

# GEOGRAPHY, BA

**Banner Code:** SC-BA-GEOG

## Undergraduate Advising

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The Geography, BA is designed to offer students the opportunity to study the integrated social and environmental processes that continuously shape and reshape the world we live in. This major provides students with broad training across the core subdisciplines of geography (human, physical, and GIScience), while also offering the requisite flexibility for those students seeking a multidisciplinary educational experience. Students will find numerous opportunities for employment in both the private and public sectors, as well as in academia. Given their interdisciplinary approach and uniquely spatial perspective, geographers are well suited to address important local, regional, and global challenges in today's world.

The Department of Geography and Geoinformation Science (<http://catalog.gmu.edu/colleges-schools/science/geography-geoinformation-science/>) fosters a supportive, active learning environment in which students are encouraged to work closely with both faculty and peers. The curriculum in this major provides students with the synthesis skills and broad base of knowledge that prepares them to be successful in an ever-evolving job market. For students who wish to pursue their interest in geography with a more technical curriculum, the department also offers a Geography, BS (<http://catalog.gmu.edu/colleges-schools/science/geography-geoinformation-science/geography-bs/>).

## Admissions & Policies

### Admissions

University-wide admissions policies can be found in the Undergraduate Admissions Policies (<http://catalog.gmu.edu/admissions/undergraduate-policies/>) section of this catalog.

To apply for this program, please complete the George Mason University Admissions Application (<https://www2.gmu.edu/admissions-aid/apply-now/>).

### Policies

Students must fulfill all Requirements for Bachelor's Degrees (<http://catalog.gmu.edu/policies/academic/undergraduate-policies/#text>) including the Mason Core (<http://catalog.gmu.edu/mason-core/>). As outlined in the Requirements tab, students in this bachelor's program must also complete the additional College Requirements for the BA Degree.

GGS 415 Seminar in Geographic Thought and Methodology (Mason Core) (<http://catalog.gmu.edu/mason-core/>) fulfills the writing intensive requirement.

For policies governing all undergraduate programs, see AP.5 Undergraduate Policies (<http://catalog.gmu.edu/policies/academic/undergraduate-policies/>).

## Requirements

### Degree Requirements

Total credits: minimum 120

Students should refer to the Admissions & Policies tab for specific policies related to this program.

Candidates for a degree in geography must complete the approved GGS geography courses with a minimum GPA of 2.00.

Students must complete the Core, Systematic and Regional Geography, and GGS electives, then select one concentration or an additional program, and lastly complete the College Requirements for the BA Degree and the Mason Core and Elective Credits.

### Geography

#### Core Courses

Code	Title	Credits
GGS 102	Physical Geography (Mason Core) ( <a href="http://catalog.gmu.edu/mason-core/">http://catalog.gmu.edu/mason-core/</a> )	3-4
or GGS 121	Dynamic Atmosphere and Hydrosphere (Mason Core) ( <a href="http://catalog.gmu.edu/mason-core/">http://catalog.gmu.edu/mason-core/</a> )	
or GGS 122	Dynamic Geosphere and Ecosphere	
GGS 103	Human Geography (Mason Core) ( <a href="http://catalog.gmu.edu/mason-core/">http://catalog.gmu.edu/mason-core/</a> )	3
GGS 110	Introduction to Geoinformation Technologies	3
GGS 300	Quantitative Methods for Geographical Analysis	3
GGS 310	Cartographic Design	3
GGS 311	Geographic Information Systems	3
GGS 415	Seminar in Geographic Thought and Methodology (Mason Core) ( <a href="http://catalog.gmu.edu/mason-core/">http://catalog.gmu.edu/mason-core/</a> ) <sup>1</sup>	3
GGS 485	Capstone in Geography and Geoinformation Science	3
Total Credits		24-25

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Fulfills writing intensive requirement.

#### Breadth and Experience Courses

Students must take one systematic course and one regional course from the list below:

Code	Title	Credits
<b>Systematic Courses</b>		
Select one from the following:		3
GGS 301	Political Geography (Mason Core) ( <a href="http://catalog.gmu.edu/mason-core/">http://catalog.gmu.edu/mason-core/</a> )	
GGS 302	Global Environmental Hazards	

