Module Title **Web Application Development** **Keywords** Model 2 web applications, 3-tier client-server systems, databases, security	Reference CM3028 SCQF Level SCQF 9 SCQF Points 15 ECTS Points 7.5 Created March 2006 Approved May 2006 Amended May 2013 Version No. 4

This Version is No Longer Current

The latest version of this module is available here

Prerequisites for Module

Successful completion of CM2003 Web Programming and e-Commerce, and CM2020 Introduction to Database Systems.

Corequisite Modules

None.

Precluded Modules

None.

Aims of Module

To provide students with experience in developing a 3-tier web application with non-trivial functionality. This will integrate and extend knowledge gained

Mode of Delivery

Key concepts are introduced and illustrated through the medium of lectures. However the main emphasis of the course is focused on tutorials and laboratory sessions where students will collaborate in groups to develop a non-trivial web application. The groups will generate their own objectives and work plans in accordance with general web-development principles communicated in lectures.

Assessment Plan

	Learning Outcomes Assessed
Component 1	1,2,4
Component 2	1,2,3,4

on earlier modules.

Learning Outcomes for Module

On completion of this module, students are expected to be able to:

1. Discuss and evaluate the Model 2 web application architecture and apply it to the design of web applications.
2. Apply suitable technologies in the construction and integration of web application components.
3. Use a Model 2 architecture to assemble web application components into a 3-tier web application of significant size.
4. Appraise and implement appropriate security policies in a 3-tier web application.

Indicative Module Content

Model 2 web application design, 3-tier client-server systems, databases for web applications, session-handling, user-authentication and data security.

Indicative Student Workload

Contact Hours	Full Time
Assessment	10
Laboratories	24
Lectures	12

Component 2 - Coursework

Component 1 - This is a closed book examination.

Indicative Bibliography

1. AZAT, M. 2014 Practical Node.js : building real-world scalable web apps. Apress
2. POWERS, D, 2014. PHP solutions : dynamic web design made easy Third edition. Apress
3. SEVILLEJA.C, Lloyd, H. 2015, Mean Machine: The beginners guide to the Javascript stack. Leanpub
4. Scotch.io Modern web development tutorials. https://scotch.io/tutorials

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Directed Study

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Private Study

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