UNSW Course Outline

COMP4511 User Interface Design and Construction - 2024

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General Course Information

Course Code : COMP4511
Year : 2024
Term : Term 3
Teaching Period : T3
Is a multi-term course? : No
Faculty : Faculty of Engineering
Academic Unit : School of Computer Science and Engineering
Delivery Mode : Multimodal
Delivery Format : Standard
Delivery Location : Kensington
Campus : Sydney
Study Level : Postgraduate, Undergraduate
Units of Credit : 6

Useful Links

Handbook Class Timetable

Course Details & Outcomes

Course Description

COMP4511 is a hands-on project-based course designed to build and solidify the basic skills you acquired in COMP3511/9511. Students will be required to build their interface at least three times (remember the process is iterative!), once as a low fidelity prototype, moving to a higher

fidelity electronic prototype and finishing with a beta version of the app. This semester, we will be using React to help us write the app. The course will provide you with a basic understanding and the building blocks required to create your app, and let you guide the design and development process.

The process doesn't start with coding, it starts with an understanding your users. You develop personas of your target audience and work through the design issues: What information are they going to be dealing with? What are the workflows? How are they going to interact with the application? What is the application going to look like?

As you learned in Human Computer Interaction, you have to conceptualise your design on paper and evaluate prototypes with users. Then you start on the design of your system, not focussing on just the code but also the object-oriented design. You will build the code implementation iterating through both your object-oriented design and your user interface design.

The real insights come when we usability test your application. Do your users really understand how to use your application? Does it work the way that they expect - not what you as a programmer expect. That's the challenge. What is the difference between a bug and a design flaw? Proper evaluation techniques will help you uncover both.

We teach a process that is relevant to industry. Preparing students for the real-world challenges of user interface design. And face it, user interfaces are everywhere.

The process is not just about putting buttons and text on screen. COMP3511 only touched the surface of what user interface design is all about. Are you up for the challenge of designing graphical user interfaces?

COMP3511 Human Computer Interaction is a pre-requisite and you need a mark of 70 or better (you are expected to start design, prototyping and designing usability tests in the first week). You should have completed COMP2511 which introduces you to object oriented techniques, UML and design patterns, with a mark of 65 or higher.

Course Aims

This course aims to develop your skills in designing and creating a basic user interface. UI design that meets the users needs is an important part of the Design process and will equip you with skills to create more usable interfaces in industry. More specifically, the course aims to:

• to develop your skills in the area of user-centred design, with a focus on mobile design

• to develop and implement techniques/heuristics necessary to evaluate systems for their usability
• to develop further your capability of executing a user-centred design process
• to give you experience in using paper-based design techniques, including software systems designed for paper-based prototyping techniques
• to give you experience in using electronic-based prototyping techniques, including software systems designed for electronic prototyping techniques
• to give you a basic grounding and understanding of React Nativ to develop applications
• to give you experience in the formal evaluation of user interfaces
• to ensure that your design work includes user needs analysis
• to give you experience of user centred design tools, methods, and techniques
• above all, maintain a real-world perspective to applying this knowledge in industry

Course Learning Outcomes

Course Learning Outcomes
CLO1 : Construct a project plan that is based on user-centred design principles that can be used to carry out activities to design, evaluate and refine user interaction, based on iteration
CLO2 : Create user interface evaluation reports (written and oral) that critique user interfaces
CLO3 : Develop design skills, primarily using paper for rapid solutions, to consolidate individual designs that demonstrate an understanding of the importance of design decisions and the selection process
CLO4 : Develop design skills, to construct high-fidelity prototypes based on previous paper-based design activities
CLO5 : Prepare and carry out usability walkthroughs to evaluate both paper and electronic based designs for their usability, used to then create structured reports that quantify the issues discovered from the evaluation activities
CLO6 : Develop skills with React Native to implement a prototype into a functioning beta version of an app
CLO7 : Critically evaluate current research in the UX domain and apply it to projects
CLO8 : Develop an awareness of user-centred design tools, methods, and techniques and maintain a real-world perspective in order to be able to apply this knowledge in industry

