COURSE DETAIL

CHEMICAL OCEANOGRAPHY
Country France
Host Institution University of Bordeaux
Program(s) University of Bordeaux
UCEAP Course Level Upper Division
UCEAP Subject Area(s) Geography Environmental Studies Earth & Space Sciences
UCEAP Course Number 113
UCEAP Course Suffix
UCEAP Official Title CHEMICAL OCEANOGRAPHY
UCEAP Transcript Title CHEM OCEANOGRAPHY
UCEAP Quarter Units 6.00
UCEAP Semester Units 4.00

Course Description

This course provides both fundamental and advanced knowledge in chemical oceanography, specifically to describe the chemistry of seawater and to present the processes that control its composition. The course offers a quantitative approach to material transfer processes at environmental interfaces, as well as their interactions with the oceanic biosphere, and details the (bio)geochemical processes responsible for modifying these transfers across time and space. The lectures cover topics such as the chemical composition of seawater, inputs of dissolved and particulate material to the ocean, elemental cycles, gases in seawater and ocean–atmosphere exchanges, redox conditions in the ocean, the use and relevance of stable and radioactive isotopes, particle transfer from the ocean surface to the sediments, and material exchanges between the oceanic crust and seawater. The course is complemented by a field excursion in a coastal environment involving sample collection, as well as tutorials and laboratory practical sessions during which the collected samples are analyzed.

Language(s) of Instruction
French

Host Institution Course Number
4TMR704U

Host Institution Course Title
OCÉANOGRAPHIE CHIMIQUE

Host Institution Course Details

Host Institution Campus
Université de Bordeaux

Host Institution Faculty
Sciences et Technologies

Host Institution Degree

Master

Host Institution Department
Earth and Environmental Sciences

Course Last Reviewed
2025-2026

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