UNSW Course Outline

DDES2151 Interaction 3: Emerging Applications - 2024

Published on the 13 May 2024

General Course Information

Course Code : DDES2151
Year : 2024
Term : Term 2
Teaching Period : T2
Is a multi-term course? : No
Faculty : Faculty of Arts, Design and Architecture
Academic Unit : School of Art & Design
Delivery Mode : In Person
Delivery Format : Standard
Delivery Location : Paddington
Campus : Paddington
Study Level : Undergraduate
Units of Credit : 6

Useful Links

Handbook Class Timetable

Course Details & Outcomes

Course Description

This advanced course within the Interaction disciplinary studio will introduce you to some of the state-of-the-art emerging applications in interaction design. Throughout the course, you will examine the importance of human physical, social and cognitive abilities to inform the design

process. The course focuses on the key emerging technological areas that are transforming current interaction design practice, including artificial intelligence, conversational interfaces, robotic interfaces, and mixed reality environments.

In this course, you will undertake an in-depth project that focuses on one of the identified key emerging technological areas. Your main task is to work through the interaction design process, by building on the concepts, methodologies and technical skills developed in Interaction 1 and 2, to derive design prototypes for a designated theme. In particular, your project will demonstrate an emphasis on relevant human capabilities and their successful integration into your design prototypes.

Course Aims

This course is the third course within the Interaction disciplinary studio in the Bachelor of Design program. The aim of the course is to develop advanced knowledge, skills and attributes that inform the interaction design process with the human capabilities that are associated with the development of interactive systems that use emerging technologies.

Course Learning Outcomes

Course Learning Outcomes
CLO1 : Analyse and construct key concepts within emerging technological areas that are transforming interaction design, such as mixed reality, artificial intelligence and robotics
CLO2 : Inform the interaction design process with the cognitive, physical and social human capabilities that are relevant to the project and technology
CLO3 : Develop interactive systems in innovative interactive contexts to produce functional prototypes that are adapted to the users' needs and capabilities
CLO4 : Work professionally in a team, applying iterative methods and collaborative tools, to produce design prototypes and solutions

Course Learning Outcomes	Assessment Item
CLO1 : Analyse and construct key concepts within emerging technological areas that are transforming interaction design, such as mixed reality, artificial intelligence and robotics	• Existing Creative Technologies Research • Design Prototype • Project Report
CLO2 : Inform the interaction design process with the cognitive, physical and social human capabilities that are relevant to the project and technology	• Existing Creative Technologies Research • Design Prototype • Project Report
CLO3 : Develop interactive systems in innovative interactive contexts to produce functional prototypes that are adapted to the users' needs and capabilities	• Design Prototype • Project Report
CLO4 : Work professionally in a team, applying iterative methods and collaborative tools, to produce design prototypes and solutions	• Design Prototype

Learning and Teaching Technologies

Moodle - Learning Management System | Microsoft Teams

Additional Course Information

This is an advanced stream course. At this stage students should be able to bring concepts and practices from their studies in Interaction 1 and 2 to the course without being prompted, and be able to work effectively in groups, dealing with group issues, proactively engaging with the tutor where necessary.

Assessments

Assessment Structure

Assessment Item	Weight	Relevant Dates
Existing Creative Technologies Research Assessment Format: Individual	40%	Start Date: Not Applicable Due Date: 27/06/2024 11:55 PM
Design Prototype Assessment Format: Group	30%	Start Date: Not Applicable Due Date: 23/07/2024 11:55 PM
Project Report Assessment Format: Individual	30%	Start Date: Not Applicable Due Date: 02/08/2024 11:55 PM

Assessment Details

Existing Creative Technologies Research

Assessment Overview

In this assessment you will research two existing emerging creative technologies and develop a design report presented as a poster that examines the technical, design and social issues associated with the technology. Feedback will be provided on a regular basis in studio through discussion with peers and tutors. Summative assessment and feedback will be provided digitally based on the rubric.

Course Learning Outcomes

- CLO1 : Analyse and construct key concepts within emerging technological areas that are transforming interaction design, such as mixed reality, artificial intelligence and robotics
- CLO2 : Inform the interaction design process with the cognitive, physical and social human capabilities that are relevant to the project and technology

Detailed Assessment Description

As an interaction designer, it is crucial to have a broad understanding of the technology you are designing for. Suppose you misunderstand the capabilities of AI systems to perform intelligent tasks or the physical or attentional risks of AR systems. In that case, you may create dangerous, frustrating, or poorly performing interfaces. This task is about stepping back from the creative work of design and developing a rich profile of technology.

In this assignment, you will conduct your own research into two existing emerging technologies. Starting from the pointers, references and discussion points seeded in class, take a deep dive into the technical, design and social issues associated with the technology. This assignment will be a design report presented as a **poster**. You will analyse two technologies separately. You do not need to compare them directly.

