ENVIRONMENT, GEOGRAPHY, AND MARINE SCIENCES

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The department offers the following:

Environmental Systems and Sustainability, B.S. - Concentration: Coastal Marine Systems
Environmental Systems and Sustainability, B.S. - Concentration: Environmental Systems
Environmental Systems and Sustainability, B.S. - Concentration: Sustainability Science and Environmental Policy
Geography, B.A.
Geography, B.S. - Concentration: Geographic Information Science and Technology
Minor in Environmental Studies
Minor in Geospatial Information Science and Technology
Minor in Geography
Minor in Marine Studies
ENVIRONMENTAL SYSTEMS AND SUSTAINABILITY, B.S. - CONCENTRATION: ENVIRONMENTAL SYSTEMS

120 Overall Credits Required

LIBERAL EDUCATION PROGRAM AND WRITING REQUIREMENTS

Liberal Education Program

Students must complete a comprehensive three-tiered Liberal Education Program (LEP). View all requirements of the tiers on the Liberal Education Program. While the choice of courses that fulfill the requirements is generally left up to students, courses in the major and/or cognate may also satisfy LEP requirements, although the course credits are only counted once towards the 120 credits required for graduation.

Writing Requirements (“W-Courses”)

Three W-courses are required. These may not be taken until after a student has passed ENG 112 — Writing Arguments. W-courses may count toward LEP, major, or cognate requirements, as well as free electives. Course sections that meet this requirement are designated by section numbers ending in “W”.

Transfer students who enter with 60 to 89 credits are required to pass two W-courses, while transfer students who enter with 90 credits or more must pass one W-course.

MAJOR REQUIREMENTS

40 Credits Required

Environmental Systems and Sustainability Requirements
25 Credits Required

ENV 220 - Global Climate Change
GEO 290 - Research Methods in Geography
GEO 204 - Principles of Sustainability
GEO 360 - Introduction to Geographic Information Systems
ENV 491 - Environmental Problem Solving
or GEO 490 - Seminar in Geographic Thought

Select 1 from:
ENV 200 - Environmental Studies II
MAR 140 - The World Ocean
Select 1 from:
ENV 498 - Special Topics in Environmental Science
GEO 470 - Field Techniques
GEO 497 - Internship
MAR 499 - Independent Study

Select 1 from:
GEO 405 - Environmental Justice
HIS 359 - American Environmental History
LIT 303 - Literature of the Sea
PHI 321 - Philosophy of Science
SOC 235 - Environmental Sociology

Environmental Systems Concentration
15 Credits
ENV 100 - Environmental Studies I
ENV 350 - Environmental/Earth Systems Inquiry
ENV 400 - Social Science Perspectives on Environment
ENV 401 - Pollution Prevention and Control

Select 1 from:
BIO 202 - Ecology
BIO 210 - Environmental Biology and Conservation
BIO 237 - Field Natural History
ESC 200 - Physical Geology
ESC 201 - Historical Geology
GEO 404 - Applied Sustainability Science
GEO 460 - GIS II
MAR 250 - Introduction to Coastal and Marine Pollution
PCH 441 - Water Supply and Water-Waste Treatment

COGNATE REQUIREMENTS

3 Credits Required
MAT 107 - Elementary Statistics

FREE ELECTIVES

Take remaining credits to reach Overall Credits Required (listed above).
ENVIRO*NMENTAL SYSTEMS AND SUSTAINABILITY, B.S. - CONCENTRATION: COASTAL MARINE SYSTEMS

120 Overall Credits Required

LIBERAL EDUCATION PROGRAM AND WRITING REQUIREMENTS

Liberal Education Program

Students must complete a comprehensive three-tiered Liberal Education Program (LEP). View all requirements of the tiers on the Liberal Education Program. While the choice of courses that fulfill the requirements is generally left up to students, courses in the major and/or cognate may also satisfy LEP requirements, although the course credits are only counted once towards the 120 credits required for graduation.

Writing Requirements (“W-Courses”)

Three W-courses are required. These may not be taken until after a student has passed ENG 112 — Writing Arguments. W-courses may count toward LEP, major, or cognate requirements, as well as free electives. Course sections that meet this requirement are designated by section numbers ending in “W”.

