

COURSE DETAIL

FOURIER ANALYSIS

Country

United Kingdom - Scotland

Host Institution

University of Edinburgh

Program(s)

University of Edinburgh

UCEAP Course Level

Upper Division

UCEAP Subject Area(s)

Mathematics

UCEAP Course Number

164

UCEAP Course Suffix**UCEAP Official Title**

FOURIER ANALYSIS

UCEAP Transcript Title

FOURIER ANALYSIS

UCEAP Quarter Units

4.00

UCEAP Semester Units

2.70

Course Description

This is a course in the rigorous treatment of Fourier series and related topics, including Fourier series, Fourier coefficients, trigonometric polynomials and orthogonality; properties of Fourier coefficients; Bessel's inequality, Parseval's identity and the Riemann-Lebesgue lemma; various notions of convergence of Fourier series, including pointwise, uniform and mean square convergence. Summability methods, convolution and Young's inequality; Fourier Analysis in broader contexts; for example, Fourier integrals, Fourier expansions in groups, Schwartz spaces and tempered distributions.

Language(s) of Instruction

English

Host Institution Course Number

MATH10051

Host Institution Course Title

FOURIER ANALYSIS

Host Institution Course Details

<https://www.drps.ed.ac.uk/25-26/dpt/cxmath10051.htm>

Host Institution Campus

Host Institution Faculty

School of Mathematics

Host Institution Degree

Host Institution Department

Course Last Reviewed

2025-2026

[Print](#)