

SYLLABUS--GEOGRAPHY 310 (3 credits)
GENERAL CLIMATOLOGY
Fall 2018, 7/27/18 version

Time: T-R 11:00-12:15 p.m. (BOL B95 and BOL 289)
Instructor: Dist. Prof. Mark D. Schwartz (mds@uwm.edu)
Office: BOL 490 -- messages may be left in BOL 410 (Geog. Dept.)
Office Phone: 229-3740 Messages: 229-4866 (Geog. Dept.)
Office Hours: by appointment only
Class Web Page: <http://people.uwm.edu/mds/geography-310/>
Class Reflector: geog-310@uwm.edu

Textbooks: Rohli & Vega, *Climatology* (4th edition, 2018)
Map supplement: A package of weather maps is required, and can be accessed from the class web page (https://people.uwm.edu/mds/files/2017/08/map_sup-1nf9k4d.pdf)

This course examines global patterns of climate and the processes that shape them. Specific topics include: overview of atmospheric processes, global distribution of individual climatic elements, upper-atmospheric waves and jet streams, weather data on the Internet, climate of the Midwest U.S., climate classification systems, and a survey of the world's major climatic regions. The final portion of the course studies past climates, climate change mechanisms, and likely future climates. **After taking this course**, you should be able to understand the basic weather patterns to expect throughout the course of the year at any location in the world, with more detailed information about mid-latitude climates and the Midwest U.S.

COURSE POLICIES

1. **Evaluation:** Grades will be assigned based on the total points accumulated from tests, exercises, and discussion/participation throughout the semester (420 possible). These will consist of 3 exams (100 points each), exercises (total of 80 points), and discussion/participation, including lecture attendance (total of 40 points). Exercises can be turned in late for reduced points up until the time when they are returned to the class (usually the next class period after they are turned in). After that time exercises will not be accepted for points.

The percentages necessary to receive certain grades will be no higher than the following:

88%--(A-)
78%--(B-)
68%--(C-)
58%--(D-)

2. **Notices:** Grades, once given are final except in cases of clerical error. Do not use a red pencil or pen to write exam answers. All tests must be taken as scheduled; make-ups are given in case of documented student illness or other emergency only. It is the responsibility of the student to notify the instructor when an exam or other course requirement will be missed. If you need special accommodations to meet any of the requirements of this course, please contact me as soon as possible. Do your own work. Plagiarism and cheating are unacceptable and will not be tolerated. Additional information regarding the policies and procedures applicable to this course are available on-line (<http://www4.uwm.edu/secu/SyllabusLinks.pdf>) and posted in the Geography Dept. main office, BOL410. In the event of disruption of normal classroom activities due to an epidemic, the format for this course may be modified to enable completion of the course. No weapons are permitted in any building on the UWM campus.

3. Average student's investment of time to achieve learning goals of the course (145 hours).

This total is made up of the following:

General preparation and study: 80 hours

Lectures and Exams: 40 hours

Assignments: 25 hours

LECTURE SCHEDULE AND READINGS

		<i>Rohli & Vega Chapters</i>
Sept.	4-T--Introduction/course procedures, VIDEO (part 1);	1
	6-R--Solar Energy;	3, pp. 25-33
	11-T--Long-wave E., Energy-Temp., Exercise #1 distributed (5 points);	2
	13-R--Temperature Variation, Human impacts	
	18-T--Moisture in the atmosphere, (#1 due);	5
	20-R--World Precipitation Distribution, Pressure, Winds, Moisture, Exercise #2 distributed (10 points);	6
	25-T--Pressure and Winds;	3, pp. 33-50
	27-R--General Circulation, (#2 due);	7, pp. 131-141
Oct.	2-T--Air masses, Atmospheric Disturbances	
	4-R--Atmospheric Disturbances (continued)	
	9-T--Weather Map Interpretation (meet in BOL 289);	7, pp. 141-143
	11-R--EXAM ONE	
	16-T--Constant Pressure Charts Map Interpretation, Exercise #3 distributed (10 points)	
	18-R--Vorticity;	7, pp. 143-145
	23-T--CAVT and Teleconnection, (#3 due);	7, pp. 145-147
	25-R--Waves and Wave motion, Vorticity, Exercise #4 distributed (15 points);	7, pp. 147-153
	30-T--Climate variability;	4
Nov.	1-R--Midwestern Regional Weather, (#4 due)	
	6-T--Climate model orientation (meet in BOL 289) Climate Model, Exercise #5 distributed (15 points);	13, pp. 326-330
	8-R--Midwestern Regional Weather (continued)	
	13-T--Climatic Classification, Köppen Classification, Exercise #6 distributed (10 points);	8
	15-R--EXAM TWO	
	20-T--Af Climate, Am and Aw Climate, Monsoon Climate, (#5 due);	9,10
	22-R--THANKSGIVING--NO CLASS	
	27-T--B Climates, Cs Climates, Cf Climates	
	29-R--D and E Climates, "History" of the earth's paleoclimates, (#6 due), African Transect Exercise #7 distributed (15 points);	11, pp. 273-290
Dec.	4-T--Natural climate change;	11, pp. 290-297
	Unintentional human-induced climatic change;	12, pp. 301-312
	6-R--VIDEO – "Decoding the Weather Machine" (part 2), (#7 due);	15
	11-T--Coping with variable climate, future climates;	12, pp. 312-321
	13-R--Discussion, evaluations and wrap-up	
	15-SATURDAY--EXAM THREE, 7:30 a.m. – 9:30 a.m.	