Communication Studies/Environmental Studies/Geology/Humanities/Meteorology (CEGHM) 168A,B: Global Climate Change, Fall 2019-Spring 2020

Instructor: Amarissa Mathews, Communication Studies
amarissa.mathews@sjsu.edu
Office Location: HGH 239
Office Hours: Tues. 9:15-10:15am Thurs. 1:30pm-2:30pm or by appointment, Please sign up via email 24 hours in advance.

Instructor: Qian Tan, Meteorology and Climate Science
qian.tan@sjsu.edu
Office Hours: Tues 1:30pm-3:00pm, Thurs 9:00am - 10:00am, or by email appointment, Duncan Hall 613.

Instructor: Costanza Rampini, Environmental Studies
WSQ 111C, costanza.rampini@sjsu.edu
Office Hours: Tuesdays 1:45m - 2:45pm or by appointment. Please sign up via email 24 hours in advance.

Class Days/Time: T/TH 10:30AM-1:15PM
Classroom: Morris Dailey Auditorium
Prerequisites: Passage of the Writing Skills Test (WST), upper-division standing, and completion of Core GE.

GE/SJSU Studies Category: R, S, V

Course Description

Many different scientific observations and measurements indicate that Earth is experiencing global-scale changes in climate, i.e., in the long-term distributions of temperature, cloud cover, precipitation, and extreme weather events. Scientific consensus considers most these changes to be caused or accelerated by human activities. The economic, ecological, social, and cultural challenges caused by global climate change will affect everyone on the planet, and are very likely to have disproportionate impacts on developing nations. In this course, we will study global climate change from an interdisciplinary perspective, incorporating natural and social science approaches to understanding processes and effects. We will study the socioeconomic contexts of environmental effects and how globally diverse cultural perspectives influence strategies to mitigate and adapt to climate change.

A note about this course (Team SJSU Studies): This is a year-long course: 6 units (CEGHM 168A) in Fall and 3 units (CEGHM 168B) in Spring. You must pass 168A with a grade of C or higher in order to enroll in 168B. If you receive a grade of C- or lower in 168A, you will not be able to enroll in 168B. A grade of C- or lower in 168A will not earn any GE credit. You will receive credit for GE Areas R, S, and V after you have successfully completed the entire year-long sequence. In order to receive GE credit, you must receive a grade of C or higher in both semesters.

This course is team-taught. We meet for extended class periods. We will cover a lot of material on
numerous topics and engage in various activities related to global climate change and the SJSU Studies learning objectives. Assignments, readings, class activities and discussions are designed to help you recognize connections among concepts from many different disciplines, and to critically evaluate and integrate them as part of a life-long learning process about global climate change and related issues. This course will help students to develop abilities to address complex issues using disciplined analytical skills and creative techniques.

Course Goals and Student Learning Objectives

Learning objectives are developed to assist students in understanding the main goals and expectations of the course. Teaching and learning activities are designed with these objectives in mind while assessment activities help us measure student achievement of these objectives. This course will incorporate writing assignments throughout the two semesters, and will meet the requisite 9,000 words required of the three SJSU Studies areas. Some written assignments will be adaptable to students’ specific disciplines.

Assessment is designed to determine how well students have achieved the goals of the learning objectives and thus form an important component of the course. Each student will be assessed through a combination of writing assignments, exams, and course projects. Each assignment is linked to the student learning objectives (SLO) noted in the greensheet by Area and SLO number (ex: Riii). Students will complete diagnostic, midterm, and summative assessment rubrics each semester in addition to written reflection and evaluation of their own work.

Success in this course is based on the expectation that students will spend, for each unit of credit, a minimum of forty-five hours over the length of the course (normally 3 hours per unit per week with 1 of the hours used for lecture) for instruction or preparation/studying or course related activities including but not limited to internships, labs, clinical practica. Other course structures will have equivalent workload expectations as described in the syllabus.

The Area R (Earth and Environment) General Education learning objectives are:

- A student should be able to demonstrate an understanding of the methods and limits of scientific investigation.
- A student should be able to distinguish science from pseudoscience.
- A student should be able to apply a scientific approach to answer questions about the earth and environment.

R: The specific learning objectives in this area for this course are:

i. A student should be able to demonstrate an understanding of the fundamental processes responsible for past and present climate change.
ii. A student should be able to distinguish valid scientific debates with biased propagandas.
iii. A student should be able to design quantified personal and community scale climate change solutions.

