

# DEPARTMENT OF GEOGRAPHY AND PLANNING

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## Advanced Placement Program

Refer to the University of Toledo's Registrar page at [https://www.utoledo.edu/offices/registrar/student\\_records/advan\\_credits.html](https://www.utoledo.edu/offices/registrar/student_records/advan_credits.html) ([http://www.utoledo.edu/offices/registrar/student\\_records/advan\\_credits.html](http://www.utoledo.edu/offices/registrar/student_records/advan_credits.html)) for specific information on minimum scores and credits awarded for Advanced Placement examinations administered by the College Board Advanced Placement Program.

## Degrees Offered

- B.A. in Geography (<https://catalog.utoledo.edu/undergraduate/arts-social-sciences-education/geography-planning/ba-geography/>)
- Geographic Information Science and Technology Certificate (<https://catalog.utoledo.edu/undergraduate/arts-social-sciences-education/geography-planning/geographic-information-science-and-technology-certificate/>)
- Urban and Regional Planning Certificate (<https://catalog.utoledo.edu/undergraduate/arts-social-sciences-education/geography-planning/urban-an-regional-planning-certificate/>)
- Minor in Geographic Information Science and Technology (<https://catalog.utoledo.edu/undergraduate/arts-social-sciences-education/geography-planning/minor-geographic-information-science-technology/>)
- Minor in Human and Environmental Geography (<https://catalog.utoledo.edu/undergraduate/arts-social-sciences-education/geography-planning/minor-human-environmental-geography/>)
- Minor in Urban and Regional Planning (<https://catalog.utoledo.edu/undergraduate/arts-social-sciences-education/geography-planning/minor-urban-regional-planning/>)

### GEPL 1010 People, Places, and Society

[3 credit hours]

This course provides an overview of the geographic dimensions of human diversity with an emphasis on understanding the uneven distribution of people and resources in the context of globalization. It is a systematic treatment of the major concepts of human geography and their application to modern problems, population, migration, cultural patterns and processes, political organization of space, agricultural and rural land use, industrialization and economic development, and urban land use. (not for major credit)

**Term Offered:** Spring, Summer, Fall  
Core Social Sciences, OT36 Social Science

### GEPL 1100 Environmental Sustainability

[3 credit hours]

While gaining a fundamental understanding of the world's physical environment, students explore the processes and spatial distributions of anthropological changes to the world's lands, freshwater, biota, oceans and atmosphere. Current issues such as global warming, acid rain, ozone depletion, deforestation and desertification are addressed.

**Term Offered:** Spring, Summer, Fall  
Core Social Sciences, OT36 Social Science

### GEPL 2010 Fundamentals Of Geography

[3 credit hours]

An introduction to basic geographic concepts of both physical and human geography, with emphasis on the interrelationships of people with their physical and cultural environments.

**Term Offered:** Spring

### GEPL 2020 Introduction to Geospatial Science

[3 credit hours]

Introduction to the basic concepts, definitions, theories, methods, and tools of geospatial science and technology (GIS&T). Topics include geographic information systems (GIS), remote sensing (RS), Global positioning systems (GPS), geo-visualization, and spatial statistics.

**Term Offered:** Fall

### GEPL 2030 Cultural Geography

[3 credit hours]

A learning-through-writing course. Systematic applications of the concepts of culture and cultural diversity to geographical themes and case studies.

**Term Offered:** Spring, Fall  
Multicultural Non-US Diversity

### GEPL 2040 World Regional Geography

[3 credit hours]

This course explores the cultural, demographic, socio-economic, historical and political geographies of the world outside of the United States. World regions are examined and discussed with a focus on the forces that create both differences and interconnections among regions. The course uses the themes of globalization and human-environmental interaction, with an emphasis on understanding how these forces operate at different scales to create our global geography.

**Term Offered:** Spring, Summer, Fall  
Core Social Sciences, Multicultural Non-US Diversity

### GEPL 2050 World Cities

[3 credit hours]

This course discusses the physical, cultural, socio-economic aspects of the mega cities of the world - the World Cities. It examines the causes and stages of growth and the decline of cities.

