

GEOGRAPHY (GEOG)

GEOG 105 Introduction to Human Geography

3 cr. Undergraduate.

How humans interact with and alter the Earth through cultural, political, and economic processes; how these processes are dependent on and affect Earth's natural resources. 2 hrs lec, 1 hr dis.

Prerequisites: none.

General Education Requirements: SS

Last Taught: Spring 2021, Summer 2020, Spring 2020, Summer 2019.

Current Offerings: <https://catalog.uwm.edu/course-search/>

GEOG 110 The World: Peoples and Regions

3 cr. Undergraduate.

Introduction to regional cultural geography through a study of representative and significant areas of the earth.

Prerequisites: none.

General Education Requirements: SS

Last Taught: Summer 2021, Spring 2021, Fall 2020, Summer 2020.

Current Offerings: <https://catalog.uwm.edu/course-search/>

GEOG 114 Geography of Race in the United States

3 cr. Undergraduate.

Contemporary geographic issues of segregation, assimilation, belonging, and exclusion facing African-American, white, Asian, Latino, Native American and either groups in the U.S. 2 hrs lec, 1 hr dis.

Prerequisites: none.

General Education Requirements: CD, SS

Last Taught: Spring 2021, Fall 2020, Spring 2020, Fall 2019.

Current Offerings: <https://catalog.uwm.edu/course-search/>

GEOG 115 Globalization and Economic Development

3 cr. Undergraduate.

Geographic perspectives on world economy: geographic organization of contemporary production and consumption around the world; historical development of capitalist economy; economic geography of globalization processes.

Prerequisites: none.

General Education Requirements: SS

Last Taught: Fall 2020, Fall 2019, Fall 2018, Fall 2012.

Current Offerings: <https://catalog.uwm.edu/course-search/>

GEOG 120 Our Physical Environment

3 cr. Undergraduate.

Characteristics and significance of world land form, climate, soils, vegetation, and mineral and water resources. 2 hrs lec, 2 hrs lab/dis.

Prerequisites: none.

Course Rules: Not open for cr to students w/cr in Geog 121(ER), 122(ER).

General Education Requirements: NS+

Last Taught: Summer 2021, Spring 2021, Fall 2020, Summer 2020.

Current Offerings: <https://catalog.uwm.edu/course-search/>

GEOG 125 Introduction to Environmental Geography

3 cr. Undergraduate.

Introduction to environmental geography and related environmental problems aimed at understanding of the earth's systems in our daily encounter with them.

Prerequisites: none.

General Education Requirements: NS

Last Taught: Summer 2021, Spring 2021, Fall 2020, Summer 2020.

Current Offerings: <https://catalog.uwm.edu/course-search/>

GEOG 128 Introduction to Caves and Caving

3 cr. Undergraduate.

An introduction to the science of speleology, to the underground world of caves, and to the techniques and history of caving.

Prerequisites: none.

General Education Requirements: NS

Last Taught: Spring 2019, Fall 2018, Spring 2018, Fall 2017.

Current Offerings: <https://catalog.uwm.edu/course-search/>

GEOG 140 Our Urban Environment: Introduction to Urban Geography

3 cr. Undergraduate.

Site and situation, central functions, spatial patterns of socio-economic and demographic characteristics of urban population. Spatial patterns of urban economy.

Prerequisites: none.

General Education Requirements: SS

Last Taught: Fall 2020, Fall 2019, Fall 2018, Fall 2017.

Current Offerings: <https://catalog.uwm.edu/course-search/>

GEOG 193 First-Year Seminar:

3 cr. Undergraduate.

The specific topics are announced in the Schedule of Classes each time the class is offered.

Prerequisites: none.

Course Rules: Open only to freshmen. Students may earn cr in just one L&S First-Year Sem (course numbers 192, 193, 194).

General Education Requirements: SS

Last Taught: Fall 2004, Fall 2002, Fall 2001, Fall 2000.

Current Offerings: <https://catalog.uwm.edu/course-search/>

GEOG 194 First-Year Seminar:

3 cr. Undergraduate.

Specific topics are announced in the Schedule of Classes each time the class is offered.

Prerequisites: none.

Course Rules: Open only to freshmen. Students may earn cr in just one L&S First-Year Sem (course numbers 192, 193, 194).

General Education Requirements: NS

Last Taught: Fall 2005, Fall 2003, Fall 1999, Spring 1998.

Current Offerings: <https://catalog.uwm.edu/course-search/>

GEOG 199 Independent Study

1-3 cr. Undergraduate.

For further information, consult dept chair.

Prerequisites: 2.0 GPA; consent of instructor, department chair, and Assistant Dean for Student Academic Services.

Course Rules: May be retaken to 6 cr max.

Last Taught: Spring 2006, Spring 2004, Summer 2002.

Current Offerings: <https://catalog.uwm.edu/course-search/>

GEOG 213 Geography of Asia

3 cr. Undergraduate.

Population, resources, development, and diversity. Regions discussed are East Asia, Southeast Asia, South Asia, and Central Asia.

Prerequisites: soph st.

General Education Requirements: SS

Last Taught: Spring 2018, Spring 2015, Spring 2013, Spring 2011.

Current Offerings: <https://catalog.uwm.edu/course-search/>

GEOG 215 Introduction to Geographic Information Science

3 cr. Undergraduate.

Geographic objects, their representation and analysis. Topics include special nature of spatial data; concepts of space, mapping, spatial relationships; and use of geographic information systems. 2 hrs lec, 2 hrs lab.

Prerequisites: none.**Last Taught:** Summer 2021, Spring 2021, Fall 2020, Summer 2020.**Current Offerings:** <https://catalog.uwm.edu/course-search/>**GEOG 231 Muslim Geographies: Identities and Politics**

3 cr. Undergraduate.

Origin and main features of Islam and the diversity of Muslim cultures in various geographical, social, cultural, and political contexts.

