

BCS LEVEL 5 DIPLOMA IN IT USER EXPERIENCE

SYLLABUS

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Introduction

Level 5 Diploma in IT

The second stage within the BCS three-stage Higher Education Qualification programme, the Level 5 Diploma enables candidates who have already achieved the Level 4 Certificate in IT to progress to higher levels of knowledge and competency.

This internationally-recognised qualification introduces you to the business-related aspects of the IT industry, developing your technological expertise while also considering the potential challenges of the day-to-day running of an organisation, such as legal obligations and intellectual property.

Our modules have been created in-line with the latest developments in the industry, giving you a competitive edge in the IT job market. You will have the opportunity to learn about object-oriented programming, user experience, systems analysis and design, as well as to build upon knowledge and skills developed during the Level 4 Certificate.

To successfully achieve the qualification, candidates need to complete:

- One core module
- Three optional modules
- One Professional Project in IT

Candidates who wish to progress onto the next stage will need to complete the Project at end of the Level 6 Professional Graduate Diploma in IT.

User Experience Optional Module

The User Experience module is an optional module that forms part of the Level 5 Diploma in IT – the second stage within the BCS three-stage Higher Education Qualification programme.

Candidates will focus on understanding user populations, current trends and techniques for specifying, analysing and designing interactive systems, and how these can be applied to create the desired user experience.

Qualification Suitability and Overview

Candidates must have achieved the Certificate in IT or have an appropriate exemption to be entered for the Diploma in IT. Candidates can study for this diploma by attending a training course provided by a BCS accredited Training Provider or through self-study, although it is strongly recommended that all candidates register with an approved centre. Studying with an approved centre will deliver significant benefits.

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.

The Level 5 Diploma is suitable for professionals wishing to gain a formal IT qualification, and this module may be particularly relevant for candidates interested in career opportunities such as digital production, interface design, or usability consultancy.

Total Qualification Time	Guided Learning Hours	Assessment Time
1086 hours	225 hours	2 hours

SFIA Levels

This module provides candidates with the level of knowledge highlighted within the table, enabling candidates to develop the skills to operate successfully at the levels of responsibility indicated.

Level	Levels of Knowledge	Levels of Skill and Responsibility (SFIA)
K7		Set strategy, inspire and mobilise
K6	Evaluate	Initiate and influence
K5	Synthesise	Ensure and advise
K4	Analyse	Enable
K3	Apply	Apply
K2	Understand	Assist
K1	Remember	Follow

SFIA Plus

This syllabus has been linked to the SFIA knowledge skills and behaviours required at Level 5.

USEV3

Evaluates design options and prototypes to obtain user feedback on requirements of developing systems, products or services. Tests the usability and accessibility of components and alternative designs. Administers a range of evaluations, recording data and feedback. Analyses evaluation data and recommend actions. Checks systems, products or services for adherence to applicable standards, guidelines, style guides, and legislation. Evaluates the usability of existing or competitor systems to provide benchmark values and as input to design.

REQM3

Defines and manages scoping, requirements definition and prioritisation activities for small-scale changes and assists with more complex change initiatives. Follows agreed standards and applies appropriate techniques to elicit and document detailed requirements. Provides constructive challenge to stakeholders as required. Reviews requirements for errors and omissions. Prioritises requirements and documents traceability to source. Provides input to the requirements base-line. Investigates, manages and applies authorised requests for changes to base-lined requirements, in line with change management policy.

HCEV3

Applies tools and methods to design and develop users' digital and off-line tasks, interactions and interfaces to meet agreed usability and accessibility requirements for selected system, product or service components. Creates workable prototypes. Assists, as part of a team, on overall user experience design. Assists in the evaluation of design options and trade-offs. Consistently applies visual design and branding guidelines.

Further detail regarding the SFIA Levels can be found at www.bcs.org/levels.

Learning Outcomes

Upon completion of this module, candidates will be able to:

- Explain the key principles of UX.
- Select appropriate user interface styles for a range of scenarios.
- Analyse users, situations and tasks, leading to the specification of user experiences.
- Apply the knowledge learned in this module to evaluate the UX.

Syllabus

1. Fundamentals of user experience

Learners will be able to:

1.1 Describe the fundamentals of user experience (UX).

Indicative content

- a. Process of human-centred UX design.
- b. Problem space and users.
- c. Designing, prototyping and evaluating.

