Bending the Curve: Climate Change Solutions
POLI 117/SIO 109
Spring 2017

Professors:
Veerabhadran Ramanathan vram@ucsd.edu
Fonna Forman fforman@ucsd.edu

Coure Coordinator:
Astrid Hsu ajhsu@ucsd.edu

Teaching Intern
Hannah Campi hcampi@ucsd.edu

Office Hours: By appointment only

Class Times:
Tuesday and Thursdays, 3:30-4:50 PM at Vaughan Hall 100

Bending the Curve:
This course will focus on scalable solutions for carbon neutrality and climate stability across different disciplines—Science, Technology, Governance, Social Sciences, Economics, and Ecosystem. It leverages expertise across the UC system to showcase how mitigating climate change is relatable in every discipline and challeneges students to lead this change. Students will learn examples of projects actively "bending the curve" of climate change on a local and international scale, and will have the opportunity to plan and execute a project of their own. **Students will be grouped into interdisciplinary teams with 4-5 members maximum in each team.**

Hybrid Course:
This course will require students to review lecture material and complete readings at home prior to class. Class time will focus on in-class discussions of the concept and the questions in the lecture notes as well as group project work. Interdisciplinary discussions will take place both online and in-person, with groups encompassing students from at least 3 different disciplines.

Textbook:
No textbook required for purchase. Core readings are 10 chapters from *Bending the Curve: Ten scalable solutions for carbon neutrality and climate stability.* Chapters will be uploaded through class online portal, TritonEd.

Grading
Students will be graded on one-third for in-class discussions, one-third for project proposals, and one-third project completition.

Course Lecture Calendar

Lecture	Cluster	Topics	Instructor	Date	Reading Chapter
		SETTING THE STAGE			
1	Science	Climate Change: How Large? How Disruptive? How Soon? How much time do we have to protect Nature and Humanity?	Ramanathan	April 4	Chapter 1
2	Societal Transformation	How Did We Get Here? Unpacking the Socio-Economic Structures Shaping Climate Change: Climate Justice; Inequality; Power dynamics in social hierarchies; Equitable Social Approaches to Climate Mitigation	Forman	April 6	Chapter 8
3	All Clusters	Six clusters as organization principles and Ten Solutions for Bending the Curve.	Ramanathan	April 11	Executive Summary
4	All Clusters	Living Laboratory: Carbon Neutrality Initiative of UC *L. Chiang (UCOP)*	Chiang/Ramanathan	April 13	Chapter 2
		SOLUTIONS			
5	Science	How Did We Get Here? Understanding the unsustainability of fossil-fuel energy consumption and its impact on health, environment and ecosystems **Form Teams**	Ramanathan	April 18	Chapter 3
6	Lab Time		Forman and Ramanathan	April 20	
7	Societal Transformation	Movement Organizations: Building a social movement for change	Forman	April 25	Chapter 9
8	Lab Time	**Presentation of Solution Proposals**	Forman	April 27	
9	Governance	Paris Agreement and its Implementation National vs States, greenhouse gas policies & Regulations	Forman	May 2	Chapter 6
10	Lab Time	*Led by Hannah Campi*	Forman	May 4	
11	Market and Regulations	Economics of Climate Change and Energy	Forman	May 9	Chapter 4
12	Market and Regulations	Market Incentives and Instruments. *M. Jacobsen (UCSD)*	Jacobsen/ Forman	May 11	
13	Lab Time	**Progress Report on Solutions**	Ramanathan	May 16	
14	Technology	Mature Technologies	Ramanathan	May 18	Chapter 5

15	Technology	Emerging Technologies and Needed Innovations	Ramanathan	May 23	
16	Technology	Speeding up Climate Mitigation: Measures for Short Lived Climate Pollutants	Ramanathan	May 25	Chapter 7
17	Lab Time		Forman	May 30	
18	Living Laboratories (All Clusters)	Building Environmental Resilience at the Local Scale *K. Pezzoli (UCSD)*	Pezzoli/ Forman	June 1	
19	Lab Time		Forman and Ramanathan	June 6	
20	Lab Time	**Final Paper Due**	Forman and Ramanathan	June 8	
21	Finals	Team presentation of class projects: 10 teams (5 members per team) presentations of 20 mts each. Team-written reports should be submitted for grading	Forman and Ramanathan	June 12 3-6 PM	