824 Monitoring the Biosphere from Space
Spring of even years. 3(3-0) P:M: (GEO 424)
Remote sensing in support of global and other environmental change research. Observing patterns in satellite imagery and linking them with human processes. Monitoring Earth from space at variable spatial and temporal scales. Advanced digital image processing, information extraction, interpretation, and applications.

825 Geoprocessing
Fall of odd years. 4(4-0)
Integration of digital remote sensing data, geographic information systems, spatial analysis, and expert systems in solving research problems. Class research project.

826 Seminar in Cartography and Geoprocessing
Spring. 3(3-0) A student may earn a maximum of 9 credits in all enrollments for this course.
Review of research in cartography, geographic information systems, and remote sensing.

827 Digital Image Processing and Analysis
Fall. 4(2-4) P:M: (GEO 424)
Use of computer to classify and enhance satellite images and to extract information from them. Combining images from different sources. Accuracy assessment of resulting information.

832 Environmental and Natural Resource Law
Fall. 3(3-0) Interdepartmental with Resource Development; Agricultural Economics; Crop and Soil Sciences; Forestry. Administered by Department of Community, Agriculture, Recreation and Resource Studies. RB: (RD 430)
Origin and development of environmental law. Theories of power, jurisdication, sovereignty, property interests, pollution, and other bases for legal controls of natural resources. Common law and constitutional limitations on governmental power.

835 Biogeography
Spring of odd years. 3(3-0) Interdepartmental with Fisheries and Wildlife; Zoology; Plant Biology. Administered by Department of Fisheries and Wildlife. RB: Courses in evolution and ecology at undergraduate level.
Geographical distributions of plants and animals; biogeographic realms. Ecological and evolutionary mechanisms determining distributional patterns. Application of biogeography to conservation problems.

850 Seminar in Regional Geography
Spring. 3(3-0) A student may earn a maximum of 9 credits in all enrollments for this course.
Review of research on contemporary geographic issues in different world regions.

854 Economics of Planning and Development
Spring. 3(3-0) Interdepartmental with Urban Planning. Administered by Department of Geography. RB: (UP 801)
The physical urban environment and local economic development.

858 Gender, Justice and Environmental Change : Issues and Concepts
Spring of odd years. 3(3-0) Interdepartmental with Fisheries and Wildlife; Anthropology; Forestry; Resource Development; Sociology. Administered by Department of Fisheries and Wildlife. RB: Background in social science, environmental science, or natural resources.
Issues and concepts related to gender, ecology, and environmental studies. Key debates and theoretical approaches to addressing environmental issues from a gender and social justice perspective. Gender and environment issues and processes from a global perspective.

859 Gender, Justice, and Environmental Change: Methods and Application
Spring of even years. 3(3-0) Interdepartmental with Anthropology; Forestry; Fisheries and Wildlife; Resource Development; Sociology. Administered by Department of Anthropology. RB: Background in social science, environmental science, or natural resources.
Methods and case studies related to gender, ecology, and environmental studies. Methodological and fieldwork issues from a feminist perspective in international and intercultural contexts. Qualitative and quantitative methods for integrating social and environmental data.

865 Advanced Quantitative Methods in Geography
Spring. 4(4-0) RB: (GEO 465)
Statistical and mathematical approaches. Multiple regression, principal components and factor analysis, discriminant analysis. Related taxonomic methods.

866 Spatial Data Analysis
Spring. 4(3-2) Interdepartmental with Statistics and Probability. RB: (GEO 463 or STT 421 or STT 430) or equivalent quantitative methods courses SA: GEO 466
Theory and techniques for statistical analysis of point patterns, spatially continuous data, and data in spatial zones.

871 Seminar in Physical Geography
Fall. 3(3-0) RB: at least one course in physical geography
Research on topics in physical geography.

872 Seminar in Human Geography
Fall. 3(3-0) RB: at least one course in human geography
Research on topics in human geography.

873 Seminar in Human-Environment Geography
Spring. 3(3-0) RB: at least one course in human geography and one course in physical geography.
Research on topics in human-environment geography.

