NATIONAL UNIVERSITY OF COMPUTER & EMERGING SCIENCES

CS4044 – FUNDAMENTALS OF SOFTWARE PROJECT MANAGEMENT

COURSE OUTLINE – FALL 2025

Course Code: CS4044   **Course Title:** Fundamentals of Software Project Management

Credit Hours: 3   **Pre-Requisites:** Knowledge of Software Engineering/SDA/OOP Interest in Management

Instructor: Mr. Ubaid Aftab Chawla (email ubaid.aftab@gmail.com)

Course Objectives:
At the conclusion of this course, students will be able to:

- Understand the relationships between the type of project, the organization, the manager and stakeholders and their role in the project success.
- Know how to plan and develop a project, put together a Project Proposal and provide schedule, resource and costing estimates.
- Be able to track and analyze the progress of a project using a range of tools.
- Be conversant with techniques for managing scope change, risk and quality in projects.
- Manage a project, understand interactions between project groups and provide a range of progress reports.
- Plan and implement project outcomes and conduct post project reviews and learning sessions.

Text Books:
- Information Technology Project Management, Eighth Edition by Kathy Schwalbe
- A Guide to the Project Management Body of Knowledge, **Sixth Edition** *& 7th edition (PMBOK® Guide)*

Reference Books:
- Software Project Management, Sixth edition by Bob Huges and Mike Cotterell.
- SCRUM Guide: https://www.scrumguides.org/index.html

Course Organization:

Course Page: Google Classroom Code: pa4s4b64

Submission & Communication: Lectures, Group Page coordination & Email: ubaid.aftab@gmail.com

Software Requirements: MS Project

Attendance: Attendance should not go below 80%. University policy applies

Quiz (N-1 Rule): Three announced quizzes will be part of this course. Out of which best two will be selected. Tentative weeks are third week, eighth week and tenth week.

Assignments: Two Assignments shall be given as a part of the course. Timely submission is important!! Assignment submission details shall be posted on group page. Late submission shall be penalized and in some cases, submissions shall not be accepted. Plagiarism/ cheating/ copying is unacceptable and shall be reported to the concerned department. No marks shall be given in case of cheating/copying. It is the student's duty to take complete care of his work. Assignments are due on **sixth week** and **tenth week**. [Assignment booklet will be posted during 3rd week of semester]

Project: A group of maximum **<u>FIVE to SIX</u>** students shall be involved to deliver a project proposal/charter and plan for a software project in order to implement the concepts learned in the course work. The details of the project shall be posted during **<u>fourth week</u>** of the semester. Group names & Project description has to be submitted by **<u>Tuesday, September 09, 2025.</u>** Two more deliverables shall be required and that are two be submitted on time. The project is one of the major components of this course and a student shall be assigned a **failing grade in the course if he/she fails to submit the project or fails to comply with the requirements of the project**.

Course Outline:

<u>Topic No</u>	<u>Topic</u>
1	• Basic Concepts of SE, SDLC & Project Management • Project v/s Operational Work, Project Feasibility, triple constraints & success. • Stakeholders • Project Management Competencies & Project Management Knowledge areas
2	• Software Project Management Process Groups • Project & Product lifecycles • Software Development Methodologies & Shifts
3	• Basic concepts of Project Integration Management • Project selection, business drivers and CSF • Project business case, feasibility and charter
4	• Software Project Team organization
5	• Software Project Scope Management • Identifying goals, objectives, limitations and dependencies • Gathering Requirements, writing scopes & constructing WBS. • **Case Study 1 – Scope & WBS**
6	• Project Planning & Software Project Time Management • Time Management tools, constructing Network diagrams using AoA &AON • Activity relationships, Working days & Calendar days. • **MS PROJECT [Understanding & Implementation]** & Case study
7	• Software Project Cost Management • Developing budget and basic estimation techniques. • Performing EVA
8	• Resource Allocation & Resource leveling • Schedule reduction techniques
9	• Software Project Risk Management. • Identifying, planning, analyzing and controlling risks • Risk Management Strategies
10	• Agile Software Project Management • Scrum Events, roles, principles, estimations and user stories
11	• Software Project Human Resource Management • Strategies to manage people and teams.
12	• Communication Planning • Software Quality Management tools
13	• Project Stakeholder management • Project Procurement Management
14	• Project Terminations and Fixing Software Projects

Grading Plan:
Quizzes, Assignments & Class Participation: 5% + 5% = 10%
Project & Viva: 20% + 10% = 30%
Midterms: 10% + 10% = 20%
Final Exam: 40%