



## **Module Specification**

### **Database Design**

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## Part 1: Information

**Module title:** Database Design

**Module code:** UFCF7R-30-1

**Level:** Level 4

**For implementation from:** 2023-24

**UWE credit rating:** 30

**ECTS credit rating:** 15

**Faculty:** Faculty of Environment & Technology

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

**Partner institutions:** None

**Delivery locations:** Not in use for Modules

**Field:** Computer Science and Creative Technologies

**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 and design.

**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.

Data Flow Diagrams (DFD) depicting the flow of data throughout a given process or system.

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.

### **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 a complex database that employs data relationships, constraints and ownership.

**MO2** Optimise a database to reduce redundancies and data handling anomalies via Normalization

**MO3** Explain database relationships, ownership and constraints with a Database Dictionary

**MO4** Plan, design, implement and test a Database solution using appropriate tools.

**Hours to be allocated:** 300

**Contact hours:**

Independent study/self-guided study = 192 hours

Face-to-face learning = 108 hours

Total = 300

**Reading list:** The reading list for this module can be accessed at [readinglists.uwe.ac.uk](https://rl.talis.com/3/uwe/lists/FB784309-98FA-C1BE-3F6F-3CD7FED82147.html) via the following link <https://rl.talis.com/3/uwe/lists/FB784309-98FA-C1BE-3F6F-3CD7FED82147.html>

## **Part 4: Assessment**

**Assessment strategy:** This module is assessed by a combination of techniques: an practical, timed constrained assessment and a portfolio.

The timed task allows the students to demonstrate their knowledge and understanding of database analysis and design. The task takes place within a lab setting in order that the students have access to tools with which they are familiar. The portfolio assessment follows the timed task. In the portfolio, students take their learning from the initial assessment and move on through the development life cycle to implement, document and test a functioning database.

Tutor-led formative feedback is available throughout. The students confidence in the assessment process is scaffolded through the use of mock assessments.

Success is further supported by regular meetings with a personal tutor in which progress across the programme is reviewed and feedback on individual assessment

items in given via SMART targets. This strategy is built-in as part of the programme design.

**Assessment components:****Practical Skills Assessment (First Sit)**

Description: Practical database task.

Weighting: 40 %

Final assessment: No

Group work: No

Learning outcomes tested: MO1, MO2, MO3

**Portfolio (First Sit)**

Description: Portfolio - build and test a database solution

Weighting: 60 %

Final assessment: Yes

Group work: No

Learning outcomes tested: MO4

**Portfolio (Resit)**

Description: Portfolio - build and test a database solution

Weighting: 60 %

Final assessment: Yes

Group work: No

Learning outcomes tested:

**Practical Skills Assessment (Resit)**

Description: Practical database task.

Weighting: 40 %

Final assessment: No

Group work: No

Learning outcomes tested:

## **Part 5: Contributes towards**

This module contributes towards the following programmes of study:

Applied Computing[UCW] BSc (Hons) 2023-24