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 101 Introduction to Geospatial Science & GIS (4 Credits)
Introduces science underlying geospatial technologies including geographic information systems, global positioning systems, satellite and unmanned aerial systems imagery, and cartography. Introduces how geospatial technology can be used with the scientific method to investigate questions in a broad range of fields including the sciences, social sciences, and humanities.

GEOG 106 Human Geography: Global Enterprise and the Environment (4 Credits)
Recommended preparation: WR 060 (or higher) or minimum placement Wr/Comm Level 5.
Introduces the distribution and relationship of economic activities across space. Integrates ideas related to business, international relations, and sustainability into a global and geographic framework.

GEOG 107 Human Geography: The Cultural Landscape (4 Credits)
Recommended preparation: WR 060 (or higher) or minimum placement Wr/Comm Level 5.
Examines key cultural traits and how those traits vary around the world. Develops concepts of interest to students in education and those planning to work with individuals from diverse cultural background in a global and geographic framework.

GEOG 188 Special Studies: Geography (1-4 Credits)
Explores topics of current interest in the geography discipline.

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 (2 Credits)
Recommended preparation: WR 121.
Explore and understand the diverse natural and cultural landscapes of Central Oregon. Travel to locales across the region by van during five full days in this field-based course.

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.
Explore the developed world by comparing culture, politics, economics, history, urbanization, and the physical environment in this introductory geography course.

GEOG 202 World Regional Geography II (4 Credits)
Recommended preparation: WR 121.
Explore the lesser developed world by comparing culture, politics, economics, history, urbanization, and the physical environment in this introductory geography course.

GEOG 211 Cartography (4 Credits)
Develops skills needed to produce maps with ArcGIS software. Outlines cartographic principles and map use. Emphasizes mapping techniques within a geographic information system (GIS). Intended for students enrolled in GIS or unmanned aerial systems programs.

GEOG 212 Tourism And Recreation (3 Credits)
Recommended preparation: WR 060 (or higher) or minimum placement Wr/Comm Level 5.
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 geographic information systems (GIS), while providing experience using ArcGIS and Spatial Analyst software. Develops both theoretical understanding of GIS and experience in accessing GIS datasets. Covers raster and vector GIS.

GEOG 266 ArcGIS (4 Credits)
Recommended preparation: or to be taken with GEOG 265.
Provides working knowledge of ArcGIS software. Covers designing and developing a geographic information system database, performing spatial analysis, creating maps, and generating a report with software.

GEOG 267 Geodatabase Design (4 Credits)
Recommended preparation: GEOG 266.
Covers fundamentals of creating, using, editing, and managing spatial and attribute data in ArcGIS. Explores data migration; data loading; topology rules; use of subtypes, attribute domains, and relationship classes. Includes creating, editing, and analyzing geometric networks.

GEOG 270 Map Interpretation and Design (4 Credits)
Recommended preparation: MTH 060 (or higher) or minimum placement Math Level 10.
Looks at the world of maps. Covers 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 (4 Credits)
Provides the skills to collect location information for integration with a geographic information system (GIS). Focuses on proper use of the Global Positioning System 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 (4 Credits)
Recommended preparation: GEOG 285.
Provides a capstone experience to the Geographic Information Systems (GIS) program. Presents criteria to complete the project, including project planning, designing and developing a GIS database, collecting and editing data, performing spatial analysis, creating maps, generating reports, and presenting project output. (See instructor for details.)

GEOG 278 Physical Geography: Landforms in Nature (4 Credits)
Understand how activities occurring beneath and on Earth's surface mold and sculpt landforms. Investigate how natural resources and hazards are associated with these landforms and their dynamic processes.

GEOG 279 Physical Geography: From Severe Weather to Climate Change (4 Credits)
Introduces the basics of weather and climate and the differences between the two. Investigates the factors that lead to daily variations in weather and its prediction. Understand the causes of climate change, including the contribution of human activity and how climate change can be mitigated.

GEOG 280 Co-op Work Experience GIS (1-3 Credits)
Prerequisites: Instructor approval required.
Provides experience in which students apply previous GIS classroom learning in an occupational setting. Credits depend on the number of hours worked. P/NP grading.

GEOG 284 GIS Customization (4 Credits)
Customize ArcGIS software with a current programming language. Publish content to the internet and servers.

GEOG 285 Data Conversion and Documentation (4 Credits)
Recommended preparation: GEOG 266.
Covers techniques to collect and to convert data between formats, projections, and coordinate systems. Cultivates research and experimentation with data and enhances problem-solving skills. Emphasizes metadata use, which allows the data user to determine whether a particular data set is suitable for its proposed use.

GEOG 286 Remote Sensing (4 Credits)
Introduces theory and methods of remote sensing with satellite imagery. Covers use of SPOT, Landsat, and QuickBird images with ArcGIS and IMAGINE analysis software. Perform digital analysis, 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 Spatial Analysis (4 Credits)
Recommended preparation: GEOG 266.
Explores analytical capabilities of geographic information systems. Covers techniques to locate and to describe features and moves to advanced techniques based on higher-level spatial objects. Use the ArcGIS Spatial Analyst extension to analyze raster datasets in the lab.

GEOG 288 Special Studies: Geography (1-4 Credits)
Explores topics of current interest in the geography discipline.

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.