

**COURSECONTENT**

**SAFETY AND CONSTRUCTION PRACTICE REGULATIONS**

(OpenElective)

III Semester:SE

CourseCode	Category	Hours/ Week			Credits	Maximum Marks		
		L	T	P		C	CIA	SEE
2532003	Core	3	0	0	3	40	60	100
		contactClasses:45			TutorialClasses:Nil	PracticalClasses:Nil	TotalClasses:45	
Prerequisites:NIL.								

**Course Overview:**

Safety and Construction Practice Regulations is a course that focuses on ensuring safe working conditions and regulatory compliance in the construction industry. It covers the identification and management of hazards, implementation of safety measures in various construction activities, and safe handling of materials and equipment. The course also emphasizes the roles and responsibilities of stakeholders, application of safety standards such as the National Building Code of India, and adherence to legal frameworks like the Building and Other Construction Workers Act 1996 and Contract Labour Act 1970. Additionally, it highlights risk assessment, accident prevention strategies, and the importance of worker health, welfare, and ergonomics, enabling students to develop a comprehensive understanding of safety practices and regulatory requirements in construction projects.

**Course Objectives:**

1. To understand construction accidents, their causes, human factors, and legal implications related to safety.
2. To learn the components of effective safety programs, including job-site safety assessment, meetings, and incentive systems.
3. To gain knowledge of contractual safety obligations, safety documentation, OSHA standards, and national/international safety laws.
4. To understand safety responsibilities across organizational levels, including supervisors, managers, subcontractors, and safety personnel.
5. To recognize the role of owners and designers in safety, including preparedness, design-stage safety provisions, and safety clauses in project documents.

**Course Outcomes:** The student will be able to

1. Identify the causes of construction accidents, human factors, and legal implications related to occupational hazards.
2. Explain the elements of an effective safety programme and methods for improving job-site safety performance.
3. Analyze the safety provisions in construction contracts and statutory regulations under Indian and international practices.
4. Evaluate management roles, company practices, and worker participation in establishing a safety culture.
5. Formulate strategies for integrating safety responsibilities and preparedness measures into design documentation.



# MARRI LAXMAN REDDY INSTITUTE OF TECHNOLOGY AND MANAGEMENT

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## SYLLABUS:

### UNIT -I

**Introduction to Construction Industry-** Safety issues in construction- Human factors in construction safety management. Roles of various groups in ensuring safety in construction industry. Framing Contract conditions on safety, and related matters. Relevance of ergonomics in construction safety.

### UNIT -II

**Safety in various construction operations-** Excavation- under- water works- under- pinning & shoring Ladders & Scaffolds- Tunneling- Blasting- Demolition- Pneumatic caissons- confined Space Temporary Structures. Indian Standards on construction safety- National Building Code Provisions on construction safety.

### UNIT -III

**Safety in material handling and Equipment-**  
Safety in storage & stacking of construction materials.

### UNIT -IV

**Safety in these of construction equipment-** Vehicles, Cranes, Tower Cranes, Lifting gears, Hoists & Lifts, Wire Ropes, Pulley blocks, Mixers, Conveyors, Pneumatic and hydraulic tools in construction. Temporary power supply.

### UNIT -V

**Contract Labor (R&A) Act and Central Rules:** Definitions, Registration of Establishments, Licensing of Contractors, Welfare and Health provisions in the Act and the Rules, Penalties, Rules regarding wages. Building & Other Construction Workers (RE&CS) Act, 1996 and Central Rules, 1998: Applicability, Administration, Registration, Welfare Board & Welfare Fund, Training of Building workers, General Safety, Health & Well fare provisions, Penalties.

## REFERENCES:

1. K.N.Vaid, Construction Safety Management.
2. V.J.Davies and K.Tomasin, Construction Safety Handbook.
3. James B.Fullman, Construction Safety, Security & Loss Prevention.
4. Linger L, Modern Methods of Material Handling
5. R.T.Ratay, Handbook of Temporary Structures in Construction.
6. National Building Code of India
7. Relevant Indian Standards published by BIS



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## **ELECTRONIC RESOURCES:**

<https://nptel.ac.in/courses/105102206>.

## **MATERIALS ONLINE:**

1. Course template
2. Tutorialquestionbank
3. Definitionsand terminology
4. Assignments
5. Modelquestionpaper–I
6. Modelquestionpaper–II
7. Lecture notes
8. E-LearningReadinessVideos(ELRV)