Transfer students who enter with 60 to 89 credits are required to pass two W-courses, while transfer students who enter with 90 credits or more must pass one W-course.

MAJOR REQUIREMENTS

44 Credits Required

Environmental Systems and Sustainability Requirements
25 Credits Required

ENV 220 - Global Climate Change
GEO 290 - Research Methods in Geography
GEO 204 - Principles of Sustainability
GEO 360 - Introduction to Geographic Information Systems
ENV 491 - Environmental Problem Solving
or GEO 490 - Seminar in Geographic Thought

Select 1 From:
ENV 200 - Environmental Studies II
MAR 140 - The World Ocean

Select 1 From:
ENV 498 - Special Topics in Environmental Science
GEO 470 - Field Techniques
GEO 497 - Internship
MAR 499 - Independent Study

Select 1 From:
GEO 405 - Environmental Justice
HIS 359 - American Environmental History
LIT 303 - Literature of the Sea
PHI 321 - Philosophy of Science
SOC 235 - Environmental Sociology

Coastal Marine Systems Concentration
19 Credits

MAR 210 - Coastal Marine Studies
MAR 250 - Introduction to Coastal and Marine Pollution
MAR 340 - Coastal Processes
MAR 460 - Field and Laboratory Techniques in Marine Studies
GEO 357 - Coastal and Marine Geography

Select 1 From:
BIO 327 - Field Natural History
BIO 430 - Marine Biology
ESC 106 - General Oceanography
or MAR 140 - The World Ocean
ESC 220 - Physical and Chemical Oceanography
ENV 350 - Environmental/ Earth Systems Inquiry
MAR 398 - Special Topics: Bermuda
PCH 441 - Water supply and Waste-Water Treatment

COGNATE REQUIREMENTS

3 Credits Required
MAT 107 - Elementary Statistics

FREE ELECTIVES

Take remaining credits to reach Overall Credits Required (listed above).
GEOGRAPHY, B.S. - CONCENTRATION: GEOGRAPHIC INFORMATION SCIENCE AND TECHNOLOGY

120 Overall Credits Required

LIBERAL EDUCATION PROGRAM AND WRITING REQUIREMENTS

Liberal Education Program

Students must complete a comprehensive three-tiered Liberal Education Program (LEP).

View all requirements of the tiers on the Liberal Education Program.

Selection of courses that fulfill the requirements is generally left up to students in this program.

Courses in the LEP may also be used to satisfy requirements in the major and/or cognate. If applicable, these shared courses will be listed in both areas of the degree evaluation, but the course credits are only counted once towards the 120 credits required for graduation.

Writing Requirements ("W-Courses")

Three W-courses are required. These may not be taken until after a student has passed ENG 112 — Writing Arguments. W-courses may count toward LEP, major, or cognate requirements, as well as free electives. Course sections that meet this requirement are designated by section numbers ending in "W".

Transfer students who enter with 60 to 89 credits are required to pass two W-courses, while transfer students who enter with 90 credits or more must pass one W-course.

MAJOR REQUIREMENTS

40 Credits Required (minimum)

Requirements:

GEO 200 – Human Geography
GEO 201 – Physical Geography
GEO 270 – Maps and Mapmaking Technology
GEO 290 – Research Methods in Geography
GEO 360 – Introduction to GIS
GEO 460 – Geographic Information Systems for Environmental and Spatial Science
GEO 490 – Seminar in Geographic Thought
Select one from:

- GEO 461 – Environmental GIS
- GEO 497 – Geography Internship
- GEO 499 – Independent Study
- HON 494 and HON 495 – Departmental Honors

**Systematic:**
Select one course from:

- GEO 204 — Principles of Sustainability
- GEO 205 — Economic Geography
- GEO 208 — Political Geography
- GEO 260 — Population Geography
- GEO 265 — Recreation Geography
- GEO 301 — Landforms
- GEO 304 — Sustainability and Public Engagement
- GEO 305 — Environmental Economic Geography
- GEO 357 — Coastal and Marine Geography
- GEO 362 — Urban Geography
- GEO 404 — Applied Sustainability Science
- GEO 405 — Environmental Justice

**Techniques:**
Select three courses from (minimum 9 credits):

- GEO 273 – Land Use Planning
- GEO 280 – Geographic Information Systems for Inquiry in the Social Sciences
- GEO 370 – Remote Sensing
- GEO 371 – Cartography
- GEO 470 – Field Techniques
- GEO 481 – Spatial Analysis

**COGNATE REQUIREMENTS**

No cognates are required for this program.

