

APPLIED METEOROLOGY (MS)

Exploration and Discovery

The Master of Science in Applied Meteorology program is housed in the Judd Gregg Meteorology Institute in the Boyd Science Center. The degree is designed to meet regional and national needs for professional meteorologists who require more than baccalaureate-level education and qualifications. The program offers students the latest knowledge and research skills in many core areas of operational meteorology that are needed to provide modern weather support to a wide variety of customers. The program focuses on such areas as advanced weather analysis and forecasting; air quality; aviation meteorology; hydrology; mesonet/road weather meteorology; radar/satellite meteorology; and computer-based programming and other meteorological applications.

Program Highlights

- The only MS in meteorology program in New Hampshire and one of only a handful in the northeastern United States
- Outstanding technology and facilities
- Dedicated faculty willing to work closely with students
- Most professors have real operational meteorological experience
- Active collaborations with NOAA, NASA, NWS, UNH, USAF, MWO, NHDOT, and USA CRREL
- Some assistantships with tuition waivers are available
- Flexibility in course selection to tailor a program to the student's needs
- Well-qualified students may be able to complete the program in approximately 18 months
- Office area for graduate students
- Cost-efficient program

Admission Requirements

Plymouth considers applications on a rolling admissions basis that allows students to apply at any time of the year. The program is based on full fall, spring, and summer terms. However, it is generally recommended that students start the program during the fall term. Applicants planning to begin studies during the fall term should submit completed admissions applications by January 31 for priority consideration for the limited enrollment slots and available assistantships. Prospective students will automatically be considered for assistantships during the admission process. Applicants wanting to start in the spring term should apply by August 31 for limited enrollment slots, but should be advised that assistantship support may not be available. An official score report is required from the Graduate Record Examination for the quantitative, verbal, and analytical writing components. Applicants with degrees in subjects other than meteorology or atmospheric science should have had at least an introductory course in meteorology, calculus courses through multivariate calculus, and two calculus-based physics courses. All interested candidates are encouraged to contact the program coordinator for an in-person or phone interview before submitting their application.

Types of Admittance

Full admission to the program may be granted to students meeting all of the criteria for admission. The most highly qualified admitted students may be offered assistantships or tuition waivers or both based on available resources.

Students not initially receiving assistantships or tuition waivers may later be considered eligible for them based on their academic performance in the program.

Graduate Study by Undergraduate Seniors

Plymouth State University seniors with a cumulative GPA (CGPA) of 3.0 or better may take up to six graduate credits with prior permission as outlined on the Student Request form.

GPA Requirements

Graduate students in the program must maintain a CGPA of 3.0 or higher in the program to maintain satisfactory progress. Only one passing course grade of less than B- will be allowed to count toward the 30-credit degree.

Students enrolled in the program who fall below a 3.0 CGPA will have one semester to restore it to the satisfactory level. If a student does not achieve this level after one semester, the student will be barred from future coursework and pursuit of the MS degree and lose assistantship support (if applicable).

Students who fail more than one graduate course will also not be allowed to continue in the program.

Degree Requirements Curriculum and Degree Requirements

The program requires 30 credits to complete an MS degree. By the end of their second full semester, students will choose either the thesis or non-thesis degree option. However, not all students may be able to select the thesis option since the number of students that can be supported in this option is limited by faculty availability. Students desiring to pursue the thesis option will need to consult with their advisor and other meteorology faculty to identify a faculty mentor.

Thesis Option

Course	Title	Credits
Complete 24 credits of coursework		24
Complete six credits of thesis research		6
Total Credits		30

Non-Thesis Option

Course	Title	Credits
Complete 27 credits of coursework (not to include thesis research credits)		27
Complete three credits of independent study		3
Total Credits		30

Students taking the thesis option would take fewer formal courses and make up credits through thesis research. Non-thesis students would be expected to complete a shorter research paper through a three-credit independent study course arranged with a member of the meteorology faculty. As part of their coursework, all students must take a one-credit Graduate Seminar course each full semester. Only three credits from this course may count toward the 30-credit degree requirement

Coursework

There are no specific courses required for degree completion except the three semesters of Graduate Seminar and either six credits of thesis

research or three credits of independent study/research credits. Students are encouraged to complete courses in a variety of areas, but have flexibility in selecting the courses that will fit their academic goals. Students will work closely with their academic advisors to develop an appropriate program of study, generally by the end of their first semester in the program. This plan must be approved by the advisor.

Co-listed Courses

Some upper-division undergraduate courses are co-listed as graduate courses. Graduate students enrolled in these courses will be expected to complete additional coursework, such as papers and projects, to earn graduate credit in these courses. The co-listed courses are as follows:

Co-listed Meteorology Courses

Course	Title	Credits
MT 5150/4150	Air Quality	3
MT 5280/4280	Synoptic Meteorology II ¹	3
MT 5310/4310	Dynamic Meteorology I ¹	3
MT 5320/4320	Dynamic Meteorology II ¹	3
MT 5400/4400	Numerical Weather Prediction	3
MT 5410/4410	Atmospheric Physics ¹	3
MT 5420/4420	Tropical Weather and Climate	3
MT 5430	Climate Change	3
MT 5450/4450	Advanced Synoptic Meteorology	3
MT 5470	Micrometeorology	3
MT 5480/4480	Mesoscale Meteorology	3
MT 5560/4560	Topics in Meteorology	1-3

¹ Students with undergraduate degrees in meteorology or atmospheric science are expected to have already completed Synoptic Meteorology II (MT 4280), Dynamic Meteorology I (MT 4310), Dynamic Meteorology II (MT 4320), and Atmospheric Physics (MT 4410) along with undergraduate courses in Atmospheric Thermodynamics and Synoptic Meteorology I or their equivalents, and these students cannot usually take these courses for graduate credit. Eligible undergraduate students desiring graduate credit for the other courses listed should sign up for the courses using the graduate course numbers listed (Air Quality (MT 5150), Synoptic Meteorology II (MT 5280), etc.). Students entering into the program without a BS in meteorology or sufficient meteorology course background will need to complete the four courses highlighted with a ¹ at a minimum, and Topics in Meteorology (MT 5560) topics courses listed as Introduction to Synoptic Meteorology and Atmospheric Thermodynamics. Note that only the credits from two of the (¹) or topics courses can be counted toward the 30 graduate credit requirement. Any further prerequisite deficiencies would have to be made up with non-degree credits.

Graduate Courses

At least 15 of the credits counting toward the MS degree must come from the non-co-listed, 5000-level meteorology courses listed below. All students must sign up for the Graduate Seminar during each of their fall and spring semesters and may count up to three seminar credits toward the 30-credit degree requirement.

Non Co-listed Meteorology Courses

Course	Title	Credits
MT 5200	Transportation Meteorology	3
MT 5330	Satellite Meteorology	3
MT 5340	Radar Meteorology	3
MT 5350	Boundary Layer Meteorology	3
MT 5400	Numerical Weather Prediction	3
MT 5600	Computer Applications in Meteorology	3
MT 5700	Graduate Seminar Meteorology	1
MT 5800	Thesis Research	1-6
MT 5910	Independent Study/Research	1-3

Additional non-meteorology courses could also be used to fulfill up to nine credits toward degree requirements with approval of the advisor and meteorology program coordinator.

Total for MS in Applied Meteorology 30