UNSW Course Outline

DDES9920 Information Architecture for Immersive Aesthetics - 2024

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General Course Information

Course Code : DDES9920
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 : Multimodal
Delivery Format : Standard
Delivery Location : Paddington
Campus : Paddington
Study Level : Postgraduate
Units of Credit : 6

Useful Links

Handbook Class Timetable

Course Details & Outcomes

Course Description

This course examines the principles of information architecture design as they apply to the context content and users of immersive visualisations and simulations. You will learn about systems for data classification and metadata labelling, search methodologies and user

navigation, and how these may be translated into interactive systems for embodied environments. The course will help you understand how to move beyond simple technical schemas for data organisation, to consider how the physical and social spaces in which these data are encountered affect the formation of knowledge in users. In doing so, your will combine human-centred design considerations with artificial intelligence-assisted data management practices, and explore new methods for interpreting and visualising information for applications in immersive media.

Course Aims

To inform/educate students in new conceptual approaches for understanding and organising datasets so that they can design interactive schemas for visualisations, use simulations to discover new knowledge in a diverse range of data contexts, and improve the labelling of information for industry application.

Course Learning Outcomes

Course Learning Outcomes
CLO1 : Analyse the information architectures of immersive and embodied 3D experiences.
CLO2 : Design classification schema for complex and varied datasets for a range of simulative contexts.
CLO3 : Design embodied user interface schema to allow for effective knowledge transfer in immersive environments.

Course Learning Outcomes	Assessment Item
CLO1 : Analyse the information architectures of immersive and embodied 3D experiences.	• Information Architecture Analysis and Critique • Designing Information Architectures for Immersive Environments
CLO2 : Design classification schema for complex and varied datasets for a range of simulative contexts.	• Designing Information Architectures for Immersive Environments
CLO3 : Design embodied user interface schema to allow for effective knowledge transfer in immersive environments.	• Designing Information Architectures for Immersive Environments

Learning and Teaching Technologies

Moodle - Learning Management System | Microsoft Teams

Assessments

Assessment Structure

Assessment Item	Weight	Relevant Dates
Information Architecture Analysis and Critique Assessment Format: Individual	40%	Start Date: Not Applicable Due Date: 14/06/2024 11:59 PM
Designing Information Architectures for Immersive Environments Assessment Format: Group	60%	Start Date: Not Applicable Due Date: 09/08/2024 11:59 PM

Assessment Details

Information Architecture Analysis and Critique

Assessment Overview

In this task you will analyse the construction of user experience in two case studies of immersive visualisations including the design of information architectures to engage embodied experience. You will refer to required readings, and your own experience and research to explore the similarities and differences in the use of methods and effects. 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 the information architectures of immersive and embodied 3D experiences.

Detailed Assessment Description

Taking into account two case studies of immersive visualisations from this course, your own experience, as well as required readings and your own research, analyse how the user experience is constructed in each physical/virtual context, and how the information architectures are designed to engage embodied experience. What are the similarities and differences in the methods used, and to what effect?

You will need to address the following areas:

- What is the purpose of the experience and who is it for?
- What forms of data are visualised in the appliactions and how are they interacted with?
- What forms of data biases are evident in the application?

Assessment Length

1500 words

Assignment submission Turnitin type

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

Designing Information Architectures for Immersive Environments

Assessment Overview

In this task you will build on your analytical skills developed in Assessment Task 1 to design information architecture for an interactive dataset. This assessment features both group work and individual components. 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 the information architectures of immersive and embodied 3D experiences.
- CLO2 : Design classification schema for complex and varied datasets for a range of simulative contexts.
- CLO3 : Design embodied user interface schema to allow for effective knowledge transfer in immersive environments.

Detailed Assessment Description

This Assessment builds on your analytical skills developed in Assessment 1, by requiring you to design and information architecture for an interactive dataset. This assessment features both group and written components.

