

Course Title:	Applied Human Computer Interaction
Course Code:	COMP719
Descriptor Start Date:	31/01/2025
POINTS:	15.00
LEVEL:	7
PREREQUISITE/S:	None
COREQUISITE/S:	None
RESTRICTION/S:	None

LEARNING HOURS

Hours may include lectures, tutorials, online forums, laboratories. Refer to your timetable and course information in Canvas for detailed information.

Total learning hours: 150

PRESCRIPTOR

Design and evaluate the User Experience (UX) for software systems by applying Human-Computer Interaction principles and concepts. Use human-centered design approaches such as design thinking to create usable and innovative UI and data visualisation that facilitate decision making and interactions with data. Discuss ethics-by-design methods for considering responsible use of technology. Conduct user research to identify user profiles, personas, their problems and context of use, pain points and user journeys.

LEARNING OUTCOMES

1. Plan and conduct user research to understand users' needs and context of activities.
2. Design and critique user interfaces based on HCI principles, theories, and concepts.
3. Evaluate user interfaces systematically for usability and ethical use.

CONTENT

The course will include the following main topic areas in the study of User Experience:

1. Fundamental user characteristics that define user interaction with technology.
2. User research: Context analysis, task analysis, process and workflow modelling; cognitive task analysis, and decision-making
3. UI/UX Design: Design principles; representation design and information visualisation, visual design, design techniques, sketching, wireframing, and prototyping
4. Evaluation: The scientific method, A-B evaluation, heuristic evaluation

Disclaimer: Course descriptors may be amended between teaching periods/semesters

LEARNING & TEACHING STRATEGIES

The course will be delivered in a combination of lectures and tutorials working around a problem-based learning model used to introduce and discuss key UX topics, HCI concepts and principles for designing user-centered systems and user experiences. Tutorials will use the design critique approach enable students to develop key industry UX skills. Students will be presented with a problem scenario, and from this, they will (i) design a UI/UX interactive prototype while learning how to use industry tools such as Adobe XD, (ii) apply a variety of methods to evaluate the resulting interactive prototype and to compare the effectiveness of these different methods, and (iii) carry out or at least simulate user research to produce a report that describes the user journey. Through in-class activities, we introduce students to the application of critical thinking to design and to adopt the mindset of design thinking.

ASSESSMENT PLAN

Assessment Event	Weighting %	Learning Outcomes
Quiz	15.00	1,2,3
Design Project	35.00	1,2,3
Final Exam	50.00	1,2,3

Grade Map	MAP1 A+ A A- Pass with Distinction B+ B B- Pass with Merit C+ C C- Pass D Fail
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Overall requirement/s to pass the course:

To pass this course, students must attempt all summative assessments and achieve a minimum overall grade of C-.

LEARNING RESOURCES

Recommended Texts: Rex Hartson and Pardha S. Pyla (2019). The UX book: Agile UX design for a quality user experience Paperback. 2ed. Morgan Kaufman Publishers, Elsevier. Joel Marsh (2016). UX for beginners. O'Reilly Media, Inc., Sebastopol, CA. Donald A. Norman (1990). The design of everyday things. New York: Doubleday. Jenny Preece, Helen Sharp & Yvonne Rogers (2019). Interaction design: Beyond human-computer interaction. John Wiley and Sons, Inc., Indianapolis, Indiana. Frank E. Ritter, Gordon D. Baxter, and Elizabeth F. Churchill (2014). Foundations for designing user-centered systems: What system designers need to know about people. Springer.

For further information, contact: Te Ara Auaha - Faculty of Design & Creative Technologies

Principal Programme:	AK3697, Bachelor of Computer and Information Sciences
Related Programme/s:	AK3698 AK1041 AK3001 AK3003 AK3756 AK3706

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