

Pathways through the Geography Major

Geography majors may structure their course selections around a sub-field of Geography. Pathways are suggestions for classes in Geography, in related disciplines, and skills training. Each pathway includes more classes than are listed here and students may consult the Undergraduate Advisor to choose related classes. Students are welcome to construct their own pathway.

- Climatology
- Culture, Society, and Space
- Diversity and Justice
- Environmental Systems
- Geographic Information Science and Spatial Analysis
- Health and Disease
- International Development and Globalization
- Political Ecology
- Urban Development & Planning
- Develop your own pathway!



Pathways

Climatology

The emphasis of this pathway is on developing an understanding of the Earth's climate system, the impacts of climate on environmental and human sectors, and in gaining quantitative skills that can be used to analyze climate and weather.

- 110: The blue planet: An introduction to earth's environmental systems
- 111: Weather and climate
- 412: Synoptic meteorology
- 414: Climate Change
- 414: Climate change
- 416: Applied climatology

Core Classes



- 391: Quantitative methods in geography
- 410: Modeling environmental systems
- 477: Introduction to Remote Sensing

Geography Methods & Skills



- Math 231, 232, 383, 416
- Physics 104, 105 or 116, 117
- Statistics 151 or 155
- Computer science 110, 116, or 121
- ENST 462: Geostatistics

Complimentary Methods and Skills



Climate science has growing career opportunities due to renewed interest in current and future climate change. This pathway will position students for non-profit, governmental, and private environmental jobs, as well as for advanced study in climatology.

Culture, Society, and Space

How are our identities, experiences, and daily practices shaped by the places that we live in? How do we transform our environments to reflect who we are? These questions underpin key debates about culture and society today. Cultural and social geographers study the relationships among culture, society, space, and place. Their research examines the dynamic geography of cultural and societal change due to, for example, migration, technological developments, or religious movements. The Culture, Society, and Space Pathway in Geography prepares students for work in international NGOs and the public and private sectors, specializing in cultural and social issues, as well as training students for graduate school in the social sciences and humanities.

- Geog 120: World Regional Geography
- Geog 121: Geographies of Globalization
- Geog 123 Cultural Geography
- Geog 124 Gender and Place
- Geog 125 Cultural Landscapes
- Geog 225 Space, Place, and Difference
- Geog 423 Social Geography
- Geog 424 Geographies of Religion
- Geog 428 Global Cities
- Geog 430 Global Migrations, Local Impacts
- Geog 447: Gender, Space, and Place in the Middle East
- Geog 481: Ethnographies of Globalization

Core Courses



- Geog 115 Maps
- Geog 370 Introduction to Geographic Information
- Geog 391 Quantitative Methods in Geography
- Geog 392 Research Methods in Geography

Methods & Skills



- ANTH 102 Introduction to Cultural Anthropology
- ANTH 120 Anthropology through Expressive Cultures
- ANTH 259 Culture and Identity
- ANTH 428 Religion and Anthropology
- COMM 140 Introduction to Media History, Theory, and Criticism
- COMM 450 Media and Popular Culture
- HIST 202 Borders and Crossings

Classes Outside of Geography



Diversity and Justice

How do the places, spaces, and environments that we inhabit reinforce structures of oppression or create the potential for liberation? Social movements and activists have created *spatial* theories and strategies to change the world: by occupying public space or by fighting for the protection of sacred lands. In our classes, you will learn how power flows through space; that all politics unfolds in places; that everyday life is political; and that environmental issues are connected to social justice. You will also learn tools including mapping technologies, remote sensing, oral histories, and interviews.

- 56 FYS Local Places in a Globalizing World
- 67 FYS The Politics of Everyday Life
- 225 Space, Place, and Difference
- 228 Urban Geography

Building Blocks



- 212 Environmental Conservation and Global Change
- 232 Agriculture, Food, and Society
- 447 Gender, Space, and Place in the Middle East
- 470 Political Ecology
- 480 Liberation Geographies
- 650 Technology and Democracy Workshop

Advanced Courses



- 491 Intro to GIS
- 541 GIS and Public Health
- 543 Qualitative Methods in Geography
- 591 Applied GIS

Methods



Environmental Systems

The Environmental Systems pathway prepares students for addressing the complex interactions of humans and their surroundings based on geographic understanding and methods to studying the environment. Key to understanding these interactions is the link between the natural and social sciences and understanding that the study of the environment inherently requires reaching beyond disciplinary expertise and connecting to other fields.

- 110: The Blue Planet
- 111: Weather and Climate
- 212: Environmental
- 237: Conservation and Global Change
- 232: Agriculture, Food, and Society
Natural Resources
- 253: Introduction to Atmospheric
Processes
- 341: Hydrology, Ecology, and
Sustainability of the Humid Tropics
- 414: Climate Change
- 419: Field Methods in Physical
Geography
- 440: Earth Surface Processes
- 441: Introduction to Watershed Systems

Core Classes



- 391: Quantitative Methods in
Geography
- 392: Research Methods in Geography
- 410: Modeling Environmental
Systems
- 477: Introduction to Remote Sensing
and Digital Image Processing
- 577: Advanced Remote Sensing
- 597: Ecological Modeling

Methods & Skills



- 50: First-Year Seminar: Mountain
Environments
- 65: First-Year Seminar: Climate
Change and the Media
- 370: Introduction to Geographic
Information
- 541: GIS in Public Health

Complementary Courses



Geographic Information Science & Spatial Analysis

Geographic Information Science (GIScience) emphasizes geographic information technologies, their real-world applications, and the science and technology underlying them. These technologies include geographic information systems (GIS), satellite remote sensing, global positioning systems, computer cartography, terrain analysis, and geospatial visualization. These skills are in high demand, giving students a competitive edge to pursue careers in the private, public, and nonprofit sectors.

