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

GEO 315 Groundwater Hydrology
Physical and chemical principles of geohydrology. Concepts of groundwater geology. Introduction to quantitative models of regional fluid flow and groundwater contamination. Groundwater and geologic processes, with examples from tectonics, petroleum geology, geothermics, and economic mineralization. Prerequisites: GEO 102 or 122; MAT 127 or 132 or 142 or 171 or AMS 161

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

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 171 or AMS 161

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

GEO 335 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 333 and GEO 335.
Prerequisite: BIO 201 or MAR 104

GEO 401 Optical Mineralogy
An introduction to the use of optical crystallography for mineral identification using polarized light microscopy. Topics include indices of refraction of 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

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 Weller’s Law, subsurface stratigraphy, and the application of stratigraphy to geological problems. Laboratory emphasizes practical techniques in stratigraphy.
Prerequisite: GEO 306
Corequisite: GEO 401

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

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

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

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

GEO 475 Undergraduate Teaching Practicum I
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.
Prerequisite: U4 standing; previous preparation in subject field; interview; permission of instructor

GEO 476 Undergraduate Teaching Practicum II
Work with a faculty member as an assistant in one of the faculty member’s regularly scheduled classes. 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.
Prerequisite: GEO 475; previous preparation in subject field; interview; permission of instructor and department

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

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

GER

Germanic Languages 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. 6 credits

GER 111 Elementary German I
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. 5 credits

GER 112 Elementary German 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. Prerequisite: GER 111

GER 211 Intermediate German I
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: GER 101 or 112

GER 212 Intermediate German 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: GER 211

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

www.stonybrook.edu/ugBulletin

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**GER 313 German Vocabulary in Conceptual Groups**
The study of German vocabulary in so-called “conceptual groups” that reflect the world of nature (flowers, etc.) and culture (musical instruments, etc.). The objective is primarily to increase our stock of words and practice using them in context, but also to enrich our knowledge of selected words by examining significant moments or developments in their histories. 
Prerequisite: GER 212
3 credits

**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
2 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 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.
Prerequisite: GER 311 and 312
3 credits

**GER 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.
Prerequisite: GER 311 and 312
3 credits

**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.
Prerequisite: GER 411 and 412
3 credits

**GER 431 Business German I**
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

**GER 432 Business German 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

**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 475 Undergraduate Teaching Practicum in German I**
Each student conducts a regular problem or tutorial section that supplements a regular language course under the guidance of a master teacher. Responsibilities may include preparing material for discussion and helping students with problems. Not for major or minor credit.
Prerequisites: Fluency in German; permission of instructor and department
3 credits, S/U grading

**GER 476 Undergraduate Teaching Practicum in German II**
Work with a faculty member as an assistant in one of the faculty member’s regularly scheduled classes. Students assume greater responsibility in such areas as leading discussions and analyzing results of tests that have already been graded. The course in which the student is permitted to work as a teaching assistant must be different from the course in which he or she previously served.
Prerequisites: Fluency in German; permission of instructor and department
3 credits, S/U grading

**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

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**GLS Global Studies**

**GLS 101 Introduction to Stony Brook**
A seminar intended to integrate students into the Undergraduate College of Global Studies and into the University community by providing information about Stony Brook and a forum for discussion of values, intellectual and social development, and personal as well as institutional expectations. Required for all first-year students. Not for credit in addition to ACH 101, LDS 101, HDV 101, ITS 101, SSU 101, SBU 101, LHD 101, and LSE 101.
Prerequisite: Admission to the GLS Undergraduate College
1 credit, S/U grading

**GLS 102 Undergraduate College Seminar: Global Studies**
A seminar for all first-year students in the Undergraduate College of Global Studies. Seminar topics vary annually by section and cover a variety of subjects under the general scope of Global Studies. Required for all first-year students. Not for credit in addition to ACH 102, HDV 102, ITS 102, LDS 102, or SSU 102.
Prerequisite: Admission to the GLS Undergraduate College
1 credit, ABC/U grading

**GLS 275 Undergraduate College Fellows Seminar**
Creates a curricular component for the second year of the Undergraduate College Experience. College fellows will enroll in the GLS 275 course in the spring semester of their freshman year and GLS 276 in the fall semester of their sophomore year. 275 (spring) engages students in four main content areas: student development theory, scholarship on mentoring and leadership development, concepts of teaching and learning, and programming and event planning. These areas prepare students for supervised learning and teaching experiences that will occur primarily in the fall 276 course.
Prerequisites: Grade of “S” in GLS 101 and a strong desire to help other students. Enrollment in the corresponding Undergraduate College; permission of the instructor.
1 credit, S/U grading

**GLS 276 Undergraduate College Fellows Practicum**
The second semester in the sequence following GLS 275. Students assume higher responsibility and are given opportunities to apply teaching theories and concepts as learned in GLS 275. Students act as a TA for GLS 101.
Prerequisites: A grade of “S” in GLS 275. Enrollment in the corresponding Undergraduate College; permission of the instructor.
1 credit, S/U grading

www.stonybrook.edu/ugbulletin 399

As printed January 2007