Geography 121: Weather and Climate

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Recommended Texts: *Introduction to Weather and Climate* by Becker
Geography 121 Weather and Climate Lab manual Spring 2009 Long

Course purpose: This course is intended to provide you with a basic understanding of the components and processes that create weather and climate on the earth. Most of you will not follow up this course with extensive study of climate as your main focus in education, but an understanding of these principals will allow you to make better sense of the world around you. This course is akin to another piece of the puzzle that is the world we inhabit. Each area that you study such as art, history, sociology, math, biology, etc. provides you with another part of the earth's human or physical landscape. The strength of the liberal arts approach is that it gives you the opportunity to see how all the pieces, although seemingly unrelated, fit together. I want to encourage you to think about weather and climate in terms of its affect on the other subject areas that you are studying. I believe that it will soon be clear that there are significant links and that by looking for those relationships you will see the value of the liberal arts education that you're receiving and that the world we inhabit really is a very connected place.

Assignments: All reading assignments should be done before the class meeting. Labs will be held every week except for the first and last weeks of the semester.

Assessment: Your grade will be based on in-class quizzes, exams and lab exams. There will be 8 in-class quizzes during the semester. Only your 6 highest scores will count toward your grade. The quizzes like the exams will consist of multiple-choice questions and will cover subjects discussed in lecture and the readings. The quizzes will focus on recently covered material. Exams will be cumulative in scope. There will be 6 lab quizzes which will cover material examined in the lab sessions. Only your highest 4 scores will count toward your grade. Class points will be distributed in the following fashion: Lab exams = 20 points (4 quizzes worth 5 points each); In-class quizzes 15 points (each quiz worth 2.5 points 6 highest scores worth a possible total of 15 points), 1st exam = 20 points; 2nd exam = 20 points; Final exam = 25 points TOTAL = 100 points

Evaluation: There will be no curve. Students will strive for mastery rather than competing against each other. A = 100-92.0 points, AB = 91.9-87.0 points, B = 86.9-82.0 points, BC = 81.9-77.0 points, C = 76.9-70.0 points, CD = 69.9-66.0 points, D = 65.9-60.0 points, F = less than 60 points. Without acceptable documentation of illness or other emergency, failure take an exam at the appointed time will result in a score of 0 for that exam. There will be no extra credit opportunities in this class.

Special Accommodations: Reasonable accommodations will be made for students with disabilities. Please contact Disability Services (424-3100 (voice) or 424-1319 (TTY)) or visit their web site at http://www.uwosh.edu/dean/disabilities.htm for the University's accommodation request form and documentation requirements. Information related to an individual's accommodation request will be kept confidential.

Academic Integrity: The University of Wisconsin Oshkosh is committed to a standard of academic integrity of all students. The system guidelines state: "Students are responsible for the

honest completion and representation of their work, for the appropriate citation of sources, and for respect of others' academic endeavors. Students are subject to disciplinary action of academic misconduct which is defined in the UWS 14.03 Wisconsin Administrative code. Students are encouraged to review the code, located on the "Dean of Students" web page (see Student Conduct) in order to understand your rights and responsibilities.

TENTATIVE SCHEDULE

Day	Topic	Reading	Lab subject
	Introduction, Physical Geography	Chpt 0	No Lab
	Location, solar energy	Chpt. 0-1	
	Seasons, atmospheric composition	Chpt 1	
	Atmospheric composition	Chpt. 2	Lab 1 Latitude…
	Earth's surface energy balance	Chpt. 3	
	Earth's surface energy balance	Chpt. 3	
	Temperature scales	Chpt. 4	Lab 2 Atmosphere…
	Temperature	Chpt. 4	
	Atmospheric pollution	Chpt. 22	
	Urban environment	Chpt. 22	Lab 3 Temperature
	Climate effects on the human body	Chpt. 23	
	EXAM 1		
	Unique properties of water	Chpt. 9	Lab 4 Pollution..
	Unique properties of water	Chpt. 9	
	Adiabatic processes and atmospheric stability	Chpt. 10	
	Adiabatic processes and atmospheric stability	Chpt. 10, 11	Lab 5 Humidity
	Adiabatic processes and atmospheric stability	Chpt. 11	
	Atmospheric lifting mechanisms	Chpt. 10	
	Precipitation and clouds	Chpt. 13	Lab 6 Adiabatic…
	Precipitation and clouds	Chpt. 12	
	Spring Break		
	Air pressure and winds	Chjpt 5	Lab 7 Wind
	Global circulation patterns	Chpt. 6	
	Global circulation patterns	Chpt. 7	
	Air masses	Chpt. 14	Lab 8 Global circulation
	EXAM 2		
	Cyclogenesis	Chpt 15	
	Thunderstorms	Chpt 16	Lab 9 Mid-latitude….
	Tornadoes	Chpt. 17	
	Tornados	Chpt. 17	Lab 10 Violent weather
	Hurricanes	Chpt. 18	
	Hurricanes	Chpt 18	
	Global climates		Lab 11 Climate….
	Global climates		
	ENSO	Chpt. 20	

	Droughts	Chpt. 20	Lab 12. Monsoons….
	Global warming – climate change	Chpt. 22	
	Global warming – climate change	Chpt 22	
	Global warming – climate change	Chpt 22	No lab
	Global warming – climate change	Chpt. 22	
	FINAL EXAM		