

## Urban Railway Planning and Analysis (CEGE0106)

### Description

The student will gain basic analysis and modelling skills to perform urban railway planning, operation management and engineering. Through the module, the student will understand how to conceptualise, analyse and model complex railway systems.

The module focuses on analytical and modelling skills required for urban railway planning and analysis.

### Outlines:

The contents can include

- Introduction
- Demand Modelling 1: Trip generation and distribution
- Demand Modelling 2: Mode choice and Assignment
- Resource Scheduling 1: Timetabling 1 (Basics)
- Resource Scheduling 2: Timetabling 2 (Advanced)
- Train Operation Models and Simulation
- Passenger Crowd Modelling
- Operation Performance Evaluation 1 (PPM, Lost Customer Hours)
- Operation Performance Evaluation 2 (Advanced)
- Implementation of new control systems

The module includes guest lectures by the urban railway operators.

### Learning outcomes

By the end of the course, the student should be able to:

- Conceptualise and model the operations, users, and business impacts of urban railway systems in pragmatic and systematic ways.
- Apply existing models and analytical methods to solve real problems of urban railways while appreciating the problem nature.

### Key information

<b>Year</b>	2019/20
<b>Credit value</b>	15 (150 study hours)
<b>Delivery</b>	PGT L7, Campus-based
<b>Reading List</b>	<a href="#">View on UCL website</a>
<b>Tutor</b>	<a href="#">Dr Yan Cheng</a>
<b>Term</b>	Term 1
<b>Timetable</b>	<a href="#">View on UCL website</a>

### Assessment

### Find out more

For more information about the department, programmes, relevant open days and to browse other modules, visit [ucl.ac.uk](http://ucl.ac.uk)

- Use the above skills in their day-to-day work in urban railways

