

COURSE DETAIL

MODERN CLIMATE CHANGE

Country

Italy

Host Institution

University of Bologna

Program(s)

University of Bologna

UCEAP Course Level

Upper Division

UCEAP Subject Area(s)

Environmental Studies

UCEAP Course Number

171

UCEAP Course Suffix**UCEAP Official Title**

MODERN CLIMATE CHANGE

UCEAP Transcript Title

MODRN CLIMTE CHANGE

UCEAP Quarter Units

6.00

UCEAP Semester Units

4.00

Course Description

This course is part of the Laurea Magistrale degree program and is intended for advanced level students. Enrollment is by permission of the instructor. This course provides students with the scientific foundation of modern, anthropogenic climate change and its impacts. The course focuses on (1) the observational evidence of present climate change, (2) fundamental physical processes that shape climate (e.g. solar variability, orbital mechanics, greenhouse gases, the carbon cycle, atmospheric and oceanic circulation, and aerosols), (3) the modern description of climate change (radiative forcing, feedbacks, climate sensitivity) and (4) the physical understanding of predictions of future climate change (for example, how global warming will impact the global water cycle). At the end of the course, students are able to understand and discuss about material consequences of climate change, like sea level change, variations in precipitation, extreme events and abrupt climate change. This course also examines the science behind mitigation and adaptation proposals.

Language(s) of Instruction

English

Host Institution Course Number

99520

Host Institution Course Title

MODERN CLIMATE CHANGE

Host Institution Course Details

<https://www.unibo.it/en/study/course-units-transferable-skills-moocs/course-uni...>

Host Institution Campus

BOLOGNA

Host Institution Faculty

Host Institution Degree

LM in SCIENCE OF CLIMATE

Host Institution Department

PHYSICS AND ASTRONOMY

Course Last Reviewed

2025-2026

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