

- FREN 451. Special Topics in French 1-3 cr.
Selected topics relating to the cultures or literatures of the countries where French is spoken will be announced in the Schedule of Classes. Prerequisite: consent of instructor. May be repeated for a maximum of 12 credits.
- FREN 453. Independent Studies in French 1-3 cr.
Individualized, self-paced, projects for advanced students. Prerequisite: consent of instructor. May be repeated for a maximum of 6 credits.
- FREN 462. Advanced Contemporary French Culture 3 cr.
Advanced study of institutions, lifestyles and popular attitudes in modern France. Emphasis on everyday life rather than prestigious monuments in civilizations. Prerequisite: FREN 212 or consent of instructor.
- FREN 471. The French Novel 3 cr.
Development of the novel and analysis of selected texts with emphasis on the nineteenth and twentieth centuries. Prerequisites: FREN 302 and FREN 382.
- FREN 472. The French Short Story 3 cr.
Study and discussion of French short stories through the ages. Prerequisites: FREN 212.
- FREN 478. Studies in Francophone Cultures Around the World 3 cr.
Advanced studies of representative Francophone cultures through their history, literature, music, and films. Prerequisite: FREN 305.
- FREN 480. Contrastive Stylistics of the French and English Languages 3 cr.
Close analysis of convergences and divergences of the two languages in vocabulary, syntax and style. Initiation to literary translation. Prerequisite: FREN 212 or consent of instructor.

FRMG- FAMILY RESOURCE MANAGEMENT

- FRMG 330. Personal and Family Finance 3 cr.
Principles, processes and procedures involved in effective utilization and management of financial resources to meet the needs of individuals and/or families. Open to nonmajors.
- FRMG 331. Management of Family Life and Resources 3 cr.
Concepts, principles, and processes of management applied to family living and the optimal utilization of family resources. Open to nonmajors.
- FRMG 333. Consumer Practices and Problems 3 cr.
Consumer issues related to social, political, and economic components of the larger social system. Focuses on consumer rights and responsibilities within the marketplace.
- FRMG 335. Housing and Interior Design 3 cr.
Investigation of types of housing and factors impacting housing decisions for families. Selection, planning, and arrangement of interior components of homes to meet the needs of the family. Prerequisite: ART 101G or ART 110G.
- FRMG 450. Special Topics 1-4 cr.
Special subjects and credits to be announced in the Schedule of Classes. May be taken for a maximum of 4 credits per semester and a total of 9 credits toward a degree.
- FRMG 492. Special Problems 1-4 cr.
Individual research study in a selected subject area of family and consumer sciences. May be taken for a maximum of 6 credits. Prerequisite: consent of instructor.

G EN- GEOLOGICAL ENGINEERING

- G EN 151. Introduction to Geological Engineering 3 cr.
Introduction to basic concepts of geology, earth materials, and earth processes as they relate to civil engineering practice. Corequisite: MATH 191. Same as C E 151.
- G EN 270. Engineering Geology 3 cr.
Application of geology to the evaluation and solution of engineering problems. Prerequisite: GEOL 111G.
- G EN 357. Soil Mechanics 3 cr. (2+3P)
Engineering properties of soil, exploration, testing, strength, and settlement. Prerequisite: C E 301 and GEOL 111G. Same as C E 357.
- G EN 451. Subsurface Methods 3 cr. (2+3P)
Design and implementation of shallow geophysical surveys for evaluation of engineering geology problems. Prerequisites: GEOL 111G and GEOL 470.
- G EN 452. Geohydrology 3 cr.
Origin, occurrence, and movement of fluids in porous media and assessment of aquifer characteristics. Development and conservation of ground water resources, design of well fields. Prerequisites: GEOL 111G and C E 231. Same as E S 452, and GEOL 452.

- G EN 453. Advanced Engineering Geology 3 cr.
Engineering analysis and design as they relate to the geologic site materials and conditions. Prerequisites: G EN 452 and G EN 357.
- G EN 456. Project Design 3 cr.
Application of design principles to the solution of engineering geology and geological engineering problems. Prerequisite: G EN 459 or consent of instructor.
- G EN 457. Foundation Design 3 cr. (2+3P)
Application of principles of classical soil mechanics to the design and analysis of foundation systems and retaining structures. Prerequisite: G EN 357. Same as C E 457.
- G EN 459. Geomechanics and Rock Engineering 3 cr. (2+3P)
Application of rock mechanics principles to the design and construction of structures in and on rock, including design of rock support systems, rock slopes and blasting/excavation techniques. Prerequisite: G EN 453.
- G EN 460. Site Investigation 2 cr.
Investigation and characterization of surficial and subsurface geologic materials and ground water. Includes exploration program planning, drilling and sampling, rock and soil classification and logging, ground-water monitoring, preparation of geological engineering reports. G EN majors may enroll in junior year. Extra work required for graduate credit. Prerequisite: G EN 357, G EN 452, and GEOL 470.
- G EN 470. Solid Waste and Design of Municipal and Hazardous-Waste Landfills 3 cr.
Solid waste and application of geological engineering principles and methods to the site selection and design of municipal and hazardous waste landfills. Prerequisites: G EN 357 and G EN 452, or consent of instructor.
- G EN 485. Earthen Dam Design 3 cr.
Engineering design applied to site selection, foundation inspection and treatment, hydrology and hydraulics, stability, and seepage analysis. Economic and environmental factors. Prerequisites: C E 231 and G EN 357. Same as C E 485.
- G EN 497. Senior Seminar 1 cr.
Same as C E 497.
- G EN 498. Special Topics 1-3 cr.
Class, laboratory or field study of selected topics in geological engineering. Prerequisite: consent of instructor. May be repeated for a maximum of 9 credits.

