

# GEOGRAPHY AND PLANNING (GEO)

*College of Business and Public Management*

## Courses

### **GEO 101. World Geography. 3 Credits.**

The scope of geography and understanding of the world's regions generated by it. Human society is examined in a frame of spatial, environmental, and resource factors. Map skills and other 'tools' of geography are introduced.

Gen Ed Attribute: Behavioral and Social Science Distributive.

Distance education offering may be available.

Typically offered in Fall, Spring & Summer.

### **GEO 102. Physical Geography. 3 Credits.**

The study of basic principles of physical geography and of relationships between components of the total earth environment.

Typically offered in Fall.

### **GEO 103. Human Geography. 3 Credits.**

An inquiry into the theoretical and applied approaches to the study of human spatial behavior and the distribution of social problems.

Gen Ed Attribute: Behavioral and Social Science Distributive.

Distance education offering may be available.

Typically offered in Spring & Summer.

### **GEO 104. Introduction to Geospatial Technology and Analytics. 3 Credits.**

This course develops critical thinking skills through the exploration of the fundamental components of data analytics in terms of spatial data and geospatial technologies. This includes the basic concepts and skills related to the 3 core areas of analytics, 1) data, 2) analysis, and 3) visualization. Data structures and skills are examined within the context of Geographic Information Systems (GIS). Spreadsheets, database tools, GIS software, and geospatial technology are used to capture, manage, and store spatial data. Analysis tools, such as spreadsheet functions, scripts, and GIS software are used to investigate data sets related to discipline-specific projects. Geovisualization of results are communicated using map applications, dash boards, and story maps.

Gen Ed Attribute: Science Distributive Requirement.

Typically offered in Fall & Spring.

### **GEO 200. Global Cities. 3 Credits.**

This course introduces students to historical and current spatial patterns within global cities. This class will discuss the major concepts of urban development and growth, globalization, and city systems using lectures, class discussion, and videos. The goal of the course is to provide the students with an understanding of the basic principles of geography and apply those principles to the study of cities across the globe. The course emphasizes the environmental and human characteristics that make cities distinctive collectively and individually.

Gen Ed Attribute: Behavioral and Social Science Distributive.

Distance education offering may be available.

Typically offered in Spring & Summer.

### **GEO 204. Introduction to Urban Studies. 3 Credits.**

An examination of the breadth of urban studies from the perspectives of many social science disciplines. Philadelphia is emphasized as an object of perception, as a place of life and livelihood, and as an example of continual change in the urban environment.

Gen Ed Attribute: Diversity Requirement, Interdisciplinary Requirement.

Distance education offering may be available.

Typically offered in Fall & Spring.

### **GEO 205. Geography of Agriculture, Food & Sustainability. 3 Credits.**

Human beings eat food daily and this necessity has led to conversion of half of the Earth's land surface to agricultural use. This course introduces students to the spatial patterns of agricultural systems on the planet, the physical geography related to them. Students will investigate the impacts of modern agriculture on the environment, and human culture and health. This will be followed by an introduction to sustainable alternatives including local small scale organic agriculture, urban gardening, and resilient diverse food cropping systems. Students will choose a region of the world to study sustainable agricultural systems and prepare a regional food dish to share with the class.

Gen Ed Attribute: Behavioral and Social Science Distributive.

Typically offered in Fall.

### **GEO 213. GIS for the Social Sciences. 3 Credits.**

A course in mapping in the political, economic, and social features of places and the analysis of those maps using the Arc View component of ESRI's ARC GIS. Introductory course but with hands-on technology experience; suitable for majors in political science, social work, economics, and other social science disciplines.

Typically offered in Spring.

### **GEO 214. Introduction to Planning. 3 Credits.**

The methods of analyzing problems of urban and regional planning. Emphasis is placed on systems of housing, recreation, transportation, industry, and commerce.

Gen Ed Attribute: Behavioral and Social Science Distributive.

Distance education offering may be available.

Typically offered in Fall.

### **GEO 215. GIS for Criminal Justice Careers. 3 Credits.**

A course in crime mapping and the analysis of maps of crime patterns, police services, locations of criminal incidents, offenders' geographical behaviors, and spatial trends in crime.

Typically offered in Fall & Spring.

Cross listed courses GEO 215, CRJ 215.

### **GEO 225. Introduction to Maps and Remote Sensing. 3 Credits.**

Introduction to mapping and remote sensing. Thorough exposure to grid coordinate systems, representative fractions/scale, map projections, and mapping systems. Also, aerial photographs, digital orthophotos, satellite images, and computers as tools.

Typically offered in Fall.

### **GEO 230. Environmental Conservation and Sustainability. 3 Credits.**

An inquiry into the problems of resources protection, management and sustainability. Emphasis is placed on the United States.

Gen Ed Attribute: Behavioral and Social Science Distributive.

Typically offered in Fall & Spring.