**FREE ELECTIVES**

Remaining credits to reach Overall Credits Required (listed above).
GEOGRAPHY, B.A.

120 Overall Credits Required

LIBERAL EDUCATION PROGRAM AND WRITING REQUIREMENTS

Liberal Education Program

Students must complete a comprehensive three-tiered Liberal Education Program (LEP).

View all requirements of the tiers on the Liberal Education Program

While the choice of courses that fulfill the requirements is generally left up to students, courses in the major and/or cognate may also satisfy LEP requirements. These shared courses are recommended below to fulfill both areas, although the course credits are only counted once towards the 120 credits required for graduation.

Tier 2 – Cultural Expression: Select any course except GEO 200 – Human Geography

Tier 2 – Natural World I: Physical Realm: Select any course except GEO 201 – Physical Geography

Writing Requirements (“W-Courses”)

Three W-courses are required. These may not be taken until after a student has passed ENG 112 — Writing Arguments. W-courses may count toward LEP, major, or cognate requirements, as well as free electives. Course sections that meet this requirement are designated by section numbers ending in “W”.

Transfer students who enter with 60 to 89 credits are required to pass two W-courses, while transfer students who enter with 90 credits or more must pass one W-course.

MAJOR REQUIREMENTS

30 Credits Required

Requirements:
GEO 200 – Human Geography
GEO 201 – Physical Geography
GEO 270 – Maps and Mapmaking Technology
GEO 290 – Research Methods in Geography
GEO 360 – Introduction to GIS
GEO 490 – Seminar in Geographic Thought

Regional:
Select one:
• GEO 311 — United States and Canada
• GEO 315 — Connecticut
• GEO 325 — Latin America
• GEO 330 — Europe
• GEO 341 — Asia
• GEO 342 — Middle East
• GEO 343 — Former Soviet Union
• GEO 344 — Central Asia
• GEO 345 — Africa

Systematic:
Select one:

• GEO 204 — Principles of Sustainability
• GEO 205 — Economic Geography
• GEO 208 — Political Geography
• GEO 260 — Population Geography
• GEO 265 — Recreation Geography
• GEO 301 — Landforms
• GEO 305 — Environmental Economic Geography
• GEO 357 — Coastal and Marine Geography
• GEO 362 — Urban Geography
• GEO 404 — Applied Sustainability Science
• GEO 405 — Environmental Justice

Techniques:
Select one:

• GEO 273 – Land Use Planning
• GEO 280 – Geographic Information Systems for Inquiry in the Social Sciences
• GEO 370 – Remote Sensing
• GEO 371 – Cartography
• GEO 381 – Geographic Information Systems for Business and Strategic Management
• GEO 460 – GIS II
• GEO 461 – Environmental GIS
• GEO 470 – Field Techniques
• GEO 481 – Spatial Analysis

COGNATE REQUIREMENTS

No cognates are required for this program.

FREE ELECTIVES

Remaining credits to reach Overall Credits Required (listed above).
ENVIRONMENTAL SYSTEMS AND SUSTAINABILITY, B.S. - CONCENTRATION: SUSTAINABILITY SCIENCE AND ENVIRONMENTAL POLICY

120 Overall Credits Required

LIBERAL EDUCATION PROGRAM AND WRITING REQUIREMENTS

**Liberal Education Program**

Students must complete a comprehensive three-tiered Liberal Education Program (LEP). View all requirements of the tiers on the Liberal Education Program. While the choice of courses that fulfill the requirements is generally left up to students, courses in the major and/or cognate may also satisfy LEP requirements, although the course credits are only counted once towards the 120 credits required for graduation.

**Writing Requirements ("W-Courses")**

Three W-courses are required. These may not be taken until after a student has passed ENG 112 — Writing Arguments. W-courses may count toward LEP, major, or cognate requirements, as well as free electives. Course sections that meet this requirement are designated by section numbers ending in “W”.

