

## DEPARTMENT OF ECONOMICS

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Phone: 262-472-1361

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Refer to the College of Business and Economics for complete information on the Department. Only the requirements for the BA/BS major and the L&S minor are listed here.

### MAJOR

#### ECONOMICS (BA/BS)

Students in the College of Letters and Sciences are required to have:

1. a minimum overall GPA of 2.0.
2. a minimum grade point of 2.0 in their major.

MAJOR - 27 UNITS & 2.00 GPA

1. ECON 201 (GS), ECON 245, ECON 404, ECON 301 AND ECON 302
2. SELECT 12 ELECTIVE UNITS (300 AND 400) IN ECONOMICS

UNIQUE MAJOR AND WRITING REQ. - 9-11 UNITS

1. ECON 202 (GS) AND BSEDCNA 353 RLS
2. MATH 243 (GM) OR MATH 250 (GM) RLS

AN APPROVED MINOR IS REQUIRED FOR THIS MAJOR

### MINOR/EMPHASIS

#### ECONOMICS - L&S EMPHASIS

MINOR - 21 UNITS

1. ECON 201(GS) AND ECON 202 (GS)
2. SELECT 15 UNITS FROM ECONOMICS NUMBERED ECON 240 OR HIGHER. IF YOU ARE A BBA STUDENT, THE ECON COURSES APPLIED TO YOUR DEGREE REQUIREMENTS WILL NOT BE LISTED HERE BUT THEY CAN BE APPLIED TO THE MINOR; CHECK WITH THE ECON DEPT FOR INFORMATION.

## DEPARTMENT OF GEOGRAPHY AND GEOLOGY

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Phone: 262-472-1071

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Faculty: Juk Bhattacharyya, Howard Botts, David Goldblum, Rex Hanger (Chairperson), Peter Jacobs, Thomas Jeffery, Margo Kleinfeld, John Patterson, Donald Rambadt, Carol Rosen, David Travis, Chuanrong Zhang.

### GEOGRAPHY

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Geography is the discipline that studies where and why physical and human phenomena, such as cities, crime, poverty, pollution, landforms, climate, and various resources, are distributed as they are. Geographers also develop ideas and recommend how different policies and relocations of phenomena, such as health care facilities, political boundaries, waste disposal sites, public service agencies, and business firms might better serve humans and their environment.

The four traditions in geography suggest the broad range of interests addressed within the discipline and the discipline's bridging role between the natural and social sciences. These traditions are: 1) the earth science tradition or physical geography; 2) the human-land tradition devoted to investigating the interactions between human and physical phenomena; 3) the regional-international tradition which involves the study of world regions and international trends and relationships; and, 4) the spatial analysis tradition which stresses systematic and technical training for analyzing topics, problems and plans at various geographic scales, ranging from global to regional to an individual city or neighborhood. Despite the wide-ranging subject matter in the discipline, students can pursue six different tracks in the major that more effectively address their intellectual interests and career plans. These tracks or emphases listed below are: 1) General, 2) Geology, 3) International/Regional, 4) Physical/Environmental, 5) Techniques and 6) Urban/Area Development.

Owing to the primary locational concern of the discipline, many geography graduates have found employment in public and private organizations engaged in location analysis, transportation planning, urban and regional planning, real estate development, resource management and local, state and federal government positions, in addition to positions in teaching. Geographic Information Systems (GIS) skills are of growing importance to the discipline and prepare students for various careers in business, the public sector and graduate school. Fischer Scholarships are available each term for students enrolled in a College of Education program and majoring or minoring in geography and selected geography majors actively involved in teaching other students. Interested students should contact the Department of Geography.

### MAJORS/EMPHASES

#### GEOGRAPHY GENERAL (BA/BS)

MAJOR - 34 UNITS

1. GEOGRPY 100, GEOGRPY 210, GEOGRPY 230 AND GEOGRPY 270
2. GEOGRPY 480
3. SELECT 3 UNITS FROM REGIONAL COURSES GEOGRPY 362, GEOGRPY 364, GEOGRPY 365, GEOGRPY 368 AND GEOGRPY 491
4. SELECT 6 UNITS FROM SYSTEMATIC COURSES GEOGRPY 300, GEOGRPY 310, GEOGRPY 320, GEOGRPY 323, GEOGRPY 330, GEOGRPY 332, GEOGRPY 334, GEOGRPY 337, GEOGRPY 340, GEOGRPY 344, GEOGRPY 350, GEOGRPY 430 AND GEOGRPY 452
5. SELECT 3 UNITS FROM TECHNICAL COURSES GEOGRPY 290, GEOGRPY 370, GEOGRPY 377, GEOGRPY 440, GEOGRPY 460, AND GEOGRPY 470
6. SELECT 3 UNITS FROM 300-400 LEVEL GEOGRAPHY COURSES
7. SELECT 3 UNITS FROM THE GEOGRAPHY DEPARTMENT

MAJOR - WRITING REQUIREMENT (3 UNITS)

1. ENGLISH 370 OR ENGLISH 372 PRIOR TO ENROLLING IN GEOGRPY 480

AN APPROVED MINOR IS REQUIRED FOR THIS MAJOR

#### GEOGRAPHY GEOLOGY EMPHASIS (BA/BS)

MAJOR - 35 UNITS

1. GEOGRPY 100
2. GEOGRPY 210 OR GEOLGY 100 OR GEOLGY 101
3. GEOGRPY 230, GEOGRPY 270, GEOGRPY 370 AND

GEOGRPY 480

4. GEOLGY 204, GEOLGY 317, GEOLGY 496 (OR GEOLGY 315 AND GEOLGY 316) AND GEOLGY 318
5. SELECT AT LEAST 3 UNITS FROM COURSES GEOGRPY 300, GEOGRPY 310, GEOLGY 205, GEOLGY 300, GEOLGY 301, GEOLGY 307, GEOLGY 319, GEOLGY 492 OR GEOLGY 498

MAJOR - WRITING REQUIREMENT (3 UNITS)

