

# METEOROLOGY



*"We focus on creating opportunities for undergraduate students where they can build skill sets that are tuned to workforce needs. We prepare students for fruitful careers and advanced studies. We provide venues for networking with peers and professionals. All our resources are directed toward the undergraduate experience. Come see what distinguishes our program, and find out why Millersville meteorology is an excellent place to be."*

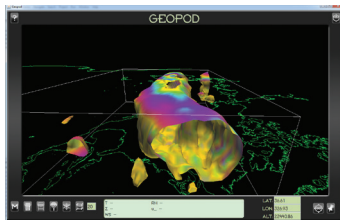
– Richard D. Clark, Department Chairperson

**Millersville University's meteorology program offers a contemporary, comprehensive curriculum, infused with technology, and taught by inspiring and passionate faculty. We prepare students for a broad range of career opportunities through our ongoing commitment to their growth as scientists and citizens, with knowledge and skills that are and will be in demand in the modern, evolving workplace.** The B.S. in meteorology degree meets the American Meteorological Society Guidelines for an undergraduate degree in meteorology/atmospheric science and the GS-1340 requirements for government employment as a meteorologist.

## BACHELOR OF SCIENCE (B.S.)

**Meteorology** – A nationally recognized program offering deep and broad immersion in the atmospheric sciences. What makes Millersville Meteorology the first choice for so many students?

- Caring faculty and staff who are mentors, educators and advisors, guiding students along a bold path toward meaningful careers.
- Contemporary curriculum infused with technology and informed by emerging trends.
- Research opportunities that are rich, meritorious and challenging.
- Serious and responsible guidance and mentoring.
- Courses taught by faculty, all Ph.D.s, not graduate students.
- Small class sizes.
- Modern facilities; instruments and equipment for research and education.
- Active Student Chapter of the American Meteorological Society.
- A great value from a program of distinction.



*Flying through data in the GEOPOD, a 3-D immersion technology built by students.*

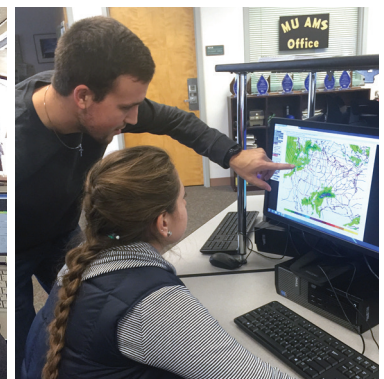


*The Campus Weather Service: produced by students, supervised by professionals.*

Students participate in the Campus Weather Service, a student forecasting activity; Weather Watch, a streaming weather summary video; Spaced Out, a streaming monthly overview of solar activity; the Weather Outreach Program, where students visit elementary schools and present weather/climate information; and the Peer Mentor Program, which involves juniors and seniors serving as mentors to freshmen.

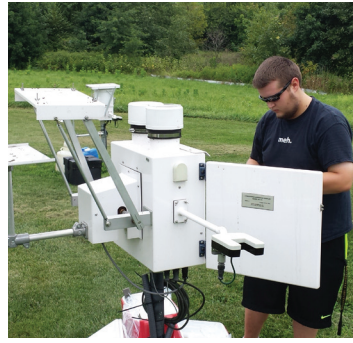


*Undergraduate research opportunities allow students to practice science and hone technical and teamwork skills, thus preparing students for graduate school and fruitful careers.*



*Peer mentoring leads to student success and higher retention rates.*





**TEACHING**  
Creating knowledge.

**TRAINING**  
Building skill sets.

**TEAMWORK**  
Doing science collaboratively.

**TRANSFORMATION**  
Career-ready graduates.

## LEARNING BY DOING

Students pursuing the B.S. in meteorology have access to a suite of research-grade instruments and equipment used for research and education. In addition, students make use of the e-map wall and streaming video, and computer resources for programming (e.g., FORTRAN, Python), analysis and visualization, as well as producing regional forecasts.

- **Millersville Atmospheric Research and Aerostat Facility (MARAF)** – Central to the program’s research capability is the MARAF, a suite of instrument platforms deployed primarily to measure the meteorological and chemical characteristics of the lower atmosphere. This facility includes ground-based and remote sensing equipment, as well as balloon-borne instruments that can sample from the surface to the stratosphere.
- **Weather Information Center** – Located on the top floor of Caputo Hall, the main science building, the Weather Information Center (WIC) is a hub of student activity and camaraderie. Located in the WIC is the electronic map wall, the steaming video desk, computers for students to produce forecasts for the campus and community, access to the observation deck, and offices for the director of WIC and the Student AMS chapter. The WIC is where the excitement and passion for weather blossoms every day.
- **Winter Road Weather Precision Forecasting** – Millersville University provides targeted winter storm forecasts for an eight-county region in the lower Susquehanna Valley. A contract with the Pennsylvania Department of Transportation supports four undergraduate students who gain valuable experience under the supervision of a seasoned expert forecaster.
- **National Trends Network** – Millersville meteorology students provide the National Acid Deposition Program and the Mercury Deposition Network with local samples of precipitation that contribute to the long-term record of precipitation chemistry across the United States.

**“All of our resources are directed to the undergraduate student. We believe that our attention to the undergraduate experience is second to none, and our status as a program of distinction is earned by the opportunities we provide and the graduates that we cultivate. What do you want to do as an undergraduate?”**

– Richard D. Clark, Department Chairperson



Students gain field experience studying lake-effect snow.



Students study detailed weather data in real-time on the electronic map wall located in the Weather Information Center (WIC).

## CLUBS AND ACTIVITIES

**American Meteorological Society (AMS)** – One of the most active clubs on campus with over 100 members, the Millersville University Student Chapter of the AMS provides a sense of community for its members, offering activities both professional and social. The chapter has a speaker series, an outreach program to elementary schools, a peer-mentoring program for incoming freshmen and a highly successful Public Weather Awareness Day, where students host an event for the local community focusing on weather and climate for all ages in a festival-like environment.

**Campus Weather Service** – A student-run forecast service that issues forecasts several times daily for the local community. Forecasts are disseminated via the Web and streaming video, offering students the opportunity to hone their writing and oral presentation skills.

**American Meteorological Society Annual Meeting** – Attendance at the annual meeting of the AMS is a capstone experience for all meteorology majors. Students get to see firsthand the full scope of the weather and climate enterprise.



**External Relationships** – Millersville Meteorology is an active member of the University Corporation for Atmospheric Research, American Meteorological Society, American Geophysical Union, and National Weather Association, and participates in the Unidata Internet Data Distribution system. Students can attend conferences where they can present the results of their research.

Millersville University

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