Course Learning Outcomes	Assessment Item
CLO1 : Construct a project plan that is based on user-centred design principles that can be used to carry out activities to design, evaluate and refine user interaction, based on iteration	• Design Diary • Group Project
CLO2 : Create user interface evaluation reports (written and oral) that critique user interfaces	• Design Diary • Group Project
CLO3 : Develop design skills, primarily using paper for rapid solutions, to consolidate individual designs that demonstrate an understanding of the importance of design decisions and the selection process	• Group Project
CLO4 : Develop design skills, to construct high-fidelity prototypes based on previous paper-based design activities	• Group Project
CLO5 : Prepare and carry out usability walkthroughs to evaluate both paper and electronic based designs for their usability, used to then create structured reports that quantify the issues discovered from the evaluation activities	• Group Project
CLO6 : Develop skills with React Native to implement a prototype into a functioning beta version of an app	• React Native Deliverable • Group Project
CLO7 : Critically evaluate current research in the UX domain and apply it to projects	• Design Diary
CLO8 : Develop an awareness of user-centred design tools, methods, and techniques and maintain a real-world perspective in order to be able to apply this knowledge in industry	• Design Diary • Group Project

Learning and Teaching Technologies

Moodle - Learning Management System

Learning and Teaching in this course

The course involves 2 hours of Face to Face lectures on Tuesday, 2 hours of online React Nativ lectures on Wednesdays, and 2 to 3 hours of enrolled weekly tutorial/lab time from week2 onwards. The tutorials involve both in class assessments and time to work on your Group projects.

Assessments

Assessment Structure

Assessment Item	Weight	Relevant Dates
Design Diary Assessment Format: Individual	40%	Start Date: Not Applicable Due Date: Week 5: 07 October - 13 October, Week 10: 11 November - 17 November
React Native Deliverable Assessment Format: Individual	10%	Start Date: Not Applicable Due Date: Week 3: 23 September - 29 September, Week 8: 28 October - 03 November
Group Project Assessment Format: Group	50%	Start Date: Not Applicable Due Date: Multiple deliverables

Assessment Details

Design Diary

Assessment Overview

The Design Diary includes weekly exercises and will have two separate submissions during the term. Each individual submission will be marked by your tutor and individual feedback will be provided on the submission based on a marking rubric. Some feedback may also be provided in class. The second submission will also include an individual reflection that will involve a combination of some of your own research and a critique of your project.

Course Learning Outcomes

- CLO1 : Construct a project plan that is based on user-centred design principles that can be used to carry out activities to design, evaluate and refine user interaction, based on iteration
- CLO2 : Create user interface evaluation reports (written and oral) that critique user interfaces
- CLO7 : Critically evaluate current research in the UX domain and apply it to projects
- CLO8 : Develop an awareness of user-centred design tools, methods, and techniques and maintain a real-world perspective in order to be able to apply this knowledge in industry

Detailed Assessment Description

Please see Moodle for exact due dates of both the Week5 and Week10 submissions. We will also release a specification document for these two deliverables in Moodle.

Submission notes

Submitted via Moodle

Assessment information

Please see Moodle for addditional information.

Assignment submission Turnitin type

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

Generative AI Permission Level

Simple Editing Assistance

In completing this assessment, you are permitted to use standard editing and referencing functions in the software you use to complete your assessment. These functions are described below. You must not use any functions that generate or paraphrase passages of text or other media, whether based on your own work or not.
If your Convenor has concerns that your submission contains passages of AI-generated text or media, you may be asked to account for your work. If you are unable to satisfactorily demonstrate your understanding of your submission you may be referred to UNSW Conduct & Integrity Office for investigation for academic misconduct and possible penalties.
For more information on Generative AI and permitted use please see here.

The main purpose of allowing this option is to support students from non-English speaking backgrounds. However, you still need to generate all the ideas yourself, and you cannot include passages of AI generated text in your submissions. You wil be expected to explain details of your ideas in person if there is any concerns about over reliance on AI related tools.

React Native Deliverable

Assessment Overview

There will be two React Nativ exercises that take place during tutorials, that will be used to help develop your React Nativ skills. Feedback will be delivered by your tutors during tutorial time, and based upon a marking rubric. The purpose is to practice these skills so you can apply them to the final project.

Course Learning Outcomes

- CLO6 : Develop skills with React Native to implement a prototype into a functioning beta version of an app

Detailed Assessment Description

This deliverable is assessed in class (during your allocated tutorial time) in Week3 and Week8 and invovles two different React Nativ deliverables, details of which will be released via Moodle.

