

DEPARTMENT of GEOGRAPHY
University of Wisconsin-Madison

**CATALOG OF COURSE
DESCRIPTIONS**



Fall 2008-09

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Geography Courses Taught This Semester by Our Faculty

Amy Burnicki	170, 676	Lisa Naughton	434/930
James Burt	120, 560	Kristopher Olds	305, 675/901
William Cronon	460, 932	Robert Ostergren	349, 506
Leila Harris	319, 401/900	Matthew Turner	339, 765
Mark Harrower	Sabbatical	Jack Williams	120, 331
Robert Kaiser	318, 675	A-Xing Zhu	377, 577
James Knox	325, 524		
Joseph Mason	127, 320		

Our Faculty

AMY BURNICKI, 375 Science Hall, 262-3213, burnicki@wisc.edu; Ph.D., University of Michigan, 2008, Assistant Professor - GIS Applications in Environmental Modeling and Resource Management, Quantitative Analysis.

JAMES E. BURT, 425 Science Hall, 262-4438, jburt@geography.wisc.edu; Ph.D., U.C.L.A., 1980, Professor - Climatology, quantitative analysis, computer cartography.

WILLIAM CRONON, 443 Science Hall, 265-6023, wcronon@wisc.edu; Ph.D., Oxford, 1981, Frederick Jackson Turner Professor - Environmental history, environmental studies, North America (also History).

LEILA HARRIS, 223 Science Hall, 265-0531, lharris@geography.wisc.edu; Ph.D., Minnesota, 2004, Assistant Professor - Nature-society, environmental policy and management, water resources, gender and inequality, Middle East.

MARK HARROWER, 208 Science Hall, 265-0012, maharrower@wisc.edu; Ph.D., Penn State, 2002, Associate Professor - Cartography, GIS, geovisualization.

ROBERT J. KAISER, 430 Science Hall, 262-1904, rjkaise1@wisc.edu; Ph.D., Columbia University, 1988, Professor - Political geography, nationalism, population geography, ethnic studies, Eurasia.

JAMES C. KNOX, 234 Science Hall, 262-1804, knox@geography.wisc.edu; Ph.D., Iowa, 1970, Evjue-Bascom Professor - Geomorphology, paleohydrology, water resources.

JOSEPH A. MASON, 207 Science Hall, 262-6316, mason@geography.wisc.edu; Ph.D., University of Wisconsin-Madison, 1995, Professor - Soils, geomorphology, quaternary paleoenvironments, GIS applications in geomorphology

LISA C. NAUGHTON, 373 Science Hall, 262-4846, naughton@geography.wisc.edu; Ph.D., University of Florida, 1996, Professor - Wildlife ecology, protected areas, Africa, Latin America.

KRISTOPHER N. OLDS, 376 Science Hall, 262-5685, olds@geography.wisc.edu; Ph.D., University of Bristol, 1996, Professor - Urban, economic, globalization, Pacific Rim.

ROBERT C. OSTERGREN, 343 Science Hall, 262-6302, rcosterg@wisc.edu; Ph.D., Minnesota, 1976, Professor - Historical, cultural, Europe, and North America.

MATTHEW D. TURNER, 340 Science Hall, 262-2465, turner@geography.wisc.edu; Ph.D., U.C.-Berkeley, 1992, Professor - Environmental resources, cultural ecology, Africa.

JACK WILLIAMS, 421 Science Hall, 265-5537, jww@geography.wisc.edu; Ph.D., Brown University, 1999, Associate Professor - Vegetation dynamics, paleoecology, paleoclimatology.

A-XING ZHU, 421 Science Hall, 262-0272, azhu@wisc.edu; Ph.D., Toronto, 1994, Professor - GIS, remote sensing, and their application in environmental modeling and resource management.

Emeritus Faculty

WALTRAUD BRINKMANN
WILLIAM DENEVAN
PHILLIP MUEHRCKE
THOMAS VALE

REID BRYSON
DANIEL DOEPPERS
YI-FU TUAN
ROBERT SACK

Advisors

See the Geography website, or postings around Science Hall, for listings of Undergraduate and Graduate Advisors and their office hours.

Undergraduate Requirements for Major in Geography

Procedure for Declaration and Completion

1. Select and meet with the adviser for your intended subfield (see the Geography website for current advisers). If you have not identified your subfield, see the Undergrad Affairs Committee Chair.

Sub-field titles (short name):

- Group I: Earth Systems and Environmental Processes (Physical Geography)
- Group II: People-Environment Interaction (People-Environment)
- Group III: Human Geography
- Group IV: Area Studies and Global Systems (Area Studies)
- Group V: Cartography and Geographic Information Systems (Cartography)

2. Complete the College of Letters and Science "Major Declaration" form (from advisor) and bring to 160 Science Hall for processing.

3. Plan a suitable major program with consultation and approval by a faculty advisor. During the final undergraduate semester, have your total program reviewed and certified that it meets the requirements of the major.