### **GEO 301. Geography of United States and Canada. 3 Credits.**

An examination of the complexity and diversity of the physical and human landscapes of the U.S. and Canada. Both rural and urban geography are studied with an emphasis on recent geographic changes of influence: such as the shift from an emphasis on production to one on service and consumption, the growing importance of cities, and increasing racial and ethnic diversity.

Typically offered in Fall.

### **GEO 302. Geography of Latin America. 3 Credits.**

Central and South America are studied with emphasis on geographic understanding of the major sources of change in recent times. The course focuses on selected individual countries in addition to presentation of the region as a whole.

Gen Ed Attribute: Foreign Language Culture Cluster, Spanish Culture Cluster.

Typically offered in Fall & Spring.

### **GEO 303. Geography of Europe. 3 Credits.**

A survey course focusing on the regional geography of Europe. The course includes and examination of the physical environment, cultural traditions, lifestyles, economies, urban environment and political change throughout the region.

Gen Ed Attribute: Foreign Language Culture Cluster, France & Francophone Area Culture Cluster, Germany Culture Cluster, Italy (Italian) Culture Cluster.

Distance education offering may be available.

Typically offered in Fall, Spring & Summer.

### **GEO 304. Geography of Asia. 3 Credits.**

This course is a survey course focusing on the geography of Asia. This course utilizes a systematic approach to understanding Asia's geography and includes an examination of the physical environment, the cultural traditions, lifestyles, economies, development, and urban environment throughout the Asia region. The course focuses on the regions of South, Central, East, and Southeast Asia. Russia and the eastern countries of the former Soviet Union are also covered.

Gen Ed Attribute: Foreign Language Culture Cluster, Russia & Eastern Europe Culture Cluster.

Typically offered in Spring & Summer.

### **GEO 310. Population Geography. 3 Credits.**

An introduction to theories, concepts, processes and geographical patterns of human population.

Gen Ed Attribute: Writing Emphasis.

Typically offered in Spring.

**GEO 312. Urban Geography. 3 Credits.**

Analysis of patterns, processes, and consequences of urban growth and development. Theory of systems, size, spacing, and functions of cities. Students will conduct outside analysis using real data.

Gen Ed Attribute: Diversity Requirement.

Typically offered in Fall, Spring & Summer.

**GEO 316. Planning for Resilient Communities and Natural Disasters. 3 Credits.**

This course provides students with the capacity to develop planning and public service skills to understand, diagnose and address causes, consequences, and mitigation and adaptation measures for a wide variety of emergencies and disasters. These events include natural hazards (such as earthquakes, volcanic eruptions, tsunamis, hurricanes, floods, and temperature extremes), accidents, terrorism and other extreme events such as climate change and environmental catastrophes that are both rapid and slow moving with often devastating impacts on social structures and the built and natural environments.

Typically offered in Fall.

**GEO 318. Economic Geography. 3 Credits.**

This course is concerned with the spatial patterns of economic activities, including production, consumption, and settlement. It provides an understanding of their location and the processes of change. The course is international in scope, with an emphasis on the global economy.

Typically offered in Fall.

**GEO 324. Intro to Geographic Information Systems. 3 Credits.**

Data sources and analysis techniques used in the planning process, with emphasis on appropriate applications. Students receive considerable experience in using geographic information systems technology to solve real-world problems.

Typically offered in Fall, Spring & Summer.

**GEO 325. Intro Business GIS. 3 Credits.**

This course provides a conceptual overview of geographical information systems as well as hands-on experience of software systems used in developing business management and marketing strategies. Attention is focused on using GIS technology as an analysis tool to improve decision making. Designed primarily for marketing majors.

Typically offered in Fall, Spring & Summer.

**GEO 326. Geographical Analysis. 3 Credits.**

Applications of basic statistical techniques to problems of spatial significance, emphasizing the adaptation of technique to problem, and the understanding and interpretation of specific analytical methods as applied to real-world situations.

Pre / Co requisites: GEO 326 requires prerequisites of MAT 103 or MAT 115 or MAT 113 or MAT 143 or MAT 121 or MAT 161 or MAT 131 or MAT 199.

Typically offered in Spring.

**GEO 328. Computer Cartography. 3 Credits.**

This course provides an overview of a variety of computer mapping programs and hands-on experience utilizing those programs. The course is structured to develop design skills related to the effective creation of maps. Graphic techniques are emphasized that relate to the effective display and communication of spatial phenomena.

Typically offered in Spring.

**GEO 331. Transportation Planning. 3 Credits.**

Important issues, descriptive and analytical, facing urban and suburban transportation are studied. Employment of the planning process emphasizes use of analytical tools.

Typically offered in Spring.

**GEO 332. Environmental Crises. 3 Credits.**

The nature and dimensions of environmental problems with an emphasis on endangered life-support systems. Aspects of natural and social environment systems and their mutual interrelationships.

Typically offered in Spring.