- 370: Introduction to Geographic Information
- 391: Quantitative Methods
- 410: Modeling for Environmental Sciences
- 541: GIS in Public Health
- 477: Introduction to Remote Sensing

GIScience Courses



- 577: Advanced Remote Sensing
- 591: Urban GIS
- 592: Watershed GIS
- 593: GIS Programming
- 594: Global Positioning Systems and Applications
- 595: Ecological Modeling
- 491: Introduction to Geographic Information Systems

GIScience Courses



- COMP 116, 401, 410, & 416: Variety of classes in Programming
- MATH 231/232: Calculus 1 and Calculus 2
- MATH 383: Differential Equations
- MATH 416: Linear Algebra
- ENST 462: Geostatistics for Spatial/Temporal Environmental Phenomenon
- ENST 468: Advanced Functions of Temporal GIS

Courses Outside of Geography



Health and Disease

Health Geography takes a socio-ecological approach, rather than a biomedical approach to understanding the occurrence of human disease and wellbeing. This is a highly integrated field, requiring knowledge of social systems, environmental systems, and the etiology and ecology of disease. In addition, geospatial technologies such as geographic information systems, satellite remote sensing, and geographic analysis are powerful tools in the study and management of human diseases. This pathway will prepare students for a career in the spatial, social, and ecological dimensions of public health, as well as for graduate school in the spatial health sciences.

- 51 FYS: What is Health Care?
- 445: Medical Geography
- 446: Geography of Health Care Delivery
- 451: GIS in Public Health
- 542: Neighborhoods and Health

Health Courses in Geography



- 232: Agriculture, Food, and Society
- 269: Human-Environment Interactions in the Galapagos Islands
- 391: Quantitative Methods
- 410: Modeling for Environmental Sciences
- 451: Population, Development, and the Environment

Geography Methods & Skills



- ANTH 319: Global Health
- BIOL 101: Principles of Biology
- SOCI 121: Population Problems
- SOCI 172: Introduction to Population Health in the United States
- STOR 151: Basic Concepts of Statistics and Data Analysis
- STOR 155: Introduction to Statistics
- STOR 358: Sample Survey Methodology

Classes Outside of Geography



International Development and Globalization

The “international development and globalization” pathway will prepare you with the practical tools and intellectual framework to become participants and leaders in the world of international development. You might continue your studies in graduate school, work for an international non-governmental organization, pursue a career in diplomacy, or work with social movements. In addition to the building block courses of 120, 121, 123, and 130, the following classes are recommended:

- 259: Latin America
- 265: Eastern Asia
- 266: Southeast Asia
- 267: South Asia
- 268: Africa
- 464: Europe

Region Specific



- 423: Social Geography
- 428: Global Cities
- 460: Economic Change
- 453: Political Geography
- 470: Political Ecology

Advanced Concepts



- Global Studies/Geography 210
- 435: Environmental Politics
- 447: Gender in the Middle East
- 448: Muslim Societies
- 452: Mobile Geographies
- 480: Liberation Geography

Contemporary Issues



Political Ecology

Political ecologists study the reciprocal and dynamic relations between society and nature. How do markets, social relations, and populations influence resource governance practices and vice versa? Whose voices and ideas count in the creation of protected areas, or in the decisions about where toxic waste and trash are deposited? When and how do decision makers or community members mobilize scientific knowledge to pursue environmental and ethical commitments? The Political Ecology Pathway in Geography offers a cross-disciplinary approach for answering such questions and, more broadly, for studying the relationship between the economy, politics, and ecology.

- 51 FYS Political Geography of Health and Disease
- 112 Environmental Conservation
- 141 Geography for Future Leaders
- 212 Environmental Conservation and Global Change
- 232 Agriculture, Food, and Society
- 269 Galapagos Islands
- 435 Environmental Politics
- 414 Climate Change
- 470 Political Ecology

Core Courses



- 370 Introduction to Geographic Information
- 391 Quantitative Methods in Geography
- 392 Research Methods in Geography
- 222 Health and Medical Geography
- 450 Population, Development and the Environment
- More Advanced Quantitative and GIS courses are very useful to students wishing to pursue professional paths in this field.

Methods & Skills



- ANTH 139 Ecological Anthropology
- ANTH 151 Anthropological Perspectives on Food and Culture
- ANTH 175/NUTR 175 Introduction to Food Studies: From Science to Society
- ANTH 238 Human Ecology of Africa
- ANTH 306 Water and Inequality: Anthropological Perspectives
- ANTH 320 Anthropology of Development

Classes Outside of Geography



Urban Development and Planning

For the first time in human history over half of the world's population lives in cities. This presents a monumental challenge to politicians, urban planners, and citizens to build sustainable, just, and livable urban spaces. A background in urban geography prepares you for one of the many careers devoted to improving cities and settlements around the globe.

- 228: Introduction to Urban Geography
- 423: Social Geography
- 428: Global Cities
- 429: Experiential learning in Durham
- 430: Migration and Cities
- 458: Urban Latin America
- 542: Neighborhoods and Health

Core Classes



- Qualitative, Quantitative and GIS skills: 391, 392, 491, 591
- Research Opportunities: 697 Capstone, Internships, and Independent Study

Methods and Research



- DCRP 246: Cities of the Future
- DCRP 247: Solving Urban Problems
- 3 DCRP electives

Minor in City Planning (DCRP)



There are career opportunities in city planning, architecture, real estate development, policy analysis, community development, or civil engineering; just to name a few!