GGG 303	Geography of Resource Conservation (Mason Core) ( <a href="http://catalog.gmu.edu/mason-core/">http://catalog.gmu.edu/mason-core/</a> )	
GGG 304	Population Geography (Mason Core) ( <a href="http://catalog.gmu.edu/mason-core/">http://catalog.gmu.edu/mason-core/</a> )	
GGG 305	Economic Geography	
GGG 306	Urban Geography	
GGG 307	Geographic Approaches for Sustainable Development	
GGG 309	Introduction to Weather and Climate	
GGG 312	Physical Climatology	
GGG 314	Severe and Extreme Weather	
GGG 321	Biogeography	
GGG 340	Health Geography	
GGG 344	Military Geography	
GGG 346	Geography of Religions and Belief Systems	
GGG 357	Urban Planning	
GGG 399	Select Topics in GGS	
<b>Regional Courses</b>		
Select one from the following:		3
GGG 315	Geography of the United States	
GGG 316	Geography of Latin America	
GGG 317	Geography of China (Mason Core) ( <a href="http://catalog.gmu.edu/mason-core/">http://catalog.gmu.edu/mason-core/</a> )	
GGG 320	Geography of Europe	
GGG 325	Geography of North Africa and the Middle East	
GGG 326	Geography of Eastern Europe and Russia	
GGG 333	Issues in Regional Geography	
GGG 380	Geography of Virginia	
Total Credits		6

**Elective Courses**

Code	Title	Credits
Select 3-4 credits of GGS electives ( <a href="http://catalog.gmu.edu/courses/ggs/">http://catalog.gmu.edu/courses/ggs/</a> )		3-4
Select 6 credits of upper division GGS electives ( <a href="http://catalog.gmu.edu/courses/ggs/">http://catalog.gmu.edu/courses/ggs/</a> )		6
Total Credits		9-10

**Environmental Geography Concentration (EGEO)**

The Environmental Geography concentration for the BA in Geography provides a unique opportunity for majors to take a broader, integrative science approach to studies of the environment. In collaboration with the Department of Environmental Science and Policy (<http://catalog.gmu.edu/colleges-schools/science/environmental-policy/>), BA in Geography majors have the opportunity to focus their studies on geographic approaches to climatology and global changes, environmental issues, policy matters, and sustainability topics.

Some courses may have prerequisite requirements:

Code	Title	Credits
<b>Core Courses</b>		
GGG 303	Geography of Resource Conservation (Mason Core) ( <a href="http://catalog.gmu.edu/mason-core/">http://catalog.gmu.edu/mason-core/</a> )	3
EVPP 336	Tackling Wicked Problems in Society the Environment (Mason Core) ( <a href="http://catalog.gmu.edu/mason-core/">http://catalog.gmu.edu/mason-core/</a> )	3
or EVPP 337	Environmental Policy Making in Developing Countries (Mason Core) ( <a href="http://catalog.gmu.edu/mason-core/">http://catalog.gmu.edu/mason-core/</a> )	
or EVPP 377	Applied Ecology	
<b>Methods Course</b>		
GGG 354	Data Analysis and Global Change Detection Techniques	3
or GGS 379	Remote Sensing	
<b>Electives</b>		<b>6-7</b>
Select at least 6 credits from the following options, 3 credits of which must be prefixed GGS:		
GGG 302	Global Environmental Hazards	
GGG 307	Geographic Approaches for Sustainable Development	
GGG 308	Field Mapping Techniques	
GGG 309	Introduction to Weather and Climate	
GGG 312	Physical Climatology	
GGG 314	Severe and Extreme Weather	
GGG 354	Data Analysis and Global Change Detection Techniques <sup>1</sup>	
GGG 379	Remote Sensing <sup>1</sup>	
EVPP 302	Environmental Science: Biomes and Human Dimensions	
EVPP 318	Conservation Biology	
or BIOL 318	Conservation Biology	
EVPP 336	Tackling Wicked Problems in Society the Environment (Mason Core) ( <a href="http://catalog.gmu.edu/mason-core/">http://catalog.gmu.edu/mason-core/</a> ) <sup>1</sup>	
EVPP 337	Environmental Policy Making in Developing Countries (Mason Core) ( <a href="http://catalog.gmu.edu/mason-core/">http://catalog.gmu.edu/mason-core/</a> ) <sup>1</sup>	
EVPP 338	Economics of Environmental Policy	
EVPP 361	Introduction to Environmental Policy	
EVPP 362	Intermediate Environmental Policy	
EVPP 377	Applied Ecology <sup>1</sup>	
EVPP 381	Nature and Culture in Global Wetlands (Mason Core) ( <a href="http://catalog.gmu.edu/mason-core/">http://catalog.gmu.edu/mason-core/</a> )	
EVPP 421	Marine Conservation	
EVPP 428	Planetary Health	
EVPP 430	Fundamentals of Environmental Geographic Information Systems	
EVPP 434	Food-Energy-Water-Climate Nexus	
EVPP 436	Politics of Climate Change Governance	
EVPP 440	Field Environmental Science	
EVPP 475	Global Biodiversity Governance	

EVPP 480	Sustainability in Action (Mason Core) ( <a href="http://catalog.gmu.edu/mason-core/">http://catalog.gmu.edu/mason-core/</a> )
ANTH 370	Environment and Culture
ECON 105	Environmental Economics for the Citizen (Mason Core) ( <a href="http://catalog.gmu.edu/mason-core/">http://catalog.gmu.edu/mason-core/</a> )
ECON 335	Environmental Economics
GCH 360	Health and Environment
GEOL 305	Environmental Geology (Mason Core) ( <a href="http://catalog.gmu.edu/mason-core/">http://catalog.gmu.edu/mason-core/</a> )
GOVT 361	Introduction to Environmental Policy
GOVT 362	Intermediate Environmental Policy
PHIL 243	Global Environmental Ethics (Mason Core) ( <a href="http://catalog.gmu.edu/mason-core/">http://catalog.gmu.edu/mason-core/</a> )
<b>Total Credits</b> 15-16	

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Course cannot be selected if previously selected as a core course.

