

# MEDICAL GEOGRAPHY IN GLOBAL HEALTH | BA

Geography is the science of place, space, and environment. Each place on earth is distinguished by a unique mix of natural resources, cultural practices, and socioeconomic and political systems. Geographers study what makes each place unique, as well as the connections and interactions between places.

## About this Program

- **College:** Liberal Arts and Sciences (<http://catalog.ufl.edu/UGRD/colleges-schools/UGLAS/>)
- **Degrees:** Bachelor of Arts ([http://catalog.ufl.edu/UGRD/colleges-schools/UGLAS/GPY\\_BA\\_BS/GPY\\_BA/](http://catalog.ufl.edu/UGRD/colleges-schools/UGLAS/GPY_BA_BS/GPY_BA/)) | Bachelor of Science ([http://catalog.ufl.edu/UGRD/colleges-schools/UGLAS/GPY\\_BA\\_BS/GPY\\_BS/](http://catalog.ufl.edu/UGRD/colleges-schools/UGLAS/GPY_BA_BS/GPY_BS/))
- **Specializations:** Environmental Geosciences (BA) ([http://catalog.ufl.edu/UGRD/colleges-schools/UGLAS/GPY\\_BA\\_BS/GPY\\_BA01/](http://catalog.ufl.edu/UGRD/colleges-schools/UGLAS/GPY_BA_BS/GPY_BA01/)) | Geographical Science and Sustainability (BA) ([http://catalog.ufl.edu/UGRD/colleges-schools/UGLAS/GPY\\_BA\\_BS/GPY\\_BS03/](http://catalog.ufl.edu/UGRD/colleges-schools/UGLAS/GPY_BA_BS/GPY_BS03/)) | Medical Geography in Global Health (BA) (p. 1) | Medical Geography in Global Health (BS) ([http://catalog.ufl.edu/UGRD/colleges-schools/UGLAS/GPY\\_BA\\_BS/GPY\\_BS01/](http://catalog.ufl.edu/UGRD/colleges-schools/UGLAS/GPY_BA_BS/GPY_BS01/))
- **Credits for Degree:** 120
- **Contact:** Email ([liangmao@ufl.edu](mailto:liangmao@ufl.edu))

*To graduate with this major, students must complete all university, college, and major requirements.*

## Department Information

The Geography Department offers a range of topics in contemporary geography and geospatial science, rich and lively cultural and learning environments, BA and BS undergraduate degrees, MA, M.S., and PhD degrees, as well as the largest Medical Geography program in the United States.

**Website** (<https://geog.ufl.edu/>)

## CONTACT

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Map (<http://campusmap.ufl.edu/#/index/0267>)

## Curriculum

- Combination Degrees
- Geographic Artificial Intelligence and Big Data Certificate
- Geography
- Geography Minor
- Geography Minor UF Online
- Geography UF Online
- Geospatial Information Analysis Certificate
- Medical Geography Certificate
- Medical Geography in Global Health Minor
- Meteorology and Climatology Certificate

The Bachelor of Arts in Medical Geography in Global Health is intended for students interested in social and cultural aspects of medical geography and global health and disease issues. The degree focuses on human impacts, cultural, and social aspects of health and disease, and public health planning and management.

## Coursework for the Major

The Bachelor of Arts in Medical Geography in Global Health requires a minimum of 39 credits of coursework, plus 3 credits of Statistics. Students must earn a minimum grade of C in all coursework for the major.

## Required Coursework

| Code                | Title   | Credits |
|---------------------|---|---------|
| GEO 2200<br>& 2200L | Dynamic Planet Earth<br>and Dynamic Planet Earth Laboratory | 4       |
| GEO 4170            | Communicating Science in the Geosciences                    | 3       |
| GEO 4930            | Senior Seminar  | 1       |