Prerequisites: none.**General Education Requirements:** SS**Last Taught:** Spring 2019, Spring 2017, Fall 2015, Fall 2014.**Current Offerings:** <https://catalog.uwm.edu/course-search/>**GEOG 247 Quantitative Analysis in Geography**

3 cr. Undergraduate.

Application of quantitative measures to geographic problems. Topics include descriptive statistics, statistical inference, and bivariate relationships.

Prerequisites: Satisfaction of GER Quantitative Literacy - Part A.**Course Rules:** 2 hrs lec, 2 hrs lab.**General Education Requirements:** QLB**Last Taught:** Fall 2020, Fall 2019, Fall 2018, Fall 2017.**Current Offerings:** <https://catalog.uwm.edu/course-search/>**GEOG 289 Internship in Geography, Lower Division**

1-6 cr. Undergraduate.

Application of basic principles of geography in a business, organizational, educational, political, or other appropriate setting.

Prerequisites: intro course in Geog; 2.25 gpa; cons supervising faculty member.**Course Rules:** One cr earned for academic work based on 40 hours in internship. May be retaken to 6 cr max.**Last Taught:** Summer 2008, Spring 2006, Fall 2005, Summer 2004.**Current Offerings:** <https://catalog.uwm.edu/course-search/>**GEOG 296 UROP Apprenticeship**

1-3 cr. Undergraduate.

Undergraduate research participation in a project developed with a supervising member of the faculty or staff.

Prerequisites: acceptance into UROP; prior or conc reg in UROP seminar.**Course Rules:** One credit for 45 hrs research. May be retaken to 9 cr max in any combination of UROP apprenticeship courses. Not open to jrs & srs.**Last Taught:** Fall 2005.**Current Offerings:** <https://catalog.uwm.edu/course-search/>**GEOG 297 Study Abroad:**

1-12 cr. Undergraduate.

Designed to enroll students in UWM sponsored program before course work level, content and credits are determined and/or in specially prepared program course work.

Prerequisites: acceptance for Study Abroad Prog.**Course Rules:** May be retaken w/chg in topic.**Last Taught:** Fall 2020, Spring 2020, Fall 2019, Fall 2017.**Current Offerings:** <https://catalog.uwm.edu/course-search/>**GEOG 299 Ad Hoc:**

1-6 cr. Undergraduate.

Course created expressly for offering in a specified enrollment period. Requires only dept & assoc dean approval. In exceptional circumstances, can be offered in one add'l sem.

Prerequisites: none; add'l prereqs may be assigned to specific topic.**Course Rules:** May be retaken w/chg in topic.**Last Taught:** Fall 1998, Spring 1989, Spring 1986.**Current Offerings:** <https://catalog.uwm.edu/course-search/>**GEOG 304 Human Impact on the Environment**

3 cr. Undergraduate.

Geographical and temporal distribution of human effects on land and resources; historical background of human concern for deleterious effects of impacts on environments.

Prerequisites: jr st; intro course in Geog or a life sci recom.**General Education Requirements:** SS**Last Taught:** Spring 2017, Spring 2016, Spring 2015, Spring 2014.**Current Offerings:** <https://catalog.uwm.edu/course-search/>**GEOG 306 Natural Hazards**

3 cr. Undergraduate.

An introduction to processes and conditions responsible for natural hazards, reasons for geographic patterns of hazards' occurrence, and modes of adjustment to natural hazards.

Prerequisites: jr st; a physical geog course recom.**General Education Requirements:** NS**Last Taught:** Spring 2021, Fall 2020, Spring 2020, Fall 2019.**Current Offerings:** <https://catalog.uwm.edu/course-search/>**GEOG 309 Nationalities and Nations of the World**

3 cr. Undergraduate.

Geographies of national identities and nationalism. Changing borders of countries, transnational migration, refugees. Use of memorial spaces rel. to national identity and legacies of colonialism. Transnational human rights activism, fascism, neoliberalism and its opposition.

Prerequisites: junior standing or one of the following: GEOG 110(P), GEOG 114(P), ETHNIC 101(P), or ETHNIC 102(P); or consent of instructor.**Last Taught:** Fall 2020, Fall 2019, Fall 2018, Fall 2017.**Current Offerings:** <https://catalog.uwm.edu/course-search/>**GEOG 310 General Climatology**

3 cr. Undergraduate.

Global patterns of climate and the processes that shape them. Climatic elements, upper-atmospheric waves, internet data, Midwest climate, climate classification, and climate change.

Prerequisites: jr st; Geog 120(R), Atm Sci 100(R), or Atm Sci 240(R).**Last Taught:** Fall 2020, Fall 2019, Fall 2018, Fall 2017.**Current Offerings:** <https://catalog.uwm.edu/course-search/>**GEOG 325 Introduction to Data Science with R, Python, and GIS**

4 cr. Undergraduate.

Basic concepts and practices in data science using R; introduction to practical skills for using Python and ArcGIS. 2.5 hrs lec, 2 hrs lab.

Prerequisites: jr st.**Last Taught:** Spring 2019.**Current Offerings:** <https://catalog.uwm.edu/course-search/>

GEOG 330 Europe: East and West

3 cr. Undergraduate.

Europe's lands and peoples, physical and cultural diversities and similarities.

Prerequisites: jr st.**Last Taught:** Spring 2021, Spring 2020, Spring 2019, Spring 2018.**Current Offerings:** <https://catalog.uwm.edu/course-search/>**GEOG 340 Biogeography**

3 cr. Undergraduate.

An introduction to the geography of the biosphere, the earth's surface, and the plants and animals which live there.

Prerequisites: jr st; a physical geog or a biology course recom.**Last Taught:** Summer 2021, Spring 2021, Summer 2020, Spring 2020.**Current Offerings:** <https://catalog.uwm.edu/course-search/>**GEOG 350 Conservation of Natural Resources**

3 cr. Undergraduate.

