

# GEOGRAPHY, BS

In high school, your geography class probably focused on maps and locations – but the field is so much broader than that. Geography bridges the physical and human world, using both scientific and humanistic methods to explain, predict, and interpret people’s impact on the planet and the planet’s impact on people.

UWM’s geography students graduate with exceptional abilities, both intellectual and technological, to analyze data about space, place, and people - and how they relate to each other. They understand how to make sense of seemingly unrelated pieces of information by bringing together diverse facts and values. They also are adept at presenting information visually - for example, maps!

Some examples of research topics that today’s geographers are tackling include climate change, land use patterns, environmental justice, racial segregation, migration and refugees, natural hazards, and animal migration.

Geographic Information Science (GIS) is a growing specialty within geography. GIS is a technical system for capturing, storing, and analyzing diverse types of data in relation to location on Earth, and it enhances decision-making in both the private and public sectors. For example, a small town may use GIS data to determine where to place fire stations and personnel based on patterns of forest fires and populations; or a corporation may use GIS to plan the location of a new store based on shopping and traffic patterns.

At UWM, students can either focus on GIS or choose another specialty track: the urban track, investigating the dynamics of cities and urbanization; the climate-environment track, for those interested in climate change, natural hazards, and environmental problems and policy; or the globalization, societies and cultures track, for a broad approach to human geography and issues like economic, social, and racial inequality; migration; and cultural change.

## Related Programs

For the teaching major and minor, see the School of Education (<http://catalog.uwm.edu/education/>) section of this catalog. A related special major is International Studies (<http://catalog.uwm.edu/letters-science/international-studies/>). Related certificate programs include Asian Studies (<http://catalog.uwm.edu/letters-science/asian-studies-undergraduate-certificate/>), Latin American and Caribbean Studies (<http://catalog.uwm.edu/letters-science/latin-american-caribbean-studies/latin-american-caribbean-studies-undergraduate-certificate/>), and Middle Eastern and North African Studies (<http://catalog.uwm.edu/letters-science/middle-eastern-north-african-studies-undergraduate-certificate/>).

## Requirements

### Course of Study – Bachelor of Science Degree

Complete 120 credits including 90 credits in the College of Letters & Science and with 36 of the 90 credits in L&S upper-level (numbered above 300) courses and 30 of those 36 credits in designated Advanced Natural Science courses (<https://uwm.edu/letters-science/advising/degree-requirements/advanced-natural-science-approved-courses-list/>). The College requires that students must complete in residence at UWM at least 15 credits in upper-division (numbered 300 or above) courses

in their major. Students are also required to complete University-wide General Education Requirements and the specific L&S requirements listed below.

To complete a major, students must satisfy all the requirements of the major as stated in this catalog. Students who declare their majors within five years of entering the UW System as a degree candidate may satisfy the requirements outlined in any catalog issued since the time they entered. Credits used to satisfy the major also may be used to satisfy other degree requirements.

## University General Education Requirements (GER)

Code	Title	Credits
<b>Oral and Written Communication</b>		
<i>Part A</i>		
Achieve a grade of C or better in the following course:		
ENGLISH 102	College Writing and Research (or equivalent)	
<i>Part B</i>		
Course designated as OWC-B; may be completed through a major-specific course requirement		
<b>Quantitative Literacy</b>		
<i>Part A</i>		
Earn at least 3 credits with a grade of C or higher in one of the following courses or an equivalent course, or achieve a placement code of at least 30 on the mathematics placement test (or other appropriate test, as determined by the Mathematical Sciences Department)		
MATH 102	Mathematical Literacy for College Students II	
MATH 103	Contemporary Applications of Mathematics	
MATH 105	Introduction to College Algebra	
MATH 108	Algebraic Literacy II	
MATH 111	Introduction to Logic - Critical Reasoning <sup>1</sup>	
or PHILOS 111	Introduction to Logic - Critical Reasoning	
MATH 116	College Algebra	
Or equivalent course		
<i>Part B</i>		
Course designated as QL-B; may be completed through a major-specific course requirement		
<b>Arts</b>		
Select 3 credits		3
<b>Humanities</b>		
Select 6 credits		6
<b>Social Sciences</b>		
Select 6 credits		6
<b>Natural Sciences</b>		
Select 6 credits (At least two courses including one lab)		6
<b>UWM Foreign Language Requirement</b>		
Complete Foreign Language Requirement through:		
Two years (high school) of a single foreign language		
Two semesters (college) of a single foreign language		
Or equivalent		
<b>UWM Cultural Diversity Requirement</b>		