|  |  |     |
|--|--|-----|
| Select one:                                |  | 3   |
| GEO 2410                                   | Social Geography   |     |
| GEO 2420                                   | People, Place, and Culture                                 |     |
| GEO 2500                                   | Global and Regional Economies                              |     |
| GEO 3162C                                  | Introduction to Quantitative Analysis for Geographers      | 4   |
| Select one GeoAI course:                   |  | 3   |
| GIS 2002                                   | The Digital Earth  |     |
| GIS 2114                                   | The World & Big Data                                       |     |
| Select two technique courses:              |  | 7-9 |
| GIS 3043                                   | Foundations of Geographic Information Systems              |     |
| Select one:                                |  |     |
| GEO 4167C                                  | Intermediate Quantitative Analysis for Geographers         |     |
| GIS 3001C                                  | Geovisualization and Map Design                            |     |
| GIS 3420C                                  | GIS Models for Public Health                               |     |
| GIS 4021C                                  | Aerial Photo Interpretation                                |     |
| GIS 4037                                   | Digital Image Processing                                   |     |
| GIS 4113                                   | Introduction to Spatial Networks                           |     |
| GIS 4115C                                  | Spatial Surface Modeling and Geostatistics                 |     |
| Select one regional geography course:      |  | 3   |
| GEA 2270                                   | Geography of Florida                                       |     |
| GEA 3405                                   | Geography of Latin America                                 |     |
| GEA 3500                                   | Geography of Europe  |     |
| GEA 3600                                   | Geography of Africa  |     |
| GEA 4465                                   | Amazonia   |     |
| Select two medical geography core courses: |  | 6   |
| GEO 3452                                   | Introduction to Medical Geography                          |     |
| GEO 3454                                   | Peoples and Plagues  |     |
| GEO 3427                                   | Plants, Health and Spirituality                            |     |
| GEO 4612                                   | Shelter and Care Options for US Elderly                    |     |
| Select two geography elective courses:     |  | 6-8 |
| GEO 2242                                   | Extreme Weather  |     |
| GEO 3250                                   | Climatology  |     |
| GEO 3280                                   | Principles of Geographic Hydrology                         |     |
| GEO 3315                                   | Hungry Planet: Global Geographies of Food                  |     |
| GEO 3341                                   | Extreme Floods   |     |
| GEO 3352                                   | The Human Footprint on Landscape                           |     |
| GEO 3372                                   | Conservation of Resources                                  |     |
| GEO 3427                                   | Plants, Health and Spirituality                            |     |
| GEO 3430                                   | Population Geography                                       |     |
| GEO 3452                                   | Introduction to Medical Geography                          |     |
| GEO 3454                                   | Peoples and Plagues  |     |
| GEO 3502                                   | Economic Geography   |     |
| GEO 3602                                   | Urban and Business Geography                               |     |
| GEO 3611                                   | Housing, People, and Places in a Spatially Diverse America |     |
| GEO 3803                                   | Geography of Alcohol                                       |     |
| GEO 3930                                   | Special Topics   |     |
| GEO 4167C                                  | Intermediate Quantitative Analysis for Geographers         |     |
| GEO 4281                                   | River Forms and Processes                                  |     |
| GEO 4285                                   | Water, Risk, and Extreme Events                            |     |
| GEO 4300                                   | Environmental Biogeography                                 |     |
| GEO 4306C                                  | Geography of Vector-borne Diseases                         |     |
| GEO 4554                                   | Regional Development                                       |     |
| GEO 4612                                   | Shelter and Care Options for US Elderly                    |     |
| GEO 4700                                   | Transportation and Urban Accessibility                     |     |
| GEO 4938                                   | Selected Topics in Geography                               |     |
| GEO 4970                                   | Honors Thesis  |     |
| GIS 2002                                   | The Digital Earth  |     |
| GIS 3420C                                  | GIS Models for Public Health                               |     |
| GIS 4021C                                  | Aerial Photo Interpretation                                |     |
| GIS 4037                                   | Digital Image Processing                                   |     |
| GIS 4102C                                  | GIS Programming  |     |
| GIS 4113                                   | Introduction to Spatial Networks                           |     |

|           |  |
|-----------|--|
| GIS 4115C | Spatial Surface Modeling and Geostatistics     |
| GLY 4734  | Coastal Morphology and Processes               |
| MET 3503  | Weather and Forecasting                        |
| MET 4532  | Hurricanes                                     |
| MET 4560  | Atmospheric Teleconnections                    |
| MET 4750  | Spatial Analysis of Atmospheric Data using GIS |

**Total Credits****40-44**

The same course may **not** be used to satisfy requirements for more than one bulleted group.

<sup>1</sup> Other geography courses may be counted at the discretion of the undergraduate coordinator.

Transfer coursework is considered on a case-by-case basis. Upper division transfer courses with no UF equivalent will be substituted as GEO 4938.

## Related Coursework

- STA 2023

## Critical Tracking

Critical Tracking records each student's progress in courses that are required for progress toward each major. Please note the critical-tracking requirements below on a per-semester basis.

For degree requirements outside of the major, refer to CLAS Degree Requirements: Structure of a CLAS Degree.

