GEOGRAPHY / GEOG INFO SYSTEMS (GEOG)

GEOG 100 Introduction to Geography (4 Credits)
Designed to examine the key themes, concepts and ideas in geography and to develop a geographical perspective of the contemporary world. A basic foundation of the fundamental themes in geographic education will be extended to the study of places and regions. Emphasis will be placed on the development of cartographic and map interpretation skills.

GEOG 106 Economic Geography (4 Credits)
Recommended preparation: minimum placement into WR 065.
Introduces the distribution of economic activities across the nation and the world. Explores core issues such as economic development, resource distribution and use, global agriculture, changes in manufacturing and the growth of the service sector. Urban patterns are explained in the context of our interrelated, globalized world. Useful course for business majors or any student wanting to understand criteria for business location.

GEOG 107 Cultural Geography (4 Credits)
Recommended preparation: minimum placement into WR 065.
Examination of different cultural traits in the world. Special emphasis on perception of space and landscape, language, world religion and folk and popular culture issues.

GEOG 190 Environmental Geography (4 Credits)
Recommended preparation: WR 121.
Introductory view of the environment and how it is shaped by and shapes human activity. Units include famine, water resources, deforestation, energy use, biodiversity and sustainable land-use practices.

GEOG 198 Field Geography of Central Oregon (3 Credits)
Recommended preparation: WR 121.
Field course that examines natural and cultural landscapes of Central Oregon sub-regions such as the Bend Core, Sisters Country, High Desert, and Upper and Lower Deschutes Basins.

GEOG 199 Selected Topics: Geography (1-4 Credits)
Series of mini-courses focusing on selected geographical topics including the following: an invitation to geography and natural regions of the world (deserts, mountains, humid tropics) and thematic topics.

GEOG 201 World Regional Geography I (4 Credits)
Recommended preparation: WR 121.
Introductory Geography course that explores the following regions: Europe, the former Soviet Union, Anglo-America, Australia and Japan. Evaluate how culture, politics, economics, history and the physical environment help create differences across regions.

GEOG 202 World Regional Geography II (4 Credits)
Recommended preparation: WR 121.
Introductory Geography course that explores the following regions: Latin America, Middle East/North Africa, Sub-Saharan Africa, East, South and Southeast Asia. Evaluate how culture, politics, economics, history and the physical environment help create differences across regions.

GEOG 211 Computer Cartography (4 Credits)
Develops skills needed to produce maps using ArcGIS Desktop software. Outlines cartographic principles and map use. Emphasis on mapping techniques within a GIS. Intended for students enrolled in GIS or UAS programs.

GEOG 212 Tourism And Recreation (3 Credits)
Recommended preparation: WR 065.
Includes a study of various components of the tourist industry and an analysis of the economic and environmental impacts of tourism and recreation upon communities. Examines tourism and recreation in Central Oregon and in other selected parts of the world.

GEOG 213 Geography of Pacific Northwest (3 Credits)
Recommended preparation: WR 065.
General introduction to geographical characteristics of the Pacific Northwest and, through this regional emphasis, to some of the basic principles and concepts of geography as a discipline. Comprises three broad sections dealing in turn with historical geography, physical geography and economic geography.

GEOG 265 Geographic Information Systems (4 Credits)
Introduces students to principles and practice of GIS, while providing experience using ArcGIS Desktop and Spatial Analyst software. Develops both theoretical understanding of GIS and experience in accessing GIS datasets. Students exposed to raster and vector GIS.

GEOG 266 Arc GIS (5 Credits)
Recommended preparation: or to be taken with GEOG 265.
Provides working knowledge of ArcGIS Desktop software. In addition, students undertake designing and developing a GIS database, performing spatial analysis, creating maps, and generating a report using the desktop products.

GEOG 267 Geodatabase Design (5 Credits)
Recommended preparation: GEOG 266.
Covers fundamentals of creating, using, editing, and managing spatial and attribute data stored in a geodatabase in ArcGIS. Topics include data migration; data loading; topology rules; use of subtypes, attribute domains, and relationship classes. Also covered are creation, editing and analysis of geometric networks.

GEOG 270 Map Interpretation and Design (4 Credits)
Recommended preparation: MTH 60 or equivalent.
Looks at the world of maps. How to design, interpret and critique many forms of maps.

