

EES 210: METEOROLOGY 2014
VIRGINIA WESLEYAN COLLEGE

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Office hours: Wednesday 1:00-3:00, Friday 11:00-11:45 & *by appointment*

Required Texts: C. D. Ahrens, *Essentials of Meteorology*, 7th Edition.

Class time and room:

Lecture:	M W F	12:00-12:50	Clarke 118
Lab, Sections 01 & 03: M		1:00-3:45	Blocker 104
Sections 02 & 04: M		4:00-6:45	Blocker 104

Course Objectives

Have you ever wondered why the sky is blue, why hurricanes are so prevalent along the East Coast, how tornadoes form or how weather predictions are made? In this course we will answer all these questions as we explore the dynamic nature of our atmosphere. This course is designed to be an introduction to meteorology and atmospheric science for students of all majors. In the laboratory component of this course you will conduct experiments in the lab and field. You will make your own weather observations, use computer models, learn to read weather maps and investigate the basic laws and processes that govern the weather.

Objectives:

1. Gain a broad, basic knowledge of the atmosphere and meteorology including an understanding of formation of winds and clouds and the science behind fronts, storms and weather prediction.
2. Explore the impact of the weather on life on earth and humans.
3. Investigate man's impact on weather, climate and air pollution.
4. Evaluate and understand scientific information by acquiring analytical skills and knowledge of scientific research methods.
5. Discover at least one aspect of the meteorology that you find fascinating.

Grading

3 Exams: 20% each
Quizzes: 5%
Lab write-ups: 16%
Class participation, in class assignments, and attendance: 5%
Project:
 Proposal: 2%
 Bibliography: 1%
 Progress report 2%
 Presentation: 4%
 Paper: 5%

Grade letter translation:

A	92-100	B-	80-81	D+	68-69
A-	90-91	C+	78-79	D	62-67
B+	88-89	C	72-77	D-	60-61
B	82-87	C-	70-71	F	<60

Attendance and Late Policy: Attendance is expected at all lectures. Participation counts towards your final grade and is based on your participation in in-class discussions and exercises. You will not be able to make up any missed in-class

exercises. Attendance is required at all exams and labs. **Make-up exams and labs will only be given in case of documented illness or a documented emergency.** Make-up exams have to be taken within one week of returning to class and may differ in content and format from the original exam. The final exam cannot be taken at a time other than scheduled except in the case of a documented illness or documented emergency. **There are no makeup labs.** Any missed lab session will result in a 5% deduction of your lab grade for the course. For each weekday late, an assignment will be penalized by 5 points (out of 100). All papers handed in must be stapled. Multiple pages handed in that are not stapled will not be accepted.

Exams: There will be three closed book exams for the course. They will cover assigned readings (even if they are not discussed in lecture), laboratories, class activities and lectures.

Quizzes: Quizzes are closed book and consist of 5 multiple choice questions on text readings. They are given at the beginning of class. **If you are late (arriving after 12:05) or are absent, you cannot make-up a quiz.** Your lowest quiz grade will be dropped.

In Class Activities: We will have several participatory activities and exercises throughout the semester designed to give you the opportunity to discuss controversial or complex topics, explore a question in more detail or develop your analytical skills. You will benefit most from these activities by regular attendance and keeping up with the readings.

Academic Integrity: Academic Integrity: Students are expected to adhere to the highest standards of academic integrity. On examinations, academic dishonesty is defined as collaboration with other students in the actual taking of (as opposed to the preparation for) a test or using prohibited materials during a test (such as cell phones, notes, etc.). On written assignments (including rough drafts submitted for my review), academic dishonesty is the use of others' work without proper attribution or submitting the same work for two different assignments or courses or submitting the same work in two courses. On papers, students should provide appropriate citations to source materials, including the textbook; avoid close paraphrasing and clearly demarcate quoted passages. If you are in doubt about the rules for quoting and citing research materials, do not guess, but consult with me. Fabrication of data, such as for a lab report, is also considered a violation of the honor code. A student who engages in a single act of academic dishonesty, no matter what the value of the assignment in relation to the final course grade, may receive a zero for the course and may be subject to additional disciplinary action under the 2012-13 Honor Code. If you need additional guidance on written assignments, please see me during office hours or e-mail me and consult the honor code on our college web site: <http://www.vwc.edu/academics/creed-a-honor-code.php>

