

ISNS 2366 Course Syllabus

Course	ISNS 2366.001.24S
Course Title	Global Climate Change
Professor	Steve McCauley BS Atmospheric Science, <i>Purdue University</i> MS Atmospheric Science, <i>Texas Tech University</i> MS Geosciences, <i>Mississippi State University</i>
Term	January 16 – May 3, 2024
Meetings	Mon/Wed/Fri 12:00 PM – 12:50 PM in SCI 2.210

Professor's Contact Information

Office Phone	972.883.2883 (Physics Department Main Line)
Other Phone	NA
Office Location	Online
Email Address	Steven.McCauley@utdallas.edu
Office Hours	Any day after 5 PM (except weekends) ONLINE by appointment on MS Teams
Other Information	Please avoid using eLearning to email me. Use any standard email client for fastest response.

General Course Information

General Course Information	
Pre-requisites, Co-requisites, & other restrictions	None
Course Description	ISNS 2366 Global Climate Change brings together the four main Earth Sciences - Geology, Oceanography, Meteorology, and Astronomy – and demonstrates the interaction between them and how they determine world climate conditions. Students will be able to identify a variety of natural forces – including life itself - that interact with one another to define Earth's climate by establishing long-term weather patterns across the planet. Students will also be able to explain how human activity can fundamentally change the natural state of Earth's climate. Ultimately, students will show how their understanding of ancient and modern climate conditions allows for valid scientific projections of how climate will change in the near and distant future and how those projections critically depend on decisions society make today.
Learning Outcomes	1. Students will identify the interactions between the Land-Ocean-Atmosphere System as well as appreciate the consequences of the variations in the orbit of the Earth around the Sun and how all of this combine to establish past, present, and future global weather and climate patterns.

General Course Information	
	<p>2. Students will identify the types of human activity that can intentionally and unintentionally modify natural weather patterns that can ultimately alter the natural course of climate change and its subsequent positive and negative impacts on biological systems.</p> <p>3. Students will interpret paleo proxy data that reveal the Earth's climate history since the Cambrian Period and then attempt to identify within that half a billion-year time frame any period that is analogous to the changes in global climate patterns being observed today.</p> <p>4. Students will defend their position on global warming/climate change by critically assessing the strengths and weaknesses of the evidence for or against anthropogenic climate change including computer modelling techniques that attempt to project future global climate conditions and evaluate the reliability of these models in formulating public policy.</p>
Required Text	<p>None Students will be provided access to all necessary documents, visual materials, and online videos and activities for this course.</p>

Assignments & Academic Calendar

Class Week	Assignments
January 15	Course Overview View PowerPoint 1 Take Syllabus Quiz Online Due Sunday night 11:59 PM Homework #1 Due Sunday night 11:59 PM
January 22	View PowerPoint 2 Take Quiz 1 Online Due Sunday Night 11:59 PM Homework #2 Due Sunday night 11:59 PM
January 29	View PowerPoint 3 Take Quiz 2 Online Due Sunday Night 11:59 PM Homework #3 Due Next Tuesday night 11:59 PM
February 5	View PowerPoint 4 Take Quiz 3 Online Due Sunday Night 11:59 PM Homework #4 Due Sunday night 11:59 PM
February 12	EXAM I – (Lessons 1, 2, 3, & 4) Monday View PowerPoint 5 Take Quiz 4 Online Due Sunday Night 11:59 PM Homework #5 Due Sunday night 11:59 PM
February 19	View PowerPoint 6 Take Quiz 5 Online Due Sunday Night 11:59 PM Homework #6 Due Sunday night 11:59 PM
February 26	View PowerPoint 7 Take Quiz 6 Online Due Sunday Night 11:59 PM Homework #7 Due Sunday night 11:59 PM
March 4	EXAM II – (Lessons 5, 6, & 7) Monday View PowerPoint 8 Take Quiz 7 Online Due Sunday Night 11:59 PM Homework #8 Due Sunday night 11:59 PM
March 11	SPRING BREAK
March 18	View PowerPoint 9 Take Quiz 8 Online Due Sunday Night 11:59 PM
March 25	View PowerPoint 10 Take Quiz 9 Online Due Sunday Night 11:59 PM Homework #9 Due Sunday night 11:59 PM

