COURSE DETAIL

INTRODUCTION TO GAME THEORY
Country United Kingdom - England
Host Institution Imperial College London
Program(s) Imperial College London
UCEAP Course Level Upper Division
UCEAP Subject Area(s) Mathematics
UCEAP Course Number 145
UCEAP Course Suffix
UCEAP Official Title INTRODUCTION TO GAME THEORY
UCEAP Transcript Title INTRO GAME THEORY
UCEAP Quarter Units 5.00
UCEAP Semester Units 3.30

Course Description

This course explores the classical theory of games involving concepts of dominance, best response, and equilibria, where it proves Nash's Theorem on the existence of equilibria in games. Students learn the concept of when a game is termed zero-sum and prove the related Von Neumann's Minimax Theorem. The course explores cooperation in games and investigates the interesting Nash bargaining solution which arises from reasonable bargaining axioms. Students also explore the concept of a congestion game, often applied to situations involving traffic flow, where they see the counterintuitive Braess paradox emerge and prove Nash's theorem in another context.

Language(s) of Instruction
English

Host Institution Course Number
MATH70141

Host Institution Course Title
INTRODUCTION TO GAME THEORY

Host Institution Course Details
https://www.imperial.ac.uk/computing/current-students/courses/math70141/

Host Institution Campus

Host Institution Faculty

Host Institution Degree

Host Institution Department
Mathematics

Course Last Reviewed
2024-2025

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