1. ENGLISH 372 OR ENGLISH 370 PRIOR TO ENROLLING IN GEOGRPY 480

AN APPROVED MINOR IS REQUIRED FOR THIS MAJOR

**GEOGRAPHY INTERNATIONAL/REGIONAL (BA/BS)**

MAJOR - 34 UNITS

1. GEOGRPY 100, GEOGRPY 210, GEOGRPY 230 AND GEOGRPY 270
2. GEOGRPY 480
3. SELECT 9 UNITS FROM REGIONAL COURSES GEOGRPY 261, GEOGRPY 362, GEOGRPY 363, GEOGRPY 364, GEOGRPY 365, GEOGRPY 366, GEOGRPY 368, GEOGRPY 485, GEOGRPY 491 AND GEOGRPY 492
4. SELECT 6 ELECTIVE UNITS FROM COURSES GEOGRPY 332, GEOGRPY 334, GEOGRPY 340, GEOGRPY 452
5. SELECT 3 ELECTIVE UNITS FROM GEOGRAPHY COURSES (CAN INCLUDE THOSE LISTED ABOVE)

MAJOR - WRITING REQUIREMENT (3 UNITS)

1. ENGLISH 370 OR ENGLISH 372 PRIOR TO ENROLLING IN GEOGRPY 480

AN APPROVED MINOR IS REQUIRED FOR THIS MAJOR

**GEOGRAPHY PHYSICAL/ENVIRONMENTAL (BS)**

MAJOR - 34 UNITS

1. GEOGRPY 100, GEOGRPY 210 AND GEOGRPY 270
2. GEOGRPY 230 OR GEOGRPY 252
3. GEOGRPY 480
4. SELECT 6-9 ELECTIVE UNITS FROM PHYSICAL SYSTEMS COURSES GEOGRPY 300, GEOGRPY 310, GEOGRPY 320, GEOGRPY 330
5. SELECT 6-9 ELECTIVE UNITS FROM ENVIRONMENTAL SYSTEMS COURSES GEOGRPY 323, GEOGRPY 337, GEOGRPY 352, GEOGRPY 420, GEOGRPY 435, GEOGRPY 452, OPTIONAL COURSES (MAXIMUM 3 UNITS) GEOLGY 301 OR BIOLOGY 257
6. SELECT 3-6 UNITS FROM TECHNIQUES COURSES GEOGRPY 290, GEOGRPY 370, GEOGRPY 377, GEOGRPY 450, GEOGRPY 460, GEOGRPY 470 AND APPROVED GEOGRPY 496

MAJOR - WRITING REQUIREMENT (3 UNITS)

1. ENGLISH 370 OR ENGLISH 372 PRIOR TO ENROLLING IN GEOGRPY 480

AN APPROVED MINOR IS REQUIRED FOR THIS MAJOR

**GEOGRAPHY TECHNIQUES (BA/BS)**

MAJOR - 34 UNITS

1. GEOGRPY 100, GEOGRPY 210, GEOGRPY 230 AND GEOGRPY 270
2. GEOGRPY 480
3. SELECT 9 UNITS FROM COURSES GEOGRPY 290, GEOGRPY 370 AND GEOGRPY 377
4. SELECT 6 UNITS FROM ADVANCED TECHNIQUES COURSES GEOGRPY 440, GEOGRPY 460, GEOGRPY 470, GEOGRPY 485, APPROVED GEOGRPY 496
5. SELECT 3 ELECTIVE UNITS FROM ANY 300 OR 400 LEVEL GEOGRAPHY COURSES

MAJOR - WRITING REQUIREMENT (3 UNITS)

1. ENGLISH 370 OR ENGLISH 372 PRIOR TO ENROLLING IN GEOGRPY 480

AN APPROVED MINOR IS REQUIRED FOR THIS MAJOR

**GEOGRAPHY URBAN / SUBURBAN (BA/BS)**

MAJOR - 34 UNITS

1. GEOGRPY 100, GEOGRPY 210, GEOGRPY 230, GEOGRPY 270
2. GEOGRPY 480
3. 3 UNITS OF URBAN/SUBURBAN TRACK CORE: GEOGRPY 344
4. SELECT 6-9 UNITS FROM URBAN TRACK: GEOGRPY 334, GEOGRPY 340, GEOGRPY 444
5. SELECT 6-9 UNITS FROM GEOGRAPHY TECHNICAL COURSES GEOGRPY 290, GEOGRPY 370, GEOGRPY 377, GEOGRPY 440/640, AND GEOGRPY 470
6. SELECT 0-3 UNITS FROM OF 300 OR 400 LEVEL COURSES FROM THE GEOGRAPHY DEPARTMENT

MAJOR - WRITING REQUIREMENT (3 UNITS)

1. ENGLISH 372 PRIOR TO ENROLLING IN GEOGRPY 480

AN APPROVED MINOR IS REQUIRED FOR THIS MAJOR

**GEOGRAPHY (BSE)**

LICENSURE - 42-43 UNITS

1. EDFOUND 212, EDFOUND 425 AND SECNDED 466
2. EDFOUND 243 OR EDFOUND 445
3. SELECT 2 UNITS FROM CIFLD 210
4. STUDENT TEACHING  
SELECT 2 UNITS FROM CIFLD 402 AND 12 UNITS FROM CIFLD 414 OR SELECT 2 UNITS FROM CIFLD 404 AND 12 UNITS FROM CIFLD 412
5. SECNDED 430
6. GEOGRPY 252 (GS) OR BIOLOGY 214 (GM) RLS
7. ECON 213 OR ECON 324 RLS
8. SELECT 3 UNITS FROM COURSE CIFLD 492
9. SELECT 3 UNITS FROM SPECED 205

MAJOR - 34 UNITS

1. GEOGRPY 210, GEOGRPY 230, GEOGRPY 250, GEOGRPY 270 AND GEOGRPY 340
2. SELECT 3 UNITS FROM REGIONAL COURSES

GEOGRPY 362, GEOGRPY 363, GEOGRPY 364, GEOGRPY 365, GEOGRPY 366, GEOGRPY 368

3. GEOGRPY 480
4. SELECT 9 UNITS FROM GEOGRAPHY IN CONSULTATION WITH ADVISER

AN APPROVED MINOR IS REQUIRED FOR THIS MAJOR

### GENERAL SCIENCE-BROADFIELD EARTH SCIENCE EMPHASIS (BSE)

LICENSURE - 40 UNITS

1. EDFOUND 212, EDFOUND 425 AND SECNDED 466
2. EDFOUND 243 OR EDFOUND 445
3. SELECT 2 UNITS FROM CIFLD 210
4. STUDENT TEACHING  
SELECT 2 UNITS FROM CIFLD 402 AND 12 UNITS FROM CIFLD 414 OR SELECT 2 UNITS FROM CIFLD 404 AND 12 UNITS FROM CIFLD 412
5. SECNDED 429
6. GEOGRPY 252 (GS) OR BIOLOGY 214 (GM) RLS
7. SELECT 3 UNITS FROM COURSE CIFLD 492
8. SELECT 3 UNITS FROM SPECED 205

