COURSE DETAIL

ANALYSIS
Country Australia
Host Institution University of Sydney
Program(s) University of Sydney
UCEAP Course Level Upper Division
UCEAP Subject Area(s) Mathematics
UCEAP Course Number 106
UCEAP Course Suffix
UCEAP Official Title ANALYSIS
UCEAP Transcript Title ANALYSIS
UCEAP Quarter Units 6.00
UCEAP Semester Units 4.00

Course Description

This course examines the field of mathematical analysis both with a careful theoretical framework as well as selected applications. It shows the utility of abstract concepts and teaches an understanding and construction of proofs in mathematics. The course starts with the foundations of calculus and the real numbers system. It goes on to study the limiting behavior of sequences and series of real and complex numbers. This leads naturally to the study of functions defined as limits and to the notion of uniform convergence. Returning to the beginnings of calculus and power series expansions leads to complex variable theory: elementary functions of complex variable, the Cauchy integral theorem, Cauchy integral formula, residues and related topics with applications to real integrals.

Language(s) of Instruction
English

Host Institution Course Number
MATH2023

Host Institution Course Title
ANALYSIS

Host Institution Course Details
https://sydney.edu.au/courses/units-of-study/2018/math/math2023.html

Host Institution Campus
sydney

Host Institution Faculty

Host Institution Degree

Host Institution Department
Mathematics

Course Last Reviewed
2024-2025

Print