UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

COURSE SYLLABUS

Ice Core Science

2627-1-124R004

Title

Ice Core Science

Teacher(s)

Barbara Delmonte ; Valter Maggi

Language

English

Short description

Polar ice cores are cornerstones of global change research since they provide information about past climate and environmental conditions on timescales from decades to hundreds of millennia. For example, Antarctic ice cores played a central role in showing how closely climate and greenhouse gas concentrations were linked in the past, while Greenland ice allowed demonstrating that very abrupt climate switches can occur.

In this short course, where a short general introduction about ice core science is followed by laboratory activities at the EUROCOLD Lab of DISAT, students will learn how it is possible to decipher the past climate change from a polar ice core archive, how the paleoclimate records from the two hemispheres can be synchronized and how it is

possible to reach a quantitative assessment of the past atmospheric load of mineral dust aerosol, with particular focus on Greenland and Antarctica.

Final evaluation: The final assessment of the course will be based on a written critical analysis of a scientific paper dealing with ice core-derived paleoclimatic reconstructions, that will be selected by the candidate in agreement with the professor. This assignement is expected to be due in 10 days since the end of the course.

CFU / Hours

1 CFU - 8 Hours (Lecture)

Teaching period

II semester

Sustainable Development Goals

CLIMATE ACTION