

Course syllabus

Department of Civil Engineering, Indian Institute of Technology Madras

CE5130 - Construction Quality and Safety Management

Credit Distribution: C:12 L:4 T:0 P:0 E:0 O:8 TH:0

Course Type: Theory

Description: To learn the concepts and techniques used for safety management and quality management in construction projects.

Course Content: Quality Management Total Quality Management, Quality Assurance, Quality Control, Quality Audits, Cost of Quality, Specifications and Tolerances, Quality Function Deployment, Material Quality Assurance, Management tools for quality control, Benchmarking, Fundamentals of Statistical concepts, Statistical Quality Control, Statistical Process Control, Control Charts, Acceptance Sampling, Case studies, ISO/BIS standards, Six Sigma, Guest Lectures Safety Management Introduction, Accident Theories, Case studies on Healthy and Safety Planning, Construction Fatalities, Safety Statistics, Cost of accidents, Safety incentives, Safety practices in underground construction, safety culture, occupational health, Ergonomics, Safety manuals, Zero accidents, ISO & OHSAS Standards

Text Books:

- Managing for Total Quality: From Deming to Taguchi and SPC by N. Logothetis, PHI
- Introduction to Statistical Quality Control by Douglas C. Montgomery, John Wiley & Sons, Inc.
- Construction Safety Engineering Principles: Designing and Managing Safer Job Sites by David V MacCollum McGraw-Hill Professional

Reference Books: Operations Management by Dan Reid and Nada R. Sanders, John Wiley Second Edition

Prerequisite: NIL