Career and Transfer Center

Monroe Community College

Career Profile:

Atmospheric Science & 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 it affects the rest of our environment. The best known application of this knowledge is in forecasting the weather. However, weather information and meteorological research are also applied in air- pollution control, agriculture, air and sea transportation, defense, and the study of trends in Earth's climate such as global warming, droughts, or ozone depletion.

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. These forecasts inform not only the general public, but also those who need accurate weather information for both economic and safety reasons, as in the shipping, air transportation, and agriculture, fishing, and utilities industries.

Some atmospheric scientists work in research. **Physical Meteorologists**, for example, study the atmosphere's chemical and physical properties; the transmission of light, sound, and radio waves; and the transfer of energy in the atmosphere. They also study factors affecting the formation of clouds, rain, snow, and other weather phenomena, such as severe storms. **Synoptic Meteorologists** develop new tools for weather forecasting using computers and sophisticated mathematical models. **Climatologists** collect, analyze, and interpret past records of wind, rainfall, sunshine, and temperature in specific areas or regions. Their studies are used to design buildings, plan heating and cooling systems, and aid in effective land use and agricultural production. Other research meteorologists examine air pollution.

Salary Information:

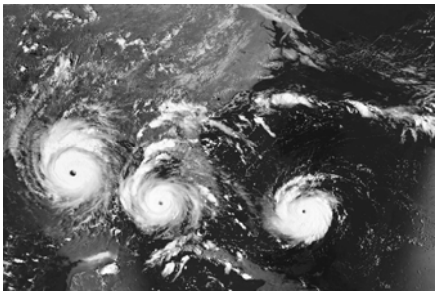
- Atmospheric Scientists:
  $80,080 Median Salary (U.S. Bureau of Labor Statistics, 2008)
  [*Salary varies based on education/advanced degree, work-experience & setting/location]

Transfer Information:

- A Bachelor's degree is entry-level into many of these professions
- Master's/PhD may be required for some.

Additional Information:

- American Meteorological Society: www.ametsoc.org
- National Weather Association: www.nwas.org



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