

# Geography (GEOG)

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## Courses

### **GEOG 401. Topics in Regional Geography. 3 or 4 hours.**

Geographic analysis of cultural and environmental systems of a political, economic, or climatic region of the world as defined by the instructor. Course Information: 3 undergraduate hours. 4 graduate hours. May be repeated to a maximum of 6 hours. Prerequisite(s): One upper-division course in each of the areas of skills, systematic and regional/urban geography.

### **GEOG 418. Ethnographic and Qualitative Research Methods. 3 or 4 hours.**

Practical introduction to the techniques of social scientists for research in natural social settings: participant observation/non-participant observation, interviewing, use of documentary sources, etc. Course Information: Same as ANTH 418. 3 undergraduate hours. 4 graduate hours. Prerequisite(s): Junior standing or above.

### **GEOG 425. Field Techniques in Archaeology. 4 hours.**

Exposure to field methods in archaeology through participation in an actual research project. Students are instructed in field excavation techniques. Usually offered in summer session. Course Information: Same as ANTH 425. May be repeated to a maximum of 8 hours. Prerequisite(s): ANTH 102 or consent of the instructor. Recommended: Concurrent registration in ANTH 426 or GEOG 426. Class Schedule Information: To be properly registered, students must enroll in one Lecture and one Practice.

### **GEOG 426. Laboratory Techniques in Archaeology. 4 hours.**

Exposes students to laboratory methods in archaeology through the analysis of excavated materials. Students are instructed in laboratory techniques. Course Information: Same as ANTH 426. May be repeated to a maximum of 8 hours. Prerequisite(s): ANTH 102 or consent of the instructor. Recommended: Concurrent registration in ANTH 425 or GEOG 425. Class Schedule Information: To be properly registered, students must enroll in one Laboratory and one Lecture.

### **GEOG 429. Archaeological Methods. 3 or 4 hours.**

This course will familiarize students with various methodologies used by archaeologists and geo-archaeologists. Course will concentrate on a different method each time it is taught. Course Information: Same as ANTH 429. 3 undergraduate hours. 4 graduate hours. May be repeated up to 2 time(s). Students may register for more than one section per term.

### **GEOG 431. Advanced Landform Geography. 3 or 4 hours.**

Genesis of surficial landforms and processes that sculpt them. Course Information: 3 undergraduate hours. 4 graduate hours. Prerequisite(s): GEOG 131 or EAES 101 or consent of the instructor.

### **GEOG 441. Topics in Resource Management and Policy. 3 or 4 hours.**

Selected topics dealing with environmental problems at local, regional or global levels. Topics vary. Course Information: 3 undergraduate hours. 4 graduate hours. May be repeated to a maximum of 6 hours. Prerequisite(s): GEOG 341 or GEOG 361 or consent of the instructor.

### **GEOG 442. Environmental Hazards and Risks. 3 or 4 hours.**

Environmental risks of natural and technological hazards; causes and consequences to people; social theories of risks; coping mechanisms used to reduce risk. Course Information: 3 undergraduate hours. 4 graduate hours. Prerequisite(s): GEOG 251 or GEOG 441 or consent of the instructor.

### **GEOG 444. Management of Solid and Hazardous Wastes. 3 hours.**

Management of solid and hazardous waste, including radioactive waste: landfills, incineration, recycling, composting, source reduction, groundwater and air pollution impacts, control, regulations, siting, health impacts. Course Information: Same as CME 423, and EOHS 472.

### **GEOG 453. Seminar in Cultural Ecology. 3 or 4 hours.**

Cultural ecology and cultural evolution, emphasizing peasant farming and other subsistence systems. Soil management under shifting and sedentary agriculture. Course Information: Same as ANTH 453. 3 undergraduate hours. 4 graduate hours. Prerequisite(s): ANTH 101 or GEOG 151 or consent of the instructor.

### **GEOG 455. Quantitative Methods. 3 or 4 hours.**

Introductory statistics course in statistical methods for anthropological problem-solving. Primary emphasis is on univariate and bivariate statistics, such as means standard deviations, correlation, chi square, t-tests, and simple regressions. Course Information: Same as ANTH 455. 3 undergraduate hours. 4 graduate hours. Extensive computer use required. Prerequisite(s): Junior standing or above; and consent of the instructor.

