BCS Foundation Certificate in User Experience
Syllabus

Version 1.3
January 2018

This qualification is not regulated by the following United Kingdom Regulators - Ofqual, Qualification in Wales, CCEA or SQA

BCS Foundation Certificate in User Experience Syllabus

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 and Date	Changes Made
V1.3 January 2018	Typo Error correction
V1.2 September 2017	Certificate name correction on cover sheet and footer
V1.1 April 2017	Standardised New Template Format adopted, with revised ToC. No material change to syllabus content. K levels checked
V1.0 October 2015	Syllabus approved and signed off

Introduction

This foundation certificate addresses user experience practice in projects, product and software development. The foundation certificate is the first level of user experience certification provide by the BCS.

The syllabus is designed to ensure the candidate has suitable knowledge of the core concepts of User Experience (UX) and is aware of the most common tools, techniques and methods used in the field. It does not focus on one specific methodology.

Approved Training Organisations (ATOs) are selected and verified on their ability to provide a course that will give candidates the necessary training for the entire syllabus.

Objectives

This course provides candidates with an understanding of the principles of, and practical experience of using, industry best practice involved in operating, monitoring, reporting, implementing, planning and improving User Experience, leading to a Foundation qualification in User Experience (UX).

Specific Learning Objectives

Holders of the BCS Foundation Certificate in User Experience should be able to:

- Ensure systems have an early and continual focus on users and their tasks
- Plan and carry out empirical measurements of user behaviour
- Practice validated learning through prototyping and iterative design

Target Audience

Anyone involved in the design and evaluation of user interfaces (interface designers, usability engineers, requirement engineers, product managers). Other usability professionals may also be interested, including IT managers, quality managers, development managers and business analysts

Course Format and Duration

Candidates can study for this certificate in two ways: by attending an accredited training course provided by Accredited Training Organisation or by self-study.

The total time specified in this syllabus is 18 hours of lecture and practical work

Eligibility for the Examination

There are no specific pre-requisites for entry to the examination; however candidates should possess the appropriate level of knowledge to fulfil the objectives shown above. In addition, candidates should be familiar with simple multiple-choice exams. Before undertaking the BCS Foundation in User Experience examination, it is recommended that candidates have taken foundation certificate training in user experience by an approved ATO.

Format of the Examination

- 60 minute 'closed book'
- 40 multiple choice questions
- Pass mark is 26/40 (65%)

Additional time

For candidates requiring reasonable adjustments

Please refer to the reasonable adjustments policy for detailed information on how and when to apply.

For candidates whose language is not the language of the examination

If the examination is taken in a language that is not the candidate's native/official language, candidates are entitled to:

- 25% extra time
- Use their own **paper** language dictionary (whose purpose is translation between the examination language and another national language) during the examination Electronic versions of dictionaries will **not** be allowed into the examination room

Excerpts from 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 do this. If you are interested in taking out a licence to use BCS published material, you should contact the Head of Publishing at BCS outlining the material you wish to copy and the use to which it will be put.

Guidelines for Accredited Training Organisations

Each major subject heading in this syllabus is assigned an allocated time. The purpose of this is two-fold: first, to give both guidance on the relative proportion of time to be allocated to each section of an accredited course and an approximate minimum time for the teaching of each section; second, to guide the proportion of questions in the exam. Accredited Training Organisations may spend more time than is indicated and candidates may spend more time again in reading and research. Courses do not have to follow the same order as the syllabus. Courses may be run as a single module or broken down into two or three smaller modules.

Note that specific laws and legal issues relating to the country(s) within which a training provider operates may be mentioned as examples and included in course material, but the examination will only test the principles

There are some parts of the syllabus that require a practical element to give candidates experience of the theoretical ideas. An example of this is the sentence "Practice the concept of interactive paper prototyping", in Section 8 of the syllabus. This part requires candidate time exploring and refining the technique. There are no times provided in the syllabus, but the relative merits of each section are indicated, by a percentage figure.

