

Module Title:	Web Applications
Language of Instruction:	English
Credits:	5
NFQ Level:	7
Module Delivered In	No Programmes
Teaching & Learning Strategies:	Students will learn from lectures, labs and mini projects. These will enable the student to understand and practice the various database concepts, web and mobile technologies presented.
Module Aim:	To broaden the student's understanding of the use and administration of databases with web technologies.
Learning Outcomes	
<i>On successful completion of this module the learner should be able to:</i>	
LO1	Setup & install multiuser DBMSs and implement a database
LO2	Make use of database tools (for monitoring, for scripting, database objects etc)
LO3	Integrate web applications with server-side database systems
LO4	Develop a simple mobile application
LO5	Discuss the issues of integrity, security and concurrency in relation to multi-user databases
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>	
2nd year Web Programming & Databases or equivalent	

Module Content & Assessment

Indicative Content

Database Theory- Review

Relational model, Data Modelling, Normalisation

Database Objects

Stored procedures, triggers, views

Database DBMS

Installation; Tools; Extended SQL (for data manipulation, data definition, data control); Catalog and data dictionary

Database Integrity & Security:

Validation, Triggers, Constraints, Permissions

Database Concurrency

Transactions, Concurrency Issues

Distributed Databases

Concepts ;Distributed Queries

The Web Development Infrastructure

Client, server, content, protocol, client-side programming, server-side programming.

Dynamic web applications with server-side technologies and database integration

n/a

Convergence of Web & database technologies

XML, AJAX, JSON, Cloud based databases

Mobile Application development

Design and implement simple app

Assessment Breakdown

%

Continuous Assessment

50.00%

End of Module Formal Examination

50.00%

Continuous Assessment

Assessment Type	Assessment Description	Outcome addressed	% of total	Assessment Date
Examination	Written class tests (2/3)	1,2,3,4,5	20.00	n/a
Project	Report on tasks carried out in lab (total 3)	1,2,3,4,5	30.00	n/a

No Project

No Practical

End of Module Formal Examination

Assessment Type	Assessment Description	Outcome addressed	% of total	Assessment Date
Formal Exam	The final examination will include questions on all aspects of the course	1,2,3,4,5	50.00	End-of-Semester

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	20 Weeks per Stage	2.00
Laboratory	20 Weeks per Stage	2.00
Estimated Learner Hours	20 Weeks per Stage	6.00
Total Hours		200.00

