



# PRINCIPLES OF CONSTRUCTION MANAGEMENT

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**INTENDED AUDIENCE** : Though the course primarily targets students of civil engineering in colleges, students from other disciplines, especially mechanical and electrical engineering may find it interesting.

**PRE-REQUISITES** : There are no real 'pre-requisites' to this course but an exposure to construction projects would make the understanding easier.

**INDUSTRIES APPLICABLE TO** : It is hoped that engineers working in different contracting, consulting and other organizations related to construction projects will find the course useful, specially as a tool in induction training.

## **COURSE OUTLINE :**

Though the course primarily targets students of civil engineering in colleges, other engineering students may also find it interesting. The course seeks to present a rounded view of the divers issues involved in the management of construction projects, and includes aspects like construction economics, quality and safety management, and contract management, apart from time management and scheduling, estimation. It is hoped that engineers working in contracting, consulting and other organizations related to construction projects will also find the course useful.

## **ABOUT INSTRUCTOR :**

Prof. Sudhir Misra is Professor at the Department of Civil Engineering, Indian Institute of Technology Kanpur and has a keen interest in concrete materials, construction and engineering. He has worked with consulting and construction companies also during his 35 years of professional experience, and also led the effort to initiate a graduate programme in Infrastructure Engineering and Management at IIT Kanpur. He has been a member of committees of the BIS and also worked with professional organizations in Japan and India. His research interests include durability and non-destructive testing of concrete and development and utilization of special concretes. A lecture module of Concrete Engineering and Technology by him is also available online under the NPTEL scheme of the Government of India.

## **COURSE PLAN :**

**Week 01** : General overview and project organization

**Week 02** : Estimation of project cost

**Week 03** : Construction Economics

**Week 04** : Planning and scheduling: part-1

**Week 05** : Planning and scheduling: part-2

**Week 06** : Quality management

**Week 07** : Safety Management

**Week 08** : Legal aspects of a construction project