MAJOR - 58 UNITS

1. SELECT 24 UNITS FROM EARTH SCIENCE COURSES FROM PHYSICAL GEOGRAPHY, GEOLOGY AND ASTRONOMY: GEOLGY 100, GEOLGY 204, GEOLGY 205, GEOLGY 300, GEOLGY 301, GEOLGY 314 THRU GEOLGY 319, GEOLGY 490 THRU GEOLGY 498, ASTRONMY 112, ASTRONMY 114, GEOGRPY 210, GEOGRPY 310, GEOGRPY 320 OR GEOGRPY 410
2. SELECT 14 UNITS FROM CHEMISTRY OR BIOLOGY OR PHYSICS
3. CHOOSE 2 GROUPS FROM THOSE LISTED BELOW:
  - a. SELECT 10 UNITS FROM BIOLOGY DEPT
  - b. SELECT 10 UNITS FROM CHEMISTRY DEPT
  - c. SELECT 10 UNITS FROM PHYSCS DEPT

### SOCIAL STUDIES-BROADFIELD GEOGRAPHY I EMPHASIS (BSE)

LICENSURE - 42-43 UNITS

1. SECNDED 466
2. EDFOUND 243 OR EDFOUND 445
3. SELECT 2 UNITS FROM CIFLD 210
4. STUDENT TEACHING  
SELECT 2 UNITS FROM CIFLD 402 AND 12 UNITS FROM CIFLD 414 OR SELECT 2 UNITS FROM CIFLD 404 AND 12 UNITS FROM CIFLD 412
5. SECNDED 430
6. GEOGRPY 252 (GS) OR BIOLOGY 214 (GM) RLS
7. ECON 213 OR ECON 324 RLS
8. EDFOUND 212 AND EDFOUND 425
9. SELECT 3 UNITS FROM COURSE CIFLD 492
10. SELECT 3 UNITS FROM SPECED 205

MAJOR - 54 UNITS

1. GEOGRPY 210, GEOGRPY 230, GEOGRPY 270 AND GEOGRPY 480
2. SELECT 3 UNITS FROM REGIONAL COURSES: GEOGRPY 362, GEOGRPY 363, GEOGRPY 364, GEOGRPY

365, GEOGRPY 366, GEOGRPY 368

3. SELECT 20 UNITS FROM DEPTS OF ANTHROPOLOGY, ECONOMICS, HISTORY, POLITICAL SCIENCE, PSYCHOLOGY AND SOCIOLOGY (AT LEAST 2 DEPTS ARE REQUIRED)
4. SELECT 15 UNITS FROM GEOGRAPHY IN CONSULTATION WITH ADVISER

### SOCIAL STUDIES-BROADFIELD GEOGRAPHY II EMPHASIS (BSE)

LICENSURE - 42-43 UNITS

1. SECNDED 466
2. EDFOUND 243 OR EDFOUND 445
3. SELECT 2 UNITS FROM CIFLD 210
4. STUDENT TEACHING  
SELECT 2 UNITS FROM CIFLD 402 AND 12 UNITS FROM CIFLD 414 OR SELECT 2 UNITS FROM CIFLD 404 AND 12 UNITS FROM CIFLD 412
5. SECNDED 430
6. GEOGRPY 252 (GS) OR BIOLOGY 214 (GM) RLS
7. ECON 213 OR ECON 324 RLS
8. EDFOUND 212 AND EDFOUND 425
9. SELECT 3 UNITS FROM COURSE CIFLD 492
10. SELECT 3 UNITS FROM SPECED 205

MAJOR - 54 UNITS

1. GEOGRPY 210, GEOGRPY 230 AND GEOGRPY 270
2. SELECT 3 UNITS FROM REGIONAL COURSES: GEOGRPY 362, GEOGRPY 363, GEOGRPY 364, GEOGRPY 365, GEOGRPY 366, GEOGRPY 368
3. SELECT 32 UNITS IN 3 OTHER SOCIAL SCIENCES ANTHROPOLOGY, ECONOMICS, HISTORY, POLITICAL SCIENCE, PSYCHOLOGY AND SOCIOLOGY
4. SELECT 6 UNITS FROM GEOGRAPHY COURSES

15 units Add-on for Geography Licensure (for Holders of the Broadfield Social Studies License, 701). 15 term units of upper level or graduate courses. At least 6 units of topical courses: to include GEOGRPY 332, GEOGRPY 334, GEOGRPY 337/537, GEOGRPY 340, GEOGRPY 344 and GEOGRPY 430. At least 3 units of regional courses: to include GEOGRPY 362, GEOGRPY 363, GEOGRPY 364, GEOGRPY 365, GEOGRPY 366 and GEOGRPY 368. Courses to be completed within five years of the date when the additional licensure is requested and at least 9 units must be earned at Whitewater.

Writing Proficiency Requirement for each degree: See chairperson for course(s) that satisfy this requirement.

### MINORS/EMPHASIS

#### ENVIRONMENTAL STUDIES

MINOR 24 UNITS

1. BIOLOGY 214, GEOGRPY 252
2. SELECT 6-9 UNITS FROM COURSES: BIOLOGY 467, CHEM 102, GEOGRPY 300, GEOGRPY 323, GEOGRPY 352, GEOGRPY 420, GEOGRPY 435, GEOLGY 300 AND GEOLGY 301
3. SELECT 3-6 UNITS FROM COURSES ECON 471, GEOGRPY 452, HISTRY 190, PHILSPHY 248, SAFETY 420, SOCIOLGY 319 AND SOCIOLGY 362
4. SELECT 6-9 UNITS FROM COURSES BIOLOGY 303, ENGLISH 372, GEOGRPY 290, GEOGRPY

## 190 GEOGRAPHY & GEOLOGY

377, GEOGRPY 460, GEOGRPY 470, MATH 230, MATH 231 AND INTERNSHIP IN ENVIRONMENTAL STUDIES (1-3 UNITS FROM ANY APPROPRIATE DEPT.)