Transfer students who enter with 60 to 89 credits are required to pass two W-courses, while transfer students who enter with 90 credits or more must pass one W-course.

MAJOR REQUIREMENTS

40 Credits Required

Environmental Systems and Sustainability Requirements
25 Credits Required

- ENV 220 - Global Climate Change
- GEO 204 - Principles of Sustainability
  - GEO 290
  - Research Methods in Geography
  - GEO 360
  - Introduction to Geographic Information System
  - ENV 491
  - Environmental Problem Solving
or GEO 490
- Seminar in Geographic Thought
Select 1 From:
  ENV 200
  - Environmental Studies II
or
  MAR 140
  - The World Ocean
Select 1 From:
  ENV 498
  - Special Topics in Environmental Science
GEO 470 - Field Techniques
GEO 497 - Internship
  MAR 499
  - Independent Study
Select 1 From:
  GEO 405
  - Environmental Justice
  HIS 359
  - American Environmental History
  LIT 303
  - Literature of the Sea
  PHI 321
  - Philosophy of Science
  SOC 235
  - Environmental Sociology
Environmental Policy and Management Concentration
15 Credits Required
GEO 304
  - Sustainability and Public Engagement
GEO 404
  - Applied Sustainability Science
MGT 425
  - Managing for People, Planet, and Profit
  PSC 351
  - Analysis of Public Policy
Select 1 From:
  ENV 100
  - Environmental Studies I
GEO 273
  - Land use Planning
GEO 305
- Environmental Economic Geography
  MGT 400
- Business and Society
  MGT 418
- Negotiation and Conflict Resolution
  PSC 310
  - Comparative Public Policy
  PSC 314
- Urban Politics
  PSC 325
- U.S. Politics and Economic Policy

COGNATE REQUIREMENTS

3 Credits Required
MAT 107 - Elementary Statistics

FREE ELECTIVES

Take remaining credits to reach Overall Credits Required (listed above).
COURSES

ENV 100 - Environmental Studies I
An overview of the major scientific concepts that underlie current environmental problems. A multidisciplinary approach to the nature and extent of the pollution jeopardizing our air, water, resources, wildlife, and quality of human life.
Last Offered: Spring 2021
3 credits

ENV 101 - Critical Thinking: Global Environmental Issues
Course teaches basic critical thinking skills through engagement with some of the most fundamental global environmental problems of our time (e.g., energy and oil, climate change, world water resources, biodiversity loss and species extinctions). The course will examine means of living sustainably with the planet and will provide students with the tools to sort through the media hype and distortions of information that are all too common on all sides of these issues. Students will appreciate that critical thinking skills are applicable to all intellectual endeavors as well as to the profitable living of one’s own life.
Last Offered: Fall 2020
3 credits

ENV 200 - Environmental Studies II
Study of the political, legal, and economic dimensions of environmental issues.
Last Offered: Fall 2020
3 credits

ENV 220 - Global Climate Change
Examination of the scientific, social, economic and political aspects of global climate change due to energy production using fossil-fuels.
Last Offered: Spring 2021
3 credits

ENV 350 - Environmental/Earth Systems Inquiry
Local, regional, and global environmental phenomena, events, and issues through inquiry, field studies, and group collaborative research. Topics include environmental field studies, site descriptions and monitoring, and data collection (weather, hydrology, soils, and biometry). A systems analysis approach examines environmental phenomena and events affecting atmosphere, hydrosphere, biosphere and geosphere.
Prerequisite(s): One science (BIO, CHE, PHY, GEO) or ENV 100, or departmental permission.
Last Offered: Spring 2021
3 credits

ENV 398 - Special Topics
Topics vary.
Last Offered: Fall 2020
1 to 6 credits

ENV 400 - Social Science Perspectives on Environment
Investigation of major environmental issues as they relate to culture and other social structures.
Last Offered: Spring 2021
3 credits

