

GEOSCIENCES (GEOS)

GEOS 104 Natural Hazards and Disasters

(3 Credits, Fall/Spring)

Examination of the Earth's geologic and atmospheric processes that impact modern society. Natural processes that adversely affect humans are examined, including earthquakes, volcanic eruptions, hurricanes, floods, wildfires, meteorite impacts, landslides, tsunamis, tornadoes, drought, space weather, lightning, and climate trends. Students study patterns of occurrence, research, prediction, and mitigation, and our adaptation to natural hazards and disasters. PRE/COREQ: GEOS 104L. *(This CWI course meets Idaho State Board of Education GEM competency requirements for GEM 4 - Scientific Ways of Knowing.)*. (3 lecture hours, 0 lab hours, 3 credits)

GEOS 104L Natural Hazards and Disasters Lab

(1 Credit, Fall/Spring)

This lab accompanies GEOS 104. Lab experiences include analysis and interpretation of resources, information, and events that address causes, impacts, prediction, mitigation, and distribution of various natural disasters. PRE/COREQ: GEOS 104. *(This CWI course meets Idaho State Board of Education GEM competency requirements for GEM 4 - Scientific Ways of Knowing.)*. (0 lecture hours, 2 lab hours, 1 credits)

GEOS 105 Earth's Natural Resources

(3 Credits, Fall/Spring)

Examination of the ways we can sustainably continue to collect and use Earth's natural resources while facing increasing global population and demand. Considerations will include environmental, economic, political, and earth system perspectives. For each resource covered we will explore the science of the resource as well as environmental and sustainability concerns. Topics will include energy resources (e.g. fossil fuels, alternative sources, and nuclear power), metals, life-supporting resources (e.g. building materials, industrial materials, and fertilizers), water and soil resources, and biological resources (e.g. wood, fish, and animals). *(This CWI course meets Idaho State Board of Education GEM competency requirements for GEM 4 - Scientific Ways of Knowing OR the CWI Global Perspectives requirement. [It will not fulfill both requirements.]*). (3 lecture hours, 0 lab hours, 3 credits)

GEOS 170 Earth's Weather and Climate

(3 Credits, Fall/Spring/Summer)

Students explore the basic principles of weather and climate as well as causes and effects. Emphasis is placed on understanding basic elements and controls of weather and climate including atmospheric composition, temperature, pressure, precipitation, and wind. Topics also include severe storm analysis such as thunderstorms, tornadoes, and hurricanes and the influences of weather on humans. Techniques and principles involved in interpreting weather data, weather maps, and forecasting will also be introduced. *(This CWI course meets Idaho State Board of Education GEM competency requirements for GEM 4 - Scientific Ways of Knowing.)*. (3 lecture hours, 0 lab hours, 3 credits)

GEOS 199 Geosciences Special Topics

(1-5 Credits, Varies)

This course is designed to permit the offering of special topics appropriate to a student's program. Regular or frequently recurring topics are not offered under this title. The course may be repeated as new topics are presented. (1 lecture hours, 0 lab hours, 1 credits)

GEOS 208 Hydrology and Water Resources

(4 Credits, Spring)

Introduction to the hydrologic sciences with an emphasis on processes most relevant to the western United States. Topics include surface water, groundwater, water quality, precipitation, river processes, water supplies, climate change, watershed distribution, water conservation, dams, irrigation, and surficial geology. Interactions of humans, water, and the environment will be closely studied. Laboratory exercises include experiences in the collection, analysis, and interpretation of water data, maps, water quality, and other variables. Local field trips will be taken. PRE/COREQ: MATH 143 and one of the following lecture/lab courses: GEOL 101 and GEOL 101L, GEOG 100 and GEOG 100L, or ENVI 100 and ENVI 100L. (3 lecture hours, 2 lab hours, 4 credits)

GEOS 270 Global Climate Change

(3 Credits, Fall/Spring)

This course introduces students to the science behind global climate change. Students will learn to integrate a variety of scientific disciplines that contribute to Earth System science. Utilizing the scientific method, students will evaluate the global climate as it has changed and predict future patterns. In addition, the course will evaluate climate impacts, climate adaptation, and climate mitigation. Students will be challenged to critically evaluate information and make informed decisions on climate change and its ramifications. This course is cross-listed with GEOG 270. *(This CWI course meets Idaho State Board of Education GEM competency requirements for GEM 4 - Scientific Ways of Knowing.)*. (3 lecture hours, 0 lab hours, 3 credits)

GEOS 275 Field Geology

(4 Credits, Fall)

This field-based course is designed to serve as a capstone for students who are pursuing an AS degree in Geosciences. Providing a unique early opportunity to gain roughly 90 hours of field experience, students will learn both traditional and modern field techniques, expand their knowledge by visiting and studying exceptional geologic localities within a specific region, develop scientific writing skills, and learn to create digital figures to aid in technical communication. Field projects will typically range in scale from one to four weeks in duration with the addition of two-weekend trips and will be supported by weekly homework assignments. PREREQ: GEOL 101 and GEOL 101L with a grade of C or higher, or GEOL 102 and GEOL 102L with a grade of C or higher, or PERM/INST. (1 lecture hours, 6 lab hours, 4 credits)

GEOS 293 Geosciences Internship

(1-3 Credits, Varies)

Internships allow students to apply learning to real-life career possibilities. Credits are earned through supervised fieldwork specifically related to a student's area of study. PREREQ: PERM/INST. (0 lecture hours, 3 lab hours, 1 credits)

GEOS 296 Geosciences Independent Study

(1-10 Credits, Varies)

This is a term long project. Each credit hour is equivalent to 45 hours of work on a project. Students should make arrangements with the instructor in their field of interest. Before enrolling for independent study, a student must obtain approval of the department chair and dean, acting on the recommendation of the instructor who will be supervising the independent study. An Independent Study Registration Form must be completed and turned into a One Stop Student Services location before a student may register for this course. PREREQ: PERM/INST and submission of a completed Independent Study Registration Form. (0 lecture hours, 0 lab hours, 1 credits)

Refer to How to Read Course Descriptions for an explanation of elements found in the course descriptions above.