UNSW Course Outline

BEIL0014 Digital Making - 2024

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General Course Information

Course Code : BEIL0014
Year : 2024
Term : Summer
Teaching Period : U1
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

In 'Digital Making' you will critique design by engaging in digital fabrication technologies and advanced prototyping. You will gain the conceptual understanding, technical knowledge and critical thinking skills required to engage in digital making as a system that connects design to fabrication. Your performance will be evaluated progressively as you prepare for and engage in

studio activities. You will use a range of multimedia communication skills to represent your design propositions and prototyping results with professionalism, clarity and purpose.

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 : Analyse and evaluate case studies and developments in digital fabrication technologies.
CLO2 : Demonstrate knowledge of digital making as a system that connects design to fabrication.
CLO3 : Apply digital fabrication skills for their own design projects and professional work.
CLO4 : Create and construct digitally fabricated working prototypes.

Course Learning Outcomes	Assessment Item
CLO1 : Analyse and evaluate case studies and developments in digital fabrication technologies.	• Design Presentation
CLO2 : Demonstrate knowledge of digital making as a system that connects design to fabrication.	• Design Objects • Design Presentation
CLO3 : Apply digital fabrication skills for their own design projects and professional work.	• Design Objects • Design Presentation
CLO4 : Create and construct digitally fabricated working prototypes.	• Design Objects • Design Presentation

Learning and Teaching Technologies

Moodle - Learning Management System | Microsoft Teams

Assessments

Assessment Structure

Assessment Item	Weight	Relevant Dates
Design Objects Assessment Format: Individual	40%	Start Date: Not Applicable Due Date: Not Applicable
Design Presentation Assessment Format: Individual	60%	Start Date: Not Applicable Due Date: Not Applicable

Assessment Details

Design Objects

Assessment Overview

You will engage in an iterative process of testing and revision to create an object by applying digital technologies. Marking will be done using a rubric. Verbal feedback will be provided to individual students and the class.

Course Learning Outcomes

- CLO2 : Demonstrate knowledge of digital making as a system that connects design to fabrication.
- CLO3 : Apply digital fabrication skills for their own design projects and professional work.
- CLO4 : Create and construct digitally fabricated working prototypes.

Detailed Assessment Description

The detailed assessment criteria is available on Moodle.

Assignment submission Turnitin type

Not Applicable

Design Presentation

Assessment Overview

You will develop a presentation that will demonstrate your ability to apply to digital fabrication skills and knowledge of computational design to a contemporary problem. Marking will be done using a rubric. Ongoing, formative feedback will be provided to individual students and the class through the project development phase.

Course Learning Outcomes

- CLO1 : Analyse and evaluate case studies and developments in digital fabrication technologies.

- CLO2 : Demonstrate knowledge of digital making as a system that connects design to fabrication.
- CLO3 : Apply digital fabrication skills for their own design projects and professional work.
- CLO4 : Create and construct digitally fabricated working prototypes.

Detailed Assessment Description

The detailed assessment criteria is available on Moodle.

Assignment submission Turnitin type

This is not a Turnitin assignment

General Assessment Information

This course requires the physical making of objects. This means students must complete a safety induction in one of the makerspaces on campus. Other inductions for specific machines will be run as a part of the course.

Grading Basis

Standard

Course Schedule

Teaching Week/Module	Activity Type	Content
Week 1 : 1 January - 7 January	Lecture	There will be two lectures held in week 1. Lecture 01: Course introduction & Relevant Materials Lecture 02: Materials & Recycling
	Tutorial	There will be two tutorials held in week 1. Tutorial 01: Introduction to software & design for manufacture and assembly. Tutorial 02: Parametric design & surface design.
Week 2 : 8 January - 14 January	Lecture	There will be two lectures held in week 2. Lecture 01: Advanced 3D Printing Leture 02: Cnc Milling & Subtractive Manufacturing
	Tutorial	There will be two tutorials held in week 2. Tutorial 01: 3D Printing & Slicing Workshop Tutorial 02: CNC & Toolpath Design Workshop
	Assessment	Assessment 01 is due at the end of Week 2. Students should submit their assessments via Moodle. All details of the assessment can be found on Moodle.
Week 3 : 15 January - 21 January	Lecture	There will be two lectures held in week 3. Lecture 01: How advanced manufacturing is changing the built environment. Lecture 02: Future of Robotic Fabrication & Course Completion.
	Tutorial	There will be two tutorials held in week 3. Tutorial 01: Plastics processing & design studio. Tutorial 02: Design & fabrication studio.
Week 5 : 29 January - 4 February	Assessment	Assessment two is due in week 05. Students must present their work to their tutor. All relevant information must be submitted to Moodle. All details of the assessment can be found on Moodle.

Attendance Requirements

Students are strongly encouraged to attend all classes and review lecture recordings.

General Schedule Information

This course is run as an intensive summer course which will require students to be on campus mulitple times a week.

Course Resources

Prescribed Resources

All resources are available through Moodle.

Recommended Resources

All resources are available through Moodle.

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 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.

Staff Details

Position	Name	Email	Location	Phone	Availability	Equitable Learning Services Contact	Primary Contact
Convenor	Charlotte Firth		4041; Level 4; Anita B. Lawrence Building		Appointment via email	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