

One Year Industrial Training Program

Guidelines

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1. Introduction:

In the regulation 2023, students have an option to opt one full year industrial training in the third year of their Diploma Program. This industrial training will focus on high demand practical skills required for the industry and enhance the employability of students. Students will undergo two years of academic study in the First Year and Second Year as per the curriculum and One Year of industrial training in the Third Year in the industry/skill knowledge provider/Training Provider, who had the MoU with the Directorate of Technical Education, Tamil Nadu. Students can avail this One-Year industrial training only after getting approval from the Commissioner of Technical Education / Chairman Board of Examinations. The Institute HOD/Training Partner should give awareness about this program at the time of admissions for the students in the academic year 2024-25 and for the existing students at the start of Second Year (III Semester), the students can be given the option to select this program as per the guidelines.

Eligibility: 17 Years and above (End of IV Semester).

(i) Assessment and Certification for one-year industrial training:

State Board of Technical Education, Tamil Nadu, will conduct examinations as per the Curriculum for First Year and Second Year.

Industry / Skill Knowledge Provider / Training Provider will do assessment for skill competency through qualified skill assessors for Third Year. During this one-year industrial training program, student has to maintain a minimum 80% of attendance for the assessment by the industry/Skill Knowledge Provider/Training Provider.

Industry/ The Skill Knowledge Provider / Training Provider / will submit the Necessary skill credits (40 Credits) of the students to the institute where the student is registered. These credits will be transferred to the State Board of Technical Education, Tamil Nadu, for the award of Diploma in Engineering.

(ii) General guidelines for the Industrial training

The Principal / HOD / Training Partner should explain in detail about the program at the beginning of second year (III Semester) as the case may be, the students can be given the option to select this program as per the guidelines. Once this program was opted to the student, this cannot be revised to the regular curriculum. The student has to submit the undertaking form for this option to the Principal through the HOD.

(iii) Training Period and Methodology:

In the Third Year (V and VI Semester), the Industrial Training in the Industry from May to April.

In the Third Year the industrial training shall be designed in a manner that the students can meet the below mentioned level descriptors.

- Process required: Job that requires well developed skill, with clear choice of procedures in familiar context.
- Professional Knowledge: Knowledge of facts, principles, processes and general concepts, in a field of work or study.
- Professional skill: A range of cognitive and practical skills required to accomplish tasks and solve problems by selecting and applying basic methods, tools, materials and information.
- Core skill: Desired mathematical skill, understanding of social, political and some skill of collecting and organizing information, communication.
- Responsibility: Responsibility for own work and learning and some responsibility for other's works and learning

(iv) Suggestions for the Skill Knowledge Provider / Training Provider / Industry.

Industrial training should be planned with a blend of theoretical knowledge, practical skills, industry practice exposure, and soft skills aimed to create competent and versatile engineers.

(v): Guidelines to award the required credit in the Final year.

Award of 40 skill credits / required credits in the third year can be gained from the industry practices by submitting a report and assessment method designed by the Skill Knowledge Provider / Training Provider / Industry Partner and Chairman Board of Examinations.

The End Semester Evaluations for the award of required skill credits can be scheduled at the end of every six months during the industry training duration.

The assessment marks to gain the required (20) credits in every semester should be submitted during October and April.

(vi): Guidelines for the Skill Knowledge Provider / Training Provider / Industry Partner to plan the training and evaluation.

The industry training should be the blend of Teaching - Learning - Practice components.

For the award of skill credit, the following distribution can be maintained in every sixth month during October and April.

Teaching - 4 + 4 = 8 Credits. (Minimum One Week for every six month)

Learning - 4 + 4 = 8 Credits. (Minimum One Week for every six month)

Practice - 12 + 12 = 24 Credits.

The credit for teaching can be awarded by conducting lecture (Theory) classes based on the key skills / industrial practices required for the Diploma Engineer.

2. Benefits for the stakeholders.

Benefits for Students:

1. Practical Exposure and Hands-on Experience:

- Students gain real-world experience by applying theoretical knowledge from their coursework to actual industry scenarios.
- Exposure to current technologies, tools, and systems used in the engineering industry helps bridge the gap between classroom learning and practical application.

2. Skill Development:

- Development of both technical skills (such as working with industry-specific tools, machinery, and software) and soft skills (like teamwork, communication, problem-solving, and time management).
- Improved industry-specific skills make students more job-ready and competitive in the job market.

3. Networking Opportunities:

- Students build a network with industry professionals, mentors, and potential future employers, enhancing their career prospects.
- Participation in industry events, seminars, and team activities provides valuable exposure and networking opportunities.

4. Increased Employability:

- Employers often prefer candidates with practical experience. A successful completion of the industrial training program gives students an edge in securing full-time positions after graduation.
- Internships or job offers may come directly from the industry partner if the student performs well during their training.

5. Mentorship and Guidance:

- Students receive mentorship from experienced industry professionals who provide guidance on career development, industry practices, and personal growth.
- This direct mentorship can help students identify their strengths and areas for improvement.

6. Exposure to Work Culture:

- Students get familiar with the professional work environment, including workplace ethics, discipline, and corporate culture.
- They develop an understanding of teamwork, leadership, and responsibility in a real-world context.

Benefits for Parents:

1. Enhanced Career Prospects for Their Child:

- Parents are assured that their child is receiving hands-on training and industry exposure, increasing the likelihood of employment after graduation.
- The skills and experience gained during the industrial training will make their child more employable, potentially leading to higher-paying job opportunities.

2. Personal Growth of their Child:

- Parents benefit from knowing that their child is developing valuable professional skills, growing in maturity, and becoming more responsible and independent.
- The training program helps students build confidence and practical knowledge, which fosters a positive personal and professional future.

3. Financial Security:

- If the student is offered a stipend or salary during the industrial training period, this can help parents reduce their financial burden for the duration of the program.
 - Some industries may offer permanent job positions after the training, providing long-term financial stability for their child.
4. Exposure to Industry Standards:
- Parents gain reassurance that their child is exposed to the best practices and standards of the engineering industry, preparing them for a successful career.

