

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 Campus

University College London

Host Institution Faculty

Host Institution Degree

Host Institution Department

Civil, Environmental and Geomatic Engineering

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