One course from the Arts, Humanities, or Social Sciences must also satisfy UWM's Cultural Diversity requirement

<sup>1</sup> Math 111 and Philosophy 111 are jointly offered and count as repeats of one another. Students cannot receive credit for both courses.

## College of Letters & Science Requirements

### I. English Composition Requirement

Students must satisfy the English Composition Requirement with one of the following options:

- 1) Completing ENGLISH 102 with a grade of C or higher; or
- 2) placing beyond English 102 on the English Placement Test (EPT) (or other assessment as determined by the English Department); or
- 3) transferring a course of at least 2.5 equivalent credits from another institution that is equivalent to English 102, or a UWM higher-level expository writing course, with a grade of C or higher.

**Note:** This requirement is the same as the University General Education Requirement for Oral and Written Communication Part A. The College of Letters & Science does not have a specific requirement for a writing course beyond English 102, but students must complete the university-wide requirement for Oral and Written Communication Part B listed above.

### II. Mathematics and Formal Reasoning

To satisfy the Mathematics and Formal Reasoning Requirement, Bachelors of Sciences degree students must satisfy the following two requirements:

1. Complete one of the following courses or an equivalent course:

Code	Title	Credits
MATH 211	Survey in Calculus and Analytic Geometry I	4
MATH 213	Calculus with Life Sciences Applications	4
MATH 221	Honors Calculus I	5
MATH 231	Calculus and Analytic Geometry I	4

2. Complete one course (at least 3 credits) at the 200 level or above chosen from courses in Mathematics, PHILOS 211, or Letters and Science statistics courses:

Code	Title	Credits
Complete one of the following:		
3 or more credits in any 200-level or above Math course		
AFRIC 220	Introduction to Statistics in African and African Diaspora Studies	
ANTHRO 568	Introduction to Anthropological Statistics	
BIO SCI 465	Biostatistics	
ECON 210	Economic Statistics	
GEOG 247	Quantitative Analysis in Geography	
HIST 595	The Quantitative Analysis of Historical Data	
MTHSTAT 215	Elementary Statistical Analysis	
PHILOS 211	Elementary Logic	

POL SCI 390	Political Data Analysis
POL SCI 392	Survey Research
PSYCH 210	Psychological Statistics
SOCIOL 261	Introduction to Statistical Thinking in Sociology

**Note:** This requirement is NOT the same as the University General Education Requirement for Quantitative Literacy Part B. To complete the BS, students must take one of the L&S approved courses. **Not all of the courses listed here will satisfy the QL-B requirement.**

### III. Foreign Language Requirement

Two courses (minimum of 6 credits) in a language (including American Sign Language) other than English at the 100 level or above are required.

Placement testing may be used to satisfy all or part of this requirement. Language courses (including American Sign Language) other than English taken in high school may be used to satisfy all or part of this requirement. One year of high school language equates to one semester of college work.

Completion of the L&S Language Requirement also satisfies the university-wide Foreign Language GER, but not vice versa.

### IV. International Requirement

See Approved Courses for the L&S International Requirement (<http://catalog.uwm.edu/letters-science/approved-courses-international-requirement/>) for course options.

Code	Title	Credits
Completed in one of the following ways:		9
Complete 3 courses (min. 9 cr) in a single foreign language (not including literature-in-translation or American Sign Language) at the 3rd semester level and above		
Complete 3 non-language courses (min. 9 credits) with an international content chosen from at least 2 curricular areas.		
Complete 9 credits in combination of the two options above.		

### V. Breadth Requirement

Along with completing the University General Education Requirements of 3 credits in the Arts (A); 6 credits in the Humanities (HU), Social Sciences (SS), and Natural Sciences (NS/NS+); and a course with the Cultural Diversity (CD/+) designation, L&S students must complete the Breadth requirement.

