UNSW Course Outline

BEIL0015 Digital Design Foundations - 2024

Published on the 01 Feb 2024

General Course Information

Course Code : BEIL0015
Year : 2024
Term : Term 1
Teaching Period : T1
Is a multi-term course? : No
Faculty : Faculty of Arts, Design and Architecture
Academic Unit : School of Built Environment
Delivery Mode : In Person
Delivery Format : Standard
Delivery Location : Kensington
Campus : Sydney
Study Level : Undergraduate
Units of Credit : 6

Useful Links

Handbook Class Timetable

Course Details & Outcomes

Course Description

This course explores how traditional methods of design and making can be reconceptualised through design technology tools and in relation to contemporary digital and robotoc fabrication technologies. You will explore concepts of computational and digital craft and their application in

contemporary design projects. The course culminates in the creation of physical prototypes to test your design and fabrication strategies.

Relationship to Other Courses

This course is part of the robotic fabrication minor offered by the Built Environment.

Students can take this elective without being enrolled in the minor.

Course Learning Outcomes

Course Learning Outcomes
CLO1 : Explain the concept of digital craft in relation to contemprary architecture and design projects.
CLO2 : Apply knowledge of computational design as a system that connects design with fabrication.
CLO3 : Create design technology workflows to fabricate design prototypes.
CLO4 : Document a design and fabrication process using visual and verbal skills and techniques.

Course Learning Outcomes	Assessment Item
CLO1 : Explain the concept of digital craft in relation to contemprary architecture and design projects.	• Research and Project Proposal • Design Process Presentation • Final Project
CLO2 : Apply knowledge of computational design as a system that connects design with fabrication.	• Design Process Presentation • Final Project
CLO3 : Create design technology workflows to fabricate design prototypes.	• Research and Project Proposal • Design Process Presentation • Final Project
CLO4 : Document a design and fabrication process using visual and verbal skills and techniques.	• Final Project

Learning and Teaching Technologies

Moodle - Learning Management System | Microsoft Teams

Additional Course Information

Students must have completed a workshop safety badge induction to complete this

course : https://www.making.unsw.edu.au/access/entry-badges/

Assessments

Assessment Structure

Assessment Item	Weight	Relevant Dates
Research and Project Proposal Assessment Format: Individual	30%	Start Date: Not Applicable Due Date: Not Applicable
Design Process Presentation Assessment Format: Individual	30%	Start Date: Not Applicable Due Date: Not Applicable
Final Project Assessment Format: Individual	40%	Start Date: Not Applicable Due Date: Not Applicable

Assessment Details

Research and Project Proposal

Assessment Overview

You will select and investigate a design fabrication theme. You will submit a report outlining research in this area and identify a project to be automated. Feedback will be given through the learning management system, and the level of achievement will be indicated against the assignment criteria rubric as well as a section for additional comments. Feedback will also be given verbally in class where applicable.

Course Learning Outcomes

- CLO1 : Explain the concept of digital craft in relation to contemprary architecture and design projects.
- CLO3 : Create design technology workflows to fabricate design prototypes.

Detailed Assessment Description

The detailed assessment brief can be found on the Moodle homepage.

Assignment submission Turnitin type

This assignment is submitted through Turnitin and students can see Turnitin similarity reports.

Design Process Presentation

Assessment Overview

Based on the project identified in assessment 1, you will develop a design and digital fabrication strategy and workflow. You will submit a pre-recorded video presentation that outlines the project strategy and workflow. Feedback will be given through the learning management system, and the

level of achievement will be indicated against the assignment criteria rubric as well as a section for additional comments. Feedback will also be given verbally in class where applicable.

Course Learning Outcomes

- CLO1 : Explain the concept of digital craft in relation to contemprary architecture and design projects.
- CLO2 : Apply knowledge of computational design as a system that connects design with fabrication.
- CLO3 : Create design technology workflows to fabricate design prototypes.

Detailed Assessment Description

The detailed assessment brief can be found on the Moodle homepage.

Assignment submission Turnitin type

This is not a Turnitin assignment

Final Project

Assessment Overview

You will develop and apply a design technology workflow and create and compare fabricated prototypes. You will deliver a verbal and mixed-media presentation evaluating the outcomes of your design technology workflow and prototypes. Feedback will be given through the learning management system, and the level of achievement will be indicated against the assignment criteria rubric as well as a section for additional comments. Feedback will also be given verbally in class where applicable.

