

Course Title	Computer Networking and Web Technologies				
Course Code	CSE125				
Course Type	Compulsory				
Level	Bachelor (1st cycle)				
Year / Semester	1 st Year / 2 nd Semester				
Teacher's Name	TBA				
ECTS	6	Lectures / week	3 hours/14 weeks	Laboratories / week	None
Course Purpose and Objectives	<p>Introduce the students to the basics of computer networking and web technologies. The course will cover the basics of computer networking in terms of component and technologies used. The WWW and its fundamental technologies are then examined. The HTML language, the CCS styling and JavaScript with jQuery are introduced to the students. The principles of web design and its importance is explained. Finally the need for usability and user oriented design and how this can be engineered is introduced.</p>				
Learning Outcomes	<p>Upon successful completion of the course students should be able to:</p> <ul style="list-style-type: none"> • Identify the basic component and technologies of computer networking • Compare circuit switching to packet switching • Identify the operation of key physical layer technologies and the their operation. • Recognize the underlying technologies of the Internet as a platform for Web systems • Recognize the contemporary technologies used in web systems • Describe and implement the process of designing web systems based on the available web technologies • Experiment with web usability and evaluation for quality web systems 				
Prerequisites	None	Co-requisites	None		
Course Content	<p>Introduction</p> <p>Introduction to the organization of the internet and the client server architecture.</p> <p>Computer Networking</p> <p>Circuit vs packet switching; Communications protocols; Internet Protocol;</p>				

	<p>Basic concepts of the physical layer; bandwidth;</p> <p>Internet protocols</p> <p>Domain Name System; Uniform Resource Locator; Hypertext transfer Protocol; Web Browsers; Web Servers;</p> <p>Introduction Web development</p> <p>The Client-Server Model; Working in Web Development; HTML Syntax; semantic Markup; Structure of HTML documents; HTML Elements; HTML5 semantic Structure Elements;</p> <p>Introduction to CCS</p> <p>CCS syntax; Location of Styles; Selectors; How styles interact; the Box Model; CCS text styling;</p> <p>HTML Tables and Forms</p> <p>Styling Tables; Form Control Elements; Table and Form Accessibility</p> <p>Web Media</p> <p>Digital representation of images; Color models; Image concepts; file formats for audio and video;</p> <p>JavaScript Language</p> <p>JavaScript Language Fundamentals; Variables and Data Types; JavaScript output; Conditionals; Loops; Arrays; Objects; Functions; Object Prototypes; the Document Object Model;</p> <p>JavaScript with jQuery</p> <p>jQuery foundations; event handling in jQuery, DOM manipulation; effects and animation; AJAX; asynchronous file transmission ;</p> <p>Web Application design</p> <p>Introduction to web usability and evaluation techniques; usability evaluation methods; analytic vs empirical; usability checklist; real-world web software design; principle of layering; software design patterns; data nad and domain patterns; presentation patterns; testing;</p>
Teaching Methodology	Face-to-Face
Bibliography	<ul style="list-style-type: none"> • Randy Connoly and Ricardo Hoar, Fundamentals of Web development, Pearson • William Stallings, Data and Computer Communications, Pearson Prentice Hall

Assessment	<table border="1"> <tr> <td data-bbox="456 248 956 282">Mid – Term Examination</td> <td data-bbox="962 248 1200 282">20%</td> </tr> <tr> <td data-bbox="456 286 956 320">Final Examination</td> <td data-bbox="962 286 1200 320">50%</td> </tr> <tr> <td data-bbox="456 324 956 358">Assignments/Lab</td> <td data-bbox="962 324 1200 358">20%</td> </tr> <tr> <td data-bbox="456 362 956 396">Class Participation and attendance</td> <td data-bbox="962 362 1200 396">10%</td> </tr> <tr> <td data-bbox="456 400 956 434"></td> <td data-bbox="962 400 1200 434">100%</td> </tr> </table>	Mid – Term Examination	20%	Final Examination	50%	Assignments/Lab	20%	Class Participation and attendance	10%		100%
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	100%										
Language	English										