874 Seminar in Geographic Information Science
Spring. 3(3-0) RB: at least one course in geographic information science, cartography or remote sensing
Geographic information science (GIS) applications to social and environmental problems. Theory and related issues.

880 Seminar in Advanced Physical Geography
Spring. 3(3-0) A student may earn a maximum of 9 credits in all enrollments for this course. SA: GEO 809
Advanced study of soils, geomorphology, climatology and/or plant geography.

886 Research Design in Geography
Spring. 3(3-0)
Research and writing in geography. Identification of geographic problems and their relative importance. Structuring and stating hypotheses. Data acquisition and tests for validity.

890 Advanced Readings in Geography
Fall, Spring, Summer. 1 to 8 credits. A student may earn a maximum of 12 credits in all enrollments for this course. R: Approval of department.
Advanced independent readings.

892 Advanced Research in Geography
Fall, Spring, Summer. 1 to 4 credits. A student may earn a maximum of 12 credits in all enrollments for this course.
Advanced independent research.

899 Master's Thesis Research
Fall, Spring, Summer. 1 to 12 credits. A student may earn a maximum of 99 credits in all enrollments for this course. R: Open only to graduate students in Geography.
Master's thesis research.

986 Theory and Methods in Geography
Spring. 3(3-0) R: Open only to Ph.D. students in Geography.
Historical development of the discipline within social and intellectual contexts. Current methodological and philosophical approaches to geographic research.

999 Doctoral Dissertation Research
Fall, Spring, Summer. 1 to 24 credits. A student may earn a maximum of 99 credits in all enrollments for this course.
Doctoral dissertation research.

GEOLOGICAL SCIENCES GLG

Department of Geological Sciences
College of Natural Science

201 The Dynamic Earth
Fall, Spring. 4(3-2) Not open to students with credit in GLG 301.
Physical and chemical processes related to the past, present and future behavior of the earth system, and the energy systems that drive these processes. A study of the earth's materials, the earth's surface and the earth's interior.

302 Geology of Michigan
Spring. 3(3-0) P: (GLG 201 or ISP 203)
Integration of the geological evolution of Michigan with its social and economic development.

303 Oceanography
Fall. 4(4-0) P: (CEM 141 or CEM 142 or CEM 151 or CEM 152 or CEM 181H or CEM 182H or LBS 171) and (PHY 183 or PHY 183B or PHY 193H or PHY 231 or PHY 231B or PHY 231C or LBS 271)
Physical, chemical, biological, and geological aspects of oceanography: ocean circulation, waves, tides, air-sea interactions, chemical properties of ocean water, ocean productivity, shoreline processes, and sediments.

304 Physical and Biological History of the Earth
Fall, Spring. 4(3-2) P: (GLG 201 or ISP 203) SA: GLG 202
Origin of the Earth. Differentiation of the Earth's core, mantle and crust. Lithospheric tectonics over geologic time. Origin and evolution of the Earth's hydrosphere, atmosphere and climate. Origin and evolutionary history of biological life. Interactions of life with the Earth's endogenic and exogenic systems.

306 Environmental Geomorphology
Spring. 3(3-0) Interdepartmental with Geography. Administered by Department of Geography. P: (CSS 210 or GEO 203 or GEO 206 or GEO 330 or GEO 333 or GEO 259 or GLG 201 or GLG 304 or ISP 201 or ISP 203 or ISS 310 or RD 201) and completion of Tier I writing requirement.
Relationships of running water, weathering, gravity, ice, waves, wind, and biota (including humans) to terrain and soils. Evolution of landscapes. Classical and modern interpretations.

319 Introduction to Earth System Science
Fall. 3(3-0) Interdepartmental with Entomology; Plant Biology; Zoology; Sociology. Administered by Department of Entomology. RB: Completion of one course in biological or physical science.
Systems approach to Earth as an integration of geochemical, geophysical, biological and social components. Global dynamics at a variety of spatiotemporal scales. Sustainability of the Earth system.

321 Mineralogy and Geochemistry
Spring. 4(3-2) P: (GLG 201 or concurrently) and (CEM 142 or CEM 152 or CEM 182H or LBS 172) and (MTH 132 or LBS 118)
Geochemical properties and processes in the origin, modification, structure, dynamics and history of earth materials. Crystallography and crystal chemistry. Mineral classification and identification.