Benefits for the Educational Institution:

1. Enhanced Academic Reputation:
 - A well-executed industrial training program helps the institution build its reputation as an educational provider that prioritizes practical, real-world learning.
 - Successful collaboration with industry partners enhances the institution's credibility, making it more attractive to prospective students.
2. Stronger Industry Partnerships:
 - The institution benefits from long-term partnerships with industries, which can lead to increased opportunities for future collaborations, internships, or even sponsored research.
 - Guest lectures, workshops, and seminars organized by industry partners can enrich the curriculum and provide further learning opportunities for students.
3. Improved Placement Opportunities:
 - By fostering relationships with industry partners, the institution can improve placement rates and job opportunities for its graduates, which enhances the institution's ranking and reputation.
 - Industry ties can also help facilitate better job placements post-training for the students.
4. Curriculum Improvement:

- Feedback from industry partners regarding the students' performance during industrial training can provide valuable insights into potential gaps in the curriculum, enabling the institution to adapt and improve its educational offerings.
 - Industry feedback can also ensure that the institution stays aligned with current industry trends, ensuring that its programs remain relevant.
5. Attracting Industry Sponsorships and Collaborations:
- Successfully running industrial training programs may lead to industry sponsorships, joint ventures, and research projects, enhancing the institution's overall development.

Benefits for Industry:

1. Skilled Workforce Development:
 - a. The industry gets access to a pool of well-trained, job-ready students who are familiar with the latest academic and technological trends.
 - b. By participating in the industrial training program, industries have an opportunity to shape the future workforce by influencing the skills and attitudes of students early on.
2. Talent Pipeline:
 - a. Industry partners can use the program as a recruitment tool to evaluate potential employees, observing students' skills, behavior, and compatibility with the company culture over the course of the training.
 - b. The training program helps create a pipeline of future talent, as high-performing students may be offered full-time positions upon graduation.
3. Fresh Perspectives and Ideas:
 - a. Students often bring new ideas, innovative solutions, and fresh perspectives that can help the industry partner improve processes, solve problems, or explore new avenues of development.
 - b. Innovation and creativity can be encouraged through the students' engagement with practical work and projects.
4. Corporate Social Responsibility (CSR):

- a. By providing industrial training, the company contributes to the development of skilled labor in the engineering field, fulfilling a part of their corporate social responsibility.
 - b. Supporting educational initiatives and providing training opportunities also enhances the company's brand image as a responsible corporate entity.
- 5. Improved Productivity:
 - a. The training program may allow industries to delegate some operational tasks to students, under the supervision of senior staff, helping improve productivity.
 - b. Students can take on smaller tasks or assist with ongoing projects, giving employees more time for higher-value tasks.
- 6. Reduced Recruitment Training Costs:
 - a. By evaluating and mentoring students during the training, companies can identify high-potential candidates and recruit them post-training, reducing the time and costs associated with recruitment.
 - b. Industries are more likely to hire graduates who are already familiar with their systems, procedures, and culture, leading to quicker integration into full-time roles.

3. Assessment:

(i) Teaching Assessment:

Minimum two-week lecture should be provided in the industry training centre during the one year of training. The suitable assessment methodology (Test / MCQ etc. - online or offline) shall be planned by the industry supervisor from the lecture given for the award of the credits and grade.

October - 4 Credit (Minimum One Week before the assessment)

April - 4 Credit (Minimum One Week before the assessment)

The document for this assessment can be kept in the Institution, the grade awarded by the training partner shall be forwarded as per the requirement of the Chairman Board of Examinations for the result process.

(ii) Learning Assessment: (Communication and Presentation Skills)

The credit for learning can be awarded through the presentation / report submission / project submission by the students from learning of the activities assigned during the training by the industry supervisor. Minimum one special activity should be provided for the students and sufficient required time should be given to prepare and present their learning as per the guidelines of the industry supervisor. This can be assessed by the industry supervisor / training program coordinator as per the schedule prepared by the industry advisor.

October - 4 Credit (Minimum One activity).

April - 4 Credit (Minimum One activity).

The document for this assessment can be kept in the Institution, the grade awarded by the training partner shall be forwarded as per the requirement of the Chairman Board of Examinations for the result process.

(iii) Practice Assessment: (On the Job Training)

Practice credit can be awarded by evaluating the diary and report submitted by the student during the industry training period of every six months. The assessment methodology can be designed and evaluated by the industry supervisor. The distribution of credits can be carried out periodically and at the end of the training every six months. Example: Two Assessment in every two months for the 3 credits each and Final Assessment at the end of training (October and April) for 6 credits.

October - 12 Credit. (End of Six Month Training - October)

April - 12 Credit. (End of Six Month Training - April)

The industry supervisor should be the distinguished experts who have made remarkable contributions in their professions in the field of engineering, science, technology and entrepreneurship. Those who have proven expertise in their specific profession or role with at least 15 years of service/experience(accumulated), preferably at a senior level, will be assigned for the assessment and award of skill credit in every semester.

4. Role and Responsibilities:

(i) Directorate of Technical Education:

Role: The Commissioner of Technical Education / Chairman Board of Examinations, Tamil Nadu, oversees the overall administration and strategic planning to identify the

eligible Skill Knowledge Provider / Training Provider / Industry Partner for this program.

Responsibilities: Foster partnerships with Skill Knowledge Provider / Training Provider / Industry Partner for industrial training. Formulate policies for academic, administrative, and industrial activities. Prepare Guidelines for the stakeholders, including students, parents, faculty, and industry partners. Ensure compliance with regulatory bodies. Monitor and evaluate the performance of industries and institutions. MOU shall be signed with the Industry partner by clearly mentioning the terms and conditions for the industrial training procedure and assessment methodology.

(ii) Industrial Training Partner

Role: The Industrial Training Partner shall collaborate with the institution to provide skill training and industry exposure to students, ensuring they gain hands-on experience and industry-relevant skills.

