

**Instructor:** Dr. Dorian J. Burnette  
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**Office Hours**  
11:30 a.m.-12:30 p.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.

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### COURSE WEBSITE

[memphis.instructure.com](https://memphis.instructure.com) (Canvas)

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### COURSE TEXTBOOK

*Climatology*, 4<sup>th</sup> Edition, by Rohli and Vega

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### ABOUT THE COURSE

The first two parts of the course cover climatological processes, statistical and applied climatology, and the classification of climates around the world. The last part of the course covers climate modeling, climates of the past, climate variability and change, and projected changes in the future. Prerequisites: ESCI 1010 (Weather and Climate) and MATH 1710 (College Algebra).

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### GRADES

Your grade at the end of the semester is completely determined from the total number of points earned. These points come from 1) two exams, 2) six exercises, and 3) a term paper. Final grades will be determined from a total of 420 points:

Grade	Points Needed	Average Percentage
A	378	90%
B	336	80%
C	294	70%
D	252	60%

### Exams:

Two exams are scheduled for this course—a mid-term and a final. Each exam is worth 100 points and will take the format of fill-in-the-blank and discussion questions. While each chapter can build on previous chapters, exams only cover the new material presented. In other words, material on the mid-term exam will not show up on the final exam.

Exams can be made up, but you must have a legitimate, verifiable, and an unavoidable reason. If you know you are going to be absent, then please make arrangements for a makeup before the exam. If you miss an exam because of an unforeseen emergency, arrangements to make it up must be made as

soon as you return to campus. Please note that while makeup exams will be in the same format and cover the same material, they may not ask the same questions. The last day to makeup an exam is Study Day, 5 December 2024.

### **Exercises:**

There will be six exercises worth 20 points each, and are due at the beginning of class on the date listed. You may work on these exercises in groups if you wish, but each student must turn in their own set of answers.

It is better to hand in exercises late than not at all. Any exercises turned in late, however, are subject to a grade penalty. The later an exercise is, the more stiff the penalty. For each class period that an exercise is late, 10% of the maximum points will be subtracted. Please note, the last day to turn in late exercises is Study Day, 5 December 2024.

### **Term Paper:**

In order to receive graduate credit for this course, you will need to complete a term paper on a topic of your choice relevant to climatology. This paper should be no more than 10 pages long with 3-5 figures/tables. Please consult with me on your research topic, and please make sure to focus on genuine peer-reviewed research for your citations. There is a lot of trash on the web regarding climate, especially climate change. If you have any questions, please don't hesitate to come see me. The term paper is worth 100 points and is due on 5 December 2024.

### **Attendance:**

I will not call roll. I am assuming that you can make your own decisions about class attendance and how it might influence your performance. However, it is in your own best interest to attend class for a couple of reasons. First, this is a 4000/6000-level course and class lectures will likely go beyond the textbook at times to include new material from the peer-reviewed literature, especially later in the semester. Second, 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. My experience has shown students who miss a number of days, do not perform as well on exams as they could have had they attended class.

## **STUDENT CONDUCT**

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### **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 [www.memphis.edu/osa/pdfs/csrr.pdf](http://www.memphis.edu/osa/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, laptops, or tablet computers 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**

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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, 901-678-2880,

[www.memphis.edu/drs/](http://www.memphis.edu/drs/). SDS coordinates accommodations for students with documented disabilities. A registration form is available on their website.

## COURSE SCHEDULE

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**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.

Date	Topic	Chapter
27 August	Introduction to Climatology	1
29 August	Atmospheric Structure	2
3 September	Climate System Controls	3
5 September	Climate System Controls	3
10 September	Atmosphere and the Earth System	4
12 September	Atmosphere and the Earth System	4
17 September	Energy, Matter, and Momentum Exchanges	5
19 September	Energy, Matter, and Momentum Exchanges	5
24 September	Hydrologic Cycle and Surface Water Balance	6
26 September	Hydrologic Cycle and Surface Water Balance	6
1 October	Atmospheric Circulation	7
3 October	Atmospheric Circulation	7
<b>8 October</b>	<b>Mid-Term Exam</b>	
10 October	Introduction to Statistical Climatology	Lecture
15 October	No Class – Fall Break	
17 October	Applied Climatology	14
22 October	Climate Classification	8
24 October	Climate Classification	8
29 October	Extratropical Northern Hemisphere Climates	9
31 October	Extratropical Northern Hemisphere Climates	9
5 November	Tropical and Southern Hemisphere Climates	10
7 November	Tropical and Southern Hemisphere Climates	10
12 November	Paleoclimatology	Lecture + 11
14 November	Paleoclimatology	Lecture + 11
19 November	Anthropogenic Climate Change	Lecture + 12
21 November	Anthropogenic Climate Change	Lecture + 12
26 November	Climate Modeling	Lecture + 13
28 November	No Class – Thanksgiving Break	
3 December	Climate Modeling	Lecture + 13
<b>12 December (5:30-7:30 p.m.)</b>	<b>Final Exam</b>	

**\*Note: 5 December 2024 is the last day to turn in late assignments and makeup missed exams**