

AV 108 : METEOROLOGY I

Transcript title

Meteorology I

Credits

4

Grading mode

Standard letter grades

Total contact hours

40

Lecture hours

40

Course Description

A survey course in atmospheric science that covers weather basics and atmospheric circulations. Included is a systematic development of the following: the atmosphere, energy and temperature, wind, atmospheric moisture, horizontal and vertical pressure patterns, clouds, atmospheric circulation, stability, air masses, fronts, fog, icing, thunderstorms, jet streams and turbulence. Students will study surface weather observations, routine weather reports and forecasts, surface maps and constant pressure maps.

Course learning outcomes

1. Understand and apply fundamentals of meteorology.
2. Understand and use the vocabulary of aviation weather.
3. Demonstrate through understanding of atmospheric systems.
4. Become aware of the influences weather has on flight.
5. Interpret printed and graphic aviation weather products.
6. Apply weather knowledge to flight planning.
7. Maximize aircraft performance through understanding of atmospheric systems.
8. Ultimately, the overriding outcome is to increase safety by minimizing exposure to weather hazards.

Content outline

- Why Study Weather?
- The Atmosphere
- Atmospheric Energy and Temperature
- Pressure, Altitude and Density
- Wind
- Vertical Motion and Stability
- Atmospheric Moisture
- Scales of Atmospheric Circulations
- Airmasses, Fronts, and Cyclones

Required materials

Requires textbook and/or online learning materials.