This Assessment requires the following:

Group work:

- Research and identify a dataset comprising a combination of textual data, 2D images, 3D data, audio, video or archival data to work with. You may choose to work with a full, publicly-accessible dataset, or define the contents of a dataset without a publicly-available API. Make sure you check that your selection is appropriate with your lecturer.
- Design an interactive experience that allows users to browse and manipulate these data in order to gain insight into the dataset.
- Consider what the characteristics of your dataset are, who your users are, and what the intended purpose of the system is.
- Provide a brief user profile of your target user.
- Through research on information systems methods, course readings, and search methods, construct a database classification schema that will allow for deep interrogation for the maximal variables from the content metadata.
- Diagram your system structure, referencing any information systems you use.
- Design an immersive environment and user interface for delivery on a digital immersive

system of your choice that allows the user to interrogate the dataset through embodied methodologies.
- Outline interactive methods including user onboarding, use and offboarding, and briefly detail some evaluation methods you may use in order to assess the value and impact of your design.
- Present your design in a portfolio format using a combination of wireframe diagrams, text and other visual means to theorise your methodology.

Length: 2000 words plus necessary system diagrams.

Individual work:

- Write an individual report detailing your role in the group design team including your research responsibilities, methods and outcomes. Detail particular challenges your group faced in the selection and design of your experience as well as in executing their individual roles. Briefly reflect on your experience and any insight you gained that may affect your future design path.

Length: 1000 words plus optional diagrams.

Marks will be awarded as follows:

1. Group design portfolio (50% of task, 30% of course).
2. Individual research report (50% of task, 30% of course).

Assessment Length

2000 words + diagrams (group), 1000 words (individual)

Assignment submission Turnitin type

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

General Assessment Information

Grading Basis

Standard

Course Schedule

Teaching Week/Module	Activity Type	Content
Week 1 : 27 May - 2 June	Topic	Introduction to Information Architecture This week we will be introduced to the discipline of information architecture and begin to examine why it is an essential consideration in the creation of immersive environments, in particular, and data visualisations, more generally. The (now furloughed) Information Architecture Institute defined IA as 'the practice of deciding how to arrange the parts of something to be understandable'. IA is still a discipline in the process of being made. It draws in methods from information science, visual design, user experience design, software engineering and human computer interaction, but today it is most often associated with the structuring of web user experience. However, in this course we will examine the applications of thinking about information structures in physical and virtual environments.
Week 2 : 3 June - 9 June	Topic	Information Architecture in Immersive Environments This week presents an expanded view of the field, asking us to consider broader ways in which we consume information and the visual spaces in which we encounter it. We will raise the issue of visual literacy as a core component of IA and look at our first case study of how data is structured in an immersive environment that leverages our full sensory faculties to deliver information. In later weeks we will look more closely at how to structure and design user experience within immersive environments and physical spaces. However, this week establishes the foundations of what IA implies for immersive visualisation.
Week 3 : 10 June - 16 June	Topic	The problem with data navigation: algorithmic and systemic bias This week begins two sessions in which we explore implicit and explicit biases in the ways in which we present and experience data structures that must inform the way we design future information experiences. This week we look at the systemic biases of search and exploration algorithms that are used to determine the type and frequency of content presented to users of multimedia platforms, and thus function as the middle man between users and the IA of a dataset. Biases in data navigation – whether they are inherited from faulty data assumptions or created through the implicit biases of their makers – distort and pervert the way we experience information.
Week 4 : 17 June - 23 June	Topic	The problem with data experiences: user perception and human bias This week begins two sessions in which we explore implicit and explicit biases in the ways in which we present and experience data structures that must inform the way we design future information experiences. This week we look at the systemic biases of search and exploration algorithms that are used to determine the type and frequency of content presented to users of multimedia platforms, and thus function as the middle man between users and the IA of a dataset. Biases in data navigation – whether they are inherited from faulty data assumptions or created through the implicit biases of their makers – distort and pervert the way we experience information.
Week 5 : 24 June - 30 June	Topic	Methods for Structuring Information Part 2, "Information Architecture and User Experience Design" focuses on practical skills in the field of user experience design that will help us to conceptualise, sort and organise data to be structured in an immersive environment. This week we will begin by looking at traditional models for structuring and categorising textual data for databases or the web. In our study of information architecture for the specific field of immersive visualisation, we must be cognisant of the characteristics of our end users even more so than in most user experience design situations. This is because immersive environments employ hybrid spaces and physically demanding technology, whose affordances have to be carefully designed to facilitate use by wide demographics. In the UX design process, the design of most products and services begins by studying, identifying and defining the core user groups of the product (in our case, data environments). To do this, we create user personas that describe actual users, their characteristics, abilities and behaviours. This can be done by using verified data from field observation, sales data, interviews or surveys, or it could be created through the knowledge of the design team – what is known as an 'assumption persona'. Either way, personas provide focus and direction for decision making within the design group. In the case of data visualisation, understanding our users can make the difference between legibility and persuasion and confusion and hostility for our message. This week we look at the benefits and challenges in crafting user personas, and how this might feed back into our design decisions.
Week 6 : 1 July - 7 July	Topic	Study week - no class
Week 7 : 8 July - 14 July	Topic	Interacting with Multimodal Data in Immersive Environments Having thought about how to structure type of data in week 5, this week we turn our attention to methods for enabling interaction with data types in immersive environments. User interfaces in immersive environments are built using paradigms derived from human computer interaction, usually video games. As