4. To qualify for a major in Geography, you must earn a minimum of 30 in geography and meet A through C below:

A. Breadth of Study: At least one course in each

- 1. Physical Geography (Group I)
- 2. People-Environment Interaction (Group II)
- 3. Human Geography (Group III)
- 4. Area Studies & Global Systems (Group IV)

B. Skills, Techniques, and Methods: Each of the following, or an equivalent approved by the advisor:

- 1. Geography 170, Map Reading and Interpretation, or Geography 370, Introduction to Cartography
- 2. Geography 360, Quantitative Methods in Geographical Analysis (Spring only)

3. Geography 565, Colloquium for Undergraduate Majors (Spring only)

C. Depth and Quality of Study:

- 1. A minimum of 15 credits at the intermediate level or above. Course levels are indicated under Concentrations or Tracks.
- 2. A concentration, approved by the advisor, consisting of at least three related intermediate or advanced level courses (including at least one advanced level course). Choose Options A, B, or C in box below.
- 3. A grade-point average of 2.0 or higher for courses in the major.

Option A. A concentration from one of the Groups I, II, III, or V

Option B. A concentration from one of the Area Clusters below:

North America: 305*, 329*, 340, 341, 342, 344, 345, 431*, 460*, 506*, 507*, 508*, 531*, 536*, 675

Middle & South America: 303*, 348, 531*, 535*, 538*, 548, 675

Europe and former USSR: 349, 353, 371*, 444, 506*, 531*, 549, 553, 675

Africa: 277, 355, 356, 531*, 537*, 538*, 675

Asia: 358, 531*, 538*, 553*, 558, 675

* Denotes courses having substantial regional content; often satisfies Group IV concentration requirement; see instructor. No more than one course identified with * may count toward the Group IV concentration. For the appropriateness of Geog 675 in any given semester, see instructor. With advisor's written consent, one course with an area focus from outside of the Geography Dept. may count toward the concentration. This course will not count for credit in Geography.

Option C. An individual concentration proposed by the student and approved by the adviser.

CONCENTRATIONS OR TRACKS WITHIN THE GEOGRAPHY MAJOR

Course Levels are indicated by:

E=Elementary; I=Intermediate; D=Intermediate/Advanced; A=Advanced
Frequency of course offering in recent years shown here as an indication (not
a future certainty):

1 = every semester; 2 = every year; 3 = every other year;
4 = irregularly

Group I. Physical Geography: Earth Systems and Environmental Processes

- 120 Global Physical Environments (E) 1
- 121 Atmospheric Environment and Society (E) 2
- 127 Physical Systems of the Environment (E) 1
- 320 Geomorphology (I) 4
- 321 Climatology (I) 2
- 325 Analysis of the Physical Environment (I) 2
- 326 Landforms-Topics and Regions, (Fluvial Geomorphology) (I) 2
- 328 Arid Lands Geomorphology (I) 3
- 329 Landforms and Landscapes of North America (I) 3
- 331 Climatic Environments of the Past (I) 2
- 420 Glacial and Pleistocene Geology (I) 3
- 421 Applied Surficial Geology (I) 3
- 523 Quaternary Vegetation Dynamics (A) 3
- 524 Advanced Landform Geography (A) 4
- 525 Soil Geomorphology (A) 3
- 527 The Quaternary Period (A) 3
- 528 Past Climates and Climatic Change (A) 4
- 531 Global Climates (A) 3

Group II. Environmental Studies: People-Environment Interaction

- 139 Resources and People (E) 2 or 3
- 230 Soil: Ecosystem and Resource (I) 2 or 3
- 240 Plants and Man (E) 2 or 3
- 303 The Human Role in Changing the Face of the Earth (I) 2
- 309 People, Land and Food: Comparative Study of Agricultural

Systems (I) 2

- 319 Environmental Evaluation and Adaptation (I) 3
- 336 Our Hazardous Environment (I) 4
- 338 Vegetation: Stability & Change (I) 4
- 339 Environmental Conservation (I) 1
- 434 People, Wildlife and Landscapes (A) 2
- 460 American Environmental History (I) 3
- *508 Landscape and Settlement in the North American Past (A) 3
- 519 Environment and Human Experience (A) 3
- 534 History and Ideology of Environmentalism (A) 4
- 535 Environmental Geography & Conservation in Developing
Countries (D) 4
- 536 American Wilderness: Perception and Preservation (A) 3
- 537 Culture and Environment (A) 2
- 538 The Humid Tropics: Ecology, Subsistence, and Development (A) 4

Group III. Human Geography

- 101 Introduction to Cultural Geography (E) 1
- 102 Spatial Organization of Human Activity (E) 4
- 236 Bascom Course: The Power of Place (E)
- 300 Population, Migration, and Diffusion (I) 4
- 301 Geography of Social Organization (I) 4
- 302 Economic Geography: Locational Behavior (I) 4
- 305 Introduction to the City (I) 1
- 311 Industrial Location: Theory and Patterns (I) 4
- 312 Regional Development and Planning (I) 1
- 318 Geography, Politics, and Territoriality (I) 2
- *349 Europe (I) 2
- *353 Russia and the Newly Independent States: Topical Analysis (I) 2
- 444 Health and Social Welfare in Society (I) 4
- 501 Space and Place: A Geography of Experience (S_A) 3
- 502 Spatial Behavior (A) 4
- 503 Researching the City (I) 3
- 505 Urban Spatial Patterns and Theories (A) 4
- 506 Historical Geography of European Urbanization (A) 4
- *508 Landscape and Settlement in the North American Past (A) 3
- 510 Economic Geography (A) 2
- *553 Russia and the CIS: Problems in Human Geography (A) 4
- 558 The Social Geography of Asian Cities in Comparative Perspective
(A) 2

