



# University of Management and Technology

School of Commerce and Accountancy

Quaid e Azam Campus

## Course Outline

<b>Course Title: Introduction to Software Engineering</b> <b>(CS380)</b>	
<b>Program</b>	ADP(CS)
<b>Credits Hours</b>	3
<b>Duration</b>	15 Weeks / 30 Sessions
<b>Prerequisites</b>	
<b>Resource Person</b>	
<b>Contact/Email</b>	

## Course Objectives:

The main aim of this course is to introduce the fundamental concepts necessary for designing, using, and implementing software engineering and applications. Our presentation stresses the fundamentals of Software Engineering modeling and design, different facilities provided by Software Engineering.

## Teaching-Learning Methodology:

*Note: Select methodologies as per nature of the course.*

- Lectures
- Recommended Text/Supplementary Texts
- Handouts
- Case Studies
- Skill Development Exercises
- Project Report/Term Paper
- Any other Teaching Tool.....

## Recommended Text Book:

1. Software Engineering

8<sup>th</sup> Edition

By: Ian Sommerville, Addison Wesley

## Reference Books:

1. Software Engineering: A Practitioner's Approach

7<sup>th</sup> Edition

By: Roger S. Pressman

**Assessment & Evaluation:**

**Note: Please Specify the Weightage you want to assign to assignments and Final Project/Project presentation/Presentation.**

Quizzes	15%	}
Assignments		
Final Project	20%	
Project Presentation/Presentations		
Mid Term	25%	
<u>End Term Exam</u>	<u>40%</u>	
<b>Total:</b>	<b>100</b>	

**SCHEDULE OF ACTIVITIES**

**Note: Please fill the tasks/activities column according to your course plan**

Week	Contents/Topics to be Taught	Tasks/Activities
1	Overview of SE, Concepts, General Issues SE diversity, Importance, Well Engineer Software	Course Outline Distribution
2	Practice & Myths, SE Ethics, Software Processes Models, Waterfall Model, Incremental Development	
3	Process Activities, SDLC, Evolutionary Development Component-based SE, Spiral Development	Quiz 1
4	CMM, Prescriptive Process, Specialized Process Models, The Formal Methods, Models, Agile Development	Assignment 1
5	Business Information Systems, Components; Types Evaluating methods, SWOT Analysis	
6	Evaluation of Systems Requests System Planning The Importance of Strategic Planning	Assignment 2
7	Requirement Engineering  Difference between Structured Analysis and Object-Oriented Analysis  Modeling	Quiz 2
8	<b>MID TERM EXAMINATION</b>	

9	Difference between FDD Diagrams & UML Diagrams, Data & Process, Modelling Software Reengineering	
10	Diagrams: Data Flow, Context, Conventions Detailed Level, DFD's, Design Process	Quiz 3
11	Diagrams: Data Flow, Context, Conventions Detailed Level, DFD's, Design Process	
12	Architecture Design Elements, Interface Design Elements, Component-Level Design Elements	Quiz 4
13	Deployments Design Elements, System Architecture Architectural Styles, User Interface Design, Web Apps Interface Design	
14	Software Quality Assurance, Validation Testing System Testing, Internal and External View of Testing	Assignment 4
15	Project Management Risk Management SRS Report Produce SRS Report	Presentations (if any)
16	<b>END TERM EXAMINATION</b>	