COURSE DETAIL

ESSENTIALS OF ANALYSIS AND PROBABILITY
Country United Kingdom - Scotland
Host Institution University of Edinburgh
Program(s) University of Edinburgh
UCEAP Course Level Upper Division
UCEAP Subject Area(s) Statistics Mathematics
UCEAP Course Number 148
UCEAP Course Suffix
UCEAP Official Title ESSENTIALS OF ANALYSIS AND PROBABILITY
UCEAP Transcript Title ANALYSIS&PROBABILTY
UCEAP Quarter Units 4.00
UCEAP Semester Units 2.70

Course Description

The course covers many of the following topics: Random events, sigma-algebras, monotone classes. Measurable spaces, random variables - measurable functions. Measures, probability measures, signed measures. Borel sets in R^d, Lebesgue measure. Caratheodory extension theorem. Sequences of events and random variables, Borel-Cantelli lemma. Distributions of random variables. Independence of random variables. Integral of measurable functions - mathematical expectation,. Moments of random variables, L_p spaces. Convergence concepts of measurable functions. Limit theorems for integrals. Weak and strong laws of large numbers. Completeness of L_p spaces. Conditional expectation and conditional distribution of random variables. Fubini's theorem.

Language(s) of Instruction
English

Host Institution Course Number
MATH10047

Host Institution Course Title
ESSENTIALS OF ANALYSIS AND PROBABILITY

Host Institution Course Details
http://www.drps.ed.ac.uk/23-24/dpt/cxmath10047.htm?code=MATH10047AC

Host Institution Campus

Host Institution Faculty
School of Mathematics

Host Institution Degree

Host Institution Department

Course Last Reviewed
2023-2024

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