**Term Offered:** Spring, Fall

### GEPL 2110 Maps and Map Analysis

[3 credit hours]

This course provides an overview of the appropriate use of maps, a basic tool of analysis in geography and planning. Topics will include map scale and map projections, types of maps and their particular uses, elements of map design, effective communication with maps, special requirements of spatial data, and the fundamentals of spatial analysis using maps. The focus is on the use of maps as tools for spatial analysis and not the production of maps.

**Term Offered:** Fall

**GEPL 3030 Geography Of Europe**

[3 credit hours]

An introduction to the geography of Europe with an emphasis on boundaries, economic development, integration, identity, nationalism, and regional differences. The course includes an examination of how Europe has been defined and what it means to be European in both historical and contemporary contexts. It provides a critical perspective on the geography of Europe as it is impacted by local, regional, and global forces.

**Term Offered:** Spring**GEPL 3050 Geography of US and Canada**

[3 credit hours]

Systematic and regional survey of physical, social and economic geography of the region. Emphasis on the region with respect to worldwide/continental problems and prospects in economic development, management of resources and population adjustment.

**Term Offered:** Spring, Summer, Fall

Multicultural US Diversity

**GEPL 3120 Geography Of Asia**

[3 credit hours]

Compares and contrasts physical and human aspects of Asian countries and peoples in relation to economic development.

**Term Offered:** Spring, Fall

Multicultural Non-US Diversity

**GEPL 3220 Geography Of Africa**

[3 credit hours]

Course begins with a general overview of Africa's physical environment, its colonial history and its people and cultures. It then examines a variety of themes associated with development, population, urban and political geography.

**Term Offered:** Fall

Multicultural Non-US Diversity

**GEPL 3300 Geography of Latin America and the Caribbean**

[3 credit hours]

This course explores one of the world's most vibrant regions, Latin America. This world region stretches across diverse landscapes, from tropical rainforests to the snowcapped peaks of the Andes, from megacities to empty deserts and plains. The diversity of environments fosters great cultural diversity, despite sharing similar historical roots. This course explores the geography of Latin America through a combination of thematic and regional approaches.

**Term Offered:** Spring, Summer, Fall

Multicultural Non-US Diversity

**GEPL 3440 Population Geography**

[3 credit hours]

A learning through writing course. Space and place facets of population size, growth, migration, distribution and composition with emphasis on the population trends and patterns in both developing and developed nations.

**GEPL 3610 Conservation And Resources**

[3 credit hours]

A timely examination of some basic philosophies, principles and ethical issues in conservation and resource discourses in geography and across the disciplines. Provocative case studies. A learning-through-writing (WAC) course.

**Term Offered:** Spring**GEPL 3650 Economic Geography**

[3 credit hours]

An introduction to economic geography; including industrial location theory, competing production systems, and shifts from manufacturing to service-based economies.

**Term Offered:** Spring, Fall**GEPL 3900 Environmental Planning**

[3 credit hours]

Study of how humans are impacting the health and sustainability of the earth by their actions and activities and means by which we can reduce the impacts by better planning and management of human uses. Topics include water resources, forests, natural hazards, and the Great Lakes, through conservation, protected areas, better use of science, stewardship, cooperation and community actions. Will include use of local examples and case studies drawn from Ohio and the US.

**Term Offered:** Spring, Fall**GEPL 4040 Geography Education Strategies**

[3 credit hours]

Use of geographic inquiry in the emerging integrated social studies and standard geography education curricula for K-12 instruction.

**Term Offered:** Fall**GEPL 4110 Geographic Information Systems**

[3 credit hours]

Introduction to computerized methods for the capture, storage, management, analysis and display of spatially-referenced data for the solution of planning, management and research problems.

**Term Offered:** Spring, Fall**GEPL 4160 Patterns Of World Development**

[3 credit hours]

An examination of contemporary global economic patterns and trends. Compares and contrasts population problems; the diffusion of multinational corporations, and the emergence of post-industrial economies.