Analysis of environmental ethics; the positive and negative consequences of resource development with emphasis on strategies designed to resolve environmental conflicts.

Prerequisites: jr st or a geog course.**General Education Requirements:** SS**Last Taught:** Summer 2021, Spring 2021, Fall 2020, Summer 2020.**Current Offerings:** <https://catalog.uwm.edu/course-search/>**GEOG 381 Honors Seminar.**

3 cr. Undergraduate.

Selected topics in geography.

Prerequisites: soph st; Honors200(P); cons Honors College dir.**Course Rules:** May be retaken w/chg in topic to 9 cr max.**General Education Requirements:** SS**Last Taught:** Fall 2019, Fall 2016, Spring 2014, Spring 2012.**Current Offerings:** <https://catalog.uwm.edu/course-search/>**GEOG 400 Population, Environment, Development**

3 cr. Undergraduate/Graduate.

Population processes and policies in different geographical contexts: fertility, mortality, migration, and policies affecting these; population-environment relations; interactions of population and economic development.

Prerequisites: jr st; Geog 105(P), 110(P), 114(P), or 140(P).**Last Taught:** Spring 2014, Spring 2013.**Current Offerings:** <https://catalog.uwm.edu/course-search/>**GEOG 400G Population, Environment, Development**

3 cr. Undergraduate/Graduate.

Population processes and policies in different geographical contexts: fertility, mortality, migration, and policies affecting these; population-environment relations; interactions of population and economic development.

Prerequisites: jr st; Geog 105(P), 110(P), 114(P), or 140(P).**Last Taught:** Spring 2014, Spring 2013.**Current Offerings:** <https://catalog.uwm.edu/course-search/>**GEOG 403 Remote Sensing: Environmental and Land Use Analysis**

4 cr. Undergraduate.

Use of aerial photographs and digital imagery in environmental and land use analysis, including urban areas. 3 hrs lec; 2 hrs lab. PC/Windows familiarity recom.

Prerequisites: jr st & Geog 215(P).**Last Taught:** Spring 2021, Spring 2020, Spring 2019, Spring 2018.**Current Offerings:** <https://catalog.uwm.edu/course-search/>**GEOG 405 Cartography**

4 cr. Undergraduate.

Thematic cartography; map communication, design principles, illustration and mapping software. 3 hrs lec, 2 hrs lab.

Prerequisites: jr st & Geog 215(P).**Last Taught:** Spring 2019, Spring 2018, Spring 2017, Spring 2016.**Current Offerings:** <https://catalog.uwm.edu/course-search/>**GEOG 410 Gendered Geographies**

3 cr. Undergraduate/Graduate.

Various ways feminist geographers have analyzed gender in relation to phenomena such as the body, home, work, the nation, colonization, and globalization.

Prerequisites: jr st & one of Geog 105(P) or 110(P) or Wmns 200(P) or 201(P) or equiv; or grad st.**Last Taught:** Spring 2011, Spring 2008.**Current Offerings:** <https://catalog.uwm.edu/course-search/>**GEOG 410G Gendered Geographies**

3 cr. Undergraduate/Graduate.

Various ways feminist geographers have analyzed gender in relation to phenomena such as the body, home, work, the nation, colonization, and globalization.

Prerequisites: jr st & one of Geog 105(P) or 110(P) or Wmns 200(P) or 201(P) or equiv; or grad st.**Last Taught:** Spring 2011, Spring 2008.**Current Offerings:** <https://catalog.uwm.edu/course-search/>**GEOG 415 Hydrogeography**

3 cr. Undergraduate/Graduate.

Role of water in geographic systems. Interaction of water with physical and human systems, key hydrological processes, spatial and temporal variations of water, data collection, modeling.

Prerequisites: junior standing and GEOG 120(P) or GEOG 125(P); or graduate standing.**Last Taught:** Fall 2020, Fall 2018.**Current Offerings:** <https://catalog.uwm.edu/course-search/>**GEOG 415G Hydrogeography**

3 cr. Undergraduate/Graduate.

Role of water in geographic systems. Interaction of water with physical and human systems, key hydrological processes, spatial and temporal variations of water, data collection, modeling.

Prerequisites: junior standing and GEOG 120(P) or GEOG 125(P); or graduate standing.**Last Taught:** Fall 2020, Fall 2018.**Current Offerings:** <https://catalog.uwm.edu/course-search/>**GEOG 420 Methods and Principles in Land Form Geography**

3 cr. Undergraduate/Graduate.

Geographic qualitative and quantitative methods in land form analysis and principles of landscape evolution.

Prerequisites: jr st & Geog 120(P) or 121(P) or Geo Sci 100(P).**Last Taught:** Spring 2019, Spring 2017.**Current Offerings:** <https://catalog.uwm.edu/course-search/>**GEOG 420G Methods and Principles in Land Form Geography**

3 cr. Undergraduate/Graduate.

Geographic qualitative and quantitative methods in land form analysis and principles of landscape evolution.

Prerequisites: jr st & Geog 120(P) or 121(P) or Geo Sci 100(P).**Last Taught:** Spring 2019, Spring 2017.**Current Offerings:** <https://catalog.uwm.edu/course-search/>

GEOG 421 Geography of Latin America

3 cr. Undergraduate/Graduate.

Topical and regional analysis of physical features, discovery and exploration, processes of settlement, evolution of the landscape, and problems of development through modern times.

Prerequisites: jr st & Geog 110(P) or 120(P) or 125(P); or grad st.**Last Taught:** Spring 2015, Fall 2011.**Current Offerings:** <https://catalog.uwm.edu/course-search/>**GEOG 421G Geography of Latin America**

3 cr. Undergraduate/Graduate.

Topical and regional analysis of physical features, discovery and exploration, processes of settlement, evolution of the landscape, and problems of development through modern times.