Class Week	Assignments
April 1	<p>EXAM III – (Lessons 8, 9, & 10) Monday</p> <p>View PowerPoint 11</p> <p>Take Quiz 10 Online Due Sunday Night 11:59 PM</p> <p>Homework #10 Due Sunday night 11:59 PM</p>
April 8	<p>View PowerPoint 12</p> <p>Take Quiz 11 Online Due Sunday Night 11:59 PM</p> <p>Homework #11 Due Sunday night 11:59 PM</p>
April 15	<p>View PowerPoint 13</p> <p>Take Quiz 12 Online Due Sunday Night 11:59 PM</p> <p>Homework #12 Due Sunday night 11:59 PM</p>
April 22	<p>View PowerPoint 14</p> <p>Take Quiz 13 Online Due Sunday Night 11:59 PM</p> <p>Prepare for Climate Change Debate</p>
April 29	<p>Climate Change Debate</p> <p>Final Exam Review</p> <p>Final Exam (Semi-comprehensive but mostly Lessons 11, 12, 13, and 14) TBA</p>

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Class Materials	<p>The instructor will provide class materials that will be made available to all students registered for this class as they are intended to supplement the classroom experience. These materials may be downloaded during the course; however, these materials are for registered students' use only. Classroom materials may not be reproduced or shared with those not in class or uploaded to other online environments except to implement an approved Office of Student AccessAbility accommodation. Failure to comply with these University requirements is a violation of the Student Code of Conduct.</p>																																																														
Class Recordings	<p>Students are expected to follow appropriate University policies and maintain the security of passwords used to access recorded lectures. Unless the Office of Student AccessAbility has approved the student to record the instruction, students are expressly prohibited from recording any part of this course. Recordings may not be published, reproduced, or shared with those not in the class, or uploaded to other online environments except to implement an approved Office of Student AccessAbility accommodation. Failure to comply with these University requirements is a violation of the Student Code of Conduct.</p> <p>The instructor may record meetings of this course. These recordings will be made available to all students registered for this class if the intent is to supplement the classroom experience. If the instructor or a UTD school/department/office plans any other uses for the recordings, consent of the students identifiable in the recordings is required prior to such use unless an exception is allowed by law.</p>																																																														
Grading (credit) Criteria	<table border="0"> <thead> <tr> <th data-bbox="513 1041 766 1058">Method of Evaluation</th> <th data-bbox="938 1041 1078 1058"><u>Point Value</u></th> </tr> </thead> <tbody> <tr> <td data-bbox="513 1092 678 1117">Syllabus Quiz</td> <td data-bbox="1013 1092 1045 1117">10</td> </tr> <tr> <td data-bbox="513 1125 727 1150">Class Attendance</td> <td data-bbox="1013 1125 1045 1150">20</td> </tr> <tr> <td data-bbox="513 1159 799 1184">Climate Change Debate</td> <td data-bbox="1013 1159 1045 1184">30</td> </tr> <tr> <td data-bbox="513 1192 850 1218">3 Exams @ 100 points each</td> <td data-bbox="997 1192 1062 1218">300</td> </tr> <tr> <td data-bbox="513 1226 834 1251">Final Exam @ 150 points</td> <td data-bbox="997 1226 1062 1251">150</td> </tr> <tr> <td data-bbox="513 1260 948 1285">13 Online Quizzes @ 20 points each</td> <td data-bbox="997 1260 1062 1285">260</td> </tr> <tr> <td data-bbox="513 1293 948 1318">12 Homeworks @ 15-20 points each</td> <td data-bbox="997 1293 1062 1318"><u>230</u></td> </tr> <tr> <td data-bbox="669 1335 915 1360">Course Total Points:</td> <td data-bbox="997 1335 1062 1360">1000</td> </tr> <tr> <td colspan="2" data-bbox="513 1394 662 1419">Grade Scale</td> </tr> <tr> <td data-bbox="513 1453 610 1478"><u>Percent</u></td> <td data-bbox="704 1453 850 1478"><u>Total Points</u></td> <td data-bbox="990 1453 1071 1478"><u>Grade</u></td> </tr> <tr> <td data-bbox="513 1486 610 1512">97-100</td> <td data-bbox="704 1486 824 1512">970-1000</td> <td data-bbox="1013 1486 1055 1512">A+</td> </tr> <tr> <td data-bbox="513 1520 610 1545">93-96.9</td> <td data-bbox="704 1520 808 1545">930-969</td> <td data-bbox="1029 1520 1045 1545">A</td> </tr> <tr> <td data-bbox="513 1554 610 1579">90-92.9</td> <td data-bbox="704 1554 808 1579">900-929</td> <td data-bbox="1029 1554 1045 1579">A-</td> </tr> <tr> <td data-bbox="513 1587 610 1612">87-89.9</td> <td data-bbox="704 1587 808 1612">870-899</td> <td data-bbox="1013 1587 1055 1612">B+</td> </tr> <tr> <td data-bbox="513 1621 610 1646">83 -86.9</td> <td data-bbox="704 1621 