This interdisciplinary minor combines information from a wide range of courses, all of which focus on some aspect of environmental studies. Participating departments and programs include Biological Sciences, Chemistry, Economics, Geography and Geology, History, Languages and Literatures, Mathematics, Safety Studies and Sociology. Upon completion, the student will have gained knowledge about many aspects of present-day environmental issues including 1) the natural processes of environmental systems, 2) the social and economic influences on the environment and the regulatory controls enacted to protect both the environment and human health, and 3) the techniques currently being used to study environmental problems. The minor, in combination with their selected major, is suitable to prepare students for possible careers related to the study of the environment or future graduate study.

### GEOGRAPHY

MINOR - 23 UNITS

1. GEOGRPY 210, GEOGRPY 230 AND GEOGRPY 270
2. SELECT 3 UNITS FROM REGIONAL COURSES  
GEOGRPY 362, GEOGRPY 363, GEOGRPY 364, GEOGRPY 365, GEOGRPY 366 AND GEOGRPY 368
3. SELECT 3 UNITS FROM SYSTEMATIC COURSES  
GEOGRPY 320, GEOGRPY 323, GEOGRPY 332, GEOGRPY 334, GEOGRPY 337, GEOGRPY 340, GEOGRPY 344 AND GEOGRPY 350
4. SELECT 6 UNITS FROM GEOGRAPHY COURSES.  
AT LEAST 3 UNITS MUST BE 300 OR 400 LEVEL.

### GEOGRAPHY ELEMENTARY EDUCATION EMPHASIS

MINOR - 23 UNITS

1. GEOGRPY 210, GEOGRPY 230, GEOGRPY 250 AND GEOGRPY 275
2. SELECT 3 UNITS FROM REGIONAL COURSES  
GEOGRPY 261, GEOGRPY 362, GEOGRPY 363, GEOGRPY 364, GEOGRPY 365, GEOGRPY 366 AND GEOGRPY 368
3. SELECT 3 UNITS FROM SYSTEMATIC COURSES  
GEOGRPY 320, GEOGRPY 323, GEOGRPY 332, GEOGRPY 334, GEOGRPY 337, GEOGRPY 340, GEOGRPY 344 AND GEOGRPY 350
4. SELECT 3 ELECTIVE UNITS FROM GEOGRAPHY COURSES

### GEOLOGY

MINOR - 23 UNITS

1. GEOLGY 100 OR GEOLGY 101, GEOLGY 204 2. SELECT A MINIMUM 16 UNITS FROM COURSES  
GEOLGY 205, GEOGRPY 300, GEOLGY 310 AND ANY 300 LEVEL OR ABOVE GEOLOGY COURSE

### GIS

MINOR - 24 UNITS

1. GEOGRPY 270, GEOGRPY 290, GEOGRPY 370 AND GEOGRPY 377
2. 12 UNITS REQUIRED FROM 1 EMPHASIS (EITHER A OR B)
  - A. URBAN-ECONOMIC EMPHASIS
    1. SELECT 6 UNITS FROM SYSTEMATIC COURSES: GEOGRPY 332, GEOGRPY 334, GEOGRPY

## LETTERS AND SCIENCES

340, GEOGRPY 344, GEOGRPY 444  
2. GEOGRPY 440, GEOGRPY 470

OR

B. PHYSICAL-ENVIRONMENTAL EMPASIS

1. SELECT 6 UNITS FROM SYSTEMATIC COURSES:  
GEOGRPY 300, GEOLOGY 301, GEOGRPY 323, GEOGRPY 330, GEOGRPY 352, GEOGRPY 420, GEOGRPY 435
2. GEOGRPY 460, GEOGRPY 470

### URBAN & AREA DEVELOPMENT

MINOR - 24 UNITS

1. 12 CORE UNITS FROM AT LEAST THREE DISCIPLINES FROM COURSES: ECON 438, FNBSLW 348, FNBSLW 457, GEOGRPY 340, GEOGRPY 344, GEOGRPY 444, POLISCI 344, POLISCI 446 AND SOCIOLOGY 352
2. 12 ELECTIVE UNITS MUST BE DETERMINED IN CONSULTATION WITH ADVISER.
3. NO MORE THAN 12 UNITS OF CORE AND ELECTIVES ANY SINGLE DEPARTMENT

Administered by the Department of Geography and Geology, the minor consists of 24 units drawn from several departments in the College of Letters and Sciences and College of Business and Economics. A core curriculum of 15 required units and 9 units of electives is required. Students interested in this minor should contact the Chair of the Geography Department or Coordinator of the Urban and Area Development Minor Program.

### COURSE DESCRIPTIONS

Note: Field trips may be required for any of the courses. Although few geography classes require prerequisites, a general studies geography course is recommended before attempting advanced courses. Students with little background in geography should consult the appropriate instructor before registering for upper division courses.

#### GEOGRPY 100 INTRODUCTION TO GEOGRAPHY 1 u

Introduction to Geography introduces students to the specialties within geography, outlines the academic tracks within the major and associated requirements, and explores public and private career opportunities in the field of geography. Required of all majors at earliest opportunity. Prereq: Must be a declared Geography major.

#### GEOGRPY 120 INTRODUCTION TO WEATHER AND CLIMATE 3 u

This course introduces students to the processes controlling and distinguishing weather and climate. Particular emphasis is on data selection, interpretation, and analysis. The impacts of severe weather and climate change on humans is also emphasized. The labs expose students to the wide range of weather and climate information currently available on the Internet.

Coreq: MATH 141

#### GEOGRPY 210 PHYSICAL GEOGRAPHY GL 5 u

A study of selected physical aspects of our geographic environment. Emphasis is given to the origin and characteristic features of topographic, climatic, vegetative and soil regions of the earth and to their interrelationships. The ultimate objective is to provide a foundation upon which to build a better understanding of human interrelationships with the physical environment. Field trips are normally taken.