335 Plants Through Time
Spring of odd years. 3(3-0) Interdepartmental with Plant Biology. Administered by Department of Plant Biology. P: (BS 110 or PLB 105 or GLG 201 or LBS 144 or LBS 148H) R: Open only to juniors or seniors. SA: BOT 335
Evolutionary history of plants, development of ecosystems, and use of plant fossils in the reconstruction of ancient environments and climate.

351 Structural Geology
Fall. 4(3-2) P: (GLG 304 and GLG 361 or concurrently) and (MTH 114 or MTH 116 or LBS 117 or MTH 124 or MTH 126 or MTH 132 or MTH 133 or LBS 118 or LBS 119) RB: Introductory physics.
Mechanical behavior and kinematic history of the lithosphere. Stress and strain. Deformation features such as folds, faults and microstructure. Methods of analysis and interpretation. One weekend field trip required.

361 Petrology (W)
Fall. 4(3-2) P: (GLG 321) and completion of Tier I writing requirement. SA: GLG 461
Evolution, origin, occurrence and tectonic setting of igneous and metamorphic rocks. Phase relations of igneous and metamorphic systems. Studies of rocks in thin sections.

401 Plate Tectonics (W)
Spring. 4(3-2) P: (GLG 304) and (MTH 114 or MTH 116 or LBS 117 or MTH 124 or MTH 126 or MTH 132 or MTH 133 or LBS 118 or LBS 119) and (PHY 183 or PHY 183B or PHY 231 or PHY 231B or PHY 231C or LBS 271) and completion of Tier I writing requirement. R: Not open to graduate students in the Department of Geological Sciences. SA: GLG 371
Geophysical methods of studying the structure and dynamics of the earth and planets. Plate kinematics and global geodynamic processes, plate margin processes and evolution, marine geology.

411 Hydrogeology
Fall. 3(3-0) RB: (MTH 114 or MTH 116 or LBS 117 or MTH 124 or MTH 126 or MTH 132 or MTH 133 or LBS 118 or LBS 119) R: Not open to freshmen or sophomores.
Source, occurrence, and movement of groundwater emphasizing geologic factors and controls.

412 Glacial and Quaternary Geology
Spring. 4(3-2) Interdepartmental with Geography. RB: (GLG 201 or GEO 306 or GEO 408) R: Not open to freshmen or sophomores.
Glacial and Quaternary geology with emphasis on North America and Europe. Laboratory focuses on glacial processes. One weekend field trip required.

419 Advanced Earth System Science
Spring. 3(2-2) Interdepartmental with Entomology; Plant Biology; Zoology; Sociology. Administered by Department of Entomology. P: (ENT 319)
Systems science theory applied to analysis of the biological, geological, physical, and social causes and consequences of global changes. Issues of sustaining the Earth system.

421 Environmental Geochemistry
Spring. 4(3-2) RB: (GLG 201) and (CEM 141 or CEM 151 or CEM 181H or LBS 171)
Natural and anthropogenic processes affecting environmental chemistry with emphasis on the water cycle. Chemical equilibria, kinetics, geochemical cycling, acid rain, carbon dioxide, heavy metals, toxic organics, global change and the greenhouse effect.

422 Aquatic and Marine Organic Geochemistry (W)
Fall. 3(3-0) P: (CEM 141 or CEM 142 or CEM 151 or CEM 152 or CEM 181H or CEM 182H or LBS 171) and completion of Tier I writing requirement. RB: (GLG 201 or GLG 304)
Organic geochemistry applied to global cycling of organic matter and diagenesis in aquatic and marine environments. Use of stable isotopes and molecular analyses to trace the fate of bulk organic matter and individual compounds in the environment.

