

Environmental Design, Policy, and Planning (EDP)**Major and Minor in Environmental Design, Policy, and Planning**

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Environmental Design, Policy, and Planning (EDP)

The Environmental Design, Policy, and Planning major, leading to a Bachelor of Arts degree, provides the skills, knowledge, and preparation for students to understand and address complex issues related to development, land-use, urbanization, and suburban sprawl. The curriculum integrates principles and methodologies from social sciences, natural sciences, and humanities. The goal is to address the complex scientific, legal, ethical, political, environmental, and socio-economic issues that surround the development, management, and use of the built environment.

The B.A. degree prepares students for entry-level employment in the public, private, or non-profit sectors in a variety of fields including urban and regional planning, community planning, environmental consulting, land and real estate development, and public administration. The major prepares students for graduate study in environmental design, planning, architecture, 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. A design project is an essential part of the curriculum to provide real-world experience. Internships and independent research courses provide additional real-world experiences. Seniors are required to present their Design Project at an Annual Gathering of Researchers and Scholars.

Requirements for the Major and Minor in Environmental Design, Policy, and Planning (EDP)**Requirements for the Major in Environmental Design, Policy, and Planning (EDP)****A. Required Foundation Courses for Major (33-34 credits)**

MAT 131-C or MAT 125-C Calculus
 ECO 108-F Introduction to Economics
 SBC 111 Introduction to Sustainability
 SBC 115 Introduction to Human Demography
 ENV 115-E Chemistry, Life, Environment
 SBC 113/SBC 114-E Physical Geography
 ARS 154-D Foundations of Drawing
 AMS 102-C Elements of Statistics
 SBC 201 Systems and Models
 POL 102-F, 4 Introduction to American Government
 SBC 205 Introduction to Geospatial Analysis
 SBC 206 Economics and Sustainability

B. Career Leadership Skills (5 credits)

CSK 102 Career Leadership Skills: Working in Teams
 CSK 101, CSK 103, CSK 104, CSK 105, CSK 106, CSK 107, CSK 108, or CSK 109
 CSK 302 Technical Writing and Communication.

C. Core Courses (31 credits):

Required Core Courses:
 SBC 313 GIS Applications and Design
 SBC 354 Drawing for Design-CAD
 EDP 303 Spatial Economics

Students are required to take a minimum of 6 credits from each group 1 through 3 and 3 credits from group 4:

1. Historic and Theoretical Perspectives (6 credits)
 SBC 200-F History of Human Settlements and Long Island's Development
 EDP 307 Theories and Design of Human Settlements
2. Physical and Built Environment Upper Division Block (2 courses required; 6 credits)
 EDP 301/EDP 302 The Built Environment I& II
3. Policy, Politics, and Regulations (6 credits)
 EDP 309 Planning: Policies and Regulations
 and one of the following courses:
 EDP 305 Risk Assessment and Sustainable Development
 SBC 308-K American Environmental Politics
 SBC 309 Global Environmental Politics
4. Societal and Cultural Aspects (3 credits)
 SUS 303 Demographic Change and Sustainability
 SBC 307-K&4 American Environmental History

SBC 310 Migration, Development and Population Redistribution

SBC 312-F Environment, Society, and Health

One of the following courses may be used as a substitute for any of the courses in Group 4. Note: each course below has a prerequisite outside the major.

SUS 301 Environmental Ethics

EHI 322 Human Ecology

SBC 331-G City, Suburb, Sprawl

D. Design Project Course (3 credits)

EDP 404 Environmental Design Project (see notes)

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 from any 300-level or 400-level course in the major to the Director of the EDP Undergraduate Program.

Notes:

1. Internship with significant practical experience in planning and/or environmental design may be substitute for EDP 404 with permission of Undergraduate EDP Program Director.

2. One course passed with a C- may be applied to the major; all other 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.

Minor in Environmental Design, Policy, and Planning (EDP)

The Environmental Design, Policy, and Planning minor is intended for students who seek to complement their chosen major with a foundation in complex scientific, legal, ethical, political, environmental, and socio-economic issues that surround the development, management, and use of the built environment.

