# Module Proforma

**Approved, 2022.02**

## Summary Information

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|---|---|
| **Module Code** | 7150COMP |
| **Formal Module Title** | User Experience Design for Immersive Technology |
| **Owning School** | Computer Science and Mathematics |
| **Career** | Postgraduate Taught |
| **Credits** | 20 |
| **Academic level** | FHEQ Level 7 |
| **Grading Schema** | 50 |

## Module Contacts

### Module Leader

| Contact Name | Applies to all offerings | Offerings |
|---|---|---|
| Christopher Baker | Yes | N/A |

### Module Team Member

| Contact Name | Applies to all offerings | Offerings |
|---|---|---|

### Partner Module Team

| Contact Name | Applies to all offerings | Offerings |
|---|---|---|

## Teaching Responsibility

| LJMU Schools involved in Delivery |
|---|
| Computer Science and Mathematics |

## Learning Methods

| Learning Method Type | Hours |
|---|---|

| Lecture | 11 |
|---|---|
| Tutorial | 11 |
| Workshop | 11 |

## Module Offering(s)

| Offering Code | Location | Start Month | Duration |
|---|---|---|---|
| JAN-CTY | CTY | January | 12 Weeks |

## Aims and Outcomes

| Aims | Develop knowledge of:(i) design practices for immersive environments utilising virtual and augmented reality technology(ii) skills in defining usability metrics to be used in the design process of immersive technology(iii) the techniques applied to the critical evaluation of immersive technology (iv) carrying out experiments examining the usability of immersive products |
|---|---|

## Learning Outcomes

**After completing the module the student should be able to:**

| Code | Description |
|---|---|
| MLO1 | Produce appropriate user-centred requirements lists for specific immersive experiences. |
| MLO2 | Design immersive experiences using appropriate tools and academic theory. |
| MLO3 | Critically evaluate designs against user requirements using metric based approaches. |
| MLO4 | Implement user-centred immersive environments that are guided by design theory and processes. |

## Module Content

| Outline Syllabus |
|---|
| Overview of immersive environments and their use across multiple disciplines highlighting the variations in design challenges.Current theory in design and implementation of immersive technology.Ethical considerations specific to the application of immersive environments. User-Centred design approaches for VR/AR/MR applications development.3D interaction techniques for immersive technology, highlighting differences and challenges between VR, MR and AR. 3D user-interface design and advanced topics relating the development of VR/AR/MR applications. Usability engineering in immersive technology including metric based evaluations, hypothesis development and experiment design.Approaches to planning and conducting usability experiments in immersive technology.Analysis of data experimental data to test hypotheses including statistical approaches. |

**Module Overview**

This module covers a systematic approach to the analysis, modelling, design, implementation and evaluation of immersive technologies covering Virtual Reality (VR), Mixed Reality (MR) and Augmented Reality (AR). You will study and practice the material via lectures and tutorials and then proceed to a problem-based approach to the design, prototyping and evaluation of an immersive experience.

**Additional Information**

This module covers a systematic approach to the analysis, modelling, design, implementation and evaluation of immersive technologies covering Virtual Reality (VR), Mixed Reality (MR) and Augmented Reality (AR).Students will study and practice the material via lectures and tutorials and then proceed to a problem-based approach to the design, prototyping and evaluation of an immersive experience.

## Assessments

| Assignment Category | Assessment Name | Weight | Exam/Test Length (hours) | Learning Outcome Mapping |
|---|---|---|---|---|
| Report | Design and Analysis | 50 | 0 | MLO2, MLO1 |
| Report | Implementation and Testing | 50 | 0 | MLO3, MLO4 |