MODULE SPECIFICATION

Part 1: Information			
Module Title	The Internet of Everything: Design Principles		
Module Code	UFCFAL-30-2	Level	Level 5
For implementation from	2018-19		
UWE Credit Rating	30	ECTS Credit Rating	15
Faculty	Faculty of Environment & Technology	Field	Computer Science and Creative Technologies
Department	FET Dept of Computer Sci & Creative Tech		
Contributes towards			
Module type:	Standard		
Pre-requisites	None		
Excluded Combinations	None		
Co- requisites	None		
Module Entry requirements	None		

Part 2: Description

Educational Aims: This module focuses on the tools and principles that underlie the design, development and use of networked, physical devices and their corresponding web interfaces.

Outline Syllabus: Through a creative physical computing and web based project students will explore a range of current and historical design, development and research approaches. These tools will be contextualized through a study of the socio-cultural implications of developing networked, physical devices and their corresponding web interfaces.

Teaching and Learning Methods: Scheduled learning: attendance at regular studio-based groups/ Students work on web design and construction in the creative technologies lab, with tutors available for comment and advice. Students learn, mainly through practical work, from tutors and from one another. Each session will be a mixture of talks from tutors, group discussions, practical work and/or seminars. Mainstream web authoring tools and design packages will be used/ discussed throughout the year.

Independent learning: Students are expected to read around the subject and to visit relevant

websites, talks and artefacts with a critical sensibility. They are also expected to develop their project-based coursework assignments, and to attend relevant conferences or seminars.

Feedback: will be given through discussions in class, group tutorials, written feedback for assignments and comments on student's research blogs by lecturers, their peers and guest speakers. The marking criteria and assessment format will be clearly indicated on the assignment brief and will be introduced in the first teaching session.

Research Journals: Students will be supported to create research blogs and will be asked periodically to share and comment on each others journals throughout both semesters. The lecturer will also maintain a module twitter account (or other appropriate social media platform) which will aggregate and display students' blog entries and offer a platform for lecturers to share module resources. Both the blogs and twitter account are intended to engender students in an outward facing and transparent approach to interaction design.

Part 3: Assessment

On this module students will complete a portfolio comprising of 2 tasks, which accounts for 75% of the module mark with the remaining assessment attributed to a presentation.

The first portfolio task is designed to enable students to systematically work through a user-centered design process. This could include: qualitative evidence gathering, analysis and developing a detailed design specification. Students will submit detailed documentation of their research process and subsequent findings.

In the second portfolio task students will use their research findings and subsequent design brief to develop a prototype networked, physical object with a corresponding web interface. Design solutions need to suit the given context and specification and implemented following current industry guidelines.

Task one assesses the quality and completeness of the research documentation, as well as the quality of the chosen design direction.

Task two assesses students ability to respond and reflect on their design research from task one. Subsequently it assess their ability to develop a physical design based on their research and evaluate it's efficacy.

The presentation and viva is held during the exam period after the end of semester 2.

First Sit Components	**Final Assessment**	**Element weighting**	**Description**
Portfolio - Component B		23 %	User centred design research task. Portfolio
Portfolio - Component B		52 %	Task in applied networked, physical artefact design. Portfolio
Presentation - Component A	✓	25 %	Presentation and viva (15 minutes) class
Resit Components	**Final Assessment**	**Element weighting**	**Description**
Portfolio - Component B		75 %	Individual coursework assignment - portfolio
Presentation - Component A	✓	25 %	Presentation (15 minutes) video

Part 4: Teaching and Learning Methods

Learning Outcomes

On successful completion of this module students will be able to:

	Module Learning Outcomes
MO1	Explain principles that underlie the design and development of physical, networked objects and their corresponding web interfaces using concrete examples
MO2	Analyze and evaluate the qualities of a physical, networked artefact and its corresponding web presence in terms of: the validity of its code, its physical properties and its suitability for a specified user group
MO3	Use relevant contemporary physical computing and web authoring languages to: produce a physical networked artefact and web page to a given specification, validate its code, run the networked/ web aspect of the project on a live server, and develop a physical prototype
MO4	Apply visual design and user-centered design principles and practices for a given context and specification
MO5	Self-manage the planning and implementation phase of the design and development of networked physical artefacts

Contact Hours

Contact Hours	
Independent Study Hours:	
Independent study/self-guided study	228
Total Independent Study Hours:	228
Scheduled Learning and Teaching Hours:	
Face-to-face learning	72
Total Scheduled Learning and Teaching Hours:	72
Hours to be allocated	300
Allocated Hours	300

Reading List

The reading list for this module can be accessed via the following link:

https://uwe.rl.talis.com/modules/ufcfal-30-2.html