Prerequisites: jr st & Geog 110(P) or 120(P) or 125(P); or grad st.**Last Taught:** Spring 2015, Fall 2011.**Current Offerings:** <https://catalog.uwm.edu/course-search/>**GEOG 430 Geography of Transportation**

3 cr. Undergraduate.

Geographic analysis of transportation, with emphasis on commodity flows and traffic patterns.

Prerequisites: jr st; Geog 115(P).**Last Taught:** Spring 2014, Fall 2009, Fall 2008, Spring 2007.**Current Offerings:** <https://catalog.uwm.edu/course-search/>**GEOG 437 Qualitative Methods in Geography**

3 cr. Undergraduate.

Research design, interview, focus group, ethnography, survey, and discourse analysis; epistemological debates and the methodological and ethical issues that arise throughout the research process.

Prerequisites: jr st; Geog 105(P), 110(P), 114(P), or 140(P).**Current Offerings:** <https://catalog.uwm.edu/course-search/>**GEOG 441 Geography of Cities and Metropolitan Areas**

3 cr. Undergraduate/Graduate.

Extent, localization, and geographic relations of land uses, facilities, and internal circulation, with particular reference to large North American cities.

Prerequisites: jr st & intro course in geog or acceptable course in an urban related field, e.g. Econ, UrbPlan, Urb Std; or grad st.**Last Taught:** Fall 2020.**Current Offerings:** <https://catalog.uwm.edu/course-search/>**GEOG 441G Geography of Cities and Metropolitan Areas**

3 cr. Undergraduate/Graduate.

Extent, localization, and geographic relations of land uses, facilities, and internal circulation, with particular reference to large North American cities.

Prerequisites: jr st & intro course in geog or acceptable course in an urban related field, e.g. Econ, UrbPlan, Urb Std; or grad st.**Last Taught:** Fall 2020.**Current Offerings:** <https://catalog.uwm.edu/course-search/>**GEOG 443 Cities of the World: Comparative Urban Geography**

3 cr. Undergraduate/Graduate.

Geographic analysis of world urban systems with emphasis on the cultural traditions, form, function and socio-economic development of cities.

Prerequisites: jr st & Geog 110(P), 115(P), or 140(P).**Last Taught:** Spring 2020.**Current Offerings:** <https://catalog.uwm.edu/course-search/>**GEOG 443G Cities of the World: Comparative Urban Geography**

3 cr. Undergraduate/Graduate.

Geographic analysis of world urban systems with emphasis on the cultural traditions, form, function and socio-economic development of cities.

Prerequisites: jr st & Geog 110(P), 115(P), or 140(P).**Last Taught:** Spring 2020.**Current Offerings:** <https://catalog.uwm.edu/course-search/>**GEOG 450 Climates of the Past and Climate Change**

3 cr. Undergraduate/Graduate.

Climatic history of the earth and climate models. Milankovitch theory, quaternary climates, temporal-spatial scales of change, general circulation, and earth system models.

Prerequisites: jr st, Geog 120(P) or Atm Sci 100(P) or 240(P), & Geog 310(R); or grad st.**Last Taught:** Fall 2020, Fall 2019.**Current Offerings:** <https://catalog.uwm.edu/course-search/>**GEOG 450G Climates of the Past and Climate Change**

3 cr. Undergraduate/Graduate.

Climatic history of the earth and climate models. Milankovitch theory, quaternary climates, temporal-spatial scales of change, general circulation, and earth system models.

Prerequisites: jr st, Geog 120(P) or Atm Sci 100(P) or 240(P), & Geog 310(R); or grad st.**Last Taught:** Fall 2020, Fall 2019.**Current Offerings:** <https://catalog.uwm.edu/course-search/>**GEOG 455 Applied Climatology**

3 cr. Undergraduate/Graduate.

Applications of climate processes and data. Solar energy, wind energy, food production, water usage, building design, urban environments, ecological assessment, and land form development.

Prerequisites: jr st, Geog 120(P) or Atm Sci 100(P) or 240(P), & Geog 310(R); or grad st.**Last Taught:** Fall 2012, Spring 2006.**Current Offerings:** <https://catalog.uwm.edu/course-search/>**GEOG 455G Applied Climatology**

3 cr. Undergraduate/Graduate.

Applications of climate processes and data. Solar energy, wind energy, food production, water usage, building design, urban environments, ecological assessment, and land form development.

Prerequisites: jr st, Geog 120(P) or Atm Sci 100(P) or 240(P), & Geog 310(R); or grad st.**Last Taught:** Fall 2012, Spring 2006.**Current Offerings:** <https://catalog.uwm.edu/course-search/>**GEOG 464 Environmental Problems**

3 cr. Undergraduate/Graduate.

General discussion and case studies of geographical contexts and historical roots of modern environmental problems. History of human concern over adverse environmental impacts.

Prerequisites: jr st & an intro course in a life science or environmental science.**Last Taught:** Spring 2021, Fall 2020.**Current Offerings:** <https://catalog.uwm.edu/course-search/>

GEOG 464G Environmental Problems

3 cr. Undergraduate/Graduate.

General discussion and case studies of geographical contexts and historical roots of modern environmental problems. History of human concern over adverse environmental impacts.

Prerequisites: jr st & an intro course in a life science or environmental science.

Last Taught: Spring 2021, Fall 2020.

Current Offerings: <https://catalog.uwm.edu/course-search/>

GEOG 470 Geography of South Asia

3 cr. Undergraduate/Graduate.

Survey of the historical, cultural and economic geography of South Asia, including India and adjacent countries.

Prerequisites: jr st; intro Geog, Anthro, or Econ course.

Last Taught: Spring 2020.

Current Offerings: <https://catalog.uwm.edu/course-search/>

GEOG 470G Geography of South Asia

3 cr. Undergraduate/Graduate.

Survey of the historical, cultural and economic geography of South Asia, including India and adjacent countries.

Prerequisites: jr st; intro Geog, Anthro, or Econ course.

Last Taught: Spring 2020.