Group IV. Area Studies and Global Systems

- 140 World Regions: Concepts and Regions (E) 1
- 244 Introduction to Southeast Asia: Vietnam to the Philippines (E) 1
- 253 Russia: An Interdisciplinary Survey (E)
- 260 Latin America: An Introduction (E) 2
- 277 Africa: An Introductory Survey (I) 1
- 342 Geography of Wisconsin (I) 4
- 344 The American West (I) 3
- 348 Latin America (I) 2
- *349 Europe (I) 2
- *353 Russia and the Newly Independent States: Topical Analysis (I) 2
- 355 Africa, South of the Sahara (I) 2
- 358 China and Southeast Asia (I) 2
- 548 Problems in the Geography of Latin America (A) 4
- *553 Russia and the CIS: Problems in Human Geography (A) 4

Group V. Cartography and Geographic Information Systems

- 170 Map Reading and Interpretation (E) 1 or 2
- 351 Elementary Photogrammetry (I) 2
- 370 Introduction to Cartography (I) 1
- 377 Introduction to GIS (I) 2
- 570 Problems in Cartography (A) 4
- 572 Graphic Design in Cartography (A) 2
- 574 Cartographic Methods in Research (A) 4
- 575 Introduction to Computer Cartography (I) 2
- 576 Map Transformations and Coordinate Systems (A) 3
- 577 Environmental Modeling with GIS (A) 3
- 578 GIS Applications (D) 2
- 579 GIS and Spatial Analysis (D) 2

Group VI. Methodology

- 360 Quantitative Methods in Geographical Analysis (I) 1
- 560 Advanced Quantitative Methods (A) 2
- 565 Colloquium for Undergraduate Majors (I) 1
- 566 History of Geographic Thought (A) 3 or 4
- 601 Field Course in Geography (A)
- 602 Internship 1

* Course is cross-listed in more than one Group. Students must choose the course grouping in which they want to count the course.

Undergraduate Requirements for Major in Cartography and Geographic Information Systems

An undergraduate major in cartography requires a minimum of 30 credits in geography. The major must include:

CORE (Required)

- Geog 360 (4) Quantitative Methods in Geographical Analysis (Spring)
- Geog 370 (4) *Introduction to Cartography
- Geog 377 (4) *Introduction to Geographical Information Systems
- * Geog 370 and 377 should be taken before cartography electives.
- Geog 565 (3) Colloquium for Undergraduate Majors (Spring only)

ELECTIVES

Three of the following courses:

- Geog 570 (3) Problems in Cartography
- Geog 572 (4) Graphic Design in Cartography
- Geog 575 (4) Animated and Web-based Mapping
- Geog 576 (3) Map Transformations and Coordinate Systems
- Geog 578 (3) GIS Applications
- Geog 579 (3) GIS and Spatial Analysis

TOPICAL BREADTH

One course in each of the following groups:

- Physical Geography (Group I)
- Human Geography (Group III)
- People-Environment Interaction (Group II) **or**
- Area Studies & Global Systems (Group IV)

OTHER REQUIRED COURSES

At least 11 credits must come from:

- College-level Mathematics (8 credits)
- Comp Sci 302: Introduction to Programming (3)

At least 5 credits from the following courses in Civil & Environmental Engineering (CEE):

- Remote Sensing: CEE 301, 302, 303, 304, 556
- Photogrammetry: CEE 301, 403, 404, 551
- Surveying: CEE 251, 450, 452, 454
- Land Information Systems: CEE 307, 308, 309

Honors in the Major

The L&S Honors Program encourages participation in advanced courses, independent research, and graduate seminars that provide a sound foundation for the completion of a Senior Honors Thesis.

Honors in the Major requires a separate form, available from the Honors advisor (see website.) Please bring the completed form to 160 Science Hall to be stamped and copied before you take it in person to the L&S Honors Office in 420 South Hall.

To earn a B.A. or B.S. with Honors in the Geography Major, students must complete:

1. the breadth requirements for the major;
2. the skills requirements for the major plus Geog 766 (introduction to research methods) for 1 credit, preferably during the junior year;
3. a minimum of 21 credits at the intermediate and advanced levels;
4. two advanced courses in the area of concentration with at least one of these being a graduate seminar (Geog 766, 681, 682 may not be counted toward this requirement); and
5. Senior Honors Thesis, Geog 681-682, during the senior year.

