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## **GEOGRAPHY (GEOG)**

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### **GEOG 100 Physical Geography (3 credits)**

This course is an introduction to physical geography phenomena (landforms, climate, oceans, soils) in which human-land relationships are central. The focus is on understanding the processes at work in the environment and on their interrelationships. Two hours of lecture and one two-hour laboratory period weekly. Satisfies the GER in Physical and Biological Sciences. *Either semester. Cannot be taken if GEOG 120 is taken for credit*

### **GEOG 110 Human Geography (3 credits)**

An inquiry into the theoretical and empirical approaches to the study of human spatial analysis is presented. The major topics covered include population, race, language, religion, politics, urbanization and economics. Satisfies the GER in Social Sciences. *Each semester*

### **GEOG 120 The Physical World (3 credits)**

This course studies the formation and distribution of landforms, climates, soils and vegetation. Emphasis is placed on the interrelationships among these components of the environment and their significance to life on earth. Satisfies the GER in Physical and Biological Sciences (non-lab course). *Either semester. Cannot be taken if GEOG 100 is taken for credit.*

### **GEOG 160 Geography of Non-Western Cultures (3 credits)**

This course in human geography introduces the geographical study of the current cultural and social systems in the non-western world (*in Africa, Asia and Latin America*). Emphasis is placed on the diversity of cultural frameworks and their strategies for dealing with problems. Satisfies the GER in Non-Western Civilization. *Fall semester*

### **GEOG 170 Regional Geography: The Developed World (3 credits)**

The study of regional geography of the developed world (*including Anglo-America, Europe and the Soviet Union, Australia and Japan*) investigates how humans have used the resources available to them to obtain a high standard of living in different physical and cultural milieus. This high standard of living is reflected in land use patterns that are similar in their broad outlines but different in detail. Satisfies the GER in Social Sciences. *Spring semester*

### **GEOG 196 Environmental Geography (3 credits)**

The spatial aspects of the interaction between humans and their physical environment are examined through the analysis of selected problems from resource capacity to pollution. The perceptions of environmental hazards of

human settlements are examined to illuminate environmental decision-making. Satisfies the GER in Physical and Biological Sciences (non-lab course). *Either semester*

### **GEOG 203 Meteorology (3 credits)**

*Prerequisite: GEOG 100 or GEOG 120 and consent of the instructor*

Study of the basic atmospheric processes that result in weather, regional weather systems. Basic instrumentation and practice in observing, data presentation and interpretation of weather maps. Two hours of lecture and one two-hour laboratory period weekly. *Fall semester*

### **GEOG 204 Climatology (3 credits)**

*Prerequisite: GEOG 100 or GEOG 120 or consent of the instructor*

Study of the elements and controls of climate emphasizing their effect on man and the environment, and man's response to and modification of climate. The world distribution of climatic regions. Instrumentation and practice in observing, data presentation and analysis. *Spring semester*

### **GEOG 216 Cartography (3 credits)**

*Prerequisite: GEOG 100 or GEOG 120 or EASC 100 or consent of the instructor*

Theory and practice in the design and drafting of maps, graphs and charts for the graphic presentation of geographical and statistical information. One hour of lecture and four one-hour laboratory periods weekly. Additional laboratory time may be required. *Spring semester*

### **GEOG 307 Management and Preservation of the Natural Environment (3 credits)**

*Prerequisite: Junior standing and consent of the instructor*

This course is devoted to a detailed examination of the occurrence, exploitation and conservation of natural resources, including minerals, soils, water, forest, grassland, fisheries, wildlife, recreation areas and scenery. Emphasis is placed on conservation in the United States. *Fall semester*

### **GEOG 317 Air Photo Interpretation — Remote Sensing (3 credits)**

*Prerequisite: GEOG 100 or GEOG 120 or EASC 100*

Theory and practice in extracting information about the earth's physical and cultural features from aerial photographs. Acquaint students with the detection, identification, and analysis of the earth's features through remote sensing. The application of computerized digital image processing to satellite environmental data. Two hours of lecture and one two-hour laboratory weekly. *Fall semester*

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**GEOG 318 Computer Cartography (3 credits)**

*Prerequisite: GEOG 216*

This course is concerned with the theory and application of computer processing as related to cartographic design and production. It will emphasize the use of large mainframe computers and peripheral devices (i.e. line printer, pen plotter, digitizer and graphics terminal) in the production of maps and other graphic output. No knowledge of computer programming is required for the course. Two hours of lecture and one two-hour laboratory weekly. *Fall semester*

