

5342. Latin American Romanticism and Realism. 3 hours. General overview of romantic and realist/naturalist novels in 19th-century Latin America with an emphasis on the efforts to establish political and cultural systems for the newly independent nations, the resistance to dictatorship, and the conflicts between races, genders and social classes. Readings include Echeverría, Sarmiento, Hernández, Isaacs, Cambaceres and Matto de Turner. Nationalist, postcolonial and feminist theories are introduced as major methodological approaches to analyze the novels.

5380. The Spanish-American Novel. 3 hours. The Spanish-American novel of the 19th and 20th centuries. Readings, lectures and term projects.

5480. Spanish Poetry. 3 hours. The development of Spanish poetry from its origins to the present. Readings, lectures and term projects.

5900-5910. Special Problems. 1–3 hours each. Conference courses open to advanced students capable of doing independent research under the direction of the instructor. Registration permitted only upon recommendation by the instructor and consent of the department chair.

5950. Master's Thesis. 3 or 6 hours. To be scheduled only with consent of department. 6 hours credit required. No credit assigned until thesis has been completed and filed with the graduate dean. Continuous enrollment required once work on thesis has begun. May be repeated for credit.

French

see Foreign Languages and Literatures

General Music

see Music

Geography

Archaeology, ARCH

5260. Topics in Archaeology. 3 hours. Selected topics of interest and significance in archaeology. Subjects such as historic archaeology, Texas archaeology, New World archaeology, Old World archaeology, and Meso-American archaeology are potential topics offered during different terms/semesters. Course includes the graduate equivalent of ARCH 4620 as well as graduate-only classes. Combined undergraduate/graduate courses have different course requirements for graduate students. Prerequisite(s): ARCH 2500 or consent of department. May be repeated for credit as topics vary.

Geography, GEOG

5000. Graduate Seminar. 1 hour. Case study presentations in geography, archaeology and geology, demonstrating research applications, methods and communication strategies. Research presentations by faculty, staff and students from UNT and other organizations. Also a forum for thesis proposals and defenses. Prerequisite(s): graduate standing. May be repeated for credit.

5030. British Isles Field School. 6 hours. Applying geographical field techniques in a foreign setting – the British Isles and Ireland. The field school is centered on five base sites – Plymouth, Cork, Galway, Aberystwyth and Edinburgh. At each site, students conduct one-day human and physical geography field exercises. Topics include: mapping historic changes in commercial function in Plymouth; combining field mapping, air photo and map analysis to measure coastal erosion in Cork; field survey of rural service provision in Tipperary County; physical and human dimensions of flood hazard in Aberystwyth; comparison of medieval, Georgian and modernist town planning in Edinburgh. Duration of fieldwork is approximately three weeks.

5040. Ghana Field School. 6 hours. Geography of health and economic development in Ghana. The trip includes visits to herbalists, hospitals and rural clinics, a gold mine, slave castles, and industrial sites such as cocoa processing plants and timber mills. Duration of fieldwork is approximately three weeks.

5050. Cartography and Graphics. 3 hours. (1;2) Construction and interpretation of topographic maps; thematic mapping of geographically referenced data; field mapping and survey techniques; introduction to geographic information systems and computer graphics.

5060. Applied GIS: MapInfo Professional. 3 hours (1;2) Introduction to conceptual and practical aspects of geographic information systems. Emphasis on applications, using sociodemographic and business examples. Topics include: importing and mapping census data; creating and editing map attribute databases; geocoding, buffering and aggregating data; thematic maps; applications.

5070. Geo-Spatial Technologies for Educational Environments. 3 hours. Application of geo-spatial technologies for visualization and analysis in K–12 educational settings. Emphasis on applications such as geographic information systems, global positioning systems, internet-based interactive mapping and digital globes for geo-spatial inquiry in formal and informal educational environments. (Same as EDCI 5070.)

5110. Research Design and Geographic Applications. 3 hours. Themes in geographical research, application of scientific method in spatial problem-solving and analysis.

5120. Research in Physical Geography. 3 hours. Study of physical processes manifest at or near the earth's surface. Topics will focus on atmosphere, hydrologic, geomorphic, and tectonic processes and associate phenomena. May be repeated for credit as topics vary.

5130. Research in Human Geography. 3 hours. Study of spatial and ecological relationships with cultural, demographic, political, economic and social forces shaping human settlement patterns. May be repeated for credit as topics vary.

5140. Medical Geography. 3 hours. Locational aspects of disease and health care, spatial patterns of diseases, health facilities, and health care policies and problems. Individual project required. Prerequisite(s): consent of department. (Meets with GEOG 4120.)

