Glasgow School of Art Course Specification
Course Title: Immersive Systems 4

Please note that this course specification is correct on the date of publication but may be subject to amendment prior to the start of the 2023-24 Academic Year.

Course Code:	HECOS Code:	Academic Session:
UISD402		2023-24

1. Course Title:
Immersive Systems 4

2. Date of Approval:	3. Lead School:	4. Other Schools:
PACAAG April 2020	School of Innovation and Technology	N/A

5. Credits:	6. SCQF Level:	7. Course Leader:
40	10	Daniel Livingstone

8. Associated Programmes:
BSc Immersive Systems Design

9. When Taught:
Semesters 1 & 2

10. Course Aims:

In this course students will connect their practical skills with advanced and current research and topics in immersive systems development. Students will develop awareness of current issues in commercial and industrial use of immersive systems, and develop understanding and practical skills in advanced aspects of immersive systems development. Students will learn a range of topics including:

- Current and emerging issues, technologies and directions in Immersive Systems
- Advanced techniques, methodologies and technologies for developing Immersive Systems
- Research methods and methodologies for Immersive Systems
- Critical evaluation of Immersive Systems, using appropriate methodologies

11. Intended Learning Outcomes of Course:

By the end of this course students will be able to:

- Demonstrate knowledge and understanding of the ways in which the Immersive Systems discipline is developed (in professional and/or academic settings)
- Demonstrate a critical understanding of the principal theories, concepts and principles of Immersive Systems

- Apply knowledge, skills and understanding in using some of the advanced techniques, practices and tools at the forefront of the chosen specialism
- Apply knowledge, skills and understanding in conducting a focused research investigation
- Critically review and consolidate own knowledge, skills, practices and thinking in the Immersive Systems discipline and in a chosen specialism
- Communicate with peers and specialists on a professional level.

12. Indicative Content:

The Immersive Systems 4 class provides a taught introduction to a range of advanced hardware and software tools, concepts and techniques as well as industry and research topics that students can then apply further in their studio work, and which can support or feed into honours dissertation research.

Topics covered will typically include:

- Research methods and methodologies for Immersive Systems
- Current industry and research topics
    - Industry case studies
    - Research case studies
- Introduction to procedural content generation
- AI for Immersive Systems, Virtual and Augmented Reality
    - Introduction to Computer Vision
    - Interaction with natural language and speech
    - The smart environment
- Geographical and location based systems
    - Location based VR, AR and smart technologies
    - Ubiquitous computing
- Interaction and sensory feedback

13. Description of Summative Assessment Methods:

Assessment Method	Description of Assessment Method	Weight %	Submission week (assignments)
Practical project portfolio	Portfolio of individual and group development projects	75%	Assignments due in week 8 of each semester
Essay	Circa 2,500 word essay	25%	Week 13

13.1 Please describe the Summative Assessment arrangements:

Students will be given a small set of individual and group projects, which provide a breadth of Immersive Systems development activities, and allow for students to focus on problems and tasks relevant to chosen specialism.

Students will be given a range of recommended essay topics relating to current and emerging professional and research topics in immersive systems, to submit at the end of semester 1.

14. Description of Formative Assessment Methods:

Engagement with formative assessment is a mandatory requirement.
Verbal feedback in labs.

Verbal feedback in tutorials (on written work) Student presentations and peer review.
14.1 Please describe the Formative Assessment arrangements:
Students will present work in progress to the class in week 6 (approx.) to provide an opportunity for peer review and feedback. Formative feedback from tutors will be given verbally in labs (on practical work in progress) and in tutorials (on written work in progress)

15. Learning and Teaching Methods:	
Formal Contact Hours	**Notional Learning Hours**
80	400
15.1 Description of Teaching and Learning Methods:	
Timetable: Immersive systems will be taught over both semesters, based around two contact sessions of one to two hours duration each week.	

16. Pre-requisites:
Successful completion of Stage 3 (or equivalent)

17. Can this course be taken by Exchange/Study Abroad students?	No
18. Are all the students on the course taught wholly by distance learning?	No
19. Does this course represent a work placement or a year of study abroad?	No
20. Is this course collaborative with any other institutions?	No
20.1 If yes, then please enter the names of the other teaching institutions:	
N/A	

21. Additional Relevant Information:
N/A

22. Indicative Bibliography:
Sicart, M., 2011. *The Ethics of Computer Games*. MIT Press, Cambridge, MA. Rowland, C., Goodman, E., Charlier, M., Light, A. and Lui, A., 2015. *Designing Connected Products: UX for the Consumer Internet of Things*. 1 edition ed. Sebastopol: O'Reilly Media. Montola, M., 2007. Tangible Pleasures of Pervasive Role-Playing. In: DiGRA '07 - *Proceedings of the 2007 DiGRA International Conference: Situated Play*. [online] Toronto, Ontario, Canada. Available at: <http://www.digra.org/wp-content/uploads/digital-library/07312.38125.pdf>. Ishii, H., 2008. The Tangible User Interface and Its Evolution. *Commun. ACM*, 51(6), pp.32–36. *International Journal of Computer Games Technology*. Hindawi Publishing Corp. New York, NY, United States. http://www.hindawi.com/journals/ijcgt/ Additional online resources, e.g.: *The Journal of Computer Graphics Techniques*, ACM SIGGRAPH. http://jcgt.org

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