

Instructor: Dr. Ross Guida
E-mail: ross.guida@shsu.edu

Office: LDB 336
Office Hours: M, W 2-3:30 pm; By Appt.

Lecture: MWF 10-10:50 am in LDB 215 (Section 04);
MWF 11-11:50 am in LDB 220 (Section 05)

Labs: You are registered for labs that are run by another instructor. Your instructor and lab times will vary depending on what lab section you registered for. You may contact Lab Coordinator Ava Fujimoto-Strait (axf011@shsu.edu) with lab-related questions. Weather and Climate TA's hold office hours weekly, and you should use them as resources for any lab-related questions (quizzes, logistics, grades, etc.). Your final lab grade makes up 25% of your final course grade (please see below). Please note that your individual labs do not start until the third week of class (week of 1/29)!

Objectives:

By the end of class, you should be able to:

- Explain the composition and structure of the atmosphere;
- Discuss how earth-sun relationships impact temperature patterns and seasonality;
- Identify how electromagnetic radiation interacts with the planet and the atmosphere;
- Explain the relationships between temperature, pressure, density, wind, and air circulation;
- Discuss the hydrologic cycle and how it relates to precipitation, the geographic distribution of water, and flooding;
- Define relative humidity, dew point, and explain how they relate to cloud formation and heat index;
- Identify fronts and their characteristics;
- Discuss the meteorological and climatological influences and factors that lead to the development of severe weather events;
- Interpret climographs and identify global climate zones based on the Köppen climate classification system;
- Explain the difference between natural and anthropogenic forcing of our global climate system
- Discuss potential consequences of rapid changes to Earth's system

Required Textbook:

Netoff, et al., 2017. *Weather and Climate 8th Ed.* (Ebook). The START Group.

This e-textbook can be downloaded using the code provided in the required lab manual. Once you have purchased the lab manual, you can access the e-textbook. If you'd like (and if you are protesting Earth Day), you can print the textbook, but be aware that it is 700+ pages.

Required Lab Manual:

Netoff, D. and A. Fujimoto-Strait. 2014. *Weather and Climate*. The Start Group. Can be purchased from the campus bookstore.

Course Website: Lecture notes, assignments, and any potential supplemental readings will be made available via SHSU Online/Blackboard.

SHSU Email: Your SHSU email account is the official form of university communication. I will use it as a primary means of communication with you. Please make sure that you maintain a valid password and regularly check your SHSU email account for important announcements.

Attendance Policy: Attendance in this course is mandatory. Only documented absences will be excused in accordance with university policy. Students are allowed 6 unexcused absences with no penalty or documentation. Additional undocumented absences will adversely impact your grade up to a penalty of 1% off the final grade per additional absence. Absences will also negatively impact your participation points. While attendance may not seem like a large impact, every semester there are students who see their final grades impacted two or more letters. For further details on extended absences, please see: <http://www.shsu.edu/dept/dean-of-students/absence.html>

If you miss class, you must take the initiative to get lecture notes from classmates and/or go over the materials posted online. I am happy to meet during office hours to discuss questions from lectures, but my office hours are not meant for holding individual/one-on-one lectures unless there was a legitimate reason to miss class.

Should unusual circumstances arise during the semester (medical problem, death in the family, house floods, etc.) please contact me ahead of time if possible and provide official documentation so I can work with you to accommodate the situation. Please do not wait until well after the event, the end of the semester, or until your grade has dropped as these are not sufficient reasons and may result in me not being able to make accommodations.

In addition to the above, please be on time to limit disruptions during lecture. Late arrivals will miss participation points and will be counted as absent in accordance with the above 6 absence policy. Additionally, refrain from packing up early as this also causes disruptions during lecture that are bothersome to your fellow students.

SHSU Student Conduct Code: Academic dishonesty, including cheating and plagiarism, will be taken seriously. These issues may result in failing the assignment or exam in question and/or the course. For more, please see the SHSU Student Conduct Code: <http://www.shsu.edu/dept/dean-of-students/policies/documents/Student+Guidelines+2013-2016.pdf>

Grading:

Scale: A=90-100%, B=80-90%, C=70-80%, D=60-70%, F<60%

Breakdown:

Lab	25%
Kahoot participation	11%
Exam 1	13%
Exam 2	13%
Exam 3	13%
Final exam (Comprehensive)	25%
	100%

Lab: As outlined above, lab is run by a different instructor. A separate lab syllabus is available from your TA. Please contact them for more details.

Exams: There will be four exams: three exams over ~2 chapters of material and a cumulative final. Content will include textbook reading, lecture material, and overlapping lab concepts. Questions will be multiple choice and true/false with ~50 questions for each of the first 3 exams and ~100 questions on the final. This course builds on previous material so it is important to understand how all of the concepts fit together. As such, the final will be comprehensive, meaning it will include questions from the entire semester. There will be an in-class review for each exam as well as the final. *Make-up exams will only be given in the event of an excused illness or emergency with proper documentation. Please see the link under the “attendance policy” section.*

** For all exams, make sure you bring a basic scientific calculator to class as well as #2 pencils and Scantron sheets (882-e with 50 front and 50 back). Smartphones, tablets, etc. will not be allowed during exams. Sharing of devices will not be allowed under any circumstances. Please come prepared or be ready to do it the old-fashioned way.**

Participation: Everyone will need to make sure they have the Kahoot app installed on their phones. Each class I will ask two or three timed questions randomly throughout lecture. When you type in your “nickname” or username each class, you must use your first name and last name as they appear officially in SHSU’s online system. You must use the SAME NAME each class period to get full credit. Simply participating in class and being interactive will make up 11% of your grade, while you can also earn bonus points for correct answers. Bonus points will be assigned at the end of the semester based on the average amount of correct answers in the class. When there is not an active Kahoot question, I expect you to not be on your phones.