Responsibilities:

- Design and deliver training programs aligned with industry needs and academic requirements.
- Provide mentorship and guidance to students before the commencement of training and during their training period.
- Assess the performance of students, provide assessment results and feedback to the institution.
- Share current industry trends and practices with the trainee to keep the curriculum relevant.
- Ensure a safe training environment and adherence to industry regulations and standards.
- Provide necessary tools, equipment, and resources for effective training.
- Work closely with the institution to coordinate training schedules and activities.
- Facilitate job placements and internships for students.
- Collaborate on research projects and innovation initiatives.
- Establish a system for continuous feedback, assessment and improvement of the training programs.

(iii) Head of the Institution - Principal

Role: The Institution Head oversees the day-to-day operations of the institution, ensuring that the industrial training program is integrated into the academic schedule and that all logistical aspects are managed efficiently.

Responsibilities:

- Coordinate with the Directorate, Nodal Officer for Industrial Training and Training Program Coordinator to implement the industrial training program.
- Ensure that students have access to necessary resources and support systems for their training.
- Manage administrative tasks related to the training program, including scheduling, documentation, and communication with DoTE and Industry Partner.
- Engage faculty members for the training program, facilitate them to collaborate with industry partners.
- Address any issues or challenges that arise during the training period.
- Track the progress of the training program and report to the Commissioner of Technical Education and other relevant authorities.

(iv) Nodal Officer

Role: The Nodal Officer acts as the single point of contact (SPOC) for the industrial training program, facilitating communication between the institution, students, and industry partners. The Placement and Training Officer will be the Nodal Officer.

Responsibilities:

- Serve as the liaison between the institution, students, and industrial partners.
- Coordinate all activities related to the industrial training program, including scheduling, site visits by the training program coordinator, and assessments.
- Maintain comprehensive records of student participation, performance, and feedback from industry partners.
- Ensure clear and effective communication with all stakeholders involved in the training program.
- Provide support services to students, including orientation sessions, counselling, and addressing queries or concerns.
- Collect and analyse feedback from students and industry partners to improve the training program.

- Ensure that all aspects of the training program comply with curriculum requirements and industry standards.
- Prepare an undertaking form to opt for this training program, the undertaking should be signed by the student and parent witnessed by the training program coordinator and HOD.

(v) Training Program Coordinator

Role: One faculty from the department should be assigned for every 30 students / every industry by the HOD and Principal as a Training Program Coordinator. Training Program Coordinator shall play a crucial role in overseeing and guiding students during their industrial training program in diploma engineering.

Pre-Training Responsibilities:

1. Orientation and Preparation:

- Conduct orientation sessions to familiarize students with the objectives, expectations, and guidelines of the industrial training program. Industry Partner can also be involved in this orientation program.
- If necessary, orientation program for parents can also be arranged
- Assist students in understanding the importance of industrial training in their academic and professional development.

2. Training Plan Development:

- Help students develop a detailed training plan outlining learning objectives, tasks, and expected outcomes for the training period.
- Guide students in setting SMART (Specific, Measurable, Achievable, Relevant, Time-bound) goals for their training experience.

3. Placement Coordination:

- Collaborate with the placement cell or institute industry interaction cell office to secure suitable training placements for students that align with their academic specialization and career interests.
- Facilitate communication between the institution and industry training partners to ensure smooth coordination of training arrangements.

(vi) During Training Responsibilities:

4. Monitoring and Support:

- Regularly monitor the progress of students during their industrial training. Maintain communication with both students and industry supervisors to track performance and address any issues that may arise.
- Provide ongoing support and guidance to students, offering advice on technical challenges, professional conduct, and workplace etiquette.
- Visit the industrial training industry once every month.

5. Technical Guidance:

- Offer technical guidance and mentorship related to the specific engineering discipline or specialization of the students. Help them apply theoretical knowledge to practical situations encountered in the industry.

6. Problem-Solving Assistance:

- Assist students in overcoming obstacles or challenges encountered during their training. Encourage them to develop problem-solving skills and resilience in real-world engineering scenarios.

7. Feedback and Evaluation:

- Provide constructive feedback on students' performance based on reports, assessments, and observations gathered from industry supervisors.
- Evaluate students' achievements in relation to their training objectives and competencies developed during the program.

(vii) Post-Training Responsibilities:

8. Reflection and Debriefing:

- Conduct debriefing sessions with students to reflect on their training experiences, discuss lessons learned, and identify areas for further improvement.
- Help students articulate their learning outcomes and how these experiences contribute to their professional growth.

9. Documentation and Reporting:

- Ensure comprehensive documentation of students' training activities, achievements, and feedback received from industry supervisors.

- Prepare reports summarizing students' performance and submit these to relevant departments or committees for review and assessment.
- Collect all the documents related to the assessment as per the guidelines of the evaluation.

10. Career Counselling:

- Provide career guidance and counselling to students based on their industrial training experiences. Assist them in leveraging these experiences for future job applications or further academic pursuits.

11. Continuous Improvement:

- Collaborate with industry partners to continuously improve the quality and relevance of the industrial training program.
- Incorporate feedback from students and industry supervisors to enhance the effectiveness of future training placements.

5. Instructions to the students:

(i) Before Starting Industrial Training:

1. Orientation and Preparation:

- Attend orientation sessions conducted by the institution or faculty mentors to understand the objectives, expectations, and guidelines of the industrial training program.
- Familiarize yourself with the specific policies, procedures, and safety regulations of the host organization where you will be undergoing training.
- Sign the undertaking form in consultation with the parent/guardian.

2. Setting Goals:

- Set clear and specific goals for your industrial training period. Define what skills, knowledge, and experiences you aim to gain during this time.
- Discuss your goals with your faculty mentor and seek their guidance in developing a training plan that aligns with your career aspirations.

3. Professional Attire and Conduct:

- Dress appropriately and professionally according to the standards of the industry and host organization.

