

## DESN2002: Design Thinking and Innovation

Newcastle City Precinct

Semester 1 - 2024



THE UNIVERSITY OF  
NEWCASTLE  
AUSTRALIA

*The School of Humanities, Creative Industries and Social Sciences is committed to providing an inclusive environment in which all cultures are accorded respect and all students and staff are expected to act with honesty, fairness, trustworthiness and accountability in dealings with others. The School recognises and respects the unique histories and cultures of Aboriginal and Torres Strait Islander peoples, their unbroken relationship with the lands and the waters of Australia over millennia, and the validity of Aboriginal ways of knowing. We are dedicated to reconciliation and to offering opportunities for Aboriginal and Torres Strait Islander peoples to access and succeed in higher education.*

## OVERVIEW

<b>Course Description</b>	The world is full of 'wicked problems', issues of great complexity with multiple overlapping concerns and stakeholders. The Design Thinking suite of methods and techniques assists the lay designer as well as the expert to untangle systemic and service design problems across a wide range of sectors and disciplines. Using inclusive and empathetic approaches that foster innovation, this course will produce critically, pedagogically and creatively informed research that generates real-world impact. In this course, students will explore various methods and techniques related to Design Thinking, applying these to inform their own disciplinary practices, in ways that respond to the experiences of end users, and the needs of multiple stakeholders.
<b>Academic Progress Requirements</b>	Nil
<b>Assumed Knowledge</b>	To enrol in this course you must have successfully completed at least 60 units, chosen from any courses offered by UON.
<b>Contact Hours</b>	<b>Newcastle City Precinct</b> <b>Lecture</b> Face to Face On Campus 1 hour(s) per week(s) for 6 week(s) starting Week 1  <b>Lectorial</b> Face to Face On Campus 2 hour(s) per week(s) for 7 week(s) starting Week 7  <b>Tutorial</b> Face to Face On Campus 1 hour(s) per week(s) for 6 week(s) starting Week 1
<b>Unit Weighting</b>	10
<b>Workload</b>	Students are required to spend on average 120-140 hours of effort (contact and non-contact) including assessments per 10 unit course.

# COURSE OUTLINE

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# CONTACTS

<b>Course Coordinator</b>	<b>Newcastle City Precinct</b> Dr Benjamin Matthews <a href="mailto:Ben.Matthews@newcastle.edu.au">Ben.Matthews@newcastle.edu.au</a> (02) 498 54909 Consultation: please email for appointments
<b>Teaching Staff</b>	Other teaching staff will be advised on the course Canvas site.
<b>School Office</b>	<b>School of Humanities Creative Industries and Social Sciences</b> NU Space, Level 4 409 Hunter Street Newcastle <a href="mailto:HCISS@newcastle.edu.au">HCISS@newcastle.edu.au</a> +61 4985 4500

# SYLLABUS

<b>Course Content</b>	Topics will include: <ol style="list-style-type: none"><li>1. Design Thinking values and theories, informed by the related field of Art Thinking;</li><li>2. Methods, techniques and processes for advanced iteration, rapid prototyping, and project implementation;</li><li>3. Design Thinking suite of methods and techniques applied to project lifecycles with an emphasis on interdisciplinary practice;</li><li>4. Experiential and user centred approaches such as co-design, participatory design, empathy mapping, and 'personas';</li><li>5. Analysis of exemplars and precedents in professional practice from a variety of disciplinary perspectives;</li></ol>
<b>Course Learning Outcomes</b>	<b>On successful completion of this course, students will be able to:</b> <ol style="list-style-type: none"><li>1. Interpret established Design Thinking theories, concepts and processes, as well as analyse new directions in the field;</li><li>2. Apply user centred research methods that appropriately respond to an area of practice to generate a solution to a specific real-world problem;</li><li>3. Communicate an understanding of various problem-solving methods and their relationship to Design Thinking strategies;</li><li>4. Critically reflect on their own disciplinary practice through the lens of Design Thinking and/or Art Thinking;</li><li>5. Collaborate effectively in group based work</li></ol>
<b>Course Materials</b>	<b>Other Resources:</b> <ul style="list-style-type: none"><li>- See Canvas for list of Lecture Materials required including multi-media resources, recommended and/or required reading and text.</li></ul>

