

**Descriptions – General Business–Business Law Programs
of
Courses**

805. Business Ethics
(BOA 805.) Spring. 4(4-0) Graduate student in the College of Business or approval of instructor. Interdepartmental with and administered by the Department of Philosophy. Ethical dimensions of such topics as corporate responsibility, preferential hiring, profit and taxation, deception and bribery, self-regulation versus government regulation, 'whistleblowing', and advertising. Readings from philosophical and business sources.

848. The Legal Environment of Business
(BOA 848.) Fall, Summer. 4(4-0)
Critical examination of the environment in which business operates. Analysis of the component elements of the legal environment of business and the structural framework in which law functions.

878A. Seminar in Business Law
(BOA 878A.) Winter. 4(4-0) GBL 848 or approval of department.
Contracts, sales, secured transactions and consumer legislation viewed from the judicial, legislative and executive vantage points.

878B. Seminar in Business Law
(BOA 878B.) Spring. 4(4-0) GBL 848 or approval of department.
Agency, partnerships and corporations, viewed from legislative, judicial and executive vantage points, as they affect entrepreneurial decision making.

890. Special Problems
(BOA 890.) Fall, Winter, Spring, Summer. Variable credit. Approval of department.

806. Population and Quantitative Genetics
Spring. 3(3-0) ZOL 441 or approval of instructor.
Genetics of quantitative characteristics in populations with special reference to polygenic variation and its interactions with environment, gene action and its measurement, mating systems, and selection.

880. Special Problems
Fall, Winter, Spring, Summer. 1 to 4 credits. May reenroll for a maximum of 12 credits. Approval of instructor.
Students with special interests and abilities may study published literature in a selected genetics topic or they may carry on research in the laboratory on a selected subject in collaboration with genetics faculty.

890. Selected Topics in Genetics
Fall, Winter, Spring, Summer. 2 to 5 credits. May reenroll for a maximum of 9 credits. ZOL 441 and approval of instructor.
Topics will be selected from molecular genetics, physiological genetics, population genetics, quantitative genetics, evolution, radiology and mutagenesis, microbial genetics, somatic cell genetics, behavioral genetics, and human genetics.

999. Doctoral Dissertation Research
Fall, Winter, Spring, Summer. 3 to 12 credits. Majors.
Research for the doctoral dissertation in genetics.

GEOGRAPHY GEO

College of Social Science

Courses are classified as follows:
Cultural—170, 201, 801, 901.
Economic—213, 409, 435, 809, 835, 906.
Field Techniques—415, 850.
Geographic Education—458.
Historical—310, 810, 910.
Independent Research—400H, 411, 818, 899, 918, 999.
Medical—470, 870, 970.
Physical—206, 206L, 429, 430, 431, 432, 451, 834, 902.
Political—170, 908.
Population—320, 836, 934.
Quantitative Methods—427, 428, 811.
Regional—204, 300, 315, 316, 321, 322, 340, 342, 360, 365, 812, 912.
Recreational and Environmental—100, 307, 309, 828.
Theory and Philosophy—150, 425, 825, 826.
Urban—318, 401, 402, 403, 466, 805.
Visual Media and Techniques—122, 223, 224, 424, 426, 446.

100. Man, Location and Environment
Fall, Winter, Spring. 3(3-0)
Concepts, theory, and methods of modern Geography.

122. The World of Maps
Fall, Winter, Spring. 3(3-0)
Discussion of types, practical applications, and sources of maps.

150. Geography of Selected Current Problems
Fall, Winter, Spring. 2(2-0)
The geographic perspective is used to examine U.S. and world problems of major concern such as international conflicts, environment quality, spatial change, and economic development.

170. Future Worlds (S)
Fall, Spring, Summer. 3(3-0)
Geographical approach to environmental, biological, economic, social and political problems facing mankind between now and year 2000.

IDC. Introduction to Resource Ecology
For course description, see Interdisciplinary Courses.

201. Geography of Culture
Fall, Winter, Spring. 3(3-0)
A systematic discussion of cultural geography, stressing cultural processes and relationships.

204. World Regional Geography (S)
Fall, Winter, Spring, Summer. 4(4-0)
Man's relationship with natural and cultural environments.

206. Physical Geography
Fall, Winter, Spring, Summer. 4(4-0)
Analysis of weather, climate, landforms, soils, water and biotic factors of man's environment, including their spatial, genetic, and functional interrelationships.

206L. Physical Geography Laboratory
Fall, Winter, Spring. 1(0-2) GEO 206 or concurrently.
Laboratory study of geographic aspects of map interpretation, aerial photographs, weather, climate, soils, landforms, and vegetation.

