

Instructor: Dr. Dorian J. Burnette
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Office Hours
10 a.m.-11 a.m. Mon-Wed
and by appointment

I encourage you to talk to me individually whenever you need to discuss your progress in the course or whenever you have a topic of special interest you want to discuss individually.

COURSE WEBSITE

elearn.memphis.edu (eCourseware)

COURSE TEXTBOOK

- No official textbook
- Readings will be provided via the course website

ABOUT THE COURSE

This is a course that can cover a wide range of topics in the interdisciplinary field of geography. The topic for this semester is paleoclimatology.

This course reviews Earth's climate history using historical and paleoclimate proxy data. After a review of modern climatology, the teleconnections, and historical climatology, the course introduces the different dating and reconstruction methods in paleoclimatology. It then moves through Earth's climate history with each topic including selections from the peer-reviewed literature. Students will also receive a working knowledge of the various tools and databases used to study past climate.

GRADES

Your grade is completely determined from the total number of points earned during the semester. These points come from 1) data exercises, 2) literature discussions, and 3) a written assignment. Final grades will be determined from a total of 380 points:

Grade	Points Needed	Average Percentage
A	342	90%
B	304	80%
C	266	70%
D	228	60%

Data Exercises:

There will be two data exercises during the semester that will familiarize you with the vast array of datasets in the modern and paleoclimatic records. Expect to learn not just how to find data, but also use online tools and other software to analyze the data. Exercises will be due four weeks after they are assigned, and each exercise is worth 50 points.

Literature Discussions:

Each class will contain a lecture. During most classes after the lecture, we will have a discussion about one or two papers from the peer-reviewed literature relevant to the lecture topic. You will receive 20 points for participating in these literature discussions. Since there are nine classes where we will discuss papers, 180 points out of the 380 total come from these literature discussions. If you are absent from class on one of these days, then you can write up a two-page summary (typed, double-spaced) and turn it in to me for credit.

Written Assignment:

Your “final exam” involves doing a literature search on a scientist in the broad field of paleoclimatology and writing a five-page paper (typed, double-spaced) that summarizes 1) who they are and 2) two papers where they are the lead-author. I will provide a list of names as a starting point, but you are free to choose a name not on that list. See me if you need assistance. This assignment is worth 100 points. Please upload the assignment to Dropbox on eCourseware by 5:30 p.m. on our final exam day (7 December 2016).

Attendance:

I will not call roll. Obviously, this is a graduate-level seminar class, and participation/attendance is crucial. I will memorize your names and faces and will know who comes to class regularly. I may use such information to give the benefit of doubt to borderline grade situations.

STUDENT CONDUCT

Academic Dishonesty:

Cheating, plagiarism, or any other form of academic dishonesty will not be tolerated. Cases of academic dishonesty will be dealt with in accordance with the policies set forth in the University’s Code of Student Rights and Responsibilities available at <http://www.memphis.edu/studentconduct/pdfs/csrr.pdf>. It is your responsibility to understand these policies. A lack of understanding is not an adequate defense against a charge of academic dishonesty.

Cell Phones, Laptops, Tablets:

The use of cell phones, text messaging, laptops, or tablets for purposes other than note taking is not allowed during class. Flagrant violation of this policy will result in you being dismissed from class.

STUDENTS WITH DISABILITIES

Any student who may need class or test accommodation based on the impact of a disability will need to contact Student Disability Services (SDS) at 110 Wilder Tower, 678-2880. SDS coordinates accommodations for students with documented disabilities. Once you receive your documentation from SDS, you are encouraged to schedule a meeting with me to provide me with the paperwork and discuss any accommodations needed for examinations and class materials.

COURSE SCHEDULE

Note: There is always a chance that this schedule could change. Any changes will be announced in class and updated in this syllabus on the course website.

24 August	Introduction and Basic Training In Climatology
31 August	Teleconnections
7 September	Climate Data and Models <i>Data Exercise 1 Assigned</i>
14 September	Historical Climatology <i>Literature Discussion</i>
21 September	Paleoclimate Proxies
28 September	Paleoclimate Proxies
5 October	CO ₂ and the Rock Weathering Thermostat <i>Literature Discussion</i> <i>Data Exercise 1 Due</i>
12 October	Cretaceous Climate and the Paleocene-Eocene Thermal Maximum <i>Literature Discussion</i>
19 October	Milankovitch and Glaciation <i>Literature Discussion</i> <i>Data Exercise 2 Assigned</i>
26 October	The Last Glacial Maximum <i>Literature Discussion</i>
2 November	Abrupt Climate Change <i>Literature Discussion</i>
9 November	Holocene Climate <i>Literature Discussion</i>
16 November	Climate of the Past Millennium <i>Literature Discussion</i> <i>Data Exercise 2 Due</i>
23 November	No Class – Thanksgiving Break
30 November	Paleoclimate Perspective of Anthropogenic Climate Change <i>Literature Discussion</i>
7 December	No Class <i>Written Assignment Due by 5:30 p.m.</i>