426 Biogeochemistry
Summer. 3 credits. Given only at W.K. Kellogg Biological Station. Interdepartmental with Microbiology and Molecular Genetics; Crop and Soil Sciences; Zoology. Administered by Department of Microbiology and Molecular Genetics. RB: (BS 110 or LBS 144 or LBS 148H or BS 111 or LBS 145 or LBS 149H) and (CEM 143 or CEM 251) SA: MPH 426
Integration of the principles of ecology, microbiology, geochemistry, and environmental chemistry. Societal applications of research in aquatic and terrestrial habitats.

431 Sedimentology and Stratigraphy (W)
Spring. 4(3-2) P: (GLG 351) and completion of Tier I writing requirement.
Sediments, sedimentary rocks, sedimentary processes, and depositional environments through geologic time. Facies events correlation. Fossils as tools in stratigraphy and environmental analysis. Biostratigraphy, paleoecology and taphomony.

433 Vertebrate Paleontology
Fall of even years. 4(3-2) Interdepartmental with Zoology. P: (ZOL 328)
Fossil vertebrates with emphasis on evolution and interrelationships of major groups. Modern techniques of identification and interpretation of fossils.

434 Evolutionary Paleobiology
Fall. 4(3-2) Interdepartmental with Zoology. RB: (BS 110 or GLG 304 or LBS 144 or LBS 148H)
Patterns and processes of evolution known from the fossil record including speciation, phylogeny, extinction, heterochrony and biogeography.

470 Principles of Modern Geophysics
Fall of odd years. 3(3-0) P: (GLG 201) and (MTH 234 or concurrently or MTH 254H or concurrently or LBS 220 or concurrently) and (PHY 183 or PHY 183B or PHY 193H or PHY 233B or LBS 271) SA: GLG 472
Theory of solid-earth geophysics including geochronology, geothermics, geomagnetism and paleomagnetism, geodesy and gravity, rheology, and traveltime seismology.

471 Applied Geophysics
Spring. 4(3-2) P: (MTH 133 or concurrently or LBS 119 or concurrently) and (PHY 184 or concurrently or PHY 184B or concurrently or PHY 232 or concurrently or PHY 232B or concurrently or PHY 232C or concurrently or PHY 294H or concurrently or LBS 272 or concurrently) R: Not open to freshmen or sophomores.
Application of seismic, gravity, magnetic, resistivity, and electromagnetic methods to problems related to engineering studies, mineral and oil exploration, groundwater, subsurface mapping, pollution, and hazardous waste.

481 Reservoirs and Aquifers
Spring of odd years. 3(3-0) P: (GLG 431 or concurrently)
Principles of the origin and evolution of porous media. Porosity and permeability of sediments and sedimentary rocks. Computing techniques for evaluating reservoirs and aquifers.

491 Field Geology - Summer Camp (W)
Summer. 6 credits. Given only at Park City, Utah. P: (GLG 431) and completion of Tier I writing requirement. R: Open only to students in the Department of Geological Sciences. Approval of department.
Field analysis of rock types: igneous, metamorphic, sedimentary. Structural analysis. Preparation of stratigraphic sections, geologic maps and cross sections. Air photo analysis.

499 Independent Study in Geological Sciences
Fall, Spring, Summer. 1 to 3 credits. A student may earn a maximum of 6 credits in all enrollments for this course. R: Open only to juniors or seniors in the Department of Geological Sciences. Approval of department; application required.
Advanced individual study of special topics in the geological sciences.

801 Seminar in Geochemistry
Fall, Spring. 1 to 4 credits. A student may earn a maximum of 9 credits in all enrollments for this course. R: Open only to graduate students in the Department of Geological Sciences.
Recent developments in geochemistry, including aqueous, biologic and mineralogic aspects.

802 Seminar in Geophysics and Geodynamics
Fall, Spring. 1 to 4 credits. A student may earn a maximum of 9 credits in all enrollments for this course. RB: (GLG 401 or GLG 470 or GLG 471) R: Open only to graduate students in the Department of Geological Sciences.
Applied, solid-earth, and theoretical geophysics, global and regional geodynamics. Plate tectonics, marine geophysics, and polar earth sciences.

803 Seminar in Hydrogeology
Fall, Spring. 1 to 4 credits. A student may earn a maximum of 9 credits in all enrollments for this course. RB: (GLG 411 or GLG 421) R: Open only to graduate students in the Department of Geological Sciences.
Occurrence, movement and composition of groundwater in geologic settings.

