

Session: 2022/23

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Title of Module: Interactive Design for Smart Devices			
Code: COMP11015	SCQF Level: 11 (Scottish Credit and Qualifications Framework)	Credit Points: 10	ECTS: 5 (European Credit Transfer Scheme)
School:	School of Computing, Engineering and Physical Sciences		
Module Co-ordinator:	Costas Iliopoulos		
Summary of Module			
<p>This module is a research-oriented optional module and covers a myriad of issues, topics, and paradigms that surpass the traditional scope of Human Computer Interaction (HCI) and User Experience design (UXD). Using examples, the module covers psychological and social aspects of users, interaction styles, users' requirements, design approaches, usability and evaluation, traditional and future interface paradigms, and the role of theory in user interface design. Topics are based on the design process and presented in an integrated and coherent way. Students are expected to carry out research on HCI/UXD related topics and contribute to the discussion forums.</p> <p>The module focuses on how to design interactive products, particularly the range of new smart devices that enhance and extend the way people communicate, interact, socialise and work together. Technology is continually advancing and it touches every part of our daily lives. Each year there are new developments such as mass market mobile technological advancement, wearable computing, and a plethora of new innovative smartproducts.</p> <p>Undertaking this module will develop a range of graduate attributes. Sourcing, reviewing and presenting current literature will develop critical thinking and presentation skills. The module will discuss new developments, research, innovations, research thinking and consideration of ethical issues. Other graduate attributes such as problem solving, resilience and ambition will be promoted.</p> <ul style="list-style-type: none"> • The purpose of the content is to investigate Human Computer Interaction (HCI) and User Experience Design (UXD) principles that are becoming increasingly important in the modern digital environment. HCI is the study of how people interact with computers including topics such as memory, attention, perception, colour, and usability in general. One important HCI factor is that different users form different conceptions or mental models about their interactions and have different ways of learning and retrieving knowledge and skills. In addition, cultural differences play a part. • User interface technology changes rapidly, offering new interaction possibilities which previous may not have been available. • Finally, User Experience (UX) as a discipline is evolving as user preferences change in response to technology advances. User expectations also changing with the use of digital technologies and tools such as smartphones and social media. Thus better understanding the user as well as the technology becomes essential. 			

Module Delivery Method					
Face-To-Face	Blended	Fully Online	HybridC	HybridO	Work-based Learning
✓	✓	✓			

Face-To-Face

Term used to describe the traditional classroom environment where the students and the lecturer meet synchronously in the same room for the whole provision.

Blended

A mode of delivery of a module or a programme that involves online and face-to-face delivery of learning, teaching and assessment activities, student support and feedback. A programme may be considered "blended" if it includes a combination of face-to-face, online and blended modules. If an online programme has any compulsory face-to-face and campus elements it must be described as blended with clearly articulated delivery information to manage student expectations

Fully Online

Instruction that is solely delivered by web-based or internet-based technologies. This term is used to describe the previously used terms distance learning and e learning.

HybridC

Online with mandatory face-to-face learning on Campus

HybridO

Online with optional face-to-face learning on Campus

Work-based Learning

Learning activities where the main location for the learning experience is in the workplace.

Campus(es) for Module Delivery

The module will **normally** be offered on the following campuses / or by Distance/Online Learning:
(Provided viable student numbers permit)

Paisley:	Ayr:	Dumfries:	Lanarkshire:	London:	Distance/Online Learning:	Other:
✓					✓	

Term(s) for Module Delivery

(Provided viable student numbers permit).

Term 1	Term 2	Term 3
		✓

[Top of Page](#)

Learning Outcomes: (maximum of 5 statements)

On successful completion of this module the student will be able to:

- L1. Critically appraise the interdisciplinary skills needed for interactive design, human computer interaction, information visualisation, positive user experiences, and web design.
- L2. Integrate theory with practice in demonstrating the cognitive and social issues that underpin the design of these technologies
- L3. Demonstrate appropriate skills in the design of interactive products that enhance and extend the way people communicate, interact, and work

Employability Skills and Personal Development Planning (PDP) Skills

SCQF Headings	During completion of this module, there will be an opportunity to achieve core skills in:
Knowledge and Understanding (K and U)	SCQF Level 11. Practical grounding for interaction designers and usability engineers to develop current and next generation of interactive technologies. A right blended set of skills from psychology, human-computer interaction, user experience design (UXD), web design, computer science, information systems and entertainment.
Practice: Applied Knowledge and Understanding	SCQF Level 11. Practical design of interactive products using appropriate development tools and techniques.

Generic Cognitive skills	SCQF Level 11. Practical design of interactive products using appropriate development tools and techniques.	
Communication, ICT and Numeracy Skills	SCQF Level 11. Combining an understanding of the capabilities and desires of people and the kinds of technology available to interaction designers, as well as knowledge of how to identify requirements and evolve them into a suitable design.	
Autonomy, Accountability and Working with others	SCQF Level 11. Interaction and communication as a member of a team	
Pre-requisites:	Before undertaking this module the student should have undertaken the following:	
	Module Code:	Module Title:
	Other:	
Co-requisites	Module Code:	Module Title:

* Indicates that module descriptor is not published.

