



Coursedescription:

A study of the concepts, principles, techniques and methods of Web engineering, Topics include requirements engineering, modeling and architectures, design and technologies, testing, operation and maintenance, Web project management, application development process, usability and performance, and security of Web applications. Technologies (particularly on Web 2.0), business models and strategies, and societal issues of Web 2.0 and Semantic Web are also discussed.

Aims of the course:

- To develop a technical overview of the Web & emerging platforms
- To appreciate the mechanisms by which web content can be enriched to take account of contextual factors
- To identify, evaluate and apply appropriate technologies for Web development

Intended Learning Outcomes:(ILOs)

Upon successful completion of the course the student will:

- Be able to understand the concepts, principles and methods of Web engineering.
- Be able to apply the concepts, principles, and methods of Web engineering to Web applications development.
- Be familiar with current Web technologies.
- Be familiar with Web application development software tools and environments currently available on the market.

Course structures:

Week	Credit Hours	ILOs	Topics	Teaching Procedure	Assessment methods
1,2	6	C,D	Chapter one Web-Based Systems • The Web • Web Applications • Web, Web 1.0, Web 2.0, Web 3.0, web Semantic.. • Web App Attributes • Web App Types • Web Apps from "business point of view"	Presentation methods and techniques, Sources of information and Instructional Aids	Diagnostic tests to identify the students level and areas of weakness Formal (stage) evaluation a) Class Participation b) 1st Exam c) 2nd Exam d) Activity file e) project
3	3	A, C,D	• Chapter two: Web Engineering • Introduction to Web Engineering • Introduction to Software Engineering • Web Engineering Vs Software Engineering • Agile Process • Agility Principles • Web E Frame work • Tools and Technology	Presentation methods and techniques, Sources of information and Instructional Aids	Diagnostic tests to identify the students level and areas of weakness Formal (stage) evaluation a) Class Participation b) 1st Exam c) 2nd Exam d) Activity file e) project
4	3	A,B	Chapter Three: Web Engineering Process	Presentation methods and techniques,	Diagnostic tests to identify the students level and areas of weakness



			•ClassicSoftware EngineeringProcess •WebEngineering Process •ClassicModelsof SoftwareEngineering •TypesofPrototyping Model •IncrementalModelin WebEngineering •Wep App example •ToolsforQuick PrototypesandIncrements	Sourcesof information and Instructional Aids	Formal(stage)evaluation a) Class Participation b)Ist Exam c)2ndExam d)Activityfile e)project
5, 6	6	A,B	ChapterFour:Communication •TheCommunication Activity •Formulation •Elicitation • CapturingInteraction: UseCases •Use-CaseDiagramin UML •I identifying Web App Increments •Negotiation •Toolsfordrawing	Presentation methodsand techniques, Sourcesof information and Instructional Aids	Diagnosticteststoidentify the studentslevelandareas ofweakness Formal(stage)evaluation a) ClassParticipation b)Ist Exam c)2ndExam d)Activityfile e)project
7	3	A,B	ChapterFive:Planning •PlanninginWeb Engineering • Simple Web App & Complex Web App •Web App Planning Guidelines •RefiningFramework Activities: •Buildinga Web ETeam •ManagingRisk •Developinga Schedule •ManagingQuality •ManagingChange •TrackingtheProject •Toolsforplanning	Presentation methodsand techniques, Sourcesof information and Instructional Aids	Diagnosticteststoidentify the studentslevelandareas ofweakness Formal(stage)evaluation a) ClassParticipation b)Ist Exam c)2ndExam d)Activityfile e)project



8, 9, 10	9	A,B,D	ChapterSix:The Modeling Activity •ModelingasaConcept •Modeling of Web App •ModelingActivities •ModelingLanguages Chapter Seven Analysis Modeling for Web Apps	Presentation methodsand techniques, Sourcesof information and Instructional Aids	Diagnosticteststoidentify the studentslevelandareas ofweakness Formal(stage)evaluation a) ClassParticipation b)Ist Exam c)2ndExam d)Activityfile e)project
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			• Understanding Analysis in the Context of Web E • Analysis Modeling for Web Apps • Understanding the Users • The Content Model • The Interaction Model • The Functional Model • The Configuration Model • Relationship-Navigation Analysis		
11,12	6	A,B,D	Chapter Eight: Web Applications Design • Web App Design : Art vs Engineering • Web App Design: Approaches • Design for Web Apps • Design Goals • Design and Web App Quality • The Design Process • Conceptual Architecture • Developing the architecture of Web App • Technical Architecture	Presentation methods and techniques, Sources of information and Instructional Aids	Diagnostic tests to identify the students' level and areas of weakness Formal (stage) evaluation a) Class Participation b) Ist Exam c) 2nd Exam d) Activity file e) project
13,14	6	B,D	Chapter Nine: Interaction Design • Goals of Interaction Design • Web App Design Principles • Interface Design Workflow • Pragmatic Design Guidelines • Aesthetic (Artistic) Design • Usability Issues • Other Design Issues	Presentation methods and techniques, Sources of information and Instructional Aids	Diagnostic tests to identify the students' level and areas of weakness Formal (stage) evaluation a) Class Participation b) Ist Exam c) 2nd Exam d) Activity file e) project



15	3	B,D	ChapterTen:Information Design •Information Architecture •OrganizingContent •Structuringthe InformationSpace •AddingDetailtoa Structure •AccessingInformation	Presentation methodsand techniques, Sourcesof information and Instructional Aids	Diagnosticteststoidentify the studentslevelandareas ofweakness Formal(stage)evaluation a) ClassParticipation b)Ist Exam c)2ndExam d)Activityfile e)project
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			•WireframeModels •NavigationDesign		
16	3	B,D	ChapterEleven:Functional Design •Web App Functionality • FunctionalDesignin theDesignProcess •FunctionalArchitecture •DetailedFunctional Design •StateModeling	Presentation methodsand techniques, Sourcesof information and Instructional Aids	Diagnosticteststoidentify the studentslevelandareas ofweakness Formal(stage)evaluation a) ClassParticipation b)Ist Exam c)2ndExam d)Activityfile e)project

References:

A.MainTextbook:

PressmanR. &Lowe D.(2009).*Web Engineering:APractitioner'sApproach*,1sted. McGraw-Hill.

B. Kappel, G.,Proll, B. Reich, S. &Retschitzegger,W.(2006).*WebEngineering*,1sted. Hoboken, NJ:Wiley &Sons.

Assessment Methods:

Methods	Grade	Date
FirstExam	20%	
Second Exam	20%	
Assignments (Reports /Quizzes/Seminar/Tutorials/project)	10%	
FinalExamination	50%	





ZU/QP10F004

الإصدار: 01

تاريخ الإصدار: 24 حزيران 2015