To earn a B.A. or B.S. with Honors in Cartography and Geographic Information Systems, students must complete:

1. the breadth requirements for the major;
2. the core requirements for the major plus Geog 766 (introduction to research methods) for 1 credit, preferably during the junior year;
3. the electives requirement for the major, with the additional requirement that at least one of the electives must be a graduate seminar; and
4. Senior Honors Thesis, Geog 681-82, during the senior year.

Students are urged to take geography courses for honors credits whenever offered, but there is no required minimum number of honors credits. A cumulative overall GPA of 3.3 or higher is required. Honors candidates must plan their program in consultation with the department honors advisor and must identify a faculty member willing to advise their thesis research.

COURSE DESCRIPTIONS Fall Semester 2008-09

*** NOTE: Full descriptions are provided for courses taught by permanent Geography faculty only; for cross-listed courses, see the primary department (underlined). The following information is to present a general idea of the course content and format to aid in selecting courses. Descriptions, times, and rooms may change for this semester after the printing of this catalog. Always check Class Search in MyUW for the most updated version.**

Breadth: B-Biological Science, H-Humanities, I-Interdivisional—does not satisfy breadth requirement, L-Literature, N-Natural Science, P-Physical Science, S-Social Studies, Z-either Humanities or Social Studies.

Level: E-Elementary, I-Intermediate, D-Intermediate or Advanced, A-Advanced

101 Introduction To Human Geography

Schedule: TR 9:55-10:45, 180 Science Hall

Credits: 3 **Breadth:** S **Level:** E **Comm-B course**

Prereq.: Open to freshmen

Description: This newly redesigned introduction to human geography is structured to acquaint students with the recent global patterns and processes that have come to be known as globalization through the use of a human geographic perspective. To do this, the course systematically explores globalization through the use of a series of human geographic 'lenses', including: cultural geography, population geography, economic geography, urban geography and political geography/geopolitics. Within each of these sub-fields of human geography, the course focuses on the current patterns and processes of global change, the geographic variability of these global patterns and processes, and on the ways in which changes at the global scale are affecting, and in turn are affected by, local and regional events and conditions.

Requirements: Geography 101 is a Communications B course, with an emphasis on learning through written and oral communications. During the semester, you will be required to complete three writing assignments. The first writing assignment will be submitted in final form without the opportunity for revision. You will have the opportunity to revise and resubmit the second and third writing assignments. In addition, there will be a midterm and a final essay examination for this course. Beyond these major writing assignments, you are required to read the assigned material prior to the class for which they are assigned, to attend lectures, and to attend and participate in discussion sections. Your participation in discussion sections will include map quizzes and analyses, a group presentation, a film review, and peer reviews of your classmates' papers.

120 Global Physical Environments

Burt, Williams

Schedule: Lec 1: MW 8:50-9:40, 180 Science Hall

Lec 2: MW 11:00-11:50, 180 Science Hall

Credits: 3 **Breadth:** P **Level:** E **Cross-listed:** Envir St

Prereq.: Open to freshmen, not open to those with cr in Geog 127

Description: Global distribution and processes of climate, weather, ecosystems, landforms, and soils, emphasizing interrelationships.

Textbooks: Physical Geography, 7th ed., T.L. McKnight, Prentice Hall

Exams: Three equally weighted exams (Exam 3 is not a comprehensive final).

121 Atmospheric Environment and Society

Schedule: Lec 1: MW 1:20

Credits: 2 **Breadth:** P **Level:** E **Cross-listed:** Atm Ocn, Envir St

Prereq.: Open to freshmen

Description: Changing interactions between humans, other animals and plants, and the atmospheric environment, both in time and space.

127 Physical Systems of the Environment

Mason

Schedule: Lec 1: TR 11:00-12:15, 180 Science Hall

Credits: 5 **Breadth:** P **Level:** E **Cross-listed:** Envir St

Prereq.: Open to freshmen, not open to those with cr in Geog

120,123,124,125 or ILS132.

Description: Climate, vegetation, soil, water, and landforms as components of environmental systems; interrelationships among the components; spatial patterns of environmental systems over the Earth; changes in the systems through time.

139 Resources and People

Schedule: Lec 1: MW 2:30-3:45, 180 Science

Credits: 3 **Breadth:** S **Level:** E **Cross-listed:** Envir St

Prereq.: Open to freshmen

Description: Human population growth and its impact on the earth's resources, including food, energy, physical materials, water, biota, and landscapes; the geography of resource availability and the limits of the earth as producer of resources; the importance of attitudes and values in resource use.

170 Map Reading and Interpretation

Burnicki

Schedule: Lec 1: TR 2:30-3:45, 180 Science

Credits: 3 **Breadth:** P **Level:** E **Cross-listed:**

Prereq.: Second semester freshman or consent of instructor

Description: (Will have a change of title, to: "Our Digital Globe: An Overview of GIScience and its Technology.") This class explores the geospatial information

that surrounds us - maps, images, and location-specific data. The course examines the creation and use of maps and map-related products to answer spatial questions, and provides the tools students need to assess the strengths and limitations of map representations. It investigates the application of geospatial technologies like GPS, Google Earth, satellite imaging, and GIS to improve and enhance our ability to understand and convey spatial information.

