

ATMO 1020: CLIMATE CHANGE (PS)

TEXTBOOK: FREE online resources! Please check canvas regularly for links to readings.

COURSE TECHNOLOGY: Internet connection, Canvas, video playing (YouTube, Vimeo, Kaltura, etc.), SLCC ePortfolio, Zoom, Google Apps (slides, sheets, etc.).

COURSE DESCRIPTION

This course explores the natural and human induced variations in the Earth's climate. Students will investigate the Earth-Climate system, climate forcing, and climate changes of the past, present, and future. The evidence for human effects on climate will be analyzed. Climate impacts on humans and ecosystems will be evaluated. Students will engage in discussion and analysis of climate impacts, mitigation, and adaptation.

COURSE LEARNING OUTCOMES

In order to full-fill the goals of the College-wide Learning Outcomes, the following course learning outcomes of been established for this course. Upon completion of this course a student should be able to:

- Model the essential components of the Earth-Climate system and how it applies to past, present, and future climate.
- Distinguish natural and human-caused forcing on climate and reconstruct the climate impacts of each forcing.
- Collect, interpret, analyze, and draw conclusions from climate data and evidence.
- Formulate inferences and predictions from experimental data.
- Categorize climate mitigation and adaptation policies and evaluate their merits using scientific, economic, and social data.
- Appraise the impacts of climate change on other types of people and communities and communicate visually and using written text.
- Synthesize climate impacts on natural systems such as the atmosphere, hydrosphere, cryosphere, lithosphere, and biosphere.
- Identify the elements of natural systems that relate to human systems.
- Estimate the impact of climate on human-natural systems such as agriculture, food supply, water supply, energy supply, economy, public health, national security, and others.
- Justify actions that a community, organization, or government could take to mitigate for or adapt to climate change.
- Evaluate climate impacts and solutions for a community or cause and communicate using multi-media tools and skills.

HOW TO DO WELL IN THIS CLASS

- Be an active participant by attending and participating in class, engaging in canvas, and asking and answering questions.
- Keep up with readings every week.
- Complete all assignments.
- Message me or come to office hours with questions or concerns.

COURSE PROCEDURES

Active participation in activities is expected. You will be expected to interact with others during class and participate in group discussions.

Most of the assignments you complete for the course will be submitted online using Canvas LMS. Please note that you can set up social media services in Canvas within your profile settings. There are also Canvas apps available. Some assignments may be difficult to complete on a tablet or phone. It is HIGHLY recommended you set up Canvas so it can send you messages to your email, cell phone, Facebook, or Twitter accounts. When your instructor sends out announcement, messages, and information on Canvas, you will be notified in the media you designate.

LATE WORK

Students are expected to complete all assignments on time. Late work will be accepted, but it is in your best interest to hand all assignments in on time.

INCOMPLETE GRADES

If circumstances lead you to not be able to complete the course in the regular time frame, you may work with the instructor to take an incomplete. Students must be passing and have completed 75% of the course work in order to be granted an incomplete. Students are responsible for planning for successful course completion.

GRADING SCALE

93-100 = A	90-92 = A-	87-89 = B+	84-86 = B	80-83 = B-	77-79 = C+
74-76 = C	70-73 = C-	67-69 = D+	64-66 = D	60-63 = D-	0-59 = E

RESOURCES FOR STUDENTS

General Learning Support & Tutoring Services provide support for SLCC students enrolled in any class at the College. All resources are provided free-of-charge. Ask your instructor about discipline-specific learning support and tutoring services.

- **[Tutoring](#)**: index of all tutoring resources.
- **[STEM Learning Centers](#)**: provide free assistance in Math, Science, Accounting, CSIS and Allied Health Classes at 6 campus locations.
- **[Student Writing and Reading Center](#)**: provides in-person and online feedback on all writing assignments.
- **[Library Services](#)**: provides research help, print and online resources, computers and study space.
- **[ePortfolio Lab](#)**: provides drop-in assistance for all ePortfolio questions.
- **[eLearning Support](#)**: provides support for navigating online and hybrid classes.

Advising and Counseling Support Services provide support for students enrolled in any class as the college.