Submission details: Due Week 5 (1 hour before your tutorial) and 5 minutes of presentation for one selected poster. Submission details: Poster presentation in class, supported by PDF poster submission one hour before class.

1500 words in total - approx. 750 words for each poster

Assessment Length

1500 words -/+10% with references

Submission notes

Electronic submissions via Moodle course site and in class presentation

Assessment information

Course learning outcomes addressed in this task:

1. Analyse and construct key concepts within emerging technological areas transforming interaction design, such as mixed reality, artificial intelligence and robotics.
2. Inform the interaction design process with the cognitive, physical and social human capabilities relevant to the project and technology. How will students receive feedback on this task: In-class and Written feedback.

How will students receive feedback on this task: In-class and Written feedback

Assignment submission Turnitin type

This assignment is submitted through Turnitin and students do not see Turnitin similarity reports.

Design Prototype

Assessment Overview

In this assessment task you will work in groups to develop a new design prototype that applies one or more emerging technologies in any area of your choosing. Feedback will be provided on a regular basis in studio through discussion with peers and tutors. Summative assessment and feedback will be provided digitally based on the rubric.

Course Learning Outcomes

- CLO1 : Analyse and construct key concepts within emerging technological areas that are transforming interaction design, such as mixed reality, artificial intelligence and robotics
- CLO2 : Inform the interaction design process with the cognitive, physical and social human capabilities that are relevant to the project and technology

- CLO3 : Develop interactive systems in innovative interactive contexts to produce functional prototypes that are adapted to the users' needs and capabilities
- CLO4 : Work professionally in a team, applying iterative methods and collaborative tools, to produce design prototypes and solutions

Detailed Assessment Description

This task is a group work. Working in a group, develop a new, rich concept design applying one or more emerging technologies in any area you choose. Your design should balance speculation and realism. **Speculation**: the purpose of the design should be to highlight a new way that emerging technologies may transform our lives. As a part of your portfolio, this design concept will engage and excite audiences about the future and your ability to envision it. It should stimulate discussion and show detailed integrated thinking about how technology, design and cultural factors interact. Communicate these ideas through rich prototypes, mockups and scenario development. **Realism**: although exciting and speculative, your design should be rigorously tested and iterated with evidence to develop viable and plausible application ideas. Technological feasibility is a critical factor here. Show that you understand not only the potential of the technology but its limits and conditions of operation.

*Y*ou may consider how Google Creative Labs do speculative design research into creative AI tools using real working prototypes. However, you should also be careful about sugarcoating your design's potential for success. Your critical evaluation is key. An example of previous student work: Augmented reality for enhancing live spectator experience in figure skating events. The team developed a rich design concept with detailed scenarios and video mockups. Through their design process, they identified where and how AR replays and overlays of skater moves would work best to enhance the audience experience. They explored physical prototypes and specific interface designs.

Submission details: Group Presentation in class and Presentation slides and transcript (or video recording) one hour before class.

Assignment submission Turnitin type

This is not a Turnitin assignment

Project Report

Assessment Overview

In this assessment task you will develop a written report that reflects on the outcomes of the Task 2 design prototype including your contribution to the project. Feedback will be provided on a regular basis in studio through discussion with peers and tutors. Summative assessment and

feedback will be provided digitally based on the rubric.

Course Learning Outcomes

- CLO1 : Analyse and construct key concepts within emerging technological areas that are transforming interaction design, such as mixed reality, artificial intelligence and robotics
- CLO2 : Inform the interaction design process with the cognitive, physical and social human capabilities that are relevant to the project and technology
- CLO3 : Develop interactive systems in innovative interactive contexts to produce functional prototypes that are adapted to the users' needs and capabilities

Detailed Assessment Description

Individual Reflective Project Report

This individual project report should include your reflection on the development of your team project, individual vision on future development with further research and analysis and feedbacks for particulation and other teams. Total word count is approx 1000 words.

Assessment Length

1000 -/+ 10% incl. reference list

Assignment submission Turnitin type

This assignment is submitted through Turnitin and students do not see Turnitin similarity reports.