ENV 401 - Pollution Prevention and Controls
Basic principles of hazardous chemical management and emergency response. Investigates chemical, biologic, and earth science systems and their interactions which influence the fate of chemicals in the environment. Management strategies, identification, and quantitative remediation techniques are discussed. Completion of the course results in eligibility of OSHA 1910.120 40 hour training certificate for Hazardous Materials Training Certificate.
Last Offered: Spring 2021
3 credits
ENV 491 - Environmental Problem Solving
Systematic analysis of a topic in environmental or marine studies selected by the student with prior instructor approval. Students learn effective research, writing, and oral communication skills culminating in the preparation of a research paper and a formal seminar presentation.
Prerequisite(s): Completed LEP Tier 2 Natural World I and Natural World II, or 6 credits in ENV or MAR, 6 of 8 Tier 2 complete (Honors Coll.: 15 cr. HON or 45 cr. total), and prior or concurrent completion of all Tier 1 (Honors Coll.: T1MC and T1QR only).

Last Offered: Spring 2021
3 credits

ENV 499 - Independent Study
No Description Available
Last Offered: Fall 2020
3 credits

GEO 100 - People, Places, and Environments
Study of the world’s natural habitats and cultural landscapes and the interrelationships that may develop among them.
Last Offered: Spring 2021
3 credits

GEO 102 - World Regional Geography
Examination of some geographic principles and relationships in regions on every continent. Provides a background for understanding contemporary world events.
Last Offered: Spring 2020
3 credits

GEO 104 - Sustainability in America: Challenges and Solutions
An identification of the environmental challenges facing America and the solutions that can be implemented to address them. Outlines practical and realistic approaches to transition American society and the economy towards a more sustainable future for the benefit of all Americans. Outcomes include workplace-related skills development for innovative and actionable environmental problem solving.
Last Offered: not yet offered
3 credits

GEO 105 - Food Systems: A Geography
A critical examination of the current food system from a geographical perspective. Provides a multi-scalar (from the local to the global) analysis of food production, distribution, consumption, and food waste disposal.
Last Offered: Spring 2021
3 credits

GEO 110 - Geography and Conflict
Focuses on the economic processes and resulting spatial patterns that created today’s multicultural America. Students use computer-based geographic methods and mapping technologies to unlock and explore demographic data from various decennial censuses of the United States since 1790. Through studying how various ethnic and racial groups were culturally and geographically transformed in America and by applying geographic information systems to real population data, students will develop a rich understanding of diversity in America and the skills to make powerful interdisciplinary connections.
Last Offered: Fall 2019
3 credits
GEO 190 - Exploring Geography: Opportunities and Your Future

Introduction to the multifaceted discipline of geography, providing a platform for subsequent geographical study. Students will work towards developing preparatory understandings of sub-fields in the discipline, traditions in geographic scholarship, geographic techniques, and the professional practice of geography. Students will meet the faculty of the SCSU geography department and have the opportunity to listen to professional geographer guest speakers. Intended for new majors.
Last Offered: Fall 2020
1 credits

GEO 200 - Human Geography

Introduction to population, economic, cultural, political, urban, and marine geography and to ecology.
Last Offered: Spring 2021
3 credits

GEO 201 - Physical Geography

Physical environments of representative areas: landforms, climates, vegetation, and soils are emphasized, as well as their distribution and significance for man.
Last Offered: Spring 2021
4 credits

GEO 204 - Principles of Sustainability

Introduction to the study of sustainability and human-environment interactions. Taught from a sustainability science perspective exploring contemporary environmental and societal challenges in a variety of development contexts, and applies the principles of sustainability to consider how such problems can be most effectively addressed.
Last Offered: Fall 2020
3 credits

GEO 208 - Political Geography

The interrelationships between geographic and political factors in the modern world. Current international, national, and local problems, viewed in their geographic settings, form an important part of the course.
Last Offered: Spring 2020
3 credits

GEO 260 - Population Geography

A study of the distribution of people on the earth and the reasons therefore; patterns of population growth and decline, both historical and contemporary; migrations; and biological and cultural characteristics of population.
Last Offered: Spring 2021
3 credits

GEO 265 - Recreation Geography

A systematic geography course focusing on the spatial aspects of recreation in both its urban and rural settings with special reference to the United States. The course utilizes the field resources of New Haven and southern Connecticut in analyzing the geographic dimensions of recreation.
Prerequisite(s): Junior status.
Last Offered: Fall 2019
3 credits

