

Florida Institute of Technology– Career Management Services

Career Profile: Meteorology

Atmospheric science is the study of the atmosphere—the blanket of air covering the Earth. Atmospheric scientists, commonly called *meteorologists*, study the atmosphere's physical characteristics, motions, and processes, and the way in which these factors affect the rest of our environment. In addition to predicting the weather, atmospheric scientists attempt to identify and interpret climate trends, understand past weather, and analyze today's weather.

Atmospheric scientists who forecast the weather are known as operational meteorologists; they are the largest group of specialists. These scientists study the Earth's air pressure, temperature, humidity, and wind velocity, and they apply physical and mathematical relationships to make short-range and long-range weather forecasts. Physical meteorologists study the atmosphere's chemical and physical properties; the transmission of light, sound, and radio waves; and the transfer of energy in the atmosphere. Synoptic meteorologists develop new tools for weather forecasting using computers and sophisticated mathematical models of atmospheric activity. Climatologists study climactic variations spanning hundreds or even millions of years. Environmental meteorologists study environmental problems, such as pollution and shortages of fresh water. They may evaluate and report on air quality for environmental impact statements.



Working conditions for meteorologists can vary from inside offices to the harshest outdoor weather elements. Weather forecasters who work for radio or television stations broadcast their reports from station studios, and may work evenings and weekends. During weather emergencies, such as hurricanes, meteorologists may work overtime. Meteorologists who are not involved in forecasting tasks work regular hours, usually in offices.

About 34 percent of atmospheric scientists are employed by the Federal Government; most of these work in the National Weather Service. The American Meteorological Society (AMS) offers the Certified Consulting Meteorologist professional certification for consulting meteorologists. Applicants must meet formal education requirements, pass an examination to demonstrate thorough meteorological knowledge, have a minimum of 5 years of experience or a combination of experience plus an advanced degree, and provide character references from fellow professionals. In addition, AMS also offers the Certified Broadcast Meteorologist designation for meteorologists in television and radio. Applicants must hold a bachelor's degree in atmospheric science or meteorology, complete an examination, and submit examples of their weather broadcasts for review. Both certifications also require periodic continuing education.

A bachelor's degree in meteorology or atmospheric science, or in a closely related field with courses in meteorology, usually is the minimum educational requirement for an entry-level position as an atmospheric scientist. A master's degree is necessary for some positions, and a Ph.D. degree is required for most basic research positions.

The median annual wage of atmospheric scientists was \$87,780 in May 2010. The median wage is the wage at which half the workers in an occupation earned more than that amount and half earned less. The lowest 10 percent earned less than \$45,050, and the top 10 percent earned more than \$132,130.

For more information on a career in Meteorology contact the Career Management Services Office or your academic advisor.

Sources: Bureau of Labor Statistics, U.S. Department of Labor, Occupational Outlook Handbook, 2012-13 Edition
National Association of Colleges and Employers Salary Survey: Winter 2011



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