General Assessment Information

There are THREE assessment tasks:

Assessment 1: Research into Existing Emerging Technologies (40%) - Individual
Assessment 2: Design & Prototype (30%) - Group
Assessment 3: Project Report (30%) - Individual

Grading Basis

Standard

Requirements to pass course

Aggregate mark of 50/100

Course Schedule

Teaching Week/Module	Activity Type	Content
Week 1 : 27 May - 2 June	Lecture	Introduction to Emerging Technologies and HCI for Interaction Design
Week 2 : 3 June - 9 June	Lecture	Designing for Virtual and Augmented Reality
Week 3 : 10 June - 16 June	Lecture	Artificial Intelligence (AI) in Interaction Design
Week 4 : 17 June - 23 June	Lecture	Designing for Mobile and Werable Devices
Week 5 : 24 June - 30 June	Lecture	Industry Presentation
	Assessment	Research into Existing Emerging Technologies: Poster Presentation in class (Present only ONE poster for 5 minutes) Submit both posters (Draft) combined as one pdf 1 hour before your tutorial time for feedbacks. Final Due: Week 5, Wednesday, 27 June 11.55 PM
Week 6 : 1 July - 7 July	Other	Study Week
Week 7 : 8 July - 14 July	Lecture	Ethics and Social Implications of Emerging Technologies
Week 8 : 15 July - 21 July	Lecture	Understanding Human Capabilities I: Physical factors, Perception, Proxemics and Space
Week 9 : 22 July - 28 July	Lecture	Understanding Human Capabilities II: Cognitive load, Biases and Heuristics, Prediction.
	Assessment	Final Project Presentation and Critique Submit the video prsentation by Week 9 - Tuesday, 23 July 11.55 PM and In class discussion & critique on Tutorial time
Week 10 : 29 July - 4 August	Lecture	Future of Interaction Design with Emerging Technologies

Attendance Requirements

Attendance Requirements

Students are expected to attend all classes for each course in which they are enrolled. Failure to attend and participate in at least 80% of learning activities such as discussions, peer feedback, studio sessions, online activities, group work, etc., may result in you being flagged as at risk of failing the course. By punctually attending and actively participating in your classes you not only increase your own opportunities for developing your skills and knowledge, but will also help build a rigorous and engaged creative community with other students. If you are unable to attend classes, please inform your relevant Course Convenor. If the absence is for medical reasons, you will be required to present a medical certificate. If absences impact your ability to undertake assessment, then you should apply for Special Consideration.

Staff Details

Position	Name	Email	Location	Phone	Availability	Equitable Learning Services Contact	Primary Contact
Convenor	June Kim		G110, G Block, Paddington Campus		by appointment	Yes	Yes
Tutor	Haider Akmal				Available during scheduled class time	No	No

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-specific Information

Risk of Failure Warnings

If you are at risk of failing the course, because of lack of attendance, low marks in assignments, failing to submit assignments, or lack of participation or engagement, you may be notified by email. Please ensure you read your university email, and respond to any official risk of failure warning promptly. NOTE – if the warning email is sent to your UNSW e-Mail address, it is considered as being read by you whether you check your UNSW email or not.

Late Submission Penalties

If you believe that circumstances will prevent you from submitting an assessment on time, please notify your course convenor as soon as possible. There will be penalties applied for being late and a clear ‘no later than’ date beyond which submission won’t be accepted. Where a Special Consideration is not applied for, and a student assessment is late, the following guidelines apply:

1. Up to 5 days after due date, a penalty of 5% (of maximum mark for assignment) will be applied for each day late (e.g. an assignment that is 3 days late would have its mark reduced by 15%). Please note - for the purpose of deduction calculation, a 'day' is each 24-hour period (or part thereof) past the stipulated deadline for submission within the calendar year (including weekends and public holidays). Task with a percentage mark - If the task is marked out of 100%, late submission will attract a deduction of 5% from the mark awarded to the student for every 24-hour period (or part thereof) past the stipulated deadline.

Example: A student submits an essay 48 hours and 10 minutes after the stipulated deadline. The essay is marked out of 100%. A 3 day late penalty will be applied (3 x 5% = 15%). The essay receives a mark of 68%. The student's mark will therefore be reduced to 53% (68% - 15%).

2. Beyond 5 days late, no submission will be accepted.

Special Consideration

Please note that the University's Special Consideration process allows students to apply for an extension within 3 days of the assessment due date. This provides for more extensive extensions, subject to documentation, and Course Convenor approval. You can apply for special consideration online through my.UNSW.edu.au. More information about special consideration can be found here: https://www.student.unsw.edu.au/special-consideration

NOTE: If you are experiencing issues related to your access to class material or difficulty with technology, make sure you notify your lecturer as soon as possible, well before any assessment due date. Last minute requests for extensions due to computer failure, file corruption, printing problems etc. do not qualify students for special consideration or extensions. Students are expected to maintain regular backups of their work at all times.

Educational adjustments

Educational adjustments can be applied to assessments if you are living with a disability, a long term medical condition, a mental health condition, and/or are a carer of individuals with a disability. The Equitable Learning Service (ELS) determines adjustments based on medical documentation and communicates these via an Equitable Learning Plan (ELP). To receive educational adjustments for equitable learning support, you must first register with Equitable Learning Services (ELS). More information about Equitable Learning Services can be found here https://student.unsw.edu.au/els

Supplementary Assessment

Supplementary assessments are available to students in this course who have failed an assessment but have subsequently had an application for Special Consideration approved by the university. The supplementary assessment may take a different form than the original assessment and will be defined by the course convenor - but it will address the same learning outcomes as the original assessment. If Special Consideration has not been awarded, the maximum mark that may be awarded for a supplementary assessment is 50% of the full assessment mark.

