

Course Number and Name												
BCE059 - SAFETY PRACTICES IN CONSTRUCTION												
Credits and Contact Hours												
3 & 45												
Course Coordinator's Name												
Mr.P.Dayakar												
Text Books and References												
REFERENCES												
<ul style="list-style-type: none"> • Jimmy W. Hinze, Construction Safety, Prentice Hall Inc., 1997 • Richard J. Coble, Jimmie Hinze and Theo C. Haupt, Construction Safety and Health Management, Prentice Hall Inc., 2001. • Hand Book on Construction Safety Practices, SP:70, BIS, 2001. 												
Course Description												
<ul style="list-style-type: none"> • To study various safety practices that has to be adopted in construction and to know the finer aspects of safety programs, sampling and audit. 												
Prerequisites						Co-requisites						
Building Construction Technology						NIL						
required, elective, or selected elective (as per Table 5-1)												
Course Outcomes (COs)												
CO1	Know the safety concepts that have to be adopted in construction											
CO2	Understand the elements of safety programmes											
CO3	Know the awareness on safety practices that has to be ensured during construction.											
CO4	Know about the accident prevention, safety sampling and audit.											
CO5	Know the safety concepts in hand tools, grinding, lifting works and while operating fire fighting equipments.											
Student Outcomes (SOs) from Criterion 3 covered by this Course												
	COs/SOs	a	b	c	d	e	f	g	h	i	j	k
	CO1	M					H	M	H			
	CO2	M					H	M	H			
	CO3	M					H	M	H			
	CO4	M					H	M	H			
	CO5	M					H	M	H			
List of Topics Covered												
UNIT I SAFETY CONCEPTS 9 Construction accidents - Construction Safety Management: Importance - causes of accident, safety measures- Environmental issues in construction-Construction industry related laws. Human factors in safety												

– legal and financial aspects of accidents in construction – occupational and safety hazard assessment.

UNIT II SAFETY PROGRAMMES 9

Safety Programmes - Construction Safety - Elements of an Effective Safety Programmes - Job-site assessment - Safety Meetings - Safety Incentives. Contractual Obligations - Safety in construction contracts- Substance Abuse - safety Record Keeping.

UNIT III SAFETY PRACTICES 9

Safety Culture - Safe Workers- Safety and First Line Supervisors - Safety and Middle Managers - Top Management Practices, Company Activities and Safety - Safety Personnel - Sub-contractual Obligation - Project Coordination and Safety Procedures - Workers Compensation

UNIT IV SAFETY SAMPLING AND AUDIT 9

Accident prevention-cost of accidents-Safety and productivity-safety provision in the factories act-accident reporting investigation and statistics-total loss control and damage control-Safety sampling- safety audit - critical incident technique- safety equipment - planning and site preparation- safety system of storing construction materials-Excavation - blasting- timbering-scaffolding- safe use of ladders- safety in welding.

UNIT V SAFETY IN LIFTING AND FIRE 9

Safety in hand tools- Safety in grinding- Hoisting apparatus and conveyors- Safety in the use of mobile cranes-Manual handling- Safety in demolition work- Trusses, girders and beams- First- aid- Fire hazards and preventing methods-Interesting experiences at the construction site against the fire accidents.