



GUJARAT TECHNOLOGICAL UNIVERSITY

Bachelor of Civil and Infrastructure Engineering

Subject Code: 3154006

Semester – V

Subject Name: Health and Safety Management

Type of course: Humanities and Social Science

Prerequisite: NIL

Rationale: Rapid growth in infrastructure and more and more investments for industrial establishments there is a need for every employee to have the basic understanding of Health and Safety Management including the occupational health and safety issues involved in a business environment.

Teaching and Examination Scheme:

Teaching Scheme			Credits C	Examination Marks				Total Marks
L	T	P		Theory Marks		Practical Marks		
				ESE (E)	PA (M)	ESE (V)	PA (I)	
3	0	0	3	70	30	0	0	100

Content:

Sr. No.	Content	Hrs
1	Overview of Health & Safety Management System	3
2	International Health and Safety Policies/Standards: OSHA, ISO 45001	8
3	Hazard & Risk assessments: Key hazard identification techniques such as HIS, HAZID, HAZOP and FMECA, LOPA etc.	8
4	Occupational Health & Safety Hazards: Introduction, Socio-economic aspects of occupational health and safety, Workplace Health and Safety, Major occupational health & safety hazards, Control Measures, PPE, Occupational Hygiene, First Aid, Health Screening Measures, Occupational health and safety legislations in India.	10
5	Industrial Safety & Management: Classification of Industrial hazards: Fire hazards & Control measures, Electrical hazards & control measure, Industry specific safety hazards: Construction & Chemical Industries, Case studies	8
6	Emergency Planning, Incident reporting and investigation, Safety Management & Communication	5
	Total	42



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Course Outcomes: After successful completion of the course the students shall be able to:

Sr. No.	CO statement	Marks % weightage
CO-1	Understand the process involved in health and safety management systems for an organization including concepts and techniques of identifying	30 %
CO-2	Know the important provisions of Health and Safety Policies and regulations commonly practiced at Workplaces	30 %
CO-3	Identify occupational and industrial health & safety hazards. Also, comprehend their incident reporting.	40 %

Learning Outcome:

Suggested Specification table with Marks (Theory):

Distribution of Theory Marks					
R Level	U Level	A Level	N Level	E Level	C Level
40	40	20	00	00	00

Legends: R: Remembrance; U: Understanding; A: Application, N: Analyze and E: Evaluate C: Create and above Levels (Revised Bloom's Taxonomy)

Note: This specification table shall be treated as a general guideline for students and teachers. The actual distribution of marks in the question paper may vary slightly from above table.

Reference Books:

1. Holt A & Andrews H. (1998), The Principles of Safety and Health at Work, IOSH Services Ltd
2. Hughes P and Ferrett E (2009), Introduction to Health & Safety at Work, NEBOSH
3. Stranks J. (2000), The Handbook of Health and Safety Practice, Financial Times Management
4. Charles D. Reese (2003), Occupational Health and Safety Management: A Practical Approach by CRC.
5. Handbook on Construction Safety Practices-2001 (SP 70 from BIS)

Websites for all relevant Regulations, case studies, and other information:

1. www.hse.gov.uk/
2. www.osha.gov/