213. World Economic Geography
Fall, Winter, Spring, Summer. 4(4-0)
Emphasis on distribution of natural resources, industries and service activities, stressing factors of location and economic concepts of locational change.

223. Introduction to Cartography
Fall, Winter, Spring. 4(2-4)
Principles and techniques of constructing maps and other graphic devices. Types of map reproduction.

224. Remote Sensing: Airphoto Interpretation
Fall, Winter, Spring. 4(2-4) Sophomores.
Use of aerial photographs in the identification and interpretation of physical and cultural features of the terrestrial environment. Includes principles of photogrammetry, and stresses application and practice.

IDC. Introduction to Contemporary China
For course description, see Interdisciplinary Courses.

IDC. Contemporary Japan
For course description, see Interdisciplinary Courses.

300. North America
Fall, Winter, Spring. 3(3-0)
Human and physical geography of North America, north of the Mexican border.

GENETICS GEN

College of Natural Science

800. Genetics Seminar
Fall, Winter, Spring. 1(1-0) May reenroll for a maximum of 12 credits. Approval of director.
Student seminar to cover genetics subjects not considered in formal courses. Course is also intended to give students experience in reviewing and organizing literature in a subject, and orally presenting and defending the analysis.

804. Gene Transmission
Fall. 3(3-0) ZOL 441 or approval of instructor.
Molecular and formal genetic studies of the replication, recombination, repair and segregation of genetic information in procaryotes and eucaryotes. Experimental design and methodology will be emphasized.

805. Genetic Organization, Action and Regulation
Winter. 3(3-0) GEN 804.
Molecular and formal genetic studies of the organization, expression and regulation of gene activity in procaryotes and eucaryotes. Experimental design and methodology will be emphasized.