The Area S (Self, Society & Equality in the U.S.) General Education learning objectives are:

- To be able to describe how identities (i.e. religious, gender, ethnic, racial, class, sexual orientation, disability, and/or age) are shaped by cultural and societal influences within contexts of equality and
inequality.

- To be able to describe historical, social, political, and economic processes producing diversity, equality, and structured inequalities in the U.S.
- To be able to describe social actions which have led to greater equality and social justice in the U.S. (i.e. religious, gender, ethnic, racial, class, sexual orientation, disability, and/or age).
- To recognize and appreciate constructive interactions between people from different cultural, racial, and ethnic groups within the U.S.

S: The specific learning objectives in this area for this course are:

i. To be able to describe how cultural and societal effects of climate change shape the identities of individuals and communities.
ii. To be able to describe the processes of the fossil fuel economy that creates structured inequalities in the United States.
iii. To be able to identify climate change mitigation strategies and describe actions that can lead to environmental justice in the U.S.
iv. To recognize and appreciate constructive interactions between people from different cultural, racial, and ethnic groups in the U.S., and to apply this knowledge to conduct a community needs assessment and develop a community outreach strategy regarding climate change.

The Area V (Culture, Civilization & Global Understanding) General Education learning objectives are:

- To be able to compare systematically the ideas, values, images, cultural artifacts, economic structures, technological developments, and/or attitudes of people from more than one culture outside the U.S.
- To be able to identify the historical context of ideas and cultural traditions outside the U.S. and how they have influenced American culture.
- To be able to explain how a culture outside the U.S. has changed in response to internal and external pressures.

V. The specific learning objectives in this area for this course are:

i. To be able to compare international policy responses and cultural perceptions of climate change.
ii. To be able to compare policy mechanisms, economic development patterns, and governance structures that influence national and cultural responses toward international efforts to mitigate adverse impacts of climate change.
iii. To be able to identify how international policy actions are affected by historical, cultural, and economic contexts of developed and developing countries, with emphasis on how international cultural perspectives affect the United States’ response.
iv. To be able to explain how the cultures of developing countries have responded to international negotiations of climate change.

Team SJSU Studies Integrated Learning Goals

Team SJSU course sequences include GE Areas R, S, and V and are structured to foster integrative learning in a rich multi-disciplinary academic environment. Students should develop an understanding that builds across the curriculum (and co-curriculum), from making simple connections among ideas and experiences to synthesizing and transferring learning to new, complex situations within and beyond the campus. Students will develop habits of intentional learning through reflection and self-assessment.
Students shall be able to:

1. Demonstrate understanding of the connection of academic knowledge to experiences outside the classroom;
2. Demonstrate understanding of the connection of knowledge from two or more fields of study or disciplinary perspectives by independently relating examples, facts, or theories;
3. Adapt and apply, independently, skills, abilities, theories, or methodologies gained in one situation to new situations to solve problems or explore issues, ideally in original ways;
4. Communicate integrative understanding in ways that enhance the presentation of the connections between/among information from different domains of knowledge.

Required Texts/Readings

Required: The Rough Guide to Climate Change, by Robert Henson, 3rd Ed., 2011
Both books are available online through the MLK Library website (https://library.sjsu.edu).

Other Readings and viewings will be assigned and available via the class Canvas website. It is your responsibility to know what assignments are due when, and to complete them on time.

Clickers

We will be using iClicker/REEF Polling as a student response system in class this term. This software helps us to understand what you know and gives everyone a chance to participate in class.

You will have several options available to participate in clicker sessions, all options are available to you at NO COST. iClicker/REEF Polling allows you to use your smart phone, tablet or laptop as a clicker to participate. On your smartphone or tablet go to Mac App Store or Google Play and download Reef Polling by iClicker. If using a laptop, go to https://app.reef-education.com/#/login.

Classroom Protocol

* Students are expected to attend every class, as this is a participation-intensive course that relies on your consistent and active engagement. Classroom activities will often be assigned and collected during class, and there are no ways to make up this work.
* Assignments will not be accepted late, except with a valid excuse. Late work will be marked down 20% per day (including weekends), and will receive a zero if turned in one week or more after the due date.
* We will regularly use the course’s Canvas course site: http://sjsu.instructure.com for announcements, readings, assignments, uploads of instructor presentations. You are responsible for setting up Canvas so you are notified when we have posted announcement or assignments. To locate your Canvas login name and password, follow the instructions posted here: http://www.sjsu.edu/at/ec/canvas/index.html.
* Personal electronic devices: Outside of their use for classroom activities and for iClicker responses, the use of personal electronic devices are not allowed. Their use is distracting to other students, and may compromise the educational value of the classroom experience that all students pay for.
* Cell phones and all instant-messaging programs must be turned off prior to class. NO text messaging or phone use is permitted in the classroom and laptops may only be used for taking notes. This will be strictly enforced.