[\[Top of Page\]](#)

Learning and Teaching	
Teaching and Learning is in line with the university strategy. Research skills are enhanced through independent guided study including web-based materials. Distance learning (DL) students will be encouraged to make full use of appropriate collaboration facilities within the VLE. All students will be encouraged to use discussion forums and video conferencing where appropriate. Lectures and tutorials will be delivered face to face and on-line as appropriate for student groups. Timing of on-line sessions will be set at times appropriate to the cohort of DL students.	
Learning Activities During completion of this module, the learning activities undertaken to achieve the module learning outcomes are stated below:	Student Learning Hours (Normally totalling 200 hours): (Note: Learning hours include both contact hours and hours spent on other learning activities)
Lecture/Core Content Delivery	12
Tutorial/Synchronous Support Activity	6
Laboratory/Practical Demonstration/Workshop	6
Asynchronous Class Activity	26
Independent Study	50
	100 Hours Total
**Indicative Resources: (eg. Core text, journals, internet access)	
The following materials form essential underpinning for the module content and ultimately for the learning outcomes:	

Interaction Design: Beyond Human-Computer Interaction 5th edition (paperback), Rodgers Y, Sharp H, Preece J, Publisher: John Wiley & Sons, 2019, ISBN 978-1119547259

Designing Interfaces: Patterns for Effective Interaction Design 3rd edition (paperback), Tidwill J, Brewer C, Valencia-Brooks A. Publisher: O-Reilly, 2020, ISBN-13: 978-1492051961

The Joy of UX: User Experience and Interactive Design for Developers, Addison-Wesley Professional, 2016, ISBN: 978-0134276717

Smashing UX Design: Foundations for Designing Online User Experiences, Allen J, Chudley J, Publisher: John Wiley & Sons, 2012, ISBN-13: 978-0470666852

The Design of Everyday Things: Revised and Expanded Edition, Norman D, MIT Press, 2013, ISBN: 978-0262525671

Human Computer Interaction, Alan Dix, Janet Finlay, Gregory Abowd, Russell Beale, Publisher: Prentice Hall, 2004, ISBN: 0130461091

All module materials which are available in electronic format and are placed on the Moodle VLE. These include lecture slides, tutorials, practical sessions, assessments, and a variety of additional reference materials and links to various web sites.

A number of web sites will be required as part of the course and on-line materials.

Suitable software for interface design such as Adobe XD, Axure, Balsamiq, Microsoft Visual Studio, Xamarin.

Internet access is needed to carry out practical sessions and practical coursework.

(**N.B. Although reading lists should include current publications, students are advised (particularly for material marked with an asterisk*) to wait until the start of session for confirmation of the most up-to-date material)

Engagement Requirements

In line with the Academic Engagement Procedure, Students are defined as academically engaged if they are regularly engaged with timetabled teaching sessions, course-related learning resources including those in the Library and on the relevant learning platform, and complete assessments and submit these on time. Please refer to the Academic Engagement Procedure at the following link: [Academic engagement procedure](#)

[Top of Page](#)

Supplemental Information

Programme Board	Computing
Assessment Results (Pass/Fail)	No
Subject Panel	Business & Applied Computing
Moderator	Ying Liang
External Examiner	C Luo
Accreditation Details	Not applicable

Version Number	2.08
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[\[Top of Page\]](#)

Assessment: (also refer to Assessment Outcomes Grids below)
Individual research-focussed written report(100%)
(N.B. (i) Assessment Outcomes Grids for the module (one for each component) can be found below which clearly demonstrate how the learning outcomes of the module will be assessed. (ii) An indicative schedule listing approximate times within the academic calendar when assessment is likely to feature will be provided within the Student Handbook.)

Assessment Outcome Grids (Footnote A.)

Component 1						
Assessment Type (Footnote B.)	Learning Outcome (1)	Learning Outcome (2)	Learning Outcome (3)	Weighting (%) of Assessment Element	Timetabled Contact Hours	
Dissertation/ Project report/ Thesis	✓	✓	✓	100	0	
Combined Total For All Components				100%	0 hours	

Footnotes

A. Referred to within Assessment Section above

B. Identified in the Learning Outcome Section above

[\[Top of Page\]](#)

Note(s):
<ol style="list-style-type: none"> More than one assessment method can be used to assess individual learning outcomes. Schools are responsible for determining student contact hours. Please refer to University Policy on contact hours (extract contained within section 10 of the Module Descriptor guidance note). This will normally be variable across Schools, dependent on Programmes &/or Professional requirements.

Equality and Diversity
The module is appropriate for all students. Every effort will be made by the University to accommodate any equality and diversity issues brought to the attention of the School. UWS Equality and Diversity Policy
(N.B. Every effort will be made by the University to accommodate any equality and diversity issues brought to the attention of the School)