COURSE DETAIL

DYNAMICAL OCEANOGRAPHY
Country United Kingdom - England
Host Institution University of East Anglia
Program(s) Environment and Sustainability, East Anglia
UCEAP Course Level Upper Division
UCEAP Subject Area(s) Geography Earth & Space Sciences
UCEAP Course Number 137
UCEAP Course Suffix
UCEAP Official Title DYNAMICAL OCEANOGRAPHY
UCEAP Transcript Title DYNAMICAL OCEANOGR
UCEAP Quarter Units 6.00
UCEAP Semester Units 4.00

Course Description
This course covers mathematical modelling of large-scale ocean circulation and oceanic wave motion, fluid dynamics, and differential equations. Students use these techniques to explain phenomena in the ocean that are relevant to the real world. Students examine the effects of rotation on fluid flows. This leads to the concept of geostrophy, which enables ocean currents to be inferred from measurements of sea surface height or from vertical profiles of seawater density. The role of wind in driving the ocean is examined. This enables students to model the large-scale circulation of the ocean including the development of oceanic gyres and strong western boundary currents. The course concludes by examining the role of waves, and the differences between wave motion at mid-latitudes and the Equator.

Language(s) of Instruction
English

Host Institution Course Number
MTHE6007B

Host Institution Course Title
DYNAMICAL OCEANOGRAPHY

Host Institution Course Details

Host Institution Campus
University of East Anglia

Host Institution Faculty

Host Institution Degree

Host Institution Department
Mathematics (MTH)

Course Last Reviewed

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