COURSE DETAIL

ATMOSPHERE AND CLIMATE
Country Netherlands
Host Institution Utrecht University – University College Utrecht
Program(s) University College Utrecht
UCEAP Course Level Upper Division
UCEAP Subject Area(s) Earth & Space Sciences
UCEAP Course Number 118
UCEAP Course Suffix
UCEAP Official Title ATMOSPHERE AND CLIMATE
UCEAP Transcript Title ATMOSPHERE&CLIMATE
UCEAP Quarter Units 6.00
UCEAP Semester Units 4.00

Course Description
The climate is a complicated physical system, the properties of which affect our everyday lives and impact virtually all things ecological and economic. The basic principles that govern the interaction between the climate's main constituents, the atmosphere and oceans, can be described by the methods of physics. This course introduces the fundamentals of the physics of the atmosphere and related climate, starting with atmospheric composition and static stability. Students learn about the vertical distribution of mass (pressure), temperature, the role of moisture in the atmosphere (clouds) and radiation transport. The course then focuses on the dynamical atmosphere to see how pressure gradients and the Coriolis force affect air motion (wind). Knowledge is applied to simple models of the atmosphere to discuss large scale and small scale flows. Throughout the course, recent developments, current affairs and issues pertaining to climate change are discussed. Prerequisite for this course is one of the following: calculus, foundations of mathematics, introduction to quantum physics, classical physics.

Language(s) of Instruction
English

Host Institution Course Number
UCSCIEAR22

Host Institution Course Title
ATMOSPHERE AND CLIMATE

Host Institution Course Details
https://cursusplanner.uu.nl/Curriculum

Host Institution Campus
University College Utrecht

Host Institution Faculty
Sciences

Host Institution Degree

Host Institution Department

Earth and Environment

Course Last Reviewed
2024-2025

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