# Advanced Web Development

# Module Information

**2022.01, Approved**

## Summary Information

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| Module Code | 5514COMECA |
| Formal Module Title | Advanced Web Development |
| Owning School | Computer Science and Mathematics |
| Career | Undergraduate |
| Credits | 20 |
| Academic level | FHEQ Level 5 |
| Grading Schema | 40 |

**Teaching Responsibility**

| LJMU Schools involved in Delivery |
|---|
| LJMU Partner Taught |

**Partner Teaching Institution**

| Institution Name |
|---|
| Education Centre of Australia Pty Ltd |

## Learning Methods

| Learning Method Type | Hours |
|---|---|
| Online | 44 |

## Module Offering(s)

| Display Name | Location | Start Month | Duration Number Duration Unit |
|---|---|---|---|
| JAN-PAR | PAR | January | 12 Weeks |

## Aims and Outcomes

| Aims | To present the concepts, methods and techniques used in the development and deployment of web applications and services.To develop the concepts of multi-tier web application development, including: server-side programming, database connectivity and media rich client-side interface development.To introduce wider concepts of web applications such as: legal issues, server hardware and system optimization. |
|---|---|

**After completing the module the student should be able to:**

**Learning Outcomes**

| Code | Number | Description |
|---|---|---|
| MLO1 | 1 | Explain the architectural make-up of web applications. |
| MLO2 | 2 | Develop a moderately sized media rich multi-tier web solution from a given set of requirements and data tier solution |
| MLO3 | 3 | Iteratively develop a larger user evaluated media rich multi-tier web solution for a given commercially oriented scenario that utilises local and external data sources. |

## Module Content

| Outline Syllabus | -Anatomy of a Web Application: Multi-tier Models, Client, Server and ServiceInternet, Intranet and Extranet Architectures.-The Lifecycle of a Web Application: Process, Deployment and Maintenance.-The Data Tier: Databases, SQL and Queries.-The Processing Tier: Language, Logic, Media Generation and Information.-The Client Interface Tier: HTML & CSS, Data Storage and Update, Interface, Mediaand Interaction.-Information System: Users, Roles, Tasks and Information.-Security of Web Applications-Analysis and Design Methods: Usability and Agile Development Methods.-Testing Web Applications: Automated Tools, Stress Testing and User Evaluation |
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| Module Overview | |
| Additional Information | This module provides the student with the concepts, methods, techniques and experience to analyse, design and develop media rich interactive multi-tier Web-based applications. |

## Assessments

| Assignment Category | Assessment Name | Weight | Exam/Test Length (hours) | Module Learning Outcome Mapping |
|---|---|---|---|---|
| Technology | Moderate application | 40 | 0 | MLO1, MLO2 |
| Report | Large application | 60 | 0 | MLO3 |

## Module Contacts

**Module Leader**

| Contact Name | Applies to all offerings | Offerings |
|---|---|---|
| Paul Bell | Yes | N/A |

**Partner Module Team**

| Contact Name | Applies to all offerings | Offerings |
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