Module Title **Enterprise Web Systems** **Keywords** Web Applications, Web services, XML, Web application security, scalable web architectures, Server-side scripting	Reference CM4025 SCQF SCQF Level 10 SCQF Points 15 ECTS Points 7.5 Created March 2012 Approved September 2012 Amended Version No. 1

This Version is No Longer Current

The latest version of this module is available here

Prerequisites for Module

CM1015 Software Design and Development
CM2003 Dynamic Web Programming

Corequisite Modules

None.

Precluded Modules

None.

Aims of Module

To provide the student with an understanding of the main principles involved in the development of web-based enterprise systems and with an appreciation of the key issues involved.

Mode of Delivery

The course is lecture and laboratory based. The lectures introduce key concepts to give students an awareness of the relevant issues in the development of enterprise-scale web systems. The laboratories will allow the student to progress through a sequence of exercises to develop practical skills in enterprise web development. The understanding of the student is further enhanced through directed reading.

Assessment Plan

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

To develop the student's skill in the practical development of web systems with a focus on modelling and interacting with data.

Learning Outcomes for Module

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

1. Explain the advantages and disadvantages of available web architectures and describe the key considerations for developing enterprise applications.
2. Demonstrate an understanding of key security issues on the web and how they affect enterprise systems.
3. Describe alternative approaches to modelling and interacting with data, and demonstrate their use in web systems.
4. Develop client-server systems and present these as client applications or web services.

Indicative Module Content

JSON, XML, XPath, XSLT, DOM, JavaScript, server-side scripting, AJAX, Web Services (REST & SOAP), SaaS, SOA, Multi-tier client/server architectures, application performance and scalability, data

Component 2 -Coursework

Component 1 - This is a closed book examination

Indicative Bibliography

1. NIXON, R., 2018. Learning PHP, MySQL & JavaScript: with jQuery, CSS & HTML5. O'Reilly (WILEY UK); 5th ed. edition ISBN : 978-1491978917
2. bin Uzayr, S., Cloud, N. and Ambler, T., 2019. JavaScript Frameworks for Modern Web Development. Apress.
3. Zammetti, F., 2020. Modern Full-Stack Development: Using TypeScript, React, Node. js, Webpack, and Docker. Apress.
4. TAYLOR, A, ALEXANDER, D., FINCH, A., & SUTTON, D., 2020. Information Security Management Principles. 3rd Ed. BCS ISBN: 978-1780175188

integrity and security, legacy systems.

Indicative Student Workload

Contact Hours	Full Time
Assessments	10
Laboratories	24
Lectures	24
Directed Study	
Directed Study	30
Private Study	
Private Study	62