Requirements for the Minor in Environmental Design, Policy, and Planning (EDP)

No more than two courses that are used to satisfy your major can be applied to this minor. 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 21 credits.

1. Required four introductory courses:

SBC 111 Introduction to Sustainability Studies

SBC 113 Physical Geography

SBC 200 Human Settlements: History and Future

SBC 206 Economics and Sustainability

2. Required two advanced courses:

EDP 301 The Built Environment I

EDP 302 The Built Environment II

3. Required one advanced course from the following:

EDP 303 Spatial Economics

EDP 309 Planning: Policies and Regulations

SBC 307 American Environmental History

SBC 309 Global Environmental Politics

SUS 350 Contemporary Topics in Sustainability

Declaration of the Minor

Students should declare the Environmental Design, Policy, and Planning 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 Environmental Design, Policy, and Planning

Freshman Fall	Credits	Spring	Credits
First Year Seminar 101		1 First Year Seminar 102	1
SBC 111	3	D.E.C. A	3
D.E.C. A	3	CSK 102	1
SBC 101	3	ARS 154	3
MAT 125 or 131	4	ENV 115	3
SBS 113/SBC 114	4	SBC 205	1
		POL 102	3

Total	18	Total	15
Sophomore Fall	Credits	Spring	Credits
SBC 201	1	SBC 200	3
ECO 108	4	SBC 354	3
AMS 102	3	Foreign language or elective	4
SBC 115	3	CSK 109	1
Foreign language or elective	4	CSK 10x selection	1
		D.E.C.	3
Total	15	Total	15
Junior Fall	Credits	Spring	Credits
SBC 313	4	Group 3 Selection 2	3
Group 3: EDP 309	3	EDP 307	3
SBC 206	3	Group 2: EDP 301	3
CSK 302	3	EDP 302	3
Elective or D.E.C.	3	Elective or D.E.C.	3
Total	16	Total	15
Senior Fall	Credits	Spring	Credits
Group 2: EDP 302	3	Internship/Research	6
EDP 404		D.E.C.	3
Group 4 selection 1	3	D.E.C.	3
D.E.C.	3	Elective	3
D.E.C.	3		
Total	15	Total	15

EDP

Environmental Design, Policy, and Planning

EDP 301: The Built Environment I

The functional determinants of an urban region's physical infrastructure, encompassing cities, suburbs, exurbs and satellite communities are presented. The course will cover metropolitan infrastructure components including systems of transportation, water supply, waste disposal and energy distribution and how they are shaped by the interaction of economics, politics and planning practice.

Prerequisite: SBC 200

3 credits

EDP 302: The Built Environment II

The functional dynamics underlying the development and planning for structures and facilities in urban regions are presented including their cities, suburbs, exurbs and recreational satellite communities. The course will cover the interaction of real estate economics, politics and good planning practice as they affect residential, commercial, educational, cultural and industrial sites.

Prerequisite: EDP 301

3 credits

EDP 303: Spatial Economics

Economic theories and empirical data that explain the distribution of man-made activities in geographic regions are presented. The course emphasizes spatial patterns among and within urban regions of the United States. Classes will cover the economic and demographic factors governing the distribution, within natural regional conurbations, of residences, industries and all other activities whose location is economically determined.

Prerequisite: SBC 206

3 credits

EDP 305: Risk Assessment and Sustainable Development

Course presents a comprehensive overview of risk analysis and its application to a broad range of human activities. The methodology of risk analysis enables those involved in environmental sustainability to evaluate the probability of an adverse effect of an agent, chemical, industrial process, or natural process.

Prerequisite: ENV 115

3 credits

EDP 307: Theories and Design of Urban Settlements

The course introduces students to the underlying economic, social and physical forces that shape the development of human settlements, with an emphasis on urban conurbations, and the typical United States metropolitan region.

Prerequisite: SBC 206, SBC 111

3 credits

EDP 309: Planning: Policies and Regulations

An introduction to the process of planning and development of regulations necessary for the implementation of planning objectives.

Prerequisite: SBC 200

3 credits

EDP 404: Environmental Design Project

Students will be formed into teams of 5 - 6 students representing the three major programs to jointly collaborate on a real-world environmental/planning problem affecting one of the eastern five towns of Suffolk County. They will participate with the respective municipal planning and environmental agencies and the residents of the geographic area. The students' role will be to serve as the professional consultant to the community. The design project presented in written, graphic and model form will be critiqued by a panel from the community and local government; including out-of-area experts.