### **GEOG 461. Location and Land Use. 3 or 4 hours.**

Environmental, demographic, and institutional influences on land availability/use at global/local scales; geographies of production/use intensity; market/governmental controls over land/users. Course Information: 3 undergraduate hours. 4 graduate hours. Prerequisite(s): GEOG 361 or consent of the instructor.

### **GEOG 464. Geographic Modeling of Transportation Systems. 3 or 4 hours.**

Discussions of the principles of spatial interaction, emphasizing passenger movements, commodity flows, the practicality of network analysis, and the impact of transportation facilities on land use and regional development. Course Information: 3 undergraduate hours. 4 graduate hours. Prerequisite(s): GEOG 100 and GEOG 161.

### **GEOG 469. Geographic Information Systems for Planning and Policy. 3 or 4 hours.**

Applications of Geographic Information Systems to understanding spatial relationships for their importance in planning use and policy making across a variety of disciplines/policy sectors. Course Information: Same as UPP 461. 3 undergraduate hours. 4 graduate hours. Prerequisite(s): Junior standing or above; and consent of the instructor. Priority registration will be given to students admitted to a campus certificate program in Geospatial Analysis and Visualization.

### **GEOG 470. Educational Practice with Seminar I. 6 hours.**

The first half of a two-segment sequence of practice teaching, including seminar, to meet certification requirements for teaching in grades six through twelve. Course Information: Graduate credit only with approval of the department. Prerequisite(s): Good academic standing in a teacher education program, completion of 100 clock hours of pre-student-teaching field experiences, and approval of the department. Class Schedule Information: To be properly registered, students must enroll in one Lecture-Discussion and one Practice.

**GEOG 471. Educational Practice with Seminar II. 6 hours.**

The second half of a two-segment sequence of practice teaching, including seminar, to meet certification requirements for teaching in grades six through twelve. Course Information: Graduate credit only with approval of the department. Prerequisite(s): Good academic standing in a teacher education program, completion of 100 clock hours of pre-student-teaching field experiences, credit or concurrent registration in GEOG 470, and approval of the department. Class Schedule Information: To be properly registered, students must enroll in one Conference and one Practice.

**GEOG 475. Thematic Cartography. 4 hours.**

Discussion and projects involving representation of real-world areal patterns; preservation of geodetic, locational and informational relationships; information generalization and reconstruction; computer software, and programs for computer assisted cartography. Course Information: Prerequisite(s): GEOG 276 or GEOG 278 or consent of the instructor. Class Schedule Information: To be properly registered, students must enroll in one Laboratory and one Lecture-Discussion.

**GEOG 477. Remote Sensing of the Environment. 4 hours.**

Principles and practices of processing and interpretation of remotely sensed imagery including aerial photographs, radar and multispectral satellite images. Hands-on use of image-processing software. Course Information: Same as ANTH 477. Extensive computer use required. Class Schedule Information: To be properly registered, students must enroll in one Laboratory and one Lecture-Discussion.

**GEOG 481. Geographic Information Systems I. 4 hours.**

Components and performance properties of geographic information systems. Geographic hierarchies and data structures. Problems and solutions in handling large geographic files. Geocoding. Course Information: Same as ANTH 481. Prerequisite(s): GEOG 100 and one from GEOG 278, GEOG 386, IDS 100; or consent of the instructor. Class Schedule Information: To be properly registered, students must enroll in one Laboratory and one Lecture-Discussion.

**GEOG 482. Geographic Information Systems II. 4 hours.**

Application of raster (or grid) based geographic information systems to the spatial analysis of landscapes. Course Information: Same as ANTH 482. Class Schedule Information: To be properly registered, students must enroll in one Laboratory and one Lecture.

**GEOG 483. Geographic Information Systems III. 4 hours.**

Problems encountered in the analysis and portrayal of geographic data. Topics include taxonomy, regionalization, trend surface analysis, time series, markov probabilities, and computer cartographic procedures for displaying output from analytic procedures. Course Information: Same as ANTH 483. Prerequisite(s): GEOG 482 or ANTH 482 or consent of the instructor.

