



# Stony Brook University Sustainability Studies Program

From its beginnings more than a half-century ago, Stony Brook University has been characterized by innovation, energy, and progress transforming the lives of people who earn degrees, work, and make groundbreaking discoveries here.

Today Stony Brook is one of only 62 members of the prestigious, invitation-only Association of American Universities. Listed among the top 1 percent of the world's universities in the *Times Higher Education World University Rankings*, Stony Brook University is consistently named one of the best values among public universities by *Kiplinger's Personal Finance*.

[www.stonybrook.edu/commcms/sustainability](http://www.stonybrook.edu/commcms/sustainability)

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## Sustainability Studies Program

Stony Brook University is a national leader in sustainability education. We have developed a group of majors and minors that prepare students for a career in developing sustainable solutions to the growing problems our planet faces. The multi-disciplinary programs train our students to think critically and analyze data in a systems approach.

### Majors

- BS in Coastal Environmental Studies
- BA in Ecosystems and Human Impact
- BA in Environmental Design, Policy, and Planning
- BA in Environmental Humanities
- BA in Sustainability Studies

### Minors

- Minor in Coastal Environmental Studies
- Minor in Environmental Humanities
- Minor in Ecosystems and Human Impact
- Minor in Environmental Design, Policy and Planning
- Minor in Geospatial Sciences
- Minor in Sustainability Studies



Conducting Hands-On Experiments



## SUSTAINABILITY STUDIES

Faculty Director : Dr. Arlene Cassidy  
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### Major and Minor

When we produce goods, how much and how quickly are we consuming natural resources to keep production flowing? When political decisions are made in the name of progress, how do they affect future generations? You will learn about viable economic activities that are ecologically sound and socially just.

The sustainability studies major, leading to a BA degree, prepares students to understand and address the environmental, social, political, economic, and ethical issues related to the transformation of our current practices in societies to ones that are sustainable. The curriculum integrates principles and methodologies from social and natural sciences, and humanities. Students are encouraged to take advantage of internships, project courses, independent research, and field courses to gain real-world experience.

### FAST -TRACK BA / MBA

#### Complete your BA / MBA in 5 years!

By taking a major in Sustainability Studies you can plan to complete both degrees in just 5 years. This program is a great opportunity and is designed for high achieving students with a record of accomplishments who can begin planning their courses in their freshman year.

Student Research Projects



## ECOSYSTEMS AND HUMAN IMPACT

Faculty Director : Dr. James Hoffmann  
[James.Hoffmann@stonybrook.edu](mailto:James.Hoffmann@stonybrook.edu)



### Major and Minor

Human beings take the environment for granted. We threaten the air, water, and wildlife with our way of life on planet Earth. This major examines natural ecosystems and how they function or degrade in the face of potential threats from humans. We also look at the “services” these ecosystems provide: food, shelter, and purifying our water and air. ( For example: did you know 25 percent of the oxygen we breathe comes from microscopic algae floating in lakes and oceans?)

The ecosystems and human impact major, leading to a BA degree, prepares students to assess and address the complex interaction of humans and natural environments.

The curriculum for the major and the minor integrates principles and methodologies from ecology, biology, genetics, anthropology, human ecology, and geography, combined with an understanding of economics, ethics, and policy within a global perspective. In their junior or senior year, students will have the opportunity to enroll in the study abroad program, including a winter session in Costa Rica or other locations which provides hands on training in field work, ecology, primatology, and anthropology.

Wolfie and Sustainability Studies



## ENVIRONMENTAL DESIGN, POLICY AND PLANNING

Faculty Director : Dr. H. James Quigley  
[Harold.Quigleyjr@stonybrook.edu](mailto:Harold.Quigleyjr@stonybrook.edu)



### Major and Minor

Must we live with the traffic congestion created by suburban sprawl? As people push outward from our cities, is there any way to preserve open space and manage urbanization ? Are plans for the repair or expansion of transportation, water, power supply, and waste management infrastructure sufficiently accommodating the concept of sustainability?

