UNSW SYDNEY | Australia's Global University

Built Environment

SUSD0003

Energy and the Built Environment

Course Outline – Term 3, 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

Course Contact	Anir Upadhyay
Email	anir.upadhyay@unsw.edu.au

2. COURSE DETAILS

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

Description

This course provides an overview of energy related issues in the built environment such as, demand and supply, technologies and infrastructure, greenhouse gas/ carbon emissions, and energy related interactions with other aspects of sustainable development. Various aspects of energy efficient cities, precinct and buildings are explored. In addition, tools for assessing energy performance of the built environment are also introduced. The course further discusses related policies, planning, design, management and technological strategies applied at different scales and stages in the built environment, drawing on the best practice 'real world' case studies.

Aims

This course aims to:

- Develop a theoretical and practical understanding of energy related issues and opportunities at different scales of the built environment
- Develop an understanding of energy and environmental rating tools and assessment systems and the role they can play in achieving and maintaining sustainability in the built environment.
- Develop the ability to investigate and critically assess an existing built environment; and independently develop initiatives and strategies to achieve greater sustainability in that built environment.

Course Learning Outcomes (CLOs)

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

1. Describe and explain the fundamental issues around energy generation and its consumption in the built environment sector.
2. Analyse and justify the approaches adopted by built environment professionals to address energy efficiency and in reducing GHG emissions in the built environment sector.
3. Explore various energy assessment tools and critically review model assumptions, climate data sets and default values to make informed design decisions.
4. Evaluate mandatory and voluntary energy efficiency standards and tools, and propose future directions to achieve zero carbon or carbon positive developments.

3. ASSESSMENT

Assessment task	Weight	CLOs Assessed
1. Report - Individual Report	40%	1 ,2
2. Assignment - Group Assessment	40%	3 ,4
3. Presentation- Weekly activity - 1 (Online forum)	30%	1 ,2 ,3 ,4
4. Essay - Weekly activity - 2 (Essay)	10%	1 ,2 ,3 ,4
5. Weekly activity - 3 (Quizzes)	10%	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.