It is therefore expected that Section 9 of the syllabus (20%) will be significantly longer than Section 1 (5%). The course does not have to follow the same order as the syllabus, and it is acceptable to have syllabus sections interleaved with each other - one section does not have to be completed before the next section is started. The prime objective is that all parts of all sections are covered in sufficient detail. Exam questions will be set on standards mentioned in the syllabus, and not on newer standards that are published after the syllabus.

Use of Calculators

Simple non-programmable calculators can be used during paper based examinations (to be provided by the candidate). Candidates taking on-line examinations will have access to an on-screen calculator.

No other calculators or mobile technology will be allowed.

Syllabus

For each top-level area of the syllabus a percentage and K level is identified. The percentage is the exam coverage of that area, and the K level identifies the maximum level of knowledge that may be examined for that area.

1. Guiding Principles – (5%, K2)

1.1. Articulate the importance of taking the users' perspective. (K2)
1.2. Paraphrase the key principles of user centred design. (K2)
1.3. Recall ISO9241 as an important standard in the field of usability. (K1)
1.4. Have an understanding of different user perspectives and goals for using a system (K2)
1.5. Recall the difference between usability and user experience. (K1)
1.6. Recall the difference between usability and user acceptance testing. (K1)
1.7. Summarise the benefits of inclusive design. (K2)

Appreciate why it is important to take the users' perspective. Understand and appreciate the key principles of user centred design, for example from ISO9241-201.

- The design is based upon an explicit understanding of users, tasks and environments.
- Users are involved throughout design and development.
- The design is driven and refined by user-centred evaluation.
- The process is iterative.
- The design addressed the whole user experience.
- The design team includes multidisciplinary skills and perspectives.

2. User Research – (10%, K3)

2.1. State the components of the context of use. (K1)
2.2. Identify the potential users of the system. (K2)
2.3. Plan site visits to end users to understand the context of use. (K3)
2.4. Recognise good and poor questions to ask in user interviews. (K2)
2.5. Describe the kinds of data that should be collected during a site visit to users. (K2)
2.6. Interpret the data from a site visit in ways that can be used to develop a shared knowledge of the context of use. (K3)
2.7. State the difference between observation and interpretation. (K1)
2.8. List discount usability research techniques that can be used to understand the context of use, such as diary studies. (K1)
2.9. State the key principles of contextual inquiry. (K1)
2.10. Define affinity programming. (K1)
2.11. Choose the appropriate research method to understand the context of use. (K3)

2.12. Demonstrate the difference between opinion-based and behaviour based research methods. (K3)

2.13. Recognise that requirements gathering and conceptual design should be truly inclusive. (K1)

This section of the syllabus introduces candidates to the notion of the context of use (users, goals and environments). It demonstrates that the most powerful data for design comes from field visits where researchers observe the way users achieve their goals in their own environment.

- Articulate the steps in a suitable user research technique, such as contextual inquiry, ethnography or a site visit.
- Describe the kinds of data that should be collected during a site visit and report on appropriate data collection methods, such as AEIOU (activities, environments, interactions, objects and users) and Empathy Map.
- Discuss the strengths and weaknesses of opinion-based methods, like surveys and focus groups, and behaviour-based methods, like contextual inquiry.
- Explain the notion of affinity diagramming as a way to analyse the qualitative data from field visits.
- Recall how user journey maps are constructed from affinity diagrams.

3. Illustrating the Context of Use – (15%, K3)

3.1. Illustrate the specific users of the system. (K3)
3.2. Write descriptions of users that can be used for design. (K3)
3.3. Explain the rationale for focussing on user needs. (K2)
3.4. Interpret key user needs. (K3)
3.5. Explain that including too many choices in a user interface increases the cognitive load on users. (K2)
3.6. State the elements of a user story. (K1)

This section of the syllabus builds upon the previous section to show how data from field visits is used to understand users and their goals.