- Maintain a positive attitude, demonstrate punctuality, and adhere to workplace etiquette and norms.
- (ii) During Industrial Training:
4. Learning and Engagement:
- Actively engage in all assigned tasks and projects. Seek opportunities to learn new skills and technologies relevant to your field of study.
 - Take initiative in asking questions, seeking clarification, and participating in discussions with supervisors and colleagues.
5. Adaptability and Flexibility:
- Adapt to the work environment and demonstrate flexibility in handling various responsibilities and challenges that arise during your training.
 - Be open to different roles and tasks assigned to you, as this will broaden your experience and skill set.
6. Professionalism and Communication:
- Communicate effectively with supervisors, colleagues, and clients as required. Practice clear and concise verbal and written communication.
 - Demonstrate professionalism in all interactions, respecting confidentiality, and adhering to company policies and procedures.
7. Safety and Compliance:
- Prioritize safety at all times. Familiarize yourself with safety protocols, procedures, and emergency exits in the workplace.
 - Follow all safety guidelines and regulations to ensure your well-being and that of others around you.
- (iii) After Completing Industrial Training:
8. Reflection and Documentation:
- Reflect on your training experience. Evaluate what you have learned, the challenges you faced, and how you have grown professionally.
 - Maintain a journal or log documenting your daily activities, achievements, and lessons learned during the training period.
9. Feedback and Evaluation:
- Seek feedback from your industry supervisor and faculty mentor on your performance and areas for improvement.

- Use constructive feedback to enhance your skills and competencies for future career opportunities.

10. Career Planning:

- Use your industrial training experience to inform your career planning and decision-making process.
- Discuss your career goals and aspirations with your faculty mentor or career counsellor for guidance on next steps after completing your diploma.

(iv) Documents to be maintained

The following documents should be maintained in the Institution. The HOD should submit the End Semester Assessment marks after collecting the documents, the same can be submitted to the Chairman Board of Examinations for the Result declaration and the award of Diploma through Principal.

(v) Attendance Certification

Every month students have to get their attendance certified by the industry supervisor in the prescribed form supplied by the Institution. Students have to put their signature on the form and submit it to the institution faculty mentor. Regularity in attendance and submission of report will be duly considered while awarding the Assessment Mark.

(vi) Training Reports

The students have to prepare two types of reports: Weekly reports in the form of a learning diary to be submitted to the concerned Training Program Coordinator of the institution. This will be considered for the award of the Assessment Mark.

6. Industrial Training Learning Diary:

Students are required to maintain a document for the day-to-day activities in the industry. This document is called an Industrial Training Learning Diary, every student has to write this report regularly. All days for the week should be accounted for clearly giving attendance particulars (Presence, absence, Leave, Holidays etc.). The concerned industry supervisor is to check these progress reports. The same have to be submitted at the time of end semester evaluation to the Institution.

7. Comprehensive Training Report

In addition to the industry diary, students are required to submit a comprehensive report on training with details of the organization where the training was undergone after attestation by the supervisors. The comprehensive report should incorporate study of plant / product / process / construction along with intensive in-depth study on any one of the topics such as processes, methods, tooling, construction and equipment, highlighting aspects of quality, productivity and system. The comprehensive report should be completed and submitted for the end semester evaluation after completion of training every six months. Any data, drawings etc. should be incorporated with the consent of the Organization.

8. Suggestions for the Assessment

(i) Practice Assessment:

Practice credit can be awarded by evaluating the diary and report submitted by the student during the industry training period of every six months. The assessment methodology can be designed and evaluated by the industry supervisor. The distribution of credits can be carried out periodically and at the end of the training every six months. Example: Two Assessment in every two months for the 3 credits each and Final Assessment at the end of training (October and April) for 6 credits.

October - 12 Credit. (End of Six Month Training - October)

April - 12 Credit. (End of Six Month Training - April)

The industry supervisor should be the distinguished experts who have made remarkable contributions in their professions in the field of engineering, science, technology and entrepreneurship. Those who have proven expertise in their specific profession or role with at least 15 years of accumulated service/experience, preferably at a senior level, will be assigned for the assessment and award of skill credit in every semester.

I. Teaching Credit (4 + 4 = 8 Credits)

Assessment test / MCQ (Online / Offline mode) can be conducted by the industry supervisor. This can be evaluated by the Industry supervisor / Training Program Coordinator. The documents should be kept for the award of the

marks/grades. This should be conducted every six months (October / April).
The marks/grades can be awarded as per the rubrics.

II. Learning Credit ($4 + 4 = 8$ Credits) (Communication and Presentation Skills)

The credit for learning can be awarded through the presentation / report submission / project submission by the students from learning in the activities assigned during the training by the industry supervisor. Minimum one special activity should be provided for the students and time required should be given to prepare and present their learning as per the guidelines by the industry supervisor. This can be assessed by the industry supervisor / training program coordinator as per the schedule prepared by the industry advisor. The marks/grades can be awarded as per the rubrics.

The students shall have exposure to learn thru OJT-On the job training.

Suggestions for the learning areas may be on the following:

- 5S - work place management
- Problem solving Tools and Techniques - 7QC Tools
- Lean manufacturing Tools and Techniques
- Process control
- Industrial safety measures
- Learning on various manufacturing Processes like machining, surface finishing, Anodising or other processes, Assembly, Automation, Quality control etc.

III. Practice Credit ($12 + 12 = 24$ Credits) (On the Job Training)

One presentation / report submission / project submission can be scheduled, one in every six months, by the industry supervisor. This can be evaluated by the industry supervisor and training program coordinator. The documents should be kept for the award of the marks / grades.

Sl. No.	Description	Marks
A	Industrial Training Learning Diary and Attendance.	20
B	Comprehensive Training Report and Certificate	30
C	Presentation by the student	30
D	Viva Voce	20
Total		100

Annexure - I : Guidelines to prepare the MOU with the Industry.

Annexure II : Guidelines to prepare the undertaking with the Parents and Student.

Annexure - III : Rubrics to Evaluate Industry

1. Program structure and content.
2. Instructor quality.
3. Student engagement and support.
4. Assessment and evaluation guidelines.
5. Program outcomes.
6. Program administration

Annexure - IV : Rubrics to evaluate trainee

1. Technical skill and competence
2. Professionalism and work ethics
3. Teamwork and communication
4. Learning and adaptability
5. Project and task management.
6. Documentation and reporting

ANNEXURE - I

Guidelines to prepare the MOU with the Industry.

