system performance, and the difference between stocks and flows. Systems studied will include ecological models, economic models, chemical models, population models, epidemiological models, and models that include the interactions between population, economic development, and the environment.  
Prerequisite: AMS 151 or MAT 125 or MAT 131 or MAT 141  
2 credits  

SBC 203: Interpretation and Critical Analysis  
An introduction to interdisciplinary inquiry and representation in arts, culture, and theory with emphasis on the roles of analysis, argument, and imagination in multiple media. Requires serious engagement with sophisticated texts.  
Pre- or corequisite: WRT 102  
DEC: G  
SBC: CER, HUM, WRTD  
3 credits  

SBC 204: Population Studies  
The course will present basic mathematics of population growth and introduce various approaches for modeling populations, including population viability analysis (PVA). PVA, the quantitative assessment of the extinction risk of rare species or populations, takes biological information (habitat requirements, birth and death rates, population size) and makes predictions about future population sizes. Real examples will be discussed for a range of organisms, from bacteria to plants and mammals. This course will provide also the background for understanding human population growth. The impacts of human population growth in the developed and developing world on the ecology of other organisms, habitats and systems will also be discussed.  
Prerequisite: MAT 125  
DEC: E  
SBC: STEM+  
3 credits  

SBC 206: Economics and Sustainability  
Introduction to the basic economic concepts used in sustainability analysis. Students will learn the basic concepts and how to apply them in various context. Topics include the analysis of situations in which the behavior of individuals indirectly affects the well-being of others, strategic behavior and the environment, and the use of market-oriented policies to help in the stewardship of the environment.  
Prerequisite: ECO 108  
DEC: F  
SBC: SBS+  
3 credits  

SBC 207: American Environmental History  
This course provides an overview of the history of how Americans have used, viewed and valued the natural environment. Beginning with the Indians and the early colonists (15th-16th centuries), the course will examine the cultural, social, economic, political, and technological currents that shaped North Americans' relationships with their environment in early and later industrial eras, after World War II, and finally, in the late 20th and early 21st centuries. Historical snapshots will center on people living in more natural places, such as farms and forests, as well as more built places, such as factories, cities, and suburbs. Events in the northeastern U.S. will provide a geographic focus, but the course will also look at related happenings elsewhere on the North American continent and beyond. Finally, it will examine at the growing array of movements that have identified themselves as 'environmental', at the 'greenness' of modern culture, and at the environmental dimensions of a globalizing era.  
Prerequisite: WRT 102  
DEC: K & 4  
SBC: SBS+, USA  
3 credits  

SBC 307: American Environmental Politics  
This course will survey the politics of environmental policy-making in the United States. It examines how contrasting political, economic and social interests and values have clashed and contested with one another, and the exerted power, in the environmental policy realm. The course will explore past precedents and roots, but with a view to explain the shape of this realm in the modern United States, including the many actors and institutions: local, regional and national governments, non-governmental organizations and interest groups, as well as the public. It will look at the main patterns by which these groups have defined environmental problems and formulated and implemented solutions. A chief goal is to illuminate how and why solutions of real-world environmental problems, if they are to be effective, differ from those of scientific or engineering puzzles.  
Prerequisite: POL 102  
DEC: K  
SBC: SBS+  
3 credits  

SBC 309: Global Environmental Politics  
This course will explore the politics of environmental policy-making within the international realm. Focused especially on environmental dilemmas that cross national boundaries (i.e., pollution), or that are shared by multiple nations (i.e., global warming) it will look at the ways that such problems have been defined and their solutions sought, both with and without an over-arching state or governance. It will survey the many groups, interests and values that have clashed and competed with one another to exert power and influence international environmental policies, as well as the variety of international institutions and agreements that have sought to formulate and implement solutions. One goal is to illuminate how and why effective solutions to global environmental problems differ from those to scientific or engineering puzzles. The course also aims to spur student engagement with the sometimes overwhelming nature of global environmental threats, the tenuous and sometimes counterproductive ways that knowledge and power can be linked, and the ways individuals may act powerfully in service of "sustainability."

Prerequisite: SBC 111 or ENV 115 or ENS 101 or GEO 101 or permission of instructor  
SBC: GLO  
3 credits  

SBC 310: Migration, Development and Population Redistribution  
This course draws upon the contributions of various social and natural sciences (including population and urban geography, demography, political science, sociology, history, economics, public health and environmental sciences) to explore the effects of migratory and demographic shifts on the environment, social welfare, public health, economic development, ethnic diversity, urbanization, public policy and planning. It will examine the political, social, environmental, health and economic effects on sustainability.  
Prerequisite: SBC 115  
3 credits  

SBC 311: Disasters and Society: A Global Perspective  
This class introduces students to the sociological examination of natural, technological, and industrial disasters. Students will explore how and why disasters are fundamentally social events: What do disasters reveal about society? Why are the
human consequences of disasters unequally distributed? What are the typical ways in which states, organizations, and communities respond to disasters? Focusing on case studies from around the world, students will discuss: What are the long-term/short-term causes of particular disasters? What forms of suffering the disasters under consideration generated? What state/civil society actions did they trigger? What advocacy networks were put in place in their aftermath?