Code	Title	Credits
<b>Arts</b>		
Select 3 credits		3
<b>Humanities</b>		
Complete 12 credits of L&S courses with Humanities Breadth designation; no more than 6 credits from a single subject area. *		12
<b>Social Sciences</b>		
Complete 12 credits of L&S Courses with Social Science Breadth designation; no more than 6 credits from a single curricular area. *		12
<b>Natural Sciences</b>		
Complete 12 credits of L&S Courses with Natural Sciences Breadth designation, including laboratory or field courses from three different curricular areas. *		12

### Cultural Diversity

Complete 3 credits in a course with Cultural Diversity (CD) designation.\*\* 3

\* Students should check their course selections carefully with the list of approved L&S Breadth Courses (<http://catalog.uwm.edu/letters-science/breadth-requirement-course-list/>). Students are advised to select at least 6 credits worth of courses in each of the Humanities, Social Science, and Natural Sciences areas that can satisfy both the campus-wide General Education Requirements and the L&S Breadth requirement.

\*\* Students are advised to select a course that satisfies the Cultural Diversity requirement as well as a Humanities or Social Science breadth/GER requirement.

### VI. The Major

The College requires that students attain at least a 2.0 GPA in all credits in the major attempted at UWM. In addition, students must attain a 2.0 GPA on all major credits attempted, including any transfer work. Individual departments or programs may require higher GPAs for graduation. Some departmental majors require courses from other departments. Contact your major department for information on whether those credits will count as part of the major GPA. The College requires that students must complete in residence at UWM at least 15 credits in upper-division (numbered 300 or above) courses in their major.

#### Research Requirement

Within their majors, students must complete a research experience approved by the L&S faculty. A list of courses satisfying the research requirement in each major can be found here (<http://catalog.uwm.edu/letters-science/approved-courses-research-requirement/>).

### VII. The Minor

The College requires that students attain at least a 2.0 GPA in all credits in the minor attempted at UWM. In addition, students must attain a 2.0 GPA on all minor credits attempted, including any transfer work. Individual departments or programs may require higher GPAs for graduation.

## Geography Major Requirements

Students must meet with the department's undergraduate advisor to declare geography as a major. All majors must complete the 24- or 25-credit core curriculum and the additional requirements as defined in one of the four tracks:

1. Geographic Information
2. Urban
3. Climate-Environment
4. Globalization, Cultures, and Societies

Geography majors may earn either a Bachelor of Arts or Bachelor of Science degree. In satisfying their major requirements, all students must complete at least 33 credits in geography, 18 of which must be at or above the 300 level, with at least 15 of those taken in residence at UWM. Courses taken outside geography that fulfill geography requirements will be included in the major GPA. Majors must have a 2.0 GPA in all geography credits attempted at UWM, as well as in any transfer work counting toward the Geography major.

Code	Title	Credits
<b>Core Curriculum</b>		
Select one of the following courses in human geography:		3
GEOG 105	Introduction to Human Geography	
GEOG 110	The World: Peoples and Regions	
GEOG 114	Geography of Race in the United States	
GEOG 115	Globalization and Economic Development	
GEOG 140	Our Urban Environment: Introduction to Urban Geography <sup>1</sup>	
Select one of these courses in physical or environmental geography:		3
GEOG 120	Our Physical Environment	
GEOG 125	Introduction to Environmental Geography	
Select one of the following regional or world geography courses:		3
GEOG 213	Geography of Asia	
GEOG 231	Muslim Geographies: Identities and Politics	
GEOG 309	Nationalities and Nations of the World	
GEOG 330	Europe: East and West	
GEOG 400	Population, Environment, Development	
GEOG 410	Gendered Geographies	
GEOG 421	Geography of Latin America	
GEOG 470	Geography of South Asia	
GEOG 531	Insurgent Cities - Global Geographies of Urban Social Movements	
The following two courses are required for all tracks:		
GEOG 215	Introduction to Geographic Information Science	3
GEOG 247	Quantitative Analysis in Geography	3
Select one of the following techniques courses:		3-4
GEOG 403	Remote Sensing: Environmental and Land Use Analysis	
GEOG 405	Cartography	
GEOG 437	Qualitative Methods in Geography	
GEOG 525	Geographic Information Science <sup>2</sup>	
GEOG 547	Spatial Analysis	
The following course is required for all tracks.		
GEOG 600	Perspectives on Geography (satisfies L&S research requirement)	3
Select one of the following:		3
GEOG 650	Geography Field Work <sup>3</sup>	
GEOG 489	Internship in Geography, Upper Division <sup>4</sup>	
GEOG 497	Study Abroad: <sup>4</sup>	
<b>Major Tracks</b>		
Select a Major Track		9-15
<b>Total Credits</b>		<b>33-40</b>

