GEO 311-H Geoscience and Global Concerns
An exploration of how technologically based problems facing the United States and the world are related to the basic scientific principles that explain the properties of the lithosphere, hydrosphere, and atmosphere. The set of issues include such geoscience-based topics as global warming, fossil fuel resources, nuclear waste disposal, and earthquake prediction and preparedness.
Prerequisite: GEO 101 or 102 or 107 or 122
3 credits

GEO 315 Groundwater Hydrology
Physical and chemical principles of geohydrology. Concepts of groundwater geology. Introduction to groundwater flow theory and ground-water contamination. Groundwater and geologic processes, with examples from tectonics, petroleum geology, geothermics, and economic mineralization.
Prerequisites: GEO 120 or 122; MAT 127 or 132 or 142 or AMS 161
3 credits

GEO 316 Geochemistry of Surficial Processes
Chemical principles used in the study of surface and near-surface water, rocks, and soils. Application of equilibrium concepts and reaction rates to reactions involving gases, fluids, and minerals in nature. Consideration of soil properties and processes.
Prerequisites: GEO 122, or 102 and 112; CHE 132 or 142
3 credits

GEO 318 Engineering Geology and Coastal Processes
Fundamental concepts of soil, sediment, and rock mechanics and the physics of surficial processes. Application is made to problems of geotechnical and coastal engineering. Topics include consolidation, loose boundary hydraulics, slope stability, underground excavations and beach and tidal inlet stability, and channel sedimentation. This course is offered as both GEO 318 and MAR 318.
Prerequisites: GEO 122 or GEO 102 and 112; MAT 127 or 132 or 142 or AMS 161
3 credits

GEO 320-E Glacial Geology
History of glaciation on earth; formation and dynamics of glaciers and ice sheets; processes of glacial erosion and deposition; and the nature of glacial sediments and landforms particularly relating to the development of Long Island.
Prerequisite: GEO 102 or 122
3 credits

GEO 327 Computerized Modeling of Geological Phenomena
Practical experience in creating software that implements mathematical models of selected geological phenomena. Through lectures, discussions, and homework exercises, students familiarize themselves with the details of a mathematical model that describes a selected phenomenon. Students develop specifications for a software user interface and an outline for the design of a software model. As a team, the class develops, tests, and refines the software, with each student writing a particular portion of the software according to the specifications. The course requires a significant amount of computer work outside of class time.
Prerequisites: GEO 122 or GEO 102/112; MAT 131 or 126 or AMS 151; U3 or U4 standing; permission of instructor
3 credits

GEO 353 Marine Ecology
A survey of biotic responses to ecological challenges in different marine realms. Controls of diversity and trophic structure in the marine ecosystem, historical aspects of marine realms, productivity in the oceans, plankton, soft-bottom communities, intertidal habitats, coral reefs, deep-sea environments, and effects of pollution in the ocean are discussed. This course is offered as both BIO 353 and GEO 353.
Prerequisite: BIO 201 or MAR 104
3 credits

GEO 401 Optical Mineralogy
An introduction to the use of optical crystallography for mineral identification using polarized light microscopy. Topics include indices of refraction, isotropic, uniaxial, and biaxial minerals; optical indicatrix theory; interference figures, and other optical characteristics of minerals. Laboratory exercises provide hands-on experience in using the polarizing light microscope for mineral identification.
Prerequisite: GEO 306
1 credit

GEO 403 Stratigraphy
The history and practice of defining units of layered rocks and interpreting their spatial relationships. Topics include the basis for the geologic time scale, lithostratigraphic versus chronostratigraphic units, biostratigraphy, magnetostratigraphy, facies patterns and Walker’s Law, subsurface stratigraphy, and the application of stratigraphy to geological problems. Laboratory emphasizes practical techniques in stratigraphy.
Prerequisite: GEO 306
Corequisite: GEO 401
1 credit

GEO 405 Field Camp
A field course that may be taken at any one of several approved university field stations.
Prerequisites: Two upper-division GEO courses
1-6 credits