When preparing a Memorandum of Understanding (MoU) for an Industrial Training Program aimed at Diploma Engineering Students, it is essential to lay down specific conditions to ensure the effectiveness of the program for both the educational institution and the industry partner. These conditions outline the roles, responsibilities, and expectations of all parties involved.

Below are the key conditions to include in the MoU:

1. Duration of the Industrial Training Program

- Start and End Dates: Clearly specify the duration of the training.
- Commencement Period: The time frame during which the training will take place, such as summer or winter vacations, or as per the academic schedule.
- Number of Training Hours: Define the minimum number of hours that students are expected to complete during the training period.

2. Eligibility Criteria for Students

- Academic Requirements: The minimum academic performance (e.g., passing percentage or semester completion) required for students to participate in the training.
- Selection Process: Whether the students will be selected on a first-come, first-served basis, based on academic merit, or through interviews.

3. Roles and Responsibilities of the Educational Institution

- Coordination: The institution should assign a coordinator or a single point of contact for managing and liaising with the industry partner.
- Student Preparation: The institution must ensure that students are prepared with the necessary theoretical background and soft skills before starting their industrial training.
- Feedback and Evaluation: The institution will evaluate the performance of students during and after the training and will provide feedback to the industry partner.

- Documentation and Certification: The institution is responsible for providing the necessary documentation such as training reports, progress reviews, and a certificate of completion.

4. Roles and Responsibilities of the Industry Partner

- Training Supervision: The industry partner will provide supervisors or mentors who will guide the students during the training period.
- Exposure to Relevant Work: Students must be given the opportunity to work on real-world engineering projects related to their field of study, ensuring hands-on experience.
- Health and Safety: The industry must ensure a safe working environment for the students, in line with industry standards for safety, health, and welfare.
- Stipend or Financial Support (if applicable): If the training is paid, the industry should define the stipend amount, payment cycle, and terms. If unpaid, this should be clearly stated.
- Attendance and Punctuality: The industry partner should maintain records of the student's attendance and punctuality during the training.
- Reporting and Evaluation: The industry should assess student performance, and provide feedback to the educational institution on their performance.

5. Intellectual Property and Confidentiality

- Confidentiality Clause: Students may be required to sign non-disclosure agreements (NDAs) to protect the confidentiality of sensitive information or intellectual property they are exposed to during the training.
- Use of Training Outcomes: Clarify the ownership and usage of any intellectual property, designs, inventions, or projects developed by students during the training.

6. Academic Credit and Evaluation

- Credit Allocation: Define whether the industrial training is to be recognized for academic credit. If so, detail the evaluation criteria and percentage of marks to be assigned without deviating the DoTE regulations.
- Assessment Methodology: The evaluation process should include feedback from both the industry mentor and the educational institution, possibly

incorporating student reports, presentations, and practical assessments as per the recommendations.

7. Student's Conduct and Discipline

- Behavioural Expectations: Clearly define the expectations for student conduct during the training. This could include punctuality, professional ethics, dress code, and adherence to company policies.
- Disciplinary Action: Specify the consequences if a student violates the terms of the agreement, which may include removal from the training program.

8. Insurance and Liability

- Insurance Coverage: Whether students will be covered under the industry's insurance policy or if they will require separate accident/medical insurance during the training.
- Liability Clause: Define the liability of the industry in case of accidents or injuries while students are undergoing training.

9. Termination and Modification of the Agreement

- Termination Clause: Provide conditions under which the MoU can be terminated by either party, such as failure to comply with agreed terms, lack of resources, or any unforeseen events.
- Amendment or Modification: Clarify the process for amending or updating the MoU in the future, should there be a need for changes.

10. Confidentiality and Non-Disclosure

- Confidential Information: Outline the types of information considered confidential, and the responsibilities of students and staff to maintain confidentiality during and after the training.
- Non-Disclosure Agreements (NDAs): If necessary, require students to sign NDAs before starting their training to protect sensitive industry information.

11. Feedback Mechanism

- Student Feedback: Allow students to provide feedback on their training experience, which can help improve future collaborations.
- Industry Feedback: Similarly, the industry partner should provide regular feedback on the students' performance and suggest areas for improvement.

12. Miscellaneous Provisions

- Force Majeure: Include provisions for unexpected circumstances (e.g., natural disasters, pandemics) that might affect the implementation of the training program.
- Conflict Resolution: Specify the process for resolving disputes or disagreements between the institution, industry, or students related to the training program.
- Governing Law: Indicate the legal jurisdiction under which the MoU will be governed, in case of legal disputes.

13. Signatures and Date

- Authorized Signatories: Include the names and designations of the individuals from both the educational institution and the industry partner who are authorized to sign the MoU.
- Effective Date: Mention the date on which the MoU becomes effective.

This MoU will serve as the guiding document for the Industrial Training Program and ensure that both the educational institution and the industry partner have clear and mutually agreed-upon expectations for the students' industrial training experience.

ANNEXURE - II

Guidelines to prepare the undertaking with the Parents and Student.

When drafting an Undertaking for Parents and Students as part of a One-Year Industrial Training Program for Diploma Engineering students, the document serves to clarify the expectations, responsibilities, and commitments of both the students and their parents, while ensuring that the educational institution maintains its role as the facilitator of the training. The undertaking is a legally binding document designed to establish transparency and agreement on the part of the students and their guardians.

Here are the key conditions to be laid out for the students and parents in such an undertaking:

1. Commitment to the Program

- Student's Commitment to Participate: The student agrees to participate in the Industrial Training Program for the entire one-year duration as specified in the academic curriculum and to adhere to the schedule provided by the institution and the industry partner.
- Attendance: The student commits to maintaining full attendance for the training period, and understands that failure to meet the attendance requirements may result in disqualification or non-completion of the program.
- Adherence to the Program's Terms and Conditions: The student agrees to follow the terms set forth by both the educational institution and the industry partner, including maintaining discipline, punctuality, and professional conduct.