GENE- GENETICS

- GENE 110. Experimental Systems in Genetics 1 cr.
Survey of molecular, biochemical, organismal, and computer science based approaches to investigate how genes determine important traits. Historical development and topics of current interest will be discussed.
- GENE 305 L. Genetic Techniques 1 cr. (3P)
Experimental procedures used in genetic research including: sexual transmission genetics, eukaryotic DNA isolation, DNA marker development and genotyping, polymerase chain reaction, and cytogenetics. Prerequisite: With concurrency either GENE 315, or AGRO/ANSC/BIO/HORT 305.
- GENE 315. Molecular Genetics 3 cr.
Covers fundamental principles of DNA structure and replication, transcription, translation, gene regulation, recombinant DNA technology, and a survey of genomics and bioinformatics. Prerequisites: CHEM 111, BIOL 111, and BIOL 211.
- GENE 320. Hereditary and Population Genetics 3 cr.
Covers fundamental principles of reproduction, variation, and heredity in plants and animals including: Mendelian inheritance, mitosis, meiosis, genetic linkage, random mating, genetic drift, natural selection, inbreeding, migration, mutation, interrelationships between individuals, populations and communities and the environment. Prerequisites: CHEM 111, BIOL 111, BIOL 211.
- GENE 440. Genetics Seminar 1 cr.
Organization, preparation, and presentation of genetic studies in model microorganism, plant, or animal systems that have been used to solve problems in molecular, cellular, and developmental biology.
- GENE 452. Applied Bioinformatics 3 cr.
Survey and application of publicly available bioinformatic tools that treat genomic DNA, cDNA, and protein sequences, RNA abundance, as well as tools that allow inference based on phylogenetic relationships. Prerequisites: AGRO/ANSC/BIO/HORT 305 or GENE 315 and GENE 320, and BCHE 341, or BCHE 395.

