

# Schemes and Syllabus

(For academic session 2025-26 onwards)

## **B. Voc. in Health Safety Environment**



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# SECTION 1

## Program Outcomes and Program Specific Outcomes

### Program Outcomes

#### **PO1: Apply Fundamental HSE Knowledge:**

Demonstrate a sound understanding of the core principles and practices of occupational health, industrial safety, and environmental management.

#### **PO2: Compliance with Laws and Standards**

Identify and interpret applicable national and international HSE laws, rules, and standards (e.g., Factories Act, OSHA, ISO 14001, ISO 45001).

#### **PO3: Risk Assessment and Hazard Control**

Perform risk assessments, identify workplace hazards, and implement effective control measures using tools like HIRA, JSA, and safety audits.

#### **PO4: Emergency Management Skills**

Design, implement, and evaluate emergency response procedures including fire safety, disaster management, and first aid.

#### **PO5: Industrial Hygiene and Health Monitoring**

Understand concepts of occupational hygiene and apply monitoring techniques for workplace exposures to noise, dust, chemicals, etc.

#### **PO6: Promote Sustainable Environmental Practices**

Apply principles of sustainable development, waste management, pollution control, and environmental impact assessment (EIA).

#### **PO7: Communication and Leadership**

Communicate HSE practices effectively to diverse stakeholders and demonstrate leadership in promoting a strong safety culture.

#### **PO8: Practical Skill Proficiency**

Use relevant tools, PPE, and equipment for site inspections, safety drills, and environmental monitoring as per industry norms.

#### **PO9: Workplace Ethics and Professionalism**

Adhere to ethical principles and professional standards while practicing health, safety, and environmental responsibilities.

#### **PO10: Lifelong Learning and Employability**

Recognize the need for continuous skill up gradation and stay updated with emerging HSE technologies, methods, and legal updates.

## **Program Specific Outcomes**

### **PSO1: Industrial Safety Management**

Graduates will be able to identify, evaluate, and control industrial hazards and implement safety management systems (e.g., hazard identification, risk assessment, safety audits, and root cause analysis) in various sectors like manufacturing, construction, oil & gas, and logistics.

### **PSO2: Environmental Protection and Sustainability**

Apply practical skills in environmental monitoring, pollution prevention, waste management, and sustainability practices to meet legal and organizational environmental objectives.

### **PSO3: Occupational Health and Hygiene**

Implement occupational health programs, conduct exposure assessments (noise, dust, chemical), and promote employee health and wellness initiatives aligned with workplace standards.

### **PSO4: Legal and Regulatory Compliance**

Interpret and ensure compliance with key statutory regulations such as the Factories Act, Environmental Protection Act, OSHA standards, ISO 45001, and ISO 14001 through documentation, audits, and reporting.

### **PSO5: Emergency and Disaster Preparedness**

Design and execute emergency preparedness plans, including fire drills, disaster response strategies, and first aid systems, ensuring workplace readiness for various emergencies.

## SECTION 2

### Semester wise Scheme

#### First Semester

Course Code	Course Title	L	T	P	CH	CP	Int. A	ESE	Total
B. Voc. HEV-101	Basics of Computer	4	-	-	4	4	40	60	100
B. Voc. HEV -102	Fundamentals of Health Safety & Environment	4	-	-	4	4	40	60	100
B. Voc. HEV -103	Safety management in Industry	4	-	-	4	4	40	60	100
B. Voc. HEV-104	OJT-I (On Job Training NSQF Level-4)	-	-	36	36	18	500		500
	<b>TOTAL</b>	<b>12</b>	<b>-</b>	<b>36</b>	<b>48</b>	<b>30</b>			<b>800</b>