Guidance

Candidates should develop an overall understanding of what UX is, as an umbrella term. UX encompasses all aspects of the user's interaction with a product or service.

1.2 Explain People, Activities, Context and Technologies (PACT).

Indicative content

- a. People, Activities, Context and Technologies.
- b. Fitt's Law.

Guidance

These are the two main processes for candidates to understand at this level. Candidates should develop an awareness of various approaches to the user experience, recognising and identifying key aspects.

1.3 Describe a multi-platform user experience.

Indicative content

- a. Different devices, e.g.:
 - i. Mobile and tablets.
 - ii. Laptop.
 - iii. Wearable computing.
 - iv. Smart TV.
 - v. Multi-screen.
 - vi. Appropriate assistive technologies.

Guidance

Candidates should understand that the user experience will vary according to devices, e.g. computer, mobile. They will have to describe approaches that allow for characteristics of different devices, e.g. screen size, touch-screen, operating systems such as iOS, Android, etc.

1.4 Understand usability principles.

Indicative content

- a. System Usability Scale (SUS).
- b. Design principles associated with learnability, effectiveness and communication, e.g. Nielsen's usability heuristics.

Guidance

Candidates will not be actively using these principles here, but understanding them with a view to being able to apply them later (see Section 5).

1.5 Explain design and ethical issues.

Indicative content

- a. Inclusive design.
- b. Designing for different cultures.

Guidance

Candidates could consider situations such as using a particular graphic on a button – graphics may mean different things to people from different cultures or parts of the world. Consider potential exclusions of users due to age, physical or mental abilities, affordability of a connected device and the level of digital skills required, e.g. the technical complexity of the solution.



2. Techniques for specifying, analysing and designing interactive systems

Learners will be able to:

2.1 Describe techniques for establishing user requirements.

Indicative content

- a. Planning and conducting user research.
- b. Early prototyping techniques.
- c. Envisionment.

Guidance

Candidates should identify key principles to create, design and evaluate effective user interfaces and should understand key techniques for generating user requirements.

2.2 Conceptualise interaction.

Indicative content

- a. Conceptual model.
- b. Metaphors.
- c. Conceptual and physical design.

Guidance

Candidates should be able to understand how to conceptualise interaction.

2.3 Explain principles of task analysis.

Indicative content

- a. Breaking a user goal into tasks.

Guidance

Candidates should be able to consider how a user accomplishes their goal by completing tasks.

2.4 Explain and demonstrate understanding of visual and multimodal interface design.

Indicative content

- a. Multimodal interaction, e.g.:
 - i. Using sound and voice.
 - ii. Tangible interaction.
 - iii. Gestural interaction.
 - iv. Mixed Reality.
 - v. With and without appropriate assistive technologies.

Guidance

Candidates should have an awareness of modalities and multimodal interfaces, as well as the potential for novel forms of interaction.

3. Current trends in UX

Learners will be able to:

3.1 Explain trends in interactive systems.

Indicative content

- a. Apps.
- b. Websites.
- c. Ubiquitous computing.
- d. Mobile computing.
- e. Wearable computing.
- f. Extended Reality (XR) (virtual, augmented and mixed reality).

Guidance

Candidates should be able to demonstrate an awareness of current global trends, not exclusive to their geographical area, and appreciate the bigger picture. An example of an important theme in UX is the potential impact of Artificial Intelligence (AI).

4. Understanding users

Learners will be able to:

4.1 Demonstrate understanding of populations and their abilities.

Indicative content

- a. User profiles.
- b. Simplicity principle:
 - i. Balancing ease of installation vs. ease of use, e.g. autofill feature vs. standalone app for keyboard master applications.

Guidance

Candidates should understand demographics and infrastructures available to them. Candidates will need to develop an understanding of how to adapt for different users.

4.2 Explain accessibility in design.

Indicative content

- a. Accessibility.
- b. Inclusion.
- c. Universal design (including W3C/WAI standards and guidelines).
- d. Accessibility principles (POUR).

Guidance

Candidates should develop an understanding of compliance and the legal aspects of accessibility in UX design - this will support a candidate in the workplace.

4.3 Describe cognitive aspects of the user experience.

Indicative content

- a. Memory and attention.
- b. Affect.
- c. Cognition and action.
- d. Social interaction.
- e. Perception and navigation.

