

Module Title:	Advanced Database Systems
Language of Instruction:	English
Credits:	5
NFQ Level:	8
Module Delivered In	1 programme(s)
Teaching & Learning Strategies:	The course is taught by means of lectures and supervised practicals. The practical work consists of laboratory assignments. All assignments will focus on modern DBMSs. The laboratory exercise topics (installation, configuration, maintenance, applications, etc) are designed to explore the features of each package in depth and to compare packages.
Module Aim:	To advance the student's theoretical and practical knowledge of the design, operation and administration of modern database systems.
Learning Outcomes	
<i>On successful completion of this module the learner should be able to:</i>	
LO1	Evaluate the role and trends of data management within contemporary organizations
LO2	Design, optimize and maintain modern database systems
LO3	Evaluate functions and tools available in modern DBMS software and analyse competing packages
Pre-requisite learning	
Module Recommendations	
<i>This is prior learning (or a practical skill) that is recommended before enrolment in this module.</i>	
No recommendations listed	
Incompatible Modules	
<i>These are modules which have learning outcomes that are too similar to the learning outcomes of this module.</i>	
No incompatible modules listed	
Co-requisite Modules	
No Co-requisite modules listed	
Requirements	
<i>This is prior learning (or a practical skill) that is mandatory before enrolment in this module is allowed.</i>	
No requirements listed	

Module Content & Assessment
Indicative Content
1. Database Concepts

DBMS functions and characteristics, schema, schema objects, data catalog, modelling, classifications, recent developments

2. Oracle, SQL Server, MySQL

Architecture, physical structure, logical structure, interfaces, tools, object oriented features

3. Database Maintenance

Backup and recovery, importing and exporting, log files, security and authorization, database integrity

4. Database Performance

Normalization, indexing, query optimizer, contention, database design, optimizing, monitoring and tuning

5. Database Applications

SQL, ODBC, XML, stored procedures, database connections, database app security

Assessment Breakdown
%

Continuous Assessment

60.00%

Practical

40.00%

Continuous Assessment

<i>Assessment Type</i>	<i>Assessment Description</i>	<i>Outcome addressed</i>	<i>% of total</i>	<i>Assessment Date</i>
Other	Class Tests; Theory Assignments (e.g. problem sheets, literature surveys, etc)	1,2	30.00	Week 7
Other	Class Tests; Theory Assignments (e.g. problem sheets, literature surveys, etc)	2,3	30.00	Week 12

No Project

Practical

<i>Assessment Type</i>	<i>Assessment Description</i>	<i>Outcome addressed</i>	<i>% of total</i>	<i>Assessment Date</i>
Practical/Skills Evaluation	Laboratory assignments	2,3	40.00	Every Second Week

No End of Module Formal Examination

SETU Carlow Campus reserves the right to alter the nature and timings of assessment

Module Workload

Workload: Full Time		
<i>Workload Type</i>	<i>Frequency</i>	<i>Average Weekly Learner Workload</i>
Lecture	12 Weeks per Stage	2.00
Laboratory	12 Weeks per Stage	2.00
Independent Learning Time	15 Weeks per Stage	5.13
Total Hours		125.00

Module Delivered In

Programme Code	Programme	Semester	Delivery
CW_KCCIT_B	Bachelor of Science (Honours) in Information Technology Management	7	Mandatory