<sup>1</sup> Students in the Urban Track are required to take GEOG 140.

<sup>2</sup> Students in the Geographic Information Track must take GEOG 525.

<sup>3</sup> Fieldwork is only offered in the June summer sessions. Check with the department for further details.

<sup>4</sup> Students must obtain PRIOR approval to select either of these two courses. With approval, students can fulfill this requirement by completing a minimum of 90 hours of field research in one of the following courses: GEOG 489 or GEOG 497.

## Major Tracks

### Geographic Information Track

Code	Title	Credits
GEOG 625	Intermediate Geographic Information Science	4
Select two upper-level techniques courses <sup>1</sup>		7-8
GEOG 698	GIS/Cartography Internship	3
<b>Total Credits</b>		<b>14-15</b>

<sup>1</sup> In addition to GEOG 525, listed in requirement of the core curriculum, (7-8 cr. beyond core).

### Urban Track

Code	Title	Credits
Select two of the following:		6
GEOG 430	Geography of Transportation	
GEOG 441	Geography of Cities and Metropolitan Areas	
GEOG 443	Cities of the World: Comparative Urban Geography	
GEOG 540	Globalization and the City	
Select one of the following:		3
GEOG 464	Environmental Problems	
GEOG 520	Physical Geography of the City	
GEOG 564	Urban Environmental Change and Social Justice	
<b>Total Credits</b>		<b>9</b>

### Climate-Environment Track

Code	Title	Credits
Select three of the following:		9
GEOG 304	Human Impact on the Environment	
GEOG 306	Natural Hazards <sup>1</sup>	
GEOG 310	General Climatology <sup>1</sup>	
GEOG 340	Biogeography <sup>1</sup>	
GEOG 350	Conservation of Natural Resources	
GEOG 415	Hydrogeography <sup>1</sup>	
GEOG 450	Climates of the Past and Climate Change <sup>1</sup>	
GEOG 455	Applied Climatology <sup>1</sup>	
GEOG 464	Environmental Problems	
GEOG 515	Watershed Analysis and Modeling <sup>1</sup>	
GEOG 520	Physical Geography of the City <sup>1</sup>	
GEOG 564	Urban Environmental Change and Social Justice	
<b>Total Credits</b>		<b>9</b>

<sup>1</sup> These courses are approved to satisfy the L&S Advanced Natural Sciences requirement for the B.S. Students pursuing the B.S. option will need to complete at least 15 credits in upper-division courses

(numbered 300 or above) in Geography, and 30 of their 36 credits in upper-division L&S courses must be in approved L&S Advanced Natural Science courses.

## Globalization, Cultures, and Societies Track

Code	Title	Credits
Select any three of the following regional, world, or urban geography courses, with at least two at the 400-level or above. <sup>1,2,3</sup>		9

### Regional:

GEOG 213	Geography of Asia	
GEOG 330	Europe: East and West	
GEOG 421	Geography of Latin America	
GEOG 470	Geography of South Asia	

### World:

GEOG 231	Muslim Geographies: Identities and Politics	
GEOG 309	Nationalities and Nations of the World	
GEOG 400	Population, Environment, Development	
GEOG 410	Gendered Geographies	

### Urban:

GEOG 430	Geography of Transportation	
GEOG 441	Geography of Cities and Metropolitan Areas	
GEOG 443	Cities of the World: Comparative Urban Geography	
GEOG 520	Physical Geography of the City	
GEOG 540	Globalization and the City	
GEOG 564	Urban Environmental Change and Social Justice	

**Total Credits** **9**

<sup>1</sup> In addition to the regional or world course taken to satisfy major core requirement above.