Course Learning Outcomes

- CLO1 : Explain the concept of digital craft in relation to contemprary architecture and design projects.
- CLO2 : Apply knowledge of computational design as a system that connects design with fabrication.
- CLO3 : Create design technology workflows to fabricate design prototypes.
- CLO4 : Document a design and fabrication process using visual and verbal skills and techniques.

Detailed Assessment Description

The detailed assessment brief can be found on the Moodle homepage.

Assignment submission Turnitin type

This is not a Turnitin assignment

General Assessment Information

Grading Basis

Standard

Course Schedule

Teaching Week/Module	Activity Type	Content
Week 1 : 12 February - 18 February	Lecture	Course Introduction
	Tutorial	Introduction to craft streams
Week 2 : 19 February - 25 February	Lecture	Methods of Craft & History
	Tutorial	Digital Design Workshop I
Week 3 : 26 February - 3 March	Lecture	Sustainable and Natural Materials
	Tutorial	Digital Design Workshop II
	Assessment	Assessment 01 is due this week. Submission is online.
Week 4 : 4 March - 10 March	Lecture	Guest Lecture
	Tutorial	Digital Design Workshop III
Week 5 : 11 March - 17 March	Lecture	Vernacular Architecture Vs Contemporary
	Tutorial	Automation Techniques Workshop I
Week 6 : 18 March - 24 March	Assessment	Assessment 02 is due this week. Online Submission
	Other	Week 6 - Flexibility week - There are no mandatory lectures, tutorials or workshops. Students should be working towards their assessment 02 submission. Students will have access to the design futures lab.
Week 7 : 25 March - 31 March	Lecture	Automation via robotics
	Tutorial	Automation Techniques Workshop II
Week 8 : 1 April - 7 April	Lecture	Automation via robotics & methods of developing design workflows
	Tutorial	Studio Session - Students will work on their final assessment.
Week 9 : 8 April - 14 April	Lecture	Presentation Preparation & Future of the Field
	Tutorial	Studio Session - Students will work on their final assessment.
Week 10 : 15 April - 21 April	Assessment	Assessment 03 is due. Students will present their assessment in class.

Attendance Requirements

You are expected to be regular and punctual in attendance at all classes for the School of Built Environment courses in which you are enrolled. If and where individual courses have specific attendance requirements, these will be stated in the course outline.

If you do not attend, engage, or participate in scheduled class activities, including lectures, tutorials, studios, labs, etc, you run the risk of failing a course.

If illness or unexpected and beyond your control circumstances prevent you from completing a task on time, or substantially disturb your assessment performance, you should apply for Special Consideration, as soon as practicable, accompanied by appropriate documentation.

No special consideration will be provided if you miss out on essential course information and

materials, or if you miss assessment tasks and deadlines due to unexplained absences or an unapproved lack of attendance.

You may be advised by the Course Convenor to withdraw from the course if significant learning activities are missed.

Course Resources

Prescribed Resources

All resources relating to the course can be found on the Moodle homepage.

Recommended Resources

All resources relating to the course can be found on the Moodle homepage.

Additional Costs

As this course focuses on prototyping objects, there could be some costs associated with this. The course aims to provide materials where possible, but additional material may need to be purchased through the Design Futures Lab.

Course Evaluation and Development

Feedback for the course to students will be given through the learning management system, and the level of achievement will be indicated against the assignment criteria rubric as well as a section for additional comments. Feedback will also be given verbally in class where applicable.

Feedback of the course from students: We encourage and support students to maintain regular contact with the course convenor to provide informal feedback throughout the course. For specific issues or detailed feedback, please arrange a meeting with the course convenor via email.

In this course there is an option for students to provide anonymous feedback via the course's Moodle page, which is directly sent to the convenor. As a final step, students are invited to share their insights and experiences by completing the MyExperience survey. The feedback gathered each year is integral to the continuous enhancement and development of the course.

Staff Details

Position	Name	Email	Location	Phone	Availability	Equitable Learning Services Contact	Primary Contact
Convenor	Charlotte Firth					No	Yes

Other Useful Information

Academic Information

Due to evolving advice by NSW Health, students must check for updated information regarding online learning for all Arts, Design and Architecture courses this term (via Moodle or course information provided).

