GEOGRAPHY, BA

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 scientific methods to explain and predict people’s impact on the planet and the planet’s impact on people.

UWM’s Geography students graduate with an exceptional ability to intellectually and technologically process spatial 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 facts and diverse values. They also are adept at presenting information visually - for example, maps!

Some examples of research topics being tackled by today’s geographers include climate change, population shifts, land use patterns, and animal migration. These are all examples of how geographers focus on human's relationship with man-made and natural environments.

Geographic Information Science (GIS) is a growing specialty within geography. GIS is a technology-based system for capturing, storing, and checking different types of data in relation to its position on Earth. It is a tool that enhances decision-making in both the private and public sector. For example, a rural town in the Rocky Mountains may use GIS data to determine where and when to place fire stations and personnel based on the patterns of forest fires and permanent and tourist populations. A corporation may use GIS to plan the location and layout of a new store based on shopping and traffic patterns.

At UWM, students can focus on GIS within the major, or choose another specialty track: urban geography with a focus on cities; environmental geography for those interested in natural resources; or physical systems with an emphasis on the natural features of earth such as climate, soil, and plants. Or, students can take the broad major and explore a little bit of each of these areas.

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, Caribbean, and U.S. Latin@ Studies (http://catalog.uwm.edu/letters-science/latino-studies), 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 Arts 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. 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)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>University General Education Requirements (GER)</td>
<td></td>
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<tr>
<td></td>
<td>Oral and Written Communication</td>
<td></td>
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<tr>
<td></td>
<td><strong>Part A</strong></td>
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<tr>
<td></td>
<td>Achieve a grade of C or better in the following course:</td>
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<tr>
<td></td>
<td>ENGLISH 102 College Writing and Research (or equivalent)</td>
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<tr>
<td></td>
<td><strong>Part B</strong></td>
<td></td>
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<tr>
<td></td>
<td>Course designated as OWC-B; may be completed through a major-specific course requirement</td>
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<tr>
<td></td>
<td>Quantitative Literacy</td>
<td></td>
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<tr>
<td></td>
<td><strong>Part A</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Achieve a grade of C or better in one of the following:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>MATH 102 Mathematical Literacy for College Students II</td>
<td></td>
</tr>
<tr>
<td></td>
<td>MATH 103 Contemporary Applications of Mathematics</td>
<td></td>
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<td></td>
<td>MATH 105 Introduction to College Algebra</td>
<td></td>
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<tr>
<td></td>
<td>MATH 108 Algebraic Literacy II</td>
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<tr>
<td></td>
<td>MATH 111 Introduction to Logic - Critical Reasoning</td>
<td></td>
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<tr>
<td></td>
<td>MATH 116 College Algebra</td>
<td></td>
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<tr>
<td></td>
<td>Or equivalent course</td>
<td></td>
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<tr>
<td></td>
<td><strong>Part B</strong></td>
<td></td>
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<tr>
<td></td>
<td>Course designated as QL-B; may be completed through a major-specific course requirement</td>
<td></td>
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<tr>
<td></td>
<td>Arts</td>
<td></td>
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<tr>
<td></td>
<td>Select 3 credits</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Humanities</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Select 6 credits</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Social Sciences</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Select 6 credits</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Natural Sciences</td>
<td></td>
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<tr>
<td></td>
<td>Select 6 credits (at least two courses including one lab)</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>UWM Foreign Language Requirement</td>
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<tr>
<td></td>
<td>Complete Foreign Language Requirement through:</td>
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<tr>
<td></td>
<td>Two years (high school) of a single foreign language</td>
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<tr>
<td></td>
<td>Two semesters (college) of a single foreign language</td>
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<td></td>
<td>Or equivalent</td>
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<tr>
<td></td>
<td>UWM Cultural Diversity Requirement</td>
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<tr>
<td></td>
<td>One course from the Arts, Humanities, or Social Sciences must also satisfy UWM’s Cultural Diversity requirement</td>
<td></td>
</tr>
</tbody>
</table>

1 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) by 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 requirement for Oral and Written Communication Part B listed above.