### Health Geography Concentration (HGEO)

The field of Health Geography addresses the role of place, location dynamics and geography in health, well-being, and disease. Public health patterns can vary significantly by physical and social characteristics of places both within and between regions, states, or countries. In collaboration with the Department of Global and Community Health (<http://catalog.gmu.edu/colleges-schools/public-health/global-community-health/>), BA in Geography majors get introduced to local and global health issues and develop their skill set in spatial and statistical analysis of diverse health outcomes in populations.

Some courses may have prerequisite requirements:

Code	Title	Credits
<b>Core Courses</b>		
GGS 340	Health Geography	3
GCH 300	Introduction to Public Health	3
<b>Methods Course</b>		
GGS 432 or GGS 463	Spatial Modeling for Public Health RS: GIS Analysis and Application	3
<b>Electives</b>		
Select at least 6 credits from the following options, 3 credits of which must be prefixed GGS:		6
GGS 302	Global Environmental Hazards	
GGS 303	Geography of Resource Conservation (Mason Core) ( <a href="http://catalog.gmu.edu/mason-core/">http://catalog.gmu.edu/mason-core/</a> )	
GGS 304	Population Geography (Mason Core) ( <a href="http://catalog.gmu.edu/mason-core/">http://catalog.gmu.edu/mason-core/</a> )	
GGS 306	Urban Geography	
GGS 321	Biogeography	
GGS 354	Data Analysis and Global Change Detection Techniques	
GGS 357	Urban Planning	
GGS 432	Spatial Modeling for Public Health <sup>1</sup>	
GGS 463	RS: GIS Analysis and Application <sup>1</sup>	

GCH 205	Global Health (Mason Core) ( <a href="http://catalog.gmu.edu/mason-core/">http://catalog.gmu.edu/mason-core/</a> )
GCH 332	Health and Disease
GCH 335	Applied Health Statistics
GCH 360	Health and Environment
GCH 380	Public Health Research Methods
GCH 405	Global Health Interventions: History and Systems
GCH 406	Global Health Interventions: Emerging Issues
GCH 426	Global Emerging Infectious Diseases
GCH 412	Fundamentals of Epidemiology
GCH 445	Social Determinants of Health
GCH 450	Culture, Sexuality and the Global AIDS Epidemic
ANTH 363	Humans, Disease, and Death (Mason Core) ( <a href="http://catalog.gmu.edu/mason-core/">http://catalog.gmu.edu/mason-core/</a> )
ECON 374	Health Economics
GLOA 388	Global Health and Development
PHIL 344	Ethical Issues in Global Health
RELI 341	Spirituality and Healing (Mason Core) ( <a href="http://catalog.gmu.edu/mason-core/">http://catalog.gmu.edu/mason-core/</a> )
SOCI 390	Sociology of Health, Illness, and Disability
<b>Total Credits</b> 15	

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Course cannot be selected if previously selected as a core course.

### Geoanthropology Concentration (GEA)

Anthropology, a social science, focuses on human activities—past, present, and future. Geography, positioned in the social science and STEM field, studies the physical features of the Earth and its atmosphere, and human activities as they affect and are affected by these, including the distribution of populations and resources, land use, urbanization and other topics. Just as anthropologists use insights from other disciplines to understand humans, geographers cross disciplinary boundaries to collect, store, analyze, model and visualize data. Such broad and inclusive disciplines and definitions yield a large number of possible themes in Geoanthropology. This concentration enables BA in Geography majors, versed in systematic techniques and regional geography, to become better versed in the theoretical constructs of anthropology that situate the environment as part of a global cultural system.