Current Offerings: <https://catalog.uwm.edu/course-search/>

GEOG 489 Internship in Geography, Upper Division

1-6 cr. Undergraduate.

Application of advanced principles of geography in a business, organizational, educational, political, or other appropriate setting.

Prerequisites: jr st; 300-level or above course in Geog; 2.25 gpa; cons supervising faculty member.

Course Rules: One cr earned for academic work based on 40 hours in internship. May be retaken to 6 cr max.

Last Taught: Fall 2019, Summer 2018, Summer 2017, Spring 2017.

Current Offerings: <https://catalog.uwm.edu/course-search/>

GEOG 496 UROP Apprenticeship, Upper Level

1-3 cr. Undergraduate.

Undergraduate research participation in a project developed with a supervising member of the faculty or staff. One credit for 45 hrs research.

Prerequisites: jr st; acceptance to UROP.

Course Rules: May be retaken to 9 cr max.

Current Offerings: <https://catalog.uwm.edu/course-search/>

GEOG 497 Study Abroad:

1-12 cr. Undergraduate/Graduate.

Designed to enroll students in UWM sponsored program before course work levels, content, and credits are determined and/or in specially prepared program course work.

Prerequisites: jr st; acceptance for Study Abroad Prog.

Course Rules: May be retaken w/chg in topic.

Last Taught: Fall 2019, Fall 2018.

Current Offerings: <https://catalog.uwm.edu/course-search/>

GEOG 497G Study Abroad:

1-12 cr. Undergraduate/Graduate.

Designed to enroll students in UWM sponsored program before course work levels, content, and credits are determined and/or in specially prepared program course work.

Prerequisites: jr st; acceptance for Study Abroad Prog.

Course Rules: May be retaken w/chg in topic.

Last Taught: Fall 2019, Fall 2018.

Current Offerings: <https://catalog.uwm.edu/course-search/>

GEOG 499 Ad Hoc:

1-6 cr. Undergraduate.

Course created expressly for offering in a specified enrollment period.

Requires only dept & assoc dean approval. In exceptional circumstances, can be offered in one add'l sem.

Prerequisites: jr st; add'l prereqs may be assigned to specific topic.

Course Rules: May be retaken w/chg in topic.

Last Taught: Fall 1999.

Current Offerings: <https://catalog.uwm.edu/course-search/>

GEOG 515 Watershed Analysis and Modeling

3 cr. Undergraduate.

Theories and applications of analytical and modeling techniques for watershed processes, including geographic information systems (GIS), statistics, and computer simulations.

Prerequisites: junior standing; working knowledge of GIS; GEOG 415(R), GEO SCI 463(R), or GEOG 562(R).

Last Taught: Spring 2020, Fall 2016, Spring 2014.

Current Offerings: <https://catalog.uwm.edu/course-search/>

GEOG 520 Physical Geography of the City

3 cr. Undergraduate/Graduate.

Spatial aspects and interactions of plants, animals, climate, soils, and water resources relevant to human activities in the urban environment.

Prerequisites: jr st & Geog 120(P) or 125(P); or grad st.

Last Taught: Fall 2019, Spring 2013.

Current Offerings: <https://catalog.uwm.edu/course-search/>

GEOG 520G Physical Geography of the City

3 cr. Undergraduate/Graduate.

Spatial aspects and interactions of plants, animals, climate, soils, and water resources relevant to human activities in the urban environment.

Prerequisites: jr st & Geog 120(P) or 125(P); or grad st.

Last Taught: Fall 2019, Spring 2013.

Current Offerings: <https://catalog.uwm.edu/course-search/>

GEOG 525 Geographic Information Science

4 cr. Undergraduate.

Geographic and information theoretical foundations of geographic information science (GIS). Use of macro languages in a software project to expand GIS functionality. 3 hrs lec, 2 hrs lab.

Prerequisites: jr st, & Geog 215(P).

Last Taught: Spring 2021, Fall 2020, Spring 2020, Fall 2019.

Current Offerings: <https://catalog.uwm.edu/course-search/>

GEOG 531 Insurgent Cities - Global Geographies of Urban Social Movements

3 cr. Undergraduate.

Current and past social movements, activism, resistance, and revolution and their multiscalar geographies, from the urban, to the national, to the global.

Prerequisites: jr st.**Last Taught:** Spring 2018.**Current Offerings:** <https://catalog.uwm.edu/course-search/>**GEOG 540 Globalization and the City**

3 cr. Undergraduate/Graduate.

Spatial aspects of globalization and their impact on the city. Topics include emergence of global cities, impacts on urban development, and global era urban strategies.

Prerequisites: jr st.**Last Taught:** Fall 2020.**Current Offerings:** <https://catalog.uwm.edu/course-search/>**GEOG 540G Globalization and the City**

3 cr. Undergraduate/Graduate.

Spatial aspects of globalization and their impact on the city. Topics include emergence of global cities, impacts on urban development, and global era urban strategies.

Prerequisites: jr st.**Last Taught:** Fall 2020.**Current Offerings:** <https://catalog.uwm.edu/course-search/>**GEOG 547 Spatial Analysis**

4 cr. Undergraduate.

Advanced analysis techniques, including multivariate relationships and spatial modeling.

Prerequisites: jr st; Geog 247(P) or dept-approved equiv.**Last Taught:** Spring 2021, Fall 2019, Fall 2018, Fall 2017.**Current Offerings:** <https://catalog.uwm.edu/course-search/>**GEOG 564 Urban Environmental Change and Social Justice**

3 cr. Undergraduate/Graduate.

Spatial aspects of contributors to urban environmental change affecting social justice. Inequitable distribution of environmental risks and benefits; challenge of developing policies.

Prerequisites: jr st.**Last Taught:** Spring 2021.**Current Offerings:** <https://catalog.uwm.edu/course-search/>**GEOG 564G Urban Environmental Change and Social Justice**

3 cr. Undergraduate/Graduate.