**Term Offered:** Fall**GEPL 4180 Geographic Information Systems Applications**

[3 credit hours]

Advanced applications in geographic information systems (GIS) with an emphasis on advanced GIS analysis techniques, Global Positioning System applications in GIS, database design, and a survey of vector- and raster-based GIS software and databases.

**Prerequisites:** GEPL 4110 with a minimum grade of D-**Term Offered:** Spring**GEPL 4210 Land Use Planning**

[3 credit hours]

A broad review of urban and regional planning in the US and Western Europe, introducing land use planning concepts and practices and their role in shaping the direction of urban development.

**Term Offered:** Spring

**GEPL 4300 GIS Programming**

[3 credit hours]

Introduction to computer programming languages that can customize and expand the capability of geospatial science and technology (GIS&T). Major topics include programming fundamentals, Python, ArcPy, Jupyter, and their applications.

**Prerequisites:** GEPL 2020 with a minimum grade of D- and GEPL 4110 with a minimum grade of D-

**Term Offered:** Spring

**GEPL 4310 Geography Of Gypsies (Romanies) and Travelers - WAC**

[3 credit hours]

Explorations into identities and distributions of Gypsies (Romanies) and Travelers (GR&T peoples) worldwide and the challenges that their study presents to Geography and to other social science disciplines.

**Term Offered:** Spring, Summer, Fall

Multicultural Non-US Diversity

**GEPL 4400 GeoAI and Machine Learning**

[3 credit hours]

Introduction to the concepts, principles, methods, and tools of artificial intelligence (AI), machine learning (ML), and deep learning (DL) in the geosciences. As an advanced GIS&T programming course, this course exhibits wide applications and promising potentials of AI, ML, and DL in solving real-world problems.

**Prerequisites:** GEPL 4110 with a minimum grade of D- and GEPL 4300 with a minimum grade of D-

**Term Offered:** Fall

**GEPL 4420 Quantitative Methods in Geographic Research**

[3 credit hours]

An examination of quantitative methods commonly used in geographic research with an emphasis on spatial statistics and cartographic analysis.

**Term Offered:** Fall

**GEPL 4490 Remote Sensing Of The Environment**

[3 credit hours]

Introduction to theory, methods and techniques used to gather and analyze remote sensor data. Topics range from low altitude air photo interpretation through satellite image acquisition. Recommended: GEPL 3550.

**Term Offered:** Fall

**GEPL 4500 Digital Image Analysis**

[3 credit hours]

Using imagery captured by earth orbiting satellites, students will document changes on the surface of the earth addressing environmental issues. Students will have the opportunity to learn applications of this technology including project based work in the classroom.

**Prerequisites:** GEPL 4490 with a minimum grade of D- or EEES 4490 with a minimum grade of D- or GEPL 5490 with a minimum grade of C or EEES 5490 with a minimum grade of C

**Term Offered:** Spring

**GEPL 4520 Analytical And Computer Cartography**

[3 credit hours]

The theoretical and mathematical foundations of the mapping process in a digital environment. An introduction to the structure and manipulation of graphic and nongraphic geographical data to produce maps.

**Prerequisites:** GEPL 4110 with a minimum grade of D- and GEPL 5110 with a minimum grade of C

**Term Offered:** Spring

**GEPL 4530 Principles Of Urban Planning**

[3 credit hours]

An introduction to planning theory. the planner's role in land use regulation economic development, housing and social service delivery is reviewed.

**Term Offered:** Fall

**GEPL 4540 Weather And Climate**

[3 credit hours]

A survey analysis of meteorology and climatology. The physical processes of weather and the pattern of climate provide the basis for this course.

**Term Offered:** Summer, Fall

**GEPL 4570 Land Development And Planning**

[4 credit hours]

The exploration of theoretical location analysis, pragmatic land development issues and analytic feasibility tools, and the consequences of land use policies that affect development.

**Term Offered:** Spring

**GEPL 4580 Location Analysis**

[4 credit hours]

The application of geographic location theory, spatial interaction modeling, optimization techniques and geographic information system processing to the solution of facility location problems.

