



UNSW
SYDNEY

Australia's
Global
University

Built Environment

CODE1231

Ubiquitous Cities



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

Course Contact	Nicole Gardner
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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 introduces and critiques discourses, policies, and case examples of regional and global digital, ubiquitous, and smart city thinking and initiatives. This knowledge further informs an exploration of the application of computational thinking and methods to urban and spatial analysis, and the creation of design projects that adopt principles of physical computing, interaction design and human-machine interaction. The course culminates in the creation, construction, and presentation of interaction design proposals and working interaction design prototypes that engage sensing and actuating technologies.

Aims

The course will position students to the leading edge of bringing ubiquitous city concepts into Australia respecting the local cultural and social set up the differs from the nations listed above. An understanding of ubiquitous planning guidelines combined with knowledge in sensor technology and data gathering will enable students to analyze urban data that will influence the design process in smart cities. Learning and assessment is based on design and planning exercises within a computer lab environment. The learning experience will enable students to understand planning principles in Ubiquitous Cities and how these principles could be applied in small 'bottom up' projects that engage citizens to transform their cities into Ubiquitous Cities instead of having a 'top down' approach where government agencies influence the process. Combining Grasshopper with Cry Engine skills students will feed in data from citizens into a software that can analyse and then evaluate data within a gaming environment.

Course Learning Outcomes (CLOs)

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

1. Critique discourse, policies, case studies of regional and global smart / ubiquitous / digital cities;
2. Apply computational thinking and methods to urban and spatial analysis;
3. Create design projects that adopt principles of physical computing, interaction design and human-machine interaction;
4. Apply relevant verbal and multimedia communication skills; and
5. Create and construct working prototypes of interaction-design proposals.

3. ASSESSMENT

Assessment task	Weight	CLOs Assessed
1. Project – Smart Cities initiatives case study (20%) and Comparative Analysis (10%) (Individual)	30%	1, 4
2. Assignment – Urban Interaction Design Research (individual)	30%	1, 4
3. Project – Urban Interaction Design (Group)	30%	1, 2, 3, 4, 5
4. Test – Online Exam: Moodle Quiz	10%	1

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.