

COURSE DETAIL

COASTAL MORPHODYNAMICS

Country

Netherlands

Host Institution

Utrecht University

Program(s)

Utrecht University

UCEAP Course Level

Upper Division

UCEAP Subject Area(s)

Environmental Studies Earth & Space Sciences

UCEAP Course Number

135

UCEAP Course Suffix**UCEAP Official Title**

COASTAL MORPHODYNAMICS

UCEAP Transcript Title

COSTAL MORPHODYNMCS

UCEAP Quarter Units

6.00

UCEAP Semester Units

4.00

Course Description

This course focuses on the estuarine, coastal, and marine processes and morphological features that determine the morphodynamic behavior of coastal systems. Coastal morphodynamics is defined as the mutual co-adjustment of coastal landforms and processes. Emphasis is on the behavior of sedimentary coastal systems, such as beaches and dune coasts, barrier island systems, tidal inlets, estuaries, and deltas. It includes the behavior of both sandy and muddy coasts. The time scales involved vary from less than a second (e.g., intra-wave processes; short-term) to decades (e.g., the coastal response to sea level rise; long-term). The course starts with the dynamics of wave-, tide- and current-driven processes and the effect on sediment transport processes and associated morphological change. The second part of the course deals with the morphodynamic character of different types of coastal systems. This is analyzed by discussing, evaluating, and quantifying the dominant processes, the relevant morphological features, and sedimentary products. Exercises, papers, and case studies are an integral part of the course and are used to develop skills in analyzing and solving coastal problems. The course also contains several lectures on coastal instrumentation (for example, remote sensing) and on the societal relevance of coastal processes in mitigating coastal erosion.

Language(s) of Instruction

English

Host Institution Course Number

GEO3-4306

Host Institution Course Title

COASTAL MORPHODYNAMICS

Host Institution Course Details

<https://osiris-student.uu.nl/#/onderwijscatalogus/extern/cursus>

Host Institution Campus

Utrecht University

Host Institution Faculty

Geosciences

Host Institution Degree**Host Institution Department**

Earth Sciences

Course Last Reviewed

2023-2024

[Print](#)