2017-2018 Minor Program of Study

Required (9 hours):
- Global Atmospheric Chemistry (CHE 2600)
- Weather & Climate (GHY 3100)
- Atmospheric Physics (PHY 3150) w/Calculus prereq.

Mathematical Electives (3-4 hours) Choose 1 of the following:
- Introduction to Programming with Interdisciplinary Applications (CS 1445)
- Statistical Data Analysis I (STT 3850)
- Quantitative Data Analysis for Earth & Environmental Scientists (ENV/GLY 3455)

Electives (6 hours) Choose 2 courses from the following:
- Climate Change, Snow & Ice (GHY 3600)
- Atmospheric Circulation (GHY 4620)
- Environmental Geochemistry (GLY 3131)
- Environmental Physics (PHY 3140)
- Air Pollution Effects on Plants & People (BIO 3320)
- Hydrogeology (GLY 4630)

Appalachian State University is a member of the University Corporation for Atmospheric Research, that provides opportunities for student internships, career development, and training (https://www2.ucar.edu/)

Appalachian State University is committed to providing equal opportunity in education and employment to all applicants, students, and employees. The university does not discriminate in access to its educational programs and activities, or with respect to hiring or the terms and conditions of employment, on the basis of race, color, national origin, religion, sex, gender identity and expression, political affiliation, age, disability, veteran status, genetic information or sexual orientation. The university actively promotes diversity among students and employees.
“Understanding the complex, changing planet on which we live, how it supports life, and how human activities affect its ability to do so in the future is one of the greatest intellectual challenges facing humanity. It is also one of the most important challenges for society as it seeks to achieve prosperity, health, and sustainability.”

- National Research Council

While pursuing a minor in atmospheric science, several research opportunities exist, including: Regional weather modeling; Air pollution effects on plants; Aerosol monitoring, chemical analysis; Synoptic climatology, orographic precipitation, snow and ice, and tropical climate-glacier interactions; Ecosystems and hydrologic cycles; Image processing, wavelets, parallel and distributed computing, stochastic simulations.

Active student research is a critical part of the mission of the Minor, the College, and the University.

Examples of Student Research Opportunities

Student researchers assist Dr. Baker Perry and collaborators in the NSF funded Integrated Climate Research and Education: Central Andes Precipitation Project (ICECAP) in Peru and Bolivia. (https://icecap.appstate.edu/)

Students assist faculty working to better understand air pollution formation and transport, the relationship of pollution and natural aerosol sources to a changing climate, and their impacts on regional ecosystems, weather, and climate in the Southern Appalachian Mountains. (https://appalair.appstate.edu/)

Students work with computer models to better understand the complex atmospheric dynamics in the Southern Appalachians. (https://physics.appstate.edu/research/applied-fluids-laboratory)