2. Academic and Training Performance

- Evaluation of Performance: The student agrees to complete all required evaluations during the training, including periodic assessments, reports, presentations, and any other activities required by the institution and industry.
- Completion of Assignments: The student acknowledges the requirement to submit progress reports and any other assignments during the training as required by the educational institution.
- Feedback and Evaluation: The student agrees to accept and act upon feedback provided by the industry mentor and the faculty members overseeing the training program.

3. Safety, Health, and Well-being

- **Health and Safety Compliance:** The student commits to adhering to all health and safety guidelines provided by the industry, ensuring their well-being during the training period. This includes following safety protocols, using protective gear, and reporting any health or safety hazards.
- **Insurance Coverage:** The student (and the parent/guardian) acknowledges that they are responsible for obtaining any necessary medical insurance or accident insurance during the industrial training period, if not already covered by the institution or the industry.
- **Workplace Environment:** The student agrees to maintain proper behavior and follow workplace norms, including maintaining a professional demeanour at all times.

4. Behaviour and Conduct

- **Code of Conduct:** The student agrees to adhere to the institution's and the industry's code of conduct, including punctuality, professional behaviour, dress code, and ethics.
- **Misconduct and Disciplinary Action:** The student acknowledges that any violation of institutional or industry norms (e.g., misconduct, absence, negligence) can lead to disciplinary action, which may include removal from the training program or academic penalties. However, the industry cannot take any disciplinary action against the student and it can report to college regarding students misconduct and it is the sole responsibility of college or DoTE for this matter to take necessary disciplinary action.
- **Non-Disclosure and Confidentiality:** The student agrees to respect any confidentiality clauses, non-disclosure agreements (NDAs), or intellectual property regulations set by the industry during the training.

5. Financial Responsibilities

- **Stipend (if applicable):** The student and parent acknowledge the terms regarding any stipend or financial support provided by the industry. If there is no stipend, the student understands that the training is unpaid unless otherwise agreed.

- **Expenses:** The student (and the parent/guardian) agrees to bear any personal costs incurred during the training, including transportation, accommodation, food, or other miscellaneous expenses if not provided by the industry.
- **Cost of Non-Completion:** In the event that the student fails to complete the industrial training for any reason (e.g., voluntary withdrawal, unsatisfactory performance, health issues), they may be required to compensate for any costs incurred by the institution or the industry, if applicable.

6. Leave and Absences

- **Leave of Absence:** The student understands that any leave of absence during the industrial training must be requested and approved in advance by both the educational institution and the industry mentor.
- **Medical Leave:** In case of illness or medical emergency, the student must inform the institution and the industry partner immediately, providing any necessary medical certificates. Unauthorized or prolonged absence may result in failure to complete the training.
- **No Unauthorized Leave:** The student agrees not to take any unauthorized leave without prior written consent from the institution and industry partner.

7. Intellectual Property and Confidentiality

- **Confidentiality Agreement:** The student agrees not to disclose or misuse any confidential or proprietary information encountered during the industrial training, both during and after the completion of the program.
- **Intellectual Property:** Any intellectual property, designs, or innovations developed by the student during the training (as part of their work or project) may belong to the industry partner, subject to the terms outlined by the institution and industry.

8. Termination of Training

- **Conditions for Termination:** The student (and parent/guardian) acknowledges the possibility that the training may be terminated due to poor performance, misconduct, or failure to meet attendance or other program requirements.
- **Voluntary Withdrawal:** If the student decides to voluntarily withdraw from the training program, they must notify both the institution and the industry partner

in writing, and may be required to bear any costs associated with the withdrawal.

- **Institution's Right to Terminate:** The educational institution reserves the right to terminate the student's participation in the training program for reasons such as non-compliance with program rules, academic failure, or failure to meet industry expectations.

9. Communication and Reporting

- **Regular Updates:** The student agrees to provide regular updates to the institution regarding their training progress and challenges.
- **Reporting Issues:** The student (and parent/guardian) understands the process for reporting any grievances, difficulties, or issues encountered during the training period to the institution and industry partner.
- **Parental Communication:** Parents are encouraged to maintain communication with the institution and should be informed in case of any major concerns regarding the student's behaviour, health, or performance during the training.

10. Acknowledgment and Consent

- **Parental Consent:** The parent/guardian acknowledges that they have understood all the terms and conditions of the training program and have discussed these with their child. They give their full consent for their child to participate in the program.
- **Indemnity:** The parent/guardian agrees to indemnify the educational institution and the industry partner from any liability related to the student's participation in the program, including personal injury, health issues, or accidents during the training period.

11. Legal and Jurisdictional Clauses

- **Governing Law:** The undertaking shall be governed by the laws of the country or region where the institution is located. Any legal disputes arising from the undertaking will be subject to the jurisdiction of the courts in that region.
- **Force Majeure:** The student and parent/guardian acknowledge that unforeseen circumstances (e.g., natural disasters, pandemics) may impact the training program, and they agree to abide by any revised terms issued by the institution.

12. Signatures and Date

- Student's Signature: The student signs to confirm their understanding and agreement to all the terms and conditions outlined in the undertaking.
- Parent/Guardian's Signature: The parent or legal guardian also signs, acknowledging their responsibility and consent for their child's participation in the program.
- Date of Signing: The date when the undertaking is signed by both parties.

This undertaking ensures that both students and parents are aware of their obligations and responsibilities, while also securing the interests of the educational institution and the industry partner involved in the industrial training program.

Example Template for Undertaking:

UNDERTAKING FOR PARTICIPATION IN THE ONE-YEAR INDUSTRIAL TRAINING PROGRAM

I, [Student's Full Name], enrolled in [Course Name] in the [Department Name] of [Institution Name], agree to participate in the One-Year Industrial Training Program as part of my academic curriculum.

I, along with my parent/guardian, hereby acknowledge the following terms and conditions:

1. **Commitment to Program:** I commit to completing the full one-year training, including all academic and industry-related activities.
2. **Conduct and Safety:** I will adhere to the institution's and industry's safety, health, and conduct guidelines throughout the training period.
3. **Performance:** I will actively participate in evaluations and submit all reports and assignments as required by the institution.
4. **Leave and Absences:** I will seek prior approval for any leaves and understand that unauthorized absences may lead to disciplinary actions.
5. **Financial Responsibility:** I will bear any personal expenses incurred during the program, including travel and accommodation.
6. **Intellectual Property:** I agree to respect all confidentiality and intellectual property regulations.