Spatial aspects of contributors to urban environmental change affecting social justice. Inequitable distribution of environmental risks and benefits; challenge of developing policies.

Prerequisites: jr st.**Last Taught:** Spring 2021.**Current Offerings:** <https://catalog.uwm.edu/course-search/>**GEOG 600 Perspectives on Geography**

3 cr. Undergraduate.

Seminar on concepts, methods, and approaches to geographic inquiry. Discussion of professional geographic materials, bibliographic procedures and methodologies.

Prerequisites: sr st; declared geography major; writ cons instr.**Last Taught:** Spring 2021, Spring 2020, Spring 2019, Spring 2018.**Current Offerings:** <https://catalog.uwm.edu/course-search/>**GEOG 625 Intermediate Geographic Information Science**

4 cr. Undergraduate.

Concepts and techniques of geographic information science (GIS), with emphasis on GIS-based spatial analysis, associated applications, and technology. 3 hrs lec, 2 hrs lab.

Prerequisites: jr st; Geog 525(P) or UrbPlan 591(P) or 791(P); or cons instr.**Last Taught:** Fall 2020, Fall 2019, Fall 2018, Fall 2017.**Current Offerings:** <https://catalog.uwm.edu/course-search/>**GEOG 647 ArcGIS Programming with Python**

4 cr. Undergraduate.

Fundamentals of Python programming language; focus on programming designed to automate ArcGIS geoprocessing tasks, manipulate spatial data (including geometries and rasters), and create customized tools.

Prerequisites: jr st; C+ or better in Geog 525(P) or cons instr.**Last Taught:** Fall 2020.**Current Offerings:** <https://catalog.uwm.edu/course-search/>**GEOG 650 Geography Field Work**

3 cr. Undergraduate/Graduate.

Geographic field techniques and field problems; classroom preparations and field projects.

Prerequisites: jr st; writ cons instr.**Course Rules:** Students will pay fieldwork expenses. May be retaken w/ chg in topic to 9 cr max.**Last Taught:** Summer 2021, Summer 2020.**Current Offerings:** <https://catalog.uwm.edu/course-search/>**GEOG 650G Geography Field Work**

3 cr. Undergraduate/Graduate.

Geographic field techniques and field problems; classroom preparations and field projects.

Prerequisites: jr st; writ cons instr.**Course Rules:** Students will pay fieldwork expenses. May be retaken w/ chg in topic to 9 cr max.**Last Taught:** Summer 2021, Summer 2020.**Current Offerings:** <https://catalog.uwm.edu/course-search/>**GEOG 696 Independent Work in Physical Geography**

1-3 cr. Undergraduate.

Independent reading or project on a physical geography topic under the supervision of a geography faculty member.

Prerequisites: jr st; 2.5 GPA; writ cons instr, dept chair, & asst dean for SAS.**Course Rules:** May be retaken w/chg in topic to 6 cr max.**Last Taught:** Spring 2017, Spring 2015, Fall 2012, Spring 2012.**Current Offerings:** <https://catalog.uwm.edu/course-search/>**GEOG 698 GIS/Cartography Internship**

1-6 cr. Undergraduate.

Practical GIS/cartography experience with government agency or private firm under supervision of working expert and faculty member. Intern's contract specifies duties and duration.

Prerequisites: jr st; Geog 215(P); writ cons instr & dept chair.**Course Rules:** May be retaken to 6 cr max.**Last Taught:** Spring 2021, Fall 2020, Summer 2020, Spring 2020.**Current Offerings:** <https://catalog.uwm.edu/course-search/>

GEOG 699 Independent Work

1-3 cr. Undergraduate.

Independent reading or project. See Advanced Independent Study.

Prerequisites: jr st, 2.0 GPA, consent of instructor, department chair, and Assistant Dean for Student Academic Services.

Course Rules: May be retaken with change in topic to 6 cr max.

Last Taught: Summer 2020, Spring 2020, Spring 2019, Spring 2016.

Current Offerings: <https://catalog.uwm.edu/course-search/>

GEOG 704 Remote Sensing: Environmental and Land Use Analysis

4 cr. Graduate.

Use of aerial photographs and digital imagery in environmental and land use analysis, including urban areas. 3 hrs lec; 2 hrs lab

Prerequisites: PC/Windows familiarity recom.

Last Taught: Spring 2021, Spring 2020, Spring 2019.

Current Offerings: <https://catalog.uwm.edu/course-search/>

GEOG 705 Cartography

4 cr. Graduate.

Thematic cartography; map communication, design principles, illustration and mapping software. 3 hrs lec, 2 hrs lab.

Prerequisites: grad st.

Course Rules: Counts as repeat of Geog 405. Not open for cr to students w/grad cr in Geog 405.

Last Taught: Spring 2019.

Current Offerings: <https://catalog.uwm.edu/course-search/>

GEOG 716 Watershed Analysis and Modeling

3 cr. Graduate.

Theories and applications of analytical and modeling techniques for watershed processes, including geographic information systems (GIS), statistics, and computer simulations.

Prerequisites: grad st; working knowledge of GIS.

Course Rules: Not open for cr to students w/grad cr in Geog 515.

Last Taught: Spring 2020.

Current Offerings: <https://catalog.uwm.edu/course-search/>

GEOG 726 Geographic Information Science

4 cr. Graduate.

Geographic and information theoretical foundations of geographic information science (GIS). Use of macro languages in a software project to expand GIS functionality. 3 hrs lec, 2 hrs lab.

Prerequisites: grad st.

Course Rules: Not open for cr to students w/ grad cr in Geog 525.

Last Taught: Spring 2021, Fall 2020, Spring 2020, Fall 2019.

Current Offerings: <https://catalog.uwm.edu/course-search/>

GEOG 730 Geography of Transportation

3 cr. Graduate.

Geographic analysis of transportation, with emphasis on commodity flows and traffic patterns.

