

# METEOROLOGY (MET)

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**MET 200 INTRO TO METEOROLOGY (3 Hours)**

Non-mathematical treatment of the fundamentals of meteorology, effects of weather and climate on man and his activities.

**MET 209 INTRO TO PROFSNL METEOROLOGY (1 Hour)**

Pre- or Co-requisite: MET 200. A seminar course in which a variety of professional specialties within the area of the atmospheric sciences will be explored by the students. Wherever possible, visiting professionals will be invited to present materials about their specialty in the meteorology curriculum.

**MET 210 CLIMATOLOGY (3 Hours)**

**MET 270 COMPUTNAL DATA ANLYS VISUALI (3 Hours)**

This course is an introduction to scientific data analysis and visualization. It focuses on Fortran programming language and MatLab and NCAR Command Language (NCL) visualization software. This course will be helpful for students who are research oriented or intend to pursue graduate studies! The goal of this class isto provide a hands-on experience of an understanding of statistical analysis of environmental data, both in the space, time and special domain. Ideally at the end of the course students will have developed a series of computer programming skills and statistical skills that will aid them in their abilityto analyze, interpret, and model research data. This course is structured around two tracks: computer programming and data visualization. Some knowledge of probability and statistics, and linux commands would be beneficial. However, a background review of concepts and notations will be provided.

**MET 303 MEASUREMENTS & OBSERVATIONS (3 Hours)**

Prerequisite: MET 200.

Practical experiences in weather observing, gathering and coding meteorological data.

**MET 311 GENERAL METEOROLOGY (3 Hours)**

Pre- or Co-requisite: MATH 231. Terrestrial energy budget; general circulation; atmospheric motion, fronts and cyclones, mesoscale dynamics, application to weather forecasting and modifications.

**MET 321 ATMOSPHERIC THERMODYNAMICS (3 Hours)**

Prerequisite: MET 311.

Thermodynamic properties of the atmosphere, hydrostatic equilibrium and stability.

**MET 341 DYNAMIC METEOROLOGY (3 Hours)**

Prerequisite: MET 311, 321, and MATH 232.

Physical and Mathematical models of atmospheric motion are developed from the basic equations of motion.

**MET 411 PHYSICAL METEOROLOGY (3 Hours)**

Prerequisite: MET 311, and 321.

Transmission of electromagnetic and sound waves in the atmosphere; the physics of clouds and precipitation; electrical properties of the atmosphere.

**MET 421 INTRO TO SYN METEOROLOGY (3 Hours)**

**MET 431 NUMERICAL METHODS (3 Hours)**

**MET 435 MESOSCALE METEROLOGY (3 Hours)**

**MET 472 RES METHD IN METEOROLOGY (1 Hour)**

Prerequisite: Consent of department.

Special problems in meteorology based on research or literature survey terminating with a comprehensive written report. (D)

**MET 487 PHYL & DYNMC CLIMATOLOGY (3 Hours)**

Prerequisite: MET 341, and 411.

Physical principles underlying the variations and changes in climate; climate controls, elements of microclimatology; interpretation of selected regional climates. (D)

**MET 491 HYDROLOGY (3 Hours)**

**MET 492 SEMINAR IN METEOROLOGY (1-3 Hours)**

Prerequisite: Consent of department.

Meetings for presentation and discussion of topics in meteorology by staff members and students of recent contributions published in current periodicals and of original research. (D)

**MET 499 SEMINAR IN ATMOSPHERIC SCIENCE (1 Hour)**

Various topics will be discussed and presented by students, faculty, and visitors. All meteorology majors are expected to enroll in the appropriate course numbers as assigned by their advisors.