Module Title:	Web Programming and Databases
Language of Instruction:	English

Credits:	10

NFQ Level:	6

Module Delivered In	1 programme(s)

Teaching & Learning Strategies:	There will be two 1-hour lectures and four hours laboratory work per week. The laboratory sessions will provide students with the opportunity to work on problems and assessments. They will implement (a) the theory presented in lectures and (b) practical material presented during laboratory sessions. These supervised lab sessions will involve the use of appropriate database and programming tools and packages. Students can access notes and resource materials including self-test quizzes, sample databases etc. through a MLE. The students will be expected to participate actively in lectures and lab sessions.

Module Aim:	To have students produce dynamic Web applications using client side and server side technologies, with an appreciation of security issues, the User Experience and the importance of testing these web applications.

Learning Outcomes	
On successful completion of this module the learner should be able to:	
LO1	Create an interactive programmed website with client side technologies
LO2	Design a database model and create queries (DML) in support of specific web application requirements.
LO3	Integrate a database with a website using server-side technologies.
LO4	Design websites that will give a high level of user satisfaction and maximise user productivity
LO5	Employ techniques to ensure the security of the websites.
LO6	Test websites and analyse the results of the tests to provide a reliable and useful experience for users

Pre-requisite learning
Module Recommendations *This is prior learning (or a practical skill) that is recommended before enrolment in this module.*
No recommendations listed
Incompatible Modules *These are modules which have learning outcomes that are too similar to the learning outcomes of this module.*
No incompatible modules listed
Co-requisite Modules
No Co-requisite modules listed
Requirements *This is prior learning (or a practical skill) that is mandatory before enrolment in this module is allowed.*
No requirements listed

Module Content & Assessment

Indicative Content
Developing Dynamic client-side websites Developing Dynamic client-side websites using client side coding including HTML5, Javascript and CSS
Database Theory Introduction to Database concepts : ER Modelling; SQL
Developing Dynamic Web Sites with Database Integration Developing Dynamic Web Sites with Database Integration using PHP and MySQL with an awareness of potential security issues. Testing these websites for functionality and usability.
User Experience Developing an understanding of the user, Designing interfaces using a selection of prototyping, concept development, building scenarios etc. Consideration of interaction styles, visual issues. Balancing function and fashion. Usability testing using field tests, usability labs and heuristic evaluation

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
Practical/Skills Evaluation	Develop a simple website, using HTML.	1	5.00	n/a
Practical/Skills Evaluation	Implement an interactive website (client-side) using Javascript, CSS, and HTML	1	10.00	n/a
Examination	Design an ER model for a specified enterprise scenario.	2	5.00	n/a
Examination	Use mySQL to query a specified database representation .	2	5.00	n/a
Practical/Skills Evaluation	Implement a dynamic website using Javascript, CSS, and HTML and PHP including consideration of usability and security issues.	3,4,5	15.00	n/a
Practical/Skills Evaluation	Work on the lab sheets provided each week to practice applying concepts and techniques presented in lectures.	1,2,3,4,5,6	10.00	n/a

No Project

No Practical

End of Module Formal Examination

Assessment Type	Assessment Description	Outcome addressed	% of total	Assessment Date
Formal Exam	No Description	1,2,3,4,5,6	50.00	End-of-Semester

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

Module Workload

Workload: Full Time		
Workload Type	*Frequency*	*Average Weekly Learner Workload*
Lecture	30 Weeks per Stage	2.00
Laboratory	30 Weeks per Stage	4.00
Estimated Learner Hours	30 Weeks per Stage	2.00
	Total Hours	240.00

Module Delivered In

Programme Code	Programme	Semester	Delivery
CW_KWCAP_C	[Higher Certificate in Computing](#)	2	Mandatory