

METEO 437

ATMOSPHERIC PHYSICS II
Physics and Chemistry of Clouds
Fall 2004

INSTRUCTOR: Dennis Lamb, Professor
OFFICE: 519 Walker Bldg.
(Open 2:30 to 3:30 pm, MWRf)
PHONE: 865-0174
E-MAIL: lno@ems.psu.edu

CLASS MEETINGS: 103 Walker Bldg.
1:25 – 2:15 pm Mondays, Wednesdays, Fridays

COURSE DESCRIPTION: This 3-credit lecture course is designed to complement your other meteorology courses by showing you how basic scientific principles can be used to understand a variety of atmospheric phenomena, especially those involving clouds. Among other things, you will learn how the physical and chemical properties of the atmosphere influence cloud and precipitation formation, as well as how clouds in turn affect the properties of the atmosphere.

GRADING: Each student's progress toward understanding the course material will be assessed by a variety of tests and assignments, according to the weightings given below:

Quizzes and in-class participation	5 %
1. exam: Thurs. 30 September (room 73 Willard)*	25 %
2. exam: Thurs. 4 November (room 73 Willard)*	25 %
Final Exam: (as set by the University)	30 %
Problem Sets	15 %

(* Each mid-term exam is held from 6:30 to 7:45 pm in the indicated room.)

TEACHING ASSISTANT: Lindsey Williams
OFFICE: 530 Walker
PHONE: 863-1036
E-MAIL: lnw120@psu.edu

NOTE: Copies of most of the viewgraphs presented in class are on the course web site < <http://www.ems.psu.edu/~lno/Meteo437/> >. This material is made available for your personal convenience only.

[see next page]

EXPECTATIONS AND POLICIES for Meteo 437:

As a major in Meteorology you are expected to have a reasonable understanding of mathematics (through differential equations), physics (mechanics, electricity and magnetism) and thermodynamics. Chemical principles will be reviewed as needed. Students with weak backgrounds in the fundamental disciplines are advised to postpone enrollment in this course.

Each student is expected to keep up with the subject matter and to participate actively and effectively in class. *Participation* may take the form of responding to questions posed by the instructor or of asking content-related questions in or out of the classroom. *Quizzes*, some unannounced in advance, will be used to encourage preparation for class and to let you see what the other tests are like. No make-up quizzes will be allowed. *Exams* serve to test not only your general knowledge of the subject matter, but also your ability to apply that knowledge to solving new problems.

Homework constitutes an important component of the learning process. Assigned *Problem Sets* will be challenging, but they must be presented neatly and turned in on time. Imagine that you are trying to explain the material to a friend. *Reading* from the required texts and from the several books put on reserve in the EMS library is essential. Experience also suggests that rewriting your class notes within a day or so of each lecture leads to significantly enhanced learning of complex material. Remember that what you get out of any endeavor is proportionate to the effort you put in. Work hard and enjoy learning about clouds and the atmosphere in which they form.

Reminder about *academic integrity*: Cheating and plagiarism are serious offenses that may be grounds for failing an assignment, an exam, or even the course. Collaboration with classmates can be an effective way of learning, especially when you are the one teaching others. In any case, the final work must be your own, a clear expression of your level of understanding. Please review the College policies related to academic integrity on the web < <http://www.ems.psu.edu/admin/integ.html> >.