5150. Water Resources Seminar. 3 hours. Topics will be considered from ecology, ground water hydrology and fluvial geomorphology. Special consideration is given to energy flows within the watershed, and the economic, political, legal and ecological consequences of ground water depletion. May be repeated for credit as topics vary.

5170. Map-Air Photo Analysis and Remote Sensing.

3 hours. Evaluation and interpretation of aerial photography and satellite images. Extraction of quantitative information. Introduction to photographic and computer image processing techniques. Applications in the environmental sciences.

5190. Advanced Quantitative Techniques.

3 hours. Application of advanced statistical procedures including multivariate techniques to analysis of point and areal patterns and spatial data. Prerequisite(s): GEOG 3190 or consent of department.

5210. Seminar in Urban Geography. 3 hours. Study of current perspectives on geographic inquiry as they relate to metropolitan development and change; the economic, social and political production of space; economic restructuring; segregated spaces; spatial conflicts; corporate and urban hierarchy; urban physical environment. Prerequisite(s): either ECON 4650, GEOG 4210, PSCI 4020 or SOCI 3300.

5220. Applied Retail Geography. 3 hours. Advanced survey of principles and applications in the geographic analysis of the retail marketplace. Examines changes in the retail industry and in the markets surveyed by retail firms. Students are required to complete an independent research paper. (Meets with GEOG 4220.)

5250. Climatology. 3 hours. Description and analysis of world climates; major classifications, controls, regional distribution and change. Prerequisite(s): consent of department.

5350. Geomorphology. 3 hours. Processes of land form analysis. Glacial, desert, fluvial and other settings are reviewed along with basic processes of construction, erosion and weathering.

5400. Environmental Modeling. 3 hours. (2;2) Modeling of environmental processes and human impacts on the environment to include topics on sensitivity, calibration and evaluation, watersheds, non-point source pollution, hydrological models, GIS, water and air quality models, pollutant transport and fate, and ecotoxicology. Prerequisite(s): graduate standing or consent of department.

5410. Location-Allocation Modeling. 3 hours. Introduction to location-allocation models for service delivery, covering p-median, p-center and hierarchical models and their applications; data accuracy, aggregation and distance problems in location-allocation modeling. Prerequisite(s): consent of department.

5500. Introduction to Geographic Information Systems. 3 hours. (2;1) Theoretical and practical aspects of geographic information systems (GIS). Topics include fundamental concepts and applications of GIS in fields such as geography, business, administration, planning and environmental science. Students gain data development, analysis and mapping skills via a series of practical exercises employing current software packages. Requires completion of individual project and written reports demonstrating problem-solving strategies and analytical skills. Prerequisite(s): consent of department. (Meets with GEOG 4500.)

5520. Intermediate Geographic Information Systems.

3 hours. (1;2) Design and implementation of spatial data integration and analysis functions in GIS. Topics include spatial data models and conversions, spatial analysis, three-dimensional rendering, surface analysis, network analysis, and design and implementation of two GIS projects in an area pertinent to the student's interests. Students develop spatial analysis and modeling skills rather than following step-by-step instructions. Prerequisite(s): Grade of B or better in GEOG 5500 or consent of department. (Meets with GEOG 4520.)

5550. Advanced Geographic Information System.

3 hours. (1;2) Advanced spatial analysis and database development through the use of specialized software and the design and implementation of GIS applications. Includes GIS project planning, database development, advanced data manipulation and analysis. In addition to laboratory exercises, students design and implement a complete GIS project and gain advanced GIS application skills in an area pertinent to the student's interests. A comprehensive written report demonstrating research and a problem-solving proficiency using GIS is required. Prerequisites: GEOG 5520 with a grade of B or better or consent of department. (Meets with GEOG 4550.)

5560. Introduction to GIS Programming.

3 hours. Modern GIS embraces the concept of open systems, which means GIS software can be customized to fit specific requirements of individual implementation environments. Through this course, students learn key concepts and develop skills in object-oriented programming, GIS customization, and application development. In addition to laboratory exercises, students design and implement a GIS programming project and gain hands-on skills in accessing databases, maps, data layers, features, and geometric objects in GIS. Prerequisite(s): GEOG 5500 or consent of department. (Meets with GEOG 4560.)

5570. Special Topics in GIS. 3 hours. Advanced examination of selected topics and techniques in Geographic Information Systems. Course content reflects current trends in GIS research and the job market. Examples include multiuser geospatial data management, web-based GIS implementation and customization, GIS programming, advanced topics in spatial analysis and spatial statistics, applications for specific career fields, and other topics. Students must complete an independent research paper. Prerequisite(s): consent of department. May be repeated for credit as topics vary. (Meets with GEOG 4570.)