Coreq: MATH 141

#### GEOGRPY 230 HUMAN GEOGRAPHY 3 u

A systematic study of human land relationships highlighting the diversity of the elements that make up the cultural landscape in various regions.

**GEOGRPY 250 GEOGRAPHY OF WISCONSIN** GS 3 u  
A systematic treatment of physical and cultural geographic phenomena. Emphasis is placed on the interrelationships and interactions of these phenomena from place to place within the state.

**GEOGRPY 252 HUMAN ENVIRONMENTAL PROBLEMS** GS 3 u

An introduction to environmental problems and their complexities. Attention is given to alternative solutions to such problems and the implications these alternatives have for the total environment. The course emphasizes the evaluation of the interrelationships between the environmental resource demands of people and the actual resource base of the earth.

**GEOGRPY 261 GEOGRAPHY OF CANADA AND THE UNITED STATES OF AMERICA** GS 3 u

A regional survey of the United States and Canada. Special attention is given to the physical, cultural and economic geography of the two countries.

**GEOGRPY 270 INTRODUCTION TO MAPPING** 3 u

An introduction to the quantitative and qualitative mapping techniques applicable to the physical and social sciences. Included are the skills required to create clear, concise and aesthetically pleasing maps, as well as how to derive information from them. Both graphic and cartographic software packages will be utilized to create and evaluate maps. Field trips are normally taken.

**GEOGRPY 290 SPATIAL ANALYSIS** 3 u

An introduction to the presentation and interpretation of data, use of descriptive statistics and measures of spatial patterns, introduction to statistical inference and measures of association, with particular reference to geographic examples. Students will become proficient in using computers to achieve these skills.

Prereq: MATH 143

**GEOGRPY 300 SOIL SCIENCE** 3 u

Soil science deals with the systematic description, analysis, and understanding of soils and how they interact with and drive environmental processes and ecosystems. This course will examine the properties, formation, classification, and distribution of soil, stressing the connections between environmental controls on their formation and distribution. Field trips required.

Prereq: GEOGRPY 210 or GEOLGY 100

**GEOGRPY 310 GEOMORPHOLOGY (LANDFORMS)** 3 u

A study of topographic landscapes and their evolution. Two hours per week of lecture and map study. Field trips are normally taken.

Prereq: GEOGRPY 210 or GEOLGY 100 or consent of instructor.

**GEOGRPY 320/520 METEOROLOGY AND CLIMATE** 3 u

Begins with fundamental relationships among earth, sun and air. Common myths concerning weather phenomena are dispelled through in-depth explanation in everyday language of the physical laws that govern atmospheric functioning. The course terminates with a survey of world climate regions.

Prereq: GEOGRPY 210 or consent of instructor.

**GEOGRPY 323/523 WATER RESOURCES** 3 u

Class will investigate of the pathways and processes of water transfer and storage in the many reservoirs on earth, along with the impact of human activities on water quality and fluxes. Detail is given to shallow groundwater monitoring and soil indicators of saturation for wetland delineation, anthropogenic effects on streams, and land use issues related to water quality. Field trips normally taken.

Prereq: GEOGRPY 210 or GEOLGY 100 or GEOLGY 101 or BIOLOGY 142 or consent of instructor.

**GEOGRPY 330 BIOGEOGRAPHY** 3 u

This course provides an introduction to biogeography, the study of distributions of organisms. This course will combine both historical and

ecological perspectives in analyzing plant and animal distributions. Human impacts on biotic distributions will also be discussed in some detail.  
Prereq: GEOGRPY 210 or BIOLOGY 120

**GEOGRPY 332 POLITICAL GEOGRAPHY** 3 u

A geographical study of international conflicts and relations, geopolitical strategies and processes, and the variation of political phenomena from place to place in relation to changing economic and cultural environments in the national as well as global contexts.

Prereq: GEOGRPY 230 or junior standing or consent of instructor.

**GEOGRPY 334 HISTORICAL GEOGRAPHY** 3 u

An analysis of the evolution of the geographic patterns of population and human activities in major United States regions.

Prereq: GEOGRPY 230 or junior standing or consent of instructor.

**GEOGRPY 336 WOMEN IN ASIA: ENVIRONMENT, WORK, AND DEVELOPMENT** 3 u

This course will focus on understanding broad cultural/global issues and gender relations in three regions of Asia: East, Southeast, and South. The course will focus on theoretical explanations, demographic, employment, environmental, and socio-cultural processes and how these influence gender issues.

Prereq: GENED 140 OR GEOGRPY 230 OR SOCIOLOGY 290 OR SOCIOLOGY 385

**GEOGRPY 337/537 RECREATION REGIONS AND SYSTEMS** 3 u

Initial segments of the course focus upon an evaluation of spatial elements of the recreation phenomenon and the development of recreation areas for the express purpose of providing a background for subsequent analysis of existing recreation plans and formulation of a conceptual framework for the development of future recreation regions. Field trips are normally taken.

Prereq: GEOGRPY 230 or junior standing or consent of instructor.

**GEOGRPY 340 ECONOMIC GEOGRAPHY** 3 u

The study of the spatial organization of economic activities, including patterns of production, exchange and consumption. A broad introduction to locational behavior is presented and applied examples are stressed.

Prereq: GEOGRPY 230 or junior standing or consent of instructor.

**GEOGRPY 344 URBAN GEOGRAPHY** 3 u

The intraurban consideration of various land-use and population characteristics of cities, their patterns, interrelations and changes is followed by the interurban study of locations, size, spacing, types and functions of urban settlements. Field trips are normally taken.

Prereq: GEOGRPY 230 or junior standing or consent of instructor.

**GEOGRPY 346 GLOBALIZATION AND THE CITY** 3 u

This course will focus on understanding the processes of globalization, urban and regional development theories, emergence of the global city, and influence of globalization on urban development. This course will examine the role of cities across the world and the relationship between urban change and economic, political, and cultural globalization.

Prereq: GEOGRPY 230

**GEOGRPY 352 GEOHAZARDS** 3 u

The course will focus on the physical processes that create environmental hazards (e.g. earthquakes, volcanoes, severe weather), the primary controls on their frequency and intensity, and how human decision-making can influence the magnitude of impact that they have when they inevitably occur. Comparisons are made between impacts of hazards on developing versus developed countries.