- GENE 486. Genes and Genomes** 3 cr.
Extensive coverage of nuclear and organelle genome structure in plants and animals, genome restructuring including duplication, aneuploidy, chromosome translocations and inversions, comparative genomics, and molecular systematics. Prerequisites: AGRO/ANSC/BIOL/HORT 305, or GENE 315, and GENE 320.
- GENE 488. Gene Regulation** 3 cr.
Extensive coverage of signal transduction processes and approaches used to monitor large scale changes in gene regulation and protein synthesis that occur during development and in response to environmental changes. Prerequisites: AGRO/ANSC/BIOL/HORT 305 or GENE 315.
- GEOG- GEOGRAPHY**
- GEOG 109. The Atmosphere and Hydrosphere** 3 cr. (2+3P)
Introduction to physical forces that shape the environment: Earth geometry and seasons; the atmosphere; components of weather and climate. Completion of both GEOG 109 and GEOG 110 will substitute for GEOG 111G. Branch campuses only.
- GEOG 110. The Biosphere and Lithosphere** 3 cr. (2+3P)
Introduction to physical forces that shape the environment: unique spatial characteristics of flora and fauna; soil development and classification; geomorphic processes and landform development. Completion of both GEOG 109 and GEOG 110 will substitute for GEOG 111G. Branch campuses only.
- GEOG 111G. Geography of the Natural Environment** 4 cr. (3+3P)
Introduction to the physical processes that shape the human environment: climate and weather, vegetation dynamics and distribution, soil development and classification, and geomorphic processes and landform development.
- GEOG 112G. World Regional Geography** 3 cr.
Overview of the physical geography, natural resources, cultural landscapes, and current problems of the world's major regions. Students will also examine current events at a variety of geographic scales.
- GEOG 120G. Culture and Environment** 3 cr.
Study of human-environmental relationships: how the earth works and how cultures impact or conserve nature. Introduction to relationships between people and natural resources, ecosystems, global climate change, pollution, and conservation.
- GEOG 157. Introduction to Weather Science** 4 cr. (3+3P)
Introduction to Earth's atmosphere and the dynamic world of weather as it happens. Working with current meteorological data delivered via the Internet and coordinated with learning investigations keyed to the current weather; and via study of select archived real-world meteorological data. Prerequisites: CS 110G or concurrency and ENGL 111G or concurrency.
- GEOG 205. Local Geography** 3 cr.
Examination of interrelationships and spatial arrangements of landforms, climate, ecology and the human imprints of the local area. Branch campuses only.
- GEOG 210. Orienteering** 2 cr.
Map and compass navigation. Verification of correct navigation takes place by the use of encoded control points on the route. Same as P E 210.
- GEOG 257. Introduction to Meteorology** 3 cr. (2+3P)
Basic meteorological processes. Atmospheric structure and circulation, radiation, fronts, pressure systems, precipitation mechanisms, forecasting, weather maps, meteorologic instrumentation. Prerequisite: MATH 115. Same as SOIL 257.
- GEOG 259. Introduction to Oceanography** 4 cr. (3+3P)
Introduces the origin and development of the ocean and marine ecological concepts. Examines physical processes such as waves, tides, and currents and their impact on shorelines, the ocean floor, and basins. Investigates physical processes as they relate to oceanographic concepts. Includes media via the Internet and laboratory examination of current oceanic data as an alternative to the actual oceanic experience. Students will gain a basic knowledge and appreciation of the ocean's impact on the world's ecology. Prerequisites: CS 110G or concurrency and ENGL 111G or concurrency.
- GEOG 281. Map Use and Analysis** 3 cr. (2+3P)
Introduction to map use and analysis. Emphasis on physical and cultural features.
- GEOG 291. Special Topics** 1-3 cr.
Specific subjects to be announced in the Schedule of Classes. May be repeated for a maximum of 12 credits.
- GEOG 295. Environmental Geography** 4 cr. (3+3P)
Examines the man-environment interface, detrimental effects on the environment, lessons learned, and theoretical measures. Prerequisites: CS 110G or concurrency and ENGL 111G or concurrency.
- GEOG 315G. World Agriculture and Food Problems** 3 cr.
Same as AG E 315G.
- GEOG 317. Rangeland Communities** 2 cr.
Same as RGSC 317.
- GEOG 324. Wine Regions of the World** 3 cr. (2+3P)
The wine regions of the world and their climate, topography, and economic impacts. Wine products are examined and evaluated. Prerequisite: proof of age (21 years old and older).
- GEOG 325G. New Mexico and the American West** 3 cr.
Examination of the cultural and historical patterns, economic activities and physical characteristics of New Mexico with comparisons made with other western states.
- GEOG 326. U.S. National Parks** 3 cr.
Exploration of origins, landscapes, ecosystems, management issues, and conflicts in U.S. National Parks. The regional geography of the United States as seen through the creation and protection of biologically and culturally significant lands.
- GEOG 327. Australia** 3 cr.
Introduction to physical, cultural, and economic geography of Australia.
- GEOG 328G. Geography of Latin America** 3 cr.
Explores Latin America from a geographical perspective, integrating environmental, cultural and socioeconomic factors in an in-depth study of the development of the region.
- GEOG 331G. Europe** 3 cr.
Focus on the cultural continent of Europe, from Iceland to the Ural Mountains and from Archangel, U.S.S.R., to Malta. An overview of climate, geology, topography, soils, and vegetation, as well as a brief historical geography of the continent. Current environmental, social, and political issues of Europe will be discussed. A series of regional studies is also offered.
- GEOG 351. Fundamentals of Biogeography** 3 cr.
Floristic and physiognomic characteristics of the Earth's major ecosystems and their distributions; ecosystem dynamics, evolution, and physical environment; field and laboratory techniques including remote sensing.
- GEOG 353. Geomorphology** 3 cr. (2+3P)
Endogenic and exogenic processes that shape the Earth's surface. Emphasis on origin and evolution of landforms. Prerequisite: GEOL 111G and GEOG 111G. Same as GEOL 353.
- GEOG 357. Climatology** 3 cr.
Elements and controls of climate. Energy and hydrologic cycles, general circulation, climate classification, distribution of climate types, microscale effects, applications. Prerequisites: MATH 120. Same as AGRO 357, SOIL 357.
- GEOG 361G. Economic Geography** 3 cr.
The geographic relationships of supply and demand resources, population, and transportation. Site analysis and decision-making in different economic systems and cultures and how these decisions affect the environment and the location of economic activities.
- GEOG 362. Geography of International Development** 3 cr.
Comparative analysis of international patterns of socioeconomic development, with specific consideration of theories of development in the context of economic globalization.
- GEOG 363G. Cultural Geography** 3 cr.
The world's diverse cultural landscapes. Emphasis on the connections between social, political, religious, and agricultural patterns and the impact of societies on the natural environment.
- GEOG 365G. Urban Geography** 3 cr.
The global historical development of urban areas, as well as the changing functions of today's cities. A comparison between the North American city system and cities in Europe, Asia, and South America, including the development of the city form, the internal spatial organization of commercial, residential, and industrial areas, and the socio-economic and political factors.
- GEOG 374G. The European City: History and Culture** 3 cr.
Course presents the rich, complex history and cultures of European cities from ancient to modern times, linking these cities to crucial issues in European history.