



COURSE CURRICULUM

Course Title: Occupational Health & Safety Management

Course Code:

Credit Units: 04

Course Level : PG

L	T	P/S	SW/FW	TOTAL CREDIT UNITS
04	-	-	-	04

Course Objectives: This course will provide students with knowledge and skills of occupational health and safety, emergency planning and environmental management. Students will have the foundations to create, plan, implement, audit and evaluate programs in the areas of health and safety, emergency planning and environmental management systems.

Pre-requisites: Basic knowledge of industrial accidents and pollution abatement.

Student Learning Outcomes: Students should be able to demonstrate recognition and designing of:

- Occupational health and safety law
- Risk assessment techniques and their management
- Physical hazards and their management
- Occupational health hazards and their management
- Human factors and the management of people
- Research techniques in occupational health and safety

Course Contents/Syllabus:

	Weightage (%)
Module I Introduction	25
Descriptors/Topics Hazards in Chemical Operations, Bronchitis, Asthma, Asbestosis, Silicosis, Fluorosis and other heavy metal toxicity, Heart diseases, Carcinogenic effects, Material Handling Hazards, Lifting Machinery & Pressure Vessels, Safety Measures, Material Safety Data Sheets, Housekeeping, Storage Practices, Radiation Safety, Petroleum Storage	

Requirements, Pesticide Safety. Indian Statutes- Central Acts, Factory's Act, AP Factory Rules, Construction Safety Regulations, Petroleum Rules 2002, Electrical Act & Rules.	
Module II Safety & Health Management	25
Descriptors/Topics Employer & Employee Responsibilities, Record-keeping & Reporting Requirements, Safety Organization, Responsibilities of Safety Officer, Supervisors, Safety committees. Risk management: Definitions of Hazards, Risks, Evolution of Methodical Analysis System, Safety Analysis techniques, Performance measurement, Operational Reviews - Internal & External	
Module III Accident and its consequences	15
Descriptors/Topics Accident, Sequence of accident, Effect of accidents, Analysis of Accidents, Injury Data, Accident Investigations & Reporting, Accident Costing	
Module IV Fire Safety	15
Descriptors/Topics Basic Elements, Causes, Industrial Fires, Explosions, Effect on Environment, Property & Human Loss, Prevention Techniques, Building Design, Fire Protection Systems, Contingency Plan, Emergency Preparedness, Evacuation.	
Module V Occupational Health & Safety Management	20
Descriptors/Topics Industrial Best Practices- In Electrical, Mechanical, Fire, Machine Guarding, Personal Protective Equipment, Occupational Health, Ergonomics Ambulance, Noise Abatement Methods, Management Of Contractors. Occupational Safety & Management Standards- Indian Standards, OHSAS 18001 Standard and its Elements, CE Certificate, Social Accountability Standards, System Implementation, Benefits.	

Pedagogy for Course Delivery: The class will be taught using Lectures, Power Point Presentation (PPTs), Discussion, Seminar, industrial visit etc. In addition to assigning the case studies, the course instructor will spend considerable time in understanding the concept of innovation through the eyes of the students. The instructor will cover the ways to think innovatively liberally using thinking techniques.

Assessment/ Examination Scheme:

Theory L/T	Lab/Practical/Studio (%)	Total
100	NA	100

Continuous Assessment/Internal Assessment					End Term Examination
Components (Drop down)	CT	Att.	HA	S/V/Q	EE
Weightage (%)	10	5	5	10	70

Text & References:

- Industrial safety and health, David L. Goetsch, Macmillan Publishing Company, 1993.
- Handbook of environmental health and safety, Vol I & II, Herman Kooren, Michael Bisesi, Jaico Publishing House, 1999.
- Handbook of Environmental Health and Safety – principle and practices; Koren H., Lewis Publishers
- Principles of Toxicology, Environmental and Industrial Applications, John Wiley & Sons
- Principles of Environmental Toxicology; Shaw I. C. & Chadwick J., Taylor& Francis ltd

Any other Study Material:

- **Journals like** Workplace Health & Safety, Journal of Occupational Health Psychology, Industrial Health, Occupational Safety & Health Journal etc.
- **Magazines like** Down to earth, Occupational Health & Safety, Safety+ Health etc.