Module Specification

Online Database Management

Version: 2022-23, v1.0, 30 Apr 2021

Contents

Part 1: Information

Module title: Online Database Management

Module code: UFCF9N-30-2

Level: Level 5

For implementation from: 2022-23

UWE credit rating: 30

ECTS credit rating: 15

Faculty: Faculty of Environment & Technology

Department: FET Dept of Computer Sci & Creative Tech

Partner institutions: University Centre Weston

Delivery locations: University Centre Weston

Field: Computer Science and Creative Technologies

Module type: Standard

Pre-requisites: None

Excluded combinations: None

Co-requisites: None

Continuing professional development: No

Professional, statutory or regulatory body requirements: None

Part 2: Description

Overview: Not applicable

Features: Not applicable

Educational aims: See Outline Syllabus.

Outline syllabus: Design and implement a secure database system using a suitable enterprise database management system (e.g. MySQL, MSSQL, NoSQL or Oracle

Create a database frontend using a suitable application programming languages (e.g. Web: PHP, ASP.net; HTML5, CSS, JS or Application languages: e.g. C#, Python)

Using a chosen DBMS, preform data definition, data control and data manipulation to manage your
data-driven application and provide useful real-time information (e.g. statistical information, monitoring, maps, graphs or charts) in your completed application

Perform simple day to day database administration tasks (e.g. import, export, backup, restore, migrate, optimise data etc.) using the selected DBMS

Understand the key principles of data security and importance of information security and implement both human and technological safeguards

Understand the role and historical development of databases and database management systems in managing organisational data and information and trending enterprise database solutions
(e.g. data warehousing)

Understand the role of databases and DBMS in managing organisational information and provide examples of popular DBMS used in enterprise

Evaluate a given data solution to meet business requirements or a provided scenario

Apply data analysis and data modelling techniques to design data structures based on business requirements or a provided scenario

Using a selected conceptual data modelling technique to capture the information for an enterprise domain

Translate conceptual models into appropriate database schemas (e.g. DB normalisation, entity relationships)

Part 3: Teaching and learning methods

Teaching and learning methods: Introductory lectures are supported by seminars, case studies, visits and practical workshops. In addition this module will be supported by interactive forums and learning tools.

300 hours study time of which 72 hours will represent scheduled learning. Scheduled learning includes lectures, seminars, tutorials, demonstration, practical classes and workshops; external visits; supervised time in studio/workshops.

Independent learning includes hours engaged with essential reading, case study preparation, assignment preparation and completion. Apprentice study time will be organised each week with a series of both essential and further readings and preparation for practical workshops. It is suggested that preparation for lectures, practical workshops, session delivery and seminars will take 7 hours per week.

Module Learning outcomes: On successful completion of this module students will achieve the following learning outcomes.

MO1 Understand the role and historical development of databases and database management systems in managing organisational data and information.

MO2 Understand the basics of how data and files are physically stored and accessed.

MO3 Implement a secure database system to an enterprise service/scenario using a suitable enterprise DBMS.

MO4 Create a database frontend to access data using a suitable industry standard application language and API where relevant.

MO5 Use the data definition, data manipulation, and data control language components of SQL in the context of one widely used implementation of the language.

MO6 Use at least one conceptual data modelling technique (such as entity-relationship modelling) to capture the information requirements for an enterprise domain.

MO7 Evaluate potential data solutions to meet requirements.

Hours to be allocated: 300

Contact hours:

Independent study/self-guided study = 228 hours

Face-to-face learning = 72 hours

Total = 300

Reading list: The reading list for this module can be accessed at readinglists.uwe.ac.uk via the following link https://uwe.rl.talis.com/

Part 4: Assessment

Assessment strategy: This module is assessed by a combination of techniques: a time controlled assessment (3 hours) and a practical portfolio.

Component A:
A Time Controlled Assessment (TCA) that includes the following:
An analysis and evaluation of the database needs in a given case study
A recommended solution to the given solution with design documentation
Demonstrate and understanding of the historical and trending patterns in database management and storage

Component B:
A Practical Portfolio that includes the following:
Evidence of planning and design of a database management solution
Implementation of a DBM and front-end to support a business scenario
Deploying and security testing of a completed database solution

Opportunities for formative assessment exist for the assessment strategy used. Verbal feedback is given and all apprentices will engage with personalised tutorials setting SMART targets as part of the programme design.

Assessment components:

Examination - Component A (First Sit)
Description: Database management (3 hour time controlled assessment)
Weighting: 40 %
Final assessment: Yes
Group work: No
Learning outcomes tested: MO1, MO2, MO3, MO4, MO5, MO6, MO7

Portfolio - Component B (First Sit)
Description: Design, build and test a working database solution to fulfil a business need
Weighting: 60 %
Final assessment: No
Group work: No
Learning outcomes tested: MO1, MO2, MO3, MO4, MO5, MO6, MO7

Examination - Component A (Resit)
Description: Database management (3 hour time controlled assessment)
Weighting: 40 %
Final assessment: Yes
Group work: No
Learning outcomes tested:

Portfolio - Component B (Resit)
Description: Design, build and test a working database solution to fulfil a business need
Weighting: 60 %
Final assessment: No
Group work: No

Learning outcomes tested:

Part 5: Contributes towards

This module contributes towards the following programmes of study:

Digital and Technology Solutions (Business Analyst) {Apprenticeship-UCW} [Sep][FT][UCW][4yrs] BSc (Hons) 2020-21

Digital and Technology Solutions (Data Analyst) {Apprenticeship-UCW} [Sep][FT][UCW][4yrs] BSc (Hons) 2020-21

Digital and Technology Solutions (Software Engineer) {Apprenticeship-UCW} [Sep][FT][UCW][4yrs] BSc (Hons) 2020-21

Digital and Technology Solutions (Cyber Security Analyst) {Apprenticeship-UCW} [Sep][FT][UCW][4yrs] BSc (Hons) 2020-21