Note taking: Students are strongly encouraged to take notes and not just rely on slides posted to Blackboard. Actively writing notes helps with retention of material and will also allow you to work through exam reviews easier. You may use laptops to take notes, but if complaints arise about not using laptops appropriately in class, I may have to ask you to only take notes my hand.

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Students with Disabilities: It is the policy of Sam Houston State University that individuals otherwise qualified shall not be excluded, solely by reason of their disability, from participation in any academic program of the university. Further, they shall not be denied the benefits of these programs nor shall they be subjected to discrimination. Students with disabilities that might affect their academic performance should register with the Office of Services for Students with Disabilities located in the Lee Drain Annex (telephone 936-294-3512, TDD 936-294-3786, and e-mail disability@shsu.edu). They should then make arrangements with their individual instructors so that appropriate strategies can be

considered and helpful procedures can be developed to ensure that participation and achievement opportunities are not impaired.

SHSU adheres to all applicable federal, state, and local laws, regulations, and guidelines with respect to providing reasonable accommodations for students with disabilities. If you have a disability that may affect adversely your work in this class, then I encourage you to register with the SHSU Services for Students with Disabilities and to talk with me about how I can best help you. All disclosures of disabilities will be kept strictly confidential. NOTE: No accommodation can be made until you register with the Services for Students with Disabilities. For a complete listing of the university policy, see: <http://www.shsu.edu/dept/academic-affairs/documents/aps/students/811006.pdf>

Religious Holy Days: If a student desires to be excused from class, assignment, or a test to participate in activities associated with a religious holy day, then the student must notify the instructor ahead of time of each scheduled class that he/she will miss for religious reasons. In such cases, the student will be required to take the test or submit the assignment early—unless there are good reasons for not being able to do so and the instructor has agreed to those reasons.

Visitors in the Classroom: Unannounced visitors to the classroom must present a current, official SHSU identification card to be permitted in the classroom. They must not present a disruption to the class by their attendance. If the visitor is not a registered student, it is at the instructor's discretion whether or not the visitor will be allowed to remain in the classroom. This policy is not intended to discourage occasional visiting of classes by responsible persons.

Tentative Course Schedule (*subject to change based on illness, weather, etc.*):

Class Week	Starts:	Topic	Readings
	Date:		
1	W 1/17	Course logistics; Geog and Weather and Climate Intro	Syllabus
		No lab	
2	M 1/22	Earth's Atmosphere and Electromagnetic Energy	Ch. 1
		No lab	Ch. 1, 2
3	M 1/29	Earth-Sun, heat transfer, temperature	Ch. 2
	Lab	FIRST WEEK OF LAB: Lab 1 - Maps	
4	M 2/5	Non-latitude temp controls, oceans; Exam review (Weds);	Ch. 2
	F 2/9	Exam 1 (Bring Scantron, pencil, calculator!)	Ch. 1 & 2
	Lab	Lab 2 – Earth-sun	
5	M 2/12	Pressure and Winds	Ch. 3
	Lab	Lab 3 – Temperature	Ch. 3
6	M 2/19	Atmospheric moisture, hydrologic cycle, humidity, haze, fog	Ch. 3
	Lab	Lab 4 – Weather Observation	Ch. 4
7	M 2/26	Clouds and precipitation	Ch. 4
	Lab	Lab 5 – Pressure and Winds	Ch. 4
8	M 3/5	Flooding; Exam review (Weds.)	
	F 3/9	Exam 2 (Bring Scantron, pencil, calculator!)	
	Lab	Lab 6 – Atmospheric Moisture	
	M 3/12	Spring Recess – no lecture or lab	
9	M 3/19	Air masses, fronts, mid-latitude wave Cyclones	Ch. 5
	Lab	Lab 7 – Adiabatic Processes	Ch. 5
10	M 3/26	Thunderstorms and Lightning	Ch. 6
		F 3/30 – No Class	

	Lab	Lab 8 – Air Masses	
11	M 4/2	Tornadoes and hurricanes	Ch. 6
			Ch. 6
	Lab	Lab 9 – Weather Maps	
12	M 4/9	No lecture - AAG	Ch. 7
	Lab	Lab 10 – Violent Storms	
13	M 4/16	Hurricanes and TX; Exam review (Weds.)	Ch. 6
	F 4/20	Exam 3 (Bring Scantron, pencil, calculator!)	
	Lab	Lab 11 – Global Climates	
14	M 4/23	Climate classification and paleoclimate	Ch. 7
		No lab	
15	M 4/30	Climate change and climate change impacts	Ch. 8
	F 5/4	Final Exam Review	
		No lab	
16	Week of May 7-10	<p align="center">Final Exam:</p> <p align="center">10 am class (section 04): Monday, May 7th 10:30 am – 12:30 pm</p> <p align="center">11 am class (section 05) Wednesday, May 9th 12:00 pm – 2:00 pm</p> <p align="center">(Bring Scantron, pencil, calculator!)</p>	Ch. 1 - 8