ANURAG ENGINEERING COLLEGE

(An Autonomous Institution)

(IT605PC) SOFTWARE ENGINEERING & COMPUTER NETWORKS LAB

(Professional Elective – I)

III Year B.Tech. IT- II Sem

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Course Objectives:

- Knowledge of basic software engineering methods and practices, and their appropriate
- Understanding of software requirements and the SRS documents.
- Understanding of different software architectural styles and design models.
- Understanding of software testing approaches, techniques and metrics.
- Understanding on quality control and risk management.

List of Experiments:

Do the following seven exercises for any two projects given in the list of sample projects or any other Projects:

1. Development of problem statements.
2. Preparation of Software Requirement Specification Document, Design Documents and Testing Phase related documents.
3. Preparation of Software Configuration Management and Risk Management related documents.
4. Study and usage of any Design phase CASE tool
5. Performing the Design by using any Design phase CASE tools.
6. Develop test cases for unit testing and integration testing
7. Develop test cases for various white box and black box testing techniques.

Sample Projects:

1. Pass port automation System
2. Book Bank
3. Online Exam Registration

Computer Networks List of Experiments:

1. Implement the data link layer framing methods such as character, character-stuffing and bit stuffing.
2. Write a program to compute CRC code for the polynomials CRC-12,CRC-16 and CRCCCIP
3. Develop a simple data link layer that performs the flow control using the sliding window protocol, and loss recovery using the Go-Back-N mechanism.
4. Implement Dijsktra's algorithm to compute the shortest path through a network
5. Take an example sub net of hosts and obtain a broad cast tree for the subnet.

6. Implement distance vector routing algorithm for obtaining routing table sateach node.
7. Implement data encryption and data decryption

Course Outcomes:

1. Ability to translate end-user requirements in to system and software requirements
2. Ability to generate a high-level design of the system from the software requirements
3. Implement data link layer farming methods
4. Analyze error detection and error correction codes.
5. Implement and analyse routing and congestion issues in network design.

CO-PO-PSO Mapping:

	PO-1	**PO-2**	**PO-3**	**PO-4**	**PO-5**	**PO-6**	**PO-7**	**PO-8**	**PO-9**	**PO-10**	**PO-11**	**PO-12**	**PSO-1**	**PSO-2**
CO-1	H		M	M	M								M	H
CO-2			M	M		M							M	H
CO-3	H		L	H	M								M	H
CO-4	H		L	H	M								M	H
CO-5	H		L	H	M		M						M	H

H-HIGH **M**-MODERATE **L**-LOW