Prereq: GEOGRPY 210 OR GEOLGY 100 OR GEOLGY 101 OR an approved equivalent lab course from another discipline.

**GEOGRPY 361 GEOGRAPHY OF SOUTH AND SOUTHEAST ASIA 3 u**

South and Southeast Asia are two world regions that are complex, diverse, and have important relationships to other parts of the world, historically through colonization, and the Cold War, and today, as part of globalization. The course will introduce students these broader relationships as well as more specific features of individual countries and sub-regions. At the most basic level, students will become familiar with demographic, social and economic information, as well as with key historical events. In addition to the textbook, the course will draw upon news reports, educational videos as well as major films, guest lectures and field trips.

Prereq: GENED 140 or GEOGRPY 230 or consent of instructor

**GEOGRPY 362 GEOGRAPHY OF EUROPE 3 u**

A study of the nations, regions, cultures, and traditional and emerging spatial relationships in Europe. Physical and cultural patterns and processes are considered as they relate to the distribution of population and industrial and commercial activities. The European Community and Europe's international role and linkages are investigated.

Prereq: GENED 140 or GEOGRPY 230 or junior standing or consent of instructor.

**GEOGRPY 363 GEOGRAPHY OF SOUTH AMERICA 3 u**

A study of countries south of the Caribbean with emphasis on their natural resources and economic activities. Considerable attention will be given to problems of cooperation among the Americas.

Prereq: GENED 140 or GEOGRPY 230 or junior standing or consent of instructor.

**GEOGRPY 364 GEOGRAPHY OF EAST ASIA 3 u**

A study of contemporary and historical interrelationships between the natural environment and economic, political and cultural activities in East Asia. Countries studied include: China, Taiwan, Mongolia, Japan, and North and South Korea.

Prereq: GENED 140 or GEOGRPY 230 or junior standing or consent of instructor.

**GEOGRPY 365 GEOGRAPHY OF MIDDLE AMERICA 3 u**

A study of the activities of the peoples of Mexico, Central America, and the West Indies, their problems in relation to their natural environment, and their problems as a transitional area between two large continents.

Prereq: GENED 140 or GEOGRPY 230 or junior standing or consent of instructor.

**GEOGRPY 368 GEOGRAPHY OF RUSSIA AND THE NEWLY INDEPENDENT STATES 3 u**

Spatial analyses of physical and cultural phenomena are dealt with topically as well as regionally. Current development projects are given special emphasis.

Prereq: GENED 140 or GEOGRPY 230 or junior standing or consent of instructor.

**GEOGRPY 370 GEOGRAPHIC INFORMATION SYSTEMS 3 u**

The basic principles and operations of geographic information systems (GIS) are presented, including the capture, storage, management, analysis and display of geographic referenced data and their attributes. Laboratory exercises provide extensive hands-on experiences with a number of GIS software packages, including both raster and vector systems. Field trips are normally taken.

Prereq: GEOGRPY 270 or consent of instructor.

**GEOGRPY 377/577 REMOTE SENSING OF THE ENVIRONMENT 3 u**

An introduction to the images, sensors and techniques used to gather and

process data on the Earth and other planets, including aerial photography, electro-optical scanners and radar systems. The course will focus on the fundamentals of utilizing remotely sensed data in studying both natural and human induced processes impacting the Earth's surface. Computer applications will be extensively utilized. Field trips are normally taken.

Prereq: GEOGRPY 210 or consent of the instructor.

**GEOGRPY 420/620 HUMAN AND CLIMATE INTERACTIONS 3 u**

The course objective is to distinguish between natural climate change and change induced by human activities. Topics covered include human modifications to cloud cover, global warming, and ozone problems. Another emphasis is to better understand the impacts of severe weather on human activities and the potential threats of future climate change. At least one field trip is usually taken.

Prereq: GEOGRPY 320 or consent of instructor.

**GEOGRPY 430 GEOGRAPHY OF RACE Diversity & ETHNICITY IN THE UNITED STATES 3 u**

The course will take a geographical approach to the study of ethnic groups in the United States. Native American, African American, Hispanic American, and Asian American groups will be studied systematically. Major topics will include mobility, culture regions, and the cultural landscape created by the various ethnic groups.

Prereq: GEOGRPY 230 or GEOGRPY 261 or GEOGRPY 344 or Junior standing.

**GEOGRPY 435/635 FOREST GEOGRAPHY 3 u**

This course introduces the field of forest geography, emphasizing the quantitative description of spatial and temporal patterns of forest change at multiple scales. Both natural and human forest processes are considered as well as the interaction between humans and forested environments. Theories and methods will be used to understand forest processes, using examples from around the world.

Prereq: GEOGRPY 210 or GEOGRPY 330 or BIOLOGY 141 or consent of instructor.

**GEOGRPY 440/640 APPLIED GIS: APPLICATIONS FOR BUSINESS AND INDUSTRY 3 u**

This course will provide the background necessary to apply Geographic Information Systems software to solve applied business problems. The specific educational objectives of this course are: 1) To provide the student with "hands on" problem solving skills emphasizing, site location, target marketing, sales territory development and network routing; 2) To work with the most widely used Business GIS software package, ArcView GIS and its major extensions.

Prereq: GEOGRPY 270, GEOGRPY 370 and GEOGRPY 340 or consent of instructor.

**GEOGRPY 444/644 URBAN LAND USE PLANNING 3 u**

A study of the historical, social and political framework of the urban land planning process with primary emphasis on the United States. Exposure to professional planning approaches and techniques and a critical analysis of plans and planners are stressed. Field trips are normally taken.

Prereq: GEOGRPY 344 or SOCIOLOGY 352 or POLISCI 446 or ECON 438 or consent of instructor.

**GEOGRPY 450 ADVANCED METHODS IN PHYSICAL GEOGRAPHY 4 u**

Advanced Methods in Physical Geography focuses on data collection and analysis techniques used by physical geographers. Students will conduct an integrated analysis of a local landscape, including site selection, sample collection, lab analysis, and data assimilation and interpretation for report writing. Roughly one-half of course is taught outdoors, regardless of weather. Four consecutive hours per week.

