

**SYLLABUS--GEOGRAPHY 310 (3 credits)**  
**GENERAL CLIMATOLOGY**  
**Fall 2022, 8/11/22 version**

Time: T&R 11:30-12:45 p.m. (BOL B92)

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 (use email to request)

Class Web Page (access to weather maps): <http://sites.uwm.edu/mds/geography-310/>

Class Reflector: geog-310@uwm.edu

Textbooks: Rohli & Vega, *Climatology* (4<sup>th</sup> edition, 2018, REQUIRED) and Harman, *Synoptic Climatology of the Westerlies: Processes and Patterns* (1991, provided on class Canvas page).

Required Software: Microsoft WORD, POWERPOINT, and TEAMS

Map supplement: A pdf file of weather maps can be accessed on the class CANVAS page.

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 (430 possible). These will consist of 3 exams (100 points each), 3 quizzes (10 points each), exercises (total of 85 points), and discussion/participation (15 points). Exercises can be turned in late for reduced points up until the time when they are discussed in 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 color 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, including COVID-19 syllabus statements are available through this link:

(<https://uwm.edu/secu/syllabus-links/>). 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>R&amp;V Chapters and Harman (H) pages</i>
Sept.	6-T--Introduction/course procedures;	1
	8-R--Solar Energy;	3, pp. 25-33
	13-T--Long-wave Energy, Exercise #1 distributed (5 points);	2
	15-R--Temperature Variation, Human impacts	
	20-T--Moisture in the atmosphere, (#1 due);	5
	22-R--World Precipitation Distribution, Exercise #2 distributed (10 points);	6
	27-T--Pressure and Winds, Model "Check" distributed (5 points);	3, pp. 33-50
	29-R--General Circulation, (#2 due);	7, pp. 131-141
Oct.	4-T--Air masses, Atmospheric Disturbances	
	6-R--Atmospheric Disturbances (continued), Model Check due	
	11-T--Weather Map Interpretation, Quiz # 1 due;	7, pp. 141-143
	<b>13-R--EXAM ONE (online 11:30-1:00 through class CANVAS page)</b>	
	18-T--Constant Pressure Charts, Exercise #3 distributed (10 points)	H pp. 1-8, 37-49
	20-R--Vorticity;	7, pp. 143-145; H pp. 8-15
	25-T--CAVT and Teleconnection, (#3 due);	7, pp. 145-147; H pp. 15-19
	27-R--Waves and Wave motion, Exercise #4 distributed (15 points);	7, pp. 147-153; H pp. 19-36 and H 49-72
Nov.	1-T--Climate variability;	4
	3-R--Midwestern Regional Weather, (#4 due)	
	8-T--Climate model orientation Climate Models, Exercise #5 distributed (15 points);	13, pp. 326-330
	10-R--Midwestern Regional Weather (continued)	
	15-T--Climatic Classification, Quiz # 2 due, Köppen Classification, Exercise #6 distributed (10 points);	8
	<b>17-R--EXAM TWO (online 11:30-1:00 through class CANVAS page)</b>	
	22-T--Af, Am and Aw Climate, Monsoon Climate, (#5 due);	9,10
	24-R--THANKSGIVING--NO CLASS	
	29-T-- B Climates, Cs Climates, Cf Climates	
Dec.	1-R--D and E Climates, "History" of the earth's paleoclimates, (#6 due), Exercise #7 distributed (15 points);	11, pp. 273-290
	6-T--Natural climate change;	11, pp. 290-297
	Unintentional human-induced climatic change;	12, pp. 301-312
	8-R--Coping with variable climate, future climates, (#7 due);	12, pp. 312-321
	13-T--Coping with var. clim., future climates (continued, Quiz #3 due);	15
	<b>22-THURSDAY--EXAM THREE (online 10:00-12:00 through class CANVAS page)</b>	

## COVID-19 SYLLABUS STATEMENTS

### FALL 2022

#### **Panther Community Health and Safety Standards:**

UWM has implemented health and safety protocols, taking into account recommendations by local, state, and national public health authorities, in response to the COVID-19 pandemic. As a member of our campus community you are expected to abide by the Panther [Interim COVID-Related Health & Safety Policy](#). This policy applies to anyone who is physically present on campus, in UWM-controlled facilities, or participating in a UWM-sponsored activity.

Additional details about student and employee expectations can be found on the [UWM COVID-19 webpage](#).

#### **With respect to indoors spaces on UWM facilities (classrooms, labs, performance spaces, etc.):**

- Masks are recommended while indoors on UWM campuses and in UWM-controlled facilities, with limited exceptions – environments where hazards exist that create a greater risk by wearing a mask (for example, when operating equipment in a lab with the risk of a mask strap getting caught in machinery, or when flammable materials are being used). Certain campus spaces (e.g., Student Health and Wellness Center, Children’s Learning Center, UWM campus shuttles and buses) and health care training programs always require masks.
- You should check daily for COVID symptoms by completing the self-check at <https://uwm.edu/coronavirus/symptom-monitor/>. Symptoms may appear 2-14 days after exposure to the virus and include fever, cough, or shortness of breath or difficulty breathing. See the [CDC’s Website](#) for more information about COVID-19 symptoms.
- If you test positive for or are diagnosed with COVID-10 based on symptoms, you should complete the [Dean of Students Office self-report form](#). Use the [CDC Quarantine and Isolation Calculator](#) to determine next steps.

#### **Attendance Policy**

*Do not attend class if you have COVID-19, if you are experiencing symptoms consistent with COVID-19, if you have been in close contact with others who have symptoms, if you need to care for an individual with COVID-19, or have other health concerns related to COVID-19.*

- In case of illness, you should contact me immediately to discuss options for completing course work while ill;
- Notify me in advance of the absence or inability to participate, if possible;
- Participate in class activities online and submit assignments electronically, to the extent possible;

- Reach out to me if illness will require late submission or other modifications to deadlines; and,
- If remaining in a class and fulfilling the necessary requirements becomes impossible due to illness, contact me to discuss other options.

As your instructor, **I will trust your word** when you say you are ill, and in turn, **I expect that you will report the reason for your absences truthfully.**

### **Face-to-Face Class Recording (Lecture Capture)**

Our in-person class sessions will be audio-visually recorded (using Lecture Capture software) for students who are unable to attend in person and for students who are unable to attend at the scheduled time. Students who participate during an in-person class session are agreeing to have their audio/video or image recorded. Lecture recordings will be made accessible through the class Canvas page.

### **Potential for Reversion to Fully Online Instruction**

Changing public health circumstances for COVID-19 may cause UWM to move to fully online instruction at some point during the semester. UWM will communicate with students about moving to fully online instruction if the situation develops.

### **Navigate Student Success Platform and Mobile App**

Students are encouraged to use a tool called Navigate. This tool can help you learn about academic resources, set up study groups in your courses, make appointments with your academic advisor, get reminders on important dates, and much more. In addition, Navigate allows instructors to send Progress Reports to students throughout the term, allowing for updates on your academic progress in a course in addition to your grade. You can log into the platform here: <https://uwmilwaukee.campus.eab.com/> or by finding the Navigate link under the Current Students tab on the UWM home page. More information on how you can use Navigate and the app, including tutorials, can be found on UWM's Navigate website.