- Demonstrate how to create personas from user research data.
- Understand how to identify users' key tasks and illustrate how they relate to user stories in a methodology like SCRUM.
- Understand Hick's Law and how it relates to the number of choices in a user interface.

4.   Measuring Usability – (5%, K3)

4.1. Define usability. (K1).

4.2. Illustrate how the definition of usability can be used to construct measures of usability. (K3)

4.3. Demonstrate how to choose between good and poor design ideas by using behavioural data. (K3)

4.4. Illustrate the role design experiments play in validated learning. (K3)

4.5. Identify the strengths and weaknesses of multivariate testing as a method for choosing between design alternatives. (K2)

4.6. Explain the value of iterative design. (K2)

4.7. Recall that good and bad user experiences have an emotional reaction on users. (K1)

An awareness of the ISO 9241-11 definition of usability. Articulate how usability can be specified in terms of effectiveness, efficiency and satisfaction. Explain the value of validated learning and why iterative design has value.

5.   Information Architecture – (15%, K3)

5.1 Recognise the way information flows between a person and a product or service. (K2)

5.2 Choose appropriate schemes for classifying and organising information. (K3)

5.3 Organise, structure and label content, functions and features. (K3)

5.4 Describe the steps in carrying out an open and a closed card sort. (K2)

5.5 Compare and contrast an implementation model, a mental model and a conceptual model. (K2)

5.6 State the concept of affordance. (K1)

State how to create a structured experience from disorganised information. Describe organisational techniques like Richard Saul Wurman's LATCH (Location, Alphabet, Time, Category, Hierarchy) model. Recall the different kinds of card sort. **Note**: that a card sort can be an open card sort (no constraints) or a closed card sort (the categories into which cards are to be sorted are defined

6.   Interaction Design – (10%, K3)

6.1. Describe different user interface design patterns. (K2)

6.2. Choose the correct interactive control in a user interface design. (K3)

6.3. Describe how the choice of user interface control has an impact on the time it takes users to achieve their goals. (K2)

6.4. Define the concept of progressive disclosure. (K1)

6.5. State the difference between interaction design and information architecture. (K1)

6.6. Explain why user interface consistency is an important design principle. (K2)

6.7. State the importance of focussing on the user's tasks when designing the flow of a user interface. (K1)

Describe different user interface patterns (for example, Wizards, Organiser Workspaces and Carousels). Demonstrate good and poor practice in the use of user interface controls, such as checkboxes and radio buttons. State Fitts' Law.

7. Visual Design – (10%, K2)

7.1 List fundamental principles of visual design. (K1)
7.2 Identify good and poor page layouts. (K2)
7.3 Define eye tracking as a research methodology and recall key insights from eye tracking research. (K1)
7.4 Describe the advantages and disadvantages of using metaphorical representations in visual design. (K2)

This section of the syllabus covers:

- Describe the core principles of visual design and how they can be used to remove clutter from user interfaces.
- Recognise and appreciate that good and poor design on usability has an impact on the user's experience. Become familiar with the design principles of contrast, alignment, repetition and proximity.
- Recognise how to improve a visual design (such as a form) using these design principles.
- Describe how appropriate metaphors in user interface design can bridge the gap between the user's mental model and the design's conceptual model.
- Recognise the main eye tracking gaze patterns when viewing web page content.

8. User Interface Prototyping – (10%, K3)

8.1 Choose between different types of prototype, for example paper and electronic, and recall the merits of each. (K3)
8.2 Recognise the appropriate type of prototype for the phase of design. (K2)
8.3 Describe the differences between prototypes and sketches. (K2)
8.4 Recognise the importance of identifying multiple different design solutions before deciding on a specific design solution. (K2)
8.5 Sketch paper prototypes. (K3)

Introduce high- and low-fidelity user interface prototyping. Recall that a prototype can take many forms, from paper to electronic, and that the purpose of a prototype is to support validated learning by asking and answering design questions. Practice the concept of interactive paper prototyping.