Submission notes

Assessed by your tutor in class

Assignment submission Turnitin type

Not Applicable

Generative AI Permission Level

No Assistance

This assessment is designed for you to complete without the use of any generative AI. You are not permitted to use any generative AI tools, software or service to search for or generate information or answers.
For more information on Generative AI and permitted use please see here.

Group Project

Assessment Overview

This group project will be broken down into a number of deliverables due throughout the term. It will be evaluated by your tutor both in class and by the marking of your submissions, with feedback.

Course Learning Outcomes

- CLO1 : Construct a project plan that is based on user-centred design principles that can be used to carry out activities to design, evaluate and refine user interaction, based on iteration
- CLO2 : Create user interface evaluation reports (written and oral) that critique user interfaces
- CLO3 : Develop design skills, primarily using paper for rapid solutions, to consolidate individual designs that demonstrate an understanding of the importance of design decisions and the selection process
- CLO4 : Develop design skills, to construct high-fidelity prototypes based on previous paper-based design activities
- CLO5 : Prepare and carry out usability walkthroughs to evaluate both paper and electronic based designs for their usability, used to then create structured reports that quantify the issues discovered from the evaluation activities
- CLO6 : Develop skills with React Native to implement a prototype into a functioning beta version of an app
- CLO8 : Develop an awareness of user-centred design tools, methods, and techniques and maintain a real-world perspective in order to be able to apply this knowledge in industry

Detailed Assessment Description

Details of the group project will be released in Moodle. Groups are made up of participants in the same tutorial. There are multiple Deliverables for this component and many of which will be marked in class, by your tutor.

Submission notes

Details to be released via Moodle. Some work will be marked in class.

Assessment information

Peer Review is an important part of this assessment to ensure everyone contributes equally to the project. Further details available via Moodle.

Assignment submission Turnitin type

Not Applicable

Generative AI Permission Level

Simple Editing Assistance

In completing this assessment, you are permitted to use standard editing and referencing functions in the software you use to complete your assessment. These functions are described below. You must not use any functions that generate or paraphrase passages of text or other media, whether based on your own work or not.
If your Convenor has concerns that your submission contains passages of AI-generated text or media, you may be asked to account for your work. If you are unable to satisfactorily demonstrate your understanding of your submission you may be referred to UNSW Conduct & Integrity Office for investigation for academic misconduct and possible penalties.
For more information on Generative AI and permitted use please see here.

The main purpose of allowing this option is to support students from non-English speaking backgrounds. However, you still need to generate all the ideas yourself, and you cannot include passages of AI generated text in your submissions. You will be expected to explain details of your ideas in person if there is any concerns about over reliance on AI related tools.

General Assessment Information

Detailed specifications for each of the 3 assessment components will be available via Moodle for COMP4511.

Grading Basis

Standard

Requirements to pass course

You are required to pass a combination of the two individual assessments to pass this course.

Course Schedule

Teaching Week/Module	Activity Type	Content
Week 1 : 9 September - 15 September	Lecture	Lectures begin in week1. Tuesday lectures will be Face to Face as per timetabling details: Wednesday lectures will be delivered online via Blackboard collaborate, with links available via Moodle. Please see Moodle for further lecture scheduling details and topics for each week.
Week 2 : 16 September - 22 September	Laboratory	Tutorials begin in week2. Please come ready with some of your own brainstorming activiities for your Group project work. Project groups will be formed during this first tutorial and group work will begin. Please only attend your enrolled tutorial time.
Week 3 : 23 September - 29 September	Assessment	Your first React Nativ in class assessment will take place in week3 tutorials. Please come prepared. Further details available via Moodle.
Week 4 : 30 September - 6 October	Assessment	Your first CheckPoint for the Group Project will be marked in class during Week4 by your tutor. Please see the Group Project specification document in Moodle for further details.
Week 5 : 7 October - 13 October	Assessment	Your second CheckPoint for the Group Project will be marked in class during Week5 by your tutor. Please see the Group Project specification document in Moodle for further details.
	Assessment	Your first Design Diary submission is due this week. Further details will be available in Moodle.
Week 6 : 14 October - 20 October	Lecture	There will be NO lectures or tutorials during week 6 which is Flexibility week.
Week 7 : 21 October - 27 October	Assessment	Your third CheckPoint for the Group Project will be marked in class during Week7 by your tutor. Please see the Group Project specification document in Moodle for further details.
Week 8 : 28 October - 3 November	Assessment	Your second React Nativ in class assessment will take place in week3 tutorials. Please come prepared. Further details available via Moodle.
Week 9 : 4 November - 10 November	Group Work	Since you have multiple deliverables in week10, your tutorials this week will focus on group work and working together on your final project deliverables.
Week 10 : 11 November - 17 November	Lecture	There will be NO lectures in Week10. Please use this scheduled time to work together with your group members on your group projects.
	Assessment	Your final CheckPoint for the Group Project will be marked in class during Week10 by your tutor. Please see the Group Project specification document in Moodle for further details, and you will also need to make a group submission.
	Assessment	Your second Design Diary submission is due this week. It will also include an Individual Reflection. Further details will be available in Moodle.
Week 11 : 18 November - 24 November	Other	Please see Moodle for details of the Peer Review for your Group Project, which will be due in Week11

