Interested in learning about climate from many different angles? The climate minor guides you through an exploration of the science of climate through coursework in oceanography, atmospheric sciences, earth and space sciences and beyond. The minor was envisioned and is supported by the UW Program on Climate Change in the College of the Environment. Take a look at the courses required and contact us to identify your pathway.

For more information visit: https://pcc.uw.edu/education/undergraduate-minor/
Subscribe to the list serve for notices of new classes and opportunities for undergraduates: https://mailman13.u.washington.edu/mailman/listinfo/climateminor

Climate Science Minor Advising and Information: Miriam Bertram, uwpcc@uw.edu

Requirements in brief (more detail below):
1.  Core climate course (3-5 cr) and skills course (3-5 cr); 2.  Integrative capstone course (3 cr)
3.  Science Electives (at least 12 cr) 4.  Applications Elective (to reach a total of 25 cr).

CORE COURSEWORK (6–10 credits) (most recent or planned quarter offered is shown; classes in italics currently require exception be made by an advisor)

One of…

- ESS 201: The Earth System and Climate (3) Aut 2020
  Prerequisites: MATH 124 or 144, or Q SCI 291
- ATM S 211: Climate and Climate Change (5) Aut, Win, Spr
  Prerequisites: None

One of…

- OCEAN/FISH 452: Spatial Information Technology in Ecosystem Sciences (3) Aut 2019
  Prerequisites: None
- AMATH 301: Beginning Scientific Computing (4) Aut, Win, Spr
  Prerequisites: MATH 125 or 135, or Q SCI 292
- Q SCI 381: Introduction to Probability and Statistics (5) Aut,Win, Spr, Summer
  Prerequisites: MATH 120, 124, 125, or 126, or Q SCI 190 or 291
- STAT 311: Elements Of Statistical Methods (5) Aut, Win, Spr, Summer
  Prerequisites: MATH 120, 124, 125, or 126, or Q SCI 190
- OCEAN 215: Ocean Data Analysis (4) Aut 2020
  Prerequisite: MATH 125
- ATM S 310: Programming for Atmospheric Data Analysis (4) Aut 2021
  Prerequisites: None

Last update: April 13, 2021
INTEGRATIVE CAPSTONE EXPERIENCE - required of all climate minor students

- ATM S/ESS/OCEAN 475: Current Research in Climate Science Seminar (3)
  Prerequisites: ESS 201 OR ATM S 211 or 321 (likely offered next in Spring 2022)

SCIENCE ELECTIVES: students must take at least one course from each of ATM S, ESS, and OCEAN for at least 12 credits. Many options are shown below, others are possible.

Atmospheric Sciences (some common choices)

- ATM S 301: Introduction to Atmospheric Sciences (5) Aut 2020
  Prerequisites: 2.0 in PHYS 121, 122, & 123, AND 2.0 in MATH 124, 125, & 126
- ATM S 350: Ecological Climatology (3) Win 2021
  Prerequisites: None
  Recommended: MATH 120 or equivalent; and either PHYS 114; PHYS 115; PHYS 116, or PHYS 121; PHYS 122; PHYS 123
- ATM S 380: Weather and Climate Prediction (3) Win 2020
  Prerequisites: MATH 126, PHYS 122 & ESS 201 OR ATM S 101, 111, 150, 211, 301, 321
- ATM S 358: Fundamentals of Atmospheric Chemistry (3) Spr 2020
  Prerequisites: None
  Recommended: CHEM 142 & MATH 126 & PHYS 123
- ATM S 487: Fundamentals of Climate Change (3) Aut 2020
  Prerequisites: ATM S 321

Earth and Space Sciences (some common choices)

- ESS 315/ENVIR 313: Environmental Earth Science (5) Win 2020
  Prerequisite: one of ESS 101, ESS 105, ESS 210 OR ESS 211.
- ESS 408: Great Geologic Issues (3) Aut 2019
  Prerequisites: None
- ESS 431: Principles of Glaciology (4) Aut 2020
  Prerequisites: PHYS 121
  Recommended: ESS 310
- ESS 450: Paleobiology (3) Aut 2017
  Prerequisites: None
- ESS 433: Environmental Change in the Glacial Ages (5) Spr 2020
  Prerequisites: None
Oceanography (some common choices)

- OCEAN 409: Marine Pollution (3) Spr 2020
  Prerequisites: None.
- OCEAN 423: Ocean Circulation and Climate (3) Spr 2020
  Prerequisites: PHYS 123 AND MATH 125
  Recommended: OCEAN 210
- OCEAN 450: Climatic Extremes (4) Win 2020
  Prerequisites: None

APPLICATION OPTIONS (as needed to complete 25 credits, other courses are possible):

- BIOL 315: Biological Impacts of Climate Change (3) Spr 2020
  Prerequisites: BIOL 180, or B BIO 180, or TESC 120
- CHEM E/M E 341: Energy and Environment (3) Aut 2020
  Prerequisites: MATH 112 or 114 OR Q SCI 291, AND CHEM 120 or 142,
  OR PHYS 114 or 121
- ARCTIC 391 Climate Change - An International Perspective: Science, Art, and Activism (5)
  Offered: jointly with JSIS B 391, Honors 391; Wi 2020
  Prerequisites: None
- ARCTIC 400 Integrating Policy and Science in Arctic Studies (3) I&S/NW Spr 2018
  Prerequisites: None
- CHEM E/M E 442: Renewable Energy (4) Spr 2020
  Prerequisites: ME 323, CHEM E 325, AA 260, or EE 351
  Prerequisites: None
- FISH 464: Arctic Marine Vertebrate Ecology (4) Win 2019 (taught alt years)
  Prerequisites: BIOL 180

Other Details:
1. Minimum 2.00 cumulative GPA in courses applied to the minor
2. Minimum 15 credits taken through the UW
3. Minimum 18 credits outside student's major
4. Minimum 15 upper division credits