

Aghorekamini Prakashchandra Mahavidyalaya



Add on course on

Department of Environmental Science

Course title: Industrial Safety and Environmental Management

Course duration: 36 hours(15.05.2023-27.06.2023)

Course offered by: Department of Environmental Science in association with IQAC, AKPC Mahavidyalaya, Bengai, Hooghly, W.B.

Co-ordinator Name: Prof. Amina Khatun

Name of the Teachers:

Mr. Nirmal Kumar Pal, Retd. Scientist 'F' & Head (Management Systems Dept.), Bureau of Indian Standards, New Delhi

Mr. Ashish Kumar Panda, Retired Unit Head, IFFCO Paradeep

Dr. Tirthankar Mallick, Netaji Mahavidyalaya

Dr. Sandipan Pal, AKPC Mahavidyalaya

Prof. Sumana Middy, AKPC Mahavidyalaya

Prof. Amina Khatun, AKPC Mahavidyalaya

Mr. Arijit Ghosh, Safety Officer, Avant Grade Cleanroom & Engg. Solutions Pvt. Ltd.

Mr. Diptendu Kapri, Environment Officer, Giridhan Metal Private Limited (Sai Group)

Syllabus and Modules:

Unit No & Name	Detailed Course Content	Hours
Unit I Introduction to Industrial Safety	Meaning, needs and importance of Industrial Safety; History of Safety Movement in India and Abroad; Causes of Industrial accidents; Occupational health and safety; Safety and Health Legislation	3
Unit II Principles of Accident Prevention	Definition: Incident, Accident, Near Miss Incident, Dangerous Occurrences, Unsafe Acts, Unsafe conditions, Hazards and Risk, etc. Accident Prevention: Theories of accident occurrences, Principles of accident prevention. Models of accident Prevention. Cost of Accident: Direct and Indirect cost, Compilation procedure for financial costs. Cost data, quality and its limitations. Budgeting.	6
Unit III Safety Management System	Need of Environment, Health, and Safety (EHS) in industrial safety. Planning for safety: Definition, purpose, nature, scope and procedure of planning; Range of planning; Strategic Planning and process of implementation; Management by objectives and its role in safety; Policy formulation and effective planning for safety. Organizing for safety: General Definition, need, nature and principles of Organizing; Organization structure and Safety Department; Functions and responsibilities of Safety Officer; Structure and functions of Safety Committee; Directing for Safety- Direction: Definition, process, principles and techniques. Leadership: Role-functions and attributes of a leader, Leadership styles and safety management. Communication: Fundamentals, Importance, process, types and channels. Five essential rules for communication. Two-way communication. Barriers and breakdowns in communication. Communication with management, employees and union. The Occupational Safety and Health Administration (OSHA); ISO 45001 and related standards.	9
Unit IV Environmental Management	Concept on Environmental Management; Environmental Pollution; Environmental Legislation; Environmental Management System (EMS); Management of air pollution,	9

	water pollution, noise pollution; Solid waste management; Role and responsibilities as environmental officer in Industry. Functions of management: Forecasting, planning, organizing, motivating, coordinating, controlling, and communicating, leadership, directing, and decision making. ISO 14000 and related standards. Environmental Audit.	
Unit V Environmental impact assessment (EIA)	Objective of EIA; General Methodology; Guidelines in India; administrative procedure for environmental clearances; Identification and Prediction of Impact; Case studies.	5
Unit VI Field Visit	Industrial Visit	4

Programme Outcomes

1. To prepare the students for their successful careers in area of Industrial Safety to meet changing demands of Safety profession as per international safety standards.
2. To create awareness on environmental Safety issues and commitment towards professional ethics and social responsibilities leading for their needful lifelong learning.
3. To expertise the students in the field of Environmental Management and EIA which are highly demanding area in the industry now a days.

Course outcome: This course will focus on fundamentals and as well as the concept of industrial safety and environmental management with proper precaution.

Mode of Evaluation:

After the completion of the course, written examination was taken for 50marks. We the all teachers with our all students have visited in a 'Green Industry'(ecofriendly fabricated brick industry). We have devided remaining 50 marks as (25 marks for industry visit report preparing + 25 marks for viva voce). The final results was prepared by using 6-point grading system scale.

Grading Scale:

Level	Excellent	Very Good	Good	Above Average	Average	Below Average	Poor	Fail
Grade	A+	A	B+	B	C	D	E	F
Marks range	90-100	80-89	70-79	60-69	50-59	40-49	33-40	0-32