Equivalent critical-tracking courses as determined by the State of Florida Common Course Prerequisites (<https://cpm.flvc.org/advance-search/>) may be used for transfer students.

## Semester 1

- 2.0 UF GPA required

## Semester 2

- 2.0 UF GPA required

## Semester 3

- Complete 1 geography course (GEA 1000 not acceptable)
- 2.0 UF GPA required

## Semester 4

- Complete 1 additional geography course (1 of the 2 must be GEO 2200; GEA 1000 not acceptable) or complete STA 2023 with a 2.5 critical-tracking GPA
- 2.0 UF GPA required

## Semester 5

- Complete all critical-tracking courses (STA 2023 and 2 geography courses, 1 of which must be GEO 2200; GEA 1000 not acceptable) with a 2.5 critical-tracking GPA
- 2.0 UF GPA required

## Semester 6

- Complete 1 geography technique course.
- 2.0 UF GPA required

## Semester 7

- Complete 1 geography elective course
- 2.0 UF GPA required

## Semester 8

- Complete all remaining geography (GEO, GIS, or MET) 3000/4000 required courses
- 2.0 UF GPA required

### Model Semester Plan

Students are expected to complete the Writing Requirement while in the process of taking the courses below. Students are also expected to complete the General Education International (GE-N) and Diversity (GE-D) requirements concurrently with another General Education requirement (typically, GE-C, H, or S).

To remain on track, students must complete the appropriate critical-tracking courses, which appear in bold. These courses must be completed by the terms as listed above in the Critical Tracking criteria.

*This semester plan represents an example progression through the major. Actual courses and course order may be different depending on the student's academic record and scheduling availability of courses. Prerequisites still apply.*

| Course   | Title  | Credits   |
|--|--|-----------|
| <b>Semester One</b>  |  |           |
| Quest 1 (Gen Ed Humanities)  |  | 3         |
| GEO 2200   | Dynamic Planet Earth ( <b>Critical Tracking</b> ; Gen Ed Physical Sciences)                                      | 3         |
| GEO 2200L  | Dynamic Planet Earth Laboratory (Gen Ed Physical Sciences)   | 1         |
| STA 2023   | Introduction to Statistics 1 ( <b>Critical Tracking</b> ; State Core Gen Ed Mathematics)                         | 3         |
| State Core Gen Ed Composition ( <a href="http://catalog.ufl.edu/UGRD/academic-programs/general-education/#genedcoursestext">http://catalog.ufl.edu/UGRD/academic-programs/general-education/#genedcoursestext</a> ); Writing Requirement |  | 3         |
| <b>Credits</b>   |  | <b>13</b> |
| <b>Semester Two</b>  |  |           |
| Select one:  |  | 3         |
| GEO 2410   | Social Geography ( <b>Critical Tracking</b> ; Gen Ed Social and Behavioral Sciences and Diversity)               |           |
| GEO 2420   | People, Place, and Culture ( <b>Critical Tracking</b> ; Gen Ed Social and Behavioral Sciences and International) |           |
| GEO 2500   | Global and Regional Economies ( <b>Critical Tracking</b> ; Gen Ed Social and Behavioral Sciences)                |           |
| State Core Gen Ed Humanities ( <a href="http://catalog.ufl.edu/UGRD/academic-programs/general-education/#genedcoursestext">http://catalog.ufl.edu/UGRD/academic-programs/general-education/#genedcoursestext</a> )                       |  | 3         |
| State Core Gen Ed Mathematics (pure math)  |  | 3         |
| State Core Gen Ed Social and Behavioral Sciences ( <a href="http://catalog.ufl.edu/UGRD/academic-programs/general-education/#genedcoursestext">http://catalog.ufl.edu/UGRD/academic-programs/general-education/#genedcoursestext</a> )   |  | 3         |
| Gen Ed Composition; Writing Requirement  |  | 3         |
| <b>Credits</b>   |  | <b>15</b> |
| <b>Semester Three</b>  |  |           |
| GeoAI course (select one:)   |  | 3         |
| GIS 2002   | The Digital Earth  |           |
| GIS 2114   | The World & Big Data   |           |
| Medical geography core course <sup>1</sup>   |  | 3         |
| State Core Gen Ed Biological Sciences ( <a href="http://catalog.ufl.edu/UGRD/academic-programs/general-education/#genedcoursestext">http://catalog.ufl.edu/UGRD/academic-programs/general-education/#genedcoursestext</a> )              |  | 3         |
| Foreign language   |  | 5         |
| <b>Credits</b>   |  | <b>14</b> |
| <b>Semester Four</b>   |  |           |
| Regional geography course  |  | 3         |
| Quest 2 (Gen Ed Biological Sciences or Gen Ed Social and Behavioral Science)   |  | 3         |
| Gen Ed Social and Behavioral Sciences or Gen Ed Biological Science (Option not taken in Quest 2 above)   |  | 3         |
| Foreign language   |  | 5         |
| <b>Credits</b>   |  | <b>14</b> |
| <b>Semester Five</b>   |  |           |
| GEO 3162C  | Introduction to Quantitative Analysis for Geographers  | 4         |
| GIS 3043   | Foundations of Geographic Information Systems  | 4         |
| Medical geography core course  |  | 3         |
| Electives  |  | 7         |
| <b>Credits</b>   |  | <b>18</b> |
| <b>Semester Six</b>  |  |           |
| GIS 3420C  | GIS Models for Public Health ( <b>Critical Tracking</b> ; recommended second techniques course)                  | 3         |
| Gen Ed Humanities  |  | 3         |
| Elective (3000 level or above, not in major)   |  | 3         |

