BCS Higher Education Qualifications

Professional Graduate Diploma in IT

Realising the User Interface Syllabus **

Version 4.3

July 2020

This qualification is regulated by one or more of the following: Ofqual, Qualifications Wales, CCEA Regulation or SQA.

** This module will be retired in 2020 and the last examination session will be held in November 2020, with a final opportunity for re-sit in May 2021.

Contents

1. Change History

Any changes made to the syllabus shall be clearly documented with a change history log. This shall include the latest version number, date of the amendment and the changes made. The purpose is to identify quickly what changes have been made.

Version Number	Date	Changes Made
Version 1.0	March 2014	Released
Version 2.0	March 2016	Re-formatted with syllabus numbering – no change to content
Version 3.0	April 2016	Reading list updated
Version 4.0	Dec 2016	Regulation statement added.
Version 4.1	Feb 2019	Minor update to syllabus content.
Version 4.2	Nov 2019	Retirement statement added.
Version 4.3	July 2020	Address changed

2. Rationale

This module is a progression route from the Diploma Module Principles of User Interface Design. There is a need for professionals who not only understand the requirements of effective user interface design, but are also able to produce such interfaces. Expanding and developing the material introduced earlier, this module focuses on the selection, use and evaluation of the methods and techniques necessary to design, build and test interfaces in a wide range of contemporary situations from mobile computing and web-browsing to safety critical and other interaction-intensive digital systems. The syllabus considers both the visual and the technical aspects of user interface design.

3. Aims

- To provide in-depth understanding of the methods and techniques that can be utilized in the design, implementation and testing of user interfaces
- To develop critical capabilities that enable evaluation and selection of appropriate methods and techniques for interface design
- To engender practical abilities in visual and technical aspects of the design process

4. Objectives

Upon successful completion of this module, candidates will be able to demonstrate their competence in, and their ability to:

- Be able to evaluate and select, based on critical analysis, appropriate approaches to interface design in a variety of scenarios
- Demonstrate a responsiveness to the visual and technical requirements of an interface design in the context of its use and setting
- Be able to identify, articulate and apply the legal and ethical constraints appropriate to a number of culture-, application- and platform-dependent settings
- Be able to communicate design decisions in a visual manner
- Know how to design, build and test a user interface appropriate hosting and server strategies for Web sites and mobile digital solutions in various application areas

5. Prior Knowledge Expected

The learner must have achieved the Diploma in IT or have an appropriate exemption to be entered for the Professional Graduate Diploma in IT.

Candidates are required to become a member of BCS, The Chartered Institute for IT to sit and be awarded the qualifications. Candidates may apply for a four year student membership that will support them throughout their studies.

6. Format and Duration of the Examination

The examination is a three-hour closed book examination (no materials can be taken into the examination room) based on the syllabus in this document.

Examinations are held once a year and are undertaken in normal examination conditions with one or more duly appointed invigilators.

The pass mark is 40%.

7. Syllabus Detail

Note: the focus of this paper is on the production of solutions to design issues from contemporary application domains including (but not limited to) current and emerging technologies, home entertainment, games, education and other global phenomena and events.

Category	Ref	Content
1 USER CENTRED DESIGN	1.1	Understand and apply user centred design including concepts such as: user experience, target users, user modelling, user scenarios, localisation & globalisation, user help and support
2 DESIGN TECHNIQUES	2.1	Select and apply a design methodology appropriate to a specific user interface design task
	2.2	Understand, select and use design techniques such as: storyboards, mood boards, site mapping, information architecture. An overview of methods including RAD, prototyping etc Use of UX techniques including personas, goals. Metaphors, use cases
3 CHARACTERISTICS OF GOOD DESIGN	3.1	Develop schemes of user interaction influenced by characteristics of good design, such as: learnability, robustness, flexibility, usability, performance, accessibility, adaptability, customisation. An understanding of usability guidelines and approaches for both web and mobile domains as well as social platforms
4 TESTING & EVALUATION		Devise hybrid strategies of testing and evaluation of user interaction with specific focus on:
	4.1	• Approaches to test strategy, test design, and formation of testing criteria
	4.2	• Techniques such as focus groups, task-based testing, surveys, interviews, observations and walkthroughs. An understanding of heuristics evaluation and the role of analytics and data in evaluation
5 SOCIAL, ETHICAL AND LEGAL ISSUES		Understand and apply:
	5.1	• Social and ethical impact of technologies for controlling web access. Should include consideration of data and privacy including GDPR
	5.2	• Social and commercial consequences of media convergence.
	5.3	• Social and economic effects of e-commerce.
	5.4	• Ethical and economic implications of accessibility policies and legislation.
	5.5	• Disability Discrimination Act 1995 (DDA) and the related Special Educational Needs and Disability Act 2001 (SENDA)
	5.6	• Web Accessibility Initiative (WAI) from the World Wide Web Consortium (W3C)
6 CONTEMPORARY INTERACTIVE TECHNOLOGIES	6.1	Design effective interaction for technologies such as: Mobile computing, screen readers, voice recognition, touch screens, game peripherals (joysticks, light guns, dance mats etc.) and emergent technologies, AR and VR, data driven interactions and visualisations

7 APPLICATION DOMAINS	7.1	Design effective interaction for application domains such as: e-commerce, edutainment, iTV, entertainment, informational, safety critical systems, games, online communities, social platforms, apps
8 DESIGN FOR WEB	8.1	Design effective interaction for the web considering: - Technologies such as: style sheets, CSS, HTML forms - Issues such as: web standards, web accessibility separation of content and presentation, Web 2.0, social web
	8.2	Design effective interaction for the apps considering: Technologies and platforms – IOS and Android
	8.3	Design principles, techniques and guidelines
	8.4	Mobile interactions and navigation – single page view design

8. Recommended Reading List

Module Name	ISBN 10	ISBN 13
Primary Texts		
• D Benyon, Designing Interactive Systems: A Comprehensive Guide to HCI and Interaction Design, Addison Wesley (4th Ed) 2019	1292155515	978-1292155517
Other Texts		
• H Sharp, Y Rogers and J Preece, Interaction Design: Beyond Human- Computer Interaction, John Wiley (5h Ed) 2019	1119547253	978-1119547259
• S. Krug **Don't Make Me Think, Revisited: A Common Sense Approach to Web Usability** • New Riders 2013	9780321965516	978-0321965516
A.Cooper About Face: The Essentials of Interaction Design John Wiley & Sons (2014)	1118766571	978-1118766576

Other Reading
Interaction Design Foundation. 2016. Interaction Design Foundation. [ONLINE] Available at: https://www.interaction-design.org. [Accessed 09 April 2016].
Nielsen Norman Group: UX Training, Consulting, & Research. 2016. Nielsen Norman Group: UX Training, Consulting, & Research. [ONLINE] Available at: https://www.nngroup.com. [Accessed 09 April 2016].
AskTog. 2016. AskTog Home Page. [ONLINE] Available at: http://www.asktog.com. [Accessed 09 April 2016].
Web Accessibility Initiative (WAI). 2016. Web Accessibility Initiative (WAI) - home page. [ONLINE] Available at: http://www.w3.org/WAI/. [Accessed 09 April 2016].
British Interaction Specialist Group (2016). [ONLINE] Available at: http://www.bcs.org/category/14296. [Accessed 09 April 2016]

Usability.gov. 2016. Home | Usability.gov. [ONLINE] Available at: http://www.usability.gov. [Accessed 09 April 2016].

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