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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.

### **COURSE WEBSITE**

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[elearn.memphis.edu](http://elearn.memphis.edu) (eCourseware)

### **COURSE TEXTBOOK**

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**Required:** *Understanding Weather and Climate*, 7<sup>th</sup> Edition, by Aguado and Burt

This textbook will be used in both lecture and in lab (i.e., there is not a separate lab textbook). You can purchase or rent a hard copy of the textbook in the bookstore, but an ebook is also available if you wish to purchase that instead of a hard copy. You do not need both. You can purchase the ebook online by registering as a student at the website below. You will also need the Course Name and Course ID given below.

- Ebook Website: [www.pearsonmastering.com](http://www.pearsonmastering.com)
- Course Name: Burnette ESCI 1010 Weather and Climate Fall 2019
- Course ID: burnette62196

### **ABOUT THE COURSE**

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This course surveys physical atmospheric processes and their geographic distributions. After going over the basics, which include: geographic distribution of radiation, moisture, pressure, and atmospheric circulation, we will explore how these processes interact with the global ocean and how they to create weather systems and storms. The course also includes an introduction to Earth's various climates, how historical weather records and tree rings can be used to determine climates of the past, and an in depth look at climate change.

### **GRADES**

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Your grade at the end of the semester is completely determined from the total number of points earned. These points come from 1) in-class questions, 2) exercises, 3) your best 2 out of 3 scores on the section exams, 4) your score on the comprehensive final exam, 5) your score on a term paper, 6) your final grade in the required lab section, and 7) any earned extra credit. Final grades will be determined from a total of 560 points:

Grade	Points Needed	Average Percentage
A	504	90%
B	448	80%
C	392	70%
D	336	60%

### **Top Hat:**

This course uses a student response system called Top Hat for in-class questions and exercises that costs \$30. This system allows you to submit your answers via the Top Hat smartphone app or website. For the in-class questions, you can also submit your answers via text message. Your scores are automatically recorded, but they will only be visible to you. Anonymous statistics are generated though (e.g., “90% answered C”).

You should get your account setup by 5 September 2019. An e-mail will be sent to your University of Memphis students account with a link to setup your account or you can go to the link below and follow the instructions. The join code for the course is 981382.

[app.tophat.com/register/student/](http://app.tophat.com/register/student/)

Please use your name as it is recorded in the University of Memphis system and your University of Memphis e-mail address. This way it is easier to get your Top Hat grades updated on eCourseware.

### **In-Class Questions:**

There will be 10 in-class questions asked randomly during the semester. Each question is worth two points--you will receive one point just for simply participating and a second point if your answer is correct. These questions are open book and open notes. While these questions cannot be made up, if you have an excused absence, you will be given credit.

### **Exercises:**

There will be four exercises during the semester that use the Top Hat system (i.e., you will login to Top Hat in order to complete them). Each exercise will be due one week after it is assigned and be worth 10 points.

### **Exams:**

Three section exams with 50 questions and one comprehensive final exam with 100 questions will be given. All exams are worth 100 points, so each question on the section exams is worth 2 points and each question on the final is worth 1 point. The lowest of the three section exam grades will be dropped, but all students are required to take the comprehensive final exam. These exams will consist of multiple choice, true/false, and matching questions. A study guide will be posted to course website one week before the scheduled date of the exam to give you an idea of the material that will be covered. Blue scantrons (Form 4521), a No. 2 pencil, and your student ID number are required for all exams. Correct answers will be posted to the course website shortly after each 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 2019.

**Term Paper:**

Honors students will perform an extra project during the semester and write up the results. Keep in mind you are enrolled in an honors section, so failure to complete the term paper will negatively impact your grade. Complete details about the required term paper are on the course website. The term paper is worth 100 points and is due on 8 November 2019. Late term papers will be accepted through Study Day, 5 December 2019, but they will be subject to a grade reduction of 2 points per day late.

**Labs:**

ESCI 1010 is a 4-hour course where a part of your grade comes from the lab. Therefore, enrollment in a lab section is required. You will receive one final grade for the entire course (i.e., lecture + lab combined). Lab sections are graded independently from the lecture by the graduate teaching assistant covering that lab. Out of the 460 total points possible in this course, 100 of those points will come from your grade in the lab. For example, if you received a 92% in the lab, then 92 points will be added to your final point total in the lecture, and the resulting value will be your final grade.

**Extra Credit:**

I often find extra credit to be a valuable resource, and points added to your final lecture point total can be earned by going to the course website, clicking whichever link under “Extra Credit” in the “Content” section interests you the most, and writing a brief one-page summary over the material. These links will become available after Section Exam 2 and will encompass current events in weather and climate. Each summary is worth 10 points, and you may do up to two. Please turn in your summary typed (double spaced using 12-point font or lower). You may upload these summaries to Dropbox on eCourseware. Once assigned, extra credit can be turned in at any time up through Study Day, 5 December 2019.

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**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 tablets for purposes other than answering in-class questions and note taking is not allowed during class. Flagrant violation of this policy will result in you being dismissed from class.

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**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.

## LECTURE 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.

<b>Date</b>	<b>Topic</b>	<b>Chapter</b>
27 August	Introduction	
29 August	Composition and Structure of the Atmosphere	1
3 September	Solar Radiation and the Seasons	2
5 September	Energy Balance and Temperature	3
10 September	Atmospheric Pressure and Wind	4
12 September	Atmospheric Pressure and Wind	4
<b>17 September</b>	<b>Section Exam 1</b>	
19 September	Atmospheric Moisture	5
24 September	Cloud Development and Forms	6
26 September	Cloud Development and Forms	6
1 October	Precipitation Processes	7
3 October	Atmospheric Circulation	8
8 October	Atmospheric Circulation	8
<b>10 October</b>	<b>Section Exam 2</b>	
15 October	No Class – Fall Break	
17 October	Air Masses and Fronts	9
22 October	Midlatitude Cyclones	10
24 October	Midlatitude Cyclones and Winter Storms	10
29 October	Thunderstorms and Tornadoes	11
31 October	Thunderstorms and Tornadoes	11
5 November	Thunderstorms and Tornadoes	11
7 November	Tropical Systems	12
12 November	Weather Analysis and Forecasting	13
<b>14 November</b>	<b>Section Exam 3</b>	
19 November	Air Pollution and Urban Heat Islands	14
21 November	Earth's Climates	15
26 November	Climate Change	16
28 November	No Class – Thanksgiving Break	
3 December	Climate Change	16
<b>10 December (10:30 a.m.-12:30 p.m.)</b>	<b>Comprehensive Final Exam</b>	

**\*Note:** 5 December 2019 is the last day to makeup missed exams and turn in any extra credit.