Prereq: GEOGRPY 300 or GEOGRPY 310 or GEOLGY 301/501

**GEOGRPY 452/652 CULTURAL ECOLOGY AND 3 u**

**SUSTAINABLE DEVELOPMENT**

This course will discuss the history of the subdiscipline of cultural ecology within geography and teach about indigenous and traditional societies' knowledge systems from a variety of world cultures. It will use ancient and modern examples of indigenous methods of natural resource management and show how these are being applied internationally to present day environmental problems and to sustainable development approaches. Prereq: GEOGRPY 230 or GEOGRPY 252 or consent of instructor.

**GEOGRPY 460/660 APPLIED GIS IN PHYSICAL GEOGRAPHY 3 u**

The course focuses on the use of GIS to better understand the physical processes shaping the earth's surface and characteristics of the atmosphere. Because physical geography covers such a broad range of topics, it will be necessary to review the physical processes associated with each (e.g. landform formation, biogeography, patterns of severe weather, etc.) before applying GIS. Thus, the course combines traditional lecture style format with weekly meetings in departmental computer labs equipped with the latest GIS software. Grading is heavily based on completion of labs on time and quality of GIS outputs. Prereq: GEOGRPY 210 and GEOGRPY 370

**GEOGRPY 470/670 APPLIED ENVIRONMENTAL AND NATURAL RESOURCE GIS 3 u**

This course will provide the knowledge and skills necessary to utilize GIS for solving applied environmental analysis problems. Specifically, the course is designed to 1) identify and resolve environmental and natural resource problems in terms of spatial analysis, 2) explore a conceptual understanding of GIS, 3) provide students with technical instruction in current GIS software. Prereq: GEOGRPY 270 and GEOGRPY 370 or consent of instructor.

**GEOGRPY 480 APPLIED RESEARCH METHODS 4 u**

A survey of new and traditional methods used in geographic studies; and the application of a variety of these methods in the collection, classification and analysis of data for assigned problems, culminating in individual research reports. Field trips are normally taken. This course fulfills department's writing competency requirement. Prereq: GEOGRPY 210 and GEOGRPY 230 and GEOGRPY 270 and ENGLISH 370 or ENGLISH 372.

**GEOGRPY 485 INTERNSHIP IN GEOGRAPHY 3-12 u**

Students will be placed in an outside private or governmental agency where they will utilize geographic techniques in approaching practical problems relevant to the agency's mission. An on-campus seminar with fellow interns and the supervisory instructor is required. Prereq: Students with a major or minor program emphasis in geography must have completed a minimum of 14 units in geography and have the consent of the intern committee. Students of cognate majors must have a minimum of 9 selected units in geography and consent of the intern committee. Repeatable for a maximum of 6 units in major and 12 units in degree.

**GEOGRPY 490/690 WORKSHOP 1-8 u**

Repeatable. Prereq: Consent of instructor.

**GEOGRPY 491 TRAVEL STUDY Repeatable 1-3 u****GEOGRPY 492 FIELD COURSE 4-6 u**

An introduction to field methods and techniques and their application in the study of a part of the United States or a foreign area. For information about a particular offering, write to the Department of Geography and Geology, University of Wisconsin-Whitewater. Repeatable. Prereq: Consent of instructor.

**GEOGRPY 494 SEMINAR 1-3 u**

Repeatable one time for a maximum of 6 units in major/degree.

**GEOGRPY 496/696 SPECIAL STUDIES 1-3 u**

Repeatable one time for a maximum of 6 units in major/degree.

**GEOGRPY 497 EXCHANGE STUDY Repeatable 1-12 u****GEOGRPY 498 INDEPENDENT STUDIES IN GEOGRAPHY 1-3 u**

Repeatable one time for a maximum of 6 units in major/degree. Prereq: 12 units in geography, 2.75 grade point in geography and consent of department chairperson.

**GEOLOGY**

Geology is the study of the internal structure, materials, chemical and physical processes, and history of the earth. The geology program offers fundamental geology courses such that: (1) students may develop a thorough understanding of geology in support of their major or interest or (2) students desiring employment in geology or related fields may (a) qualify directly for admission to a graduate program in geology upon completion of supporting science and mathematics courses available at UW-W or (b) complete a second baccalaureate degree at an institution which offers a geology major with one additional year of study.

**COURSE DESCRIPTIONS****GEOLOGY 100 PRINCIPLES OF GEOLOGY GL 5 u**

An introduction to the concepts which describe the origin and evolution of the earth. Emphasis is on understanding (1) the material make-up of the earth, (2) the internal and external processes which affect the earth, (3) the scientific method as it applies to the study of the earth. Four hours of lectures and two hours of lab each week.

Coreq: MATH 140 or MATH 141 or consent of instructor. Unreq: GEOLOGY 101

**GEOLOGY 101 ELEMENTS OF GEOLOGY GL 4 u**

An introduction to the study of the earth. Emphasis is placed on: (1) the materials which make up the earth, (2) the internal and external processes which affect the earth, (3) the length of geologic time, and (3) the methods of science, especially as they apply to the study of the Earth.

Coreq: MATH 140 or MATH 141. Unreq: GEOLOGY 100

**GEOLOGY 204 EARTH AND LIFE HISTORY GM 3 u**

A study of the changes in the earth's crust and life through geologic time and the methodology used in reconstructing earth history. One field trip is required. A special fee will be assessed to those students electing to participate on an optional field trip to cover transportation costs.

Coreq: MATH 140 or MATH 141

**GEOLOGY 205 HISTORICAL GEOLOGY LABORATORY 1 u**

A laboratory course in earth history emphasizing paleontologic, stratigraphic, and geologic map studies. One field trip is required. One two-hour lab per week.

Prereq: GEOLOGY 204 or concurrent registration in GEOLOGY 204.

**GEOLOGY 300 PRINCIPLES OF OCEANOGRAPHY GM 3 u**

A study of the physical, chemical, geological and biological aspects of the major water masses of the world and human dependency on these water masses. One field trip to observe shoreline processes is required. A special fee will be assessed to students electing to participate in an optional field trip to cover the transportation costs.