240 Plants and Man

Schedule: Lec 1: MWF 2:25

Credits: 2-3 **Breadth:** B **Level:** E **Cross-listed:** Botany

Prereq.: Open to freshmen

Description: A speculative, systems-oriented approach to the interrelation of plants and humans in their evolution and cultural development, with an historical geographic perspective concluding with a consideration of 20th century America's plant-human interplay. Lecture; third credit includes demo lab.

244 Introduction to Southeast Asia: Vietnam to the Philippines

Schedule: Lec 1: TR 9:30-10:45

Credits: 4 **Breadth:** Z **Level:** E **Cross-listed:** Hist, Poli Sci, LCA, Soc

Prereq.: Open to freshmen

Description: Southeast Asian history, religion, folklore and literatures, educational systems, and politics from the early classical states to contemporary social, literary, and political developments.

252 Civilizations of India - Modern Period

Schedule: Lec 1 MWF 2:25

Credits: 4 **Breadth:** Z **Level:** I **Cross-listed:** Hist, Poli Sci, LCA, Soc

Prereq.: Open to freshmen

Description: Contemporary India society as a joint product of the classical heritage and world-wide movements toward nationalism; social and economic development.

277 Africa: An Introductory Survey

Schedule: Lec 1 TR 1:00-2:15

Credits: 4 **Breadth:** Z **Level:** I **Cross-listed:** African, AfroAm, Anthro Hist, Poli Sci, Soc

Prereq.: Open to freshmen

Description: African society and culture, polity and economy in multidisciplinary perspectives from prehistory and ancient kingdoms through the

colonial period to contemporary developments, including modern nationalism, economic development and changing social structure.

305 Introduction to the City

Olds

Schedule: Lec 1 TR 1:00-2:15

Credits: 4 **Breadth:** S **Level:** I **Cross-listed:** URPL

Prereq.: Sophomore standing; qualified Freshmen admitted with instructor consent

Description: This course is designed to provide a basic understanding of cities. Urban theories and models will be stressed throughout the course. The discussion sections will be devoted to an examination of contemporary urban problems.

318 Introduction to Geopolitics: Historical and Critical Approaches

(course formally titled "Geography, Politics and Territoriality") Kaiser

Schedule: Lec 1 TR 9:30-10:45, 444 Science Hall

Credits: 3 **Breadth:** S **Level:** I **Cross-listed:**

Prereq.: Sophomore standing

Description: The purpose of this course is to introduce you to the main concepts and research themes in contemporary geopolitics. As one of the primary perspectives within the field of political geography, geopolitics represents a broad engagement with the interactive relationships between power and place, and the construction, contestation and reconfiguration of political spaces that results. During the semester we will examine the formation of geopolitical images of the world, where these images come from, and how they have shaped our thinking and politics over time. Following an introduction to historical and critical approaches to geopolitics, we will examine the modern history of global geopolitical visions from the turn of the 20th century to the present day. Beginning with imperial geopolitics and especially Mackinder's heartland thesis, and continuing with cold war and post-cold war geopolitics, we will critically analyze the ways that academics, politicians and the media have shaped our understanding of the geopolitical world. We will end the semester with a critical analysis of emergent geopolitical understandings of the post-9/11 world, and future alternative geopolitical visions.

319 International Environmental Justice

Harris

(course formally titled "Environmental Evaluation and Adaptation")

Schedule: Lec 1 TR 11:00-12:15, 360 Science Hall

Credits: 3 **Breadth:** S **Level:** I **Cross-listed:**

Prereq.: Sophomore standing

Description: The study of environmental justice theories and concepts through international and global case studies. Includes focus on development theory, and North-South dimensions of a range of environmental issues. (Course formerly

titled "Environmental Evaluation and Adaptation.")

320 Geomorphology

Mason

Schedule: Lec 1 TR 2:30-3:45, 360 Science Hall

Credits: 3 **Breadth:** P **Level:** I **Cross-listed:** Geology

Prereq.: One of the following: Geol 100, 101, 106, 201, Geog 120, 127

Description: Principles and analysis of geomorphic processes and resulting land forms.

Note: Two one-day field trips required.

325 Analysis of the Physical Environment

Knox

Schedule: Lec 1 R 1:00-5:15, 350 Science Hall

Credits: 4 **Breadth:** P **Level:** I **Cross-listed:** Envir St

Prereq.: Any intro physical geog or related course.

Description: The course is designed to provide "how-to-do-it" experience with basic field and laboratory procedures and equipment that are common to the study of physical geography and physical environmental processes associated with streams and rivers. The course includes surveying procedures involving use of automatic levels, transits, theodolites, and total stations. Experience with stream gaging, river channel surveys, sediment analyses are associated with field excursions to SW Wisconsin sites. Hands-on instruction of HEC-RAS computer modeling of stream flow and water surface profiles is provided in the Geography computer lab. Laboratory analyses of field-collected sediment samples are undertaken in the Luna B. Leopold Geomorphology Laboratory in Science Hall. The class meets on Thursday afternoons. Classes during the first half of the semester will frequently be held outside at campus field sites or at field sites in the Driftless Area in southwestern Wisconsin. Classes during the second half of the semester will be held in 217 Science Hall. The course grade will be determined from results of three exams, project participation reports, and general participation in group projects. There is no final comprehensive exam. Geography 325 provides 4 physical science credits. A surveying field notebook required. Xerox copies and pdf files of selected methodologies will be provided. There is no required text.

