

Syllabus for ATMS 320 – Meteorological Instrumentation – Fall 2006

Date	Topic	Reading/Homework*
T 22 Aug 2006	Intro/ History – Bjerknes	
R 24 Aug	Overview	Chapter 1
T 29 Aug	Barometry	Chapter 2, HW#1
R 31 Aug	Barometry	
T 5 Sep	Static Performance	Chapter 3, HW#2
R 7 Sep	Static Performance	
T 12 Sep	Thermometry	Chapter 4, HW#3
R 14 Sep	Thermometry	
T 19 Sep	Field Trip	HW#4
R 21 Sep	Hygrometry	Chapter 5
T 26 Sep	Review Session	HW#5
R 28 Sep	Exam I	Chaps 1-4, HW#1-5, 22 Aug- 19 Sep lects
T 3 Oct	Hygrometry	
R 5 Oct	Dynamic Performance Characteristics	Chapter 6, HW#6
R 12 Oct	Dynamic Performance Characteristics	
T 17 Oct	Anemometry	Chapter 7, HW#7
R 19 Oct	Anemometry	
T 24 Oct	Precipitation Rate	Chapter 9, HW#8
R 26 Oct	Precipitation Rate	
T 31 Oct	Upper Air Measurements	Chapter 12, HW#9
R 2 Nov	Upper Air Measurements	
T 7 Nov	Solar and Earth Radiation	Chapter 10, Fnl Pro Part#1
R 9 Nov	Solar and Earth Radiation	
T 14 Nov	Review Session	Fnl Pro Part#2
R 16 Nov	Exam II	Chaps 5-7, 9, 10, 12, HW#6-9, 21 Sep-9 Nov lectures
T 21 Nov	Visibility and Cloud Heights	Chapter 11
T 28 Nov	Group presentations	Final Project Report
R 30 Nov	Group presentations	

*assignment completed before class meets on this date

Description

A course designed for the undergraduate major that presents practical methods currently used to observe the atmosphere. The student will gain an appreciation for the link between our ability to forecast the weather and the forecast limitations that are directly associated with current capabilities to observe the atmosphere.

Outline

Background on Instrumentation
Overview (text, Chap 1)
Barometry (text, Chap 2)
Static Performance Characteristics (text, Chap 3)
Thermometry (text, Chap 4)
Hygrometry (text, Chap 5)
Dynamic Performance Characteristics (text, Chap 6)
Anemometry (text, Chap 7)
Precipitation Rate (text, Chap 9)
Upper Air Measurements (text, Chap 12)
Solar and Earth Radiation (text, Chap 10)
Visibility and Cloud Height (text, Chap 11)

Grading

Homework/Projects	15%
Exam I	20%
Exam II	20%
Final Exam	25%
Final Project	20%
Total	100%

92% < total score ≤ 100%	A
90% < total score ≤ 92%	A-
88% < total score ≤ 90%	B+
82% < total score ≤ 88%	B
80% < total score ≤ 82%	B-
78% < total score ≤ 80%	C+
72% < total score ≤ 78%	C
70% < total score ≤ 72%	C-
68% < total score ≤ 70%	D+
60% < total score ≤ 68%	D
total score ≤ 60%	F

Homework/Projects

Homework and projects will be assigned throughout the semester and are intended to aid in improving your understanding of the course material contained in the lecture and reading assignments. Homework will be assigned for work outside of the classroom, while projects will be assigned for work to be completed primarily inside of the classroom. Homework and projects will be defined as *individual* or *group* assignments.

When an assignment is designated for a *group*, each individual within the group will receive an identical grade. Group members will be required to anonymously grade the contributions of each member at the conclusion of an assignment. Each group member is ***strongly encouraged*** to work individually on each assignment problem. Students in the past have failed exams because they let others do the work.

Exams I and II

The mid-term exams (I and II) will be primarily testing new material introduced since the previous exam or since the start of the semester.

Final Exam

The final exam is a *comprehensive* exam in which all the material contained in the entire course is testable.

Final Project

The final project consists of a group project in which each group will serve as a private consulting agency to address an assigned environmental problem and will need to define the optimal instrument observing network that addresses the given problem. The project will consist of a written analysis report as well as a presentation defining the solution determined by your consulting agency.

Assignment/Quiz/Exam Policy

Assignments are to be handed in before the start of lecture on the date they are due. Assignments handed in after the start of lecture are considered late until 9:00 am on the day after they are due and will have an automatic 10% deduction from their final score. Assignments handed in after 9:00 am on the day after they are due will receive no credit.

Quizzes and Exams are written tests and will be taken on the date they are scheduled, unless circumstances (e.g. medical or loss in the family) warrant. Make-up quizzes and exams for special circumstances will consist of an individual oral graded question and answer session at a mutually agreed upon time outside of the usual class meeting time.

Instructor

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Textbook

“Meteorological Measurement Systems” by Fred V. Brock and Scott J. Richardson © 2001

Disabilities

Contact Prof. Miller early in the course if you have a disability that requires special accommodations.

Academic Integrity

Cheating or plagiarism results in a failed assignment, quiz, or exam on the first infraction. A second infraction results in course failure and a report to the UNCA administration. See <http://www.unca.edu/catalog/academicregs.html> under “Student Responsibilities” for a refresher on the UNCA policy.