- 307. Geography of Environmental Quality**
Spring. 3(3-0) Sophomores or approval of department.
Identification of the physical, cultural and psychological factors which constitute human environments, and how they vary and may be modified or controlled.
- 309. Geography of Recreation**
Winter. 3(3-0)
Natural and cultural factors influencing the use of space for recreation. Emphasis on recreation land use in the United States and current problems and conflicts.
- 310. Historical Geography of the United States**
Spring. 3(3-0)
Reconstruction of geographies of the United States as they existed in the past.
- 315. South America**
Spring. 3(3-0) Sophomores or approval of department.
Regional geography of South America with special attention to contemporary geographic problems.
- 316. Middle America**
Winter. 3(3-0) Sophomores or approval of department.
Interpretation of physical and cultural environment of Mexico, Central America, and the West Indies. Special attention to contemporary geographic problems.
- 318. Cities of the World**
Fall, Winter, Spring. 3(3-0)
A cross-cultural examination of cities, their historic growth, regional functions, and internal dynamics.
- 320. Geography of Population**
Fall. 3(3-0)
Relationship of the size, composition, and distribution of population to geographic variations in the nature of places.
- 321. Africa**
Fall. 3(3-0) Sophomores or approval of department.
Emphasis on continent south of Sahara: environments, peoples, problems, and potentials.
- 322. Africa: Contemporary Problems**
Spring. 3(3-0) Sophomores or approval of department. GEO 321 recommended.
Major development problems examined from environmental, historical, economic, and social perspectives.
- 340. Western Europe**
Winter. 3(3-0) Sophomores or approval of department.
Geographic analysis of physical and human character and resources of Western Europe (Scandinavia, British Isles, Benelux, Germany, France and Switzerland). Emphasis on major problems.
- IDC. Contemporary South Asia**
For course description, see Interdisciplinary Courses.
- 342. Eastern and Southern Europe**
Spring. 3(3-0) Sophomores or approval of department.
A geographical analysis of countries of Eastern and Southern Europe with emphasis on economic, political, social and ethnic problems.
- 351. Weather and Climate**
Fall. 3(3-0)
Non-mathematical treatment of general weather processes and patterns, including surface and middle atmospheric (jet stream) features, with emphasis on the U.S.
- 360. The Soviet Union**
Fall. 3(3-0) Sophomores or approval of department.
A geographical analysis of the Soviet Union and its inhabitants with emphasis on economic, social, political and ethnic problems.
- 365. China**
Winter. 3(3-0)
The physical and human geography of China and their relationship to the development problems of the country, with emphasis on the post-1949 period.
- 400H. Honors Work**
Fall, Winter, Spring. 1 to 16 credits. Approval of department.
- 401. The Ghetto**
(UMS 401.) Fall, Spring. 4(4-0) Juniors or approval of department.
Analysis of the ghetto including its spatial organization, structure and distribution of non-white and ethnic populations in cities with emphasis on the United States.
- 402. The Geography of the City**
Spring. 4(3-0)
Spatial theories, concepts, and designs of internal urban economic, social, and political structures.
- 403. The American City and Its Region**
Winter. 3(3-0)
The regional system of cities in terms of size, spacing, and functional relationships.
- 407. Michigan**
Fall, Spring. 3(3-0) Sophomores or approval of department.
Selected aspects of the physical and cultural geography of Michigan.
- 408. Canada**
Spring. 3(3-0) Sophomores or approval of department.
An analysis of the physical, economic and cultural patterns of Canada.
- 409. Geography of Transportation**
Fall. 3(3-0)
Analysis of spatial principles of transportation, including theories of interaction, network structures, and the role of transport in space-economy.
- 411. Problems in Geography**
Fall, Winter, Spring, Summer. 1 to 6 credits. Approval of department.
Research on specialized geographic problems.
- 415. Field Techniques**
Fall. 4(1-7) May reenroll for a maximum of 8 credits. Approval of department.
Basic methods for making physical and cultural observations and measurements including map reading, photo interpretation, field sketch mapping, compass traverses, sampling, questionnaire design, interviewing, analysis and reporting. Requires work off campus.
- 424. Advanced Remote Sensing Techniques**
Spring. 4(2-4) GEO 224.
Extraction, analysis, and interpretation of information obtained from remote sensors including conventional, infrared and radar imagery. Introduction to stereo-plotting devices, stressing theories of remote sensing and applications.
- 425. Development of Geographic Thought**
Spring. 3(3-0) Approval of department.
Evolution of geographic thought from antiquity to the present emphasizing developments in 20th century America. Survey of the theory and methodology of contemporary geography.
- 426. Advanced Cartography**
Spring. 4(1-6) GEO 223.
Development of advanced skills in construction of maps, including ink drafting, lettering systems, map projections, scribing and photo reproduction.
- 427. Quantitative Methods in Geography**
Fall. 4(4-0) Approval of department.
Basic quantitative techniques used in the analysis and classification of geographic data.
- 428. Computer Mapping in Geography**
Spring. 4(4-0) CPS 120.
The preparation of computer maps and the application of the computer to the development and testing of models in geography.
- 429. Landforms of North America**
Winter, Spring. 3(3-0) May reenroll for a maximum of 6 credits. GEO 206, GLG 201 or approval of department.
Study of the surface features of eastern U.S.A. (winter term) and western U.S.A. (spring term).
- 430. Climates of the World**
Spring. 3(3-0) GEO 206 or approval of department.
Regional analysis of the world's weather and climate.
- 431. Landform Analysis**
Fall. 3(3-0) GEO 206, GLG 201 or approval of department.
A problem approach is utilized to explain classical and contemporary interpretations of the nature of selected landforms, including treatment of related tools and techniques. Option for some field study.
- 432. Biogeography**
Spring. 3(3-0) GEO 206 or approval of department.
Patterns of vegetation, with emphasis on forests of eastern North America. Option for some field study.
- 435. Land Use and Location Theory**
Spring. 3(3-0) GEO 213 or approval of department.
Location principles and theories of economic activities, including methods of regional analysis.

**Descriptions – Geography
of
Courses**

- 446. Production Cartography**
Winter. 4(2-4) GEO 223 or approval of department.

Deals with the technical aspects of map and graphics production both as a sequence of operations and as a series of problems of organizations. Theoretical and applied aspects, process photography, typography, and proofing.

- 451. Climatic Patterns and Atmospheric Circulation**
Winter. 4(3-0) GEO 206 or approval of department.

Relationship between weather, climate, and upper air flow, with emphasis on this climatology of North America.

- 458. Geography for Teachers**
Winter. 3(3-0)

Problems and practices of teaching geography in elementary and secondary schools.

- 466. Social and Spatial Approaches to Community Service**
Spring. 3(3-0) GEO 201 or S W 205 or approval of department. Interdepartmental with the School of Social Work.

Analysis of major themes in social service planning: communities and neighborhoods, public policy administration, social service networks, location of public facilities, evaluation and accountability of service systems.

- 470. Geography of Health and Disease**
Fall, Winter. 3(3-0)

Spatio-environmental concepts and the techniques applied to health problems: disease transmission cycles, community nutrition and health-care planning.

- 801. Seminar in Cultural Geography**
Fall. 3(3-0) Approval of department.

Theory, methodology, and techniques in cultural geography.

- 805. Seminar in Urban Geography**
Spring. 3(3-0) Approval of department.

Selected research topics on the geography of the city.

- 809. Seminar in Transportation Geography**
Winter. 3(3-0) Approval of department, GEO 409.

Selected research topics.