- **[Center for Health and Counseling](#)**: provides health care, mental health counseling, massage therapy services and healthy lifestyle programs.
- **[Veterans' Services](#)**: assists hundreds of students in using their VA education benefits each semester.
- **[Academic and Career Advising](#)**: helps students plan, explore, make decisions, access resources, and evaluate their academic and career goals.
- **[#SLCCSAFE](#)**: resources for students to stay safe at SLCC.

ASSIGNMENTS

Assignment Type	Lowest Scores Dropped	Points	Total	Percent
CQ: Chapter Quizzes (13)	3	10 @ 2 points	20	10%
HW: Homework (12)	2	10 @ 4 points	40	20%
IL: Interactive Labs (12)	2	10 @ 6 points	60	30%
P: Project (4 parts)	0	4 @ 10 points	40	20%
R: Review Assignments (2)	0	2 @ 10 points	20	10%
R: Peer Reviews (4)	0	4 @ 5 points	20	10%
		Grand Total	200	100%

CHAPTER QUIZZES

For each Chapter covered there will be a multiple choice, timed quiz on Canvas. The quizzes will be worth 2 points each and they will comprise 10% of your final grade.

HOMEWORK

About once a week you will have a 1-2-hour homework assignment. Generally, it will involve watching a video, completing a tutorial, or reading an article and responding to questions and submitting on Canvas. Homework assignments will be worth 4 points each and they will comprise 20% of your final grade.

INTERACTIVE LABS

About once a week we will have an interactive lab activity that will be graded. Interactive labs will be worth 6 points each and they will comprise 30% of your final grade.

PROJECT (*ePortfolio Signature Assignments*)

During the semester you will complete one project in four parts to enhance your learning, critical thinking, and research skills. The project will be worth 40 points and they will comprise 20% of your final grade.

Climate Action Project

For this project you will choose a community or cause important to you and analyze how it is impacted by climate change. You will then determine one big (or several small) climate action steps you could take to help this community or raise awareness of this issue. The final product could be a letter to the editor, social media campaign, posters you put up around the area, a video that could be shared on social media, letters to your elected officials, or something else creative and effective.

- P-1: Climate Action Plan
- P-2: Climate Action Research
- P-3: Climate Action Implementation
- P-4: Climate Action Presentation

REVIEW ASSIGNMENTS + PEER REVIEW

In lieu of exams, you will be required to complete two Review Assignments during the semester. The first one will be a Climate Fact Sheet and you will choose one of Modules 1-6. The second will be a Climate Instagram Infographic and you will choose one of Modules 7-12. You will also be required to complete TWO Peer Reviews online for each of the Review Assignments. Each review assignment will be worth 10 points and each peer review will be worth 5 points and they will comprise 20% of your final grade.

CLASS SCHEDULE: This is subject to change, so make sure check Canvas regularly.
 Please see Canvas for online READINGS for each Module.

MODULE	TOPIC/READING	ASSIGNMENTS DUE
0	Class Introduction & Preview	Student Survey Online Discussion CQ-0
1	1: Basics of the Earth-Climate System	CQ-1, HW-1, IL-1
2	2: Controls on Global Climate	CQ-2, HW-2, IL-2
3	3: Monitoring the Climate System	CQ-3, HW-3, IL-3
4	4: Global Climate of the Past P-1: Climate Action Plan DUE	CQ-4, HW-4, IL-4 P-1
5	5: Paleoclimate Proxies	CQ-5, HW-5, IL-5
6	6: Human Influences on Climate Review #1: Climate Fact Sheet	CQ-6, HW-6, IL-6 R-1
7	7: Climate Impacts on the Oceans & Cryosphere Review #1: Peer Reviews	CQ-7, HW-7, IL-7 Peer Reviews
	Dust Storms & Great Salt Lake	
8	8: Regional Climate Impacts	CQ-8, HW-8, IL-8
9	9: Climate Impacts on Extreme Weather P-2: Climate Action Research DUE	CQ-9, HW-9, IL-9 P-2
10	10: Climate Justice	CQ-10, HW-10, IL-10
11	11: Climate Mitigation & Adaptation	CQ -11, HW-11, IL-11
12	12: Climate Debate	CQ-12, HW-12, IL-12
FW	Climate Action Implementation & Presentations Review #2: Instagram Infographic + Peer Reviews	R-2 P-3, P-4 Peer Reviews