

**DIPLOMA IN CHEMICAL ENGINEERING
VI - SEMESTER**

INDUSTRIAL TRAINING

Course Title	: Industrial Training	Course Code	:
Semester	: VI	Course	: Core
Teaching Scheme in periods (L:T:P)	: 0:0:105	Credits	: 25
Methodology	: Training	Total Contact	: 6 months
CIE	: 900	Periods	
		SEE	: 100

Rationale: Industrial Training is introduced in the VI semester for the students as a part of the program to make the Diploma passed out students industry ready thus saving the training and apprenticeship needs in the industry and also help in capacity building of the Telangana state and the Country.

Course Objective:

To enable the students to

1. Acquaint with Industry environment and culture.
2. Develop professional skills
3. Enhance the usage skills of modern tools
4. Develop Communication and leadership skills.
5. Encourage entrepreneurship
- 6.

Course Outcomes:

CO	Outcome
CO1	Appreciate the organizational setup and hierarchy
CO2	Practice the use of Resource optimization techniques
CO3	Develop core engineering skills
CO4	Develop an understanding of solutions for Environmental issues in the industry
CO5	Get acquainted to industry culture and professionalism

Evaluation:

1. The industrial training shall carry 1000 marks and the passing minimum is **50%**. A candidate failing to secure the minimum marks should complete it at his own expense. No apprenticeship training stipend is payable in such case.
2. During training the candidate shall put in a minimum of 90% attendance.
The student should submit a report describing the profile of the company, nature of the job assigned to him /her and other details in a standard format duly attested and approved by the head of the industry after two weeks and before four weeks from the date of joining through e mail.

Hard copy of the report may be submitted in person .

1. A candidate shall be assessed twice in the spell of industrial training i.e. at the end of third month and finally before he/she completed the industrial training
2. The assessment shall be carried out by a committee comprising of a representative of the Industry where the candidate is undergoing training and a faculty member from the respective program from the Polytechnic.

For Institution level evaluation of industrial training, a committee consisting following faculty members (1) Head of Dept. concerned.(2) Faculty member who assessed the student in the industry (3) any other staff member of department concerned may be formed.

- **Evaluation and assessment of Industrial Training**, shall be done and marks be awarded in the following manner, provided the candidates concerned have put up minimum 90% attendance of Industrial Training.

Industrial assessment at Industry : 600 marks (in two spells of 300 marks each)

Institutional Evaluation : 300 marks

Semester End Examination : 100 marks
(Seminar/viva-voce at Institution)

TOTAL 1000 marks

Assessment parameters at Industry

Sl No	Learning Parameter	Assessment I (First Quarter)	Assessment II (Second Quarter)
1	Attendance and punctuality	20	20
2	Familiarity of tools and material	30	30
3	Engineering skills	50	50
4	Application of knowledge & Problem solving skills	50	50
5	Comprehension and observation	10	10
6	Professionalism/Professional ethics	20	20
7	Safety and environmental consciousness	10	10
8	Communication skills	20	20
9	Supervisory skills	50	50
10	General conduct during the period	40	40
Total marks for Industry Evaluation		300	300
		600 marks	

Assessment parameters at Institution (End Examination)

Institution Level Evaluation Scheme			
Sl No	Criteria	Marks	Time
1	1 st Report Submission	50	within 4 Weeks
2	Seminar-I	50	9th to 10 th week
3	2 nd Report Submission	50	Within 12 weeks
4	Log book	100	--
5	Seminar-II	50	Before Viva-Voce
	Institute Evaluation Total	300	
Semester End Examination			
1	Viva-Voce	50	After 24 weeks
2	Presentation/Demonstration of skills	50	
	Total	100	

- The assessment at the institute level will be done by a minimum of three members i.e. Internal Faculty, Industrial Experts/External Examiner and H.O.D. and the shall be averaged

Learning Outcomes

1.0 Observe Safety Precautions and rules of the industry

- 1.1. Know the importance of safety in industries
- 1.2. Understand the safety about personnel protection, equipment protection
- 1.3. Know the usage of various safety devices
- 1.4. Precautionary measures to be taken.

2.0 Appreciate organizational set up from top executive to workmen level

- 2.1. Acquaint with the function of each department/section
- 2.2. Comprehend the inter relationship among various department/sections.

3.0. Observe the end product and various Components/ materials and their chemical composition used

in the production and identify their source.

- 3.1. Identify the various stages involved in the production of end product.
- 3.2. Identify various intermediates produced and their further processing and/or waste disposal.

3.3. List the final products, their composition and its commercial importance, uses and applications.

4.0. Develop an Understanding the various stages involved in processing, sequential arrangement of different equipment.

- 4.1. Represent the whole process and each sub processes with a detailed flow diagram.
- 4.2. Observe and appreciate the resource optimization of space (the arrangement of various equipment and machinery in systematic manner in a less possible area of site), money and Time.
- 4.3. Identify the process parameters
- 4.4. Identify various unit operations and unit processes
- 4.5. Do material and energy balance

5.0 Explain various analytical methods used in the quality control department

- 5.1 Practice the testing methods to find out the compositions and physical properties of various raw materials, intermediates and final products
- 5.2 Operate various tools and analytical instruments that are used in laboratory for quality checking.
- 5.3 Identify the process variables required to be maintained in each process equipment of each unit like temperature, pressure, flow P^H etc.

6.0. Observe trouble shooting /servicing /maintenance techniques used during the production

- 6.1. Observe preventive precautions and maintenance of each equipment in the unit
- 6.2. Follow starting and shutting down procedures for the equipment in the unit.

7.0 Identify the various pollutants emitted from the plant/Industry.

- 7.1. State the effects of pollutants.
- 7.2. Explain the treatment methods of wastes and pollutants disposal
- 7.3. State the effects of hazardous effluents
- 7.4. Practice the effective operations used to minimise the effluents