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NATIONAL UNIVERSITY
of Computer & Emerging Sciences, Lahore

Department of Computer Science

SE4003 – Fundamentals of Software Project Management
Fall 2023

Instructor Name: Salman Ahmad **TA Name:**
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Office Location/Number:
Office Hours:

Course Information:

Program: BS (SE) **Credit Hours:** **Course Type:** Core

Prerequisites: Software Requirements Engineering (SE2001)

Class Meeting Time:

Class Venue:

Course Description/Objectives/Goals:

- Explain principles of project life cycle
- Critically evaluate and discuss the issues around project management and its application in the real world
- Choose project management techniques for IT projects to initiate, plan, execute and evaluate a project and work in teams to create a project plan for a project scenario that includes key tasks, critical path, dependencies and a realistic timeline
- Learn application of tools to facilitate the software project management process (e.g. Microsoft Project).

Course Learning Outcomes (CLOs):

At the end of the course students will be able to:	**Domain**	**BT* Level**
Understand project management principles and techniques	C	1
Apply approaches to manage and optimize the software development processes	C	4
Use modern tools to execute and manage the project	C	5

* BT= Bloom's Taxonomy, C=Cognitive domain, P=Psychomotor domain, A= Affective domain
Bloom's taxonomy Levels: 1. Knowledge, 2. Comprehension, 3. Application, 4. Analysis, 5. Synthesis, 6. Evaluation

Course Textbook:

Software Project Management by Bob Hughes and Mike Cotterell, McGraw-Hill Education; 5th Edition (2009). ISBN-10: 0077122798

A Guide to the Project Management Body of Knowledge, 3rd Edition (PMBOK Guides), ISBN-13:978-1930699458

Additional references and books related to the course:

Web resources shared on the need basis

Tentative Weekly Schedule

Week	Topic	Contents
1	**Introduction**	Introduction to software project management. What is a project? How are software projects different from other projects?
2	**Process & Methodologies**	Contract management and technical project management, activities covered by software project management, plans methods and methodology
3	**Organizational Structure**	Discuss and understand organizational structures
	Project Evaluation	Statement of work, Request for Proposals, Contracts
4	**Planning & Estimation Monitoring & Control**	Size Estimation Techniques (Function Points, Use-case Points, etc.)
	Planning & Estimation Monitoring & Control Risk Management	Effort Estimation Techniques (Expert Judgement / WBS, PERT, Parametric models, regression techniques, etc.)
5	**Planning & Estimation**	Costing and budgeting, scheduling (Gantt charts / CPM), resource allocation, MS Project tool, JIRA, etc
6	**Monitoring & Control**	Project progress monitoring, metrics
7	**Risk Management**	Risk analysis, mitigation and management
8	**Configuration & Change Management**	Configuration items, change control, version control, baselines, change control board
9	**People Management**	Communication and behavioral issues, team structures, conflict resolution, etc.
10	**Process Management**	Process definition initiatives, quality standards and frameworks (CMMI, etc.), PMI Process Groups
11	**Other Topics**	Introduction to Agile Methodologies, Scrum
12	**Other Topics**	Any student presentations, other topics of interest, tools, etc.
13	**Other Topics**	
14	**Other Topics**	
15		

(Tentative) Grading Criteria:

Assignments / Project **(20%)** Quiz **(10 %)** Midterms **(30 %)** Final Exam **(40 %)**

Course Policies:

- **Plagiarism** in any work (Quiz, Assignment, Midterms, and Final Exam) from any source, Internet or a Student would result in **F** grade or deduction of absolute marks.
- 80% attendance is required for appearing in the Final exams.
- Absolute Grading will be done, inline with department policies.