

Geoscience (GEOS)

GEOS 210 Introduction to Geographic Information Systems 3 Credits (2,1)

Overview of GIS: spatial data acquisition, manipulation, analysis, and graphic presentation. GIS theory and practical applications. Computer-based exercises focus on training in storing, retrieving, manipulating, analyzing, and displaying spatial data.

Course Offered at: Daytona Beach, Prescott

GEOS 215 Introduction to Geoscience 3 Credits (3,0)

Overview of geologic time scales; plate tectonics; volcanism; hydrologic cycle; climate classification; glaciology; oceanography; chemical and physical weathering; fluvial processes; topographic mapping; orogenesis.

Course Offered at: Daytona Beach, Prescott

GEOS 220 Geography of Natural Hazards 3 Credits (3,0)

Global perspectives on societal, environmental, and atmospheric impacts of natural hazards on interdisciplinary perspectives from the fields of Geography, Atmospheric Science, Oceanography, and Social Sciences; earthquakes, volcanoes, tsunamis, hurricanes, tornadoes, floods, heat waves, winter storms, fire, and coastal processes; global case studies illustrating the impact of natural hazards on human vulnerability, resiliency, and adaptability.

Course Offered at: Daytona Beach

GEOS 299 Special Topics in Geoscience 1-6 Credit (1-6,0)

Individual, independent, or directed studies of selected topics in geoscience.

Course Offered at: Daytona Beach, Prescott

GEOS 310 Advanced Geographic Information Systems 3 Credits (1,2)

Focus on current GIS theories and technology trends. Practical GIS applications through hands-on technical training and scholarly research project. Weekly discussions on developments in GIS.

Prerequisites: GEOS 210

Course Offered at: Daytona Beach, Prescott

GEOS 350 Introduction to Remote Sensing with GIS 3 Credits (3,2.5)

Remote sensing imagery analysis using GIS. Hands-on course with tutorials guiding students through image analysis techniques. Practical aspects of obtaining, manipulating, and processing remote sensing data from various satellite and airborne sensors.

Prerequisites: GEOS 210

Course Offered at: Prescott

GEOS 392 Research Methods in Aviation Sustainability 3 Credits (3,0)

Integration of environmental, economic, and social sustainability principles in aviation contexts; sustainable aviation technologies; life cycle assessment and carbon accounting in aviation operations; stakeholder analysis and ethical considerations in aviation sustainability; critical review and synthesis of peer-reviewed research and white papers; project design and implementation in sustainability-focused aviation challenges; communication of technical and policy-oriented sustainability solutions to diverse audiences.

Prerequisites: ASCI 216

Course Offered at: Daytona Beach

GEOS 399 Special Topics in Geoscience 1-6 Credit (1-6,0)

Individual, independent, or directed studies of selected topics in geoscience.

Course Offered at: Daytona Beach, Prescott

GEOS 402 Geo Info System Applications 3 Credits (3,0)

Application of GIS for project management and problem solving. Geospatial data acquisition, 2D/3D visualization, location analysis, geographic distribution, pattern analysis, and current GIS developments.

Prerequisites: GEOS 310

Course Offered at: Daytona Beach, Prescott

GEOS 450 Lidar Processing with GIS 3 Credits (3,0)

Hands-on lidar data analysis for remote sensing applications. Tutorials guide students through lidar data acquisition, processing, and analysis from various platforms. Focus on elevation, vegetation structure, and terrain data analysis.

Prerequisites: GEOS 210

Course Offered at: Prescott

GEOS 499 Special Topics in Geoscience 1-6 Credit (1-6,0)

Individual, independent, or directed studies of selected topics in geoscience.

Course Offered at: Daytona Beach, Prescott