The environmental design, policy and planning major, leading to a BA degree, focuses on the built environment, culminating in a degree that prepares students to work in land use planning and design, community redevelopment, real estate development, and landscape architecture. This major prepares students to understand and address complex issues related to development, land-use, urbanization, and suburban sprawl.

The curriculum for the major and minor integrates principles and methodologies from social and natural sciences, and the humanities. The goal is to address the complex scientific, ethical, political, environmental, and socio-economic issues that surround the development, management, and use of the built environment.



Working to Restore Eelgrass Meadows



## COASTAL ENVIRONMENTAL STUDIES

Faculty Director : Dr. Michael Sperazza  
[Michael.Sperazza@stonybrook.edu](mailto:Michael.Sperazza@stonybrook.edu)



### Major and Minor

This rigorous science degree integrates physical and natural sciences together with environmental ethics, policy, and law in order to understand and mitigate the impact of sea level rise on water and land resource use and coastal zone development. This major will prepare students for one of the most important environmental careers of the future — coastal zone management. Coastal zones have always seen concentrated populations and economic activities because of their natural resources and trading opportunities.

The coastal environmental studies major, leading to a BS degree, provides the skills, knowledge, and preparation for students to assess /address coastal environmental problems. The curriculum integrates principles and methodologies from the physical and natural sciences, and physical geography, combined with environmental ethics, policy, and law.

The major prepares students for entry level employment in the public, private, or non-profit sectors concerned with assessment, monitoring abatement, or regulation of a wide range of coastal environmental problems, as well as laying the foundation for graduate study in environmental or marine science, geoscience, environmental planning and related fields.

Clearwater Field Trip Summer 2013



## ENVIRONMENTAL HUMANITIES

Faculty Director : Dr. Heidi Hutner  
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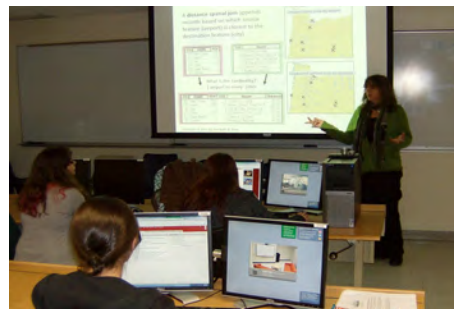
### Major and Minor

What does the history of human settlements on Long Island have to do with our present day relationship to nature? How does our understanding of Native American fiction help us to better grasp environmental issues?

This major which leads to a BA, integrates disciplines from social sciences and the humanities including; writing, ecofeminism, philosophy, history, media arts, anthropology, archaeology, art, environmental literature and architectural history. This major prepares students for careers in environmental education, museum work, community organizing and activism, environmental advocacy and writing, eco-aesthetics and the arts.

Students completing this major will have a solid foundation should they choose to pursue advanced degrees in literature, journalism, education, social work, the arts, social sciences, and law. The environmental humanities major draws upon a range of disciplines that explore human understanding and interpretation of nature, incorporating hands on learning experiences and skills development.

GIS Center Computer Classroom



## GEOSPATIAL SCIENCES

Faculty Director: Dr. Michael Sperazza  
[Michael.Sperazza@stonybrook.edu](mailto:Michael.Sperazza@stonybrook.edu)



### Minor and Graduate Certificate

Geographical Information Systems can integrate and relate any data with a spatial component (location), regardless of the source of the data. These systems integrate methodology capable of capturing, querying, analyzing, and displaying geographically referenced information; that is, data identified according to location. Geospatial Science (GSS) is used in a wide range of disciplines as a research and decision making tool and for planning and data analysis.

**The Minor in Geospatial Science (GSS)** is flexible and allows students from a broad spectrum of academic backgrounds to acquire the necessary training to complement their area of study. Students will receive training in the use of Geographical Information System software and may choose from several electives to broaden their experience in geospatial sciences.

**The Graduate Certificate (GSS)** will allow graduate students and working professionals to advance their GIS knowledge and employment opportunities with an industry recognized certificate. Students will earn 18 credits in the graduate certificate, where flexible scheduling is intended to allow full time students to complete the certificate requirements in one year.

