
GEOGRAPHY

FACULTY

Chairperson and Graduate Program

Coordinator: Associate Professor
James Hayes-Bohanan

Professors: Sandra Clark, Vernon Domingo

Associate

Professor: Madhusudana Rao

Assistant

Professors: Robert Amey, Darcy Boellstorff,
Robert Hellström

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 General Science
- 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 precession magnetometer; (6) earth resistivity unit; (7) Frantz Iso-dynamic 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;

School of Arts and Sciences

Note: See Catalog Web Addenda at www.bridgew.edu/catalog/addenda/ as that information supersedes the published version of this catalog.

(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 (Ice–land, 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.

School of Arts and Sciences

All geography majors must complete the following courses:

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

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

BS in Geography

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

Students seeking a BS in Geography are strongly encouraged to complete
 GEOG 498 Internship in Geography or Planning

BA in Geography

GEOG 340 Geography Materials and Methods
 GEOG 441 Geographic Frameworks

Program Electives

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

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

**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

GEOG 121 Physical Geography
GEOG 151 Human Geography

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:

- a) a regional course
- b) a topical course
- c) a techniques course

GRADUATE PROGRAMS

Graduate Program Coordinator: Dr. James Hayes-Bohanan

MASTER OF ARTS IN TEACHING

EARTH SCIENCES

This program is inactive.

GENERAL SCIENCE

For current information concerning this program, consult the “Physics” section of this catalog.

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.