

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

Faculty Name: L i k h i t 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	60	
		population and sampling, measure of variability, measure of central tendency		
		Recommendations of IS 456:2000 on sampling, testing and acceptance criteria for concrete.		
4		Module-4, QA and QC in Construction, Errors in concrete construction; Frequency of material testing	80	
		reporting of basic construction materials (cement, sand, coarse aggregate, bricks, steel)		
		Norms for accepting and rejecting criteria of basic construction materials as per relevant IS codes.		
5		Module-5 On-Site Quality: Achieving quality at different stages of construction: Conceptual Design, Preliminary Design, Detailed Design	100	
		Construction, Testing, Commissioning, and Handover. Quality assessment of concrete through NDT		
		rebound hammer and USPV tests and guidelines for accepting and rejecting		

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.