Code	Title	Credits
<b>Core Courses</b>		
GGS 304	Population Geography (Mason Core) ( <a href="http://catalog.gmu.edu/mason-core/">http://catalog.gmu.edu/mason-core/</a> )	3
ANTH 114	Introduction to Cultural Anthropology (Mason Core) ( <a href="http://catalog.gmu.edu/mason-core/">http://catalog.gmu.edu/mason-core/</a> )	3
or ANTH 120	Unearthing the Past: Prehistory, Culture and Evolution (Mason Core) ( <a href="http://catalog.gmu.edu/mason-core/">http://catalog.gmu.edu/mason-core/</a> )	
<b>Methods Course</b>		
GGS 308 or GGS 379	Field Mapping Techniques Remote Sensing	3

**Electives**

Select at least 6 credits from the following options, 3 credits of which must be prefixed GGS: 6

GGG 301	Political Geography (Mason Core) ( <a href="http://catalog.gmu.edu/mason-core/">http://catalog.gmu.edu/mason-core/</a> )
GGG 305	Economic Geography
GGG 306	Urban Geography
GGG 307	Geographic Approaches for Sustainable Development
GGG 309	Introduction to Weather and Climate
GGG 321	Biogeography
GGG 357	Urban Planning
GGG 315	Geography of the United States
GGG 316	Geography of Latin America
GGG 320	Geography of Europe
GGG 325	Geography of North Africa and the Middle East
GGG 326	Geography of Eastern Europe and Russia
GGG 333	Issues in Regional Geography
GGG 380	Geography of Virginia
GGG 422	Drone Remote Sensing
ANTH 302	Peoples and Cultures of Latin America (Mason Core) ( <a href="http://catalog.gmu.edu/mason-core/">http://catalog.gmu.edu/mason-core/</a> )
ANTH 307	Ancient Mesoamerica (Mason Core) ( <a href="http://catalog.gmu.edu/mason-core/">http://catalog.gmu.edu/mason-core/</a> )
ANTH 308	Peoples and Cultures of the Middle East (Mason Core) ( <a href="http://catalog.gmu.edu/mason-core/">http://catalog.gmu.edu/mason-core/</a> )
ANTH 309	Peoples and Cultures of India (Mason Core) ( <a href="http://catalog.gmu.edu/mason-core/">http://catalog.gmu.edu/mason-core/</a> )
ANTH 317	East Asian Cultures
ANTH 320	Global Africa
ANTH 325	Field Techniques in Archaeology
ANTH 330	Peoples and Cultures of Selected Regions: Non-Western
ANTH 332	Cross-Cultural Perspectives on Globalization (Mason Core) ( <a href="http://catalog.gmu.edu/mason-core/">http://catalog.gmu.edu/mason-core/</a> )
ANTH 357	Bioarchaeology
ANTH 366	Food and Human Evolution
ANTH 370	Environment and Culture
ANTH 373	Archaeological Science
ANTH 374	Archaeology of Hunter-Gatherers
ANTH 376	Food and Culture
ANTH 377	Mortuary Archaeology
ANTH 379	Andean Archaeology
ANTH 381	Medical Anthropology
ANTH 382	Urban Anthropology (Mason Core) ( <a href="http://catalog.gmu.edu/mason-core/">http://catalog.gmu.edu/mason-core/</a> )
ANTH 394	Archaeology of Climate Change

ANTH 396	Issues in Anthropology: Social Sciences (Mason Core) ( <a href="http://catalog.gmu.edu/mason-core/">http://catalog.gmu.edu/mason-core/</a> ) (When the topic is related to culture)
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Total Credits 15

**Urban Planning (URBP)**

Urban planners work to solve issues surrounding the built environment, examining spaces of everyday life in urban regions. While inherently spatial in nature, urban planners also develop transdisciplinary skills involving policy, analytical methods, and social sciences in order to create and maintain communities with high quality of life. Students pursuing the Urban Planning concentration build upon their GIS, cartographic, and geospatial analysis skills through a focus on urban spaces and urban problems.

Code	Title	Credits
<b>Core Courses</b>		
GGG 357	Urban Planning	3
ARTH 103	Introduction to Architecture (Mason Core) ( <a href="http://catalog.gmu.edu/mason-core/">http://catalog.gmu.edu/mason-core/</a> )	3
<b>Methods Course</b>		
GGG 304	Population Geography (Mason Core) ( <a href="http://catalog.gmu.edu/mason-core/">http://catalog.gmu.edu/mason-core/</a> )	3
<b>Electives</b>		
Select at least 6 credits from the following options, 3 credits of which must be prefixed GGS: <sup>1</sup>		6
GGG 301	Political Geography (Mason Core) ( <a href="http://catalog.gmu.edu/mason-core/">http://catalog.gmu.edu/mason-core/</a> )	
GGG 302	Global Environmental Hazards	
GGG 303	Geography of Resource Conservation (Mason Core) ( <a href="http://catalog.gmu.edu/mason-core/">http://catalog.gmu.edu/mason-core/</a> )	
GGG 305	Economic Geography	
GGG 306	Urban Geography	
GGG 307	Geographic Approaches for Sustainable Development	
GGG 432	Spatial Modeling for Public Health	
GGG 463	RS: GIS Analysis and Application	
ANTH 382	Urban Anthropology (Mason Core) ( <a href="http://catalog.gmu.edu/mason-core/">http://catalog.gmu.edu/mason-core/</a> )	
ARTH 311	Design of Cities (Mason Core) ( <a href="http://catalog.gmu.edu/mason-core/">http://catalog.gmu.edu/mason-core/</a> )	
ARTH 371	American Architecture and Material Culture (Mason Core) ( <a href="http://catalog.gmu.edu/mason-core/">http://catalog.gmu.edu/mason-core/</a> )	
CONF 326	Negotiation	
CONF 329	Community Engagement and Collaborative Problem Solving	
ECON 309	Economic Problems and Public Policies	
ECON 330	Public Finance	
EVPP 361	Introduction to Environmental Policy	
EVPP 442	Urban Ecosystems and Processes	
EVPP 490	Special Topics in Environmental Science and Policy (When the topic is "Urban Smart Growth Strategies")	