GEO 407 Mineralogy and Petrology II
Topics focus on the use of thin sections to interpret evolutionary histories of igneous and metamorphic rocks, integrating petrography, phase equilibria, and the physical properties of magma and rocks. Three hours of lecture and one three-hour laboratory per week.
Prerequisites: GEO 306 and 401
3 credits

GEO 420 Environmental Analysis Using Remote Sensing and Geographic Information Systems
The use of aerial and satellite imagery in environmental analysis and the manipulation of geographic data sets of all types using Geographic Information Systems. Concentrating on Long Island, each student designs and completes a research project on a particular section of the area, focusing on the habitats of local wildlife, the locations of archaeological sites, coastal regimes, etc. Students should expect to spend approximately 10 hours per week beyond regularly scheduled classes in a University computer laboratory. This course is offered as both ANT 420 and GEO 420.
Prerequisite: Upper-division course in ANT or BIO or GEO or MAR
3 credits

GEO 447 Senior Tutorial in Geology
Independent readings in advanced topics. May be repeated once.
Prerequisites: Permission of instructor and chairperson
1-3 credits

GEO 452 Seismology
An advanced course in the study of earthquakes, earth structure, and tectonics. Topics include wave propagation, body and surface waves, faulting, plate tectonics, and earthquake prediction.
Prerequisites: MAT 303 or 305 or AMS 361; PHY 132/134 or 142 or PHY 126 and 127
3 credits

GEO 475, 476 Undergraduate Teaching Practica I, II
Work with a faculty member as an assistant in one of the faculty member’s regularly scheduled classes. The student is required to attend all the classes, do all the regularly assigned work, and meet with the faculty member at regularly scheduled times to discuss the intellectual and pedagogical matters relating to the course. In GEO 475, students assume greater responsibility in such areas as leading discussions and analyzing results of tests that have already been graded. Students may not serve as teaching assistants in the same course twice.
Prerequisites to GEO 475: U4 standing; previous preparation in subject field; interview; permission of instructor
Prerequisites to GEO 476: GEO 475; previous preparation in subject field; interview; permission of instructor and department
3 credits per course, S/U grading

GEO 487 Senior Research in Geology
Under the supervision of a faculty member, a major in the department may conduct research for academic credit.
Prerequisites: Permission of instructor and chairperson
0-6 credits

GEO 488 Internship
Participation in local, state, or national private enterprises, public agencies, or nonprofit institutions. May be repeated to a limit of six credits.
Prerequisites: Permission of instructor and department
0-6 credits, S/U grading

GER German Language and Literature

GER 101 Intensive Elementary German
An intensive course covering the elementary German program (GER 111, 112) in one semester. GER 101 is designed for students who have no prior knowledge of the language. A student who has had two or more years of German in high school (or who has otherwise acquired an equivalent proficiency) may not take this course without written permission from the supervisor of the course. May not be taken for credit after GER 111 or any other course in German.
6 credits

GER 111, 112 Elementary German I, II
An introduction to spoken and written German, stressing pronunciation, speaking, comprehension, reading, writing, and culture. The course consists of four hours in a small section conducted in German, and one laboratory hour. The course is designed for students who have no prior knowledge of German. A student who has had two or more years of German in high school (or who has otherwise acquired an equivalent proficiency) may not take GER 111 without written permission from the supervisor of the course.
Prerequisite to GER 112: GER 111
3 credits per course

GER 211, 212 Intermediate German I, II
The reading and interpretation of a wide variety of German texts, with a review of German grammar, composition, and conversation. Work in the language laboratory further develops audiolingual skills.
Prerequisite to GER 211: GER 101 or 112
Prerequisite to GER 212: GER 211
3 credits per course

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GER 311, 312 German Conversation and Composition
The active use of spoken and written German.
Prerequisite: GER 212
3 credits per course

GER 343-G Introduction to Literary Genres
Using selected texts easily read and understood by students whose background in German may be limited, this course is intended to introduce those students to terminology and techniques of literary analysis and interpretation.
Prerequisite: GER 212
3 credits

GER 344-G Survey of German Literature
A chronological survey of German literature from the 18th century to the present with stress on defining the periods therein. All readings are in German.
Prerequisite: GER 212
3 credits

GER 401 German Drama
A survey of German drama and its subgenres. All work is done in German.
Prerequisite: GER 343 or 344
3 credits