9. Usability Evaluation – (20%, K3)

9.1 Recall Nielsen's Usability Heuristics and have an awareness of other usability principles. (K1)

9.2 State the different kinds of usability evaluation. (K1)

9.3 Plan usability evaluations to test design hypotheses. (K3)

9.4 Record the data from usability evaluations. (K1)

9.5 Interpret the data from usability tests to distinguish high and low severity usability problems. (K3)

9.6 Moderate a usability test. (K3)

9.7 State the difference between a usability inspection and a usability test. (K1)

9.8 Choose between good and poor tasks for a usability test. (K3)

9.9 State the difference between observation and interpretation. (K1)

9.10 Identify W3C's Web Content Accessibility Guidelines as an important standard in the field of web accessibility. (K1)

This section of the syllabus covers:

- How to evaluate the usability of systems.
- Appreciate that usability evaluation is not *just* about usability testing but can include methods such as heuristic evaluation and A/B testing.
- Recognise that there are many different sets of usability principles.
- List Nielsen's Usability Heuristics.
- Describe the different kinds of usability evaluation, such as moderated and unmoderated usability testing and remote and lab-based testing.
- Paraphrase why usability testing can use smaller samples than opinion-based research techniques like surveys.
- Demonstrate the steps required to run an in-person, "thinking aloud" usability test. List common pitfalls in usability testing (such as focusing on opinions at the expense of behaviours).
- Record observations from a usability study and explain how these observations can be analysed with an affinity diagram. Run a usability test.

Levels of Knowledge / SFIA Levels

This course will provide candidates with the levels of difficulty / knowledge skill highlighted within the following table, enabling them to develop the skills to operate at the levels of responsibility indicated. The levels of knowledge and SFIA levels are explained in on the website www.bcs.org/levels.

The levels of knowledge will also enable candidates to develop the following levels of skill to be able to operate at the following levels of responsibility (as defined within the SFIA framework) within their workplace:

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

Question Weighting

Syllabus Area	Target number of questions
1. Guiding Principles	2
2. User research	4
3. Illustrating the context of use	6
4. Measuring usability	2
5. Information Architecture	6
6. Interaction Design	4
7. Visual Design	4
8. User Interface Prototyping	4
9. Usability Evaluation	8
Total	40 Questions

Format of Examination

Type	40 Multiple Choice Questions
Duration	60 minutes. Candidates are entitled to an additional 15 minutes if they are sitting an examination in a language that is not their native/official language.
Pre-requisites	Accredited training is strongly recommended but is not a pre-requisite.
Supervised	Yes
Open Book	No (No reading materials allowed into the examination room)
Pass Mark	26/40 (645)
Calculators	Simple non-programmable calculators can be used during the exam – to be supplied by the candidate.
Learning Hours	18 Hours
Delivery	Paper based examination via a BCS Accredited Training Organisation. Also available on-line

Trainer Criteria

Criteria	- Hold the BCS Foundation Certificate in User Experience - Have in depth knowledge of User Experience and ISO9421-210 - Have a minimum of 3 years' practical experience in the fields of usability and user experience - Have a minimum of 30 days' training experience or hold a train the trainer qualification

Classroom Size

Trainer to candidate ratio	1:16

Recommended Reading List

Guiding Principles

Title: The Design of Everyday Things, 2nd Edition (Chapter 1)
Author: Norman, D.
Publisher: MIT Press
Publication Date: 2013
ASIN: B011T6P15M

Other: ISO 9241-210:2010 Ergonomics of human-system interaction - Part 210: Human-centred design for interactive systems.

