

Geography 1900B: Extreme Weather and Climate

Call number: 34218

Instructor: Dr. Stavros T. Constantinou

Time: MW 1:30 - 3:20 A.M.

Room 220 Conard Hall

Office Hours: MW 11:10 P.M.-12:10 P.M. and by appointment

Office: Room 287 Conard Hall

Email: constantinou.1@osu.edu

Telephone. (419) 755-4335

Spring Semester 2020 (Monday January 6-Friday April 24)

Classes begin: January 6

Classes end: Friday April 24

Final exams: April 27-May 1 (W-T)

Holidays: January 20, March 9-20 (Spring Break)

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 meets the General Education (GE) Natural Science: Physical Science requirements.

GE Goals and Objectives

6. Natural Science

Goals/Rationale:

The goal of courses in natural science is to foster an understanding of the principles, theories, and methods of modern science; the relationship between science and technology; and the effects of science and technology on the environment.

Learning Objectives:

1. Students understand the basic facts, principles, theories, and methods of modern science.
2. Students learn key events in the history of science.
3. Students provide examples of the interdependence of scientific and technological developments.
4. Students discuss 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 two weeks of the following semester.

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:

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

Text: Aguado, Edward and Burt, James E. 2015. Understanding Weather & Climate. 7th edition. Upper Saddle River, NJ: Pearson Education Prentice Hall. ISBN 13: 978-0-321-98730-3; ISBN 13: 978-0-321-99368-7. Cost/ new \$ 209.75 used \$157.50. Rent/ new \$167.80, used \$83.90; e-book \$46.50

Rand McNally. 2017. Goode's World Atlas, (23rd ed.) Chicago: Rand McNally (Optional). ISBN-10: 0-13-386464-2; ISBN-13: 978-0-13-386464-9: 99-38535. Cost/ new \$58.25, used \$43.75. Rent/ new \$37.86, used \$23.30.

COURSE OUTLINE

WEEK	Period	DATE	TEXT REFERENCE	LECTURE TOPIC
1	1 2	1/6 1/8	Chapter 1, pp. 2-31	Composition and Structure of the Atmosphere
2	3 4	1/13 1/15	Chapter 1, pp. 2-31	Composition and Structure of the Atmosphere
3	5 6	1/20 1/22	<i>MLK Day- no classes</i> Chapter 2, pp. 32-53	Solar Radiation and the Seasons
4	7 8	1/27 1/29	Chapter 3, pp. 54-89	Energy Balance and Temperature
				Exam 1
5	9 10	2/3 2/5	Chapter 4, pp. 90-119	Atmospheric Pressure and Wind
6	11 12	2/10 2/12	Chapter 5, pp. 120-159	Atmospheric Moisture
7	13 14	2/17 2/19	Chapter 6, pp. 160-189	Cloud Development and Forms
				Exam 2
8	15 16	2/24 2/26	Chapter 7, pp. 190-215	Precipitation Processes
9	17 18	3/2 3/4	Chapter 8, pp. 216-261	Atmospheric Circulation and Pressure Distributions
10	19 20	3/9 3/12	Spring Break No classes	
11	21 22	3/16 3/18	Chapter 9, pp. 262-287	Air masses and fronts

				Exam 3
12	23 24	3/23 3/25	Chapter 10, pp. 288-313	Mid-latitude Cyclones
13	25 26	3/30 4/1	Chapter 11, pp. 314-353 Chapter 12, pp. 354-389	Lightning, Thunder and Tornadoes Tropical Storms and Hurricanes
14	27 28	4/6 4/8	Chapter 15, pp. 446-473	Earth's Climates
15	29 30	4/13 4/15	Chapter 16, pp. 474-513	Climate Changes: Past and Future
16	31	4/20	Chapter 14, pp. 422-443	Human Effects: Air Pollution and Heat Islands
			Chapter 13, pp. 390-421 Chapter 17, pp. 514-527	Weather Forecasting and Analysis Atmospheric Optics
				Exam 4 (Final). Monday 27 April 2020, 1:00 P.M.-2:45 P.M.

IMPORTANT NOTES

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

Student Assistance with Difficulties

Any student who has difficulty affording books, academic needs, groceries, accessing sufficient food to eat every day, or who lacks a safe and stable place to live, and believes this may affect their performance in the course, is urged to contact the Michelle McGregor, Coordinator, Student Support Services, 419-755-4304, for support and information on emergency grant funding. Furthermore, please also notify the professor if you are comfortable doing so. The BLIC and Conard Learning Center often have copies of books available for student use or check-out.

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 (SLDS). 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: Michele McGregor, Coordinator, Disability Services, mcgregor.40@osu.edu; 419-755-4304; 279 Ovalwood Hall.

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's Office at the Mansfield campus. For additional information, see the Code of Student Conduct (<http://studentconduct.osu.edu>).

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/registration (click on the current term under "Important Dates" and scroll down to ADD/DROP/WITHDRAW DEADLINES). There are different drop/withdrawal dates for the various shortened sessions and full semester classes. 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;

or your academic advisor for specific 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 or calling 419-529-9941 (no cost to students). They see students on campus in Ovalwood Hall. Local crisis services are available by calling 419-522-4357. Ohio State also has an afterhours service available by calling 614-292-5766 and choosing option 2 after hours, which includes weekends and holidays.

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. Students who violate faculty expectations may be subject to the code of conduct. For behavioral related concerns, contact Student Life at 419-755-4317 and ask for an appointment with Dr. Donna L. Hight, Assistant Dean, Student Life & Success. 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 Assistant Dean, Student Life & Success 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.

Ohio State Mansfield Diversity Statement

The Ohio State University at Mansfield is committed to maintaining a community that recognizes and values the inherent worth and dignity of every person; fosters sensitivity, understanding, and mutual respect among its members; and encourages each individual to strive to reach his or her own potential. In pursuit of its goal of academic excellence, the University seeks to develop and nurture diversity, believing that it strengthens the organization, stimulates creativity, promotes the exchange of ideas, and enriches campus life. The Ohio State University at Mansfield prohibits discrimination against any member of the school's community on the basis of race, religion, color, sex, age, national origin or ancestry, marital status, parental status, gender identity, sexual orientation, ability status, health status, or veteran status. In addition to birth and/or other self-defined characteristics, we honor and value the lived experiences of all students as they add to constructive conversations about diversity, equity, and inclusion in the classroom.

Faculty, staff, and students are encouraged to contact Dr. Donna L. Hight, Assistant Dean, Student Life & Success, 419-755-4317, regarding issues, concerns, or questions related to equity and diversity or report via Bias Assessment and Response Team: <https://studentlife.osu.edu/bias/>.

Ohio State Mansfield Identity Affirmation Statement

It is our intent to honor your name and pronouns if they differ from your legal or academic record. Please advise any instructors of this change early in the semester so that we can update class rosters with your preferred name and your correct pronouns. Additionally, please advise us of any updates to your name and/or pronouns throughout the semester so that we can correct our rosters accordingly. A formal name change request can be made through Buckeyelink.

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/.

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

Donna L. Hight, Ph.D., Assistant Dean, Student Life & Success

419-755-4317; hight.6@osu.edu

Sgt. Jeff Hoffer, Campus Police

419-755-4210; hoffer.30@osu.edu

Alexa Toth, Campus Sexual Assault Advocate

419-755-4080; toth.346@osu.edu

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.