

## **Geography 1900: Extreme Weather and Climate**

Instructor: Dr. Stavros T. Constantinou

Time: MW 9:15.-11:05 A.M.

Room 220 Conard

Call number: 11626

Credit: 4 hours

Office Hours: MW 12:35 P.M.-1:30 P.M. and by appointment

Office: Room 287 Bromfield Hall

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### **Autumn Semester 2017. August 22 (T)-December 6 (W)**

Classes begin: August 22 (Tuesday)

Classes end: December 6 (Wednesday)

Final exams: December 8-14 (F-R)

No classes: September 4, October 12-13; November 10, 22-24

**Objectives:** The goals of this course are to introduce the student to atmospheric circulation, weather and climate. This course also covers the impact of human activity on atmospheric phenomena.

This course serves as a General Education (GE) curriculum Physical Science course.

### **Natural Science**

#### Goals

Students understand the principles, theories, and methods of modern science, the relationship between science and technology, the implications of scientific discoveries and the potential of science and technology to address problems of the contemporary world

### **Expected Learning Outcomes**

#### Physical Science

1. Students understand the basic facts, principles, theories, and methods of modern science.
2. Students understand key events in the development of science and recognize that science is an evolving body of knowledge.
3. Students describe the inter-dependence of scientific and technological developments.
4. Students recognize social and philosophical implications of scientific discoveries and understand the potential of science and technology to address problems of the contemporary world.

### **Method of Grading:**

Grades will depend upon four exams. Exam 1, Exam 2, and Exam 3 make up 20 percent of the grade each. Exam four (Final) accounts for 35 percent of the final grade. Attendance accounts for 5 percent of the grade. All exams must be taken as scheduled. Make-up exams are given only

in exceptional circumstances. For example, in the case of illness **a doctor's certificate must be provided**. A missed exam is credited with a zero grade in the final figuring of the student's grade. **There will be no incomplete grades in this course.**

Scoring changes for the first three exams will be considered only during the one-week period following the return of that exam. Scoring changes for the final exam and a change in the course grade will be considered during the first three weeks of the following quarter.

The roster will be called at every class meeting. Please be punctual. Experience has shown that students with many absences do not score well on exams. When a reading assignment is made for a certain day, either by the course outline or verbally in class, it is expected that the assignment will have been read by the student before coming to class. If you do not understand something, please feel free to ask questions as they come up. In the case that more than a short answer is necessary, come to my office. I am there most of the time and I will be glad to help you for whatever time is required. Do not get too far behind before seeking help.

**Note: (1) Absolutely NO grades are to be posted; (2) Grades are to be conveyed to students in person only; (3) students are not to be given grades for friends; and (4) grades are not to be given over the phone or email; and (5) students who wish may supply a self-addressed stamped envelope for the forwarding of the final exam grade.**

**Grading Scale:**

<b>A</b>	<b>90-100</b>	<b>A-</b>	<b>90-93</b>	<b>A</b>	<b>94-100</b>		
<b>B</b>	<b>80-89</b>	<b>B-</b>	<b>80-82</b>	<b>B</b>	<b>83-86</b>	<b>B+</b>	<b>87-89</b>
<b>C</b>	<b>70-79</b>	<b>C-</b>	<b>70-72</b>	<b>C</b>	<b>73-76</b>	<b>C+</b>	<b>77-79</b>
<b>D</b>	<b>60-69</b>			<b>D</b>	<b>60-66</b>	<b>D+</b>	<b>67-69</b>
<b>E</b>	<b>0-59</b>			<b>E</b>	<b>0-59</b>		

**Text:** Aguado, Edward and Burt, James E. 2015. Understanding Weather & Climate. 7th edition. Upper Saddle River, NJ: Pearson Education Prentice Hall / new \$149.50 used \$112.25. ISBN 10: 0-321-99368-3; ISBN 13: 978-0-321-99368-7

Rand McNally. 2017. Goode's World Atlas, (23rd ed.) Chicago: Rand McNally/ new \$26.60 used \$20.00 (Optional). ISBN-10: 0-13-386464-2; ISBN-13: 978-0-13-386464-9

## COURSE OUTLINE

Week	Date	Period		Text Reference	Lecture Topic
1 2	8/23 8/28 8/30	1 2 3		Chapter 1, pp. 2-31	Composition and Structure of the Atmosphere
3 4	9/4 9/6 9/11 9/13	4 5 6 7		<i>Labor Day- no classes</i> Chapter 2, pp. 32-53	Solar Radiation and the Seasons
5	9/18 9/20	8 9		Chapter 3, pp. 54-89	Energy Balance and Temperature
					<b>Exam 1</b>
6	9/25 9/27	10 11		Chapter 4, pp. 90-119	Atmospheric Pressure and Wind
7	10/2 10/4	12 13		Chapter 5, pp. 120-159	Atmospheric Moisture
8	10/9 10/11	14 15		Chapter 6, pp. 160-189	Cloud Development and Forms
					<b>Exam 2</b>
9	10/16 10/18	16 17		Chapter 7, pp. 190-215	Precipitation Processes
10	10/23 10/25	18 19		Chapter 8, pp. 216-261	Atmospheric Circulation and Pressure Distributions
11	10/30 11/1	20 21		Chapter 9, pp. 262-287	Air masses and fronts
					<b>Exam 3</b>
12	11/6 11/8 11/11	22 23		Chapter 10, pp. 288-313  <b>Veterans Day-No classes</b>	Mid-latitude Cyclones
13	11/13 11/15	24 25		Chapter 11, pp. 314-353	Lightning, Thunder and Tornadoes

14	11/20 11/22	26 27		Chapter 12, pp. 354-389 <b>Thanksgiving Break-no classes</b>	Tropical Storms and Hurricanes
15	11/27 11/29	28 29		Chapter 15, pp. 446-473	Earth's Climates
16	12/4 12/6	30 31		Chapter 16, pp. 474-513	Climate Changes: Past and Future
				Chapter 13, pp. 390-421 Chapter 14, pp. 422-443 Chapter 17, pp. 514-527	Weather Forecasting and Analysis Human Effects on the Atmosphere Atmospheric Optics.
					<b>Exam 4 (Final), Wednesday 13 December 2017, 8:00 - 9:45 A.M.</b>

## Important Notes

Please ensure your cell phones are turned off before you walk into the classroom.

