Name of Course: Industrial Training *(6 weeks Duration)*
Common to All Programmes

1.0   Rationale

Industrial training course is introduced to all diploma programmes with an objective to develop the traits of industry culture among the students before they enter into world of industry. By exposing and interacting with the real life industrial setting, student will appreciate and understand the actual working of an industry, best practices adopted in industry. The industrial skills like, soft skills, life skills and hands-on will be inculcated among the student. This short association with industry will be instrumental in orienting the students in transforming them into industry ready output after completion of diploma programme.

2.0   Competency

This course is intended to develop the following competencies:
   a) Soft Skill i.e. Communication, Presentation etc.
   b) Life skills i.e. Time management, Safety, Innovation, Entrepreneurship, Team building etc.
   c) Hands-on i.e. Design, Implementation, O&M and Quality Assurance aspects
   d) Industry specific tools e.g. Value Engineering, 6 Sigma and Lean.

3.0   Course Outcomes

The industrial training is intended to acquire the competencies as mentioned above to supplement those attained through several courses up to fourth semester of the program:
   a) Communicate effectively (verbal as well as written) the work carried out.
   b) Prepare and present the report of the work carried out.
   c) Exercise time management and safety in the work environment.
   d) Working in a team.
   e) Demonstrate various quality assurance.
   f) Exhibit the work carried out

4.0   Teaching & Examination Scheme

Teaching scheme (In hours)			Total Credits	Examination Scheme				
L	T	P	(L+ T+ P)	Theory Marks		Practical Marks		Total marks
				PA	ESE	PA	ESE	
--	--	6	6	--	--	75#	75#	150

Note: Both ESE and PA part of assessment will be carried out as specified in Table 1 and 2.

5.0 General Guidelines for Industrial Training

a) **Training during the programme:** Between 4th and 5th semester (During Summer Vacation).
b) **Duration of the training:** Six weeks
c) **Training Area:** Students should be trained in large, medium and small scale Industry / Organization.
d) These Industries / Organizations can be Government / Government Undertaking / Public limited/ or Private/Family enterprises.

For *Civil engineering* it can be public works department, irrigation department, public health engineering, municipal corporations, town and country planning, highway and roads authorities, railways, large and medium scale civil contractors, rural engineering departments, environment corporations, large and medium scale private construction companies, mining companies etc.

For *Mechanical Engineering* it can be manufacturing, fabrication, foundry or processing industry which may include compressors, boilers, engines, heat exchangers, air conditioning and refrigeration plants, conveyors etc. are either manufactured or used. Power plants, Railways, process plants, ordinance factories, textile factories, automobile manufacturers or major automobile workshops.

For *Electrical engineering* it can be electricity transmission and distribution companies, power generating stations, sub stations, railways, industries manufacturing electrical products which may include industry where large motors/transformers etc. are used, process plants, electrical contractors.

For *Electronic engineering* it can be telecommunication companies, post and telegraph department, manufacturer of telecommunication product, manufacturers of control equipments, manufacturer of CNC machines, any manufacturing industry where electronic controls are used either in production process or in its products, computer hardware manufacturers, signal divisions of railways, electronic instruments repairing/testing/calibration workshops or laboratories etc.

For *Computer and IT i*ndustries it can be any software developers, cyber security companies, web page developers, networking companies, data base management companies, telecommunication companies or IT division of any other industries/finance/retail companies or organizations where software are used and maintained for various applications.

6.0 Role of Institute

Sr. No	Activity	Schedule
1	Collecting information about Industry / Organization available for training along with capacity (Format - 1)	Before completion of 3rd semester
2	Submission of information of Industry / Organization available for training along with capacity and its confirmation to institute coordinator	On commencement of 4th semester
3	Student and mentor allocation as per the slots available for industrial training (Desirable mentor-student ratio is 1:15)	On commencement of 4th semester

4	Obtaining consent letter from parents / guardian (Format - 2)	Before second Unit Test of the 4th semester
5	Student enrollment for Internship (mapping)	Before commencement of 4th semester examination
6	Issue letter to the Industry / Organization for the training along with details of students and mentors. (Format - 3)	
7	Mentors to carry out progressive assessment of the students during the Internship (Format - 4)	Each week of training
8	Training assessment by mentor along with Industry / Organization expert as external examiner(Format – 5)	Within 2 weeks after the start of 5th semester
9	Submission of marks of Industrial Training	End of 5th semester when online e-marksheet link is available

Suggestions:

a) Departments can take help of alumni or present students (if they or their parents or relatives have some contact in different industries) for securing placement.

b) The students would normally be placed as per their choices, in case of more demand for a particular Industry / Organization students would be allocated and placed based on their relative merit. However, if some students have arranged training placement in some companies with the help of their parents/relatives etc. then they will be given preference for placement in those companies.

c) Principal/HOD/Faculty should address students about industrial safety norms, rules and discipline to be maintained in the Industry / Organization during the training before relieving students for training.

d) The faculty member during the weekly visit to Industry / Organization will check the progress of the student in the training, his/ her attendance, discipline and project report preparation.

