

FACULTY OF ENGINEERING & TECHNOLOGY
DEPARTMENT OF CHEMICAL ENGINEERING

ECHEVAC02-PERSONAL PROTECTIVE EQUIPMENT (PPE) & FIRST AID

LEARNING OBJECTIVES

- To understand the importance of PPE and safeguard the life of workers.
- To know the different types of PPE and its applications.
- To understand the necessity of First aid in emergencies and in life saving.
- To provide appropriate First-Aid for the victim of different injuries.

UNIT I: NEED FOR PERSONAL PROTECTIVE EQUIPMENT

Need for personal protective equipment – selection - Applicable standards, supply, use, care & maintenance.

UNIT II: RESPIRATORY & NON RESPIRATORY PERSONAL PROTECTIVE DEVICES

Respiratory personal Protective equipment - Classification of respiratory personal protective equipment - Selection of respiratory personal protective equipment - Non-respiratory personal protective devices, Head protection, Ear protection. Face and Eye protection, Hand protection, Foot protection and Body protection.

UNIT III: FIRST AID

Body structure and Functions, Position of causality, the unconscious casualty, fracture and dislocation, Injuries in muscles and joints, Bleeding, Burns, Scalds and accidents caused by electricity, Respiratory problems, Rescue and Transport of Casualty. Cardiac massage, poisoning, wounds.

UNIT IV: PRACTICAL ON PERSONAL PROTECTIVE EQUIPMENT

Personal protective equipment: Respiratory and non-respiratory-demonstration-self contained breathing apparatus. Safety helmet, belt, hand gloves, goggles, safety shoe, gum boots, ankle shoes, face shield, nose mask, ear plug, ear muff, anti static and conducting plastics/rubber materials, apron and leg guard.

UNIT V: PRACTICAL ON FIRST AID

Classroom based power-point presentation with practical components; (i.e. Dealing with Emergencies)

REFERENCES:

1. Frank P Lees - Loss of prevention in Process Industries, Vol. 1 and 2, Butterworth Heinemann Ltd., London (1991).
2. Industrial Safety - National Safety Council of India.
3. R. K. Jain and Sunil S. Rao, Industrial Safety , Health and Environment Management Systems, Khanna publishers, New Delhi (2006).