
FACULTY

Chairperson and Graduate Program

Coordinator: Associate Professor
James Hayes-Bohanan

Professors: Sandra Clark, Vernon Domingo

Associate Professors: Robert Hellström, Madhusudana Rao

Assistant Professors: Robert Amey, Darcy Boellstorff

Department Telephone Number: 508.531.1390

Location: Conant Science Building, Room 310

Web site: www.bridgew.edu/Geography

DEGREE PROGRAMS

- BA in Geography
- BS in Geography
- MAT - Physical Sciences

UNDERGRADUATE MINORS

- Geography

The Department of Geography offers an undergraduate major in geography. Majors in Geography may double major with education. Majors in geography may elect a concentration in environmental geography, geotechnology or regional and economic planning or double major with education. In addition, programs in chemistry-geology, oceanography and urban affairs and planning are available. The department is also active in the Asian studies minor, the Canadian studies minor, the Russian and East European studies minor, the urban affairs minor, and the women's studies minor, as well as the Graduate Certificate in Planning. See the "Interdisciplinary and Preprofessional Programs" section of this catalog.

The department works actively with state and regional agencies on socioeconomic and environmental problems. Past faculty research projects include coastal storm impacts, regional economic developments, transportation planning, the impact of PCBs in New Bedford Harbor, and the search for water supplies for the next century.

The department has been involved with assisting local organizations through faculty research and student internships. Examples of such involvement are with local banks, planning agencies, retailers, Boston's "Big Dig", the Massachusetts Bay Transit Authority (MBTA), the Massachusetts Forest Fire Bureau, the Natural Resources Trust of Bridgewater, and the Ocean Spray Cranberry Cooperative.

Additionally, this department has been selected as the only department in the state college system in Massachusetts to participate in the National Aeronautics and Space Administration (NASA) sponsored Joint Venture (JOVE) program. Members of the faculty collaborate with the Jet Propulsion Laboratory (on multi-spectral and hyperspectral remote sensing in Mexico, Alabama, and Southeastern Massachusetts), the Goddard Space Flight Center (on bolide impact), the U.S. Department of Transportation (on a national study of bus systems), Woods Hole Oceanographic Institution (on research problems in marine geochemistry and geology), the Massachusetts Department of Education (on statewide curriculum reform) and the U.S. Army Corps of Engineers (on wetlands). Faculty are also involved in watershed studies in cooperation with biology department faculty at the Raytheon Watershed Access Laboratory. In addition, a member of the faculty has an appointment as guest investigator at the Woods Hole Oceanographic Institution on Cape Cod and has research opportunities for students in marine geochemistry and geology. Two other professors are actively engaged in statewide curriculum reform. The geography faculty maintains the Southeastern Massachusetts Global Education Center's Resource Center.

A program leading to the degree of Master of Arts in Teaching (MAT) with a concentration in earth sciences is offered by the department. A MAT in Social Sciences with an emphasis on geography is available in cooperation with the history department.

Modern equipment enables the department to offer investigation oriented laboratory experience. This equipment includes: (1) an X-ray Diffractometer with powder cameras; (2) thin section equipment; (3) polarizing and stereoscopic microscopes; (4) atomic absorption spectro-photometer; (5) a proton procession magnetometer; (6) earth resistivity unit; (7) Frantz Isodynamic Separator; (8) 14-foot coastal research vessel; (9) a portable gamma-ray spectrometer; (10) Sunsparc 20 UNIX work station; (11) Hewlett Packard capillary gas chromatograph; (12) GPS surveying equipment; (13) a portable visible-near infrared, spectroradiometer; and (14) groundwater sampling equipment.

In addition, the department has a well-equipped remote sensing laboratory, and a cartographic laboratory with a large format digitizer planimeter, a climatological station with solar radiation recording instrumentation, a solar greenhouse classroom at the Burnell Campus School, an astronomy observatory, a wet geochemistry laboratory, and a wet, as well as dry, sedimentology laboratory. Finally, this department has access to a scanning electron microscope through the Southeastern Massachusetts Consortium.

Earth sciences and geography faculty are using Bridgewater State College's sophisticated computer facilities for classroom instruction, including demonstrating and displaying Web-based

and self-authored material and models. In a growing number of courses, students may submit assignments online, and in some courses, a majority of class time is spent in “virtual classrooms.” To learn more, visit the department Web site at www.bridgew.edu/depts/Geography.

The department boasts an active Earth Sciences and Geography Club that sponsors both local (Harvard Mineral Museum), regional (New Hampshire’s White Mountains), national (Hawaii), and international (Iceland, Mexico) field trips. Students may also qualify for Gamma Theta Upsilon the international geography honor society.

