

TEACHING PLAN

CSC1301 – FUNDAMENTAL OF SOFTWARE ENGINEERING

SEMESTER: October/November 2023

Synopsis:

This course covers the fundamental and basic concepts of software engineering. It gives an introduction to methods for analysis, design, testing and implementation of medium / large size and complex software systems. Students also will learn on software life-cycle, its main stages and how they contribute to a reliable product that satisfies user/client requirements. Simple and realistic case studies will be used along all the software process steps.

- Explain the main aspects of software engineering.(C2, PLO1)
- Apply relevant tools and techniques used in software development process. (C3, PLO2)
- Distinguish analytical, problem-solving and decision-making techniques for software planning and project management in a team. (C4, PLO7)

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ASSESSMENT

Quizzes	15%
Individual Assignments	15%
Group project	20%
Final Examination	50%

Reference

- (a) Sommerville, I. (2015). Software Engineering, 10th ed. Pearson.
- (b) Stephens, R. (2015). Beginning Software Engineering, 1st ed. Wrox.
- (c) Pressman, R. S. (2014). Software Engineering: A Practitioner's Approach (8th edition), McGraw Hill Education.

Week	Topics	Assessment
1	Syllabus briefing and assessment discussion	
2	Chapter 1: Introduction & Overview - Software development challenges - Defining project success - Containing maintenance costs - Meeting user/client requirements	
3	- Software engineering fundamentals - The scope of software - The software engineering discipline	Quiz 1
4	Chapter 2: Software Life Cycle - Life cycle phases - Understanding the problem - Developing the solution - Verifying the product - Maintaining the system	Assignment 1
5	- Popular software life cycle models - Waterfall - V model - Phased - Evolutionary - Spiral	Quiz 2
6	Chapter 3: Project Management - Project management activities - Project planning - Project Scheduling - Risk management	Assignment 2
7	Faculty activity	
8	Faculty activity	
9	Chapter 4: Conventional method for software engineering - Analysis concepts and principles - Analysis modeling - Design concepts and principles	Quiz 3
10	Chapter 5: software architecture - Architectural design - User interface design	
11	Chapter 6: Testing and Debugging - Testing techniques - White-box testing - Black-box testing	Assignment 3
12	Semester break	
13	- Testing strategies - Debugging	Quiz 4
14	Chapter 7: Software evolution - Software maintenance - Evolution processes - Legacy system evolution	Quiz 5
15	Chapter 8: Configuration management - Configuration management planning - Change management - Version and release management	Group work presentation