



## **Module Specification**

### **Database Development**

Version: 2023-24, v2.0, 10 Jul 2023

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## Part 1: Information

**Module title:** Database Development

**Module code:** UFC4EP-15-1

**Level:** Level 4

**For implementation from:** 2023-24

**UWE credit rating:** 15

**ECTS credit rating:** 7.5

**Faculty:** Faculty of Environment & Technology

**Department:** FET Dept of Computer Sci & Creative Tech

**Partner institutions:** University Centre Weston

**Field:**

**Module type:** Module

**Pre-requisites:** None

**Excluded combinations:** None

**Co-requisites:** None

**Continuing professional development:** No

**Professional, statutory or regulatory body requirements:** None

## Part 2: Description

**Overview:** This module covers the basics of database theory, design and development and allows you to demonstrate your knowledge and understanding of database design and development, as well as how databases are used practically.

**Features:** Not applicable

**Educational aims:** You will cover a wide range of; conceptual data modelling (entity relationship models), relational theory and tools for designing a database and its interface, database design and normalization.

**Outline syllabus:** Database driven solutions.

Foreign keys and data relationships and dependencies within a functioning database.

Systematic approaches to eliminating data redundancy(repetition) and undesirable characteristics like Insertion, Update and Deletion Anomalies – Database Normalisation.

Entity Relationship Diagrams (ERD) explaining an application/system and the relationships between its various input and outputs.

Relationships, data ownership and constraints within a database in the form of a Database Dictionary

Structured Query Language and how it can be used to select, join, insert, modify, and delete data from a relational database.

### **Part 3: Teaching and learning methods**

**Teaching and learning methods:** Introductory lectures are supported by practical workshops. In addition, this module will be supported by interactive forums and learning tools. You will have access to a suitable publicly accessible hosting platform and database server enabling you to complete this module.

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

**MO1** Design and optimise a complex database that employs data relationships, constraints and normalisation.

**MO2** Develop and test a database solution to meet a pre-written software or WebApp project.

**MO3** Evaluate the effectiveness of a completed database solution considering alternative data structures

**Hours to be allocated:** 150

**Contact hours:**

Independent study/self-guided study = 96 hours

Face-to-face learning = 54 hours

Total = 150

**Reading list:** The reading list for this module can be accessed at [readinglists.uwe.ac.uk](http://readinglists.uwe.ac.uk) via the following link

## **Part 4: Assessment**

**Assessment strategy:** This module is assessed by a practical portfolio:

The portfolio task allows the students to demonstrate their knowledge and understanding of database analysis and design, as well as how databases are used practically.

Students will be required to design and construct a database to meet a requirement using a provided dataset. Design documentation should include Normalisation (0-3NF) and Data Dictionary and ERD.

Students will then be required to develop a database solution to an existing Software or WebApp platform using a wide range of complex SQL queries.

A summative 600 word evaluation will assess the suitability of the languages and technologies used and consider alternative data structures that could be used.

Tutor-led formative feedback is available throughout. The students' confidence in the assessment process is scaffolded through the use of in class projects, examples, practical tasks and quizzes.

The resit should follow the same structure as the first assessment: Tasks and requirements should remain similar: an alternate dataset or reworking of the original data may be considered.

### **Assessment tasks:**

#### **Portfolio (First Sit)**

Description: Portfolio - design, build and evaluate a database solution

Weighting: 100 %

Final assessment: Yes

Group work: No

Learning outcomes tested: MO1, MO2, MO3

#### **Portfolio (Resit)**

Description: Portfolio - design, build and evaluate a database solution

Weighting: 100 %

Final assessment: Yes

Group work: No

Learning outcomes tested: MO1, MO2, MO3

### **Part 5: Contributes towards**

This module contributes towards the following programmes of study:

Digital and Technology Solutions (Network Engineer) {Apprenticeship-UCW} [UCW]  
BSc (Hons) 2023-24

Digital and Technology Solutions (Data Analyst) {Apprenticeship-UCW} [UCW] BSc  
(Hons) 2023-24

Digital and Technology Solutions (Cyber Security Analyst) {Apprenticeship-UCW}  
[UCW] BSc (Hons) 2023-24

Digital and Technology Solutions (Software Engineer) {Apprenticeship-UCW} [UCW]  
BSc (Hons) 2023-24

Digital and Technology Solutions (Software Engineer) {Apprenticeship-GlosColl}  
[GlosColl] BSc (Hons) 2023-24