7.0   Expectations from Industry

Helping institute in developing the following competencies among students
a) Soft Skill i.e. Communication, Presentation etc.
b) Life skills i.e. Time management, Safety, Innovation, Entrepreneurship, Team building etc.
c) Hands-on i.e. Design, Implementation, O&M and Quality Assurance aspects etc.
d) Industry specific tools i.e. Value Engineering, 6 Sigma and Lean**.**

8.0   Roles and Responsibilities of the Students

Following should be informed to students deputing them for the training
a) Students would interact with the mentor to suggest choices for suitable Industry / Organization. If students have any contact in Industry / Organization (through their parents, relatives or friends) then same may be utilized for securing placement for themselves and their peers.
b) Students have to fill the forms duly signed by authorities along with training letter and submit it to training officer in the industry on the first day of training. Student should also carry with him/her the Identity card issued by institute during training period.
c) He/she will have to get all the necessary information from the training officer regarding schedule of the training, rules and regulations of the Industry /

Organization and safety procedures to be followed. Student is expected to observe these rules, regulations, procedures.

d) Students should know that if they break any rule of industry or do not follow the discipline then industry can terminate the training and sent back the students.

e) It is the responsibility of the student to collect information from Industry / Organization about manufacturing processes / testing and quality assurance methods/specifications of machines and raw materials/maintenance procedures/ production planning/organizational structure etc.

f) During the training period students have to keep record of all the useful information in Log book and maintain the weekly diary as provided and get it signed from mentor as well as Industry / Organization training in-charge.

g) In case they face any major problem in industry such as an accident or any disciplinary issue then they should immediately report the same to the institute.

h) Prepare final report about the training for submitting to the department at the time of presentation and viva.

9.0   Format for Training Report

Following is the suggestive format for the training report, actual format may differ slightly depending upon the nature of Industry / Organization. The training report may contain the following

- Title page
- Certificate
- Abstract
- Acknowledgement
- Content Page

Chapter 1.   Organizational structure of Industry / Organization and General Lay Out

Chapter 2.   Introduction of Industry / Organization (Type of products and services, history, turn over and number of employees etc.)

Chapter 3.   Types of major equipment/instruments/ machines used in industry with their specification, approximate cost and specific use and their routine maintenance.

Chapter 4.   Manufacturing Processes along with production planning and control methods.

Chapter 5.   Testing of raw materials, components and finished products along with quality assurance procedures.

Chapter 6.   Major material handling product (lifts, cranes, slings, pulleys, jacks, conveyor belts etc.) and material handling procedures.

Chapter 7.   Safety procedures followed and safety gear used (includes Preventive maintenance schedule and breakdown maintenance procedures).

Chapter 8.   Particulars of Practical Experiences in Industry / Orginisation if any in Production/ Assembly/ Testing/Maintenance.

Chapter 9.   Short report/description of the project (if any done during the training)

Chapter 10. Special/challenging experiences encountered during training

References /Bibliography:-

The size of the report may be about 20 pages.

10.0   Suggested Learning Strategies

Students should visit the website of the industry where they are undergoing training to collect information about products, processes, capacity, number of employees, turnover etc.   They should also refer the handbooks of the major machines and operation, testing, quality control and testing manuals used in the industry. Students may also visit websites related to other industries wherein similar products are being manufactured as their learning resource.

11.0   Tentative Week-Wise Schedule Of Industrial Training

The industrial training is a common course to all programmes; therefore the industry / Organization selection will depend upon the nature of programme and its related industry. The training activity may vary according to nature and size of Industry / Organization. The details of activities to be completed during 6 week wise Industrial training schedule should be planned by the Industry. The plan should be intended to develop **Soft Skil**l i.e. Communication, Presentation etc., **Life skills** i.e. Time management, Safety, Innovation, Entrepreneurship, Team building etc. **Hands-on** i.e. Design, Implementation and Quality Assurance aspects and **Industry specific tools** e.g. Value Engineering, 6 Sigma and Lean in each student. The evaluation of Industrial training will be done on the basis of skills acquired by the student during this 6 week period.

Table - 1 Assessment Scheme for Industrial Training

Training duration	PROGRESSIVE ASSESSMENT *(Weekly report of all 6 week and attendance)*		END SEMESTER ASSESSMENT (Report, *Presentation and Viva)*		Total marks	
Six weeks	Max. marks	Min. passing marks	Max. marks	Min. passing marks	Max. marks	Min. passing marks
	#75	30	75**	30	150	60

#assessed by mentor and concern industry supervisor

**assessed by mentor/internal and external examiner (industry personnel) based on report (25 Marks), presentation (25 Marks) and Viva (25 Marks)

Table - 2 Distribution of End-Semester-Examination (ESE) marks of Industrial Training

Marks for Industrial Training Report	Marks for Seminar/ Presentation	Marks for Oral/Viva-voce	Total ESE marls
25	25	25	75