GEOG 272 Geography for Teachers (3 Credits)
Recommended preparation: WR 121.
Designed for public and private school teachers in Geography and for all teachers wishing to include geographic content and concepts in their social studies classes. Emphasizes how to teach Geography at any grade level and incorporates the benchmarks and curriculum goals of the state of Oregon Department of Education as well as National Geography standards.

GEOG 273 Spatial Data Collection (5 Credits)
Provides the skills to collect location information for the purpose of integration with a Geographic Information System. The focus is on proper utilization of Global Positioning System (GPS) receivers and data collection. Intended for students enrolled in the second year of GIS or UAS programs, or similar academic preparation (see program director for details).
GEOG 275 GIS Capstone (5 Credits)  
**Recommended preparation:** GEOG 285.  
Culmination GIS project. Students are presented with a set of criteria and perform all steps necessary to complete the project including: project planning, designing and developing a GIS database, data collection and editing, performing spatial analysis, creating maps, generating reports and presenting of project output. See instructor for details.

GEOG 278 Physical Geography-Landforms and Water (4 Credits)  
Introduction to the science of landforms and the processes that form them, including both internal and external processes, and how these processes interact and form a system. The course will survey different landform types, such as fluvial, Aeolian, glacial, volcanic, coastal, karst, and periglacial landforms and identify where, on a global basis, these landforms are likely to occur.

GEOG 279 Physical Geography-Weather and Climate (4 Credits)  
This course is an introduction to the sciences of meteorology and climatology. The focus of study for the meteorology section of the course will be on the troposphere, which is the layer of the atmosphere closest to the earth. The last portion of the course will study climatic classification and the relationship of climate with natural vegetation and human activity.

GEOG 280 Co-op Work Experience GIS (1-3 Credits)  
**Prerequisites:** instructor approval.  
Provides opportunity for on-the-job experience in the GIS field. Normally taken summer term, but may occur during any term. See instructor for details.

GEOG 284 GIS Customization (5 Credits)  
**Recommended preparation:** CIS 122.  
Utilizes techniques to customize ArcGIS software through use of a current programming language. Publishing content to the Internet and Servers is also undertaken.

GEOG 285 Data Conversion and Documentation (5 Credits)  
**Recommended preparation:** GEOG 266.  
Covers a variety of techniques to collect and convert data between various formats, projections and coordinate systems, etc. Cultivates student’s ability to research and experiment with data and enhance problem-solving skills. Stress use of metadata which allows the data user to determine whether a particular data set is suitable for its proposed use.

GEOG 286 Remote Sensing (5 Credits)  
Introduces students to the theory and methods of remote sensing through use of satellite imagery. Practical exercises involve use of SPOT, LANDSAT and Quickbird images with ArcGIS/Imagine Analysis software. Digital analysis is discussed and performed including preprocessing, image classification and image evaluation. Intended for students enrolled in the second year of GIS or UAS programs, or similar academic preparation (see program director for details).

GEOG 287 Analysis of Spatial Data (5 Credits)  
**Recommended preparation:** GEOG 266.  
Leads students through the analytical capabilities of GIS. Course begins with the more elementary but useful techniques involving locating and describing features, then proceeds to more advanced techniques based on higher-level spatial objects. Lab exercises utilize the Spatial Analyst Extension of ArcGIS to perform analysis of raster datasets.

GEOG 288 Special Studies: GIS (1-5 Credits)  
GEOG 290 Environmental Problems (3 Credits)  
**Recommended preparation:** WR 121.  
Examines intentional and inadvertent human modification of the natural environment and local, regional and global problems it may cause. Includes deforestation, urbanization, resource depletion and climate.

GEOG 295 Wilderness and Society (4 Credits)  
Cultural and historical overview of the changing attitudes toward wilderness as reflected through literature and the history of federal land legislation. Attempts to define the social and economic values of wilderness lands and where they occur geographically. A reading intensive course.

GEOG 298 Independent Study: Geography (1-4 Credits)  
**Prerequisites:** instructor approval.  
**Recommended preparation:** prior coursework in the discipline.  
Individualized, advanced study in geography to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading.

GEOG 299 Selected Topics: Geography (1-4 Credits)  
This course is in development.