Prerequisite: U3/U4, CSK 102

3 credits

EDP 487: Research in Environmental Design, Policy, & Planning

Qualified advanced undergraduates may carry out individual research projects under the direct supervision of a faculty member. May be repeated.

1-6 credits, *S/U grading*

SBC

Sustainability Block Curriculum

SBC 104 - B: Introduction to Moral Reasoning

An introductory inquiry into the formation and evaluation of moral judgments and reasoning. The major theories and problems of ethics are surveyed, such as utilitarianism, Kant's categorical imperative, ethical relativism, egoism, and various concepts of the good and virtue. Readings from historical and contemporary figures.

3 credits

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.

3 credits

SBC 113 - E: Physical Geography Lecture

This study of geosystems 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.

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, socio-economic 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.

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.

3 credits

SBC 117 - D: 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.

3 credits

SBC 200 - F: 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 the world's population currently live in cities and urbanization continues on a global scale.

The universality 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.

3 credits

SBC 201: Systems and Models

Introduction to the dynamic modeling of complex systems with feedbacks. Students will learn to use simulation software that facilitates the visualization, formulations, 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: MAT 125; EHI, EDP, SUS, COS, or EHM major, or permission of the instructor

1 credit

SBC 203 - G: 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

3 credits

SBC 204 - E: 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, SBC 201

3 credits

SBC 205: Introduction to Geospatial Analysis (lab course)

Introduction to geographic information systems (GIS) and remote sensing techniques as applied to documenting, mapping, analyzing, interpreting, and managing natural and cultural resources. Types of GIS data, computer hardware and software used for geospatial analysis, basic cartography, and global positioning system (GPS).

1 credit

SBC 206 - F: 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 affect 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

3 credits

SBC 307 - K: 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: U3/U4 standing

3 credits

SBC 308 - K: 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

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, ENV 115, ENS 101, GEO 101, or permission of instructor

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 - H: 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 do the disasters under consideration generate? 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

3 credits

SBC 312 - F: 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

3 credits

SBC 313: GIS Design and Application

This course provides the basic concepts underlying modern geographic information science and technology. Emphasis is placed on the principles of GIS for characterizing environmental systems and computer-based techniques for processing and analyzing spatial data. The course includes three hours of lecture and three hours of laboratory exercises each week.

Prerequisite: MAT 125 or MAT 131

4 credits

SBC 320 - J: Sub-Saharan Africa: Geography, Cultures, and Societies

This course presents a broad perspective on Sub-Saharan Africa, a region of sharp geographic, cultural, and economic contrasts. The legacy of the region's triple heritage (indigenous, Islamic, and European) is presented as a framework for understanding the complexity and diversity of contemporary Sub-Saharan Africa in terms of distribution of languages, religions, ethnicity, family relations, and governance systems. The influence of globalization, migration, HIV/AIDS, conflicts, population growth, and socioeconomic development policies on modern Sub-Saharan Africa are discussed.

Prerequisite: U3 or U4 standing

3 credits

SBC 321 - G: 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: SBC 203 or EGL 204

3 credits

SBC 325: Environmental Writing and the Media

An examination of multiple genres (including: photo journalism, literary nonfiction, fine art and advertising and documentary film) in order to understand ways in which these genres are utilized to inform and manipulate public opinion regarding the environment. The culmination of the course will be a final project using multiple genres.

Prerequisite: WRT 102

Advisory Prerequisite: SBC 203

3 credits

SBC 330 - G: 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: SBC 203 or EGL 204

3 credits

SBC 331 - G: 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: SBC 203 or EGL 204

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.

3 credits

SBC 401: Integrative, Collaborative Systems Studies

Problem-based capstone course.

Prerequisite: U3/U4, CSK 102

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

3 credits, S/U grading

SBC 476: Undergraduate Teaching Practicum II

Work with a faculty member as an 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

3 credits, S/U grading

SBC 488: Internship

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

0-12 credits, S/U grading