GEO 270 - Designing Maps

Surveys the social and cultural significance of general purpose and thematic maps as well as the science and technology of their creation. Shows many interdisciplinary uses of maps and explores their importance to scientific inquiry, commerce, and everyday life. Teaches fundamental components of map interpretation including georeferencing, map projections, scale, generalization, symbolization, uses of color, types of maps, and misuse of maps. Introduces the student to mapmaking software/geographic information systems and its applications to display and query data for any portion of the earth’s surface.
Last Offered: Spring 2021
3 credits
GEO 273 - Land Use Planning
An introduction to the principles of land use planning at the local, regional, state and federal levels.
Last Offered: Spring 2021
3 credits

GEO 290 - Research Methods in Geography
An introduction to research methods, research design, and research dissemination in geography. Topics addressed include the formulation of research questions; the development of research projects; qualitative, quantitative and field based research approaches; and research ethics. Lecture and group discussion format.
Prerequisite(s): GEO 200 or GEO 201.
Last Offered: Spring 2021
3 credits

GEO 303 - Principles of Sustainability
Introduction to the study of sustainability and human-environment interactions from a geographic perspective. The course is taught through a complex systems perspective considering environmental and societal challenges and human-environmental issues in a variety of contexts.
Last Offered: Fall 2019
3 credits

GEO 304 - Sustainability and Public Engagement
Through an exploration of everyday activities and items, public engagement with sustainability is evaluated within the context of consumption practices. Focusing on evaluating different approaches for involvement; students create, plan, and run their own sustainability engagement event on campus or in a community-based setting. Emphasis on skills development for public engagement with sustainability.
Prerequisite(s): GEO 203 (may be taken concurrently).
Last Offered: not yet offered
3 credits

GEO 305 - Environmental Economic Geography
Theory and applications of economic geography to environmental issues. The course outlines four core themes, which all contribute to the understanding of sustainable economic geographies and the roots and compass of an environmental economic geography. The four themes are: ecological modernization, natural resources, institutions and environmental governance, and globalization and sustainability.
Last Offered: Summer 2019
3 credits

GEO 311 - The United States and Canada
Examination of the regional geography of North America, including analysis of its physical environments, historical development, cultural patterns, and socioeconomic systems. Interactions between physical and anthropogenic systems are stressed.
Prerequisite(s): 6 of 8 Tier 2 complete (Honors Coll.: 15 cr. HON or 45 cr. total), and prior or concurrent completion of all Tier 1 (Honors Coll.: T1MC and T1QR only).
Last Offered: Spring 2021
3 credits

GEO 315 - Geography of Connecticut
A systematic geographic overview of the state. Emphasis on the distribution, function, and structure of various geographical phenomena.
Prerequisite(s): 6 of 8 Tier 2 complete (Honors Coll.: 15 cr. HON or 45 cr. total), and prior or concurrent completion of all Tier 1 (Honors Coll.: T1MC and T1QR only).
Last Offered: Summer 2019
3 credits
GEO 325 - Latin America
The countries, regions, and peoples of Latin America, including the Caribbean area, and their regional organizations. Emphasis upon the changing societies of the region and the changing relationships between the cultural and the physical environments.
Prerequisite(s): 6 of 8 Tier 2 complete (Honors Coll.: 15 cr. HON or 45 cr. total), and prior or concurrent completion of all Tier 1 (Honors Coll.: T1MC and T1QR only).
Last Offered: Fall 2020
3 credits

GEO 330 - Europe
Geographic factors useful in interpreting conditions in Europe now and in the past. Current European and world situations are emphasized.
Prerequisite(s): 6 of 8 Tier 2 complete (Honors Coll.: 15 cr. HON or 45 cr. total), and prior or concurrent completion of all Tier 1 (Honors Coll.: T1MC and T1QR only).
Last Offered: Fall 2020
3 credits

GEO 341 - Asia
Geographical basis for life in Asia. Emphasis is on current problems involving historical, political and economic factors, as well as physical factors.
Prerequisite(s): 6 of 8 Tier 2 complete (Honors Coll.: 15 cr. HON or 45 cr. total), and prior or concurrent completion of all Tier 1 (Honors Coll.: T1MC and T1QR only).
Last Offered: Spring 2020
3 credits