- 810. Seminar in Historical Geography**
Winter. 3(3-0) Approval of department.

Approaches in research in historical geography.

- 811. Advanced Quantitative Methods in Geographic Research**
Winter. 4(2-4) Approval of department, GEO 427.

Statistical and mathematical approaches to spatial distributions and areal data.

- 812. Regional Seminar**
Fall, Winter, Spring, Summer. Variable credit. May reenroll for a maximum of 9 credits. Approval of department.

Selected research topics in regional geography.

- 818. Readings in Geography**
Fall, Winter, Spring, Summer. Variable credit. May reenroll for a maximum of 15 credits. Approval of department.

- 825. History and Philosophy of Geography**
Fall. 3(3-0) Approval of department.

Analysis of the monographic and serial literature dealing with the theory and evolution of geographic science.

- 826. Research Design in Geography**
Winter, Spring. 3(3-0) Approval of department.

Formalized approach to research and writing in geography: Identification of geographic problems and their relative importance, structuring and stating hypotheses, data acquisitions, and tests for validity.

- 828. Seminar in Recreation Geography**
Spring. 3(3-0) GEO 309 or approval of instructor.

Selected current problems in recreation geography in the U.S. and abroad.

- 834. Seminar in Physical Geography**
Winter, Spring. 3(3-0) May reenroll for a maximum of 9 credits. Approval of department.

Analysis of classical and contemporary problems in physical geography treated as follows: climatology (winter), biogeography (spring), geomorphology (spring).

- 835. Seminar in Location Theory**
Fall. 3(3-0) Approval of department, GEO 435.

Recent developments and research in location analysis and regional science.

- 836. Population Geography Seminar**
Spring. 3(3-0) Approval of department.

Studies of particular topics and problems in population geography.

- IDC. Sub-Saharan Africa Seminar**
For course description, see Interdisciplinary Courses.

- 846. Seminar in Cartography**
Winter. 3(3-0) May reenroll for a maximum of 12 credits. Approval of department.

Selected research topics in cartographic theory and map design.

- 850. Advanced Field Techniques**
Fall, Winter, Spring, Summer. Variable credit. May reenroll for a maximum of 6 credits.

Instruction and practical training in the selection, data-gathering, on-site analysis, and presentation of geographic field problems.

- 870. Seminar in Medical Geography**
Winter. 3(3-0)

Spatio-environmental analysis of selected health problems.

- 899. Master's Thesis Research**
Fall, Winter, Spring, Summer. Variable credit. Approval of department.

- 901. Problems in Cultural Geography**
Fall, Winter, Spring. Variable credit. May reenroll for a maximum of 6 credits. Approval of department.
Special research problems.

- 902. Problems in Physical Geography**
Fall, Winter, Spring, Summer. Variable credit. May reenroll for a maximum of 6 credits.

Supervised research in specific topics of physical geography.

- 906. Problems in Economic Geography**
Fall, Winter, Spring, Summer. Variable credit. May reenroll for a maximum of 6 credits. Approval of department.
Special research problems.

- 908. Problems in Political Geography**
Fall, Winter, Spring, Summer. Variable credit. May reenroll for a maximum of 6 credits. Approval of department.
Special research problems.

- 910. Problems in Historical Geography**
Fall, Winter, Spring, Summer. Variable credit. May reenroll for a maximum of 6 credits. Approval of department.
Special research problems in historical geography.

- 912. Independent Study in Regional Geography**
Fall, Winter, Spring, Summer. Variable credit. May reenroll for a maximum of 15 credits. Approval of department.
Individual studies in regional geography.

- 918. Problems in Geography**
Fall, Winter, Spring, Summer. Variable credit. May reenroll for a maximum of 9 credits. Approval of department.
Research on specific geographical problems.

- 934. Problems in Population**
Fall, Winter, Spring, Summer. Variable credit. May reenroll for a maximum of 9 credits. Approval of department.
Special research problems.

- 970. Problems in Medical Geography**
Fall, Winter, Spring. Variable credit. May reenroll for a maximum of 6 credits. Approval of department.
Selected research topics in medical geography.

- 999. Doctoral Dissertation Research**
Fall, Winter, Spring, Summer. Variable credit. Approval of department.

GEOLOGY

GLG

College of Natural Science

- 200. The Geology of Man's Environment**
Fall, Winter, Spring, Summer. 3(3-0)
Not open to Geology majors. Credit will be given in only one of the following: GLG 200, GLG 201, GLG 306.

Man and his geologic environment: earthquakes, volcanoes, landslides, subsidence, flooding, coastal erosion, hydrology and human use, waste disposal, geologic aspects of environmental health, resources and energy, environmental law.