

## 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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