By signing below, I confirm that I have understood and agreed to all terms and conditions of the program.

Student's Signature: _____

Date: _____

Parent/Guardian's Signature: _____

Date: _____

ANNEXURE - III

Rubrics for evaluating an industry training program for a diploma in engineering.

1. Program Structure and Content

Criteria	Exemplary (5)	Proficient (4)	Adequate (3)	Needs Improvement (2)	Unsatisfactory (1)
Relevance to Curriculum	Content is highly relevant and directly aligns with the curriculum	Content is mostly relevant and aligns well with the curriculum	Content is somewhat relevant and aligns moderately with the curriculum	Content has limited relevance and weakly aligns with the curriculum	Content is not relevant and does not align with the curriculum
Coverage of Key Topics	Covers all key topics comprehensively	Covers most key topics thoroughly	Covers key topics adequately	Covers key topics partially	Does not cover key topics
Depth of Material	Material is presented in great depth and complexity	Material is presented in good depth	Material is presented with adequate depth	Material lacks depth in several areas	Material is superficial and lacks depth

2. Instructor Quality

Criteria	Exemplary (5)	Proficient (4)	Adequate (3)	Needs Improvement (2)	Unsatisfactory (1)
Industry Expertise	Instructor has extensive industry expertise and experience	Instructor has significant industry expertise and experience	Instructor has adequate industry expertise and experience	Instructor has limited industry expertise and experience	Instructor lacks industry expertise and experience
Teaching Effectiveness	Highly effective, engages students and facilitates learning excellently	Effective, engages students and facilitates learning well	Moderately effective, engages students adequately	Limited effectiveness, struggles to engage students	Ineffective, fails to engage students
Communication Skills	Communicates concepts clearly and effectively	Communicates concepts well with minor issues	Communicates concepts adequately with some issues	Struggles to communicate concepts clearly	Fails to communicate concepts effectively

3. Student Engagement and Support

Criteria	Exemplary (5)	Proficient (4)	Adequate (3)	Needs Improvement (2)	Unsatisfactory (1)
Hands-on Activities	Provides ample hands-on activities that enhance learning	Provides sufficient hands-on activities	Provides adequate hands-on activities	Provides limited hands-on activities	Provides no hands-on activities
Student Support	Offers extensive support and guidance to students	Offers good support and guidance to students	Offers adequate support and guidance to students	Offers limited support and guidance to students	Offers no support or guidance to students
Student Feedback Mechanisms	Implements comprehensive feedback mechanisms	Implements effective feedback mechanisms	Implements adequate feedback mechanisms	Implements limited feedback mechanisms	No feedback mechanisms in place

4. Assessment and Evaluation

Criteria	Exemplary (5)	Proficient (4)	Adequate (3)	Needs Improvement (2)	Unsatisfactory (1)
Alignment with Learning Outcomes	Assessments are perfectly aligned with learning outcomes	Assessments are mostly aligned with learning outcomes	Assessments are adequately aligned with learning outcomes	Assessments are partially aligned with learning outcomes	Assessments are not aligned with learning outcomes
Variety of Assessment Methods	Uses a wide variety of assessment methods	Uses several assessment methods	Uses some assessment methods	Uses few assessment methods	Uses no variety in assessment methods
Fairness and Transparency	Assessment process is completely fair and transparent	Assessment process is mostly fair and transparent	Assessment process is adequately fair and transparent	Assessment process is somewhat unfair and lacks transparency	Assessment process is unfair and lacks transparency

5. Program Outcomes

Criteria	Exemplary (5)	Proficient (4)	Adequate (3)	Needs Improvement (2)	Unsatisfactory (1)
Skill Acquisition	Students acquire advanced skills and competencies	Students acquire good skills and competencies	Students acquire adequate skills and competencies	Students acquire limited skills and competencies	Students do not acquire necessary skills and competencies
Industry Readiness	Students are highly prepared for industry challenges	Students are well prepared for industry challenges	Students are adequately prepared for industry challenges	Students are somewhat prepared for industry challenges	Students are not prepared for industry challenges
Employment Outcomes	High rate of successful employment in the industry	Good rate of successful employment in the industry	Moderate rate of successful employment in the industry	Low rate of successful employment in the industry	Very low or no successful employment in the industry

6. Program Administration

Criteria	Exemplary (5)	Proficient (4)	Adequate (3)	Needs Improvement (2)	Unsatisfactory (1)
Organization and Coordination	Program is highly organized and well-coordinated	Program is well-organized and coordinated	Program is adequately organized and coordinated	Program has some organizational and coordination issues	Program is poorly organized and uncoordinated
Communication with Stakeholders	Excellent communication with all stakeholders	Good communication with most stakeholders	Adequate communication with stakeholders	Limited communication with stakeholders	Poor or no communication with stakeholders
Resource Allocation	Resources are optimally allocated and utilized	Resources are well allocated and utilized	Resources are adequately allocated and utilized	Resources are poorly allocated and utilized	Resources are not allocated or utilized effectively

These rubrics provide a comprehensive framework for evaluating an industry training program for a diploma in engineering. They ensure that all critical aspects of the program are assessed thoroughly, providing valuable feedback for continuous improvement.

ANNEXURE - IV

Rubrics for awarding marks to diploma engineering students who have undergone a one-year industry training program, it's important to evaluate multiple facets of their performance comprehensively.

