

METR 4922 – Senior Seminar (Capstone) II Syllabus, Spring 2013

Instructors:

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Dr. Peter Lamb, Director of Cooperative Institute for Mesoscale Meteorological Studies, George Lynn Cross Professor, School of Meteorology, CIMMS, NWC 2140, Phone: 325-3041, Email: plamb@ou.edu

Class Time and Place: Tuesday and Thursday, 10:30 am – 11:20 am, NWC 5930

Prerequisites: Grade of C or better in METR 4911, senior standing

Web Site: Course information and any handouts will be made available at <http://learn.ou.edu>

Grade:

Presentation on introducing the topic	15%
Presentation on research progress	15%
Participation	15%
Web page	15%
Poster	15%
Final paper	25%

Background: This course completes the School of Meteorology Capstone course requirement. In 4922, you will complete the research project proposed in 4911. The research team is expected to utilize advice provided by the course instructor and the mentors chosen during 4911. Since most meteorological careers from government forecasters to the private sector require some degree of development activities and since approximately half of our students go on to graduate school, Capstone is an important introduction to research and development.

Assignment overview: The workload is significant for a two-credit course. However, if you work efficiently as a team through delegating tasks and make good use of your mentor, you will find the workload manageable. Class work consists of the following assignments:

- a) **Presentation introducing your topic:** A 10 minute talk (~5 slides) that introduces your team/mentor, your research /development topic, what you are trying to accomplish, how you will do it and why is important. Grades will be determined primarily from peer reviews.
- b) **Presentation on research progress:** A 12 minute talk (~6 slides) that briefly introduces your topic, but concentrates on your progress and describes your remaining plans. Grades will be determined primarily from peer reviews.

c) **Participation:** Class members are encouraged to ask questions during and immediately after the presentation. Class members will divide into groups of 4-5 students and fill out feedback forms that provide advice and constructive criticism to the presenters. Grades will be based primarily on your participation in the peer reviews, but may be adjusted based on your questions and attentiveness to your colleague's presentations.

d) **Web page:** Each team will be expected to have a web page. The complexity of the web page is expected to grow during the semester as assignments (e.g., your proposal from the last semester, your presentations, final paper, CVs, references, etc) are posted on the page.

e) **Poster:** A conference will be planned during exam preparation week (29-April to 5 May) where each team makes a presentation(s) on their research. Mentors, graduate students and faculty will be invited to attend. Food will be provided. The actual time and date of this conference will be selected by the class and, of course, will be subject to the availability of the lecture halls. Further details on the poster will be provided both in class and in D2L

f) **Paper:** You will need to produce a paper in AMS journal format. Each team will select and AMS journal for their "publication" based on the fit of their research to the topics and style of the different AMS journals. The final paper will be due on the 6th of May. Further details on the papers will be provided both in class and in D2L.

Projects and class size

2 vs. 3 person teams: The three-person team should have a web page that goes well beyond the minimum requirements of posting assigned materials.

IMPORTANT POLICIES:

Please be respectful of your classmates. During the presentations, class members are encouraged to remain attentive (e.g., refrain from texting and social media, working on homework, reading, surfing the web, etc.). Points may be lost in the participation grade for routinely violating this policy. Also, please be professional in your comments on the review sheet and be constructive in your criticisms.

I recommend that team members meet regularly with the advisor during the semester. Meetings on a weekly or near weekly basis tend to produce better results.

The University of Oklahoma is committed to the provision of reasonable accommodation for all students with disabilities. Students with disabilities who require accommodations in this course are requested to speak with me 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.

All provisions of the Norman Campus Academic Misconduct Code shall apply in cases of academic dishonesty. Papers will be run through the “plagiarism” software of D2L. ANY violation of the Academic Misconduct Code will result in your removal from this course, and a grade of F will be recorded for the course. Academic misconduct is defined as “any act that improperly affects the evaluation of a student’s academic performance or achievement.” At the University of Oklahoma, academic integrity is expected from each student. Misconduct such as plagiarism, fabrication, and fraud, as well as attempting to commit such acts or assisting others in so doing, will not be tolerated. Students are responsible for knowing the OU Academic Code, which can be found at <http://www.ou.edu/studentcode> and www.ou.edu/provost/integrity.

Office hours: Immediately following class or by appointment

Capstone Class Schedule Spring 2013

- 15 Jan:** Syllabus presented and dates selected for presentations
- 17 Jan:** Designing a web site and first web assignment: Mark Laufersweiler
- 22 Jan:** Assembling your resume: Dan Kemp, OU Career Services
- 24 Jan:** Lecture on how to avoid a bad presentation and preparation for Presentations on topic introduction: Dave Parsons
- 29 Jan:** Development of the AMS Statement on Climate Change: Pete Lamb
- 31 Jan:** Presentations on topic introduction and discussion
- 5 Feb:** Presentations on topic introduction and discussion
- 7 Feb:** Presentations on topic introduction and discussion
- 12 Feb:** Presentations on topic introduction and discussion
- 14 Feb:** Presentations on topic introduction and discussion
- 19 Feb:** Writing a good journal article from the prospective of a Chief-Editor: Pete Lamb
- 21 Feb:** Impressions of the Weather and Climate Policy Arena: Shree Mishra
- 26 Feb:** Thoughts on how to write a scientific paper (Parsons) and examples of papers posted
- 28 Feb:** The frontiers of lightning research: Danyal Peterson
- 5 March:** Passive remote sensing and the future of the nation's observing system: David Turner
- 7 March:** Experiences in international research and observational research: Dave Parsons

12 March: The future of operational prediction at NOAA's Storm Prediction Center and the role of research and development: Russ Schneider

14 March: No class --- instructor will be available to meet with the teams

19 and 21 March: SPRING BREAK

26 March: Presentations on research progress

28 March: Presentations on research progress

2 April: Presentations on research progress

4 April: Presentations on research progress

9 April: Presentations on research progress

11 April: Presentations on research progress

16 April: Presentations on research progress

23 April: Presentations on research progress

25 April: Instructors will be available for team questions

30 April – 4 May: Date to be selected for a conference for posters

6 May: Papers are due on **5 pm** via electronic submission