COURSE DETAIL

THEORY OF COMPLEX NETWORKS

Country
United Kingdom - England

Host Institution
King's College London

Program(s)
King's College London

UCEAP Course Level
Upper Division

UCEAP Subject Area(s)
Mathematics

UCEAP Course Number
117

UCEAP Course Suffix

UCEAP Official Title
THEORY OF COMPLEX NETWORKS

UCEAP Transcript Title
COMPLEX NETWORKS

UCEAP Quarter Units
6.00

UCEAP Semester Units
4.00

Course Description

The course covers the following: Microscopic properties of networks: adjacency matrix, vertex degree, clustering coefficient, measures of node centrality and node similarity. Macroscopic properties of networks: degree distributions, graph modularity, and assortativity. Processes on networks: voter model, diffusion process, random walk on a graph, PageRank, and spectral distribution. Random graphs: Erdos-Renyi ensemble, graphs with a prescribed degree distribution, giant components and percolation transition.

Language(s) of Instruction
English

Host Institution Course Number
6CCMCS02

Host Institution Course Title
THEORY OF COMPLEX NETWORKS

Host Institution Course Details
https://www.kcl.ac.uk/abroad/module-options/theory-of-complex-networks-2

Host Institution Campus
King's College London/ Strand Campus

Host Institution Faculty

Host Institution Degree

Host Institution Department
Mathematics

Course Last Reviewed
2022-2023

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