Guidance

Candidates should understand the importance of cognitive aspects in UX.

5. Testing and evaluation

Learners will be able to:

5.1 Describe the fundamentals of evaluation.

Indicative content

- a. Formative and summative evaluation.
- b. Heuristic evaluation.
- c. Qualitative vs quantitative.
- d. Validity.
- e. Reliability.
- f. Bias.
- g. Scope.
- h. Ecological validity.

Guidance

Candidates should apply knowledge they have learned in order to test and evaluate a system.

5.2 Explain how to use gathering methods and tools

Indicative content

- a. Surveys or questionnaires.
- b. Interviews.
- c. Observation.
- d. Walkthroughs.
- e. Experimental lab and field testing.

Guidance

Candidates should have awareness of what options are available - methods depend on what is being tested. They should have an understanding of how to select the appropriate technique for the interface they are looking at, in an unbiased way. Candidates should also understand the importance of testing with actual user groups, including with assistive technologies where appropriate.

5.3 Describe and use data analysis techniques

Indicative content

- a. Descriptive statistics.
- b. Basic inferential statistics, e.g. Mann-Whitney and t-test.

Guidance

Candidates should be able to use Mann-Whitney and t-test as well as describe them.

Examination Format

This module is assessed through completion of an invigilated written exam.

Type	Four written questions from a choice of six, each with equal marks
Duration	Two hours
Supervised	Yes
Open Book	No (no materials can be taken into the examination room)
Passmark	10/25 (40%)
Delivery	Paper format only

Adjustments and/or additional time can be requested in line with the [BCS reasonable adjustments policy](#) for candidates with a disability or other special considerations.

Question Weighting

Candidates will choose four questions from a choice of six. All questions are equally weighted and worth 25 marks.

Recommended Reading

Primary texts

Title: Designing User Experience: A guide to HCI, UX and interaction design
Author: D. Benyon
Publisher: Pearson
Date: 2019
ISBN: 978-1292155517

Title: Interaction Design: Beyond Human-Computer Interaction
Author: H. Sharp, J. Preece and Y. Rogers
Publisher: Wiley
Date: 2019
ISBN: 978-1119547259

Title: Web Accessibility Tutorials
Organisation: W3C Web Accessibility Initiative
Available at: <https://www.w3.org/WAI/tutorials/> [Accessed 9 July 2021]

Additional texts

Title: Quantifying the User Experience: Practical Statistics for User Research
Author: J. Sauro and J. R. Lewis
Publisher: Morgan Kaufman
Date: 2016
ISBN: 978-0128023082

Online resources

Organisation: Interaction Design Foundation

Available at: <https://www.interaction-design.org/literature> [Accessed 9 July 2021]

Organisation: Nielsen Norman Group

Available at: <https://www.nngroup.com/articles/> [Accessed 9 July 2021]

Organisation: Statistics Online Support

Available at: <http://sites.utexas.edu/sos/> [Accessed 9 July 2021]

Title: Authoring Tool Accessibility Guidelines (ATAG)

Organisation: W3C Web Accessibility Initiative

Available at: <https://www.w3.org/WAI/standards-guidelines/atag/> [Accessed 9 July 2021]

Title: Understanding Techniques for WCAG: Success Criteria

Organisation: W3C Web Accessibility Initiative

Available at: <https://www.w3.org/TR/UNDERSTANDING-WCAG20/understanding-techniques.html> [Accessed 9 July 2021]

Title: Design that works for all

Organisation: Design Council

Available at: <https://www.designcouncil.org.uk> [Accessed 22 March 2022]

Title: Accessibility Principles

Organisation: W3C Web Accessibility Initiative

Available at: <https://www.w3.org/WAI/fundamentals/accessibility-principles/>
Accessed 05 May 2022]

Using BCS Books

Accredited Training Organisations may include excerpts from BCS books in the course materials. If you wish to use excerpts from the books you will need a license from BCS. To request a license, please contact the Head of Publishing at BCS outlining the material you wish to copy and its intended use.

Document 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 changes made. The purpose is to identify quickly what changes have been made.

Version Number	Changes Made
Version 1.0 August 2021	Document created
Version 3.0 May 2022	Amendments made by accessibility specialists and examiner.

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