



**UNIVERSIDAD SAN FRANCISCO DE QUITO
SCHOOL: COLEGIO DE POSTGRADOS**

Semester: 201920 - Segundo Semestre 2019/2020

Schedule: 00:00 - 00:01 (ONLINE-Module 3: Jan.13-March 8)

INSTRUCTOR/TEACHER INFORMATION:**Professor:** Cristina Mateus**Email** mcmateus@usfq.edu.ec**Office:** H-101-K**Office hours:** Do not hesitate to contact me by email if you have any questions or concerns, if necessary we can arrange a virtual meeting using Zoom or Webex.**COURSE INFORMATION:****COURSE:** INA-5003E - CLIMATE CHANGE AND SOCIETY**NRC:** 2458**Credits:** 3**Pre-requisites:** English proficiency.**Co-requisites:** The course doesn't have Co-requisites**COURSE DESCRIPTION:**

This class introduces scientific, economic, ecological and social issues underlying the threat of global climate change and explores the factors that influence it. The course examines (1) natural and human causes of past and recent changes in temperatures and other climatic variables; (2) possible impacts of ongoing and expected future human emissions of greenhouse gasses on ecosystems and society; (3) and possibilities to avert dangerous climate changes.

COURSE LEARNING OUTCOMES:

#	Learning Outcomes	Level
1	Demonstrate knowledge concerning the major factors that affect Earth's climate, the impacts of technological advances on the composition of the atmosphere, how that causes global climate change, and how the science of climate change influences society today.	Medio
2	Analyze basic climate information data, to assess potential impacts of climate change, the types of changes in human behavior that will be required to address the problem, predicted costs of climate change as well as proposals for mitigation.	Medio
3	Evaluate ongoing and predicted future climate change in historic context by comparing it to past changes.	Medio
4	Articulate, in writing, a critical perspective on climate change involving science, technology, and society using evidence as support with an emphasis on critical thinking.	Medio
5	Analyze the role of science and technology in shaping those fields of study over time.	Medio

**COURSE CONTENTS:**

Science of climate change
 Impacts of climate change
 Economics and Politics of climate change
 Adaptation and mitigation

METHODOLOGY FOR THE INTEGRATION OF THEORETICAL AND PRACTICAL CONTENTS:

The teaching methodology used in all courses at USFQ follows the liberal arts philosophy: encourage dialogue and enable learning through opportunities to exchange ideas among teachers and students. It is expected that all the theoretical content courses explore potential applications to professional practice and work contexts through the integration of diverse activities and simulations that foster the contextualized understanding of concepts using reality and professional practice as frames of reference.

ASSESSMENT:

Type	General Description	Percentage of final Grade
Homework Assignments	2 assignments	15 %
Article Discussion	Article overview (20%), facilitation and discussion (20%), forum follow up (20%), written report (20%) Group Evaluation (20%)	15 %
Exams	2 Exams	30 %
Final Project	Outline (10%), Written Paper (35%), Presentation (35%), Group Evaluation (20%)	20 %
Participation	Class participation (in forums and videoconferences using Webex)	20 %
TOTAL		100%

Description of Assessment Categories

Homework assignment: There will be two homework assignments.

- 1) Earth's energy budget calculations (/15pts). Due: Jan.21st by 23h59
- 2) Renewable energy/Geoengineering infographics (/15pts). Due: March 1st by 23h59

More information about each homework is provided in the document attached in each homework folder in the D2L (see actividades >> deberes >> Homework #1 or Homework #2).

Article discussion: Each week, 2 students will lead a discussion based on the readings assigned for that week. The discussions will happen through forums (/15pts).