User Research

Title: Contextual Design: Defining Customer-Centered Systems
Author: Beyer, H. and Holtzblatt, K
Publisher: Morgan Kaufmann
Publication Date: 1997
ISBN: 978-1558604117

Title: The Mom Test: How to talk to customers and learn if your business is a good idea when everyone is lying to you
Author: Fitzpatrick, R
Publisher: CreateSpace Independent Publishing Platform
Publication Date: 2013
ISBN: 978-1492180746

Title: Designing for the Digital Age: How to Create Human-centered Products and Services (Chapters 6 and 7)
Author: Goodwin, K
Publisher: Indianapolis, IN: Wiley
Publication Date: 2009
ISBN: 978-0470229101

Title: Interviewing Users (Chapters 4 - 7)
Author: Portigal, S
Publisher: Brooklyn, NY: Rosenfeld Media
Publication Date: 2013
ISBN: 978-1933820118

Other: I   SO 9241-11:1998 Ergonomic requirements for office work with visual display terminals (VDTs) - Part 11: Guidance on usability

Illustrating the Context of Use

Title: The Inmates Are Running the Asylum (Chapter 9)
Author: Cooper, A
Publisher: Indianapolis, IN: SAMS
Publication Date: 2004
ISBN: 978-0672326141

Title: Designing for the Digital Age: How to Create Human-Centered Products and Services (Chapters 10 - 12)
Author: Goodwin, K
Publisher: Indianapolis, IN: Wiley
Publication Date: 2009
ISBN: 978-0470229101

Title: User Story Mapping: Discover the Whole Story, Build the Right Product (Chapters 5-12)
Author: Patton, J
Publisher: Sebastopol, CA: O'Reilly Media
Publication Date: 2014
ISBN: 978-1491904909

Title: The Persona Lifecycle: Keeping People in Mind Throughout Product Design
Author: Pruitt, J. and Adlin, T
Publisher: San Francisco, CA: Morgan Kaufmann
Publication Date: 2006
ISBN: 978-0125662512

Title: E-Commerce Usability: Tools and Techniques to Perfect the On-line Experience (Chapters 6 - 8)
Author: Travis, D.
Publisher: London: Taylor & Francis
Publication Date: 2002
ISBN: 978-0415258340

Measuring Usability

Title: Lean UX: Applying Lean Principles to Improve User Experience
Author: Gothelf, J.
Publisher: Sebastopol, CA: O'Reilly Media
Publication Date: 2013
ISBN: 978-1449311650

Title:	The Lean Startup: How Constant Innovation Creates Radically Successful Businesses
Author:	Ries, E.
Publisher:	London: Penguin.
Publication Date:	2011
ISBN:	978-0670921607
Title:	E-Commerce Usability: Tools and Techniques to Perfect the On-line Experience (Chapter 9)
Author:	Travis, D.
Publisher:	London: Taylor & Francis
Publication Date:	2002
ISBN:	978-0415258340
Title:	Measuring the User Experience: Collecting, Analyzing, and Presenting Usability Metrics, 2nd edition (Chapters 4 and 6).
Author:	Tullis, T. and Albert, B.
Publisher:	Burlington: MA: Morgan Kaufmann
Publication Date:	2013
ASIN:	B00HQ1QZTG

Information Architecture

Title:	The Encyclopedia of Human-Computer Interaction, 2nd Ed. (Card Sorting)
Author:	Hudson, W., Soegaard, M. and Dam, R.F. (eds.)
Publisher:	Aarhus, Denmark: The Interaction Design Foundation
Publication Date:	2014
Title:	The Design of Everyday Things, 2nd edition (Chapters 2-4)
Author:	Norman, D.
Publisher:	MIT Press
Publication Date:	2013
ISBN:	978-0262525671
Title:	Letting Go of the Words: Writing Web Content That Works
Author:	Redish, J.
Publisher:	Morgan Kaufmann
Publication Date:	2007
ISBN:	978-0123694867
Title:	Information Architecture for the World Wide Web: Designing Large-Scale Web Sites, 3rd Edition
Author:	Rosenfeld, L. and Morville, P.
Publisher:	O'Reilly Media
Publication Date:	2006
ISBN:	978-0596527341

Title:	Card Sorting: Designing Usable Categories (Chapter 4)
Author:	Spencer, D.
Publisher:	Brooklyn, NY: Rosenfeld Media
Publication Date:	2009
ISBN:	978-1933820026

