



Universities offering degrees in Meteorology

- Undergraduate degrees only
- Graduate degrees only
- Both Graduate and undergraduate degrees

www.srh.noaa.gov/srh/jetstream/nws/schools_map.htm

NOAA's Detroit/Pontiac National Weather Service

Careers in NOAA's National Weather Service



NOAA's National Weather Service (NWS) provides weather, hydrologic, and climate forecasts and warnings for the United States, its territories, adjacent waters and ocean areas, for the protection of life and property and the enhancement of the national economy. NWS data and products form a national information database and infrastructure which can be used by other governmental agencies, the private sector, the public, and the global community.



NOAA's Detroit/Pontiac National Weather Service

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NOAA's National Weather Service is open 24 hours a day, 7 days a week, 365 days a year! With over 120 field offices, we provide forecasts for the public, aviation, media and marine communities via the All-Hazards NOAA Weather Radio, Internet and the weather wire. We utilize the latest forecast technology with AWIPS (*Advanced Weather Interactive Processing System*), satellites, Doppler Radar and numerical weather prediction to bring the most accurate and dependable weather information to you.

Working Together to Save Lives

Typical National Weather Service Work Environment

Staff of Professionals that include

- 10 Meteorologists Forecasters
- 3 Hydrometeorological technicians
- 3 Administrative Meteorologists
- 3 Electronic Technicians
- 2 Meteorologist Interns
- 1 Administrative Assistant
- 1 Hydrologist
- 1 Information Technology Specialist

What is a Meteorologist?

Atmospheric scientists who forecast the weather, known professionally as *operational meteorologists*, are the largest group of specialists. They study information on air pressure, temperature, humidity, and wind velocity; and apply physical and mathematical relationships to make short- and long-range weather forecasts. Their data come from weather satellites, weather radars, and sensors and observers in many parts of the world. Meteorologists use sophisticated computer models of the world's atmosphere to make long-term, short-term, and local-area forecasts.



Federal requirements for a meteorologist

Current high school students should concentrate on mathematics, science and physics with an increasing emphasis on computer science. In addition, a solid background in public speaking and writing will make you a competitive applicant. A degree in meteorology, atmospheric science, or other natural science major currently requires extensive course work that includes atmospheric dynamics and thermodynamics, analysis and prediction of weather systems, remote sensing and instrumentation, physics, ordinary differential equations and at least course work of three or more of the following: physical hydrology, chemistry, physical oceanography, physical climatology, radiative transfer, aeronomy, advanced thermodynamics, advanced electricity and magnetism, statistics, light and optics.

Career Outlook for Meteorologists

Government meteorology positions are currently hiring approximately 50-100 hires per year. However, the private sector opportunities are climbing faster at the current time. With computer technology advancing quickly, automation has resulted in a reduction of the work force (mostly through attrition). With an increasingly competitive workforce, you will likely need additional skills with computers, public speaking, writing and perhaps a second language.



Pro's and Con's for NWS Meteorologists

- Rotational Shift Schedule
 - * Midnight shifts
 - * Weekends
 - * Holidays
- Relocation
- Continuing Education
- Severe Weather Operations
- Constantly changing
- Opportunities nationwide

Salary Outlook for Meteorologists

Starting salary within the NWS is approximately \$25,000 per year. After yearly management reviews and training the potential income climbs to near \$50,000 per year. In a highly competitive field, you may need to apply for openings in other NWS locations to become a forecaster. Forecasters earn approximately \$60,000–\$90,000 per year. Management level positions can earn up to approximately \$100,000 per year. More information can be obtained at: <http://www.opm.gov/>

Additional Careers in Meteorology (outside of the NWS)

- Stocks and Commodities
- Military
- Media (television, newspapers)
- Air Pollution
- Aviation
- Research and Development
- Biometeorology
- Professor
- Space Meteorology
- Forensic Meteorology
- Energy and Utility Companies

Other careers in NOAA's NWS

While the main focus is on meteorology, it takes a dedicated team of support personnel to put together an efficient work environment. With technology the forefront of all NWS offices, it takes a team of electronic technicians and information technology specialists to make the office run effectively. Electronic Technicians install and maintain various operational electronics including Doppler Radar, observation equipment and computers. Information Technology Specialists implement, design and maintain software and managing network security. These fields require specialized training with salaries for electronic technicians averaging between \$40,000 and \$60,000 per year and Information Technology Specialists range between \$60,000 and \$80,000 per year. The Administrative Support Assistant coordinates all of the office administrative functions including pay roll, travel, financing of office activities with salaries ranging between \$30,000 and \$40,000 per year. Hydrologists, professionals that study water and its environmental impact, such as river flows, earn between \$60,000 and \$80,000 per year.

For More Information

U.S. Department of Labor
<http://www.bls.gov/oco/ocos051.htm>

American Meteorological Society
<http://www.ametsoc.org>

National Weather Association
<http://www.nwas.org>

National Oceanic Atmos. Admin.
<http://www.noaa.gov>

National Weather Service
<http://www.nws.noaa.gov>

Experimental Graphical Forecasts
<http://www.weather.gov>

Nat. Center for Environ. Prediction
<http://www.ncep.noaa.gov>

Official Federal Career Opportunities
<http://www.usajobs.gov>