* Common courtesy and professional behavior dictate that you notify someone when you are recording them. You must obtain the instructor’s permission to make audio or video recordings in this class. Such permission allows the recordings to be used for your private, study purposes only. The recordings are the intellectual property of the instructor; you have not been given any rights to reproduce or distribute the material.

* Course material developed by either of the instructors is the intellectual property of the respective instructor and cannot be shared publicly without their approval. You may not publicly share or upload instructor generated material for this course such as exam questions, lecture notes, or homework solutions without instructor consent.

* Email to a professor should be treated like a business letter. Please follow these tips when emailing your professor: [http://web.wellesley.edu/SocialComputing/Netiquette/netiquetteprofessor.html](http://web.wellesley.edu/SocialComputing/Netiquette/netiquetteprofessor.html). Emails that do not follow this “netiquette” will not receive a response.

**Dropping and Adding**

Students are responsible for understanding the policies and procedures about add/drop, grade forgiveness, etc., and should be aware of the deadlines and penalties for dropping classes. Refer to the current semester’s [Catalog Policies](http://info.sjsu.edu/static/catalog/policies.html). Add/drop deadlines can be found on the [current academic calendar](http://www.sjsu.edu/academic_programs/calendars/academic_calendar/). The [Late Drop Policy](http://www.sjsu.edu/aars/policies/latedrops/policy/) is available at [http://www.sjsu.edu/aars/policies/latedrops/policy/](http://www.sjsu.edu/aars/policies/latedrops/policy/). Information about the latest changes is available at the [Advising Hub](http://www.sjsu.edu/advising/).

**Assignments and Grading Policy**

There will be spontaneous in-class writing activities throughout the course, which all students are expected to complete as part of the revision and feedback process of larger writing assignments.

Letter grades will be assigned according to the following point scale:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Points</th>
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<tbody>
<tr>
<td>A</td>
<td>925-1000</td>
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<tr>
<td>A-</td>
<td>895-924</td>
</tr>
<tr>
<td>B+</td>
<td>865-894</td>
</tr>
<tr>
<td>B</td>
<td>825-864</td>
</tr>
<tr>
<td>B-</td>
<td>795-824</td>
</tr>
<tr>
<td>C+</td>
<td>765-794</td>
</tr>
<tr>
<td>C</td>
<td>725-764</td>
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<tr>
<td>C-</td>
<td>695-724</td>
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<tr>
<td>D</td>
<td>665-694</td>
</tr>
<tr>
<td>D-</td>
<td>625-664</td>
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<tr>
<td>D+</td>
<td>605-624</td>
</tr>
<tr>
<td>F</td>
<td>0-594</td>
</tr>
</tbody>
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**FALL ASSIGNMENTS**

Short Paper #1 (Mathews): 15%. 500 words draft; 250 words peer review; 1000 words final paper (SLO: Si). Compose an essay about the importance of climate change for your specific discipline. You should consult at least three sources from your field to articulate why the issue of climate change is important to
Short Paper #2 (Tan): 15%. 1000 words; (SLO: Riii, Riv). *A detailed assignment sheet and grading rubric will be discussed in class and shared on canvas.*

Community Action Project: 10%, 1200 words.
- **Project Proposal:** 75 points. As a group, you will write a 500-word proposal for your CAP project. *A detailed assignment sheet will be shared on canvas.*
- **Revised Proposal:** 100 points. Based on the feedback received on your proposal, your CAP group will submit a revised and detailed 700-word proposal for your CAP project that addresses the various concerns raised by your instructors.

**Participation, In-class and Online Activities:** 25 %. Participation in class discussion will be evaluated by your engagement in daily class discussions. In-class activities will be assigned and evaluated during class, including responses from iClicker scores. Out of class assignments will be announced on Canvas.

