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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