

Lesson Plan for the Session Jan - May 2025-2026 (Even Sem)

Faculty Name: Likhit M L

Subject with code: Quality Control and Quality Assurance - BCV657D

Semester with section: 6th Sem

Module No	Class	Topics proposed to be covered	% portion covered	Remarks
1		Bridge Course, Module-1, Overview of Quality : Quality History, Quality Definition.	20	
		Quality Inspection, Quality Control, Quality Assurance, Quality Engineering, Quality Management.		
		Quality Gurus: Philip B. Crosby, W. Edwards Deming etc, PDCA Cycle, Costs associated with Quality, Reasons for Poor Quality.		
2		Module-2 Quality Management: Management Practices : TQM, Vision and Quality policy.	40	
		Quality Function Deployment, Bench marking and performance evaluation		
		ISO 9000 Quality Management System, ISO 14000 Environmental Management System		
3		Module-3, Statistical Quality Control : Importance of SQC in construction, Statistical parameters: sampling population and sampling, measure of variability, measure of central tendency	60	
		Recommendations of IS 456:2000 on sampling, testing and acceptance criteria for concrete.		
		Module-4, QA and QC in Construction , Errors in concrete construction; Frequency of material testing reporting of basic construction materials (cement, sand, coarse aggregate, bricks, steel)		
4		Norms for accepting and rejecting criteria of basic construction materials as per relevant IS codes.	80	
		Module-5 On-Site Quality : Achieving quality at different stages of construction: Conceptual Design, Preliminary Design, Detailed Design		
		Construction, Testing, Commissioning, and Handover. Quality assessment of concrete through NDT		
5		rebound hammer and USPV tests and guidelines for accepting and rejecting	100	

Suggested Learning Resources

Books

1. Juran J M and Gryna F M, Quality Planning and Analysis
2. Hutchins G, John L Ashford, The Management of Quality in Construction
3. Mohamed A. El-Reedy, "Concrete and Steel Construction, Quality Control and Assurance", CRC Press, Taylor and Francis Group
4. M. S. Shetty, Concrete Technology, S Chand Publications
5. Relevant IS Codes

Web links and Video Lectures (e-Resources):

NPTEL and YouTube Videos.