

ATMOSPHERIC SCIENCE, MS

The UWM Atmospheric Science Program, housed within the Department of Mathematical Sciences, is a group of scholars who engage in a wide array of distinguished, societally-relevant research currently supported by over \$3 million in external funding. Their specializations include climate variability, cloud physics and numerical modeling, atmospheric dynamics, mesoscale and synoptic meteorology, air pollution meteorology, and data analytics. The Atmospheric Science graduate programs are focused on student-led research under the direction of one or more faculty advisors.

Over its twenty-plus years of existence, the program has a history of innovation in both education and research, with the Innovative Weather program and first-of-its-kind "Air Pollution and Ancient Cultures" faculty-led study abroad course being two representative examples of innovative educational opportunities. Students graduating from the program have a long history of acquiring gainful employment with top-tier public and private sector institutions in Wisconsin and beyond.

Admission Requirements

Application Deadlines

Application deadlines vary by program, please review the application deadline chart (<http://uwm.edu/graduateschool/program-deadlines/>) for specific programs. Other important dates and deadlines can be found by using the One Stop calendars (<https://uwm.edu/onestop/dates-and-deadlines/>).

Admission

An applicant must meet Graduate School requirements plus these departmental requirements to be considered for admission to the program:

- A general background in both physics and mathematics, including calculus and ordinary differential equations. Students who lack this background may be admitted if the deficiencies amount to no more than two courses. Deficiencies must be made up within the first three enrolled semesters of graduate study.

Optional

Submission of scores on the Graduate Record Examination (GRE) (<http://uwm.edu/graduateschool/admission/#gre>).

Credits and Courses

Students enrolled in the MS in Atmospheric Science degree program must complete a total of thirty (30) credits.

Code	Title	Credits
Select 12 credits at the ATM SCI 700-level or greater		12
Select 6 credits in approved graduate elective courses		6
Select one of the following:		6
MATH 601 & MATH 602	Advanced Engineering Mathematics I and Advanced Engineering Mathematics II	
ATM SCI 500 & ATM SCI 700	Statistical Methods in Atmospheric Sciences and Statistical Methods in Atmospheric Sciences II: Signal Detection	
ATM SCI 990	Master's Thesis	6
Total Credits		30

Students receiving financial support from the Department of Mathematical Sciences must enroll in a minimum of fifteen (15) credits offered by the department during each academic year.

Courses in Atmospheric Science that may be taken for graduate credit are listed below.

Code	Title	Credits
ATM SCI 330	Air-Pollution Meteorology	3
ATM SCI 350	Atmospheric Thermodynamics	3
ATM SCI 351	Dynamic Meteorology I	3
ATM SCI 352	Dynamic Meteorology II	3
ATM SCI 360	Synoptic Meteorology I	4
ATM SCI 361	Synoptic Meteorology II	4
ATM SCI 460	Mesoscale Circulations	3
ATM SCI 464	Physical Meteorology: Cloud Physics	3
ATM SCI 470	Tropical Meteorology	3
ATM SCI 480	The General Circulation and Climate Dynamics	3
ATM SCI 497	Study Abroad: (subtitled)	3
ATM SCI 500	Statistical Methods in Atmospheric Sciences	3
ATM SCI 505	Micrometeorology	3
ATM SCI 511	Seminar in Atmospheric Radiation and Remote Sensing	3
ATM SCI 600	Data Analytics	3
ATM SCI 690	Seminar in Atmospheric Sciences:	3
ATM SCI 700	Statistical Methods in Atmospheric Sciences II: Signal Detection	3
ATM SCI 705	Air Pollution Modeling	3
ATM SCI 711	Cloud Dynamics	3
ATM SCI 730	Numerical Weather Prediction	3
ATM SCI 750	Nonlinear Time Series Analysis	3
ATM SCI 761	Advanced Synoptic/Mesoscale Meteorology	3
ATM SCI 950	Seminar on Topics in Atmospheric Sciences:	3
ATM SCI 990	Master's Thesis	1-8
ATM SCI 997	Doctoral Externship	1-12
ATM SCI 998	Doctoral Dissertation	1-12
ATM SCI 999	Advanced Independent Reading	1-4

Additional Requirements

Major Professor as Advisor

The student must have a major professor to advise and supervise the student's studies as specified in Graduate School regulations.

Thesis

Prior to graduation, students, under the direction of a major professor and supervision of a three-member evaluation committee comprised of Atmospheric Science graduate faculty, must complete and orally defend an acceptable thesis. An acceptable thesis is defined as one representing an original contribution in the atmospheric science of sufficient caliber for publication in a peer-reviewed journal.

Time Limit

Entering full-time students without deficiencies are expected to complete all degree requirements within two years of first enrollment. All degree requirements must be completed within five years of first enrollment.

Contact Information

Current Students contact the Program Coordinator, atmo-chair@uwm.edu

<http://uwm.edu/atmospheric-science/graduate/>