

**GEOGRAPHY**

**DEPARTMENT OF**

**Geography: Physical Geography (Bachelor of Science)**

Requires 121 Total Credit Hours; 33-35 Major Credit Hours; **Declared major AU22 and beyond.**General education requirements for degree completion can be found at <https://artsandsciences.osu.edu/advising/general-education-requirements>

**Major Requirements**

Several major courses are offered only one term per year. Careful schedule planning is required to complete course   
sequences in a timely manner.

**Required Prerequisite or Supplemental Courses:**

Prerequisites are specific to courses within the major. There are no prerequisites that must be completed before declaring   
the Physical Geography major. A student may declare a major in Physical Geography by meeting with an academic advisor  
in the Department of Geography.

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| **Course** | **Title** | **Hours** |  |
| Math 1151 | Calculus I | 5 |  |
| Math 1152 | Calculus II | 5 |  |
| Physics 1250 | Mechanics, Work, Energy, Thermal Physics | 5 |  |
| Statistics 2450 > | Introduction to Statistical Analysis I | 3 |  |

> *Indicates courses are supplemental to study and not required as prerequisites to courses in the major.*

**Required Courses:** (6 courses/19-20 hours)

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| **Course** | **Title** | **Hours** | **Required Prerequisite** |
| AtmosSc 2940 **OR**  GEOG 5900 | Basic Meteorology (recommended course)  OR Weather, Climate and Global Warming | 3  3 | Math 1151 & Physics 1250  None |
| GEOG 2800 **OR**  GEOG 2960 | Our Global Environment  **OR** Introduction to Physical Geography | 3  4 | None  None |
| GEOG 3900.01 **OR**  GEOG 3900.02 **OR** GEOG 3901H | Global Climate Change: Causes and Consequences **OR**  Global Climate and Environmental Change**2** | 3  4  3 | None  None |
| GEOG 3980 | Biogeography: An Introduction to Life on Earth | 3 | None |
| GEOG 5210 | Fundamentals of Geographic Information Systems**1,3** | 3 | None |
| EARTHSC 5550 | Geomorphology *(see advisor re: offerings and prerequisites)* | 4 | EARTHSC 1121 &  EARTHSC 1122 |

***1*** *Indicates a Data Analysis EL Course;* ***2*** *Indicates an Advanced Writing EL Course; and* ***3*** *Indicates a Technology EL Course*

**Elective Courses:** Choose five of the following courses (14-15 hours).

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| **Course** | **Title** | **Hours** | **Required Prerequisite** |
| AtmosSc 5901 | Climate System Modeling: Basics and Applications | 3 | AtmosSc 2940 OR GEOG 5900 |
| AtmosSc 5950 | Atmospheric Thermodynamics | 3 | Math 1152 |
| AtmosSc 5951 | Dynamic Meteorology I | 3 | AtmosSc 5950 (or co-req)  & Math 2153 |
| Student Choice | One Human Geography course at 4000-level or higher | 3 | None |
| GEOG 3597.02 | Integrated Earth Systems: Confronting Global Change | 3 | None |
| **Course** | **Title** | **Hours** | **Required Prerequisite** |
| GEOG 4101 | Undergraduate Research & Professionalization Seminar | 3 | 12 credit hours in Geography |
| GEOG 4103 | Introductory Spatial Data Analysis  *(if not taken as a required course)* | 3 | Math 1115 or above |
| GEOG 5200 | Cartography and Map Design | 3 | None |
| GEOG 5201 | GeoVisualization | 3 | GEOG 5200 |
| GEOG 5212 | Spatial Database Design for GIS | 3 | GEOG 5210 |
| GEOG 5222 **OR**  GEOG 5223 | GIS Algorithms and Programming **OR**  Design and Implementation of GIS | 3  3 | GEOG 5210  GEOG 5222 |
| GEOG 5225 | Geographic Applications of Remote Sensing | 3 | None |
| GEOG 5803 | Sustainable Energy Geographies | 3 | None |
| GEOG 5921 **\*** | Miroclimatology: Boundary Layer Climatology | 3 | AtmosSc 2940 & Physics 1250 OR  GEOG 5900 & Physics 1250 |
| GEOG 5922 **\*** | Microclimatology: Microclimatological Measurements | 3 | GEOG 5921 |
| AtmosSc/GEOG 5940**\*** | Synoptic Meteorology Laboratory | 2 | AtmosSc 2940 & Physics 1250 OR  GEOG 5900 & Physics 1250 |
| GEOG 5941 **\*** | Synoptic Meteorology: Synoptic Analysis & Forecasting | 3 | GEOG 5940 & Math 2153 |
| GEOG 5942 **\*** | Synoptic Meteorology: Severe Storm Forecasting | 3 | GEOG 5941 |
| EARTHSC 2206 | Priciples of Oceanography | 3 | None |
| EARTHSC 4450 | Water, Ice, & Energy in the Earth System | 3 | EARTHSC 1121 & Physics 1250 |

***\**** *Part of major course sequence. Major course(s) must be completed with a “C-“ or above as prerequisite to enroll.*

**Major Requirement Notations**

The following requirements for the major apply to all Arts and Sciences degrees.

**Major requirements comprise at least 30 semester hours and can be substantially higher**. Major courses must be at the 2000 level or above. At least 20 hours of the major must be in courses offered by the department of the major. Note: Some interdisciplinary majors are excluded from the 20-hour rule.

**Students must earn at least a C- in a course for the course to apply to the major**. However, students must receive a 2.0 cumulative grade point average (GPA) for all major course work. If a D+, D, or an E is earned in a course needed for the major, the course cannot be counted on the major. The major advisor will decide if the course should be repeated or if another course should be substituted. Courses taken on a pass/non-pass basis cannot be used on the major.

**The department must approve all courses in the major**. Some departments require a “major program form,” a document that must be signed by the academic advisor and submitted with the graduation application. Some departments do not require such a form because the academic advisors use an automated version on the degree audit report. Some departments require both. In any case, students should meet with the academic advisor early to plan the major; during your meeting, it can be determined whether the department requires a paper major program form. Any changes or adjustments to the major should be made in consultation with the academic advisor.

**If a student transferred from another institution, no more than half of the credit hours on the major program may consist of transfer credit.** The academic advisor, the chairperson of the department, and the appropriate assistant dean must approve any request for a variation in this policy.

**For Honors students, the GE curriculum and major must be approved by the assigned Honors advisor.** Information about the honors curriculum and requirements and how to schedule an appointment with an honors advisor is available on the College of Arts and Sciences Honors Program website: http://aschonors.osu.edu/advising. Students will also be assigned a faculty advisor in the department of study to help the student choose courses and co-curricular opportunities that align with academic and professional goals.

**For more information about internship and career opportunities, visit the College of Arts and Sciences Career Services Office.** Their website is <http://asccareerservices.osu.edu/> .