**Term Offered:** Spring

**GEPL 4600 Urban Design**

[3 credit hours]

Concepts and procedures for the organization, design and development of public and private urban forms and spaces at the micro level, including a survey of intraurban elements, cultural, ecological and aesthetic considerations, and interdisciplinary collaboration.

**Term Offered:** Fall

**GEPL 4650 Geography of Earth Systems**

[3 credit hours]

Using an Earth System Science approach linking the hydrosphere, biosphere, atmosphere, and lithosphere, students will explore the relationship and spatial characteristics of events such as hurricane landfall, volcanic eruptions and climate change.

**Term Offered:** Spring

**GEPL 4700 Community Planning Workshop**

[3 credit hours]

This course introduces the skills and techniques used by practitioners in the planning process. Assignments will focus on the collection, analysis and communication of information by following community planning approaches.

**Term Offered:** Spring

**GEPL 4710 Urban Geography**

[3 credit hours]

Geographic perspectives on the social, political and economic functions of cities. Issues of land use, redevelopment, residential and commercial geographies are examined in contemporary North American cities.

**Term Offered:** Spring, Fall

**GEPL 4750 Transportation Geography**

[3 credit hours]

This course introduces students to the culture of transportation planning while honing their critical reading and analytical skills. The approach combines two types of analysis. One is a historical political–economy treatment of the evolution of the transportation systems, including the evolution of associated institutions, concluding with contemporary transportation planning issues. The other type of analysis is an introduction to the rational method for determining appropriate public responses for dealing with current transportation planning issues.

**Term Offered:** Spring, Fall

**GEPL 4800 Geospatial Science Research**

[3 credit hours]

A seminar/capstone course to guide students in integrating Geographic Information Science and Technology (GIS&T) knowledge, exploring research questions, conducting research projects, and composing journal-standard articles.

**Prerequisites:** GEPL 4110 with a minimum grade of D- and GEPL 4300 with a minimum grade of D- and GEPL 4400 with a minimum grade of D-

**Term Offered:** Spring

**GEPL 4810 Political Geography**

[3 credit hours]

An examination of political actors and power relations at local, regional, national and global scales, and their impact on spaces and places. The course includes topics, such as state formation, electoral geography, identity and social movements, nationalism and regionalism, imperialism and post-colonialism, urban politics, feminist political geography, elites and marginalized individuals, and geopolitics.

**Term Offered:** Spring, Fall

**GEPL 4910 Research in Geography**

[1-4 credit hours]

**GEPL 4920 Readings in Geography**

[1-3 credit hours]

**GEPL 4960 Honors Thesis in Geography**

[4 credit hours]

**GEPL 4990 Geography and Planning as Disciplines and Professions**

[1 credit hour]

This course provides an overview and synthesis of geography and planning as academic disciplines and as professions. The course proceeds along two tracks. In the first, students will read and discuss some of the classic literature that attempts to define both fields. In the second, students will learn about career resources for geographers and planners and learn to present themselves as professionals in the fields.

**Prerequisites:** GEPL 2010 with a minimum grade of D-

The honors program in the Department of Geography and Planning is open to all qualified undergraduate majors whether or not they are enrolled in College Honors. The following are requirements for entrance into the Honors program in Geography:

**Admission:**

1. The student must maintain a 3.5 minimum GPA in Geography courses.
2. The student must maintain a 3.3 minimum cumulative GPA.
3. 12 hours completed work in Geography.
4. Qualification as a Geography major whether or not they are enrolled in College honors.

**Requirements:**

A student must complete 9 hours in designated honors courses in Geography and a 4-hour senior honors thesis project. During the final year before graduation, the student will meet with the department's undergraduate advisor to select a faculty research advisor, complete and submit to the department's faculty for approval a senior honors project (GEPL 4960).

## Senior Honors Thesis

The title of the senior honors thesis is reported to the undergraduate advisory who will then select a faculty research advisor for the student. The title of the honor's thesis must be filed no later than one semester prior to the expected date of graduation. A copy must also be filed in the library of the Department and students are also expected, as a courtesy, to provide members of their thesis committee with copies.