II. Mathematics and Formal Reasoning

To satisfy the Mathematics and Formal Reasoning Requirement, students must satisfy the following two requirements:

1. Achieve a Math Placement score of at least 30 or earn at least 3 credits with a grade of C or higher in one of the following courses or an equivalent course:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 102</td>
<td>Mathematical Literacy for College Students II</td>
<td>3</td>
</tr>
<tr>
<td>MATH 103</td>
<td>Contemporary Applications of Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>MATH 105</td>
<td>Introduction to College Algebra</td>
<td>3</td>
</tr>
<tr>
<td>MATH 108</td>
<td>Algebraic Literacy II</td>
<td>3</td>
</tr>
<tr>
<td>MATH 111</td>
<td>Introduction to Logic - Critical Reasoning</td>
<td>3</td>
</tr>
<tr>
<td>or PHILOS 111</td>
<td>Introduction to Logic - Critical Reasoning</td>
<td>3</td>
</tr>
<tr>
<td>MATH 116</td>
<td>College Algebra</td>
<td>3</td>
</tr>
<tr>
<td>MATH 175</td>
<td>Mathematical Explorations for Elementary Teachers I</td>
<td>3</td>
</tr>
</tbody>
</table>

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

Note: This requirement is the same as the University General Education Requirement for Quantitative Literacy Part A, listed above.

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:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATM SCI 500</td>
<td>Statistical Methods in Atmospheric Sciences</td>
<td></td>
</tr>
<tr>
<td>BIO SCI 465</td>
<td>Biostatistics</td>
<td></td>
</tr>
<tr>
<td>ECON 210</td>
<td>Economic Statistics</td>
<td></td>
</tr>
<tr>
<td>GEOG 247</td>
<td>Quantitative Analysis in Geography</td>
<td></td>
</tr>
<tr>
<td>HIST 595</td>
<td>The Quantitative Analysis of Historical Data</td>
<td></td>
</tr>
<tr>
<td>MTHSTAT 215</td>
<td>Elementary Statistical Analysis</td>
<td></td>
</tr>
<tr>
<td>PHILOS 211</td>
<td>Elementary Logic</td>
<td></td>
</tr>
<tr>
<td>POL SCI 390</td>
<td>Political Data Analysis</td>
<td></td>
</tr>
<tr>
<td>POL SCI 392</td>
<td>Survey Research</td>
<td></td>
</tr>
<tr>
<td>PSYCH 210</td>
<td>Psychological Statistics</td>
<td></td>
</tr>
<tr>
<td>SOCIOL 261</td>
<td>Introduction to Statistical Thinking in Sociology</td>
<td></td>
</tr>
</tbody>
</table>

Note: This requirement is NOT the same as the University General Education Requirement for Quantitative Literacy Part B. To complete the BA, 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

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.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Completed in one of the following:</td>
<td></td>
<td>0-18</td>
</tr>
<tr>
<td>Successful completion of the 4th semester of college work or equivalent in one language other than English (including American Sign Language)</td>
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</tr>
<tr>
<td>Successful completion of the 3rd semester of college work or equivalent in one language other than English (including American Sign Language) PLUS the 2nd semester of college work or equivalent in another language other than English (including American Sign Language)</td>
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<td></td>
</tr>
</tbody>
</table>

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.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Completed in one of the following ways:</td>
<td></td>
<td>9</td>
</tr>
<tr>
<td>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</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Complete 3 non-language courses (min. 9 credits) with an international content chosen from at least 2 curricular areas</td>
<td></td>
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<tr>
<td>Complete 9 credits in combination of the two options above</td>
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</tr>
</tbody>
</table>

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
VI. The Major
The College of Letters and Science 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 of Letters and Science 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.

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 five tracks:

Diversity (CD+/) designation, L&S students must complete the Breadth requirement.

### Code Title Credits
**Arts**
Select 3 credits 3

**Humanities**
Complete 12 credits of L&S courses with Humanities Breadth designation; no more than 6 credits from a single subject area. * 12

**Social Sciences**
Complete 12 credits of L&S Courses with Social Science Breadth designation; no more than 6 credits from a single curricular area. * 12

**Natural Sciences**
Complete 12 credits of L&S Courses with Natural Sciences Breadth designation, including at least one laboratory or field course; no more than 6 credits from a single curricular area. * 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.

