UNIVERSITY of BRADFORD

Module Descriptor

Module Details	
Module Title:	Internet Technologies
Module Code:	COS4018-B
Academic Year:	2019-20
Credit Rating:	20
School:	Department of Computer Science
Subject Area:	Computer Science
FHEQ Level:	FHEQ Level 4
Pre-requisites:	
Co-requisites:	

Contact Hours	
Type	**Hours**
Lectures	12
Tutorials	12
Laboratory	24
Directed Study	152

Availability	
Occurrence	**Location / Period**
BDA	University of Bradford / Semester 2 (Feb - May)

Module Aims

To provide the background knowledge of computer and networked systems and the World Wide Web, and their modes of operation. To introduce the fundamental concepts of Internet technologies, the underlying protocols and typical ways of delivering static and dynamic material from a server to a client through several different programming languages, markup languages and meta- markup languages. Material will provide knowledge and understanding of protocols (such as ftp, ssh, http, https), web hosting servers (e.g. typical systems such as LAMP), web scripting (client side and server-side scripting).

Outline Syllabus

Introduction to networked computers and servers; addressing and domain names; Internet technologies; Internet functionalities, file transfers, operating systems; protocols (such as ftp, ssh, http, https); ISPs, web hosting servers (typical systems ¿ LAMP); web scripting (client-side and server-side) and programming languages (including HTML, XHTML, XML, CSS, and reference to JavaScript, PHP, Python); user interface design and implementation for web applications. Examples of cloud-based services; IaaS, PaaS, SaaS.

Learning Outcomes	
1	a. discuss and apply operating principles and basic functionalities of Internet technologies and demonstrate how they communicate, can be programmed and used for web applications; b. design, develop, deploy and maintain static and dynamic websites;
2	a. represent, process and transfer information over the Internet; b. analyse and discuss the principles of data transfer on World Wide Web; use the Internet as a tool for information processing and communication; c. use most current web development and programming technologies for platform-independent web applications.
3	a. analyse and apply the modes of communication using Internet technologies to present, program and communicate information on the Internet.

Learning, Teaching and Assessment Strategy

Learning outcomes 1a, 1b, 2a, 2b, 2c are addressed in a combination of formal lectures; computer based laboratory practical exercises, on-line web-based resources and directed reading. They are supplemented by seminar/tutorials intended to provide reinforcement by direct engagement with taught material and allow for some degree of flexibility in response to student need, and addressing learning outcomes 1b, 2b, 2c and 3a. Students will also be expected to read and explore a variety of Internet and text resources, together with elementary practical work in directed study hours, reading of documentation such as journal papers and book sections, and online material. Practical understanding and skills will be tested through the coursework by developing a dynamic web application; knowledge of information representation and processing technologies, and principles of data transfer, and web development technologies will be assessed in a 2-hour computer-based examination. The supplementary assessment will be about developing a dynamic web application based on a mini case with a technical report describes the analysis and design of the web application.

Mode of Assessment

Type	Method	Description	Length	Weighting
Referral	Coursework	Develop a dynamic web application based on mini case with a technical report	2000 words-equivalent	100%

Summative	Coursework	Develop a dynamic web application. Based on real case study to demonstrate example of Internet Technologies	2000 words-equivalent	60%
Summative	Computer-based assessment	Computer-based exam	1 hour	40%

Reading List
To access the reading list for this module, please visit https://bradford.rl.talis.com/index.html.

Please note:

This module descriptor has been published in advance of the academic year to which it applies. Every effort has been made to ensure that the information is accurate at the time of publication, but minor changes may occur given the interval between publishing and commencement of teaching. Upon commencement of the module, students will receive a handbook with further detail about the module and any changes will be discussed and/or communicated at this point.