**GEO 334. Sustainable Living. 3 Credits.**

Practical solutions and innovative thinking in how students can adopt a more sustainable lifestyle personally and professionally. Three interconnected objectives of sustainability- economic vitality, environmental integrity, and social equity- will serve as core themes in the course.

Distance education offering may be available.

Typically offered in Summer.

**GEO 336. Environmental Planning. 3 Credits.**

Introduction to the concepts and tools of environmental planning which include landscape form and function in planning. Applications to local and regional issues are stressed.

Typically offered in Fall.

**GEO 338. Environmental Application of Geographic Information Systems (GIS). 3 Credits.**

This course reviews the principles of cartography and GIS in terms of environmental applications. Using ESRI's and ArcGIS software, students will add environmental, political, economic, and other types of data to computerized maps to explore environmental analysis. These data will then be spatially examined and manipulated to review the process of mapmaking and decision-making.

Typically offered in Fall & Summer.

**GEO 341. Landscape Analysis. 3 Credits.**

The study of contemporary geographical patterns of plants and animals, and the overall processes which influence landscape development and characteristics, such as climatic and geomorphic events, and anthropogenic activities.

Typically offered in Spring.

**GEO 352. Geopolitics. 3 Credits.**

A study of the casual relations between geographical phenomena and political or military power.

Typically offered in Spring.

**GEO 354. Geography and Planning of Housing. 3 Credits.**

This course provides an overview of the spatial, economic, social, physical, and political forces that structure and affect current housing conditions and prospects. This course introduces key concepts and institutions that influence the production, distribution, maintenance and location of housing. The Philadelphia metropolitan area is emphasized as a case study for understanding the implications of present housing policies and plans.

Typically offered in Fall.

**GEO 400. Senior Seminar In Geography. 3 Credits.**

The study of historical and contemporary trends in geography; the design, preparation, and defense of a research proposal.

Gen Ed Attribute: Writing Emphasis.

Typically offered in Fall.

**GEO 401. Internet Mapping. 3 Credits.**

This course reviews principles and applications of cartography and geographic information systems (GIS) in terms of internet and mobile mapping technologies. Web-distributed maps, internet map services, navigation/Global Positioning Systems (GPS) and cell phone based applications are examined through the use of ArcGIS Internet map server, Google Earth, Google APIs and cell phone applications.

Pre / Co requisites: GEO 401 requires prerequisite of GEO 225.

Typically offered in Fall & Summer.

**GEO 402. Topical Seminar. 3 Credits.**

Intensive examination of a selected area of study in the field of geography. Topics will be announced at the time of offering. Course may be taken more than once when different topics are presented.

Typically offered in Fall & Spring.

Repeatable for Credit.

**GEO 403. Planning and Design. 3 Credits.**

Selected experiences designed to assist the student (either as an individual or as a member of a group) in developing proficiency in information-providing techniques.

Typically offered in Spring.

Cross listed courses PLN 403, GEO 403.

**GEO 404. Senior Project in Geography. 3 Credits.**

The execution of the research proposal (designed in GEO 400) as an acceptable departmental senior research paper.

Pre / Co requisites: GEO 404 requires prerequisite of GEO 400.

Typically offered in Spring.

**GEO 410. Independent Study in Geography. 3 Credits.**

Research projects, reports, and readings in geography.

Consent: Permission of the Department required to add.

Typically offered in Summer.

Repeatable for Credit.

**GEO 412. GIS Applications in Health. 3 Credits.**

LEC (0), LAB (0)

This is an applied course covering the theory and applications of geographic information systems (GIS) for public health. The course includes an overview of the principles of GIS in public health and practical experience in its use. The practical component involves the use of desktop GIS software packages including ArcGIS.

Pre / Co requisites: GEO 412 requires a prerequisite of GEO 324.

Typically offered in Fall.

**GEO 415. Internship in Geography and Planning. 1-12 Credits.**

Practical job experience in applying geographic theory, executing substantive research, and engaging in community service in selected off-campus situations. Open only to upper-division B.A. majors and minors in geography/planning with permission of department chairperson.

Typically offered in Fall, Spring & Summer.

Repeatable for Credit.

**GEO 424. Geographic Information Systems Application. 3 Credits.**

A course to advance the student's knowledge of the design and implementation of geographic information systems.

Pre / Co requisites: GEO 424 requires prerequisite of GEO 324.

Typically offered in Spring.

**GEO 425. Business GIS Applications. 3 Credits.**

Intensive use of Geographical Information Systems (GIS) in the business environment to aid in better sales and marketing decisions. Course provides a conceptual overview of database management systems from MIS to geodatabases and their integration with a GIS. Case studies draw numerous examples from various businesses. Student tutorials provide hands-on opportunities for students to experience and learn how to use GIS within a business problem-solving framework.

Pre / Co requisites: GEO 425 requires prerequisite of GEO 325.

Typically offered in Fall & Spring.

**GEO 427. Geodatabase System. 3 Credits.**

The course teaches students the concepts and design of geographic database systems in the process of geographic analysis.

Typically offered in Spring.