**Prerequisite:** SBC 111, or ENS 101, or GEO 101; POL 102 or SOC 105

**DEC:** H

**SBC:** STAS

**3 credits**

**SBC 312: Environment, Society, and Health**

This class examines the interactions between environment, social structures, and institutions. The first part of the class examines the ways in which environmental issues are perceived and constructed by various social actors (lay public, state officials, scientists, activists, media). The second part of the class will examine the differential impact of class, race, and gender on the distribution of hazards and risks (what is commonly known as 'environmental inequality'). In the third part of the class, students will be introduced to different cases of 'contested environmental illnesses' (cancer, lead-poisoning, asthma).

**Prerequisite:** SBC 111, or ENS 101, or GEO 101; POL 102 or SOC 105

**DEC:** F

**SBC:** SBS+

**3 credits**

**SBC 321: Ecology and Evolution in American Literature**

This course is a review of 19th- and 20th-century American writers who trace the evolution of the US with respect to ecological practices through various multicultural perspectives. Literature covered will include transcendentalist essays, utopian/dystopian novels, ecofeminist fiction, and journalism.

**Prerequisite:** WRT 102

**Advisory Prerequisite:** SBC 203

**DEC:** G

**SBC:** HFA+, WRTD

**3 credits**

**SBC 330: Extreme Events in Literature**

A course that examines the depiction of extreme events (both natural and human-related) in literature, journalism, art, and film, with special emphasis paid to the extended political and social issues that are raised by the events in question.

**Prerequisite:** WRT 102

**Advisory Prerequisite:** SBC 203

**DEC:** G

**SBC:** HFA+, WRTD

**3 credits**

**SBC 331: City, Suburb, Sprawl**

A course that traces the shift from city to suburb to sprawl in texts that span the late-nineteenth century through the early twenty-first century, with special attention paid to phenomena such as industrialization, immigration, mass society, globalization, and postmodern hyperspace. An interdisciplinary set of texts will include works by novelists, artists, architects, and literary theoreticians.

**Prerequisite:** WRT 102

**Advisory Prerequisite:** SBC 203

**DEC:** G

**SBC:** HFA+

**3 credits**

**SBC 354: Drawing for Design--CAD**

Techniques and Theory of Drawing; Architectural Drawing; Learning Computer Assisted Design (CAD). This course will serve as an introduction to CAD tools relevant to design and architectural rendering.

**Prerequisite:** SBC 117

**SBC:** STEM+

**3 credits**

**SBC 374: Environment and Development in African History**

Provides a critical exploration of the history and political-economy of environmental changes and human activities in Africa from earlier times to the present. It examines the ways in which the dynamics of human-environment relationship have shaped the development of African societies and economies from the rise of ancient civilizations to the contemporary problems of war and famine. Although significant attention will be given to the pre-colonial era (like the impacts of iron-working, irrigation, deforestation and desertification), the focus of the course will be on the 20th and century and after, looking at the impacts of imperialism, colonialism, globalization and the postcolonial quest for development on the state of the environment in Africa. In the discussion, we will demonstrate that the shaping of African environments and ecologies is a product of complex, evolving and interconnected developments between humans and nature within and beyond the African continent. Offered as both AFS 374 and SBC 374. Not for credit in addition to SBC 320.

**Prerequisite:** U3 or U4 status

**DEC:** J

**SBC:** GLO, SBS+

**3 credits**

**SBC 401: Integrative, Collaborative Systems Studies**

Problem-based capstone course.

**Prerequisite:** U3 or U4 status

**SBC:** ESI

**3 credits**

**SBC 475: Undergraduate Teaching Practicum**

Work with a faculty member as assistant in a regularly scheduled course. The student must attend all classes and carry out all assignments; in addition the student will be assigned a specific role to assist in teaching the course. The student will meet with the instructor on a regular basis to discuss intellectual and pedagogical matters relating to the course.

**Prerequisites:** Permission of instructor and undergraduate director

**SBC:** ESI, EXP+

**3 credits, S/U grading**

**SBC 476: Undergraduate Teaching Practicum II**

Work with a faculty member as assistant in one of the faculty member's regularly scheduled courses. Students assume greater responsibility in such areas as leading discussions and analyzing results of tests that have already been graded. Students may not serve as teaching assistants in the same course twice.

**Prerequisites:** Permission of instructor and undergraduate director

**SBC:** EXP+

**3 credits, S/U grading**