		such, we are able to leverage the hardware controllers employed in games, as well as technologies developed for spatial analysis to enable users to interact bodily. This week we will use Denis Del Favero's immersive browser T_Visionarium as a case study for enabling dynamic search through immersive interaction.
Week 8 : 15 July - 21 July	Topic	Structuring Information Experience in Hybrid Space Part 3 "Evaluating Information Models for Immersive Data" looks at how and why we need to evaluate the information architecture of immersive platforms, to better understand their functionality, and any utility provided to users. This week we will begin by understanding how to design a holistic information experience in in physical space, using a mixture of traditional wayfinding and interpretive elements within architectural space, digital information architectures in immersive experiences, and interpersonal interaction. The case study for this week is the virtual reality exhibition Henry VR held in 2018 at the Art Gallery of New South Wales, Australia. We will explore how the various forms of UX design explored in weeks 5-7 are brought together in practice.
Week 9 : 22 July - 28 July	Topic	Immersive Data Visualisation Models for Business Intelligence One of the fields in which information architecture has immense application is in business intelligence. By this we mean the capture and analysis of customer and financial data by business for the purposes of future decision making. This week we turn our attention to the use of immersive visualisation in this context through a case study of one of the great 21st success stories of digital transformation: the American hardware retailer Lowe's. Faced with an increasingly difficult retail environment in the 2010s, Lowe's led a revival of its brand by offering customer-focused immersive visualisation technologies to aid customers to try and purchase hardware solutions and to learn how to use products and services. In doing so, they have provided a model for customer-facing business to embrace interactive technologies to solve business problems. This week we will examine the processes of this transformation and Lowe's learnings from the process.
Week 10 : 29 July - 4 August	Topic	Evaluating Information Experience In this final week, we look at emerging models for evaluating the value and success of information environments, from traditional web-based information architectures, to immersive visualisations presented in hybrid spaces.

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.

Course Resources

Prescribed Resources

Students are expected to view all online lectures and videos, complete all mandated readings and participate in class discussions. The in-class learning, feedback and discussions support are

invaluable for assessment and student progress.

Recommended Resources

All recommended readings and options for the hire of or access to technologies are listed in the Course Moodle. Students wishing to undertake further self directed training to upskill in bespoke software programs can access UNSW Linkedin Learning and or visit the Maker Centres.

Course Evaluation and Development

Feedback and evaluation occurs through myExpereince and myFeedback matters in Moodle.

Staff Details

Position	Name	Email	Location	Phone	Availability	Equitable Learning Services Contact	Primary Contact
	Andrew Yip					No	Yes
	Benjamin Bailey					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