



UNSW
SYDNEY

Australia's
Global
University

Built Environment

CODE1110
Computational Design Theory 1



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	Dr Yannis Zavoleas
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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 addresses architecture's digital turn and introduces students to historical and contemporary discourses, theoretical concepts and ideas, and architectural projects that have engaged digital technologies and computational design thinking and methods from the late twentieth century onwards. Students will undertake verbal, visual, and written modes of analysis to develop knowledge and critically evaluate discourses and architectural projects relating to digital and computational design technologies. Students will employ a range of verbal and multimedia communication mediums and skills to demonstrate their knowledge and analysis.

Aims

This course is conducted via a lecture series (one hour per week); the lecture series has 80% attendance requirement and will have a computer-generated test at the end of the semester. Passing the test with a minimum of 80% right answers is compulsory to pass the course.

The course will expose students to current concepts and design theories through the analysis of digital design skills and technique. It enables students to generate their own design approaches as well as navigate the digital design media that explores new forms and relationships between the designer, image, and information. Furthermore, by constructing his or her own 'theoretical toolbox', each student is expected to formulate his/her own design paradigm.

The assessed projects in this course are two folds: reading - discourse formulation - writing, and project analysis as guided by theoretical framings and research + documentation on the technologies employed. Students need to present their writing topics in class first and conduct discussions. Upon the feedbacks from the lecturer, a paper will make up 40% of the assessment. Students will then select the theoretical themes introduced in the lectures, formulate their analytical tools or design paradigms, and exercise the unfolding of theory in the expanding field of digital technologies by way of selected project analysis and comparison (the selection need to be approved by the lecturer in advance). This will constitute 60% of the assessment.

Course Learning Outcomes (CLOs)

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

1. Synthesis historical and theoretical knowledge of computational design thinking and methods in an architectural context;
2. Critically analyse architectural projects that engage computational thinking and methods;
3. Analyse and evaluate the ethical application of digital and computational technologies in an architectural context; and
4. Demonstrate a range of verbal and multimedia communication skills.

3. ASSESSMENT

Assessment task	Weight	CLOs Assessed
1. Assignment – Reflective Writing (Individual)	20%	1, 2
2. Assignment – Discourse formations – Computational Design timelines (Individual)	30%	2, 4
3. Assignment – Interview with an architect (Group)	30%	1, 2, 3, 4
4. Test – Online Exam: Moodle Quiz (Individual)	20%	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.