1. Technical Skills and Competence

Criteria	Exemplary (5)	Proficient (4)	Adequate (3)	Needs Improvement (2)	Unsatisfactory (1)
Application of Knowledge	Consistently applies technical knowledge with high accuracy and effectiveness	Frequently applies technical knowledge accurately and effectively	Applies technical knowledge adequately with some minor errors	Rarely applies technical knowledge accurately, with frequent errors	Fails to apply technical knowledge, with numerous errors
Problem-Solving Skills	Demonstrates exceptional problem-solving skills and innovative solutions	Demonstrates good problem-solving skills and effective solutions	Demonstrates adequate problem-solving skills with satisfactory solutions	Demonstrates limited problem-solving skills with basic solutions	Demonstrates poor problem-solving skills with ineffective solutions
Use of Tools and Technologies	Masterfully uses industry tools and technologies	Effectively uses industry tools and technologies	Adequately uses industry tools and technologies	Struggles to use industry tools and technologies	Fails to use industry tools and technologies

2. Professionalism and Work Ethic

Criteria	Exemplary (5)	Proficient (4)	Adequate (3)	Needs Improvement (2)	Unsatisfactory (1)
Punctuality and Attendance	Always punctual and maintains perfect attendance	Mostly punctual with rare absences	Adequately punctual with occasional absences	Frequently late or absent	Regularly late or absent
Responsibility and Reliability	Highly responsible and reliable, always meets deadlines	Responsible and reliable, usually meets deadlines	Generally responsible and reliable, sometimes meets deadlines	Occasionally irresponsible and unreliable, often misses deadlines	Irresponsible and unreliable, consistently misses deadlines
Adherence to Safety Standards	Consistently adheres to safety standards without reminders	Usually adheres to safety standards with occasional reminders	Adequately adheres to safety standards with frequent reminders	Rarely adheres to safety standards, needs constant reminders	Fails to adhere to safety standards, poses a safety risk

3. Teamwork and Communication

Criteria	Exemplary (5)	Proficient (4)	Adequate (3)	Needs Improvement (2)	Unsatisfactory (1)
Collaboration	Actively and effectively collaborates with team members	Collaborates well with team members	Collaborates adequately with team members	Struggles to collaborate with team members	Fails to collaborate with team members
Communication Skills	Communicates ideas clearly and effectively in all situations	Communicates ideas clearly and effectively in most situations	Communicates ideas adequately with occasional misunderstandings	Struggles to communicate ideas clearly, with frequent misunderstandings	Fails to communicate ideas effectively, causing constant misunderstandings
Contribution to Team Goals	Consistently contributes significantly to team goals	Frequently contributes to team goals	Adequately contributes to team goals	Rarely contributes to team goals	Does not contribute to team goals

4. Learning and Adaptability

Criteria	Exemplary (5)	Proficient (4)	Adequate (3)	Needs Improvement (2)	Unsatisfactory (1)
Willingness to Learn	Shows exceptional willingness to learn and improve	Shows strong willingness to learn and improve	Shows adequate willingness to learn and improve	Shows limited willingness to learn and improve	Shows no willingness to learn and improve
Adaptability to Change	Easily adapts to changes and new challenges	Adapts well to changes and new challenges	Adequately adapts to changes and new challenges	Struggles to adapt to changes and new challenges	Fails to adapt to changes and new challenges
Feedback Reception	Actively seeks and applies feedback effectively	Receives and applies feedback well	Adequately receives and applies feedback	Rarely receives and struggles to apply feedback	Rejects feedback and does not apply it

5. Project and Task Management

Criteria	Exemplary (5)	Proficient (4)	Adequate (3)	Needs Improvement (2)	Unsatisfactory (1)
Task Completion	Consistently completes tasks on time with high quality	Frequently completes tasks on time with good quality	Adequately completes tasks on time with acceptable quality	Often fails to complete tasks on time or with acceptable quality	Rarely completes tasks on time or with acceptable quality
Project Management	Manages projects exceptionally well, meeting all goals	Manages projects effectively, meeting most goals	Manages projects adequately, meeting some goals	Struggles to manage projects, meeting few goals	Fails to manage projects, meeting no goals
Resource Utilization	Utilizes resources efficiently and effectively	Utilizes resources well	Utilizes resources adequately	Utilizes resources poorly	Fails to utilize resources effectively

6. Documentation and Reporting

Criteria	Exemplary (5)	Proficient (4)	Adequate (3)	Needs Improvement (2)	Unsatisfactory (1)
Quality of Reports	Reports are thorough, detailed, and well-organized	Reports are clear, detailed, and well-organized	Reports are clear and adequately detailed	Reports lack detail and organization	Reports are incomplete and poorly organized
Accuracy of Documentation	Documentation is highly accurate and error-free	Documentation is mostly accurate with minor errors	Documentation is adequately accurate with some errors	Documentation is often inaccurate with frequent errors	Documentation is largely inaccurate with numerous errors
Timeliness of Submission	Always submits documentation and reports on time	Usually submits documentation and reports on time	Submits documentation and reports on time with occasional delays	Frequently submits documentation and reports late	Rarely submits documentation and reports on time

These rubrics provide a comprehensive framework for assessing students' performance during their industry training. They ensure that all critical aspects of the training experience are evaluated, allowing for a fair and thorough assessment of each student's achievements and areas for improvement.

Sl.No.	Committee Members	Signature
1.	<u>Convener</u> : Thiru. K. Prabakaran, Additional Director (Exams)-FAC, Directorate of Technical Education, Chennai.	
2.	Members : Tmt. V. Thenmozhi, Principal, Tamil Nadu Govt. Polytechnic College, Madurai.	
3.	Dr. E.M. Srinivasan, Principal, Institute of Leather Technology, Chennai.	
4.	Thiru. M. Sugumaran, Principal, Ramakrishna Mission Polytechnic College, Chennai.	
5.	Dr.G.Uma Gowri, Principal, T.S.Srinivasan Centre for Polytechnic College and Advanced Training, Chennai.	
6.	Tmt.M.Kalaiselvi, HoD/Civil, Dr.Dharmambal Government Polytechnic College for Women, Chennai.	
7.	Tmt. M.J. Anitha, HoD/ECE, Central Polytechnic College, Chennai.	
8.	Thiru.Gopu, HoD/Mechanical, Central Polytechnic College, Chennai.	
9.	Thiru. S. Murali, HoD (i/c) Mechanical, AMK Technological Polytechnic College, Chennai.	