804 Seminar in Paleobiology
Fall, Spring. 1 to 4 credits. A student may earn a maximum of 9 credits in all enrollments for this course. R: Open only to graduate students in the Department of Geological Sciences.
Invertebrate, vertebrate and plant paleobiology.

805 Seminar in Petrology
Fall, Spring. 1 to 4 credits. A student may earn a maximum of 9 credits in all enrollments for this course. RB: (GLG 361) R: Open only to graduate students in the Department of Geological Sciences.
Current topics in igneous petrology.

806 Seminar in Sedimentology and Stratigraphy
Fall, Spring. 1 to 4 credits. A student may earn a maximum of 9 credits in all enrollments for this course. R: Open only to graduate students in Geological Sciences.
Recent developments in stratigraphy and deposition, and diagenesis of sedimentary rocks.

807 Seminar in Structural Geology and Tectonics
Fall, Spring. 1 to 4 credits. A student may earn a maximum of 9 credits in all enrollments for this course. R: Open only to graduate students in Geological Sciences.
Rock deformation and major lithospheric structure.

811 Advanced Hydrogeology
Spring. 3(3-0) Interdepartmental with Civil Engineering. RB: (CE 821)
Processes influencing groundwater flow and solute transport. Mathematical equations and numerical methods to describe these processes.

821 Aqueous Geochemistry
Fall of odd years. 3(2-2) RB: (CE 481 or CEM 383 or CSS 455 or FW 472 or GLG 421 or GLG 422) R: Open only to graduate students.
Controls on the chemical and isotopic nature of water (fresh, marine, brine) and its solutes. Data acquisition and synthesis. Chemical modeling and evolution of water masses.

823 Isotope Geochemistry
Spring of even years. 3(3-0) RB: (CEM 152) and (PHY 184 or PHY 232)
Fundamentals of isotope behavior, fractionation, and interpretation and application of isotope data. Radiogenic isotopes including geochronology and environmental tracing.

824 Stable Isotope Biogeochemistry
Spring. 2(1-2) RB: (CEM 142 or CEM 152 or CEM 182H or LBS 171)
Principles of stable isotope chemistry applied to biogeochemical problems: climate change, ecology, contaminants, oceanography limnology, and paleobiology.

825 Clay Mineralogy and Soils Genesis
Spring of even years. 4(3-2) Interdepartmental with Crop and Soil Sciences. Administered by Department of Crop and Soil Sciences. R: Open only to graduate students in College of Agriculture and Natural Resources, College of Engineering, or College of Natural Science.
Mineral structures. X-ray diffraction, pedogenic processes, and mineral transformations and stability.

831 Quantitative Paleobiology
Spring of odd years. 3(2-2) Interdepartmental with Zoology. RB: (GLG 431)
Analysis of paleobiological problems using quantitative techniques such as cladistics, morphometrics, ordination, and stereology.

861 Evolution of the Crust and Mantle
Spring of odd years. 3(3-0) RB: (GLG 361) R: Open only to graduate students.
Origin and evolution of the Earth's crust and mantle. Petrology, tectonics and geophysics of the Earth.

862 Igneous Petrology
Spring of even years. 4(3-2) RB: (GLG 361) R: Open only to graduate students
Origin and evolution of magmatic systems. Relationship of igneous activity to tectonic setting.

863 Mineral-Water Interactions
Fall of even years. 4(3-2) Interdepartmental with Crop and Soil Sciences. R: Open only to graduate students in Crop and Soil Sciences or Geological Sciences or Geography.
Mineralogy, petrology and geochemistry of fluid-rock reactions in geologic, sedimentary and geochemical cycles. Rock and mineral weathering, soil formation, genesis and burial diagenesis of sediments and sedimentary rocks, and metamorphism.

881 Sedimentary Petrology
Fall of even years. 4(3-2) RB: (GLG 361 and GLG 431)
Origin of sedimentary particles and their chemical and physical alterations after deposition. Geochemical cycles in Earth history.

