



Our renowned Meteorology and Atmospheric Science program, which is one of the oldest and largest in the nation, spans all areas of the atmospheric sciences. The strength department lies in the diverse knowledge and reputation of our faculty for both teaching and research, and the **array of opportunities for students** to engage in research projects and extracurricular activities that provide community outreach. Regardless of where you land after graduation, **a degree from Penn State's Meteorology and Atmospheric Science program will be highly regarded.**

Career Opportunities

Meteorology and Atmospheric Science program graduates are working in every level of government and the private sector on a wide variety of applications including weather forecasting and communications, air-quality regulation, site planning, freight routing, energy resource management, flood warning and control, commodities trading, and many others. Graduates with advanced degrees are participating in teaching and research in university, government, and industrial settings. For those wishing to pursue a career in government, Penn State's program provides all necessary qualifications to meet civil service requirements for meteorological employment. For those who have an interest in forecasting and communications, Penn State's Meteorology and Atmospheric Science program has more than 100 graduates who are doing weather on television stations across the country. Students are strongly encouraged to pursue internships to supplement their education. Internships provide valuable networking and real-world experience that is hard to match in the classroom. Each year, the Department of Meteorology and Atmospheric Science holds its own career fair to aid students in finding jobs and internships or just to explore employment options.



"The Department of Meteorology and Atmospheric Science is a close-knit group and students are very lucky to get to know the professors and instructors on a one-on-one basis rather than being just a number in a class of 300+ students."
- Danielle Knittle

The Academic Program

Our program spans all aspects of the atmosphere and environment and reaches across disciplines such as business and finance, geography, engineering, and computer science. Students planning to major in meteorology and atmospheric science need a strong background in science, mathematics and computer skills. Basic required courses during the first two years consist of four math, two physics, one statistics, one computer science, and one chemistry course, in addition to the university's general education requirements.

Also during the first two years, students may take two or three of the required basic meteorology courses:

- An introduction to weather analysis
- A calculus-based survey of the atmospheric sciences
- Atmospheric thermodynamics

Later semesters are dominated by meteorology and professional elective courses relevant to the student's selected option. By choosing an option in the major, students have the opportunity to develop their skills in weather forecasting and communications, atmospheric sciences, environmental meteorology, or weather risk management.



Research

The diverse teaching and research interests of the faculty encompass the full range of specialty areas in the atmospheric sciences. Throughout their undergraduate education, students have many opportunities to participate in hands-on research, often in the summer. Activities may include launching weather balloons to study air pollution and air chemistry, writing computer code to manipulate large data sets, or analyzing radar imagery of severe storms, to name a few. A general open-door policy by all faculty encourages students to interact with them on a wide range of specialties. It's quite common for students with a keen interest in research to co-author a journal article while an undergraduate. If you plan to go to graduate school, research experience is a key to entrance to the best programs. The department's goal is to give students the broad-based knowledge and research tools to understand and solve contemporary problems in the atmospheric and oceanic sciences.

"The weather risk program's blend of meteorology and finance related coursework provided me the background I needed to immediately bring value to a variety of companies who may not traditionally look to hire meteorology majors. In this job environment, having a diverse and unique set of skills can really help graduates stand out to employers."

—Alan Lustig



Scholarships

The Department of Meteorology and Atmospheric Science awards between \$40,000-\$50,000 in scholarships annually to students based on financial need or academic merit. Although the majority of departmental scholarships are awarded to upperclassmen, some sophomores who have demonstrated academic excellence are also eligible for these scholarships. In addition, a limited number of scholarships are awarded to incoming freshmen. Students do not need to apply for meteorology scholarships; they are awarded by the department's scholarship committee each fall. Students are also eligible for numerous scholarships through the College of Earth and Mineral Sciences and the University.



For More Information:

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PennState
College of Earth
and Mineral Sciences

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and Atmospheric Science**