



**UNSW**  
SYDNEY

Australia's  
Global  
University

# Built Environment

SUSD0016  
Sustainable Infrastructure



Course Outline – Term 1, 2020

## Disclaimer

Information within this document is subject to change. The full and most accurate course outline will be available in Moodle closer to the start of the term in which the course is offered.

## 1. COURSE STAFF

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## 2. COURSE DETAILS

<b>Credit Points</b>	6 units of credit (uoc)
<b>Workload</b>	Approx. 150 hours including class contact hours, weekly individual and group online learning activities, readings, class preparation, and assessment activities.
<b>Teaching Times and Location</b>	Find details in timetable <a href="http://www.timetable.unsw.edu.au">http://www.timetable.unsw.edu.au</a>

## Description

This course provides foundation knowledge for planning and managing sustainable infrastructure and public services. By infrastructure we mean built facilities and networks – either above or below ground – that support health, safety, and welfare. This is a broad take that traditionally has included publicly- and privately-owned providers of systems such as:

- Utilities – gas and electricity, water supply and sewerage, waste collection and disposal
- Public Works – roads and bridges, dams and canals, ports and airports, railways
- Community Facilities – prisons, schools, parks, recreation, hospitals, libraries
- Telecommunications - telephony, internet, television, satellites, cable, broadband, etc.

Public services in this context refers to public or social programs designed to benefit a class or classes of citizens, including health care, housing, workfare, education etc. This course prepares students to be proficient in a life-cycle method of infrastructure planning and management, which starts with a needs assessment, and encompasses programming, planning, design, costing, budgeting, financing, operations, maintenance, rehabilitation, replacement/redesign, and evaluation. We will also cover selected infrastructure and service systems, to be selected by the professor in consultation with the students, in order to best meet their interests. These typically include transport, public health, water, sewage treatment, energy, and telecoms. This course provides professionals and researchers with the theory and the tools needed to perform basic infrastructure planning and research. This course is designed to provide a basis for life-long inquiry into infrastructure. It is for students of urban planning, urban design, landscape architecture, architecture, property development, civil and environmental engineering, public health, and public administration.

## Aims

1. This course prepares students to be proficient in a life-cycle method of infrastructure planning and management, which starts with a needs assessment, and encompasses programming, planning, design, costing, budgeting, financing, operations, maintenance, rehabilitation, replacement/redesign, and evaluation.
2. This course is designed to provide a basis for life-long inquiry into infrastructure. It is for students of urban planning, urban design, landscape architecture, architecture, property development, civil and environmental engineering, public health, and public administration.

## Course Learning Outcomes (CLOs)

At the successful completion of this course, you will be able to:

1. Evaluate the role of sustainable infrastructure in the planning and urban development process.
2. Demonstrate an understanding of life cycle thinking in planning sustainable infrastructure.
3. Analyse the roles of government, private sector, and other agents in infrastructure development processes.
4. Demonstrate collaborative skills in teamwork that ensure productivity and shared responsibility.

## 3. ASSESSMENT

Assessment task	Weight	CLOs Assessed
1. Assessment 1 - Individual Essay (Individual)	35%	1, 3
2. Assessment 2 - Presentation of Group Projects	30%	2, 3, 4
3. Assessment 3 - Group Project Report (Individual 20%, Group 15%)	35%	1, 2, 3, 4

## 4. COURSE IMPROVEMENT AND FEEDBACK

Feedback from students is an integral part of improving courses and teaching approaches. One of the primary mechanisms of feedback is myExperience, which we strongly urge all students to complete at the end of term. Course convenors use the feedback to make ongoing improvements to the course. This is communicated in Moodle in the myFeedback Matters page.