5600. Seminar in Environmental Policy. 3 hours. Analysis and evaluation of environmental policy, including spatial, historical, economic, ecological and institutional dimensions of contemporary resource management issues.

5630. Soils Geomorphology. 4 hours. (3;3) Methods and applications of soils and landform analysis. Soils classification, formation processes and relationships to landforms and vegetation are stressed. Methods of soils description, mapping and physical-chemical analysis are taught, and applications to study of landscape changes and land-use planning are emphasized. Prerequisite(s): consent of department.

5650. Environmental Geology. 3 hours. Geologic aspects of land-use planning; earthquakes, landslides, coastal processes, streams and flooding, soils, groundwater, and waste disposal; planning for the future. Requires investigating and reporting on a case study in environmental geology.

5700. Global Dynamics. 3 hours. (2;2) Biosphere-geosphere models on a global scale. Topics include past global changes and climate variability, assessing impacts of global change, dynamic biogeography, interdisciplinary approaches, economics and policy issues, and applications of GCM, GIS and remote sensing. Prerequisite(s): graduate standing or consent of department.

5850. Introduction to Groundwater Hydrology. 3 hours. Topics include principles of groundwater flow; aquifer properties and characteristics; geology of groundwater occurrence; groundwater development and methods of assessing and remediating ground water contamination. Students independently acquire, evaluate and interpret hydrogeological data and report the results in a research paper.

5900. Special Problems. 1–3 hours. Research by graduate students in fields of special interest. Prerequisite(s): consent of department.

5920. Research Problems in Lieu of Thesis. 3 hours. Research-based independent study. Problem must be approved by major professor. Requires submission of research report. Non-thesis option only. Prerequisite(s): must have completed or be concurrently enrolled in GEOG 5110, plus 12 additional hours completed toward the Master of Science degree in applied geography, or consent of department.

5950. Master's Thesis. 3 or 6 hours. To be scheduled only with consent of department. 6 hours credit required. No credit assigned until thesis has been completed and filed with the graduate dean. Continuous enrollment required once work on thesis has begun. May be repeated for credit.

5960. Geography Institute. 3 hours. For students accepted by the university as participants in special institute courses. May be repeated for credit as topics vary.

Geology – see *Undergraduate Catalog*

Geology

see *Undergraduate Catalog*

German

see Foreign Languages and Literatures

Health Promotion

see Kinesiology, Health Promotion and Recreation

Hebrew

see *Undergraduate Catalog*

Higher Education

see Counseling and Higher Education

History

History, HIST

5010. Studies in Ancient History. 3 hours. Extensive readings and study in the social, religious, political and military history of ancient Egypt, Israel, Greece or Rome. May be repeated as topics vary.

5020. Seminar in Ancient History. 3 hours. Research seminar in selected themes in ancient history. Prerequisite(s): HIST 5010 or consent of department. May be repeated for credit as topics vary.

5040. Studies in Modern European History. 3 hours. Extensive readings and study in one of the topical areas of modern European history. May be repeated for credit as topics vary.

5060. Seminar in Recent and Contemporary European History. 3 hours. Studies in European history since World War I.

5080. Seminar in Modern European History. 3 hours. Research seminar in modern European history. May be repeated for credit as topics vary.

5100. Seminar in United States History. 3 hours. Research seminar in United States history. May be repeated for credit as topics vary.

5110. Studies in United States History. 3 hours. Extensive readings and study in United States history. May be repeated for credit as topics vary.

5130. Studies in World History: Latin American or Asian. 3 hours. Extensive readings and study in either Latin American or Asian history. May be repeated for credit as topics vary.

5150. Seminar in World History: Latin American or Asian. 3 hours. Research seminar in either Latin American or Asian history. May be repeated for credit as topics vary.

5190. Studies in Near East/African History. 3 hours. Extensive readings and study in one of the topical areas of Near East/African history. May be repeated for credit as topics vary.

5220. Studies in United States Military/Diplomatic History. 3 hours. Extensive readings and study in either United States military or diplomatic history. May be repeated for credit as topics vary.

5230. Seminar in United States Military/Diplomatic History. 3 hours. Research seminar in either United States military or diplomatic history. May be repeated for credit as topics vary.

5240. Studies in European Military/Diplomatic History. 3 hours. Extensive readings and study in either European military or diplomatic history. May be repeated for credit as topics vary.

5250. Seminar in European Military/Diplomatic History. 3 hours. Research seminar in either European military or diplomatic history. May be repeated for credit as topics vary.

5260. Seminar in Near East/African History. 3 hours. Research seminar in Near East/African history. May be repeated for credit as topics vary.

5420. Research Seminar in Local History. 3 hours. Research and writing of local history.