Southampton Block Curriculum

SBC 102 Undergraduate Seminar at Stony Brook Southampton
A seminar for all students enrolled at Stony Brook Southampton. Seminar covers various topics under the general scope of sustainability. Seminars vary by section and include examination of topics such as sustainable development, global warming, sprawl, economic development, environmental policies, alternative energy resources, population growth, food supply, and global poverty.
Prerequisite: Enrollment at Stony Brook Southampton 1 credit, ABC/U grading

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 concepts 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. Corequisite: SBS 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 growth, food and pollution, urbanization, gender and minority empowerment, and the human relationship and ecology with other organisms and species) are reviewed.
Prerequisite: MAT 125 3 credits

SBC 116 Introduction to Human Geography
Survey course introduces geography as a social science by emphasizing the role the analysis of geographic concepts to human problems. Course emphasizes globalization and cultural diversity.
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 interactions between population, economic development, and the environment.
Prerequisite: MAT 125 or 131 1 credit

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 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 & 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 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).
Prerequisite: POL 102 3 credits

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 contexts. 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 207-E Fundamentals of Biology: From Cells, to Organisms, to Biosphere
An introduction to cell biology, genetics, living organisms, ecology and evolutionary biology. Organism structure and function in the context of evolutionary history, and the ecological roles of organisms in communities, ecosystems, and the biosphere are covered. Ecological and evolutionary principles as the basis for conservation biology are discussed.
Prerequisite: MAT 125 3 credits

SBC 307-K&4 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 America’s 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 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 ‘greening’ of modern culture, and at the environmental dimensions of a globalizing era.
Prerequisite: US/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 overarching state or governance. It will survey the many groups, interests and values that have clashed and
SBC 310 Migration, Development and Population Redistribution
This course draws upon the contributions of various social 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 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, POL 102
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, POL 102
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: SBC 205, MAT 125
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 African are discussed.
Prerequisite: SBC 111, U3/U4
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
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
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 theorists.
Prerequisite: SBC 203
3 credits

SBC 401 Integrative, Collaborative Systems Studies
Problem-based capstone course.
Prerequisite: U3/U4, CSR 102
3 credits