FNAN 351	Principles of Real Estate
FNAN 454	Real Estate Development and Investment Fund
GOVT 304	American State and Local Government
GOVT 351	Administration in the Political System
GOVT 354	Nonprofit Sector in Society
GOVT 464	Issues in Public Policy and Administration (When title is "Urban Economic Development in Smart Growth Era")
HIST 316	History of Modern Architecture (Mason Core) ( <a href="http://catalog.gmu.edu/mason-core/">http://catalog.gmu.edu/mason-core/</a> )
INTS 331	The Nonprofit Sector (Mason Core) ( <a href="http://catalog.gmu.edu/mason-core/">http://catalog.gmu.edu/mason-core/</a> )
NUTR 435	Urban Agriculture
RMGT 302	Park Management and Operations
RMGT 405	Planning and Operation of Recreation Facilities
SOCI 332	The Urban World (Mason Core) ( <a href="http://catalog.gmu.edu/mason-core/">http://catalog.gmu.edu/mason-core/</a> )
SOCI 352	Social Problems and Solutions (Mason Core) ( <a href="http://catalog.gmu.edu/mason-core/">http://catalog.gmu.edu/mason-core/</a> )
SOCI 355	Social Inequality (Mason Core) ( <a href="http://catalog.gmu.edu/mason-core/">http://catalog.gmu.edu/mason-core/</a> )
SOCI 431	Survey Research
STAT 474	Introduction to Survey Sampling

Total Credits 15

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Other urban topics courses may be taken with advisor approval.

### Alternative to a Concentration

Code	Title	Credits
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Students who are not selecting a concentration must choose an established minor or second major that provides 15 unique credits. If 15 unique credits are not available in the chosen minor or second major, additional GGS courses may be taken to fulfill this requirement; please consult with an advisor for details. <sup>1</sup>

1

Students choosing an established minor or major must apply a minimum number of credits only to that minor or major, as detailed in AP 4.2.1 (<https://catalog.gmu.edu/policies/academic/degree-application-conferral-graduation/#ap-4-2-1>).

### Mason Core and Elective Credits

In order to meet a minimum of 120 credits, this degree requires additional credits (specific credit counts by concentration are shown below), which may be applied toward any remaining Mason Core (<http://catalog.gmu.edu/mason-core/>) requirements (outlined below), Requirements for Bachelor's Degrees (<http://catalog.gmu.edu/policies/academic/undergraduate-policies/#ap-5-3-2>), College Requirements for the BA Degree (outlined below), and electives. Students are strongly encouraged to consult with their advisors to ensure that they fulfill all requirements.

- EGEO Concentration: 63-66 credits
- HGEO Concentration: 64-66 credits
- GEA Concentration: 64-66 credits
- URBP Concentration: 64-66 credits
- Alternative to a Concentration: 64-66 credits

### Mason Core

Some Mason Core (<http://catalog.gmu.edu/mason-core/>) requirements may already be fulfilled by the major requirements listed above. Students are strongly encouraged to consult their advisors to ensure they fulfill all remaining Mason Core (<http://catalog.gmu.edu/mason-core/>) requirements.

Students who have completed the following credentials are eligible for a waiver of the Foundation and Exploration (lower level) requirement categories. The Integration category (upper level) is not waived under this policy. See Admissions (<http://catalog.gmu.edu/admissions/undergraduate-policies/#transfertext>) for more information.

- VCCS Uniform Certificate of General Studies
- VCCS or Richard Bland Associate of Science (A.S.), Associate of Arts (A.A.), Associate of Arts and Sciences (A.A.&S.), or Associate of Fine Arts (A.F.A.)

