

CLIMATE CHANGE FLUENCY MINOR

AOSC/
GEOG440 Polar Remote Sensing

Total Credits

15

Program Director: Alexandra Jones

This minor program is intended for non-science majors, but open to all majors other than atmospheric and oceanic science. It is designed to fill a critical need for climate literacy among professionals whose careers can benefit, such as journalists, policy makers, public health practitioners, investment and insurance professionals, etc. Students will be introduced to the science behind and evidence of both natural and anthropogenic climate factors and learn how to distinguish between climate science and climate policy as it relates to their intended career field.

It will provide the students with a general background in weather and climate as offered by the lower level courses and exposure to deeper exploration in the elective areas of the student's choosing. This will include the ocean's role in the climate system, climate change mitigation, visualizing climate data, climate attribution of extreme events, climate dynamics, paleoclimate, air quality, and more.

Program Learning Outcomes

1. Clearly distinguish between and describe to a non-scientific audience the natural greenhouse effect, the mechanism and structure of anthropogenic climate change, climate feedback mechanisms, multidecadal climate variability, natural sources of climate change in earth's history, and the evidence that supports each.
2. Evaluate how the facts of climate change apply to your discipline and identify climate change policy recommendations and opinions and evaluate their potential impact on your discipline.
3. Discuss the complexity involved in climate attribution of extreme events such as fires, droughts, floods, and severe storms.
4. Discuss the role of a variety of climate subtopics (based on electives) in the climate system and their relation to your career field, ocean, biogeochemical, polar, mitigation, climate data analysis, internal variability, extreme event attribution, etc.

REQUIREMENTS

Course	Title	Credits
Required Courses		
AOSC/GEOL123	Causes and Consequences of Global Change	3
AOSC365	(Climate change – cutting through the noise)	3
Electives (choose at least 3; 2 of which need to be at the upper level); one 3 credit course not listed but in a closely related subject area may be used as an elective with approval of the undergraduate program director		9
AOSC200	Weather and Climate	
AOSC247	Scientific Programming: Python	
AOSC360	(How to Solve the Climate Change Problem)	
AOSC/ GEOL375	Introduction to the Blue Ocean	
AOSC401	Climate Dynamics and Earth System Science	
AOSC/ CHEM433	Atmospheric Chemistry and Climate	
AOSC/ GEOL437	Global Climate Change: Past and Present	