GEO 342 - Middle East
A systematic, historical, cultural, political and economic overview of the region, followed by an in-depth analysis of the individual countries.
Last Offered: Fall 2019
3 credits

GEO 344 - Central Asia
A systematic and regional examination of the physical and cultural environments of the countries of Central Asia. Emphasis on current conditions related to geographic factors are discussed and analyzed.
Last Offered: Fall 2017
3 credits

GEO 345 - Africa
Analysis of the geographical complexities of the African continent, both from a systemic and regional perspective. Discussions focus on the interrelationships of nature and society and how these relationships define and influence a particular region and produce the landscapes of contemporary Africa. A special emphasis is placed on current conditions as they relate to the discipline of geography.
Prerequisite(s): 6 of 8 Tier 2 complete (Honors Coll.: 15 cr. HON or 45 cr. total), and prior or concurrent completion of all Tier 1 (Honors Coll.: T1MC and T1QR only).
Last Offered: Spring 2021
3 credits

GEO 357 - Coastal and Marine Geography
Examination of the relationships between humans and the world’s oceans and coasts, including the biophysical, socioeconomic, and cultural aspects of this relationship and interrelationships between these elements. An essential theme is the use and management of coastal and marine resources.
Prerequisite(s): 6 of 8 Tier 2 complete (Honors Coll.: 15 cr. HON or 45 cr. total), and prior or concurrent completion of all Tier 1 (Honors Coll.: T1MC and T1QR only).
Last Offered: Spring 2021
3 credits
**GEO 360 - Introduction to GIS**

Provides a broad understanding of concepts and general theory of Geographic Information Systems (GIS). Students utilize GIS software to complete a series of tutorials and labs. GIS theory is emphasized over software training. Lecture, 4 hours.

Prerequisite(s):

Last Offered: Spring 2021

4 credits

**GEO 362 - Urban Geography**

Study of the distribution, function, internal structure of cities. The focus is on structure and pattern.

Last Offered: Fall 2020

3 credits

**GEO 370 - Remote Sensing**

Examination of how we view and evaluate our environment using various remote sensing techniques. Topics include land use/land cover change, vegetation patterns, geologic mapping, and anthropogenic effects (e.g., oil spills, water contamination). Interpretation of remotely sensed images through in-class labs and research projects emphasize the study of spatial and environmental relationships. Lecture, 4 hours.

Prerequisite(s): GEO 270 or GEO 360

Last Offered: Fall 2020

4 credits

**GEO 371 - Cartography**

Computer methods for visualizing qualitative and quantitative geographic information for data exploration, analysis, and communication. Trains the student to determine and construct suitable map projections for any study area; techniques for classifying and symbolizing data based on spatial and frequency distributions and the underlying behavior of the phenomena being mapped; and, effective map design and the use of color and lettering for different communication media. Lecture, 4 hours.

Prerequisite(s): GEO 360

Last Offered: Spring 2019

4 credits

**GEO 400 - Geography of Wine**

A critical examination of the global wine industry from a geographical perspective. The cultivation of vines and the production and consumption of wine is considered through a focus on the spatial variations of the embedded bio-physical, environmental, socio-economic, and cultural complexities of the wine industry.

Last Offered: Summer 2020

3 credits

**GEO 403 - Applied Sustainability**

Field laboratory experience intended to put principles of sustainability concepts into practice through an applied project-based learning experience. Projects may address water, energy, food systems and environmental justice related topics in campus and/or community based settings.

Prerequisite(s): GEO 303.

Last Offered: Spring 2021

3 credits

**GEO 404 - Applied Sustainability Science**

Experimental field laboratory experience intended to implement the principles of sustainability and key public engagement techniques into practice through an applied project-based learning approach. Projects may address energy, transport, food, and environmental/climate justice related topics on campus or in a community-based setting.

Prerequisite(s): GEO 304

Last Offered: not yet offered

3 credits

**GEO 405 - Environmental Justice**

Examination of the role of social inequalities, particularly those of class and race, and the dissemination of environmental risks in societies at different geographic scales. Also includes study of legal solutions and public policy measures that address environmental injustices.