Classroom etiquette, cell phones and other electronic devices: Please be respectful to your fellow classmates and myself during class time. Avoid interruptions by arriving to class on time, turning off cell phones and not talking. With the exception of emergency situations (in which case you need to make me aware of the situation), cell phones or other electronic devices are prohibited in the classroom (this includes laboratory as well). This includes texting in class. It is a distraction to the instructor and fellow classmates. Out of respect for your classmates, do not bring food that creates and odor or is noisy. Food and beverage are not allowed in the lab area when we work with computers, equipment or chemicals (most labs).

Email: I will occasionally send class updates via email, so check your VWC email regularly.

Special needs and/or accommodations: Virginia Wesleyan College recognizes, and is sensitive to, students with special needs. Students requesting special accommodations must register with the college's disability services coordinator at the Learning Center (455-3246). For further information, see the course catalog or contact the Learning Resource Center.

Extra Credit: You can earn up to 12 extra credit points total added to your lowest test grade. Extra credit papers are due at the beginning of the final exam. Extra credit points for a paper will be assigned based on paper quality. There are three ways you can earn points:

1) Attend a seminar — 4 pts for attendance and up to 4 pts for writing a 1 pg. typed summary. Eligible seminars TBA during the semester.

2) Respond to a weather blog—write a 1 pg. typed summary with response to one of meteorologist Jeff Masters’ blogs for up to 4 pts. You can write more than one for additional points. To find his blogs go to:

<http://www.weatherunderground.com/blog/JeffMasters/show.html>. Attach a copy of his blog to your paper.

Inclement weather & campus closing: You can check the college’s status at 757-455-5711 and <http://emergency.vwc.edu>. If I cannot come but the college is closed I will send an email.

Honors section: Students enrolled in the honors section of this course will conduct more extensive literature search for their research project. The final paper and presentation will be based on more primary research articles. Consequently the paper will be longer.

Meteorology Updated Course Schedule

Week Of	Monday	Wednesday	Friday	Lab
27-Jan	Syllabus &Intro.	Ch 1: Earth’s Atmosphere		Weather maps & data
3-Feb	Ch 2: Solar Energy & Radiative transfer, Quiz			Radiation
10-Feb	Ch 3: Seasons & Temperature, Quiz		Ch 4: Humidity & Clouds Quiz	Volcano & Carbon Footprint
17-Feb			Ch 13: Climate Change Quiz	Humidity
24-Feb			Exam 1	Individual meetings with professor Project proposal due
3-Mar	Ch 5: Cloud & Precip. Processes, Quiz			Condensation
10-Mar	Ch 6: Air Pressure & Wind, Quiz			Research Projects Bibliography due
17-Mar	<i>Spring Break - NO CLASS</i>			
24-Mar	Ch 7: Atmospheric Circulations, Quiz			Research Projects
31-Mar	Ch 8: Air Masses & Fronts, Quiz			Statistics Progress report due
7-Apr	Exam 2	Ch 9: Weather Forecasting, Quiz		Field Trip: WAVY TV
14-Apr		Ch 10: T-storms & Tornadoes, Quiz	Last day to drop w/out automatic WF	Research Projects
21-Apr	Easter Monday No Class		Ch 11: Hurricanes, Quiz	No lab
28-Apr			Ch 14: Air Pollution, Quiz	Presentations during lab
5-May		Project paper due	Final Exam 3:00-5:30 Last day to hand in any make-up/late work/extra credit	Presentations during lab

*The textbook readings will be supplemented by additional readings from journal articles and texts assigned throughout the semester.