Title:	Information Anxiety 2
Author:	Wurman, R.S.
Publisher:	QUE
Publication Date:	2000
ISBN:	978-0789724106

Interaction Design

Title:	About Face 3: The Essentials of Interaction Design
Author:	Cooper, A., Reimann, R. and Cronin, D.
Publisher:	Indianapolis, IN: Wiley
Publication Date:	2007
ISBN:	978-0470084113

Title:	Designing for the Digital Age: How to Create Human-Centered Products and Services
Author:	Goodwin, K.
Publisher:	Indianapolis, IN: Wiley
Publication Date:	2009
ISBN:	978-0470229101

Title:	Forms that Work: Designing Web Forms for Usability (Chapter 5)
Author:	Jarrett, C. and Gaffney, G.
Publisher:	Burlington: MA: Morgan Kaufmann
Publication Date:	2008
ISBN:	978-1558607101

Title:	Designing Web Interfaces: Principles and Patterns for Rich Interactions
Author:	Scott, B. and Neil, T.
Publisher:	O'Reilly Media
Publication Date:	2009
ISBN:	978-0596516253

Visual Design

Title: [Forms that Work: Designing Web Forms for Usability](#) (Chapter 7 & 8)
Author: Jarrett, C. and Gaffney, G.
Publisher: Burlington: MA: Morgan Kaufmann
Publication Date: 2008
ISBN: 978-1558607101

Title: [The Non-Designer's Design Book](#), 4th edition
Author: Williams, R.
Publisher: Berkeley, CA: Peachpit Press.
Publication Date: 2014
ISBN: 978-0133966152

Title: [Web Form Design: Filling in the Blanks](#) (Chapter 4)
Author: Wroblewski, L.
Publisher: Brooklyn, NY: Rosenfeld Media.
Publication Date: 2008
ISBN: 978-1933820248

User Interface Prototyping

Title: [The User Experience Team of One: A Research and Design Survival Guide](#) (Chapter 7)
Author: Buley, L.
Publisher: Brooklyn, NY: Rosenfeld Media.
Publication Date: 2013
ISBN: 978-1933820187

Title: [Sketching User Experiences: Getting the Design Right and the Right Design](#)
Author: Buxton, B.
Publisher: San Francisco, CA: Morgan Kaufmann
Publication Date: 2007
ISBN: 978-0123740373

Title: [Sketching User Experiences: The Workbook](#)
Author: Buxton, B., Greenberg, S., Carpendale S., Marquardt N.
Publisher: Morgan Kaufmann
Publication Date: 2011
ISBN: 978-0123819598

Title: [Paper Prototyping: The Fast and Easy Way to Design and Refine User Interfaces](#) (Chapters 4 and 7)
Author: Snyder, C.
Publisher: San Francisco, CA: Morgan Kaufmann
Publication Date: 2003
ISBN: 978-1558608702

Usability Evaluation

Title:	Don't Make Me Think, Revisited: A Common Sense Approach to Web Usability, 3rd Edition (Chapter 9)
Author:	Krug, S.
Publisher:	New Riders
Publication Date:	2014
ISBN:	978-0321965516

Title:	Usability Engineering (Chapters 5 and 6)
Author:	Nielsen, J.
Publisher:	Morgan Kaufmann
Publication Date:	1993
ISBN:	978-0125184069

Title:	Handbook of Usability Testing: How to Plan, Design and Conduct Effective Tests, 2nd Edition
Author:	Rubin, J. and Chisnell, D.
Publisher:	Indianapolis, IN: Wiley
Publication Date:	2008
ISBN:	978-0470185483

Title:	The Moderator's Survival Guide: Handling Common, Tricky, and Sticky Situations in User Research
Author:	Tedesco, D. and Tranquada, F.
Publisher:	Waltham, MA: Morgan Kaufmann
Publication Date:	2013
ISBN:	978-0124047006