**GEOG 484. Qualitative Methods in Geographic Research. 3 or 4 hours.**

Use of qualitative methods in geographic research. Research design choices, data collection and analysis, writing. Applications in environmental and urban geography. Course Information: 3 undergraduate hours. 4 graduate hours. Prerequisite(s): GEOG 481 or geography major or minor or consent of instructor.

**GEOG 486. Analysis of Geographic Patterns. 4 hours.**

Analytical methods for evaluating arrangements of points, lines, and subareas across regions. Development of non-central measures of spatial association as an alternative to correlation analysis. Course Information: Prerequisite(s): GEOG 482 or consent of the instructor. Class Schedule Information: To be properly registered, students must enroll in one Laboratory and one Lecture-Discussion.

**GEOG 491. History and Philosophy of Geography. 3 or 4 hours.**

The philosophy of geography, its theory and research techniques. Analysis of bibliographic sources; criticism of papers on assigned topics. Course Information: 3 undergraduate hours. 4 graduate hours. Prerequisite(s): Declared major or minor in geography; or consent of the instructor.

**GEOG 496. Internship. 1-4 hours.**

Professional field experience with an agency or organization in the private or public sector on projects related to the student's area of specialization. Course Information: Same as ANTH 496. May be repeated to a maximum of 8 hours. Only 4 hours of credit may be applied toward the Minor in Geography. Prerequisite(s): Declared major in anthropology, minor in geography or full graduate standing in anthropology or geography and consent of the faculty advisor, head of the department, or the director of internship programs. Class Schedule Information: This course counts toward the limited number of independent study hours accepted toward the degree and the major.

**GEOG 505. Seminar on the Geography of Colonialism and Neocolonialism. 3 hours.**

Colonialism: historical, political and development geographies. Colonialism in the evolution of Europe and the Third World. Anti-colonial liberation movements. Theories of neocolonialism, underdevelopment, dependency. Course Information: May be repeated to a maximum of 6 hours. Prerequisite(s): GEOG 353 or GEOG 401 or consent of the instructor.

**GEOG 511. Topics in Urban Geography. 3 hours.**

Critical analysis of selected theories, methods and problems of urban and settlement geography. Course Information: May be repeated to a maximum of 9 hours. Prerequisite(s): One 400-level course in urban, economic, or transportation geography.

**GEOG 530. Seminar in Physical Geography. 3 hours.**

General topic to be defined by instructor; specific approved topic to be defined, researched and discussed by student. Course Information: May be repeated to a maximum of 6 hours. Prerequisite(s): GEOG 421 or GEOG 431 or consent of the instructor.

**GEOG 541. Seminar on Resource Management and Policy. 3 hours.**

Social policy issues in the resolution of resource management conflicts. Topics will vary. Course Information: May be repeated to a maximum of 6 hours. Prerequisite(s): GEOG 441 or GEOG 461 or consent of the instructor.

**GEOG 551. Research Seminar on the Ecology of Mapping Behavior. 4 hours.**

Mapping behavior examined cross-culturally, historically, and developmentally. Ecological functions of mapping in macro-spatial behavior. Course Information: Prerequisite(s): Consent of the instructor.

**GEOG 575. Seminar in Cartography. 3 hours.**

Review of recent developments in computer mapping and identification of mapping needs. Research on conceptual and program solutions to computer mapping problems. Course Information: May be repeated to a maximum of 6 hours. Prerequisite(s): GEOG 475 and GEOG 481; or consent of the instructor.

**GEOG 592. Research Proposal Design. 1 hour.**

Research techniques, including problem definition, literature search, and methodological design. Course Information: Prerequisite(s): GEOG 595.

**GEOG 595. Departmental Seminar. 3 hours.**

Review of contemporary geographic theory in academic research and professional practice. Course Information: Satisfactory/Unsatisfactory grading only. Prerequisite(s): Graduate standing in geography.

**GEOG 596. Independent Study. 1-4 hours.**

Independent research on approved topic not related to thesis preparation. Course Information: May be repeated to a maximum of 6 hours. Students may register in more than one section per term. Prerequisite(s): Consent of faculty advisor and the instructor.

**GEOG 598. Master's Thesis Research. 0-16 hours.**

Independent research on a topic approved for a graduate thesis. Course Information: Satisfactory/Unsatisfactory grading only. May be repeated to a maximum of 16 hours. Prerequisite(s): Consent of thesis research advisor.