#### Second Semester

Course Code	Course Title	L	T	P	CH	CP	Int. A	ESE	Total
B. Voc. HEV-201	Professional Communication	4	-	-	4	4	40	60	100
B. Voc. HEV-202	Risk Management and Safety Protocols	4	-	-	4	4	40	60	100
B. Voc. HEV-203	Hazard Management in Factories	4	-	-	4	4	40	60	100
B. Voc. HEV-204	OJT-II (On Job Training NSQF Level-5)	-	-	36	36	18	500		500
	<b>TOTAL</b>	<b>12</b>	<b>-</b>	<b>36</b>	<b>48</b>	<b>30</b>			<b>800</b>

### Third Semester

Course Code	Course Title	L	T	P	C H	C P	Int. A	ESE	Total
B.Voc-HEV-301	Environment studies	4	-	-	4	4	40	60	100
B.Voc-HEV-302	Fire Safety and Prevention Techniques	4	-	-	4	4	40	60	100
B.Voc-HEV-303	Occupational Diseases and Ergonomics	4	-	-	4	4	40	60	100
B.Voc-HEV-304	OJT-III (On Job Training NSQF Level-6)	-	-	3 6	36	18	300	200	500
	<b>TOTAL</b>	<b>1 2</b>	<b>-</b>	<b>3 6</b>	<b>48</b>	<b>30</b>	<b>480</b>	<b>320</b>	<b>800</b>

### Fourth Semester

Course Code	Course Title	L	T	P	C H	C P	Int. A	ESE	Total
B.Voc-HEV-401	Human values & Ethics	4	-	-	4	4	40	60	100
B.Voc-HEV-402	First Aid and Emergency Procedures	4	-	-	4	4	40	60	100
B.Voc-HEV-403	Industrial Hygiene and Toxicology	4	-	-	4	4	40	60	100
B.Voc-HEV-404	OJT-IV (On Job Training NSQF Level-6)	-	-	3 6	36	18	300	200	500
	<b>TOTAL</b>	<b>1 2</b>	<b>-</b>	<b>3 6</b>	<b>48</b>	<b>30</b>	<b>480</b>	<b>320</b>	<b>800</b>

### Fifth Semester

Course Code	Course Title	L	T	P	C H	C P	Int. A	ESE	Total
B.Voc-HEV-501	Disaster Management	4	-	-	4	4	40	60	100
B.Voc-HEV-502	Green Technologies and Climate Change	4	-	-	4	4	40	60	100
B.Voc-HEV-503	Public Health and Sanitation	4	-	-	4	4	40	60	100
B.Voc-HEV-504	OJT-V (On Job Training NSQF Level-7)	-	-	3 6	36	18	300	200	500
	<b>TOTAL</b>	<b>1 2</b>	<b>-</b>	<b>3 6</b>	<b>48</b>	<b>30</b>	<b>480</b>	<b>320</b>	<b>800</b>

### Sixth Semester

Course Code	Course Title	L	T	P	C H	C P	Int. A	ESE	Total
B.Voc-HEV-601	Current Affairs	4	-	-	4	4	40	60	100
B.Voc-HEV-602	Nutrition and Workplace Wellness	4	-	-	4	4	40	60	100
B.Voc-HEV-603	Professional Ethics and Responsibilities in HSE	4	-	-	4	4	40	60	100
B.Voc-HEV-604	OJT-VI (On Job Training NSQF Level-7)	-	-	3 6	36	18	300	200	500
	<b>TOTAL</b>	<b>1 2</b>	<b>-</b>	<b>3 6</b>	<b>48</b>	<b>30</b>	<b>480</b>	<b>320</b>	<b>800</b>

**Assessment Criteria (100 Marks Per Subject)**  
**(For General Components)**

<b>S. No.</b>	<b>Components</b>	<b>Maximum Marks</b>
1	Assignment-1	20
2	Assignment-2	20
3	ESE	60

**Assessment Criteria (500 Marks) (For OJT)**  
**For Skill Component**

<b>S. No.</b>	<b>Components</b>	<b>Maximum Marks</b>
1	Attendance	50
2	General Behaviour & Discipline	50
3	Technical Skill	200
4	Presentation Skill	200