Code	Title	Credits
<b>Foundation Requirements</b>		
	Written Communication (lower-level) ( <a href="http://catalog.gmu.edu/mason-core/#written">http://catalog.gmu.edu/mason-core/#written</a> )	3
	Oral Communication ( <a href="http://catalog.gmu.edu/mason-core/#oral">http://catalog.gmu.edu/mason-core/#oral</a> )	3
	Quantitative Reasoning ( <a href="http://catalog.gmu.edu/mason-core/#quantitative">http://catalog.gmu.edu/mason-core/#quantitative</a> )	3
	Information Technology and Computing ( <a href="http://catalog.gmu.edu/mason-core/#information-technology">http://catalog.gmu.edu/mason-core/#information-technology</a> )	3
<b>Exploration Requirements</b>		
	Arts ( <a href="http://catalog.gmu.edu/mason-core/#arts">http://catalog.gmu.edu/mason-core/#arts</a> )	3
	Global Contexts ( <a href="http://catalog.gmu.edu/mason-core/#global-contexts">http://catalog.gmu.edu/mason-core/#global-contexts</a> )	3
	Global History ( <a href="http://catalog.gmu.edu/mason-core/#global-history">http://catalog.gmu.edu/mason-core/#global-history</a> )	3
	Literature ( <a href="http://catalog.gmu.edu/mason-core/#literature">http://catalog.gmu.edu/mason-core/#literature</a> )	3
	Natural Science ( <a href="http://catalog.gmu.edu/mason-core/#natural-science">http://catalog.gmu.edu/mason-core/#natural-science</a> )	7
	Social and Behavioral Sciences ( <a href="http://catalog.gmu.edu/mason-core/#social-behavioral-science">http://catalog.gmu.edu/mason-core/#social-behavioral-science</a> )	3
	Just Societies (optional) ( <a href="http://catalog.gmu.edu/mason-core/#justsocieties">http://catalog.gmu.edu/mason-core/#justsocieties</a> ) <sup>1</sup>	
<b>Integration Requirements</b>		
	Written Communication (upper-level) ( <a href="http://catalog.gmu.edu/mason-core/#written">http://catalog.gmu.edu/mason-core/#written</a> )	3
	Writing Intensive ( <a href="http://catalog.gmu.edu/mason-core/#wi">http://catalog.gmu.edu/mason-core/#wi</a> ) <sup>2</sup>	3
	Mason Apex ( <a href="http://catalog.gmu.edu/mason-core/#apex">http://catalog.gmu.edu/mason-core/#apex</a> ) <sup>3</sup>	3
Total Credits		40



1

In addition to covering content related to the designated category, Exploration level courses marked with a *Just Societies* "flag" are specifically designed to help students learn how to interact effectively with others from all walks of life, including those with backgrounds and beliefs that differ from their own. Courses marked with the Just Societies flag are available for students starting in Fall 2024. Students admitted prior to the Fall of 2025 are not required to take courses with a Just Societies flag but may wish to do so to increase their knowledge and skills in this important area. Students interested in this approach to completing their Mason Core Exploration Requirements should work closely with their advisor to identify the appropriate Just Societies-flagged courses.

2

Most programs include the writing-intensive course designated for the major as part of the major requirements; this course is therefore not counted towards the total required for Mason Core.

3

Minimum 3 credits required.

## College Requirements for the BA Degree

In addition to the program requirements and the Mason Core (<http://catalog.gmu.edu/mason-core/>) requirements, students pursuing a BA degree must complete the coursework below. Except where expressly prohibited, a course used to fulfill this college-level requirement may also be used simultaneously to satisfy other requirements such as Mason Core (<http://catalog.gmu.edu/mason-core/>) requirements, other college-level requirements, or requirements for the major. In some cases, the requirements listed below may be superseded by requirements of the degree program and the Mason Core (<http://catalog.gmu.edu/mason-core/>).

### Foundational Breadth

Choose two courses from approved Mason Core: Arts (<http://catalog.gmu.edu/mason-core/#arts>), Mason Core: Literature (<http://catalog.gmu.edu/mason-core/#literature>), Mason Core: Global Understanding (<http://catalog.gmu.edu/mason-core/#global-understanding>), and Mason Core: Social and Behavioral Sciences (<http://catalog.gmu.edu/mason-core/#social-behavioral-science>) courses in addition to those required by the Mason Core (<http://catalog.gmu.edu/mason-core/>). The two courses used to fulfill the college-level requirements must each be from different Mason Core categories. Additionally, they must be from different disciplines than the courses used to fulfill the University Mason Core requirements.

### Natural Science

Choose one credit in addition to the Mason Core: Natural Science (<http://catalog.gmu.edu/mason-core/#natural-science>) requirement for a total of 8 credits<sup>1</sup>. This combined college-level and university requirement must be fulfilled by completing two of any approved Mason Core: Natural Science (<http://catalog.gmu.edu/mason-core/#natural-science>) courses that include a laboratory experience<sup>2</sup>.

Code	Title	Credits
	Select an additional Mason Core Natural Science course	1

1

For Geography, BA majors, this extra credit is not required.

2

BIOL 124 Human Anatomy and Physiology I and BIOL 125 Human Anatomy and Physiology II may not be used to fulfill this requirement.