GER 402 German Prose
A survey of German prose and its subgenres. All work is done in German.
Prerequisite: GER 343 or 344
3 credits

GER 403 German Poetry
A survey of German poetry and its subgenres. All work is done in German.
Prerequisite: GER 343 or 344
3 credits

GER 404 Goethezeit
An intensive study of German literature in the period 1750-1832. All work is done in German.
Prerequisite: GER 343 or 344
3 credits

GER 411, 412 Advanced German Conversation and Composition
This course is designed to develop fluency in spoken and written German. Students practice expressing themselves idiomatically and fluently, and become acquainted with the subtleties of German grammar and style.
Prerequisites: GER 311 and 312
3 credits per course

GER 420 Special Topics in German Literature
An intensive study of the works of a German author or a period of German literature. All work is done in German. Semester supplements to this Bulletin contain specific description when course is offered. May be repeated for credit as the topic changes.
Prerequisites: GER 411 and 412
3 credits

GER 431, 432 Business German I, II
Designed to broaden knowledge of German by emphasizing business terminology and conversational skills. Students practice expressing themselves idiomatically and fluently in a style appropriate to the world of commerce. Materials covered should prepare the student for the certificate “Wirtschaftsprüfung Deutsch International” examination.
Prerequisites: GER 311 and 312
3 credits per course

GER 438 Structure of German
Study of the phonological, graphemic, morphological, syntactic, and semantic structures of Modern German.
Prerequisite: GER 212
3 credits

GER 439 History of German
The development of the German language from Indo-European to Modern High German. A representative selection of texts from different periods is examined. Conducted as a seminar.
Prerequisite: GER 212
3 credits

GER 447 Directed Readings in German
Independently supervised readings in selected topics in German language and literature, which may focus on a specific German language author or the literature of a specific period or genre. May be repeated.
Prerequisites: Permission of instructor and department
3 credits

GER 488 Internship
Participation in local, state, national, and international public and private agencies and organizations to apply and reinforce language and related skills and knowledge of social and cultural institutions.
Prerequisites: GER 311 and 312; permission of instructor and department; specific placement examinations where applicable
0-6 credits, S/U grading

GER 495 Senior Honors Project in German
Per project for seniors. Arranged in consultation with the department, the project involves writing a paper, under the close supervision of an appropriate instructor, on a suitable topic. Students who are candidates for honors take this course.
Prerequisite: Permission of department
3 credits

GLS 311, 312 German Conversation and Composition
The active use of spoken and written German.
Prerequisite: GER 212
3 credits per course

GLS 343-G Introduction to Literary Genres
Using selected texts easily read and understood by students whose background in German may be limited, this course is intended to introduce those students to terminology and techniques of literary analysis and interpretation.
Prerequisite: GER 212
3 credits

GLS 447 Directed Readings in German
Independently supervised readings in selected topics in German language and literature, which may focus on a specific German language author or the literature of a specific period or genre. May be repeated.
Prerequisites: Permission of instructor and department
3 credits

HAL 205 Introduction to Athletic Training
Introduction to the health care professions of athletic training. The course explores the history and development of the profession and the concept of the sports medicine team, as well as medical terminology. Open to West Campus students.
2 credits

HAL 210 Emergency Care of Athletic Injuries
Recognition and management of medical emergencies with emphasis on those conditions which are most commonly suffered by athletes. Successful completion of the course leads to CPR certification by the National Safety Council. Open to West Campus students.
1 credit

HAO 210 Introduction to Occupational Therapy
Introduces the student to occupational therapy. Examines philosophical base, definitions related to the practice, scope of practice, and role delineations. Provides an orientation to professional organizations, statutes, and credentialing. Open to West Campus students.
1 credit

HAD 210 Introduction to Clinical Laboratory Sciences
Introduces the student to forensic science. Describes the interesting and diverse disciplines that comprise the field of investigation of evidence for criminal and civil investigations. Open to west campus students.
1 credit

HAD 304 Introduction to Criminalistics
An intensive study of German literature in the period 1750-1832. All work is done in German.
Prerequisite: GER 343 or 344
3 credits