ATMS 310 ATMOSPHERIC KINEMATICS/DYNAMICS   Spring 2008

DESCRIPTION: Topics include driving forces for the air, equations of motion, balanced flow, circulation, vorticity, streamlines, extratropical dynamics, and atmospheric waves.

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Office Hours: Tuesday Thursday, 11-11:30 am, 1-1:30 pm; Wednesday 2:30-3 pm
(or by appointment, but walk-in is always welcome)

TEXT: <u>**An Introduction to Dynamic Meteorology**</u> (2004), by J. R. Holton.
<u>**ATMS 310 Supplementary Material**</u> (2008), by Alex Huang (AH).

SCHEDULE: 9:25 - 10:40 am, Tuesday, Thursday, RH217.
EXAMS: 1st Test: 2/14;   2nd Test: 3/13;   3rd Test: 4/3;
Final Exam: 8:00-10:30 am, Thursday, May 8, 2008.

GRADING: **Assignments: 25%; 3 Tests: 45%; student presentation: 5%,**
Classroom participation: 5%; and Final exam: 20%.
GRADE SCALE (100%): A $\geq$ 93: A-: 92.5-90;   B+: 89.5-87; B: 86.5-83; B-: 82.5-80;
C+: 79.5-77; C: 76.5-73; C-: 72.5-70;   D+: 69.5-67; D: 66.5-60;   F: $\leq$ 59.5.
SPECIAL REMARKS: Each assignment is due in a week, unless otherwise indicated. Class attendance is strongly recommended. You are solely responsible for the consequences due to your absence. No late assignments will be accepted; no make-up tests will be given. Exception may be granted for uncontrollable circumstances and medical reasons. You have to consult with the instructor at your earliest convenience for exceptions. A significant reduction of your score on your late homework may be applied.   You will receive an F for the semester if you miss more than 5 class periods without any justifiable and excusable reasons.
NOTE: This syllabus is subject to any reasonable modifications by the instructor with the consent of students.

<u>COURSE OUTLINE</u>

Week	Dates	SUBJECT	Sections in Text	AH
1	1/15	Introduction, Math Review	1.1, 1.2	1, 2
1, 2	1/17, 1/22	Atmospheric Forces	1.4, 1.5	4
2	1/24	Hydrostatic Balance/Hypsometric Equation	1.6	3
3, 4	1/29, 1/31, 2/5	Equations of Motion	2	5
4, 5	2/7, 2/12	Basic Equations	3.1	4
5	**2/14**	**1st Test**		
6	2/19, 2/21	Balanced Flow	3.2	6
7	2/26, 2/28	Thermal Wind	3.4	6
8, 9	**3/1 - 3/9**	**SPRING BREAK**		
9	3/11	Streamline Analysis	3.3	7, 8
9	**3/13**	**2nd Test**		
10	3/18	Vertical Motion	3.5	
10, 11	3/20, 3/25	Circulation and Vorticity	4	9
11, 12	3/27, 4/1	Synoptic-scale Motions I	6	10, 11
12	**4/3**	**3rd Test**		
13	4/8, 4/10	Atmospheric Oscillations	7.1, 7.2	12
14	**4/15**	**UNCA Spring Symposium, no class**		
14	4/17	Sound waves	7.3	12
15	4/22, 4/24	Rossby Waves	7.7	12
16	**4/29**	**Student Presentations (3 minutes each)**		
17	**5/8**	**Final Exam, 8:00-10:30 am, Thursday**		