808 1646">830-869</td> <td data-bbox="1029 1621 1045 1646">B</td> </tr> <tr> <td data-bbox="513 1654 610 1680">80-82.9</td> <td data-bbox="704 1654 808 1680">800-829</td> <td data-bbox="1029 1654 1045 1680">B-</td> </tr> <tr> <td data-bbox="513 1688 610 1713">77-79.9</td> <td data-bbox="704 1688 808 1713">770-799</td> <td data-bbox="1013 1688 1055 1713">C+</td> </tr> <tr> <td data-bbox="513 1722 610 1747">73-76.9</td> <td data-bbox="704 1722 808 1747">730-769</td> <td data-bbox="1029 1722 1045 1747">C</td> </tr> <tr> <td data-bbox="513 1755 610 1780">70-72.9</td> <td data-bbox="704 1755 808 1780">700-729</td> <td data-bbox="1029 1755 1045 1780">C-</td> </tr> <tr> <td data-bbox="513 1789 610 1814">67-69.9</td> <td data-bbox="704 1789 808 1814">670-699</td> <td data-bbox="1013 1789 1055 1814">D+</td> </tr> <tr> <td data-bbox="513 1822 610 1848">63-66.9</td> <td data-bbox="704 1822 808 1848">630-669</td> <td data-bbox="1029 1822 1045 1848">D</td> </tr> <tr> <td data-bbox="513 1856 610 1881">60-62.9</td> <td data-bbox="704 1856 808 1881">600-629</td> <td data-bbox="1029 1856 1045 1881">D-</td> </tr> <tr> <td data-bbox="513 1890 591 1915"><59.9</td> <td data-bbox="704 1890 834 1915">599 or less</td> <td data-bbox="1029 1890 1045 1915">F</td> </tr> </tbody> </table>	Method of Evaluation	<u>Point Value</u>	Syllabus Quiz	10	Class Attendance	20	Climate Change Debate	30	3 Exams @ 100 points each	300	Final Exam @ 150 points	150	13 Online Quizzes @ 20 points each	260	12 Homeworks @ 15-20 points each	<u>230</u>	Course Total Points:	1000	Grade Scale		<u>Percent</u>	<u>Total Points</u>	<u>Grade</u>	97-100	970-1000	A+	93-96.9	930-969	A	90-92.9	900-929	A-	87-89.9	870-899	B+	83 -86.9	830-869	B	80-82.9	800-829	B-	77-79.9	770-799	C+	73-76.9	730-769	C	70-72.9	700-729	C-	67-69.9	670-699	D+	63-66.9	630-669	D	60-62.9	600-629	D-	<59.9	599 or less	F
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Other Information	
	<p>Due to several extra credit opportunities (20+ points!) available in the class, the above grading scale cannot be modified in any way. In other words, there can be no “rounding up” of a student’s total points at the end of the semester just to give the student a higher grade, so please do not ask. Think of it this way: You come to the end of the semester, and you are 1 point away from the next higher grade, but when you factor in the extra credit, you actually missed the next higher grade by over 20 points. The higher grade must be earned, not given.</p>
Make-up Work	<p>Students have 7 days to complete quiz and homework assignments for 100% credit. Students may turn in any assignment - including quizzes, homework, and exams - AFTER the due date for any reason whatsoever for 80% credit. Students will have 24 hours after the due date to turn in their missed assignment to receive this partial credit. After 24 hours, 80% credit can no longer be given and a zero will be recorded for that missed assignment.</p> <p>Students who miss the due date for an assignment or an exam may make up the work for 100% credit <u>IF AND ONLY IF</u> it was due to one of the following:</p> <ol style="list-style-type: none"> 1) illness, 2) family emergency, 3) pre-approved appointment, or 4) university-approved activity. <p>A student may use “illness” as an excuse to get an extension for any assignment for 100% credit once in the semester. Students who seem to consistently get sick on the day an assignment is due are strongly encouraged to complete the assignment ahead of time because no extension can be granted a third time for illness.</p> <p>If a student has any one of the four excused absences listed above, AND if the student has documentation (except for illness) to verify the absence, that student will have 2 DAYS to make up the missed assignment for 100% credit. In the case of an exam, the make-up test may not be the same as the one taken by the rest of the class, but it will be equally challenging.</p> <p>Note: Students who wait until the last minute to submit an assignment online but then suddenly discover they have Internet connection problems should use their phones to complete the task. Extensions WILL NOT be granted due to internet connectivity issues with laptops, tablets, or desktop computers. Plan accordingly!</p>
Extra Credit	<p>There will be several extra credit opportunities given throughout the semester. Therefore, no quiz, exam, or homework score is dropped in this class. Most extra credit will consist of bonus questions on exams.</p> <p>There will also be "Pop Extra Credit" (PEC) opportunities given during class. These special opportunities will be <u>UNANNOUNCED</u> and will</p>