**Exam #1:** 10%. 100 words (SLO: Ri, Rii, Riii, Riv, Rv)

**Exam #2:** 10%. 100 words (SLO: Ri, Rii, Riii, Riv, Rv)

**Exam #3:** (Final): 15%. 100 words (SLO: Ri, Rii, Riii, Riv)

### SPRING ASSIGNMENTS

**Short Paper #3:** 15%. 1000 words, required revision: 1000 words (SLO: Riv, Sii, Siii, Vi, Vi, Vi, Vii). *A detailed assignment sheet and grading rubric will be discussed in class.*

**Community Project:** 35%. 2000 words. You will work with a group of your peers to engage the community on some aspect of climate change. As a group, you will submit a public service announcement, a final report, and a final presentation that will be judged by your peers, and an external panel of judges who will award prizes to the winning teams. Your final community project grade will be a combination of individual and group grades. (SLO: Riii, Riv, Si, Sii, Siii, Siv, Vi, Vii, Viii).

**Participation, In-class and Online Activities 20 %**. Participation in class discussion will be evaluated by your engagement in daily class discussions. In-class activities will be assigned and evaluated during class, including responses from iClicker scores. Out of class assignments will be announced on Canvas.

**Exams 1 & 2:** 15% each (SLO: Ri, Rii, Riii, Riv, Rv, Si, Sii, Siii, Siv, Vi, Vii, Vi, Viii).

### University Policies

Per University Policy S16-9, university-wide policy information relevant to all courses, such as academic integrity, accommodations, etc. will be available on Office of Graduate and Undergraduate Programs’ [Syllabus Information web page](http://www.sjsu.edu/gup/syllabusinfo/).
TH Aug 22
Intro to Course
Realities of Managing Climate Change (CR)

TU Aug 27
Climate Science Overview (QT)
Land Use and Climate Change (CR)

TH Aug 29
(A Brief) Environmental History (AM)
Influence of Climate Change on Non-Human Species (CR)

TU Sept 3
Observational Evidence of Climate Changes (QT)
Introduction to Environmental Communication & Writing for your Discipline (AM)

TH Sept 5
The Challenges of Climate Change Communication (Crisis Framing) (AM)
“One Degree Factor” (movie and in-class quiz) (CR)

TU Sept 10
The Earth’s Energy Balance (QT)
Climate change vulnerability (CR)
Community Connections Fair

TH Sept 12
Bring paper #1 draft to class
The Writing Process (AM)
Greenhouse Gas Effects (QT)

TU Sept 17
Land and Ocean (QT)
Climate change in the Himalayas (CR)

TH Sept 19
Feedbacks, Interactions and Response Time(QT)
Climate Media and the US (AM)

TU Sept 24
Paper #1 Peer Review Due
Introduction to mitigation (CR)
Guest Speaker: TBA (AM)
TH Sept 26
Carbon Cycle (QT)
Exam #1 Review

TU Oct 1
Exam #1

TH Oct 3
Global Warming 6 Americas (AM)
Paleo Climate (QT)

TU Oct 8
Introduction to Community Action Project (CAP) & Group Formation

TH Oct 10
Paper #1 Due
Merchants of Doubt (movie) & in-class discussion (CR)

TU Oct 15
Climate change field trip to Coyote Creek with Deb Kramer & Keep Coyote Creek Beautiful

TH Oct 17
Ice (DR)
Climate change and Christianity (CR)

TU Oct 22
Climate modeling(QT)
California & Climate Change (CR)

TH Oct 24
Uncertainties and Bias (QT)
Frames in Climate Change Communication (AM)

TU Oct 29
Carbon Footprint (QT)
Community Action Project - Local Organizations (CR)

TH Oct 31
Introduction to Climate Change Adaptation (CR)
Exam #2 Review

TU Nov 5
Exam #2
TH Nov 7
Adapting Agriculture (CR)
Guest Speaker: TBA (AM)

TU Nov 12
Adapting Cities (CR)
Risk Communication (AM)

TH Nov 14
**Paper #2 Due**
Community Project Group Meeting - Topic Selection (AM)

TU Nov 19
Adapting conservation (CR)
Geoengineering (QT)
**CAP Proposals due on Canvas at 11:59pm**

TH Nov 21
Climate Advocacy (AM)
Climate Change Solutions (QT)

TU Nov 26
*An Inconvenient Sequel (movie & in-class quiz)* (QT)

TH Nov 28  **Thanksgiving: No Class**

TU Dec 3
Climate Change Career Panel (AM)
Community Action Project - Revising CAP Proposal

TH Dec 5
**CAP Revised Proposals due on Canvas on Friday December 6th at 11:59pm**
Wrap-up & Catch-up
Final Exam Review

**Final Exam:**  **Friday December 13, 9:45AM-12:00PM**