



## Database Design and Management I Course Descriptor

Course Title	Database Design and Management I	Faculty	EDGE Innovation Unit (London)
Course code	NCHNAP447	Course Leader	Professor Scott Wildman (interim)
Credit points	15	Teaching Period	This course will typically be delivered over a 6-week period.
FHEQ level	4	Date approved	June 2020
Compulsory/Optional	Compulsory		
Prerequisites	None		

### COURSE SUMMARY

This course covers the underlying principles and concepts behind relational databases. Learners will use the reporting language SQL to interrogate relational databases and design simple databases. SQL will be used for creating and accessing data tables, indexing, arithmetic operations, loops, arrays, multiple table processing, I/P operations, data-type conversions, and views. Learners will have the opportunity to apply their knowledge of relational databases using industry-standard cloud-based technology e.g. using ServiceNow training.

### COURSE AIMS

- Train learners in the core concepts and techniques for manipulating relational databases.
- Give learners the tools to code native SQL.
- Give learners the opportunity to create various functions in SQL.

- Give learners the opportunity to work on simulated work-based problems and use learned knowledge to solve these problems.

### **LEARNING OUTCOMES**

On successful completion of the course, learners will be able to:

#### **KNOWLEDGE AND UNDERSTANDING**

- K1a Understand the basic principles of relational databases: their structure, use and how to interrogate them.
- K2a Have knowledge and understanding of basic SQL syntax and query structure.
- K3a Have knowledge of the regulations, ethical and security considerations required in modern data storage.

#### **SUBJECT SPECIFIC SKILLS**

- S1a Code structurally correct SQL commands.
- S2a Design and implement basic relational databases.
- S3a Perform basic data manipulation and information retrieval operations using SQL.

#### **TRANSFERABLE AND PROFESSIONAL SKILLS**

- T1ai Demonstrate skill in numeracy and computation.
- T1aii Display a developing technical proficiency of written English skills that demonstrates an ability to communicate clearly and accurately when producing structured and coherent pieces of text.
- T2a Understand logical arguments, identifying the assumptions made and the conclusions drawn.
- T3a Demonstrate the ability to analyse, evaluate and correctly interpret data.

### **TEACHING AND LEARNING**

This is an e-learning course, taught throughout the year.

This course can be offered as a standalone short course.

Teaching and learning strategies for this course will include:

- On-line learning
- On-line discussion groups
- On-line assessment

Course information and supplementary materials will be available on the College’s Virtual Learning Environment (VLE).

Learners are required to attend and participate in all the formal and timetabled sessions for this course. Learners are also expected to manage their self-directed learning and independent study in support of the course.

The course learning and teaching hours will be structured as follows:

- Off-the-job learning and teaching (6 days x 7 hours) = 42 hours
- On-the-job learning (12 days x 7 hours) = 84 hours (e.g. 2 days per week for 6 weeks)
- Private study (4 hours per week) = 24 hours

Total = 150 hours

Workplace assignments (see below) will be completed as part of on-the-job learning.

## ASSESSMENT

### FORMATIVE

Learners will be formatively assessed during the course by means of set assignments. These will not count towards the final degree but will provide learners with developmental feedback.

### SUMMATIVE

Assessment will be in two forms:

AE	Assessment Type	Weighting	Online submission	Duration	Length
1	Set computational exercises	60%	Yes	Requiring on average 20-30 hours to complete	N/A
2	Report following workplace practical exercise	40%	Yes	Requiring on average 10-20 hours to complete	2,000 words +/- 10%, excluding data tables

### FEEDBACK

Learners will receive formal feedback in a variety of ways: written (via email or VLE correspondence) and indirectly through online discussion groups. Learners will also attend a formal meeting with their Academic Mentor (and for apprentices, including their Line Manager). These bi- or tri-partite reviews will monitor and evaluate the learner’s progress.

Feedback is provided on summatively assessed assignments and through generic internal examiners’ reports, both of which are posted on the VLE.

### INDICATIVE READING

Note: Comprehensive and current reading lists for courses are produced annually in the Course Syllabus or other documentation provided to learners; the indicative reading list provided below is used as part of the approval/modification process only.

#### BOOKS

- Casteel, J., (2015), *Oracle 12C: SQL*, Course Technology
- Date, C. J., (2019), *Database design and relational theory*, Apress
- Silberschatz, A. and Korth, H.F., (2019), *Database System Concepts*, MacGraw-Hill

#### JOURNALS

Learners are encouraged to read material from relevant journals on Database Design and SQL as directed by their course trainer.

#### ELECTRONIC RESOURCES

Learners are encouraged to seek out websites that support Database Design and SQL.

### INDICATIVE TOPICS

- Database design
  - SQL
  - Data Structures
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<b>Title: NCHNAP447 Database Design and Management I</b>					
<b>Approved by: Academic Board</b>					
<b>Location: Academic Handbook/Programme specifications and Handbooks/ Undergraduate Apprenticeship Programmes/BSc (Hons) Digital &amp; Technology Solutions Programme Specification/Course Descriptors</b>					
Version number	Date approved	Date published	Owner	Proposed next review date	Modification (As per AQF4) & category number
2.1	May 2022	May 2022	Scott Wildman	June 2025	Category 1: Corrections/clarifications to documents which do not change approved content.
2.0	January 2022	April 2022	Scott Wildman	June 2025	Category 3: Changes to Learning Outcomes
1.0	June 2020	June 2020	Scott Wildman	June 2025	