

METR 4922 – Senior Seminar (Capstone) II Syllabus

Instructor: Dr. David Karoly, National Weather Center (NWC) Room 5238

Phone: 325 6446, E-mail: dkaroly@ou.edu

Class time and place: Tuesday, Thursday 10:00 noon -11:15 pm; Room NWC 5720.

Note: This course will not meet every week, as most of your time should be spent on your research projects. The frequency of class meetings will be agreed at the beginning of the course and will be included in the calendar on the course web site.

Prerequisites: Grade of C or higher in METR 4911.

Textbook: Leedy, P. D. and J. E. Ormrod, 2004: *Practical Research: Planning and Design*. 8th ed. Prentice Hall, 352 pp. (7th ed. acceptable)

Web site: Course information and handouts will be available through <http://learn.ou.edu>

Proposed grading: Written senior thesis 40%; Oral or poster presentation 40%;
Abstract and work plan 10%; Participation 10%.

Purpose: The Capstone course is designed to be the pinnacle of the undergraduate experience. Here students integrate and apply knowledge gained in their previous courses to an original research project of their choosing. Capstone provides opportunities to strengthen basic research, report writing, and presentation skills. In addition, Capstone provides opportunities to develop the professional skills needed by meteorologists in government, academia and the private sector.

This course is intended to satisfy the meteorology Capstone course requirement. The instructor will guide senior meteorology majors through a research project. Interdisciplinary topics will be encouraged, and library work will be required. Students will have been paired with a regular or adjunct faculty mentor in METR4911 and have prepared a mini-proposal for their research project. The final result will be a written senior thesis and an oral or poster presentation on the research project.

Policy on assessment

All work to be graded should be handed in on time. Extensions will only be allowed when a medical certificate or other notarised declaration is provided. If an extension is not approved, late work will be accepted and graded, but the maximum possible grade will be reduced by 20% for every day (or part of a day) late. Work that is handed in 5 days late will be marked but will not contribute to the student's final grade.

Note: *The University of Oklahoma is committed to providing reasonable accommodation for all students with disabilities. Students with disabilities who require accommodations in this course are requested to speak with Dr Karoly as early in the semester as possible. Students with disabilities must be registered with the Office of Disability Services prior to receiving accommodations in this course. The Office of Disability Services is located in Goddard Health Center, Suite 166, phone 405-3253852 or TDD only 405-325 4173.*

METR 4922 – Senior Seminar (Capstone) II Class Calendar

DRAFT – to be modified after discussion in first class

Week	Starting	Activity
1	15 January	No class meetings
2	22 January	Class meets on Tuesday: Syllabus and class calendar Work plan and copy of mini-proposal due Friday January 26
3	29 January	No class meetings
4	5 February	Class meets Tuesday: Literature search tools Guidelines for senior thesis, oral and poster presentations provided
5	12 February	No class meetings
6	19 February	No class meetings
7	26 February	No class meetings
8	5 March	Class meets Tuesday: Results from citation exercise; Example of worst published paper and really bad analysis. Abstracts for oral or poster presentations due Friday March 9
9	12 March	No class meetings
10	19 March	Spring break
11	26 March	No class meetings
12	2 April	No class meetings
13	9 April	Class meets Tuesday Notification of selection of oral or poster presentations Informal progress reports and discussion of difficulties
14	16 April	No class meetings
15	23 April	Class meets Tuesday: Final program for Capstone mini-conference
16	30 April	Capstone mini-conference: oral and poster presentations Monday 30 April Senior thesis due Monday 30 April
17	7 May	Finals week: No final exam!!

Note: The above schedule is preliminary and changes, if any, will be announced in class and on the course web site on D2L.

METR 4624—Radar Meteorology SPRING 2007

Dr. Michael I. Biggerstaff; drdoppler@ou.edu (best)
National Weather Center, Room 5417, 325-3881
Office hours: M,W 1:30-2:30 pm or by appointment

Principles of weather radar and storm observations including: propagation effects, detection of precipitation particles, beam distortions, ground clutter, attenuation, rainfall measurements, single- and dual-Doppler interpretation, polarimetric theory and interpretation and kinematics of convective storms (multi-cell, supercell, mesoscale convective systems).

Lecture class will meet MWF 11:00-11:50 pm in room NWC 5720. Lab classes will be held in NWC 5720 on Fridays from 3:00-6:00 pm. If available I will reserve use of a SMART-radar during April. Labs involving the SMART-radar will be optional since we'll have to break into small groups.

The TA for the course is Nick Biermann (nsbiermann@ou.edu), NWC 5413. He or Mr. Gordon Carrie may occasionally provide lectures during my absence.

Required text: *Radar for Meteorologists* by R. E. Rinehart (1991) fourth edition. Copies can be purchased at the Bookstore. [Note: This book covers fundamentals at an introductory level. We will go well beyond the material in this text].

Other books that I will use for reference include:
Radar Observations of the Atmosphere by L. J. Battan (1973)
Doppler Radar and Weather Observations by R. J. Doviak and D. S. Zmic (1984)
Radar and Atmospheric Science: A collection of essays in honor of Dave Atlas.
Edited by R. Wakimoto and R. Srivastava (2003)
Mesoscale Meteorology and Forecasting edited by P.S. Ray (1986), and
Doppler Radar Meteorological Observations; Federal Meteorological Handbook
No. 11 (Part B) (1990).

Grades will be determined by the following formula:

2 mid-terms	25% each	=	50%
Homework (collected randomly)		=	10%
Lab (collected randomly)		=	10%
Final exam		=	30%
			100%

Approximately 90 % or better = A
Approximately 80 to 89 % = B **FIRST EXAM – 2 March.**
Approximately 70 to 79 % = C **SECOND EXAM — 25 April**
Approximately 60 to 69 % = D **FINAL EXAM —7 May 8:00-10:00 am**

Below 60 %

= F

OR

10 May 1:30-3:30 pm

(stay tuned)

No class on Friday, 16 March.

NOTE: All materials provided you in this class are protected by copyright.

Legal Requirements:

1) The University of Oklahoma is committed to providing reasonable accommodation for all students with disabilities. Students with disabilities who require accommodations in this course are requested to speak with the professor as early in the semester as possible. Students with disabilities must be registered with the Office of Disability Services prior to receiving accommodations in this course. The Office of Disability Services is located in Goddard Health Center, Suite 166, phone 405/325-3852 or TDD only 405/325-4173.

2) Academic integrity policy website information: There have been several changes to the Academic Misconduct Code. Details can be found at the following website: www.ou.edu/provost/integrity-rights.

In addition, persons found, or suspected of, having violated university academic conduct will be punished to the maximum extent allowable. The instructor will do his best to dissuade potential employers from hiring a person found guilty of academic misconduct.