WM9G2-15 Innovative Simulation Design and Development

24/25

Department
WMG
Level
Taught Postgraduate Level
Module leader
Devon Allcoat
Credit value
15
Module duration
4 weeks
Assessment
100% coursework
Study locations
University of Warwick main campus, Coventry Primary
Distance or Online Delivery

Description

Introductory description

This module takes learners through the product creation lifecycle of a game/simulation, from inception of an idea, through to design and development of the product. The subjects covered include systems thinking, design thinking, interactive design, product design, innovation, game theory, user psychology, sales and marketing. Learners apply these concepts and practices into the creation of a game or simulation, which will be tailored to meet the needs of the programme and their area of interest.

Module aims

This module aims to give learners a theoretical background to good design practice for a game or simulation , as well as practical experience in creating their own. It integrates knowledge from multiple disciplines to provide a holistic view of design.

Outline syllabus

This is an indicative module outline only to give an indication of the sort of topics that may be covered. Actual sessions held may differ.

- Concepts and tools in simulation related to game play, game flow, interactive narrative and storytelling.
- Systems thinking, design thinking, interactive design, product design.
- How to design with accessibility in mind.
- Technology for simulations and serious games
- Selling & marketing your product.
- Creation of an innovative serious game simulation.

Learning outcomes

By the end of the module, students should be able to:

- Examine the main concepts and processes associated with design & development of a game from concept to development and release.
- Critically assess relevant tools & techniques associated with game and simulation design & development.
- Interpret user requirements analysis and translate it into game/simulation requisites.
- Ideate, design and develop a game to suit defined user needs.
- Using teamwork, evaluate and select approaches to marketing communications in relation to a designed game or simulation.

Indicative reading list

Arnab, S., Lim, T., Carvalho, M. B., Bellotti, F., De Freitas, S., Louchart, S., … De Gloria, A. (2015). Mapping learning and game mechanics for serious games analysis. British Journal of Educational Technology, 46(2), 391–411. Available at: https://0-onlinelibrary-wiley-com.pugwash.lib.warwick.ac.uk/doi/full/10.1111/bjet.12113.

James, A. & Nerantzi, C. (eds) (2019) The power of play in higher education: creativity in tertiary learning. Cham: Palgrave Macmillan. Available at: http://encore.lib.warwick.ac.uk/iii/encore/record/C__Rb3263586.

Lupton, E. (ed.) (2011) Graphic design thinking: beyond brainstorming. New York, New York: Princeton Architectural Press. Available at: http://encore.lib.warwick.ac.uk/iii/encore/record/C__Rb3009508.

Scheiner, C. W. (2015). The motivational fabric of gamified idea competitions: The evaluation of game mechanics from a longitudinal perspective. Creativity and Innovation Management, 24(2), 341–352. Available at: https://0-onlinelibrary-wiley-com.pugwash.lib.warwick.ac.uk/doi/abs/10.1111/caim.12115

Schell, J. (2019a) The art of game design: a book of lenses. 3rd edition. Boca Raton: CRC Available at: http://encore.lib.warwick.ac.uk/iii/encore/record/C__Rb3431594.

View reading list on Talis Aspire

Research element

Students research theory as well as practical design and existing games and simulations and how they are used.

Interdisciplinary

Originally an interdisciplinary module, and as discussed in the subject skills it covers a variety of disciplines from engineering and maths (systems thinking, design thinking, game theory) to psychology (motivational design, pedagogy and consumer psychology), to business skills (product design, sales and marketing).

International

Games and simulations designed all over the world are looked at in the module.

Subject specific skills

Systems thinking, design thinking, motivational design, product design, game theory, pedagogy and consumer psychology, and sales and marketing.

Transferable skills

Effective design communication, creativity & innovation, team/group working, psychology, communication skills, decision making, critical thinking, problem solving.

Study

Study time

Type	Required
Lectures	15 sessions of 1 hour (10%)
Seminars	15 sessions of 1 hour (10%)
Online learning (independent)	40 sessions of 1 hour (27%)
Other activity	20 hours (13%)
Assessment	60 hours (40%)
Total	150 hours

Private study description

No private study requirements defined for this module.

Other activity description

Student group work outside of contact hours.

Costs

No further costs have been identified for this module.

Assessment

You do not need to pass all assessment components to pass the module.

Assessment group A3

	Weighting	Study time	Eligible for self-certification
Design	70%	42 hours	Yes (extension)
Design assignment: Design brief, instruction booklet and accompanying essay. Total word count of 2700, with 1500 expected for the essay.			
Case Study Assessment	30%	18 hours	No
Project - Students will be grouped and each group will given a briefing, based on which they will need to come up with a game/simulation design and a marketing communications strategy. Group work ending with a team-based presentation (10-15 minutes), marked collectively if equal contribution is monitored with oversight from teaching staff.			

Feedback on assessment

Written feedback sheets provided as standard.

Availability

There is currently no information about the courses for which this module is core or optional.