- Forums will be held from Wednesday (00h00) to Saturday (23h59) each week. Students will not be able to participate before or after those days. Things to keep in mind:



- a) Students leading the discussion must upload all the information for the forums no later than Tuesday 23h59.
- b) Students leading the discussion need to answer any comment/question that happens during the forum.
- c) Students that are not leading the discussion need to participate at least 2 times in each forum. Participation on forums is mandatory and counts towards your participation grade (see participation description). Please take into account that forums close on Saturday @ 23h59 and after that you will no longer be able to participate.
- The format for discussion includes (/15pts):
 - a) 5 pts. An overview (summary) of the assigned papers and synthesize the main points you want to discuss in the forums. Power point presentations, word documents, infographics, photos, etc., are recommended for this section. Students are allowed to use other articles related to the main articles provided in class to complement their discussion. Content for this section needs to be uploaded on the forum discussion panel before Tuesday @ 23h59.
 - b) 5 pts. Open and facilitate a discussion of the reading. For this section students need to post minimum 4 questions/activities/arguments for the other students to comment and discuss. The quality of the questions are graded. They need to be relevant to the reading and interesting in order to create a great discussion. Content for this section needs to be uploaded on the forum discussion panel before.
 - c) 5 pts. Forums follow up questions, synthesis, and closing of discussion. Students leading the discussions need to constantly check the forum during those 4 days and answer and/or comment on other students' comments or questions. Students leading the discussion needs to upload in the D2L a written report with: a) the overview of the readings, b) synthesis and closing thoughts of the forum discussion and c) 5 questions and answers related with the assigned articles. Only one member of the group must upload the written report to the assignment folder (Article Discussion: Written Report). Written report must be uploaded by Sunday @ 23h59.
 - Group member evaluation (/3pts): Each member of the group must upload their evaluation for the other group members independently to the following folder: "Article Discussion: Group Member's Eval". Grades must be based on members contribution to points a), b), & c) discussed in the previous bullet point. This must be uploaded by Sunday @ 23h59.

Exams: There will be two partial exams. The course content evaluation will be based on class material, forum discussions, homework assignments, and articles. The exam will require students to explain concepts, interpret graphs discussed in class material and/or forums, discuss and justify different alternatives, and apply concepts to unfamiliar problems. Format for the exam will include multiple choice, fill in the blank, short answer, and concept definitions.

- 1) Midterm Exam: Saturday, Feb.8 (week 4). Content will be based on material from week 1 to 4.



- 2) Final Exam: Saturday, May 11th (Week 8). Content will be based on material from week 5 to 8 including final project presentations.

Final group project: Students are required to write on an issue of your interest related to climate change. See final project description document for more detailed information (Actividades >> Deberes >> Final Project). Students will work together in groups of 2 or 3. The final project is divided in three sections:

1. 10% → Outline and Bibliography (/10pts): Students must turn in a detailed outline with the main ideas based on the topic of choice and include a small literature review. See details in the assignment folder.
2. 35% → Written paper (/20pts): 7 -10 pages, including bibliography. Only one member of the group must upload the written report to the folder "*Final Project: Written Report*". Word format is preferable to provide feedback. Late assignments will not be considered. See details in the assignment folder.
3. 35% → Presentation (/20pts): 15-minute presentation in a videoconference using Webex; 3-5 minutes for questions. Every member of the group needs to present at least one section of the project. Order of presentation will be determined by drawing numbers. Presentations will be held on Wednesday and Thursday on week 8. Presentations must be uploaded by at least two hours before the day your group is presenting.
4. 20% → Group Member Evaluation (/3pts): Each member of the group must upload their evaluation for the other group members independently to the folder: "*Final Project: Group Member's Eval*". Evaluations are graded over 3 assigning a value considering each group member participation and contribution in points 1 to 3 above.

NOTE: Article discussions and final projects are group assignments. The groups are assigned by the D2L randomly. They are fixed throughout the module. You can review the group in the D2L menu, see in: Others >> Groups >> Integration. *Take into account that 20% of the grade comes from your group members.* This means that each student must grade your partners contribution to the project.

Participation: Participation counts for 20% of your final grade and is equally distributed among 7 forums and 3 or 4 videoconferences. Students are expected to read all the material before the forums and be prepared for informed discussion. Grades for participation will be based on videoconference attendance, consistence forum participation (minimum two times), and your thoughtful and informed questions and discussions of the material.

Evaluation criteria:

Due dates and times: No late assignments will be accepted. Deviations from this late policy will not be accepted except under very extenuating circumstances (e.g. death in family) and must be negotiated with the instructor in advance of the deadline. Please make sure you constantly check the course schedule (cronograma del curso) in the D2L for due dates and times.

Format: You must use size 11, and 1.5-spaced on a A4 size paper for every written assignment. You must cite and make references when needed. Written reports with more than 30% similarities will not be graded and automatically will have an F on the report. Please make sure you cite your work properly. You can use any format you want as long as you use the same format throughout the entire report (recommended MLA format).

