

COURSE DETAIL

CHEMICAL OCEANOGRAPHY

Country

Taiwan

Host Institution

National Taiwan University

Program(s)

National Taiwan University

UCEAP Course Level

Upper Division

UCEAP Subject Area(s)

Geography Environmental Studies

UCEAP Course Number

111

UCEAP Course Suffix**UCEAP Official Title**

CHEMICAL OCEANOGRAPHY

UCEAP Transcript Title

CHEM OCEANOGRAPHY

UCEAP Quarter Units

1.50

UCEAP Semester Units

1.00

Course Description

This course primarily focuses on the ocean's role in the global biogeochemical cycling of elements, with special attention given to the impact of human activities on the transport of these elements within these cycles. The course begins by covering basic ocean chemistry, followed by an exploration of the concept of global geochemical cycles based on water/rock interactions. The discussion then delves into nutrient and trace metal cycling, emphasizing redox reactions and the biologically mediated oxidation of organic matter. Steady-state models will be employed to explain the global distribution of these components in the oceans.

In addition, the course examines the role of sediment in shaping ocean chemical composition, considering both equilibrium and kinetic perspectives and touches upon marine chemistry related to radioactive and stable isotopes.

This course aims to provide young marine scientists with a foundation in the fundamental concepts of ocean chemistry, while offering a global perspective on the subject. There are no prerequisites for enrollment, but a background in basic chemistry (e.g., Chemistry 101) is preferred.

Language(s) of Instruction

English

Host Institution Course Number

Ocean5128

Host Institution Course Title

INTRODUCTION TO CHEMICAL OCEANOGRAPHY

Host Institution Course Details

https://nol.ntu.edu.tw/nol/coursesearch/print_table.php?course_id=241%20U6250&c...

Host Institution Campus

Host Institution Faculty

Host Institution Degree

Host Institution Department

Oceanography

Course Last Reviewed

2024-2025

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