Coreq: MATH 140 or MATH 141

**GEOLOGY 301 ENVIRONMENTAL GEOLOGY 3 u**

A study of geological phenomena such as earthquakes, volcanism, mass movements, river processes, coastal processes etc. and their impacts on society and environment. Special emphasis will be placed on examining remedial

measures against geological hazards and how human actions influence natural geological processes. Three lecture hours per week.

**GEOLGY 307 DINOSAURS** *GM* **3 u**

The proposed course will examine all aspects of Dinosaurs from Earth System Science perspective. Who were the Dinosaurs? When, how and where did they live on earth? What is their relationship to birds? What are the circumstances of their extinction?

Coreq: MATH 140 OR MATH 141

**GEOLGY 315 INTRODUCTION TO MINERALOGY** **4 u**

An introduction to mineralogy with emphasis on the principles of crystallography, physical mineralogy, chemical mineralogy and the systematic classification of minerals. Three lectures and one two-hour lab per week. One field trip is required. A special fee will be assessed to those students electing to participate on an optional field trip to cover transportation costs. Prereq: GEOLGY 100, (CHEM 102 or CHEM 141 recommended).

**GEOLGY 316 PETROLOGY** **4 u**

A study of the mode of occurrence, composition, classification, and origin of igneous, sedimentary, and metamorphic rocks. Special emphasis is placed on (1) hand specimen and microscopic characteristics as indicators of the origin and evolution of rocks and (2) the chemical and physical aspects of rocks which control their origin and evolution. Two lectures and two two-hour labs per week. One field trip is required. A special fee will be assessed of those students electing to participate in an optional field trip to cover transportation costs.

Prereq: GEOLGY 100, GEOLGY 315, (CHEM 104 and PHYSCS 163 recommended).

**GEOLGY 317 PALEONTOLOGY** **3 u**

An introduction to the history of life on Earth. Lectures focus on concepts in paleontology including paleoecology; evolution; paleobiogeography; and use of fossils in the solution of geologic problems. Characteristics of common fossils will be the focus of the laboratory. Two lectures and one two-hour lab per week. One field trip is required; up to two optional field trips possible (fee required to cover cost of optional trips).

Prereq: GEOLGY 100 or GEOLGY 101 and GEOLGY 204 or BIOLOGY 142 or consent of instructor.

**GEOLGY 318 GEOLOGIC STRUCTURES AND FIELD METHODS** **4 u**

A study of the causes behind the formation of the major structural features of earth as well as identification techniques and description of geologic structures in the field. Emphasis is placed on (1) understanding and quantifying geologic deformation, (2) material response to different conditions of deformation, (3) identification and description of geologic structures in microscopic, macroscopic and regional scale, (4) geologic field and data analyses techniques such as stereographic projections and preparation and interpretation of geologic maps. Offered in Spring semesters. A special fee will be assessed to those students electing to participate on an optional field trip to cover transportation costs.

Prereq: GEOLGY 100 and MATH 152

**GEOLGY 319 STRATIGRAPHY AND SEDIMENTATION** **3 u**

Classification and description of the various kinds of sediments and sedimentary rock units; with emphasis on carbonates; cyclic sedimentation and sequence stratigraphy; and techniques of correlating sedimentary rocks. Two hours of lecture and two hours of lab each week. One field trip is required. A special fee will be assessed to those students electing to participate on an optional field trip to cover transportation costs.

Prereq: GEOLGY 100 or GEOLGY 101, GEOLGY 204.

**GEOLGY 352 GEOHAZARDS** **3 u**

The course will focus on the physical processes that create environmental hazards (e.g. earthquakes, volcanoes, severe weather), the primary controls on their frequency and intensity, and how human decision-making can

influence the magnitude of impact that they have when they inevitably occur. Comparisons are made between impacts of hazards on developing versus developed countries.

Prereq: GEOGRPY 210 OR GEOLGY 100 OR GEOLGY 101 OR an approved equivalent lab course from another discipline.

**GEOLGY 490/690 WORKSHOP** **1-3 u**

Repeatable. Prereq: Consent of instructor.

**GEOLGY 491 TRAVEL STUDY** *Repeatable* **1-3 u**

**GEOLGY 492 FIELD STUDIES IN GEOLOGY** **1-3 u**

Field studies of classic geologic regions. Emphasis will be placed on training in the basic techniques and methods of field studies, recognition and interpretation of geologic structures, and the use of field observations to develop both geologic understanding of the region studied and geologic reasoning ability. Students will be responsible for the cost of the university van rental and other trip expenses.

Coreq: enrollment in or completion of GEOLGY 100 or consent of instructor.

**GEOLGY 494 SEMINAR** **1-3 u**

An intensive study of one or more philosophical issues that supplement the curriculum. Original research papers may be expected as partial fulfillment of the course requirements.

Repeatable. Prereq: Consent of instructor.

**GEOLGY 496/696 SPECIAL STUDIES** **1-3 u**

Repeatable. Prereq: Consent of instructor.

**GEOLGY 498 INDEPENDENT STUDY IN GEOLOGY** **1-3 u**

Repeatable. Prereq: 8 units in geology or consent of instructor and program coordinator.

## DEPARTMENT OF HISTORY

Phone: 262-472-1103

E-Mail: [history@umw.edu](mailto:history@umw.edu)

Faculty: Lloyd Binagi, Anthony Gulig, James Jaffe, Elizabeth Hachten, Richard Haney, Steven Karges, Seung-joon Lee, Nikki Mandell, Seth Meisel, Jennifer Thibodeaux, Stephen Vincent.

History is studied for many reasons. It is our social memory, telling us who we are, where we belong, and where we seem to be going. History takes us out of the present, broadens the horizons of our minds, makes us aware of human possibilities, and confronts us with the awareness that our present culture is neither the only way, nor perhaps the best way, that human beings have lived.

A major in history provides broad preparation for careers in teaching and business, as well as for professional training in law, journalism, management, and university teaching. But most importantly, history helps to develop a breadth of vision, a capability for critical thinking, and a fundamental understanding of human society permitting a person to grow and adapt to the changing career opportunities in the modern world.

### MAJOR/EMPHASES

#### HISTORY (BA/BS)

If courses in the major are used to satisfy General Education requirements and Letters and Sciences requirements, 6 additional elective units would be available.

MAJOR - 36 UNITS

1. HISTORY 200 AND HISTORY 499