

GLOBAL CLIMATE CHANGE



Course covers the science of climate change as an Earth system. Learn how the complex dynamics of the climate system (i.e., the Earth, the oceans, the atmosphere) relate to each other and the science evidence for climate change. Learn how climate science and policy can interact. Climate Change Student Project will help broaden understanding of the science.

G-184, CRN #24210, 4 credits. Lecture and Laboratory are combined sessions, plus a local field trip (late May).

Dates: Tuesday and Thursday evenings, 6 pm – 8:50 pm, **Spring Quarter 2022**, 10 weeks (starting March 29).

Where: PCC-Southeast Campus, SE Division and SE 82nd, SCOM Room 308 (face-to-face sessions)

Textbook: **Climate Change: The Science of Global Warming** (2018), by Mathez (ISBN 9-780231172837)

Instructor: Prof. Kyle Dittmer, (503) 731-1314 (day, office), email: kyle.dittmer@pcc.edu

COURSE TOPICS:

Introduction

- Scientific Method
- Basics of Weather and Ocean Science
- Basics of Geology – volcanoes, glaciers

Climate Science

- Defining Climate
- Climate Zones
- The Carbon Cycle

Climate Change

- Defining Climate Change
- Three Causes of Climate Change
- The Science Evidence, *NOVA* films
- The Greenhouse Effect
- Natural Forcings

Ancient Climate Change

- The Pleistocene Ice Age
- The Holocene Epoch (modern era)
- The big amount of Science Evidence
- Human History and Natural Climate Variability

Observed Modern Climate Change

- The 20th Century Record, PBS film *Sinking Cities-NYC*
- Strange Recent Weather; Ocean Impacts, Sea-Level Rise
- Impacts in the Arctic and Antarctica regions

Climate Models – Future Climate Change

- Modeling efforts, results, reliability, research trends
- Future Climate Change – Prospects, Risk Assessment
- Dealing with Climate Change Skeptics and Deniers
- Solutions – scientific, policy, legal, religion

It's easy to register! To register online, go to: <http://www.pcc.edu/enroll/registration/>.

You can also register by calling 971-722-8888. You will need to know the 5-digit CRN for the class you want to take.



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