# SCHEDULE

Week	Week Begins	Topic	Learning Activity	Assessment Due
1	26 Feb	Introduction to Design Thinking Methods	Design Thinking techniques in context: systems, service, and interaction design	
2	4 Mar	Creativity for Purpose	Engaging with case studies: wicked problems from our community	
3	11 Mar	Methods and techniques for Design Thinking across commercial and social enterprise	Defining through empathy: Stakeholders, user journeys, personas	
4	18 Mar	Building the world better: Identifying and untangling 'wicked problems'	For the common good: Strategies for working effectively in teams	
5	25 Mar	Transdisciplinary practices in research: Interviews, data collection, digital footprints.	Using ethnographic and interaction design methods	
6	1 Apr	From fearless ideation to innovation	Class Presentations	1: Research and Define Your Wicked Problem - 20%
7	8 Apr	From ideation to prototype	Class Presentations + Strategy session 1: Mindset shift, from thinking to making	1: Research and Define Your Wicked Problem - 20%
<b>Mid-Semester Recess</b>				
<b>Mid-Semester Recess</b>				
8	29 Apr	Practical methods and techniques for prototyping: software, materials, documentation methods	Strategy session 2: Defining the problem through personas, story mapping, user journeys and more	
9	6 May	Reality check 1: Prototypes in the real world	Strategy session 3: Identifying Roses, Buds and Thorns	
10	13 May	Reality check 2: Feedback session	Research to prototype 1: Tutor/Group consultations	
11	20 May	Advanced prototypes: digital or physical?	Research to prototype 2: Project workshop session	
12	27 May	Knowing is showing: Developing the prototype	Class Presentations	2: Research to Prototype 40%
13	3 Jun	Innovations in Action	Class Presentations	2: Research to Prototype 40%
<b>Examination Period</b>				
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<b>Examination Period</b>				

# ASSESSMENTS

This course has 3 assessments. Each assessment is described in more detail in the sections below.

	Assessment Name	Due Date	Involvement	Weighting	Learning Outcomes
1	A Visual/ Verbal Slide Presentation to an Audience	Week 6-7, in-class presentation. Slides due Friday 12th April, 11.59pm online via Canvas.	Group	20%	1, 2, 3, 5
2	Research to Prototype	Week 12-13, in-class presentation. Documentation due Friday 7 June, 11.59 online via Canvas.	Group and Individual	40% (30% and 10%)	2, 3, 5
3	Online Blog	Due Friday 14 June, 11.59pm online via Canvas.	Individual	40%	1, 2, 4

## Late Submissions

The mark for an assessment item submitted after the designated time on the due date, without an approved extension of time, will be reduced by 10% of the possible maximum mark for that assessment item for each day or part day that the assessment item is late. Note: this applies equally to week and weekend days.

## Assessment 1 – Research and Define Your Wicked Problem - 20%

<b>Assessment Type Description</b>	Presentation (A Visual/ Verbal Slide Presentation to an Audience) A work-in-progress presentation of the current state of the group's progress toward defining a 'wicked problem' inspired by a brief provided on Canvas and the United Nations Sustainable Development Goals. Your focus will be on conducting research that guides the creation of an 'on-paper' proposed solution to this problem for Assessment 2 (Research to Prototype).
<b>Weighting</b>	20%
<b>Length</b>	10 Minute Presentation and Slides
<b>Due Date</b>	Week 6-7, in-class presentation. Slides due Friday 12 <sup>th</sup> April, 11.59pm online.
<b>Submission Method</b>	In Class Online via Canvas
<b>Assessment Criteria</b>	Groups will be expected to have considered their problem thoughtfully and with solid research. The research will show a clear understanding of the 5 stages of the Design Thinking method: Empathise, define, ideate, prototype, test. Techniques utilised must include one user journey and one persona as a minimum requirement, as well as genuinely show empathy and inclusion for stakeholders. The quality of the in-class presentation will be assessed, in addition to the online slides submitted via Canvas. A One Drive link should be submitted within the document uploaded to Canvas if the file size is over 100Mb.
<b>Return Method</b>	Online and In Class
<b>Feedback Provided</b>	Online and In Class.

## Assessment 2 - Research to Prototype - 40% (30% and 10%)

<b>Assessment Type Description</b>	Project In this major Assessment for the course, groups will present the summation of their research and design thinking practice, generated as a means to solving their 'wicked problem', as inspired by the briefs provided for Assessment 1 and the United Nations Sustainable Development Goals.
<b>Weighting</b>	40% (30% and 10%)
<b>Length</b>	10 Min Presentation and 500 word individual summary report
<b>Due Date</b>	Week 12 and 13, in-class presentation. Documentation due Friday 7 June, 11.59 online via Canvas.
<b>Submission Method</b>	In Class Online via Canvas
<b>Assessment Criteria</b>	The presentation slides must include an early-stage prototype (either a digital or physical model) and one minute promotional video, and show in-depth and well-designed intention, thorough research, and a novel approach. In groups, students will apply user centred research methods that appropriately respond to an area of practice to generate a solution to a specific real-world problem. Students will show they have the capacity to collaborate effectively in group-based work. The quality of the in-class presentation will be assessed, in

addition to the online documentation (images, text and one minute promotional video) submitted via Canvas. A One Drive link should be submitted within the document uploaded to Canvas if the file size is over 100Mb.