Evaluation: You will be evaluated on the structure and content. For group assignments, 20% of the grade is evaluated by other group members. If it is rigorously determined that a



student does not contribute to the group assignments, I reserve the right to adjust their grade appropriately.

Cheating or Plagiarism: Students are expected to be honest and ethical in their academic work. Academic dishonesty is punished with an F in that activity. Academic dishonesty is defined as an intentional act of deception in one of the following areas:

- cheating- use or attempted use of unauthorized materials, information or study aids
- fabrication- falsification or invention of any information
- assisting- helping another commit an act of academic dishonesty
- tampering- altering or interfering with evaluation instruments and documents
- plagiarism- representing the words or ideas of another person as one's own

LIBRARY BIBLIOGRAPHY:

* , Climate change 2014 :, Geneva 2 : Intergovernmental Panel on Climate Change, 2015.

COURSE BIBLIOGRAPHY:

* Assessment Reports of the Intergovernmental Panel on Climate Change (IPCC), available online at <https://www.ipcc.ch/>; specifically refer to the 5th Assessment (AR5 Synthesis Report) at <https://www.ipcc.ch/report/ar5/>.

* Because the understanding of global climate change policy continues to evolve, course materials will include recent literature examining current developments. Also, course materials will include articles and case studies on various environmental issues. In the spirit on environmental awareness and sustainability, students will be provided with electronic reading materials at the beginning of class.

POLICIES:

All students taking courses at USFQ must follow the rules for ethics of learning, research, and behavior detailed in the [USFQ's Code of Honor and Coexistence](#). All courses should follow the policies stated in USFQ's [Manual del Estudiante](#)

There are no extra assignments unless it is for some justified situation. Please keep in mind that no late work is accepted. It is recommended to organize the time to comply with the course schedule. Take into account that the online course is held in 8 weeks. Therefore, if you are taking this class, you must commit to working intensively in order to fulfill with the requirements of the syllabus. It is important to keep in mind that you need to be organized and meet the deadlines for each week.

SCHEDULE OF ACTIVITIES:

WEEK	TOPIC	ACTIVITY
1	Introduction Science of Climate Change o Important terms and definitions o Earth's Climate System at its Components	- Forum 1: Presentations due Jan17 by 23h59 - Videoconference #1 due Jan 16 by 19h30
2	o Earth's energy budget and Radiation o Greenhouse Gases GHG o Greenhouse effect & Feedbacks o Water & carbon cycles o Changes of climate in the past o Causes of climate change: Anthropogenic	- Forum 2: Article Discussion #1 (Leader: Cristina Mateus) due Jan.22-25 by 23h59 - Homework #1 due Jan. 21 by 23h59
3	vs. Natural o Climate models	- Forum 3: Article Discussion #2 (Leaders:



	o Future scenarios and uncertainties	Group 1) due Jan.29-Feb.1 by 23h59 - Final Project Outline (Feb.2).
4	Impacts of climate change o Ocean and fresh water o Ecuador and the Galápagos Islands o Agriculture and Human Health Midterm Exam	- Forum 4: Article Discussion #3 (Leaders: Group 2) due Feb.1-8 by 23h59 -Midterm due Feb.8
5		- Forum 5: Article Discussion #4 (Leaders: Group 3) due Feb.12-15 by 23h59
6	Economics and Politics o Montreal Protocol o Kyoto Protocol o Paris Protocol	- Forum 6: Article Discussion #5 (Leaders: Group 4) due Feb.19-22 by 23h59
7	Mitigation and Adaptation o Geoengineering o Renewable Energy	- Forum 7: Article Discussion #6 (Leaders: TBC) due Feb.26-29 by 23h59 -Homework #2 due March 1 by 23h59
8	Final Project Presentation and Written Reports Final Exam	-Written Report due March 8. -Presentations due March 4-5 (videoconference 2 and 3) -Final Exam due March 7

This syllabus was reviewed and approved by the coordination of the respective academic area or department. All sections of this course must follow this syllabus. Any changes or adjustments to this syllabus must be approved by the coordinator responsible for this academic area or department and must be reflected in the Curricular Design system.'