

GUJARAT TECHNOLOGICAL UNIVERSITY

Subject Name: Software Engineering

Subject Code: 3725108

Semester: II

Type of course: M.E. Computer Engineering (IT systems and Network Security)

Prerequisite: Software Development Process

Rationale: NA

Teaching and Examination Scheme:

Teaching Scheme			Credits C	Examination Marks				Total Marks
L	T	P		Theory Marks		Practical Marks		
				ESE (E)	PA (M)	ESE (V)	PA (I)	
3	2#	0	4	70	30	30	20	150

Content:

Sr. No.	Content	Total Hrs	% Weightage
1	The software engineering discipline-Evolution and Impact,	4	8
2	Programs Vs Software Products,	4	8
3	Software Life Cycle Model,	4	8
4	Software project management,	4	8
5	Software reliability and Quality Management,	4	8
6	An Agile View of Process Software Engineering Practice,	4	8
7	CMM levels, Requirements Engineering, Design Concept, Architectural Design Project Management, Modeling Component-Level Design,	4	8
8	User Interface & Pattern Based Design Testing Strategies, Metrics for Process and Project, Project Scheduling, Quality Management	4	8

Reference Books:

1. Software Engineering: A Practioner's Approach by Roger S. Pressman, Mcgraw-hill
2. Software Engineering by Ian Sommerville, Pearson

Course Outcome:

After learning the course the students should be able to:

- Understanding of the Software methodologies...
- The knowledge and application skills to design and implement in Project Management
- This subject is designed to help developers understand and Software Engineering Methods
- Design and implement of the UML.

List of Experiments: (with Open Ended Problems)

- Case Studies-I
- Case Studies-II

Major Equipment:

- VMWare-Workstation
- Linux (Kali/Fedora/BT5/centOS)
- Windows Server 2008/2012

List of Open Source Software/learning website:

- ISO 20001-7
- HIPAA
- CMM Levels
- PCI DSS
- www.pcisecuritystandards.org/security_standards
- www.hipaa.com
- www.iso.org

Review Presentation (RP): The concerned faculty member shall provide the list of peer reviewed Journals and Tier-I and Tier-II Conferences relating to the subject (or relating to the area of thesis for seminar) to the students in the beginning of the semester. The same list will be uploaded on GTU website during the first two weeks of the start of the semester. Every student or a group of students shall critically study 2 papers, integrate the details and make presentation in the last two weeks of the semester. The GTU marks entry portal will allow entry of marks only after uploading of the best 3 presentations. A unique id number will be generated only after uploading the presentations. Thereafter the entry of marks will be allowed. The best 3 presentations of each college will be uploaded on GTU website