Last Offered: Winter 2020-21

3 credits
GEO 460 - GIS II

Teaches students in environmental and spatial sciences how to use geographic information systems (GIS) to visualize, query, and begin to analyze key aspects of terrain (such as elevation, slope, and aspect, landuse, landcover, and vegetation) as well as human modifications and the built environment. Input and edit georeferenced data from multiple sources such as paper maps and global positioning systems (GPS) and learn aspects of various coordinate systems and spatial database designs in order to link attribute data to inputted geographic features. Classify and symbolize data in order to create maps; embed graphs and reports in maps; and output maps in digital and paper form. Export GIS data to other software packages and import spatial data from other software packages into GIS software. Lecture, 4 hours. 
Prerequisite(s): GEO 360. 
Last Offered: Spring 2021 
4 credits

GEO 461 - Environmental GIS

Examination of GIS in environmental management. Applies GIS techniques to a range of environmental issues to develop analytical conclusions for stakeholders. Explores case studies of environmental management topics that employ GIS. Lecture, 4 hours. 
Prerequisite(s): GEO 360. 
Last Offered: Spring 2021 
4 credits

GEO 470 - Field Techniques

Course involves field study in either the southern Connecticut region or an area outside the United States. Areas are visited and mapped, and techniques of field research are studied dealing with the physical and human aspects of the environment. 
Last Offered: Summer 2019 
3 credits

GEO 481 - Spatial Analysis

Application of statistical techniques to analyze geographic phenomena. Topics include public health, criminology, climate change impacts, food systems, among others. Lecture, 4 hours. 
Prerequisite(s): GEO 360. 
Last Offered: Fall 2020 
4 credits

GEO 490 - Seminar in Geographic Thought

A capstone experience for Geography majors focusing on the integration of geographic theory and geographic practice in the context of selected contemporary issues, events, or processes through a combination of seminar style discussions and field-research project based learning. The course also provides an overview of the historical and philosophical development of the discipline. 
Prerequisite(s): GEO 200, GEO 201, and senior status. 
Last Offered: Fall 2020 
4 credits

GEO 497 - Internship

Practical training in a variety of government agencies and private firms, working under supervision of the employer’s representative and a faculty administrator. 
Prerequisite(s): Senior status and 12 credits in GEO. 
Last Offered: Fall 2020 
3 to 6 credits

GEO 499 - Independent Study

No Description Available 
Prerequisite(s): Departmental permission. 
Last Offered: Spring 2020 
3 credits

MAR 140 - The World Ocean

Introduction to contemporary marine environmental science, focusing on the relationship between basic marine systems and processes and current marine environmental concerns. Open to non-science majors. 
Last Offered: Spring 2021 
3 credits
MAR 210 - Coastal Marine Studies
Classroom and field activities in marine biology, geology, meteorology, and coastal zone management along Long Island Sound. Lecture and field activities.
Last Offered: Fall 2020
4 credits

MAR 250 - Introduction to Coastal and Marine Pollution
Examination of sources, transport, and fate of toxic and non toxic contaminants in the ocean. Physical, chemical, and biological processes that control distribution and cycling of contaminants are considered along with relevant state, federal, and international water pollution control policies. Emphasis placed on case studies in Long Island Sound.
Prerequisite(s): MAR 140 or MAR 210 or ESC 320 or CHE 120 or BIO 100 or BIO 102.
Last Offered: Fall 2020
3 credits

MAR 340 - Coastal Processes/Environment
Various coastal environments, their origins, and the processes that shape them including impacts of humans.
Prerequisite(s): ENG 111, MAT 100 or MAT 102 or higher, and one of the following: MAR 140, MAR 150, ESC 320.
Last Offered: Spring 2021
3 credits

MAR 398 - Special Topics in Marine Studies
Topics vary.
Last Offered: Summer 2020
3 credits

MAR 460 - Field and Laboratory Techniques in Marine Studies
Investigations of regional environmental processes and problems using state-of-the-art instrumentation and techniques.
Prerequisite(s): MAR 250 or MAR 340.
Last Offered: Spring 2021
4 credits

MAR 499 - Independent Study and Research
Provides properly qualified students an opportunity for independent study and/or research in selected topics in marine studies.
Prerequisite(s): Departmental permission.
Last Offered: Spring 2020
1 to 3 credits