<sup>2</sup> If the course taken to meet core requirement is a Regional course, then the course selected to complete track requirement should be a World course, or vice versa, for a total of one **Regional** course and one **World** course in the major.

<sup>3</sup> If not selected for core requirement above.

## Cross-listed Courses

The following courses offered by the Department of Geosciences may be used to fulfill the requirements of the undergraduate major or minor in geography.

Code	Title	Credits
GEO SCI 401	General Soil Science	3
GEO SCI 409	Process Geomorphology	4

## Letters & Science Advising

During your time at UWM, you may have multiple members of your success team, including advisors, peer mentors, and success coaches. Letters and Science students typically work with at least two different types of advisors as they pursue their degrees: professional College Advisors and Faculty Advisors. Departmental Faculty Advisors focus on

the major while L&S College Advisors advise across your entire degree program.

**College Advisors** are located in Holton Hall and serve as your primary advisor. They are your point person for your questions about navigating college and completing your degree. College Advisors will:

- assist you in defining your academic and life goals;
- help you create an educational plan that is consistent with those goals;
- assist you in understanding curriculum, major and degree requirements for graduation, as well as university policies and procedures;
- provide you with information about campus and community resources and refer you to those resources as appropriate; and
- monitor your progress toward graduation and completion of requirements.

**Faculty Advisors** mentor students in the major and assist them in maximizing their development in the program. You will begin working with a Faculty Advisor when you declare your major. Faculty Advisors are an important partner and will:

- help you understand major requirements and course offerings in the department;
- explain opportunities for internships and undergraduate research and guide you in obtaining those experiences; and
- serve as an excellent resource as you consider potential graduate programs and career paths in your field.

Students are encouraged to meet with both their College Advisor and Faculty Advisor at least once each semester. Appointments are available in-person, by phone or by video.

Currently enrolled students should use the Navigate website (<https://uwmilwaukee.campus.eab.com>) to make an appointment with your assigned advisor or call (414) 229-4654 if you do not currently have an assigned Letters & Science advisor. Prospective students who haven't enrolled in classes yet should call (414) 229-7711 or email [let-sci@uwm.edu](mailto:let-sci@uwm.edu).

## Honors in the Major

Geography majors who have maintained at least a 3.0 GPA overall and a 3.5 GPA in all courses taken for the major are awarded the distinction 'Honors in the Major' when they graduate.

## High Honors in the Major

Geography majors who have maintained at least a 3.0 GPA overall and a 3.75 GPA in all courses taken for the major are awarded the distinction 'High Honors in the Major' when they graduate.

## Honors in the College of Letters and Science

### Dean's Honor List

GPA of 3.750 or above, earned on a full-time student's GPA on 12 or more graded credits in a given semester.

## Honors College Degree and Honors College Degree with Distinction

Granted to graduating seniors who complete Honors College requirements, as listed in the Honors College (<http://catalog.uwm.edu/honors-college/>) section of this site.

### Commencement Honors

Students with a cumulative GPA of 3.500 or above, based on a minimum of 40 graded UWM credits earned prior to the final semester, will receive all-university commencement honors and be awarded the traditional gold cord at the December or May Honors Convocation. Please note that for honors calculation, the GPA is **not** rounded and is truncated at the third decimal (e.g., 3.499).

### Final Honors

Earned on a minimum of 60 graded UWM credits: Cum Laude - 3.500 or above; Magna Cum Laude - 3.650 or above; Summa Cum Laude - 3.800 or above.

### Contact Information

Current Students contact Associate Professor Hyejin Yoon at [yoony2@uwm.edu](mailto:yoony2@uwm.edu)

Prospective Students contact a Letters & Science Admissions Counselor at

(414) 229-7711 or [let-sci@uwm.edu](mailto:let-sci@uwm.edu)

<http://uwm.edu/geography/undergraduate/>