### Foreign Language

Code	Title	Credits
Intermediate-level proficiency in one foreign language is required and may be fulfilled via one of the options below. <sup>1</sup>		
1. Completing a course in a foreign language numbered 202 (or its equivalent), or higher level courses taught in the language.		
2. Achieving a satisfactory score on an approved proficiency test.		
3. Completing a three course sequence in American Sign Language:		
EDSE 115	American Sign Language (ASL) I	
EDSE 116	American Sign Language (ASL) II	
EDSE 219	American Sign Language (ASL) III	
4. Conferral of a baccalaureate degree. <sup>2</sup>		

1

Students who are already proficient in a second language may be eligible for a waiver of this requirement. Additional information on waivers can be found with the college's Office of Academic and Student Affairs (<http://cosundergrad.gmu.edu/>).

2

This option is only available to students in the Biology, BA with a concentration in Biological Health who have already conferred a baccalaureate degree.

## Honors

### Honors in the Major

To graduate with departmental honors in Geography, students must have a minimum GPA of 3.50 in GGS courses, an overall GPA of 3.50, and complete the following courses each with a grade of 'B+' or above:

Code	Title	Credits
GGS 463	RS: GIS Analysis and Application	3
GGS 499	GGS Independent Study <sup>1</sup>	3
3 credits of 500-699 level GGS courses ( <a href="http://catalog.gmu.edu/courses/ggs/">http://catalog.gmu.edu/courses/ggs/</a> ) <sup>2</sup>		3

1

Before registering for this course, students must have identified a topic under the guidance of a full-time faculty member following departmental guidelines.

2

Eligibility for these courses is restricted to students who obtain permission from the undergraduate coordinator or those in the Accelerated Master's program.

## Accelerated Master's

### Bachelor's Degree (any)/Geographic and Cartographic Sciences, Accelerated MS

#### Overview

Offered by the Department of Geography and Geoinformation Sciences (GGS) (<http://catalog.gmu.edu/colleges-schools/science/geography-geoinformation-science/>) in the College of Science (<http://catalog.gmu.edu/colleges-schools/science/>), this bachelor's/accelerated master's degree program enables highly qualified undergraduates to obtain any Mason bachelor's degree and the Geographic and Cartographic Sciences, MS (<http://catalog.gmu.edu/colleges-schools/science/geography-geoinformation-science/geographic-cartographic-sciences-ms/>) degrees within an accelerated timeframe. The program strategy enables students to undertake graduate coursework during their final year in the bachelor's degree. In the case of a 120 credit bachelor's program, this accelerated master's option can be completed as a 138 credit program (thesis option) or 145 credit program (comprehensive exam option). This accelerated pathway prepares students for professional careers where geoinformation management, geographic analysis, and geospatial visualization are of importance.

Students in this accelerated degree program must fulfill all university requirements for the bachelor's program and the Geographic and Cartographic Sciences, MS (<http://catalog.gmu.edu/colleges-schools/science/geography-geoinformation-science/geographic-cartographic-sciences-ms/>). While the information below is largely comprehensive, students are strongly encouraged to also review AP.6.7 Bachelor's/ Accelerated Master's Degrees (<http://catalog.gmu.edu/policies/academic/graduate-policies/#ap-6-7>).

#### Application Requirements

Students with an overall GPA of at least 3.0 may apply for provisional acceptance into this accelerated master's program after completing at least 60 undergraduate credits. Additionally, students they must have completed the following courses with a combined GPA of 3.0 or better: GGS 300 Quantitative Methods for Geographical Analysis, GGS 311 Geographic Information Systems, and any one upper level GGS-prefixed course.

Applicants to all graduate programs at Mason must meet the admission standards and application requirements for graduate study as specified in the Admissions section of this catalog. However, this accelerated master's does not require GRE test scores, letters of recommendation, CV/resume, or a statement of interest.

While being undergraduate students, accelerated master's students must complete the graduate courses indicated on their Accelerated Master's Program Application (obtained from the Office of Academic and Student Affairs) with a minimum grade of B in each course. They must maintain a minimum GPA of 3.0 in all coursework and in coursework applied to their major.

At the beginning of their final undergraduate semester, they must submit the Bachelor's/Accelerated Master's Transition Form (found on the Office of the University Registrar website). Students must begin their master's program in the semester immediately following the term of undergraduate degree conferral. Students should consult with their faculty advisor in the Department of Geography and Geoinformation

Science and the Office of Academic and Student Affairs to obtain further guidance.

#### Accelerated Option Requirements

Students admitted to this program may start taking graduate courses after completing 75 undergraduate credits. It is recommended that students register for one of the following courses in their first semester of accelerated coursework:

Code	Title	Credits
GGG 551	Cartographic Design	3
GGG 553	Geographic Information Systems	3
GGG 560	Quantitative Methods	3
GGG 579	Remote Sensing	3

Including the course chosen above, up to 12 credits of graduate coursework may be applied to both undergraduate degree and the master's degree. If students earn at least a B in these classes, they are granted advanced standing in the master's program and must then complete 18 (thesis option) or 25 (comprehensive exam option) additional credits to receive the master's degree. All other master's degree requirements must be met.