Attendance Requirements

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

General Schedule Information

Detailed course schedule information will be made available in Moodle on a weekly basis. We will also publish a lecture a weekly schedule via Moodle.

Course Resources

Prescribed Resources

Since this a project based course, there are no prescribed texts or the like.

Recommended Resources

Suggested resources will be discussed by your tutors or made available via Moodle.

Course Evaluation and Development

This course is evaluated each session using the myExperience system.

Lab-based feedback will be used to gather further feedback about the course. We take all feedback seriously and approach the design of this course using user centred design philosophies. Students are also encouraged to provide informal feedback during the session, and to let the lecturer in charge know of any problems, as soon as they arise. Suggestions will be listened to very openly, positively, constructively and thankfully, and every reasonable effort will be made to address them.

In the previous offering of this courses, some students noted that they struggled with only engaging properly with React Native too late in the course. We introduced a mini React Native deliverable due in week 3, to help get you going with this sooner. Students still requested more React Native related assessment components in the previous offering of the course, so we introduced another React Nativ exercise later in the term. This was received favourably by students, but they felt it was not worth enough marks for the effort involved, so we have increased the mark allocation to the React Nativ in class assessment components. We also plan to have a few React Native consultations later in the term to help support students.

Some student indicated there were too many assessments and that multiple deadlines overlapped. We have thus redesigned the individual assignment components with this in mind. There is now a single individual submission in week10 and there is no longer a presentation component. The final Design Diary submission now also includes an individual reflection. It has a project related component to reduce the scope a bit, as well as some links to an HCI topic of relevance and interest to you.

We will be using Moodle again as the LMS as it appears to meet more of our course needs compared to the other current options. None of these are unfortunately perfect solutions.

And lastly, we continue with the one-minute video submission of your group project ideas, as feedback around this from last year was positive.

Staff Details

Position	Name	Email	Location	Phone	Availability	Equitable Learning Services Contact	Primary Contact
Lecturer	Nadine Marcus					No	Yes
Administrator	Maliha Mian					No	No

Other Useful Information

Academic Information

I. Special consideration and supplementary assessment

If you have experienced an illness or misadventure beyond your control that will interfere with your assessment performance, you are eligible to apply for Special Consideration prior to, or within 3 working days of, submitting an assessment or sitting an exam.

Please note that UNSW has a Fit to Sit rule, which means that if you sit an exam, you are declaring yourself fit enough to do so and cannot later apply for Special Consideration.

For details of applying for Special Consideration and conditions for the award of supplementary assessment, please see the information on UNSW's Special Consideration page.

II. Administrative matters and links

All students are expected to read and be familiar with UNSW guidelines and polices. In particular, students should be familiar with the following:

- Attendance
- UNSW Email Address
- Special Consideration
- Exams
- Approved Calculators
- Academic Honesty and Plagiarism
- Equitable Learning Services

III. Equity and diversity

Those students who have a disability that requires some adjustment in their teaching or learning environment are encouraged to discuss their study needs with the course convener prior to, or at

the commencement of, their course, or with the Equity Officer (Disability) in the Equitable Learning Services. Issues to be discussed may include access to materials, signers or note-takers, the provision of services and additional exam and assessment arrangements. Early notification is essential to enable any necessary adjustments to be made.

