

Bachelor of Science Major: Atmospheric Sciences

The Atmospheric Sciences major at Ohio State focuses on exploring systems that determine our weather and climate. Students in this major will complete a minimum of 121 hours (including 39 upper division hours) outlined as follows.

General Education Requirements		
Requirement	Course Options	Hours
GE Launch Seminar	AcadAff 1201	1
Foundations: Writing and Information Literacy	Student Choice	3
Foundations: Mathematical & Quantitative Reasoning/Data Analysis	Math 1151	3-5
Foundations: Literary, Visual and Performing Arts	Student Choice	3
Foundations: Historical & Cultural Studies	Student Choice	3
Foundations: Natural Sciences	Student Choice	4-5
Foundations: Social & Behavioral Sciences	Student Choice	3
Foundations: Race, Ethnicity and Gender Diversity	Student Choice	3
Theme: Citizenship for a Diverse & Just World*	Student Choice	4-6
Theme: Student Choice*	Student Choice	4-6
GE Reflection	AcadAff 4001	1
General Education Credit Hours:		32-39

College Requirements		
Requirement	Course Options	Hours
University Survey	ASC 1100.xx(H)	1
World Language Foundation	1101-1103 in any language or equivalent proficiency**	0-12
Credit Hours:		1-13

* Students complete either one 4-credit course or two 3-credit courses in each of two General Education Theme areas: Citizenship for a Diverse & Just World (required), and the student's choice of available GE Themes. If major courses are approved as a GE Theme course, one course in each GE Theme area may double count in the GE and major hours.

**Students must demonstrate proficiency in a language other than English at a level equivalent to 3 semesters of university coursework. Proficiency may be demonstrated by satisfactory completion of coursework, appropriate testing, or language validation. Please see <https://cllc.osu.edu/validation-foreign-language-0> and your Academic Advisor for more details.

***Major Pre-Requisites and Co-Requisites may overlap freely with GE Foundations, GE Themes, minors, or certificates when appropriate.

Major Pre-requisites/Co-requisites***		
Course	Title	Hours
Math 1151	Calculus I <i>Foundations: Mathematical & Quantitative Reasoning/Data Analysis</i>	5
Math 1152	Calculus II	5
Math 2153	Calculus III	4
Math 2255	Differential Equations and Their Applications	3
Physics 1250	Mechanics, Thermal Physics, Waves	5
Physics 1251	E&M, Optics, Modern Physics	5
CHEM 1210	General Chemistry I	5
STAT 2450	Intro to Statistical Analysis I <i>EL: Data Analysis</i>	3
GEOG 3597.03	Environmental Citizenship <i>EL: Advanced Writing</i>	3
Credit Hours:		38

Major Coursework			
Course	Title	Prerequisite(s)	Hrs
Major Coursework – Core (26 hours)			
ATMOSSC 2940 or GEOG 5900	Basic Meteorology Weather, Climate & Global Warming	Math 1151 & Physics 1250 NONE	3 3
GEOG 5921	Microclimatology: Boundary Layer Climatology	ATMOSSC 2940 & Physics 1250	3
GEOG 5922	Microclimatology: Microclimatological Measurements	GEOG 5921	3
GEOG 5940	Synoptic Meteorology Lab <i>EL: Tech</i>	ATMOSSC 2940 & Physics 1250	2
GEOG 5941	Synoptic Analysis & Forecasting <i>EL: Tech</i>	GEOG 5940 & Math 2153	3
GEOG 5942	Severe Storm Forecasting <i>EL: Tech</i>	GEOG 5941	3
ATMOSSC 5950	Atmospheric Thermodynamics	Math 1152	3
ATMOSSC 5951	Dynamic Meteorology I	ATMOSSC 5950 (or co-req) & Math 2153	3
ATMOSSC 5952	Dynamic Meteorology II	ATMOSSC 5951 & Math 2255	3
Major Coursework – Electives (6 hours)			
ATMOSSC 5901	Climate Systems Modeling	ATMOSSC 2940 or GEOG 5900	3
GEOG 3900 or GEOG 3901H	Global Climate Change Global Climate & Environ Change	NONE NONE	3 3
GEOG 5200	Cartography & Map Design	NONE	3
GEOG 5210	Fundamentals of GIS	NONE	3
GEOG 5225	Geographic Applications of Remote Sensing	NONE	3
EARTHSC 2206	Principles of Oceanography	NONE	3
Credit Hours:			32

Open Electives	
TBD	
Credit Hours:	TBD ____

General Education	32-39
College Requirements	1-13
Major Pre-requisites/Co-requisites	38
Major Coursework	32
Required Minor/Certificate	N/A
Open Electives	TBD
Total Credit Hours	Min. 121

College of Arts and Sciences Policies and General Requirements for Degree

- Students must earn a minimum of 121 total credit hours. Remedial courses (courses at the 10XX level or below, and English 1109) and credit hours earned in repeated course work do not count toward the 121 hour minimum.
- A maximum of 10 hours of non-Arts and Sciences and non-Arts and Sciences-approved course work can be applied to your degree. Of the 10 hours, no more than 4 may be from physical activities courses taught in Education: Physical Activity and Educational Services (KNSFHP); physical activities courses include all 1100 level KNSFHP courses except for 1102, 1103, 1122, and 1137. A maximum of 8 hours of technical credit may be counted toward the 10 hours of non-Arts and Sciences and non-Arts and Sciences-approved course work; however, the combination of KNSFHP, technical, and other non-Arts and Sciences credit hours may not exceed 10.
- Students must complete a total of 39 upper division hours. Upper-division courses are defined as all Arts and Sciences courses at the 3000-level or above, Philosophy 2500, all courses taught by departments in mathematical and physical sciences (Astronomy, Chemistry and Biochemistry, Computer Science and Engineering, Earth Sciences, Mathematics, Physics, and Statistics) at the 2000-level and above (except for courses numbered 2194), and world language courses taught in the language at the 2000-level.
- Students must earn a minimum of 30 credit hours through regular course enrollment at Ohio State.
- Students must earn a cumulative grade point average (GPA) of at least 2.0 for all work attempted at Ohio State. Additionally, students must earn a cumulative GPA of at least 2.0 in their major.