331 Climatic Environments of the Past

Williams

Schedule: Lec 1 TR 9:30-10:45, 350 Science Hall

Credits: 3 **Breadth:** P **Level:** I **Cross-listed:** Envir St, Atm Ocn

Prereq.: Geog 120 or 127 or Geol 100 or 101 or cons inst

Description: This class reviews the major climatic events and trends during the Quaternary, spanning timescales from the last 1,000,000 years to the last 1,000 years. An emphasis will be placed on understanding the physical processes controlling the behavior of the earth system and its components (atmosphere,

oceans, cryosphere, biosphere, etc.). Students will also learn how paleoclimatologists collect, date, and analyze a staggering variety of paleoclimatic records and climate models. Quaternary paleoclimatology is an exciting and rapidly changing field, with relevance to current global change questions. Understanding the sources and causes of past climatic variability is a necessary precondition to making informed projections of future climate changes and impacts.

339 Environmental Conservation

Turner

Schedule: Lec 1: MWF 9:55-10:45, 180 Science Hall

Lec 2: MWF 1:20-2:10, 180 Science Hall

Credits: 4 **Breadth:** S **Level:** I **Cross-listed:** Envir St

Prereq.: Sophomore standing

Description: The first half of the course explores the history of resource exploitation and environmental protection in the U.S., focusing on "environmental conservation" as a multi-pronged, ever-changing social movement. We will explore differing ideas of "nature" and "conservation", as well as contemporary conservation efforts in places like the public lands in the American West and the oceans. The second half of the course focuses on global issues, with special emphasis on the tropics.

Textbooks: To be announced. Reserved readings available on the web.

Exams: Two exams

Grading: Two exams 200 points, discussion section activities 100 points

349 Europe

Ostergren

Schedule: Lec 1 MW 2:30-3:45, 180 Science Hall

Credits: 3 **Breadth:** S **Level:** I

Prereq.: Sophomore standing

Description: Survey of European geography with emphasis on European culture, political organization, urbanism and regional landscapes.

Textbooks: to be announced. Reserve readings available on the web.

370 Introduction to Cartography

Schedule: Lec 1 TR 11:00-12:15, 444 Science Hall

Credits: 4 **Breadth:** P **Level:** I

Prereq.: Sophomore standing or instructor consent

Description: This course serves as a broad introduction to cartography, with a dual emphasis on the theory and practice of making maps. The objective is to help students develop the faculty to think critically about cartographic processes and representations and to develop their skills in creating maps. Topics include the basics in mapping (e.g., scale, spatial reference systems, and projections), data acquisition and organization, key techniques for thematic mapping, and the

principles of cartographic abstraction and design. By the end of the course students will understand how maps are made and how to transform geographic data (related to people, places, and things on, in, or under the earth's surface) into abstract, symbolic representations of the world. There are numerous of kinds of maps (e.g., choropleth, isoline, proportional symbol, reference) and many ways to implement those basic maps forms: understanding the advantages and disadvantages of various map forms (and when they can/should be applied) is a central theme of this class. This course contains a significant lab component.

377 Introduction to Geographic Information System

Zhu

Schedule: Lec 1 TR 4:00-5:15, 180 Science Hall

Credits: 4 **Breadth:** P **Level:** I **Cross-listed:** Envir St

Prereq.:

Description: Geographic Information Systems (GIS) deals with the analysis and management of geographic information. This course offers an introduction to methods of managing and processing geographic information. Emphasis will be placed on the nature of geographic information, data models and structures for geographic information, geographic data input, data manipulation and data storage, spatial analytic and modelling techniques, and error analysis. The course is made of two components: lectures and labs. In the lectures, the conceptual elements of the above topics are explained. The labs are designed in such a way that students will gain first-hand experience in data input, data management, data analyses, and result presentation in a geographical information system.

401 Seminar: Gender, Space, Environment

Harris

Schedule: Sem 1 W 4:00-6:30, 388 Science Hall

Credits: 3 **Breadth:** S **Level:** A

Prereq.:

Description: Mixed seminar; undergrads register for 401, grads for 900.

434 People, Wildlife and Landscapes

Naughton

Schedule: Lec 1 3:30-6:00 M, 378 Science Hall

Credits: 3 **Breadth:** S **Level:** A **Cross-listed:** Envir St

Prereq.: Geog/Envir St 339

Description: This course investigates the relationship between people and animals amidst different social and ecological contexts. We begin by examining pre-historical interactions between animals and early humans, focusing on the evolution and impact of hunting and animal domestication. We then study how contemporary humans alter wildlife communities via fire, forest clearing, hunting, and species introductions. In the remainder of the course we evaluate various strategies for conserving wildlife in human-dominated landscapes. Case studies will be drawn from both tropical (East Africa, Amazonia) and temperate regions

(Wisconsin, Yellowstone, Sweden). This is a mixed, writing intensive seminar; undergrads should register for Geog 434, grads for Geog 930.