### **Disability Service Statement**

The University strives to make all learning experiences as accessible as possible. If you anticipate or experience academic barriers based on your disability (including mental health, chronic or temporary medical conditions), please let me know immediately so that we can privately discuss options. To establish reasonable accommodations, I may request that you register with Student Life Disability Services. After registration, make arrangements with me as soon as possible to discuss your accommodations so that they may be implemented in a timely fashion. SLDS contact information: mcgregor.40@osu.edu; 419-755-4304; 279 Ovalwood Hall, 1760 University Drive.

### **Academic Misconduct Statement**

It is the responsibility of the Committee on Academic Misconduct to investigate or establish procedures for the investigation of all reported cases of student academic misconduct. The term "academic misconduct" includes all forms of student academic misconduct wherever committed; illustrated by, but not limited to, cases of plagiarism and dishonest practices in connection with examinations. Instructors shall report all instances of alleged academic misconduct to the committee via the Associate Dean.

### **Drop/Withdrawal Statement**

It is the **student's responsibility** to know the deadlines for dropping a course or withdrawing from the University. Term drop & withdrawal deadlines can be found at [registrar.osu.edu/](http://registrar.osu.edu/) (click on the current term under "Important Dates" and scroll down to ADD/DROP/WITHDRAW DEADLINES). If you receive financial aid, you should always talk with a financial aid specialist prior to adjusting your schedule. If you stop attending a course but do not drop it, you risk receiving a failing grade which could negatively affect your GPA and your financial aid status. You can call 419-755-4317 to set up an appointment with an academic advisor or a financial aid specialist in 104 Riedl Hall.

### **Retention**

The Ohio State University-Mansfield is committed to the success of students. If you are having academic or personal difficulties, you can contact Darla Myers at 419-755-4036, Ovalwood 283, for referral resources.

### **Mental Health Services:**

As a student you may experience a range of issues that can cause barriers to learning, such as strained relationships, increased anxiety, alcohol/drug problems, feeling down, difficulty concentrating and/or lack of motivation. These mental health concerns or stressful events may lead to diminished academic performance or reduce a student's ability to participate in daily activities. The Ohio State University at Mansfield offers services to assist you with addressing these and other concerns you may be experiencing. You can learn more about the broad range of confidential mental health services available on campus via the **New Directions Student**

**Assistance Program (SAP) by visiting [newdirectionsforlife.com](http://newdirectionsforlife.com)/or calling 419-529-9941. They see students on campus in Ovalwood Hall. Local crisis services are available by calling 419-522-4357. 24 hour emergency help is also available through the 24/7 National Suicide Prevention Hotline at 1-800-273-TALK or at [suicidepreventionlifeline.org](http://suicidepreventionlifeline.org).**

### **Student Conduct**

The code of student conduct is established to foster and protect the core missions of the university, to foster the scholarly and civic development of the university's students in a safe and secure learning environment, and to protect the people, properties and processes that support the university and its missions ([studentaffairs.osu.edu/resource\\_csc.asp](http://studentaffairs.osu.edu/resource_csc.asp)). Students who violate faculty expectations may be subject to the code of conduct. For mental health and other behavioral related concerns, contact Student Life at 419-755-4317 and ask for an appointment with the Chief Student Life and Enrollment Services Officer. *As a responsible community member, do not allow others to act inappropriately and impact the community.*

### **Discrimination**

The Ohio State University at Mansfield is committed to providing a learning, working and living environment that promotes personal integrity, civility and mutual respect in an environment free of discrimination of any type. This includes students creating a hostile environment for other students. To file a complaint, contact Student Life at 419-755-4317 and ask for an appointment with the Chief Student Life and Enrollment Services Officer; or Human Resources at 419-755-4047 and ask for an appointment with the Chief Human Resources Officer, who will connect you with the appropriate Columbus Offices.

### **Title IX and Sexual Misconduct**

Title IX makes it clear that violence and harassment based on sex and gender are Civil Rights offenses subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories such as race, national origin, etc. If you or someone you know has been harassed or assaulted, you can find more information and the appropriate resources at [titleix.osu.edu/](http://titleix.osu.edu/).

### **HOW TO REPORT**

Reports of sexual misconduct can be made to one of the following individuals:

Donna L. Hight, Ph.D.

Chief Student Life and Enrollment Services Officer

419-755-4317

[hight.6@osu.edu](mailto:hight.6@osu.edu)

Sgt. Jeff Hoffer

419-755-4210

[hoffer.30@osu.edu](mailto:hoffer.30@osu.edu)

## **CAMPUS SEXUAL ASSAULT ADVOCATE**

Sarah Metzger

419-565-2489

smetzger@thedvshelter.com

Notice of an incident to the officials listed above, other than the Campus Sexual Assault Advocate, is considered official notice to the university. You can expect reports received by these individuals to be investigated and properly resolved through administrative procedures. Information will be shared only as necessary with investigators, witnesses, and the accused individual. The Campus Sexual Assault Advocate and the New Directions Student Assistance Program (SAP) staff are considered confidential resources.

**Please remember to complete the Student Evaluation of Instruction (SEI) at the end of the semester, when you receive a notification from the University registrar.**