882 Basin Analysis
Fall of odd years. 3(3-0) RB: (GLG 351 and GLG 431)
Paleogeographic evolution of sedimentary basins. Principles of facies anaylsis, subsidence history, thermal history and diagenesis. Methods of stratigraphic analysis.

891 Special Problems in Geochemistry
Fall, Spring, Summer. 1 to 4 credits. A student may earn a maximum of 6 credits in all enrollments for this course. R: Open only to graduate students in Geological Sciences. Approval of department.
Individual study on problems in geochemistry, including aqueous, biologic, and mineralogic aspects.

892 Special Problems in Geophysics and Geodynamics
Fall, Spring, Summer. 1 to 4 credits. A student may earn a maximum of 6 credits in all enrollments for this course. RB: (GLG 401 or GLG 470 or GLG 471) R: Open only to graduate students in the Department of Geological Sciences. Approval of department.
Individual study on problems in applied and solid-earth geophysics, global and regional geodynamics, and polar earth sciences.

893 Special Problems in Hydrogeology
Fall, Spring, Summer. 1 to 4 credits. A student may earn a maximum of 6 credits in all enrollments for this course. RB: (GLG 411 or GLG 421) R: Open only to graduate students in Geological Sciences. Approval of department.
Individual study on the movement, occurrence and composition of groundwater in geologic environments.

894 Special Problems in Paleobiology
Fall, Spring, Summer. 1 to 4 credits. A student may earn a maximum of 6 credits in all enrollments for this course. R: Open only to graduate students in Geological Sciences. Approval of department.
Individual study on invertebrate, vertebrate and plant paleobiology.

895 Special Problems in Petrology
Fall, Spring, Summer. 1 to 4 credits. A student may earn a maximum of 6 credits in all enrollments for this course. RB: (GLG 361) R: Open only to graduate students in the Department of Geological Sciences. Approval of department.
Individual study on current problems in petrology.

896 Special Problems in Sedimentology and Stratigraphy
Fall, Spring, Summer. 1 to 4 credits. A student may earn a maximum of 6 credits in all enrollments for this course. R: Open only to graduate students in the Department of Geological Sciences. Approval of department.
Individual study on problems in sedimentology and stratigraphy.

897 Special Problems in Structural Geology and Tectonics
Fall, Spring, Summer. 1 to 4 credits. A student may earn a maximum of 6 credits in all enrollments for this course. RB: (GLG 351) R: Open only to graduate students in the Department of Geological Sciences. Approval of department.
Individual study on rock deformation or major expressions of deformation. From two to seven weeks of field study during semester breaks may be required for certain research projects.

898 Special Problems in Environmental Geosociences
Fall, Spring, Summer. 1 to 4 credits. A student may earn a maximum of 6 credits in all enrollments for this course. R: Open only to graduate students in the Department of Geological Sciences. Approval of department.
Individual study on problems in environmental geosciences.

899 Master's Thesis Research
Fall, Spring, Summer. 1 to 10 credits. A student may earn a maximum of 36 credits in all enrollments for this course. R: Open only to master's students in the Department of Geological Sciences. Approval of department.
Master's thesis research.

999 Doctoral Dissertation Research
Fall, Spring, Summer. 1 to 24 credits. A student may earn a maximum of 120 credits in all enrollments for this course. R: Open only to doctoral students in the Department of Geological Sciences. Approval of department.
Doctoral dissertation research.

GERMAN GRM

Department of Linguistics and Germanic, Slavic, Asian and African Languages
College of Arts and Letters

101 Elementary German I
Fall, Spring, Summer. 4(4-1) R: No previous experience in German or designated score on German Placement Test. Not open to students with credit in GRM 150.
German language, civilization, and culture for beginning students. Work on all language skills with emphasis on speaking.

102 Elementary German II
Fall, Spring, Summer. 4(4-1) P: (GRM 101) or designated score on German placement test. Not open to students with credit in GRM 150.
Further study of German language, civilization, and culture for beginning students. Continued work on all language skills with emphasis on speaking.

103 Self-Paced Elementary German I
Fall, Spring, Summer. 2 to 4 credits. A student may earn a maximum of 4 credits in all enrollments for this course. RB: Some German coursework in High School. Not open to students with credit in GRM 101.
Self-paced introduction to German language, civilization and culture including web-based activities.

