

Module Number and Title

U08182 Information Systems Design

Description for modular programme handbook

A study of the principles, methods and techniques for the design of automated information systems.

Level and value

Honours component single module.

Pre-requisites

U08004 Constructing Computer Software and U08048 Requirements Specification

Pre- and Co-requisite notes, restrictions and relationship to other modules

Replaces M08748 (PART), cannot be counted with M08748 Information Systems Analysis and Design.

Timetable information

Timetabled semester 2, running every year.

Context

Builds on the knowledge introduced in U08048 Requirements Specification to show how the analysis phase is taken forward into the design phase for the development of an automated information system.

Content

The principles, methods and techniques of information system design and implementation including the following aspects.

- Architectural styles of information systems and their relationship to quality;
- Roles of various types software components, including legacy subsystems, in information systems and their key features;
- Current methods and techniques for modelling, design, analysis evaluation and testing of information systems at design stage.

Learning outcomes – knowledge and understanding

It is intended that students will develop knowledge and understanding of:

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1. Principles, methods and techniques for information systems design;
2. Architectural structures of software systems and their relationship to quality;
3. Roles of software components, including legacy sub-systems, in information systems and their key features;
4. Catalogue of software architectural styles, understanding their quality features;
5. Selection of methods and techniques for modelling the design of information systems;
6. Principles, techniques and methods of design evaluation and software testing.

Learning outcomes – disciplinary and professional

It is intended that students will develop the following skills:

7. The use of appropriate techniques for software design;
8. Modelling information systems' architectural structures
9. Selection of appropriate architectural styles and design of component features;
10. Evaluation of the quality of software and information systems as designed;
11. Documentation of information system design and key activities in implementation, such as maintenance of legacy code, development of test plan and test report;
12. Selection and systematic application of testing techniques to software and information systems.

Transferable skills summary

- Self management transferable skills practised
- Learning transferable skills practised
- Communication transferable skills taught, practised and assessed
- Teamwork transferable skills taught, practised and assessed
- Problem solving transferable skills taught, practised and assessed
- Information technology transferable skills practised

Student experience

Students completing this module will have been given the opportunity to:

- Attend lectures designed to show how to design an information system that matches a requirements specification.
- Attend practical classes in problem solving in designing an information system.
- Carry out work independently using un-assessed worksheets.
- Work independently on the computer system to document a design specification using appropriate CASE tools.

Contact hours

33 hours Lectures/Practicals

Coursework examination assessment balance

50% coursework, testing learning outcomes (1,2,5,6,7,9, 10, 11, 12)

50% examination, testing learning outcomes (1,2,3,4,5, 6, 8, 10, 12)

Indicative Reading

See module reading list at http://opac.brookes.ac.uk:8001/www-bin/www_talis32

Date of last change

Date of approved changes

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