#### Reserve Graduate Credit

During the bachelor's degree status, students may take up to 6 graduate credits as reserve graduate credit. These credits do not apply to the undergraduate degree, but will reduce the subsequent master's degree credits accordingly. With 12 credits counted toward the undergraduate and graduate degrees plus the maximum 6 reserve credits, the credits necessary for the graduate degree can be reduced by up to 18. The ability to take courses for reserve graduate credit is available to all high achieving undergraduates with the permission of the department. To apply the reserved credits to the master's degree, students must request their transfer from the undergraduate degree to the graduate degree via the Bachelor's/Accelerated Master's Transition Form found on the Office of the University Registrar website.

### Bachelor's Degree (any)/Geoinformatics and Geospatial Intelligence, Accelerated MS

#### Overview

Offered by the Department of Geography and Geoinformation Sciences (GGS) (<http://catalog.gmu.edu/colleges-schools/science/geography-geoinformation-science/>) in the College of Science (<http://catalog.gmu.edu/colleges-schools/science/>), this bachelor's/accelerated master's degree program enables highly qualified undergraduates to obtain any Mason bachelor's degree and the Geoinformatics and Geospatial Intelligence, MS (<http://catalog.gmu.edu/colleges-schools/science/geography-geoinformation-science/geoinformatics-geospatial-intelligence-ms/>)degrees within an accelerated timeframe. The program strategy enables students to undertake graduate coursework during their final year in the bachelor's degree. In the case of a 120 credit bachelor's program, this accelerated master's option can be completed as a 141 credit program. This accelerated pathway prepares students for professional careers where geoinformation management, geographic analysis, and geointelligence and geovisualization are of importance.

Students in this accelerated degree program must fulfill all university requirements for the bachelor's program and the Geoinformatics and

Geospatial Intelligence, MS (<http://catalog.gmu.edu/colleges-schools/science/geography-geoinformation-science/geoinformatics-geospatial-intelligence-ms/>). While the information below is largely comprehensive, students are strongly encouraged to also review AP.6.7 Bachelor's/Accelerated Master's Degrees (<http://catalog.gmu.edu/policies/academic/graduate-policies/#ap-6-7>).

## Application Requirements

Students with an overall GPA of at least 3.0 may apply for provisional acceptance into this accelerated master's program after completing at least 60 undergraduate credits. Additionally, students must have completed the following courses with a combined GPA of 3.0 or better: GGS 300 Quantitative Methods for Geographical Analysis, GGS 311 Geographic Information Systems, and any one upper level GGS-prefixed course.

Applicants to all graduate programs at Mason must meet the admission standards and application requirements for graduate study as specified in the Admissions section of this catalog. However, this accelerated master's does not require GRE test scores, letters of recommendation, CV/resume, or a statement of interest.

While being undergraduate students, accelerated master's students must complete the graduate courses indicated on their Accelerated Master's Program Application (obtained from the Office of Academic and Student Affairs) with a minimum grade of B in each course. They must maintain a minimum GPA of 3.0 in all coursework and in coursework applied to their major.

At the beginning of their final undergraduate semester, they must submit the Bachelor's/Accelerated Master's Transition Form (found on the Office of the University Registrar website). Students must begin their master's program in the semester immediately following the term of undergraduate degree conferral. Students should consult with their faculty advisor in the Department of Geography and Geoinformation Science and the Office of Academic and Student Affairs to obtain further guidance.

## Accelerated Option Requirements

Students admitted to this program may start taking graduate courses after completing 75 undergraduate credits. It is recommended that students register for one of the following courses in their first semester of accelerated coursework:

Code	Title	Credits
GGS 550	Geospatial Science Fundamentals	3
GGS 553	Geographic Information Systems	3
GGS 579	Remote Sensing	3
GGS 684	Selected Topics in Geospatial Intelligence	3

Including the course chosen above, up to 12 credits of graduate coursework may be applied to both undergraduate degree and the master's degree. If students earn at least a B in these classes, they are granted advanced standing in the master's program and must then complete 21 additional credits to receive the master's degree. All other master's degree requirements must be met.

## Reserve Graduate Credit

During the bachelor's degree status, students may take up to 6 graduate credits as reserve graduate credit. These credits do not apply to the undergraduate degree, but will reduce the subsequent master's degree credits accordingly. With 12 credits counted toward the undergraduate

and graduate degrees plus the maximum 6 reserve credits, the credits necessary for the graduate degree can be reduced by up to 18. The ability to take courses for reserve graduate credit is available to all high achieving undergraduates with the permission of the department. To apply the reserved credits to the master's degree, students must request their transfer from the undergraduate degree to the graduate degree via the Bachelor's/Accelerated Master's Transition Form found on the Office of the University Registrar website.