Prerequisites: grad st.

Course Rules: Not open for cr to students w/ grad cr in Geog 430.

Current Offerings: <https://catalog.uwm.edu/course-search/>

GEOG 731 Insurgent Cities - Theorizing geographies of social movements

3 cr. Graduate.

Investigation into how social movements use and produce various spatialities, in relation to state forms, other social movements and forces, media assemblages, the built environment

Prerequisites: grad st.

Last Taught: Spring 2018.

Current Offerings: <https://catalog.uwm.edu/course-search/>

GEOG 742 Urban and Regional Dimensions of Globalization

3 cr. Graduate.

Geographic perspectives on urban and regional change as 'developed' and 'less developed' parts of the world become more interconnected by wider international processes of change.

Prerequisites: grad st.

Last Taught: Spring 2013, Spring 2012, Fall 2010, Spring 2010.

Current Offerings: <https://catalog.uwm.edu/course-search/>

GEOG 744 Cities, Regions, and Globalization

3 cr. Graduate.

Globalization process and impact on cities and regions, including emergence of global cities and regions, impact on uneven development, and global era urban strategies.

Prerequisites: grad st

Current Offerings: <https://catalog.uwm.edu/course-search/>

GEOG 747 Spatial Analysis

4 cr. Graduate.

Advanced analysis techniques, including multivariate relationships and spatial modeling.

Prerequisites: grad st.

Course Rules: Not open for cr to students w/grad cr in GEOG 547.

Last Taught: Spring 2021, Fall 2019, Fall 2018.

Current Offerings: <https://catalog.uwm.edu/course-search/>

GEOG 748 ArcGIS Programming with Python

4 cr. Graduate.

Fundamentals of Python programming language; focus on programming designed to automate ArcGIS geoprocessing tasks, manipulate spatial data (including geometries and rasters), and create customized tools.

Prerequisites: grad st; Geog 726(P).

Course Rules: Not open for cr to students w/ grad cr in Geog 647.

Last Taught: Fall 2020, Fall 2019.

Current Offerings: <https://catalog.uwm.edu/course-search/>

GEOG 798 GIS/Cartography Internship

1-4 cr. Graduate.

Practical GIS/cartography experience with government agency or private firm under supervision of working expert and faculty member. Intern's contract specifies duties and duration.

Prerequisites: grad st; writ cons instr & dept chair

Course Rules: May be retaken to 8 cr max.

Last Taught: Fall 2018.

Current Offerings: <https://catalog.uwm.edu/course-search/>

GEOG 804 Advanced Remote Sensing

3 cr. Graduate.

Advanced techniques of image processing and analysis, including classification, georegistration, and spatial modeling.

Prerequisites: grad st; Geog 704(P)

Course Rules: Counts as a repeat of Geog 703.

Last Taught: Spring 2021, Spring 2019.

Current Offerings: <https://catalog.uwm.edu/course-search/>

GEOG 810 Introduction to Techniques of Research and Presentation

3 cr. Graduate.

Proseminar on the scholarly use of materials in all aspects of geography; training for effective presentation in both written and oral form.

Prerequisites: grad st.

Last Taught: Fall 2019, Fall 2017, Fall 2014, Fall 2013.

Current Offerings: <https://catalog.uwm.edu/course-search/>

GEOG 826 Intermediate Geographic Information Science

4 cr. Graduate.

Concepts and techniques of geographic information science (GIS), with emphasis on GIS-based spatial analysis, associated applications, and technology. 3 hrs lec, 2 hrs lab.

Prerequisites: grad st; Geog 525(P) or Geog 726(P) or UrbPlan 591(P) or UrbPlan 791(P).

Course Rules: Counts as a repeat of Geog 625. Not open for cr to students w/grad cr in Geog 625.

Last Taught: Fall 2020, Fall 2019, Fall 2018.

Current Offerings: <https://catalog.uwm.edu/course-search/>

GEOG 827 Qualitative Research

3 cr. Graduate.

Qualitative research as applied in geography, including the relationship between quantitative and qualitative approaches, issues of interpretation, and ethics of field work.

Prerequisites: grad st.

Last Taught: Spring 2020, Spring 2019, Spring 2017, Spring 2015.

Current Offerings: <https://catalog.uwm.edu/course-search/>

GEOG 834 GIS and Society

3 cr. Graduate.

Interconnected relationship between Geographic Information Science (GIS) and society, including hidden impacts and implications of such a relationship.

Prerequisites: grad st.

Last Taught: Fall 2020, Fall 2018, Spring 2014, Fall 2012.

Current Offerings: <https://catalog.uwm.edu/course-search/>

GEOG 870 Contemporary Geographic Approaches:

3 cr. Graduate.

Foundations of geographic inquiry, with emphasis on the roles of sub-disciplines, and generalist/specialist approaches in the development of geographic science.

Prerequisites: grad st.

Course Rules: Retakable w/chg in topic to 6 cr max.

Last Taught: Fall 2020, Fall 2018, Fall 2016, Fall 2014.

Current Offerings: <https://catalog.uwm.edu/course-search/>

GEOG 880 Urban Sustainability

3 cr. Graduate.

Urban sustainable challenges and opportunities that impact the built environment. Includes review of traditional and innovative sustainable practices and regulations

Prerequisites: grad st.

Course Rules: Jointly-offered w/& counts as repeat of UrbPlan 880.

Last Taught: Spring 2011, Spring 2010, Fall 2008, Fall 2007.

Current Offerings: <https://catalog.uwm.edu/course-search/>

GEOG 888 Candidate for Degree

0 cr. Graduate.

Available for graduate students who must meet minimum credit load requirements.

Prerequisites: graduate standing.

Course Rules: Fee for 1 cr assessed; unit does not count towards credit load for Fin Aid. Repeatable. Satisfactory/Unsatisfactory only.

Last Taught: Spring 2021, Summer 2015, Summer 2014, Fall 2013.