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**GEOG 320 Geography Materials and Methods (3 credits)**

*Prerequisite: Any GEOG or ECON course*

This course is focused on the maps, globes, and other geographic learning material that are used in developing and extending geographic knowledge and insight. Current techniques and alternative frameworks in the field of geographic education are emphasized. The course details an examination of the strategies, texts, materials and media that can be used to enhance the teaching and learning of geography within our schools. It closely integrates geographic content and teaching methods so that a truly geographic view of the world can be developed in the classroom. *Offered alternate years, Spring semester*

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**GEOG 353 Urban Geography (3 credits)**

*Prerequisite: Any GEOG course or consent of the instructor*

The geographic aspects of the city including location, function, land use patterns and interaction. Fieldwork focuses on current problems facing urban life. *Fall semester*

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**GEOG 354 Field Methods in Urban Geography (3 credits)**

*Prerequisite: GEOG 353*

A geography analysis of local urban areas and their problems, and the application of concepts learned in GEOG 353. Hours arranged.

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**GEOG 358 Geography of Latin America (3 credits)**

*Prerequisite: GEOG 100 or GEOG 120 or GEOG 110*

Physical and cultural patterns of selected countries of South America. Emphasis on current economic and political problems.

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**GEOG 361 Geography of Environmental Problems (3 credits)**

*Prerequisite: EASC 100, GEOG 100 or GEOG 120*

Environmental problems are considered in this course from the geographer's point of view — problems such as population density and distribution; balanced land use and its philosophic, aesthetic, and scientific basis; the circulation of goods and people; and a comparison of levels of development. *Spring semester*

†May be taken for graduate level credit.

**Note:** This section is arranged in course number order. See course prefix key for assistance in locating department sections.

**Note:** See Catalog Web Addenda at [www.bridgew.edu/catalog/addenda/](http://www.bridgew.edu/catalog/addenda/) as that information supersedes the published version of this catalog.

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**GEOG 362 Economic Geography (3 credits)**

*Prerequisite: Any GEOG or ECON course or consent of the instructor*  
The geographical analysis of the distribution of economic activities such as production, exchange and consumption is presented in this course. Here we examine the principles underlying spatial variations in land use and economic development at the local, national and international levels.

*Fall semester*

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**GEOG 363 Locational Analysis (3 credits)**

*Prerequisite: ECON 101 or GEOG 362 or consent of the instructor*

The spatial approach is utilized to analyze retail, industrial, and public utility location. Topics covered include demographic analysis, retail structure, location factors, and economic development.

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**GEOG 380 Geography of Russia/C.I.S. (3 credits)**

*Prerequisite: Any 100 level GEOG or ECON course*

The geography of environment, resources and population is studied in relation to history and the present economic and social system of the Russia/C.I.S. *Offered alternate years, Fall semester*

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**GEOG 384 Geography of Asia (3 credits)**

*Prerequisite: Any 100 level GEOG or ECON course*

The physical and cultural patterns of selected countries of Asia. *Offered once in three years*

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**GEOG 386 Geography of Canada (3 credits)**

*Prerequisite: GEOG 100 or GEOG 120 or consent of the instructor*

The geography of environment, resources and population is examined in relation to history, economic, and regional land patterns of Canada. *Offered alternate years, Spring semester*

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**GEOG 388 Geography of Africa (3 credits)**

*Prerequisite: Any 100 level GEOG or ECON course*

The physical and cultural features of the African continent with special reference to the emerged political and regional patterns. *Spring semester*

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**GEOG 402 Online Weather Studies (3 credits)†**

In this meteorology course, which is designed and serviced by the American Meteorological Society (AMS), students will access and work with current weather maps delivered via the Internet, and will coordinate these maps with learning activities keyed to the day's weather. This study of the atmosphere includes weather systems from local to global scales, severe weather, and current weather applications. The course meets three times per semester for evaluation. All other activities are executed solely on the Internet, with the faculty mentor guiding the student in understanding the basic principles of meteorology, and analyzing real-time weather data. *Spring semester*

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**GEOG 419 Geographic Information Systems  
(3 credits†)**

*Prerequisite:* At least junior standing, open to all majors or consent of the instructor

