EESA09H3 - Wind

Instructor: Tanzina Mohsin
Room: SW648
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Office Hours: Tuesday 11:00 am to 12:30 pm
Thursday: 5:30 pm to 6:30 pm

Teaching Assistants:
Vincent Cheng (Participations and weather stations tours)
Rick Siewierski (marking quizzes)
Kinson Leung (midterm/final/participations)

Lecture Time: Thursday, 7:00 pm-10:00 pm (SY110)

Course Description

A survey of the science, history and applications of wind. Topics include storms including hurricanes, tornadoes and midlatitude cyclones, global circulation, local circulations, measurement of winds, impact of winds on land surfaces, wind power, winds and pollution, historical and literary winds, and contemporary wind research. No prior knowledge of environmental science is required.

Tentative Lecture List

1. Introduction to Wind	Sept 13
2. Global Wind Circulation	Sept 20
3. Hurricanes	Sept 27
4. Midlatitude Cyclones	Oct 4
5. Thunderstorms/Tornadoes	Oct 11
6. Polar lows and other storms	Oct 18
7. MIDTERM (tentative)	Oct 25 (7:00-9:00 pm)
8. Thermal winds	Nov 1
9. Wind measurement	Nov 8
10. Pollutant transportation by Wind	Nov 15
11. Wind Power	Nov 22
12. Changing wind and issues of climate change	Nov 29

Evaluation

Midterm Test: 30%
Participation (in class quizzes + out of class participation): 15%
Final Exam: 55%
Bonus Participation: iclicker quizzes

Quizzes will occur near the end of each lecture 2-11. Each quiz will cover the materials from the same day lecture. If you miss a quiz, there is no make up and you will miss out a participation opportunity. It is very important that you attend each lecture to write the quiz at the end of the lecture. Out of class opportunities will also be available, to a maximum of 5 marks.

Required Text

There is no text book assigned to this course. All lectures with supplementary (explanatory) material will be posted on the course web site on the blackboard.

Reading research papers

In each lecture, a research paper will be introduced on the relevant topic. You are required to read the paper as soon as it is posted on the blackboard.

To study a research paper, follow the steps below.

1. Reading through a given paper once without taking notes, to get an overview of the paper. You should read critically (not passively), by asking yourself such questions as – what research questions the authors are asking? What are the major steps (assumptions/methodologies) taken to answer the questions? How does this reading relate to other readings and most importantly, to the lecture material? Do not use a highlighter at this stage – only when you've read it all can you judge what are the most important points in terms of the results!
2. Reading the paper a second time, in order to take notes. You should record a minimum of 3 main points per paper, but *never* take more than one page of notes from a given paper. If you should fill up a whole page with notes, organize your notes in some structured way so that you can see the relationships between the key points in a simple way. It is harder to take brief notes than to take copious notes, because in making brief notes you have to think more about what you are reading so as to be able to choose the key points and structure them in such a way that they are easy to remember.

Midterm

October 25 (tentative), time and place to be announced.
I expect all students to write the midterm exams except under the most severe and exceptional circumstances. I will not accept having a cold, a stomach ache, or headache, or something of that sort as a valid reason for not writing any midterm.

If, for some extraordinary reason, you do miss a midterm, please notify me within 24 hours of the exam in person or by email. A non-vague note from a doctor will be required.

Midterm and Final exam format

Same format for both exams, only differing in quantity.

1. Section one: Who is who (or, fill in the blank)
2. Section two: True or false questions and Multiple choice questions
3. Section three: Short answer questions
4. Section four: Concept maps

How to study for the exams

You must study the lecture notes (will be posted after each lecture) in addition to the lecture slides, for the exams. The major topics are elaborated in the lecture notes. In order to understand a specific topic and to describe it in detail on the exam paper the notes are very helpful.

Emails

I welcome dialogue by email concerning the material in the course. However, I will delete without answering any emails asking me what is covered on the term tests or final exam, any questions regarding participations (can be found on the blackboard), or asking to come to my office to pick up a term test (can be picked up only during the scheduled time posted on the blackboard). Include EESA09 in the subject line of your emails (this especially makes it easier to find your email later). **Although I provide email address to communicate on urgent matter, I encourage that you discuss your concerns/questions in person. YOU CAN ONLY USE THE EMAIL LISTED AT THE TOP OF THIS COURSE OUTLINE.**