Geography majors may earn either a Bachelor of Arts or Bachelor of Science degree. The physical systems track is recommended for Bachelor of Science students. In satisfying their major requirements, all students must complete at least 37 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 GPA. Majors must have a 2.0 GPA in all geography credits attempted at UWM. In addition, students must attain a 2.0 GPA in all major credits attempted, including any transfer work.

### Code Title Credits
**Core Curriculum**
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

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 214 Wisconsin
GEOG 216 Geography of the United States and Canada
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 3
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:
GEOG 650  Geography Field Work 4
GEOG 654  Tropical Field Course:
GEOG 489  Internship in Geography, Upper Division 5
GEOG 497  Study Abroad. 5

Major Tracks
Select a Major Track 9-15
Total Credits 33-40

1 Students in the Urban Track are required to take GEOG 140.
2 Students in the Physical Systems Track must take GEOG 120; those in the Environmental Track must take GEOG 125.
3 Students in the Geographic Information Track must take GEOG 525.
4 Fieldwork is only offered in the June summer session. Check with the department for further details.
5 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.

Environmental Track
Code   Title                                      Credits
 Select three of the following:  9
 GEOG 350  Conservation of Natural Resources  
 GEOG 520  Physical Geography of the City  
 GEOG 464  Environmental Problems  
 GEOG 564  Urban Environmental Change and Social Justice  

Total Credits  9

Physical Systems Track
Code   Title                                      Credits
 Required
 Select three of the following:  9
 GEOG 310  General Climatology  
 GEOG 340  Biogeography  
 GEOG 415  Hydrogeography  
 GEOG 420  Methods and Principles in Land Form Geography  
 GEOG 424  Karst Geomorphology  
 GEOG 475  Geography of Soils  

Electives
Select 6 credits 1  6
Total Credits 15

1 Any two upper-division (numbered 300 or above) courses approved for natural science credit that have not been selected to fulfill the above requirements. A maximum of 3 credits from outside Geography may be applied to the major.

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. 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  

Total Credits 9

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  

Total Credits 9
GEOG 564  Urban Environmental Change and Social Justice

Total Credits 9

1. In addition to the regional or world course taken to satisfy major core requirement above.
2. 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.
3. 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.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEO SCI 401</td>
<td>General Soil Science</td>
<td>3</td>
</tr>
<tr>
<td>GEO SCI 409</td>
<td>Process Geomorphology</td>
<td>4</td>
</tr>
</tbody>
</table>

Letters & Science Advising

The College of Letters and Science provides general academic advising for all students with a major in the College, particularly as it relates to campus' general education requirements and the College's degree requirements. We also provide specialized advising for pre-professional students (pre-med, pre-dental, pre-pharmacy, etc.) regardless if their major is in Letters and Science or not. Prospective students, including high school students and students seeking to transfer to a program in Letters and Science may also receive advising from our admissions counselors.

Upon admission, students are assigned an advisor in the College advising office. Academic advising is available Monday through Friday from 8:30 a.m. to 4:30 p.m. by appointment. Appointments outside of these times may be available and phone appointments are available for online students. The advising office (https://uwm.edu/letters-science/advising/contact-advising) is located on the first floor of Holton Hall. Current students should call (414) 229-4654 to schedule an appointment or use the Student Success Collaborative website (https://uwmilwaukee.campus.eab.com) to make an appointment with your assigned advisor; online scheduling is only available if you already have a Letters & Science advisor assigned to you. Prospective students should call (414) 229-7711 or email let-sci@uwm.edu.

When students declare a major, they will receive an additional faculty advisor located within the major department who will assist with requirements for that major. Students should read the "Declaration of Major" information on the website of the major that they are interested in. In some cases, the student will need to choose a faculty advisor as part of the declaration process.

All students are cautioned to consult their Letters & Science academic advisor AND their major advisor prior to each registration period to ensure they understand all requirements. Do not rely on pre-printed sample plans, as they are intended to be samples only and may not be right for your particular situation.

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 Degree and Honors Degree with Thesis

Granted to graduating seniors who complete Honors College requirements, as listed in the Honors College (http://catalog.uwm.edu/opportunities-resources/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 Kristin Sziarto at sziarto@uwm.edu
Prospective Students contact a Letters & Science Admissions Counselor at (414) 229-7711 or let-sci@uwm.edu

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