This course explores the use of computers in handling geographic information. Students will learn the conceptual modeling methods and principles necessary for the design and assessment of geographic information systems. Application of several geo-processing tools to accomplish the horizontal and vertical integration of spatial data are considered. Vector, raster, and relational data structures are examined. No knowledge of computer programming is required for this course. Two hours of lecture and three one-hour laboratory periods weekly. Additional laboratory and field time may be required. *Spring semester*

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**GEOG 420 Principles of Urban and Regional Planning (3 credits†)**

*Prerequisite:* GEOG 353 or consent of the instructor

An introduction to the process of planning which deals with the interrelationships of resources, facilities, activities, and people over time and space. *Offered alternate years, Spring semester*

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**GEOG 430 Geography of Transportation (3 credits†)**

*Prerequisite:* Any GEOG course or consent of the instructor

This course will provide a spatial understanding of the role of transportation and interaction. It will provide an analysis of the importance of location relative to economic activities, development of distribution systems, flow analysis, effectiveness of distribution systems and the impact of transport systems on economic development.

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**GEOG 473 Political Geography (3 credits†)**

*Prerequisite:* Any GEOG or POLI course

The course examines the variation of politically organized areas and their relationships to each other. The focus is on the interaction of geographical factors (distance, location and distribution) and political process. Emphasis is on both state and non-state agents in the political arrangement of space. *Fall semester*

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**GEOG 474 Quantitative Geography (3 credits†)**

*Prerequisite:* MATH 110 or consent of the instructor

The use of statistical techniques, and computer and model building methodology to analyze various spatial phenomena. *Fall semester*

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**GEOG 490 Seminar in Geography (3 credits†)**

The historical development of methods and techniques used in geographic research. Preparation of a research paper on a problem selected from one of the subdivisions of geography. For senior geography majors. *Spring semester*

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**GEOG 498 Internship in Geography or Planning  
(3-6 credits)**

*Prerequisite:* Consent of the department; formal application required

Student internships in local planning department or agency. The purpose of this internship is to provide a student with experience in various aspects of his planning interest.

*Either semester*

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**GEOG 499 Directed Study in Geography (1-3 credits)**

*Prerequisite:* Consent of the department; formal application required

Open to juniors and seniors who have demonstrated critical and analytical abilities in their studies and who wish to pursue a project independently. May be taken twice for a maximum of six credits. *Either semester*

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**GEOG 504 On-Line Weather Studies (3 credits)**

This is a meteorology course that will cover all major aspects of atmospheric processes, including weather systems from local to global in scale and severe weather. This on-line course will involve work with current weather maps and data delivered via the Internet, and will coordinate this information to the day's weather. The instructor guides the student in understanding the basic principles of meteorology and in analyzing real-time weather data. The class meets in a formal classroom three times per semester. A research project is required which is keyed to the background and interests of each student. *Spring semester*

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**GEOG 520 Special Topics in Geography (1-3 credits)**

*Prerequisite:* May be specified depending on the nature of the topic

Special topics of current relevance to geography will be offered from time to time. The topic to be offered will be announced in pre-registration publications. This course may be taken more than once for different topics.

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**GEOG 551 Geography in the Middle School (3 credits)**

This course examines in depth the characteristic features of countries on six continents as delineated by the Massachusetts curriculum framework. Course participants will develop the geographic content that can be translatable for classroom use at the middle school level. The purpose of the course is for teachers to develop the necessary knowledge, insights, and teaching approaches so that they can teach, with confidence, about the various regions of the world. The geographic approach used in the course integrates historical, economic, and political issues in order to develop a more comprehensive understanding of our world.

†May be taken for graduate level credit.

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**Other Approved Courses:**

- GEOG 378 Geography of Anglo-America
- GEOG 382 Geography of Europe
- GEOG 417 Satellite Image Processing Applications to the Environment
- GEOG 500 Planning and Urban Environment
- GEOG 502 Research
- GEOG 503 Directed Study
- GEOG 520 Improving the Teaching of Earth Sciences, Geography, and Energy I
- GEOG 521 Improving the Teaching of Earth Sciences, Geography, and Energy II
- GEOG 550 Contemporary Issues in Geography
- GEOG 555 Field Methods in Geographic Inquiry
- GEOG 560 Seminar in Geographic Education
- GEOG 565 Geotechnology
- GEOG 570 Planning and Economic Development
- GEOG 575 Environmental Issues: Problems and Solutions
- GEOG 580 The Regional Method in Geographic Analysis

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