Careers in Meteorology

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Roadmap to a Career in Meteorology

- Definition of a Meteorologist
- Why Meteorology?
- Career Opportunities
  - “Are you on TV?” “Do you study meteors?”
  - “Are you a storm chaser?”
- Career Opportunities in the National Weather Service
- What is a Operational Meteorologist?
- Colleges and Universities
  - “What kind of degree do I need?” “Where should I go to school?”
- Degrees in Meteorology

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What is a Meteorologist?

“A person with specialized education who uses scientific principles to explain, understand, observe, or forecast the earth's atmospheric phenomena and/or how the atmosphere affects the earth and life on the planet.” (AMS Definition)
Why Meteorology?

- Overall interest
- Experienced a significant past weather event
  - “I saw a tornado” “My friend lost her home during Katrina” “I was stuck on the Beltway for 9 hours during a snow storm” “Snowmageddon was awesome”
- Strength in math & science
- You want a challenging job that is constantly changing
Career Opportunities

- Public
- Military
- Media
- Private-Sector
- Aviation
- Research

[Logos of various organizations related to weather and meteorology]
Career Opportunities

Other Opportunities Include…

- Consulting (Covers everything)
- Air Quality (Environmental)
- Forensic (Legal matters and police investigations)
- Support (Decision Makers)
- Marketing and Sales
- Atmospheric Observation and Instrumentation
- Technology Development

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Career Ops in the National Weather Service

- Forecaster ladder at the WFO
  - Meteorologist Intern
  - General Forecaster
  - Senior Forecaster

- Different directions in a WFO
  - Hydrologist
  - Incident Meteorologist (I-met)
  - Emergency Response Meteorologist (ERS)
  - Information Technology Officer (ITO)
  - Observation Program Leader (OPL)
  - Science Operations Officer (SOO)
  - Warning Coordination Meteorologist (WCM)
  - Meteorologist in Charge (MIC)

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Career Ops in the National Weather Service

Regional
- River Forecast Center (RFC)
- Center Weather Service Unit (CWSU)

National
- National Centers for Environmental Prediction (NCEP)
  - Aviation Weather Center
  - Environmental Modeling Center
  - NCEP Central Operations
  - Ocean Prediction Center (OPC)
  - Space Weather Prediction Center
  - Hydro Meteorological Prediction Center (HPC)
  - Climate Prediction Center (CPC)
  - Storm Prediction Center (SPC)
  - National Hurricane Center (NHC)

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What does it mean to be an “operational meteorologist” also known as a forecaster?

Creating a basic prediction of a variety of weather parameters for a specified region.

One Area of Responsibility Can Include:
- Mountains and Valleys
- Marine
- Aviation
Operational Meteorology

Weather Parameters Include:
- Temperature
- Wind and Wind Gusts
- Sky Cover
- Weather Type
- Probability of Precipitation
- Amount of Precipitation
- Relative Humidity
- Hazardous Weather

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NWS Hazards

• Severe Weather
  ✶ Tornado
  ✶ Damaging Winds and Hail

• Tropical Systems
  ✶ Hurricanes
  ✶ Tropical Storms

• Non-Precipitation
  ✶ Heat Waves
  ✶ High Wind
  ✶ Wind Chill/Excessive Cold
  ✶ Dense Fog

• Hydrological
  ✶ Flash Floods
  ✶ River Floods
  ✶ Small Stream & Tributaries

• Winter Storms

• Coastal Flooding

• Wildfires

• Marine

Spruce Knob, Pendleton County, WV
Elevation 4,861 feet
The colleges and universities listed here offer degree programs in the atmospheric and closely related oceanic, hydrologic, and other sciences. The publication of this listing is part of the educational services the AMS provides to the community; no endorsement or accreditation of the programs is implied by inclusion.

For general information about careers in the atmospheric and related sciences, visit the AMS Career Center. Here you'll find links to two brochures about careers in the science: "A Career Guide for the Atmospheric Sciences" and "Challenges of Our Changing Atmosphere: Careers in Atmospheric Research and Applied Meteorology."

Visit our Students page to find out more about AMS scholarships and student internships; to learn about the benefits of becoming an AMS Student Member; and for information on AMS meetings, including the Annual Student Conference and Career Fair."
Colleges & Universities

http://www.ametsoc.org/atmoscareers/
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Education

NWS Employment Requirements for a Entry-Level Intern Position

- Degree: meteorology, atmospheric science, or other natural science major that included:
  - 24 semester hours of meteorology/atmospheric sciences
  - 6 semester hours of physics
  - 3 semester hours of physical meteorology
  - 3 semester hours of ordinary differential equations
  - 9 or more semester hours of course work appropriate for a physical science major
- Study what interests you
  - Air pollution, statistics, computer science, oceanography, etc

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Like starting any new career, it is important to gain some experience
This can be achieved through many different programs:
- Student Internships & Volunteer Positions (Paid and Unpaid)
- Independent Research
- Attending Conferences
- Becoming a NWS Skywarn Spotter

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Professional Organizations

- American Meteorological Society (AMS)
  - http://www.ametsoc.org/

- National Weather Association (NWA)
  - http://www.nwas.org/
More Information

- University of Oklahoma- School of Meteorology Page
  - Prepare for a degree in meteorology
- AMS Careers Page
- NWS Student Page
- NWS Baltimore/Washington DC Student Volunteer Program
  - http://www.erh.noaa.gov/lwx/outreach/Student_Volunteer_Webpage.htm

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