## GREEN CAREERS: The Direction of Jobs and the Economy: Present & Future

Our society is rapidly adapting to the new realities of an interconnected world that faces environmental challenges, population growth, and dwindling non-renewable resources. New careers have emerged and others have been redefined in the context of these new challenges. Careers focusing on conservation of ecosystems and their biodiversity, working with industry on the implementation of alternative energy resources, designing and building greener communities, developing new policies and incentives for consumers to make greener choices are just a few examples of career paths that are seeing rapid growth and expansion.

Minimizing the use of resources while lowering cost is an important incentive for businesses, all levels of government, and individuals to innovate and operate more sustainably. To achieve this, there is a need for skilled analysts, consultants, educators, advocates, planners, and policy makers. Many of these jobs did not exist several years ago and this “green” sector of the economy is expected to continue to grow. For example, according to education-portal.com, at a time when most sectors of the economy are slowing, green industries are projected to see a major boom. The Federal government has estimated that occupations in clean energy and sustainability will grow by an impressive 52% between 2000 and 2016. By contrast, other careers are projected to see an increase of only 14% in this same time period. Some specific examples of “green” and sustainable career opportunities are:

Town/County/ State Planning & land use	Environmental Consulting
Green Marketing & Consulting	Preservation and Stewardship
Renewable & alternative energies	Environmental Education
Eco- Tourism & Travel	Geographic Information Systems Specialist
Recycling & Waste Reduction	Not-for-Profit Advocacy Organizations
Governmental & Regulatory Administration	Ecosystem Restoration

## FOR MORE INFORMATION

### ABOUT APPLYING TO STONY BROOK UNIVERSITY



[www.stonybrook.edu/admissions](http://www.stonybrook.edu/admissions)

Priority Application Deadline:  
**January 15**

*We accept both the Common  
and SUNY applications*

**E-mail: [enroll@stonybrook.edu](mailto:enroll@stonybrook.edu)  
Phone: (631) 632-6868**

## RESEARCH OPPORTUNITIES

The Sustainability Studies Program at Stony Brook encourages undergraduates to explore the synergy between research and classroom learning. Semester long and summer research afford opportunities to engage in hands-on, discovery based learning to develop skills as they examine a subject in collaboration with outstanding scientists, scholars, and mentors. Examples of recently completed projects funded by research awards include: Effects of Climate Change on Evolutionary Traits Over Generations; Environmental Aesthetics and Land Use; Construction of an Eco Dwelling Using Green Materials; Public Land Use and Vertical Gardening Systems.

## TRAVEL

Get a new point of view and hands on experience in looking at the Earth's environmental problems. We have developed an opportunity to study renewable energy and conduct field work in **Costa Rica**, focusing on sustainable programs including solar, methane, and water collection systems.

When you graduate, you'll be better prepared to enter one of the many fields related to stewardship of the Earth in expanding fields like carbon trading, pollution prevention, geographic information systems, natural resource management, and land-use planning. Such experiences can provide you with a competitive edge in the global job market as businesses are increasingly looking for more employees with backgrounds in sustainability and international experience.

## INTERNSHIPS

Academic internships enable our students to put theory to practice and gain valuable skills. Recent internship experiences include: rehabilitation and release of marine mammals on Long Island, analyzing the relationship between architecture and the environment, identifying and monitoring nesting sites for Fire Island National Park's piping plover protection program, positions with city and state park administration for education programs, working with the NYC department of transportation, and many others.

## CLUBS

Opportunities abound at Stony Brook University to take part in student clubs and organizations providing scholastic, recreational, intellectual, cultural and social interaction. They can enable you to increase your leadership skills and abilities, enhance your personal and scholastic development, and help you define and shape your personal and professional career goals.

You'll be sure to find at least one club that matches your some of your interests:

- N.Y. Public Interest Research Group
- The Greening Committee
- The Eco Leaders Program
- The Environmental Club
- The Earthstock Committee
- The Ecology Club
- Campus Organic Farm Club
- Engineers Without Borders
- Global Environmental Brigades
- Health and Nutrition Club
- Marine Science Club
- Recycle It !