460 American Environmental History Cronon

Schedule: Lec 1 MW 2:30-3:45, 2650 Humanities

Credits: 4 **Breadth:** Z **Level:** I **Cross-listed:** History, Envir St

Prereq.: Sophomore standing

Description: Survey of interactions among people and natural environments from before European colonization to present. Equal attention on problems of ecological change, human ideas, and uses of nature and history of conservation and environmental public policy. Additional information about the course can be found at <http://www.williamcronon.net/courses/460.htm>.

506 Historical Geography of European Urbanization Ostergren

Schedule: Lec 1 T 3:30-5:25, 350 Science Hall

Credits: 3 **Breadth:** S **Level:** A **Cross-listed:** URPL

Prereq.: Junior standing

Description: Growth and development of European towns and cities from classical times to the present. Examines changing political, social and economic uses of urban space, as well as changes in the layout, architecture and meaning of the built environment. Case studies of major capitals and cities, including Rome, Paris, London, Berlin, Moscow, and Istanbul.

524 Advanced Landform Geography Knox

Schedule: Lec 1 W 4:00-6:00, 350 Science Hall

Credits: 3 **Breadth:** P **Level:** A **Cross-listed:** Geology

Prereq.: Jr st

Description: Purposes, methods, and content of analysis of landforms, with emphasis on quantitative descriptive regional variation, and functional relationships.

560 Advanced Quantitative Methods Burt

Schedule: Lec 1 MW 2:30-3:45, 444 Science Hall

Credits: 3 **Breadth:** P **Level:** A **Cross-listed:**

Prereq.: Geog 360 or equiv; Jr st.

Description: Selected topics in the analysis of spatial distributions with emphasis on multivariate techniques.

577 Environmental Modeling with GIS Zhu

Schedule: Lec 1 T 1:20-3:15, 444 Science Hall

Credits: 3 **Breadth:** P **Level:** A **Cross-listed:**

Prereq.: Geog 377 or equiv & Geog 325 or equiv

Description: This course focuses on environmental modeling using geographic information systems. The course provides an overview of physical environmental processes and focuses on discussion of the GIS-techniques used to parameterize these processes. The discussion will be illustrated by widely used GIS-based environmental models.

602 Internship

Credits: 1-2 **Level:** A

Prereq.: Undergraduate majors or graduate students in Geography and instructor consent

Description: Students may earn credit for internships (service experience with government agencies, nonprofit organizations) that enrich the student's academic education. On credit per 45 hours of internship service (generally 1 credit per semester or up to 2 during the summer). Not more than 2 internship credits to be counted toward the 30-40 credits in Geography.

675 Topic 1: Advanced Political Geography: Power, Place, Identity

Schedule: Lec 1 R 3:30-5:25, 444 Science Hall Kaiser

Credits: 3 **Breadth:** S **Level:** A

Prereq.: Must have taken Geog 318, or cons inst

Description: The purpose of this course is to explore the main concepts and research themes in political geography today. As one of the primary perspectives within the field of human geography, political geography represents a broad engagement with the interactive relationships between power and place, and the construction, contestation and reconfiguration of political geographic spaces that result. Processes of identification and differentiation are integral to this dynamic interaction between power and place, in some cases resulting in the creation of inclusive multicultural socio-spatial places and practices, while in others leading to more exclusionary settings. During the semester, we will investigate the various intersections and interactions among power, place and identity; review the reconceptualizations of borders and scales in political geography; examine the specific case of nationalism and the place and identity discourses and practices that result from it; explore the power contained in sites of memory; and consider the geographies of resistance through which subaltern political actors seek to empower themselves and their communities. Finally, we will assess the post-national political geographies associated with diasporas and globalization, and discuss the new spaces of citizenship identification that are said to be resulting from these processes.

675 Topic 2: Horizons in Human Geography Olds

Schedule: Lec 2 T 8:00-11:30 am, Pyle Center

Credits: 3 **Breadth:** S **Level:** A

Prereq.:

Description: World University Network course, mixed seminar; undergrads register for Geog 675 Sec 002, grads for 901 Sec 001.

676 Topic: Modeling Land-Cover Change

Burnicki

Schedule: Lec 1 TR 9:30-10:45, 360 Science Hall

Credits: 3 **Breadth:** P **Level:** A **Cross-listed:**

Prereq.: Geog 377 and junior, senior, or grad standing

Description: This course investigates the role models of land-cover change play in improving our understanding of land dynamics and their consequences. Initial classes will examine the use of remote-sensing technology in mapping land-cover change, the socio-economic and biophysical factors that influence land-cover change and issues related to modeling LUCC. The majority of this course is dedicated to a comprehensive review of the types of models used to analyze land-cover change, including empirical methods, Markov methods, cellular automata and integrative models. Model validation and the impact of uncertainty on model estimates is also addressed. The course concludes with a discussion of the strengths and weaknesses of modeling efforts. The course is comprised of both lectures and lab sessions, designed to provide students with first-hand knowledge of the modeling techniques available to map and predict land-cover change. Class lectures and lab sessions integrate GIS, remote-sensing, spatial analysis and modeling techniques.