IV. Professional Outcomes and Program Design

Students are able to review the relevant professional outcomes and program designs for their streams by going to the following link: https://www.unsw.edu.au/engineering/student-life/student-resources/program-design.

Note: This course outline sets out the description of classes at the date the Course Outline is published. The nature of classes may change during the Term after the Course Outline is published. Moodle or your primary learning management system (LMS) should be consulted for the up-to-date class descriptions. If there is any inconsistency in the description of activities between the University timetable and the Course Outline/Moodle/LMS, the description in the Course Outline/Moodle/LMS applies.

Academic Honesty and Plagarism

UNSW has an ongoing commitment to fostering a culture of learning informed by academic integrity. All UNSW students have a responsibility to adhere to this principle of academic integrity. Plagiarism undermines academic integrity and is not tolerated at UNSW. *Plagiarism at UNSW is defined as using the words or ideas of others and passing them off as your own.*

Plagiarism is a type of intellectual theft. It can take many forms, from deliberate cheating to accidentally copying from a source without acknowledgement. UNSW has produced a website with a wealth of resources to support students to understand and avoid plagiarism, visit: student.unsw.edu.au/plagiarism. The Learning Centre assists students with understanding academic integrity and how not to plagiarise. They also hold workshops and can help students one-on-one.

You are also reminded that careful time management is an important part of study and one of the identified causes of plagiarism is poor time management. Students should allow sufficient time for research, drafting and the proper referencing of sources in preparing all assessment tasks.

Repeated plagiarism (even in first year), plagiarism after first year, or serious instances, may also

be investigated under the Student Misconduct Procedures. The penalties under the procedures can include a reduction in marks, failing a course or for the most serious matters (like plagiarism in an honours thesis or contract cheating) even suspension from the university. The Student Misconduct Procedures are available here:

www.gs.unsw.edu.au/policy/documents/studentmisconductprocedures.pdf

Submission of Assessment Tasks

Work submitted late without an approved extension by the course coordinator or delegated authority is subject to a late penalty of five percent (5%) of the maximum mark possible for that assessment item, per calendar day.

The late penalty is applied per calendar day (including weekends and public holidays) that the assessment is overdue. There is no pro-rata of the late penalty for submissions made part way through a day. This is for all assessments where a penalty applies.

Work submitted after five days (120 hours) will not be accepted and a mark of zero will be awarded for that assessment item.

For some assessment items, a late penalty may not be appropriate. These will be clearly indicated in the course outline, and such assessments will receive a mark of zero if not completed by the specified date. Examples include:

- Weekly online tests or laboratory work worth a small proportion of the subject mark;
- Exams, peer feedback and team evaluation surveys;
- Online quizzes where answers are released to students on completion;
- Professional assessment tasks, where the intention is to create an authentic assessment that has an absolute submission date; and,
- Pass/Fail assessment tasks.

Faculty-specific Information

Engineering Student Support Services – The Nucleus - enrolment, progression checks, clash requests, course issues or program-related queries

Engineering Industrial Training – Industrial training questions

UNSW Study Abroad – study abroad student enquiries (for inbound students)

UNSW Exchange – student exchange enquiries (for inbound students)

UNSW Future Students – potential student enquiries e.g. admissions, fees, programs, credit transfer

Phone

(+61 2) 9385 8500 – Nucleus Student Hub

(+61 2) 9385 7661 – Engineering Industrial Training

(+61 2) 9385 3179 – UNSW Study Abroad and UNSW Exchange (for inbound students)

School Contact Information

CSE Help! - on the Ground Floor of K17

- For assistance with coursework assessments.

The Nucleus Student Hub - https://nucleus.unsw.edu.au/en/contact-us

- Course enrolment queries.

Grievance Officer - grievance-officer@cse.unsw.edu.au

- If the course convenor gives an inadequate response to a query or when the courses convenor does not respond to a query about assessment.

Student Reps - stureps@cse.unsw.edu.au

- If some aspect of a course needs urgent improvement. (e.g. Nobody responding to forum queries, cannot understand the lecturer)

You should **never** contact any of the following people directly:

- Vice Chancellor

- Pro-vice Chancellor Education (PVCE)

- Head of School

- CSE administrative staff

- CSE teaching support staff

They will simply bounce the email to one of the above, thereby creating an unnecessary level of indirection and a delay in the response.