

<b>Module code: MOD005427</b>	<b>Version: 1    Date Amended: 04/May/2016</b>
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<b>1. Module Title</b>
Advanced Database Design

<b>2a. Module Leader</b>
Jane Cooper

<b>2b. Department</b>
Department of Computing and Technology

<b>2c. Faculty</b>
Faculty of Science and Technology

<b>3a. Level</b>
5

<b>3b. Module Type</b>
Standard (fine graded)

<b>4a. Credits</b>
15

<b>4b. Study Hours</b>
150

<b>5. Restrictions</b>			
Type	Module Code	Module Name	Condition
Pre-requisite:	MOD005425	Systems Design and Development	Compulsory
Co-requisites:	None		
Exclusions:	None		
<b>Courses to which this module is restricted:</b>			

## LEARNING, TEACHING AND ASSESSMENT INFORMATION

### 6a. Module Description

Database development is fundamental in the area of computing and IT within organisational contexts. Database Management Systems (DBMS) provide the systems, tools and interfaces by which the organisation can manage their information and use it to assist in the effective running of the organisation. Databases offer many links to other areas such as programming, systems analysis, HCI, as well as embracing issues of compatibility and end-user interfacing.

This module builds on the fundamentals of database design from Level 4 giving students opportunities to develop an understanding of the concepts and issues relating to databases and database design as well as the practical skills to translate that understanding into the design and creation of complex databases.

The students develop advanced design concepts based on Entity Relationship Diagrams and apply these to real-world cases. They also develop their knowledge of SQL beyond basic queries by adding techniques such as outer joins, aggregation and DDL. The students experience the multi-user aspect of databases by working with transactions.

The assessment comprises the design, production and querying of a database to meet a client's brief.

### 6b. Outline Content

Modelling real world aspects of database design

Optionality and exclusivity

Inheritance

SQL as a Data Definition Language

Advanced SQL queries

SQL transactions

Implementation of a database for a client

Demonstration of database

### 6c. Key Texts/Literature

The reading list to support this module is available at: <http://readinglists.anglia.ac.uk/modules/mod005427>

### 6d. Specialist Learning Resources

Database server for class, such as MySQL

Integrated Development Environment, such as MySQL Workbench

7. Learning Outcomes (threshold standards)		
No.	Type	On successful completion of this module the student will be expected to be able to:
1	Knowledge and Understanding	Formulate a design which reflects some complexities of real world data
2	Knowledge and Understanding	Prove the soundness of the design by querying
3	Intellectual, practical, affective and transferrable skills	Implement a multi-table database which meets a client's brief.
4	Intellectual, practical, affective and transferrable skills	Develop SQL queries which provide business value.

8a. Module Occurrence to which this MDF Refers				
Year	Occurrence	Period	Location	Mode of Delivery
2017/8	F01UCP	Semester 1	University Centre, Peterborough	Face to Face

8b. Learning Activities for the above Module Occurrence			
Learning Activities	Hours	Learning Outcomes	Details of Duration, frequency and other comments
Lectures	12	1,2,4	Lecture 1 hr x 12 weeks
Other teacher managed learning	24	1,2,4	Practical 2 hr x 12 weeks
Student managed learning	114	1,2,3,4	Reading, research and assignment preparation
TOTAL:	150		

9. Assessment for the above Module Occurrence					
Assessment No.	Assessment Method	Learning Outcomes	Weighting (%)	Fine Grade or Pass/Fail	Qualifying Mark (%)
010	Practical	3	0 (%)	Pass/Fail	100 (%)
Demonstration 15 minutes (1,000 words equivalent)					
Assessment No.	Assessment Method	Learning Outcomes	Weighting (%)	Fine Grade or Pass/Fail	Qualifying Mark (%)
011	Coursework	1,2,4	100 (%)	Fine Grade	30 (%)
Report on design, implementation and evaluation 2,000 words					

In order to pass this module, students are required to achieve an overall mark of 40%.

In addition, students are required to:

(a) achieve the qualifying mark for each element of fine graded assessment of as specified above

(b) pass any pass/fail elements