Current Offerings: <https://catalog.uwm.edu/course-search/>

GEOG 889 Internship in Geography

1-6 cr. Graduate.

Application of advanced principles of geography in a business, organizational, educational, political, or other appropriate setting. Intern's contract specifies duties and duration.

Prerequisites: grad st; Geog 810(P); writ cons instr & dept chair.

Course Rules: Retakable to 6 cr max.

Last Taught: Summer 2021, Summer 2020, Spring 2015, Fall 2014.

Current Offerings: <https://catalog.uwm.edu/course-search/>

GEOG 890 Research and Master Thesis

1-6 cr. Graduate.

Research connected with master thesis.

Prerequisites: grad st.

Course Rules: Retakable to 6 cr max.

Last Taught: Summer 2021, Spring 2021, Spring 2020, Spring 2019.

Current Offerings: <https://catalog.uwm.edu/course-search/>

GEOG 904 Remote Sensing and Urban Analysis

3 cr. Graduate.

Seminar in remote sensing technologies and applications in urban analyses, including land use/land cover analysis, socio-economic information estimation, heat-island effect, sprawl monitoring, and growth modeling.

Prerequisites: grad st; Geog 403(P) or Geog 704(P); Geog 525(P) or Geog 726(P) or UrbPlan 591(P) or 791(P).

Last Taught: Spring 2020, Fall 2015, Spring 2012.

Current Offerings: <https://catalog.uwm.edu/course-search/>

GEOG 905 Seminar: Selected Topics in Geography:

3 cr. Graduate.

Prerequisites: grad st.

Course Rules: Retakable w/topic chg to 9 cr max.

Last Taught: Fall 2019, Fall 2017, Fall 2016, Spring 2015.

Current Offerings: <https://catalog.uwm.edu/course-search/>

GEOG 910 Techniques of Research and Presentation

3 cr. Graduate.

Seminar on theoretical and practical aspects of geographic research, funding, presentation, and publication.

Prerequisites: grad st in Geog Ph.D. program.

Last Taught: Fall 2019, Fall 2017, Fall 2014, Fall 2013.

Current Offerings: <https://catalog.uwm.edu/course-search/>

GEOG 926 Advanced Geographic Information Science: Geographic Modeling

3 cr. Graduate.

Advanced spatial modeling with both GIS and other tools of geo-computation, including examination of conceptual models aimed at an analysis of their possible implementation.

Prerequisites: grad st; Geog 826(P).

Course Rules: Counts as a repeat of Geog 725.

Last Taught: Spring 2020.

Current Offerings: <https://catalog.uwm.edu/course-search/>

GEOG 932 Seminar: Economic Geography:

3 cr. Graduate.

Analysis in depth of significant topics in advanced economic geography specializations: agricultural geography, geography of manufacturing, and geography of transportation.

Prerequisites: grad st.**Course Rules:** Retakable w/chg in topic to 9 cr max.**Last Taught:** Spring 2006, Spring 2002, Fall 1989.**Current Offerings:** <https://catalog.uwm.edu/course-search/>**GEOG 934 Seminar: Urban Geography:**

3 cr. Graduate.

Prerequisites: grad st.**Course Rules:** Retakable w/chg in topic to 9 cr max.**Last Taught:** Spring 2013, Fall 2011, Fall 2007, Spring 2003.**Current Offerings:** <https://catalog.uwm.edu/course-search/>**GEOG 940 Seminar: Physical Geography:**

3 cr. Graduate.

Prerequisites: grad st.**Course Rules:** Retakable w/chg in topic to 9 cr max.**Last Taught:** Spring 2002, Fall 2001, Fall 1998, Spring 1998.**Current Offerings:** <https://catalog.uwm.edu/course-search/>**GEOG 941 Seminar: Climatology:**

3 cr. Graduate.

Prerequisites: grad st.**Course Rules:** Retakable w/chg in topic to 9 cr max.**Last Taught:** Spring 2015, Fall 2005, Fall 1997, Fall 1995.**Current Offerings:** <https://catalog.uwm.edu/course-search/>**GEOG 942 Seminar: Geography of Land Form:**

3 cr. Graduate.

Prerequisites: grad st.**Course Rules:** Retakable w/chg in topic to 9 cr max.**Last Taught:** Fall 2006, Fall 2000, Spring 1994, Spring 1992.**Current Offerings:** <https://catalog.uwm.edu/course-search/>**GEOG 945 The Internal Structure of the City**

3 cr. Graduate.

The interaction of forces responsible for the evolution of the city as a spatial form and the allocation of economic and social activity within the spatial configuration.

Prerequisites: grad st.**Course Rules:** Geog 945 & Urb Std 945 are jointly-offered; they count as repeats of one another.**Last Taught:** Spring 2020, Spring 2018, Spring 2016, Spring 2014.**Current Offerings:** <https://catalog.uwm.edu/course-search/>**GEOG 960 Seminar: Geographic Techniques:**

3 cr. Graduate.

Prerequisites: grad st.**Course Rules:** Retakable w/chg in topic to 9 cr max.**Last Taught:** Spring 2021, Spring 2019, Spring 2016, Spring 2015.**Current Offerings:** <https://catalog.uwm.edu/course-search/>**GEOG 990 Research and Doctoral Dissertation**

1-12 cr. Graduate.

Research projects connected with dissertation.

Prerequisites: grad st.**Course Rules:** Retakable to 12 cr max.**Last Taught:** Summer 2021, Spring 2021, Fall 2020, Spring 2020.**Current Offerings:** <https://catalog.uwm.edu/course-search/>**GEOG 999 Independent Work**

1-6 cr. Graduate.

Independent reading or project.

Prerequisites: grad st.**Course Rules:** Retakable w/chg in topic to 12 cr max.**Last Taught:** Summer 2021, Spring 2021, Fall 2020, Spring 2020.**Current Offerings:** <https://catalog.uwm.edu/course-search/>