**GEOG 102 Earth and Environment** (Cross-listed with ENVS 102)

Students successfully completing this course will be able to:

1. Describe the fundamental workings of the atmospheric, hydrospheric, lithospheric, and oceanic systems of Earth
2. Explain the interactions between these Earth systems
3. Describe the basic geophysical methods used to monitor these Earth systems.
4. Solve basic analytical problems related to these Earth systems.
5. Quantify and describe key environmental parameters in meteorology, climatology, hydrology, and geomorphology using relevant field and laboratory methods.

**GEOG 110 Introduction to ArcGIS** (Cross-listed with ENVS 110)

Students successfully completing this course will be able to:

1. Correctly use GIS terminology and describe what it means to think of the world in spatial terms
2. Describe a GIS framework, its capability and its limitations
3. Acquire and compile data, conduct basic analyses and construct maps with ArcGIS, the commonly used GIS software today.
4. Design and execute an independent GIS project.

**GEOG 111 Introduction to Differential GPS** (Cross-listed with ENVS 111)

Students successfully completing this course will be able to:

1. Explain the basic principles of how GPS functions, including differential correction
2. Demonstrate the use of various GPS units for purposes of navigation and data acquisition
3. Correctly transfer data to and from GPS equipment, including mapping of GPS data with a geographic information system (GIS).
4. Design and execute an individual GPS project.
GEOG 212 Natural Hazards (Cross-listed with ENVS 212)

Students successfully completing this course will be able to:

1. Differentiate between natural hazards and natural disasters.
2. Describe how human activities influence our relative safety while living on a tectonically dynamic planet.
3. List strategies for risk assessment and describe how mitigation plans are developed.
4. Identify methods used to collect data from specific natural disaster events.
5. Explain the simple mathematics and statistical methods used to analyze data from specific natural disaster events in determining recurrence intervals, the energy released by the event, and the cost of remediation.
6. Explain how results from the analyses of data from specific natural disaster events can be used in planning for mitigation for future occurrences.
7. List and describe how and where different types of natural hazards occur, and methods to better predict them and/or live with their inevitability.