COURSE DETAIL

PROBABILITY AND RANDOM PROCESSES

Country
Korea, South

Host Institution
Yonsei University

Program(s)
Yonsei University

UCEAP Course Level
Upper Division

UCEAP Subject Area(s)
Mathematics

UCEAP Course Number
115

UCEAP Course Suffix

UCEAP Official Title
PROBABILITY AND RANDOM PROCESSES

UCEAP Transcript Title
PROBABILITY&PROCESS

UCEAP Quarter Units
4.50

UCEAP Semester Units
3.00

Course Description

This course covers fundamental stochastic models of probabilistic phenomena, including conditional probability, stochastic processes, Markov chains, properties and applications of Markov chains, Poisson processes, renewal processes, and martingales. Topics include Conditional Expectation, Martingales in Discrete Time, Optional Stopping Theorem, Martingale Inequalities, Convergence and Uniform Integrability, Markov Chains, Long-Time Behavior of Markov Chains, Poisson Process, Brownian Motion, and Stochastic Differential Equations.

Language(s) of Instruction
English

Host Institution Course Number
MAT3113

Host Institution Course Title
PROBABILITY AND RANDOM PROCESSES

Host Institution Course Details

Host Institution Campus

Host Institution Faculty

Host Institution Degree

Host Institution Department

Course Last Reviewed
2025-2026

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