104 Self-Paced Elementary German II
Fall, Spring, Summer. 2 to 4 credits. A student may earn a maximum of 4 credits in all enrollments for this course. P: (GRM 101 or GRM 103) or designated score on German placement test. RB: Some German coursework in High School Not open to students with credit in GRM 102.
Further self-paced study of German language, civilization, and culture for beginning students including web-based activities.

200 Second-Year German I with Review
Fall. 4(4-1) P: (GRM 102) or designated score on German placement test. Not open to students with credit in GRM 102 or GRM 201.
Rapid review and strengthening of vocabulary, grammar, and communication skills for incoming freshmen and transfer students. Reading, viewing, and discussion of a broad range of cultural texts and materials from the German-speaking world.

201 Second-Year German I
Fall, Spring. 4(4-0) P: (GRM 102) or designated score on German placement test. Not open to students with credit in GRM 200.
Intermediate-level development of all language skills. Reading, viewing, and discussion of a broad range of cultural materials from the German-speaking world.

202 Second-Year German II
Fall, Spring. 4(4-0) P: (GRM 201) or designated score on German placement test.
Further intermediate-level work on all language skills, based on topics such as popular music, literature, film, current events, and culture. Transition course to advanced work in German studies.

250 German Literature and Culture in English
Fall. 3(3-0) A student may earn a maximum of 9 credits in all enrollments for this course.
Selected representative texts or themes in the cultures of German-speaking countries.

290 Independent Study
Fall, Spring. 1 to 4 credits. A student may earn a maximum of 8 credits in all enrollments for this course. R: Approval of department.
Special projects arranged by an individual student and a faculty member in areas supplementing regular course offerings.

301 Third-Year German I
Fall, Spring. 3(3-0) P: (GRM 202) or designated score on German placement test.
Advanced speaking, listening comprehension, reading, and writing skills. Intensive work with authentic texts dealing with contemporary issues in the German-speaking world. Selected review of grammar and syntax.

302 Third-Year German II
Fall, Spring. 3(3-0) P: (GRM 301)
Continuation of GRM 301. Intensive work with original texts dealing with contemporary issues in the German-speaking world.

311 Business German I
Fall. 3(3-0) P: (GRM 202) or designated score on German placement test. R: Not open to freshmen.
Development of proficiency through readings, discussions, and assignments based on materials dealing with the German economic system and Germany in world trade. Taught in German.

312 Business German II
Spring. 3(3-0) P: (GRM 311) R: Not open to freshmen.
Further readings, discussions, and assignments based on materials dealing with key areas of German business such as management and corporate hierarchies. Taught in German. Research paper required.

325 Third-Year German: Oral Communication
Spring, Summer. 3(3-0) P: (GRM 202) or designated score on German placement test.
Development of listening comprehension and oral communication in German beyond the intermediate level. Expansion of vocabulary, use of idiomatic expressions and review of grammatical structures relevant for speaking.

341 German Literature and Culture Before 1918
Spring. 3(3-0) P: (GRM 202) or designated score on German placement test.
Historical, social, and cultural developments in the German-speaking world before 1918 as revealed in textual material in German, including literature, essays, and film.

342 German Literature and Culture since 1918
Fall. 3(3-0) P: (GRM 202) or designated score on German placement test. SA: GRM 340
Historical, social, and cultural developments in the German-speaking world since 1918 as revealed in textual material in German, including literature, essays, and film.

400 Reading German for Graduate Students
Spring of even years. 5(5-0) R: Open only to graduate students or approval of department.
German grammar and syntax, with emphasis on reading and translation in specialized fields.

420 Advanced German (W)
Fall, Summer. 3(3-0) Summer: Mayen, Germany. P: Completion of Tier I writing requirement. RB: Two of the following courses: GRM 301, GRM 302, GRM 311, GRM 312, GRM 325, GRM 341 or GRM 342.
Advanced language skills using a variety of media. Review of grammar and syntax with attention to idomatic usage and stylistic variation. Major writing project.