**Return Method** Online and In Class  
**Feedback Provided** Online and In Class.

### Assessment 3 - Online Blog - 40%

**Assessment Type** Online Learning Activity  
**Description** Students will write a summative reflection on their learning journey throughout the course. Content will need to show an understanding of key theory and practice taught, including the ability to interpret established Design Thinking theories, concepts and processes, as well as analyse new directions in the field. Reference will be made to the group project, and it is recommended that students write about their experience from an individual perspective, analysing the 'roses, buds and thorns' of the project.

**Weighting** 40%  
**Length** 1500 words  
**Due Date** Due Friday 14 June, 11.59pm online via Canvas.  
**Submission Method** Online Via Canvas  
**Assessment Criteria** Students will be expected to reflect upon their progress and development throughout the Semester, supported by scholarly references, in a clearly written analysis that shows an ability to apply key Design Thinking processes. Images and links to documentation sources such as video can be included. A single consistent academic referencing style will be followed. A One Drive link should be submitted within the document uploaded to Canvas if the file size of over 100Mb

**Return Method** Online.  
**Feedback Provided** Online.

## ADDITIONAL INFORMATION

### Grading Scheme

This course is graded as follows:

Range of Marks	Grade	Description
85-100	High Distinction (HD)	Outstanding standard indicating comprehensive knowledge and understanding of the relevant materials; demonstration of an outstanding level of academic achievement; mastery of skills*; and achievement of all assessment objectives.
75-84	Distinction (D)	Excellent standard indicating a very high level of knowledge and understanding of the relevant materials; demonstration of a very high level of academic ability; sound development of skills*; and achievement of all assessment objectives.
65-74	Credit (C)	Good standard indicating a high level of knowledge and understanding of the relevant materials; demonstration of a high level of academic achievement; reasonable development of skills*; and achievement of all learning outcomes.
50-64	Pass (P)	Satisfactory standard indicating an adequate knowledge and understanding of the relevant materials; demonstration of an adequate level of academic achievement; satisfactory development of skills*; and achievement of all learning outcomes.
0-49	Fail (FF)	Failure to satisfactorily achieve learning outcomes. If all compulsory course components are not completed the mark will be zero. A fail grade may also be awarded following disciplinary action.

\*Skills are those identified for the purposes of assessment task(s).

**Communication Methods** Communication methods used in this course include:  
- Face to Face: Communication will be provided via face-to-face meetings or supervision.

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- Email: Students will receive communications via their student email account.
  - Canvas Course Site: Students will receive communications via the posting of content or announcements on the Canvas course site.

**Course Evaluation** Each year feedback is sought from students and other stakeholders about the courses offered in the University for the purposes of identifying areas of excellence and potential improvement.

**Oral Interviews (Vivas)** As part of the evaluation process of any assessment item in this course an oral examination (viva) may be conducted. The purpose of the oral examination is to verify the authorship of the material submitted in response to the assessment task. The oral examination will be conducted in accordance with the principles set out in the [Oral Examination \(viva\) Procedure](#). In cases where the oral examination reveals the assessment item may not be the student's own work the case will be dealt with under the [Student Conduct Rule](#).

**Academic Misconduct** All students are required to meet the academic integrity standards of the University. These standards reinforce the importance of integrity and honesty in an academic environment. Academic Integrity policies apply to all students of the University in all modes of study and in all locations. For the Student Academic Integrity Policy, refer to <https://policies.newcastle.edu.au/document/view-current.php?id=35>.

**Adverse Circumstances** The University acknowledges the right of students to seek consideration for the impact of allowable adverse circumstances that may affect their performance in assessment item(s). Applications for special consideration due to adverse circumstances will be made using the online Adverse Circumstances system where:

1. the assessment item is a major assessment item; or
2. the assessment item is a minor assessment item and the Course Co-ordinator has specified in the Course Outline that students may apply the online Adverse Circumstances system;
3. you are requesting a change of placement; or
4. the course has a compulsory attendance requirement.

Before applying you must refer to the Adverse Circumstance Affecting Assessment Items Procedure available at:  
<https://policies.newcastle.edu.au/document/view-current.php?id=236>

**Important Policy Information** The Help button in the Canvas Navigation menu contains helpful information for using the Learning Management System. Students should familiarise themselves with the policies and procedures at <https://www.newcastle.edu.au/current-students/respect-at-uni/policies-and-procedures> that support a safe and respectful environment at the University.

*This course outline was approved by the Head of School. No alteration of this course outline is permitted without Head of School approval. If a change is approved, students will be notified and an amended course outline will be provided in the same manner as the original.*

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