Other Information	<p>often be given at the end of lecture, and thus you must be in attendance in order to be eligible to earn the PEC points.</p> <p>Students who have an excused absence - such as an illness, family emergency, pre-approved appointment, or taking part in a university-approved sporting event - on a PEC day may still earn the extra credit given in class by performing a special assignment outside of class. (Students without an excused absence are NOT eligible to make up PEC points.) The special assignment usually consists of writing a paper on a specific climate change topic. The assignment is due within 7 days of the PEC day.</p> <p>IT IS THE RESPONSIBILITY OF THE STUDENT TO DETERMINE IF HE OR SHE HAS MISSED A POP EXTRA CREDIT (PEC) OPPORTUNITY.</p> <p>This means the INSTRUCTOR will NOT track down a student who missed class to let them know that they missed an extra credit opportunity. A qualified student who wishes to take advantage of any missed PEC opportunity will make arrangements with the instructor within 24 hours (i.e., by email) of the PEC opportunity to see what he or she must do to obtain the extra credit points.</p> <p><u>NOTE:</u> A student who leaves the lecture room before class has officially ended may not only miss out on a riveting lecture and class discussion, but the student will also miss out on any possible unannounced extra credit opportunity at the end of lecture! And since final points cannot be rounded up to the next higher grade, every point is important!</p>
Forgery/Cheating	<p>Any student who falsifies documentation in order to be considered for make-up work will receive a zero for the assignment or exam, will be dropped one letter grade in the class, and will be reported to university officials for proper disciplinary measures. The same penalty will apply to any student found cheating (i.e., claiming another student's work as their own).</p>
Attendance	<p>Attendance is very important. You are required to attend class as much as possible. It is unlikely you will succeed with an "A" or "B" in this class without regular attendance. If you must miss lecture, please try to obtain the notes from a student who did attend class on the day you missed. Students who obtain class notes when they miss lecture perform MUCH BETTER on exams than students who do not.</p> <p>For each day you attend class and stay for the entire lecture, 1 point will be ADDED to your total points. 20 of those points are used to fulfill the attendance requirement for this class. On randomly selected days, students can earn 1 point in additional extra credit for attending more than 20 times.</p> <p>Attendance points are points you legitimately earn because you are taking full responsibility as an adult to be in your assigned class and are being held accountable for your presence or absence during lecture.</p> <p>Attendance can make the difference between an A and an A- or an A- and a B+ (and so on down the grading scale).</p>

Other Information	
Classroom Citizenship	<p>In order to not interrupt the class session, students are asked to turn off or set to vibrate all phones at the beginning of class. There should be no texting, instant messaging, or any other forms of outside communications during lecture.</p> <p>Students are welcome to take notes during lecture on their tablets or laptop computers. However, students are asked NOT to access Internet content that is unrelated to the material being discussed. This is not only interfering with your understanding of course content, but it has been shown to be disruptive to the learning styles of other students. It is one thing to sabotage your own learning experience resulting in a low grade, but it is unacceptable to interfere with another student's education and bring them down with you.</p> <p>If the instructor sees or hears a student or a group of students engaged in inappropriate use of electronic devices during lecture or engaging in disruptive conversations, the instructor will request that the students stop their inappropriate behavior.</p> <p>Students who do not correct their behavior in a timely manner may INSTANTLY lose ALL attendance points.</p> <p>All students in this class will be treated like adults, and as such, they are expected to practice courteous, respectful, and cooperative behavior for the time they are in class. This would be the norm in any higher education or work environment.</p> <p>To avoid distractions in the classroom, students are expected to:</p> <ul style="list-style-type: none"> Arrive on time and stay until class is dismissed if at all possible. Be prepared for class discussions. Listen courteously to one speaker at a time, with no interruptions. Never disrupt the class by engaging in unrelated conversations that can be heard by the instructor but especially by other students.
Comet Creed	<p><i>This creed was voted on by the UT Dallas student body in 2014. It is a standard that Comets choose to live by and encourage others to do the same:</i></p> <p><i>“As a Comet, I pledge honesty, integrity, and service in all that I do.”</i></p>
Academic Support Resources	<p><i>The information contained in the following link lists the University's academic support resources for all students.</i></p> <p><i>Please go to http://go.utdallas.edu/academic-support-resources.</i></p>
UT Dallas Syllabus Policies and Procedures	<p><i>The information contained in the following link constitutes the University's policies and procedures segment of the course syllabus. Please review the sections regarding the credit/no credit grading option and withdrawal from class.</i></p>

Other Information	
	Please go to http://go.utdallas.edu/syllabus-policies for these policies.

The descriptions and timelines contained in this syllabus are subject to change at the discretion of the Professor.