

Module 11: Server-side Web Development and Databases

Stage							1
Semester							2
Module Title							Server-side web development and databases
Module Number							11
Module Status							Elective
Module ECTS Credits							5
Module NFQ level							9
Pre-Requisite Module Titles							None
Co-Requisite Module Titles							None
Capstone Module?							No
List of Module Teaching Personnel							Mark Scanlon, Ruairi Murphy
Contact Hours					Non-contact Hours		Total Effort (hours)
36					64		100
Lecture	Practical	Tutorial	Seminar	Assignment	Placement	Independent Work	
18	18			32		32	
Allocation of Marks (Within the Module)							
	Continuous Assessment	Project	Practical	Final Examination	Total		
Percentage Contribution	70			30	100%		

Intended Module Learning Outcomes

On successful completion of this module the learner will be able to:

1. Apply knowledge of client and server-side design and architectural issues.
2. Develop conceptual designs for information systems.
3. Write and edit complex server-side scripts relevant to the development of web applications.
4. Design, develop, test and evaluate a server-side web application that interrogates a database.

Module Objectives

The module provides learners with an understanding of programming and information architecture principles required for the development of database-driven Websites. The emphasis in the module is on server-side functionality and database access.

Module Curriculum

Web Application Development

Web architecture / Client-Server Relationships / Three-tier applications / Web Applications / GET/POST / Security

Server-side Programming

Web scripting (PHP) / processing form data / validation / state management (cookies/sessions) / Security

Databases

Database connectivity / SQL Fundamentals – querying, inserting, deleting, modifying / Relational Databases / Security

Web Development

Integrating server-side programming and databases / frameworks / CMSs

Reading Lists and other learning materials

Recommended Reading

PHP and MySQL for Dynamic Web Sites Fourth Edition	Larry Ullman	Peach Pit Press	2012
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Secondary Reading

Software Engineering for Internet Applications	Andersson, E., Greenspun, P. & Grumet	MIT Press (available online)	2006
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Additional reading as recommended by lecturer, appropriate to topic.

Module Learning Environment

Lectures are carried out in class rooms / lecture halls in the College. Lab tutorials are carried out in computer labs throughout the Campus. All have the software required to deliver the programme.

Library

All learners have access to an extensive range of physical and electronic (remotely accessible) library resources. The library monitors and updates its resources on an on-going basis, in line with the College's Library Acquisition Policy. Lecturers update reading lists for this course on an annual basis as is the norm with all courses run by Griffith College.

Module Teaching and Learning Strategy

Learners are taught using a combination of lectures and practical tutorials. The lectures explore the various core server-side programming, database, web application concepts and ideas.

Tutorials are Lab-based and are used to develop the learners understanding of these ideas and for practical implementation of server-side programming and database applications and projects, completing short and more complex web development assignments.

Module Assessment Strategy

Assessment is 100% continuous. This consists of a series of short initial projects to familiarise the learner with the core concepts of server-side scripting, MySQL databases and web application development, followed by a larger project in which learners have to plan and develop a comprehensive database backed dynamic web application.

Learners are assessed on the following, completed during the course of the module:

Element No.	Weighting	Type	Description	Learning Outcomes Assessed
1	20%	Assignment	Learners will develop a simple database backed web application. This will help learners understand the fundamental concepts behind database backed web applications.	1
2	80%	Project	Learners will plan, design and develop a complex databased-backed dynamic web application. Having been given a basic outline and feature list, learners should research and plan their data model and application structure, and develop a specification documentation. Then learners will develop this project to completion. The assessment criteria will be:	1,2,3,4