FUTURE UNIVERSITY IN EGYPT جامعة المستقبل

Faculty of Computers and Information Technology

Software Engineering -1

Information :

Course Code :	CS251	**Level :**	Undergraduate	**Course Hours :**	3.00- Hours

Department : Faculty of Computers and Information Technology

Instructor Information :

Title	Name	Office hours
Lecturer	Heba Hamdy Ali Hussien	2
Assistant Lecturer	Amr Mansour Mohsen Afifi	3

Area Of Study :

Combine and Select different tools and facilities.
Analyze the requirements of a software system.
Use modern techniques, up to date methods and tools for computing and information practice.
Demonstrate professional responsibilities, ethical, cultural and societal aspects.
Compare and select methodologies from range of techniques, theories and methods to develop a software system.
Deal with the individual, social, environmental, organizational and economic implications of the application of a software system.
Use effectively communication skills.

Description :

This course provides an introduction to software engineering disciplines with emphasis on: Software Process Models, Agile Software Development, Requirements Engineering, System Modelling, Requirements Specification, and Software Architecture Design.

Course outcomes :

a.Knowledge and Understanding: :	
1 -	Describe Plan-driven approach and Agile approach for software development
2 -	Outline ethical and professional issues of software engineer
3 -	Explain the difference between functional and nonfunctional requirements using real examples
b.Intellectual Skills: :	
1 -	Analyze the limitations and constrains for a new software system development
2 -	Contrast the goals, needs, and requirements of new software system
3 -	Select and justify the appropriate model in developing a software system for a given problem domain
c.Professional and Practical Skills: :	
1 -	Create a complete analysis for a new software system
2 -	Construct a complete requirements document for a new software system
3 -	Write a technical report of the requirements document according to professional standards

d.General and Transferable Skills: :	
1 -	Work on a team for the development of a requirements document
2 -	Apply communications skills in presentation and report writing of requirements engineering deliverables

ABET Course outcomes :	
1 -	Analyze the requirements of a software system.
2 -	Use modern techniques, up to date methods and tools to develop computer-based software applications.
3 -	Demonstrate professional responsibilities, ethical, cultural and societal aspects.
4 -	Compare and select appropriate methodologies and techniques to develop a software system.
5 -	Communication effectively.
6 -	Work effectively in a team.

Course Topic And Contents :

Topic	No. of hours	Lecture	Tutorial / Practical
Professional software development	4	2	2
Software engineering ethics	4	2	2
Software process models	4	2	2
The rational unified process	4	2	2
Agile software development	4	2	2
Extreme programming	4	2	2
Requirement engineering process	4	2	2
Functional and non-functional requirements	4	2	2
Mid-Term Exam	2		
The software requirement document	4	2	2
System structural models	4	2	2
System behavioral models	4	2	2
Project presentation	4	2	2
Final Exam	2		

Teaching And Learning Methodologies :
Interactive Lectures including Discussions
Practical Lab Sessions
Self-Study (Project / Reading Materials / Online Material / Presentations)
Case Studies

Course Assessment :

Methods of assessment	Relative weight %	Week No	Assess What
Assignments	5.00	4	
Final Exam	40.00	14	
Midterm Exam (s)	20.00	9	

Others (Participations)	5.00		
Presentations	5.00	12	
Quizzes	10.00	5	
Team Work Projects	15.00	12	

Course Notes :

An Electronic form of the Course Notes and all the slides of the Lectures is available on the Students Learning Management System (Moodle)

Web Sites :

www.ekb.eg