Please see: https://www.unsw.edu.au/arts-design-architecture/student-life/resources-support/protocols-guidelines for essential student information relating to:

- UNSW and Faculty policies and procedures;
- Student Support Services;
- Dean's List;
- review of results;
- credit transfer;
- cross-institutional study and exchange;
- examination information;
- enrolment information;
- Special Consideration in the event of illness or misadventure;
- student equity and disability;

And other essential academic information.

Academic Honesty and Plagarism

Plagiarism is using the words or ideas of others and presenting them as your own. It can take many forms, from deliberate cheating to accidentally copying from a source without acknowledgement.

UNSW groups plagiarism into the following categories:

- Copying: Using the same or very similar words to the original text or idea without acknowledging the source or using quotation marks. This includes copying materials, ideas

or concepts from a book, article, report or other written document, presentation, composition, artwork, design, drawing, circuitry, computer program or software, website, internet, other electronic resource, or another person's assignment without appropriate acknowledgement.
- Inappropriate paraphrasing: Changing a few words and phrases while mostly retaining the original information, structure and/or progression of ideas of the original without acknowledgement. This also applies in presentations where someone paraphrases another's ideas or words without credit and to piecing together quotes and paraphrases into a new whole, without appropriate referencing.
- Collusion: Working with others but passing off the work as a person's individual work. Collusion also includes providing your work to another student for the purpose of them plagiarising, paying another person to perform an academic task, stealing or acquiring another person's academic work and copying it, offering to complete another person's work or seeking payment for completing academic work.
- Inappropriate citation: Citing sources which have not been read, without acknowledging the "secondary" source from which knowledge of them has been obtained.
- Duplication ("self-plagiarism"): Submitting your own work, in whole or in part, where it has previously been prepared or submitted for another assessment or course at UNSW or another university.

The UNSW Academic Skills support offers resources and individual consultations. Students are also reminded that careful time management is an important part of study. One of the identified causes of plagiarism is poor time management. Students should allow sufficient time for research, drafting and proper referencing of sources in preparing all assessment items. UNSW Library has the ELISE tool available to assist you with your study at UNSW. ELISE is designed to introduce new students to studying at UNSW, but it can also be a great refresher during your study.

Completing the ELISE tutorial and quiz will enable you to:

- analyse topics, plan responses and organise research for academic writing and other assessment tasks
- effectively and efficiently find appropriate information sources and evaluate relevance to your needs
- use and manage information effectively to accomplish a specific purpose
- better manage your time
- understand your rights and responsibilities as a student at UNSW
- be aware of plagiarism, copyright, UNSW Student Code of Conduct and Acceptable Use of UNSW ICT Resources Policy
- be aware of the standards of behaviour expected of everyone in the UNSW community
- locate services and information about UNSW and UNSW Library

Use of AI for assessments

As AI applications continue to develop, and technology rapidly progresses around us, we remain committed to our values around academic integrity at UNSW. Where the use of AI tools, such as ChatGPT, has been permitted by your course convener, they must be properly credited and your submissions must be substantially your own work.

In cases where the use of AI has been prohibited, please respect this and be aware that where unauthorised use is detected, penalties will apply.

Use of AI for assessments | UNSW Current Students

Submission of Assessment Tasks

Turnitin Submission

If you encounter a problem when attempting to submit your assignment through Turnitin, please telephone External Support on 9385 3331 or email them on externalteltsupport@unsw.edu.au

Support hours are 8:00am – 10:00pm on weekdays and 9:00am – 5:00pm on weekends (365 days a year). If you are unable to submit your assignment due to a fault with Turnitin, you may apply for an extension, but you must retain your ticket number from External Support (along with any other relevant documents) to include as evidence to support your extension application. If you email External Support, you will automatically receive a ticket number, but if you telephone, you will need to specifically ask for one. Turnitin also provides updates on their system status on Twitter.

Generally, assessment tasks must be submitted electronically via either Turnitin or a Moodle assignment. In instances where this is not possible, alternative submission details will be stated on your course's Moodle site. For information on how to submit assignments online via Moodle: https://student.unsw.edu.au/how-submit-assignment-moodle

Late Submission Penalty

UNSW has a standard late submission penalty of:

- 5% per calendar day,
- for all assessments where a penalty applies,
- capped at five calendar days (120 hours) from the assessment deadline, after which a student cannot submit an assessment, and
- no permitted variation.

Students are expected to manage their time to meet deadlines and to request Special Consideration as early as possible before the deadline. Support with Time Management is available here.

School Contact Information

beadmin@unsw.edu.au