



KARNATAK LAW SOCIETY'S
**Vishwanathrao Deshpande Institute of
Technology, Haliyal-581 329**
DEPARTMENT OF CIVIL ENGINEERING
ADD ON COURSE SYLLABUS

SEMESTER – VII
Academic Year: 2022-23

TECHNICAL ASPECTS OF PEDESTRIAN FACILITIES

Teaching Hours/Week	3
Total Teaching Hours	30

Module - 1

Definitions of footpath, street crossings, school zone improvement and Pedestrian Level of Service (LOS). Definition of Pedestrian, Importance of Pedestrian facilities, Concept of Pedestrian LOS, Characteristics of Pedestrian facilities (Physical and User Characteristics)

Module - 2

Pedestrian Facilities design standards: Footpath, Kerbs, Continuity and Consistency, Tactile pavers, Level change, Maintenance, Pedestrian Crossings and Ramps and steps.

Module - 3

Pedestrian facilities design standards: Elevator/Lift, Street furniture, Bollards, Lighting, Washrooms and Toilets, school zone improvements, Pedestrian facilities- Parking, Pedestrian facilities at transit areas. Road safety audit and Pedestrian facility audit. Speed-flow, density relationship for pedestrian movements. Simulation of pedestrian movement in software.

Course Outcomes

After the successful completion of the course the student will be able to

CO1: Understand the meaning of pedestrian, importance of pedestrian facilities

CO2: Design the pedestrian facilities as per IRC

CO3: Apply appropriate techniques to solve field problems using advanced software

Text Books

T1: Holt, Daniel J. Pedestrian Safety. No. PT-112. SAE Technical Paper, 2004.

T2: Zegeer, Charles V. Pedestrian facilities users guide: Providing safety and mobility. Diane publishing, 2002

Reference Books

R1: Relevant IRC Codes: IRC103 - 2012 "Development of Guidelines for the Selection of Pedestrian Crossing Facilities–A Relook."

R2: Specifications for Roads and Bridges-MoRT&H, IRC, New Delhi.

R3: Access Board (2004), Americans with Disabilities Act and Architectural Barriers Act Accessibility Guidelines United States Architectural and Transportation Barriers Compliance Board (U. S. Access Board), Washington DC (www.access-board.gov/ada-aba/final.pdf)

(A) Bellary
(Dr. Ashik. Bellary)



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SEMESTER – V
Academic Year: 2022-23

QUALITY CONTROL IN CIVIL ENGINEERING

Teaching Hours/Week	3
Total Teaching Hours	30

Module-1

INTRODUCTION: Quality Eras ,Concept of Zero Defects ,Stated and Implied needs ,Human Resource and Quality ,Skill Development and Quality, Contract and Quality ,Specifications and Quality , Contract Conditions and Quality ,Acceptance Criteria ,Mechanization and Quality ,Safety, Health & Environment (SHE) and Quality, Continuous Improvement

Module-2

QUALITY ASSURANCE PLAN: Introduction, Objectives ,Quality Control , Types of Quality Control, Performance of Quality Control, Testing Facilities Test Specifications & Frequency ,Reporting of Test Results, Statistical Quality Control, Sampling of Materials, Sampling Requirements ,Sampling Guidelines , Preparation and Storage of Samples

Module-3

LIST OF QUALITY CONTROL FORMATS: Slump Test , Test for Cube Strength of Cement Concrete ,Test for Particle Size Distribution of Course /Fine Sand ,Test for Particle Size Distribution of 12.5/20mm/40mm graded stone aggregate ,Flakiness & Elongation Index. ,Test for Silt Content in Coarse/Fine Sand ,Fineness Modulus of Coarse/Fine Sand ,Water Test for Construction Use ,Test for Compressive Strength of / Bricks/ Bricks Tiles/ Fly Ash Bricks/ AC Block etc. ,Test for Bricks/ Bricks tiles for Water Absorption ,Test for Bricks/ Bricks tiles for Efflorescence ,Test of Brick/ Tiles for Dimensions ,Check list for seeking approval of Source /Product/Agency ,List of Equipment for Fields Testing Laboratory (Illustrative List) ,Field Testing Instruments / Laboratory Equipment ,Conformance/Non-Conformance Report ,Format for Quality Audit by Internal QA unit.

Course Outcomes

After the successful completion of the course the student will be able to
CO1: Know the basics of Quality control and its relationship with different building aspects.
CO2: Know the types and field aspects of Quality control.
CO3: Know the formats of different Quality control works

Text Books

T1: M L Gambir, "Concrete Technology", McGraw Hill Education,2014.

Reference Books

R1: Indian Standards.
R2: Quality Assurance Manual for Building Works 2022, Government of India, Ministry Of Housing And Urban Affairs, Central Public Works Department.

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SEMESTER – III
Academic Year: 2022-23

FIRE SAFETY IN BUILDINGS

Teaching Hours/Week	3
Total Teaching Hours	30

Module - 1

Fire: Introduction, Basic concepts of fire protection, Fire as a process of combustion, planning for fire protection, fire resistance, Ventilation and fuel controlled fire, Process of combustion: flashover condition, effect of fire on construction material, design of fire resistance steel structure, concrete structure. Fire safety: urban planning, escape and refuge, internal planning, detection and suppression.

Module - 2

Flow in pipe networks and fixture units, design of water supply distribution system, flow in waste water pipes. Electrical systems: design of electrical systems, intelligent building, life cycle cost and basics of building maintenance, stages of maintenance management, planning for building maintenance, periodicity of maintenance management, cost profile of maintenance, building inspection, planned and Ad-hoc maintenance.

Module - 3

Introduction to HVAC: equations for HVAC process, psychrometric chart, equation-based approach. Condition survey and health evaluation of buildings, diagnosis of building by visual survey, case studies of visual survey, Repair, rehabilitation, retrofit, periodicity and economics of condition survey, interpretation of test results.

Course Outcomes

After the successful completion of the course the student will be able to
CO1: Understand types of fire, combustion process and fire resistance
CO2: Plan for fire safety and design of lifts
CO3: Design flow network in buildings
CO4: Design of electrical systems and maintenance
CO5: Perform health evaluation of buildings and suggest remedies

Text Books

T1: V K Jain, Fire Safety in Buildings, ISBN-13 978-938980219, New Age International Private Limited; Third edition, 2020
T2: Fire protection, services and maintenance management of building, NPTEL video lecture, IIT, Delhi

Reference Books

R1: SP-35 (1987): Handbook of Water supply & drainage-BIS




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