UNDERGRADUATE PROGRAM

GEOGRAPHY MAJOR (BA OR BS)

A major or minor in geography can provide a student with a way to examine the world with objectivity. The student can be trained to analyze the water-use and land-use opportunities in your communities, to understand the interrelated systems which keep the land and sea resources in balance, and to appreciate the varied ways in which people all over the world use those resources. Bridgewater State College graduates have found employment as planners, environmental analysts, teachers, market researchers, cartographers and administrators. Many of our geography majors have gone on to earn advanced degrees from leading graduate schools.

Students are invited to meet with any of the geography faculty – Professors Clark, Domingo, Hayes – Bohanan, Hellström, Rao, or Aten—to discuss the program.

All geography majors must complete the following courses:

	CREDITS
GEOG 121 Physical Geography.....	3
GEOG 151 Human Geography.....	3
GEOG 213 Geographic Information Systems (GIS) I.....	3
GEOG 290 Introduction to Geographic Analysis.....	3
GEOG 370-389 Any regional geography course.....	3
GEOG 490 Seminar in Geography.....	3
MATH 110 Elementary Statistics I.....	3

Geography majors are required to complete the following additional courses according to the degree being sought.

BS in Geography

GEOG 315 Quantitative Geography.....	3
GEOG 413 Geographic Information Systems (GIS) II.....	3

Students seeking a BS in Geography are strongly encouraged to complete:

GEOG 498 Internship in Geography or Planning	
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BA in Geography

GEOG 340 Geography Materials and Methods.....	3
GEOG 441 Geographic Frameworks.....	3

Program Electives

All Geography majors must complete any four additional courses chosen, in consultation with their advisers, from the following list:..... 12

GEOG 221 Meteorology	
GEOG 222 Climatology	
GEOG 314 Satellite Image Processing Applications to the Environment	
GEOG 315 Quantitative Geography	
GEOG 317 Air Photo Interpretation-Remote Sensing	
GEOG 321 Meteorology II	
GEOG 322 Biogeography	
GEOG 323 Water Resources	
GEOG 324 Earth Surface Processes	
GEOG 331 Geography of Environmental Problems	
GEOG 332 Management and Preservation of the Natural Environment	
GEOG 333 Geography of Environmental Justice	
GEOG 340 Geography Materials and Methods	
GEOG 350 Economic Geography	
GEOG 354 Field Methods in Urban Geography	
GEOG 355 Political Geography	
GEOG 363 Locational Analysis	
GEOG 365 Geography of Transportation	
GEOG 374 Geography of the Middle East	
GEOG 375 Geography of South Asia	
GEOG 376 Geography of East Asia	
GEOG 380 Geography of Russia/C.I.S.	
GEOG 381 Geography of Latin America	
GEOG 382 Geography of Europe	
GEOG 383 Geography of the United States	
GEOG 386 Geography of Canada	
GEOG 388 Geography of Africa	
GEOG 400 Special Topics in Geography	
GEOG 413 Geographic Information Systems (GIS) II	
GEOG 422 Online Weather Studies	
GEOG 431 Environmental Regulations	
GEOG 441 Geographic Frameworks	
GEOG 462 Principles of Urban Planning	
GEOG 463 Applications in Urban Planning	
GEOG 497 Undergraduate Research in Geography	
GEOG 498 Internship in Geography or Planning	
GEOG 499 Directed Study in Geography	

Total minimum credits – BA in Geography: 39

Total minimum credits – BS in Geography: 39

Core Curriculum Requirements

A minimum of 120 earned hours is required for graduation. These earned hours include Core Curriculum Requirements as specified in the “Undergraduate Academic Programs” section



of this catalog. For additional graduation requirements, see the "Undergraduate Academic Policies" section of this catalog.

DOUBLE MAJOR WITH ELEMENTARY EDUCATION, EARLY CHILDHOOD EDUCATION OR SPECIAL EDUCATION

Students may choose a double major in geography and elementary education, early childhood education or special education for licensure purposes. Please contact the Department of Geography and the appropriate education department for further information.

GEOGRAPHY MINOR	CREDITS
GEOG 121 Physical Geography.....	3
GEOG 151 Human Geography.....	3
Four additional geography courses (departmental approval required). Two courses must be at the 200 level or higher and must be from at least two of the following areas:.....	12
a) a regional course	
b) a topical course	
c) a techniques course	
Total minimum credits: 18	

GRADUATE PROGRAMS

MASTER OF ARTS IN TEACHING EARTH SCIENCES

This program is inactive.

GENERAL SCIENCE

This program is inactive.

PHYSICAL SCIENCE

The MAT in Physical Science degree was developed for high school and middle school subject area teachers who have an initial license in chemistry, earth science or physics and are seeking a professional license in the Commonwealth of Massachusetts. This MAT program is defined to meet the "appropriate master's degree" requirement, which is part of the criteria for professional stage licensure, as set forth in the most recent Massachusetts Department of Education licensure regulations.

Students should consult the "School of Graduate Studies" section of this catalog for information regarding program policy and procedures.

For current information concerning program requirements, consult the "Physics" section of this catalog.