DEREE COLLEGE SYLLABUS FOR:	
ITC 4214 INTERNET PROGRAMMING	**3/1.5/3**
(Updated Fall 2021)	**UK LEVEL: 6**
	UK CREDITS: 15

PREREQUISITES:	ITC 2088 Introduction to Programming ITC 3160 Fundamentals of RDBMS
COREQUISITES:	None.
CATALOG DESCRIPTION:	Internet standards and infrastructure. Client and server technologies. Rich Internet applications. Scripting Languages. Server-side programming. Frameworks. Security and privacy.
RATIONALE:	The course exposes students to today's web development methodologies and programming principles. It provides students with the opportunity to develop complex, data driven web applications, enhancing their understanding of web development and their judgement of the effectiveness of different development techniques. Web application security concepts are also implemented.
LEARNING OUTCOMES:	As a result of taking this course, the student should be able to: 1. Develop programming skills in client-side and server-side languages for the web. 2. Demonstrate understanding of the functionality and evaluate the effectiveness of web development libraries and frameworks, as well as integrate their features in a web site. 3. Design, evaluate and develop dynamic rich internet applications, integrated with DBMS 4. Demonstrate skills in configuring web servers and deploying secure applications.
METHOD OF TEACHING AND LEARNING:	In congruence with the teaching and learning strategy of the college, the following tools are used: • Classroom lectures, discussions. • Laboratory practical sessions and problem solving. • Office hours held by the instructor to provide further assistance to students. • Use of the Blackboard Learning platform to further support communication, by posting lecture notes, assignment instruction, timely announcements, and online submission of assignments

ASSESSMENT:

Summative:

1st assessment: Group coursework assignment Design a static website with HTML, CSS and JavaScript	**30%**
2nd assessment: Portfolio of student work and oral assessment	**10%**
Final assessment: Individual project rich internet application development, report	**60%**

Formative:

Short programming exercises	**0%**
Online Quizzes	**0%**

	The formative assessments aim to prepare students for the summative assessments. The 1st summative assessment tests LO 1. The 2nd summative assessment tests LOs 1-4. The final summative assessment tests LOs 1-4. *The final grade for this module will be determined by averaging all summative assessment grades, based on predetermined weights for each assessment. If students pass the **final summative assessment,** which tests all Learning Outcomes for this module, and the average grade for the module is 40 or above, students are not required to resit any failed assessments.*
INDICATIVE READING:	**REQUIRED READING:** 1. Deitel, H.M. & Deitel, P.J., (2012) *Internet & World Wide Web How to Program*, 5th ed., Pearson Education. **RECOMMENDED READING:** 1. Felke-Morris,T. (2015) *Web Development and Design Foundations with HTML5*, Pearson. 2. Nixon, R. Learning PHP, (2014) *MySQL & Javascript* with jQuery, CSS & HTNL5, O'Reilly Media. 3. Stobart, S. & Parsons, D., (2008) *Dynamic Web Application Development using PHP and MySQL*, Course Technology.
INDICATIVE MATERIAL: *(e.g. audiovisual, digital material, etc.)*	**REQUIRED MATERIAL**: N/A **RECOMMENDED MATERIAL:** N/A
COMMUNICATION REQUIREMENTS:	Daily access to the course's site on the College's Blackboard CMS. Communication using proper written and oral English.
SOFTWARE REQUIREMENTS:	A web development environment such as PhpStorm. An FTP client. Access to college's web hosting service (which includes latest PHP and MySQL extensions)

WWW RESOURCES:	• HTML5
	  http://www.w3.org/TR/html5/
	• Extensible Markup Language (XML) Specification
	  http://www.w3.org/TR/REC-xml/
	• Document Object Model (DOM)
	  http://www.w3.org/DOM/
	• PHP manual
	  https://secure.php.net/manual/en/index.php

INDICATIVE CONTENT:	1. Internet and World Wide Web
	  a. Client-Server Architecture (N-tier)
	  b. W3C
	  c. Web Browser Functionality
	  d. Internet Protocols
	2. Introduction to HTML
	  a. Basic Tags
	  b. Forms and Data Validations

	c. Metadata (SEO)
	3. Cascading Style Sheets (CSS)
	   a. Selectors, attributes and properties
	   b. CSS Frameworks
	4. Client-Side Programming Language
	   a. Syntax
	   b. Objects
	   c. Events (synchronous vs asynchronous)
	   d. Libraries
	5. Server-Side Programming Language
	   a. Syntax
	   b. Objects
	   c. Database Connectivity
	   d. Dynamic data handling
	6. Introduction to web server architecture
	   a. application deployment
	   b. administration
	   c. application security
	7. XML
	   a. XML Document Types
	   b. Tree Structure
	   c. Displaying XML with XSLT
	   d. Validating XML with a DTD/Schema