Faculty of Computers and Information Technology

Design of Web-Based Applications

Information :

Course Code :	CS495	**Level :**	Undergraduate	**Course Hours :**	3.00- Hours
Department :	Department of Information Systems				

Area Of Study :

Apply the basic concepts and theories of computing and information.
Combine and evaluate different tools and facilities.
Demonstrate professional responsibilities, ethical, cultural and societal aspects.
Understand knowledge that enhances skills in Web programming.
Use and adopt fundamental and advanced techniques in all development phases of Web-based applications.
Comprehend deeply the basic concepts of Web technologies to be ready for further and continuous learning.

Description :

The course gives an introduction to the design, creation, and maintenance of web pages and websites. This course focuses on creating a Web application architecture that is maintainable and extensible using website development aiding tools. Topics include basic HTML, Client / Server programming, Server side controls, the concept of design patterns and use them effectively in creating an extensible Web presentation infrastructure, Brief overview Web services

Course outcomes :

a.Knowledge and Understanding: :	
1 -	Explain modeling of Web-based application
2 -	Discuss different qualitative and quantitative methods for Web-based application
3 -	Explain the principles and techniques of Human-Computer Interaction using emerging technologies and tools
4 -	Discuss the fundamental topics for developing Web applications
b.Intellectual Skills: :	
1 -	Analyze and design a solution for Web-based application.
2 -	Analyze different problems for Web-based application
3 -	Select appropriate methodologies and techniques for computing and information systems
4 -	Classify methods, techniques and algorithms of computer and information systems.
c.Professional and Practical Skills: :	
1 -	Apply effective information to apply and design basic HTML/CSS, Client / Server programming and different supporting tools
2 -	Create technical reports using scientific literature and web sources
3 -	Use human computer interaction principles in the construction and evaluation of user interfaces for wide ranges of applications

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d.General and Transferable Skills: :	
1 -	Work in a team to develop the requirement documentation
2 -	Apply communication skills in presentations and report writing using various methods and tools

ABET Course outcomes :	
1 -	Analyze, design, and implement web-based application for given requirements.
2 -	Enhance Human-Computer Interaction using emerging technologies and tools
3 -	Demonstrate basic proficiency of using Scripting Languages to develop web pages.
4 -	Use server-side development tools to design and develop web-based applications, using one of current development tools.
5 -	Use an advanced object-oriented programming language to develop dynamic web pages.
6 -	Use advanced Database Management Systems to design and integrate databases in web-based applications.
7 -	Use advanced tools to enhance the performance of web-based applications.
8 -	Work and communicate effectively in a team and apply professional ethics of the field.

Course Topic And Contents :

Topic	No. of hours	Lecture	Tutorial / Practical
Introduction to the Internet and World Wide Web	4	2	2
Evolution of the Web, Web 2.0.	4	2	2
Design and Development of static Web pages using XHTML	4	2	2
Enhancing Human-Computer Interaction Using Scripting Languages	4	2	2
Enhancing Visualization Using Cascading Style Sheets (CSS)	4	2	2
Developing Web Applications Using C# and ASP.NET	4	2	2
Information Structuring, Formatting and Management Using XML	4	2	2
XSL, XSLT, and XPath	4	2	2
Mid Term	2		
Enhancing Dynamic Web Pages Using Ajax	4	2	2
Web Services	4	2	2
Project presentation	4	2	2
Project presentation	4	2	2
Final Exam	2		

Teaching And Learning Methodologies :

Interactive Lectures including discussion
Practical Lab Sessions
Self-Study (Project / Reading Materials / Online Material / Presentations)

Course Assessment :

Methods of assessment	Relative weight %	Week No	Assess What
Final Exam	40.00	14	

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Midterm Exam (s)	30.00	9	
Practical Exam	15.00		
Presentations	5.00		
Team Work Projects	10.00		

Course Notes :

Course Notes are available with all the slides used in lectures in electronic form on Learning Management System (Moodle)

Web Sites :

www.ekb.eg

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