# Advanced Web Development

## Module Information

**2022.01, Approved**

## Summary Information

| Module Code | 5714YCOM |
|---|---|
| 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 |

## Learning Methods

| Learning Method Type | Hours |
|---|---|
| Lecture | 11 |
| Practical | 33 |

## 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 Service Internet, 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, Media and 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 |
| 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 | Development of Web Application | 40 | 0 | MLO1, MLO2 |
| Technology | Dev. of Complex Web App. | 60 | 0 | MLO3 |

# Module Contacts

**Module Leader**

| Contact Name | Applies to all offerings | Offerings |
|--------------|--------------------------|-----------|
| Glyn Hughes | Yes | N/A |

**Partner Module Team**

| Contact Name | Applies to all offerings | Offerings |
|--------------|--------------------------|-----------|