GRADUATE LEVEL:

742 International Development Planning Theory

Schedule: F 3:15-5:45

Credits: 3 **Cross-listed:** Urb R Pl, Poli Sci

Prereq.: Grad st or cons inst

Description: Provides students with a historical and theoretical foundation for critical thinking about international development planning.

765 Geographical Inquiry and Analysis: An Introduction

Turner

Schedule: Lec 1 W 12:05-12:50, 378 Science Hall

Credits: 1

Prereq.: Must be entering graduate student in Geography

Description: Geographic perspectives and analyses: history of the discipline, issues and research frontiers, interests and perspectives of Madison faculty,

structure of graduate study in the department, research facilities and opportunities.

900 Seminar: Gender, Space, Environment

Harris

Schedule: Sem 1 W 4:00-6:30, 388 Science

Credits: 2-3

Prereq.: Graduate student standing

Description: See 401

901 Seminar in Human Geography 1: Horizons in Human Geography

Olds

Schedule: Sem 1 T 8:00-11:30 am, Pyle Center

Credits: 3

Prereq.: Graduate student standing

Description: See 675 Topic 2

901 Seminar in Human Geography 2: Human Geography and Mass Communication

Downey

Schedule: Sem 2 W 10:00-12:00, 5013 Vilas

Credits: 3

Prereq.: Graduate student standing

Description: Meets with Journalism 880

930 Seminar in People-Environment Geography: People, Wildlife and Landscapes

Naughton

Schedule: Sem 1 M 3:30-6:00 Science Hall

Credits: 2-3

Prereq.: Graduate student standing

Description: See 434

932 Seminar in American Environmental History

Cronon

Schedule: Sem 1 W 9:00-12:00, 202 Bradley Memorial

Credits: 3 **Cross-listed:** History

Prereq.: Graduate student standing

Description: The seminar is a one-semester introduction to some of the most interesting recent literature of American environmental history, read principally for the theories and methodologies it can offer scholars and scientists as well as its implications for contemporary environmental politics and management. The seminar assumes no previous coursework in the field, and students with a wide variety of backgrounds and disciplines are encouraged to participate. We will

read a number of the most important works that have been produced in the field during the past quarter century, with an eye to exploring the different themes and methods that have shaped this body of scholarship. We will concentrate on what might be called the "second generation" of writing in environmental history, trying to assess how the field has evolved and where it might be headed in the future. Our goal will be to evaluate these texts with a critical but sympathetic eye, trying to discover ways in which their approaches might be helpful to our own work. At the same time, we'll use this literature to think about the more general process of conceiving, conducting, and writing research about the past (whether within the disciplines of history, geography, ecology, environmental studies, natural resource management, or what have you) trying to gain as much practical wisdom as we can about how to do theses and dissertations. We will also talk about strategies for teaching this material in the undergraduate classroom. Additional Information at <http://www.williamcronon.net/courses/932.htm>.

970 Seminar in Geographic Information Science

Schedule: Sem 1 M 4:30-6:00

Credits: 2

Prereq.: Graduate student standing

982 Seminar In Latin America

Schedule: Sem 1 F 2:30-4:30

Credits: 1-3 **Cross-listed:** AAE, Anthro, Econ, History, Journ, Poli Sci, Portug, Rur Soc, Spanish

Prereq.: Graduate student standing

990 Research and Thesis

Credits: 1-9

Prereq.: Consent of instructor

999 Independent Work

Credits: 1-3

Prereq.: Consent of instructor

DATES - FALL 2008-09

August 25-29 (M-F) Advising & Orientation Week

September 2 (T) Instruction begins

November 27-30 Thanksgiving Recess

December 12 (F) Last class day

December 14 (N) Exams begin

December 20 (S) Exams end

December 21 (N) Commencement

key: Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, Sunday

DEPARTMENT OFFICES, PHONE, HOURS OPEN

Geography Office

160 Science Hall 262-2138

M-F 7:45-11:30, 12:30-4:30

Geography Computer Lab

M380 Science Hall 262-8111

Cartography Lab

M390 Science Hall 262-1363

Geomorphology Lab

217 Science Hall 265-8723

Geography Library

280 Science Hall 262-1706

M-R 9am-9pm, F 9am-4:30,

Sat. Closed, Sun. 3-9pm

Arthur H. Robinson Map Library

310 Science Hall 262-1471

Visit our web site at: <http://www.geography.wisc.edu>

Geography Club: Watch for announcements of activities posted around Science Hall. Regular meetings are held in the Geography Student Commons (155 Science Hall.) Contact the club at uwgeogclub@yahoo.com