COURSE DETAIL

INTRODUCTION TO COMPLEX INFRASTRUCTURE SYSTEMS
Country United Kingdom - England
Host Institution University College London
Program(s) University College London
UCEAP Course Level Upper Division
UCEAP Subject Area(s) Civil Engineering
UCEAP Course Number 149
UCEAP Course Suffix
UCEAP Official Title INTRODUCTION TO COMPLEX INFRASTRUCTURE SYSTEMS
UCEAP Transcript Title INTR INFRASTRUC SYS
UCEAP Quarter Units 6.00
UCEAP Semester Units 4.00

Course Description

This course focuses on the basics of infrastructure as a complex system, giving priority to the interdependencies across infrastructure, and how these links result in macro infrastructure properties, such as resilience, security, and adaptability. Challenges for infrastructure including climate change are elaborated in the context of infrastructure as a system of systems. Exciting opportunities from digitalization, decentralization, democratization, decarbonization, etc. are exposed, highlighting the connectedness of nature, society, and engineered systems. It is essential for future engineering leaders to appreciate how their sectoral systems create stakeholder value and deliver critical services in the context of infrastructure as a whole, and how these values and services change over time. The course also provides an overview of transdisciplinary approaches and methods for the analysis and visualization of infrastructure, equipping students with the skills to communicate challenges, opportunities, and recommendations to improve outcomes from infrastructure throughout its lifecycle.

Language(s) of Instruction
English

Host Institution Course Number
CEGE0120

Host Institution Course Title
INTRODUCTION TO COMPLEX INFRASTRUCTURE SYSTEMS

Host Institution Course Details
https://www.ucl.ac.uk/module-catalogue/modules/introduction-to-complex-infrastr…

Host Institution Campus

Host Institution Faculty

Host Institution Degree

Host Institution Department
Civil, Environmental and Geomatic Engineering

Course Last Reviewed
2023-2024

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