



राजस्थान आई.एल.डी. कौशल विश्वविद्यालय
RAJASTHAN ILD SKILLS UNIVERSITY

FACULTY OF SECURITY AND SURVEILLANCE

NSQF LEVEL SCHEME

SECTOR : FIRE AND SAFETY

**B. VOC. IN FIRE TECHNOLOGY AND INDUSTRIAL
SAFETY MANAGEMENT**

REGULATION

NSFQ LEVEL 7

REGULATION

SEMESTER 4TH

Semester Wise-Syllabus

Skill Components (Theory & Practical)

Course Name : B. Voc. In Fire Technology and Industrial Safety Management**Semester IV****Skill Component**

Code	Subject Type	Subject	Credits				Eose (Hrs.)		
			Theory	Practical	Self/Industry/Project	Total Credits	T	P	S
Skill Component (Location : Institute)									
	SC	Emergency Planning and First Aid	2	1	-	3	3	1	-
	SC	Industrial Security Management	2	1	-	3	3	2	-
	SC	Fire Science and Technology	1	3	-	4	3	3	-
	SC	Industrial Noise and Noise Control System	1	1	-	2	3	1	-
(OJT)/Qualification Packs) Location: Industry Partner)									
Internship/OJT/ Drill Practical			0	0	6	6	0	0	0
TOTAL			6	6	6	18	0	0	0

Skill Subjects

Skill subject I: Emergency Planning and First Aid

Component	Unit (Module)	Subunit (Session)	Learning objective	Duration in hour	Credit
Theory	Emergency	What is Emergency, Types of Emergency, Emergency Planning, and Importance of Planning.	Introduction about emergency. And its planning	05	3
Theory	On site Emergency Plan	On-site Emergency Plan, Emergency Alarm System, Emergency Control Room, Key personnel, Emergency Control Program.	On site emergency plan and its concepts and various agency works in this plan and list of key personals	10	
Theory	Off site Emergency Plan	Off-site Emergency Plan, Mutual Aid Scheme, Emergency Evacuation, Security and Media management.	Off site emergency plan and its concepts and various agency works in Offsite Emergency Plan.	10	
Theory	Hazard Communication	The Handling of hazardous substance, Material Safety Data Sheet (MSDS), Use of hazardous and Toxic substance, Storage and Handling, Transportation of Hazardous substance	What is Hazards and hazardous substances. Importance of MSDS in any plant.	05	
Theory & Demonstration	First Aid	Introduction, Principles of First Aid, Training on First Aid, General rules of First Aid, Shocks, Electrical Shock, Artificial Respiration, Cardio Pulmonary Resuscitation, Chocking, Fainting, Poisoning, Open Wounds, Control of bleeding, Burns and Scalds, Heart Attack.	Familiarization with first aid and various equipments, procedures use during first aid. Responsibility of First aider.	10	

Skill subject II: Industrial Security Management

Component	Unit (Module)	Subunit (Session)	Learning objective	Duration in hour	Credit
Theory	Security Arrangements	Introduction, Need of Security Arrangements in Industrial Plants, Security Programme, Fencing and Walls, External Landscape, Lighting.	Introducing to Security management in the plant.	15	3
Theory	Important Emergency Tools	Alarm System, Visitor Entry Pass, Employee entry Pass, Communication, safe Keys and Locks	Familiar with the Various tools use in Security Field.	15	
Theory	Responsibility and Documentation	Security Guard Force, Check List for Plant Security, Security Staff Parade Drills, Discipline, Record Keeping	Responsibility of Guard, Force and Security Staff. Various activities of Security staff.	10	
Theory	Social Security	Definitions, Scope of Social Security, Social Security in India, Administration, Working of ESI, Benefits of Workers.	Introduction and importance of Social security members.	05	
Theory	Policies	Insurance Policies, Taking Policy, Transit Insurance, Employees State Insurance, Inspection/ Safety Audit, After Fire incident, After Theft, After Accident.	Various policies of Security and safety departments.	05	

Skill subject III: Fire Science Technology

Component	Unit (Module)	Subunit (Session)	Learning objective	Duration in hour	Credit
Theory	Basic Physics and Chemistry Related to Fire	Guidelines for writing the units, Force, resultant force, Laws of force, Laws of motion, Mass and weight, work, power, energy, Law of conservation of energy, Mechanics – rest and motion, Distance and displacement, Speed and velocity, Atomic structure, Elements, compounds, Pure substance and mixture, Physical and chemical changes, Condition for the changes, Energy changes, Effects of heat on matter, Combustion, Temperature, Specific heat capacity, Chemical reaction, Exothermic reaction and endothermic reaction.	Introduction of matters and its types and various definition uses in fire fighting field. Properties of matter. About energy conservation.	10	4
Theory	Water Supply System	Sources of Water, Type of Hydrants, Care And Maintenance of Screw Down Hydrant, Types of water relay system, Advantages and disadvantages of water Relay system.	Introduce to water supply system for fire fighting and various equipments use during this activities.	15	
Theory	Fixed Installation	Introduction to Fixed Fire Fighting Installation (F.F.F.I.), Hydrants, Appliances, Detectors, Sprinklers and Alarms, Sprinkles and drenches system, Hose reel and down corner, Fire services inlet.	Introduction and familiarization with fixed installation use in the plant.	15	
Theory	Fire Service	Ranks and appointment of fire services, State Fire services Administration, City Fire services Administration, Fire Station, Maintenance of Fire Station, Executive and Administrative duties of In-charge. Various Documentation in Fire Service.	Familiarization to fire service administration and fire station.	10	
Theory	Evacuation Procedure	Perception and behaviour of people in the event of fire, The measures needed to overcome behaviour problems and ensure safe evacuation of people in the event of fire, Emergency evacuation procedures, Assisting disable people to escape.	Introduction about evacuation procedures and its importance and discipline.	05	

Skill subject IV: Industrial Noise and Noise Control System

Component	Unit (Module)	Subunit (Session)	Learning objective	Duration in hour	Credit
Theory	Measurement of Noise	Introduction, Effect of Noise on the auditory System, Audible Noise, Fundamentals of Sound, Measurement of Audible Noise.	Introduction of Noise and its types. Learn about the measurement system of noise.	10	2
Theory	Leveling of Noise	Attenuation of Sound Pressure Levels, Acceptable Levels of Noise, Criteria for Hearing Loss, Control of Noise.	Limitation of Noise. Effects of Noise and its control measurement.	15	
Theory	Vibration	Vibration, Corona Vibration, Vibration Dampers, Hearing Protectors, Record Keeping	Introduction about Vibration, How to remove or control vibration noise at work place.	15	
Theory	Controlling of Noise Pollution	Causes of Noise, Sources of Noise, Rules of Controlling of Noise.	Introduce about Noise pollution and its effects and causes. Learn about rules of noise control.		

Objective:- To Train an individual in handling Fire Safety Equipment and Enable him/her to function as a Fire Technician.

Ref. Books:-

Agni Suraksha

Industrial safety health & Environment Management System

Industrial safety management and Health

Industrial Safety

- Mr. N. K. Verma

- Mr. R.K Jain

- Mr. M. K. Tarafdar

- Mr. Misti