

Module specification

1. Factual information			
Module title	TT284: Web technologies	Level	2
Module tutor	TBA	Credit value	30
Module type	Taught	Notional learning hours	8

2. Rationale for the module and its links with other modules

This module is meant to introduce students to the foundations of web applications, including protocols, standards and content handling.

3. Aims of the module

The module aims to:

1. give students an insight into architectures, protocols, standards, languages, tools and techniques;
2. give students an understanding of approaches to more dynamic and mobile content;

4. Pre-requisite modules or specified entry requirements

The student should have completed the study of the TM112 module.

5. Intended learning outcomes	
A. Knowledge and understanding	Learning and teaching strategy
<p>After completing this module, students will be able to:</p> <p>A1. Describe how the development of the Web has enabled the creation of new forms of information systems and impacted commerce and public services.</p> <p>A2. Explain different architectural approaches to application design and contrast traditional approaches with the underlying client–server model of Web applications.</p> <p>A3. Describe the roles of the range of protocols and standards associated with Web applications and their communications, for the development of web applications.</p> <p>A4. Explain the operation and properties of service, distributed and mobile approaches to web architecture.</p> <p>A5. Demonstrate knowledge of a range of different programming languages and explain their differing roles and properties for web applications.</p> <p>A6. Discuss issues of web design including, accessibility, usability, localisation and globalisation and the nature of static and dynamic content and different content delivery approaches</p> <p>A7. Explain a range of security issues including secure protocols, use of certificates, authentication, authorisation, and firewalls</p>	<ul style="list-style-type: none"> • 25% face-to-face tutorial sessions • TMA work • Module learning booklets and support material

B. Cognitive skills	Learning and teaching strategy
<p>After completing this module, students will be able to:</p> <p>B1. Analyse requirements to produce a design for a simple web application, applying an understanding of requirements for aspects such as usability and accessibility.</p>	<ul style="list-style-type: none"> • 25% face-to-face tutorial sessions • TMA work • Module learning booklets and support material

B. Cognitive skills	Learning and teaching strategy
<p>B2. Describe a suitable architecture, components and standards as the basis for implementation of a web application for a public or business organisation.</p> <p>B3. Construct, using appropriate code, a simple web application selecting and reusing code etc where appropriate. , transforms content and integrates services to produce a mobile application</p>	

C. Practical and professional skills	Learning and teaching strategy
<p>After completing this module, students will be able to:</p> <p>C1. Outline the importance of standards and standardisation bodies.</p> <p>C2. Maintain an up-to-date view of ongoing developments in web technology including standards and techniques.</p> <p>C3. Produce and manage design and development plans for a specific technical solution to a challenge in Web application development.</p>	<ul style="list-style-type: none"> • 25% face-to-face tutorial sessions • TMA work • Module learning booklets and support material

D Key transferable skills	Learning and teaching strategy
<p>After completing this module, students will be able to:</p> <p>D1. Find, select and use information from a range of sources to support analysis, design and implementation tasks.</p> <p>D2. Plan and produce a well-structured and researched quality report as part of a project.</p> <p>D3. Plan and manage effort and progress whilst undertaking a substantial project.</p>	<ul style="list-style-type: none"> • 25% face-to-face tutorial sessions • TMA work • Module learning booklets and support material

6. Indicative content.

1. Web Essentials: Clients, Servers, and Communication
2. Markup Languages: XHTML 1.0
3. Style Sheets: CSS
4. Client-Side Programming: The JavaScript Language
5. Host Objects: Browsers and the DOM
6. Server-Side Programming: Java Servlets
7. Representing Web Data: XML
8. Separating Programming and Presentation: JSP Technology
9. Web Services: JAX-RPC, WSDL, XML Schema, and SOAP

Project: at the end of the module, students undertake a substantial project that integrates a wide spectrum of Web technologies, guidance on setting up their own software environments.

7. Assessment strategy, assessment methods and their relative weightings

TMA Work: 20%
MTA: 30%
Exam: 50%

8. Mapping of assessment tasks to learning outcomes

Assessment tasks	Learning outcomes															
	A1	A2	A3	A4	A5	A6	A7	B1	B2	B3	C1	C2	C3	D1	D2	D3
TMA'S	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
MTA	x	x	x	x				x	x		x	x				
End of Semester Exam	x	x	x	x				x	x		x	x				

9. Teaching staff associated with the module	
Name and contact details	
Dr. Moneef Jazzar, Kuwait.	(mjazzar@aou.edu.kw)

10. Key reading list				
Author	Year	Title	Publisher	Location
Jeffrey C. Jackson	2007	Web Technologies: A Computer Science Perspective	Prentice Hall	UK

11. Other indicative text (e.g. websites)				
https://lms.arabou.edu.kw/				