Academic Honesty and Plagiarism

Plagiarism is taking the ideas, words, images, designs or objects of others and passing them off as your own. Plagiarism is a type of intellectual theft. Plagiarism can take many forms, from deliberate cheating to accidentally copying from a source without acknowledgement. Plagiarism can have serious consequences, so it is important that students be aware of what it is, and how

to avoid it. All written submissions are automatically checked for plagiarism using the Turnitin site. For further information, please see the Academic Integrity & Plagiarism website https://www.student.unsw.edu.au/plagiarism.

Referencing Requirements for Assessments

Your course convenor will inform you what referencing system this course follows. Useful guidelines on how to reference according to various systems can be found at: https://student.unsw.edu.au/referencing.

You may follow these guidelines in your assessment tasks, or seek additional advice from your lecturer. Styles for Endnote are downloadable from the Endnote website. Accurate and correct referencing is an important academic prerequisite at University level, and if your work does not meet these requirements, it may be marked down, or in more serious cases, it may be treated as an instance of plagiarism and academic dishonesty.

Use of Generative AI

As AI applications continue to develop, and technology rapidly progresses around us, we remain committed to our values around academic integrity at UNSW. Your work must be your *own* and where the use of AI tools, such as ChatGPT, have 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. If in doubt, please seek advice from the Course Convenor prior to using generative AI tools.

https://www.student.unsw.edu.au/assessment/ai

Health and Safety

Ensuring student and staff health and safety is very important at UNSW Art & Design. Health and safety is everyone's responsibility. As a student, you have a responsibility not to do anything that risks your own health and safety, or the health or safety of your fellow students, staff members or visitors. This means, for example, exiting the building during a fire drill; wearing personal protective equipment and clothing (PPEC) when staff or signage instructs you to do so; undertaking induction to using equipment or carrying out processes that require specific knowledge; and reporting hazards or incidents to your lecturer or supervisor as soon as you become aware of them. For more information, please see https://safety.unsw.edu.au/.

Additional Support and Resources

At UNSW you can also find support and resources if you need help with your personal life, getting your academic success on track or just want to know how to stay safe. See https://www.student.unsw.edu.au/wellbeing.

Additional support for students is available by contacting the following centres:

- Student Support and Development https://www.student.unsw.edu.au/support
- Student Support Advisors: https://www.student.unsw.edu.au/advisors
- Mental Health Support: https://www.student.unsw.edu.au/mental-health-support
- Academic Skills and Support https://www.student.unsw.edu.au/skills
- UNSW IT Service Centre https://www.myit.unsw.edu.au/
- Student Gateway: https://www.student.unsw.edu.au/
- Equitable Learning Services: https://www.student.unsw.edu.au/equitable-learning
- Faculty Resources and Support: https://www.unsw.edu.au/arts-design-architecture/student-life/resources-support
- Arc: https://www.arc.unsw.edu.au/

After Hours Access to the Paddington Campus

The core operating hours for the Paddington Campus are below. All students have access to the campus during these hours:

- Monday to Friday 0800 – 2100
- Saturday 0900 – 1700

Some students are permitted to have “After Hours Access” (AHA) to the campus upon completion of a series of inductions. The inductions are dependent on location, as well as the types of activities undertaken in those locations. The first of these is this Primary Induction, and this must be completed online https://my.artdesign.unsw.edu.au. All students requiring AHA are required to complete this induction. The Primary Induction gives access to the following Low Risk areas:

Post Graduate Students

- PG Research students – Level 4 F Block, Computer Labs and Learning Commons
- Master of Design students – Level 3 D Block, Computer Labs and Learning Commons
- Master of Curating and Cultural Leadership students – D207, Computer Labs and Learning Commons

Honours Students

- Fine Arts – Level 3 F Block, Computer Labs and Learning Commons
- Design – Level 1 E Block, Computer Labs and Learning Commons
- Media Arts – Level 3 F Block, Computer Labs and Learning Commons

Subsequent inductions are workshop and lab specific, and are conducted face-to-face by the UNSW Art & Design Technical staff. Students and staff must first successfully complete the Primary Induction before requesting a Workshop/Lab specific Induction.

School Contact Information

UNSW School of Art & Design

Faculty of Arts, Design & Architecture

Paddington Campus

Cnr Greens Rd & Oxford Street

Paddington NSW 2021

ad.generaladmin@unsw.edu.au