



Module Specification

Emerging UX Development

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Part 1: Information

Module title: Emerging UX Development

Module code: UFCFV1-15-2

Level: Level 5

For implementation from: 2025-26

UWE credit rating: 15

ECTS credit rating: 7.5

College: College of Arts, Technology and Environment

School: CATE School of Computing and Creative Technologies

Partner institutions: University Centre Weston

Field: Computer Science and Creative Technologies

Module type: Module

Pre-requisites: None

Excluded combinations: None

Co-requisites: None

Continuing professional development: No

Professional, statutory or regulatory body requirements: None

Part 2: Description

Overview: You will learn about how user experiences can extend past the digital screen and into a user's world. Virtual Reality, Augmented Reality, and Mixed Reality are all emerging technologies that have unforeseen user experience design implications. To appreciate the implications of these new technologies, you need to understand the systems that enable them; you will evaluate existing systems that influence Extended Reality (XR), the future of XR, and how the systems themselves work.

Throughout this module you will explore the seminal developments within XR to gain insight into how these developments changed UX design, while looking at how XR is becoming mainstream technology. You will evaluate the current limitations of the systems, both caused by the technologies and the current user interfaces issues, and the potential developments of the future.

You will also analyse how societal trends affect the adoption of XR; from analysing how COVID-19 affected VR adoption to the ethical concerns of children using VR to interact with strangers, you will review emerging technologies within a socio-ethical context. You will also review the security and privacy of XR, and the potential dangers that it may cause. Finally, you will identify how XR promotes equitable design and accessibility, and how this can be furthered with user-focused design ideals.

Within this module you will have the opportunity to undertake design jams, in which you will develop your rapid prototyping skills; these design jams may include industry-set tasks and guest 'jam' leads.

Features: Not applicable

Educational aims: Within this module you will be exploring emerging technologies and systems that will impact user experience and user interface design. At current, we will be focusing on the area of Extended Reality (XR), and the three main categories of extended reality; the main categories of XR are Virtual Reality (VR), Augmented Reality (AR), and Mixed Reality (MR). Each emerging tech introduces new design problems and complications, within this module you will look at the skills required to approach these. You will gain the skills and knowledge required to tackle any issues that arise from new technology, before applying these to the realm of XR for practical experience. You will learn how to prototype in XR, both physically and digitally, through tools such as immersive authoring.

Emerging technologies do not have established design practices, guidelines on design, or heavily researched design methodologies; therefore, you will need to learn the skills utilised in rapid prototyping to ensure you can identify, and solve, any

issues early in development.

Within the module you will have hands-on development with these technologies; you will prototype applications using the key concepts learnt throughout the module.

Outline syllabus: The design, and implications of Extended Reality Technologies (Virtual Reality, Augmented Reality, Mixed Reality)

Rapid Prototyping

Immersive Authoring

Accessible and equitable design.

Social implications of emerging technologies

VR/AR development tools

Critique of unverified designs

Part 3: Teaching and learning methods

Teaching and learning methods: This module will be practical based, with extended reality environments being explored throughout; due to this the module will be lab focused, with theory being taught in situ, and lectures being performed within practical environments.

Module Learning outcomes: On successful completion of this module students will achieve the following learning outcomes.

MO1 Apply creative, analytical, and critical thinking skills to the design, development, and improvement of emerging UX solutions.

MO2 Independently analyse test data, interpret results, and evaluate the suitability of proposed solutions.

MO3 Balance and trade-off competing quality, time, and budget criteria, demonstrating understanding of future business need.

Hours to be allocated: 150

Contact hours:

Independent study/self-guided study = 102 hours

Face-to-face learning = 48 hours

Total = 150

Reading list: The reading list for this module can be accessed at [readinglists.uwe.ac.uk](https://rl.talis.com/3/uwe/lists/E443C04E-10F8-3BD9-0D21-895E3AA42127.html?lang=en-GB&login=1) via the following link <https://rl.talis.com/3/uwe/lists/E443C04E-10F8-3BD9-0D21-895E3AA42127.html?lang=en-GB&login=1>

Part 4: Assessment

Assessment strategy: You will undertake a single assessment in the form of a Practical Portfolio throughout which you review existing Extended Reality (XR) interfaces and identify where they utilise emerging design principles. You will need to show a sound understanding of design-thinking and user-centred design. You will be required to present an XR demonstration using emerging technology and hardware identifying advantages, limitations and opportunities for future development as technology evolves.

Formative feedback will be present throughout the module to develop both your research, presentation and technical skills throughout practical labs evaluating the application of current XR hardware. There will be opportunities to test, demonstrate and critique a range of XR applications with groups of peers and discuss how these have evolved.

Resit opportunities will follow the same format as the first take.

Assessment tasks:

Portfolio (First Sit)

Description: Extended Reality Project: In this assignment you will review existing extended reality environments that leverage the physical world to further the user experience. You should evaluate mixed reality, virtual reality, and augmented experiences and identify those which emphasise user-centred and equity-focused design principles. You may choose to review multiple extended reality mediums, such as mobile and desktop, to identify how the medium impacts design choices. You should select a variety of interfaces that effectively show the design implications of extended reality, to present in a demonstration; in the demonstration, you will have users interact with the selected environments while discussing the design implications of the interface and the principles it was built upon. In your walkthrough presentation, you will have time to explain the ethical and societal implications of your selected interfaces.

You may decide to develop their own interface through the usage of pre-made assets, to show design principles in practice, or use software such as BRIO XR to develop AR-based presentations. 10 minutes.

Weighting: 100 %

Final assessment: Yes

Group work: No

Learning outcomes tested: MO1, MO2, MO3

Portfolio (Resit)

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You may decide to develop their own interface through the usage of pre-made assets, to show design principles in practice, or use software such as BRIO XR to develop AR-based presentations. 10 minutes.

Weighting: 100 %

Final assessment: Yes

Group work: No

Learning outcomes tested: MO1, MO2, MO3

Part 5: Contributes towards

This module contributes towards the following programmes of study: