



GUJARAT TECHNOLOGICAL UNIVERSITY
Syllabus for Integrated MSc, 7th Semester
Branch: Information Technology
Subject Name: Software Quality Assurance
Subject Code: 1370502

Teaching and Examination Scheme

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

Content:

Sr. No.	Content	Teaching Hours	Module Weightage (%)
1.	Introduction to software Quality and Assurance The software quality challenge, Software quality, Software quality factors, Management and its role in software quality assurance	4	10%
2.	Components of SQA The components of the software quality assurance system – overview Pre-project Software Quality Components Contract review, Development and quality plans	8	15%
3.	SQA Components in the Project Life Cycle and Strategies Integrating quality activities in the project life cycle, Reviews, Software testing – strategies, Black Box Testing and White Box Testing	10	25%
4.	Software Testing – Implementation: The Testing Process, Test Case Design, Automated Testing, Testing Life Cycle, Software Quality Implementation, Assuring the quality of software maintenance components, Assuring the quality of external Participants' contributions, CASE tools and their effect on software Quality	10	25%
5.	Software Quality Infrastructure Components Procedures and work instructions, Staff training and certification, Corrective and preventive actions, Documentation control	5	10%
6.	Software Quality Metrics Software Quality metrics, Cost of Quality	8	15%

Reference Books:

- 1) Daniel Galin, “Software Quality Assurance”, Pearson Publication, 2009.
- 2) Kshirsagar Naik and Priyadarshi Tripathy, Software Testing & Quality Assurance- Theory and Practice, Wiley Student edition.
- 3) William E. Perry, Effective Methods for Software Testing, WILEY, 3rd Edition
- 4) Alan C. Gillies, “Software Quality: Theory and Management”, International Thomson Computer Press, 1997.
- 5) M G Limaye, Software Testing, Tata McGraw-Hill Education, 2009



GUJARAT TECHNOLOGICAL UNIVERSITY
Syllabus for Integrated MSc, 7th Semester
Branch: Information Technology
Subject Name: Software Quality Assurance
Subject Code: 1370502

Course Outcome:

After learning the course, the students should be able to:

No.	CO statement
CO-1	Understand the basics of software quality assurance.
CO-2	Utilize the concepts in software development life cycle.
CO-3	Demonstrate their capability to adopt quality standards.
CO-4	Assess the quality of software product.
CO-5	Apply the concepts in preparing the quality plan & documents.
CO-6	Understand software quality metrics and Cost of Quality.