|  |  |       |
|--|--|-------|
| Electives                                      |  | 6     |
|  | Credits                                  | 15    |
| Semester Seven                                 |  |       |
| GEO 4170                                       | Communicating Science in the Geosciences | 3     |
| Geography elective (Critical Tracking)         |  | 3-4   |
| Electives (3000 level or above, not in major)  |  | 9     |
|  | Credits                                  | 15-16 |
| Semester Eight                                 |  |       |
| GEO 4930                                       | Senior Seminar (Critical Tracking)       | 1     |
| Geography elective (Critical Tracking)         |  | 3     |
| Electives (3000 level and above, not in major) |  | 6     |
| Electives                                      |  | 6     |
|  | Credits                                  | 16    |
|  | Total Credits                            | 120   |

<sup>1</sup> GEO 3452 or GEO 3454 recommended.

*Electives to reach the 120-credit minimum will vary depending on whether students select minimum or maximum credit course options.*

## Academic Learning Compact

A major in Geography enables students to know the earth's physical environment, to learn social, cultural, and economic concepts from spatial and regional perspectives, and to understand the relationship between environment and society. Students will learn how geographic techniques, skills, and concepts are applied in the subfields of geography. Computer-based lab assignments teach students how to analyze geographic information and to apply an interpretation of data toward problem solving or modeling. They will be able to interpret and to effectively communicate information spatially, graphically, and/or with statistics.

The Bachelor of Arts in Geography enables students to learn how geographic techniques, skills, and concepts are applied in various subfields of geography. The Bachelor of Science enables students to learn basic concepts in sciences related to the earth and its atmosphere.

## Before Graduating Students Must

- Complete a capstone exam in GEO 4930, as developed by geography faculty.
- Complete a capstone portfolio in GEO 4930, evaluated by geography faculty.
- Complete requirements for the baccalaureate degree, as determined by faculty.

## Students in the Major Will Learn to

### Student Learning Outcomes | SLOs

#### Content

1. Identify and describe the physical and human characteristics of Earth and its regions, the essentials of human#environment interactions, and the techniques of geographic science.

#### Critical Thinking

2. Analyze geographic information and apply interpretation of data toward problem solving or modeling.

#### Communication

3. Interpret and effectively communicate information spatially, graphically, and/or with statistics.

## Curriculum Map

*I = Introduced; R = Reinforced; A = Assessed*

| Courses                                | SLO 1 | SLO 2 | SLO 3 |
|--|-------|-------|-------|
| GEA 2000-4000 level Regional Geography | R     |       |       |
| GEO 2000 level Human Geography         | I     |       |       |
| GEO 2200                               | I     |       |       |
| GEO 2200L                              | R     |       |       |
| GEO 3162C                              | I     | I     | R     |
| GEO 4930                               | R, A  | A     | A     |

|   |   |   |   |
|---|---|---|---|
| GIS 3043 and GIS 4001C  | R | R | R |
| STA 2023  |   |   | I |
| <b>BA Only</b> Plus 15 additional credits in the department   | R | R | R |
| <b>BS Only</b> Plus 12 additional credits in the department and 22 credits outside the department with CHM, GLY, MET, PHY, SWS prefixes | R | R | R |

## Assessment Types

- Capstone exam
  - Portfolio
-