Meteorology

Meteorology is a branch of the atmospheric sciences which includes atmospheric chemistry and atmospheric physics, with a focus on weather forecasting.

- Book: Fundamentals of Atmospheric Science (Brune)

This text prepares students by laying a solid foundation in the application of physical, chemical, and mathematical principles to a broad range of atmospheric phenomena. Students are introduced to fundamental concepts and applications of atmospheric thermodynamics, radiative transfer, atmospheric chemistry, cloud microphysics, atmospheric dynamics, and the atmospheric boundary layer.

- Front Matter
- 1: Getting Started
- 2: Thermodynamics
- 3: Moist Processes
- 4: Atmospheric Composition
5: Cloud Physics
6: Atmospheric Radiation
7: Applications of Atmospheric Radiation Principles
8: Math and Conceptual Preparation for Understanding Atmospheric Motion
9: Kinematics
10: Dynamics - Forces
11: Atmospheric Boundary Layer
12: The Atmosphere - A Holistic View
Back Matter

- Book: Practical Meteorology (Stull)

An Algebra-based Survey of Atmospheric Science.

- Front Matter
- 1: Atmospheric Basics
- 2: Solar and Infrared Radiation
- 3: Thermodynamics
- 4: Water Vapor
- 5: Atmospheric Stability
- 6: Clouds
- 7: Precipitation Processes
- 8: Satellites and Radar
- 9: Weather Reports and Map Analysis
- 10: Atmospheric Forces and Winds
- 11: General Circulation
- 12: Fronts and Airmasses
- 13: Extratropical Cyclones
- 14: Thunderstorm Fundamentals
- 15: Thunderstorm Hazards
- 16: Tropical Cyclones

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17: Regional Winds
18: Atmospheric Boundary Layer
19: Pollutant Dispersion
20: Numerical Weather Prediction (NWP)
21: Natural Climate Processes
22: Atmospheric Optics
Back Matter