Government Polytechnic Mumbai
Department of Mechanical Engineering

IN-PLANT TRAINING MANUAL

GUIDELINES AND PROCEDURES
(P-23 SCHEME)
IP23401

Name of Student :_____

Enrollment No:_____

Programme:_____

Semester/Year:_____

Academic Year:_____

Name and Address of Company:_____

_____

Prepared By
K. Z. Dhangare
E. C. Dhembare

IN-PLANT TRAINING MANUAL

GUIDELINES & PROCEDURES (P23 Scheme)

(IP23401)

DEPARTMENT OF MECHANICAL ENGINERING
GOVERNMENT POLYTECHNIC, MUMBAI

(An Autonomous Institute of Government of Maharashtra)

49, Ali Yavar Jung Marg, Kherwadi, Bandra (E), Mumbai – 51
Website: www.gpmumbai.ac.in

Vision of Government Polytechnic Mumbai

Transform knowledge into work

Mission of Government Polytechnic Mumbai

We are committed for:

- Quality education for lifelong learning.
- Need based educational programmes through different modes.
- Outcome based curriculum implementation.
- Development and up gradation of standard laboratory practices.
- Promoting entrepreneurial programmes.

We believe in ethical, safety, environmental friendly practices and teaching learning innovations.

Vision of Mechanical Engineering Department

Promoting Sustainable Development of Students

Mission of Mechanical Engineering Department

Department of Mechanical engineering is committed to:

- M1: Need based curriculum revision.
- M2: Provide opportunity for lifelong learning through continuing education.
- M3: Blend the latest technology with conventional practices through experiential learning.
- M4: Enhance industry institute interaction.
- M5: Promote entrepreneurial capabilities.

We believe in high ethical and moral values, safety and environmental friendly practices

Program Educational Objectives (PEO's)

PEO 1. Provide solutions to mechanical engineering problems adapting professional ethics in considerations with environmental and societal concerns.

PEO 2. Adopt state-of -the-art technologies to work in multidisciplinary environment through self-learning for enhancing technical & entrepreneurial abilities.

PEO 3. Pursue sustainable development through life-long learning, upgrade professional skills to work individually as well as be an effective team member.

Program Outcomes (PO's)

1. **Basic and Discipline specific knowledge:** Apply knowledge of basic mathematics, science and engineering fundamentals and engineering specialization to solve the engineering problems.
2. **Problem analysis:** Identify and analyse well-defined engineering problems using codified standard methods.
3. **Design/ development of solutions:** Design solutions for well-defined technical problems and assist with the design of systems components or processes to meet specified needs.
4. **Engineering Tools, Experimentation and Testing:** Apply modern engineering tools and appropriate technique to conduct standard tests and measurements.
5. **Engineering practices for society, sustainability and environment:** Apply appropriate technology in context of society, sustainability, environment and ethical practices.
6. **Project Management:** Use engineering management principles individually, as a team member or a leader to manage projects and effectively communicate about well-defined engineering activities.
7. **Life-long learning:** Ability to analyze individual needs and engage in updating in the context of technological changes.

Program Specific Outcome (PSO's)

PSO1: To model, analyse, design, and realize physical systems, components or processes in the field of mechanical engineering.

PSO 2: Use and maintain mechanical systems / processes in the world of work.

STUDENT'S PERSONAL INFORMATION

- Student's Full Name:_____
- Programm:_____
- Class :_____ Enrollment No.:_____
- Blood Group:_____ Date of Birth:_____
- Contact No.:_____
- Emergency Contact No.:_____
- Residential Address :_____

  _____

  _____
- Permanent Address :_____

  _____

  _____
- Parent Details:

1. Father's Name:_____

   Occupation:_____ Contact No.:_____

   Email Id:_____

   Office Address with Contact No.:_____

   _____
2. Mother's Name:_____

   Occupation:_____Contact No.:_____

   Email Id:_____

   Office Address with Contact No.:_____

   _____

Recent Photograph

Name & Sign of the student

Name & Sign of Father / Mother of student

INDEX

DOCUMENTS (PROFORMA'S/FORMATS) TO BE SUBMITTED/COMPLETED AT VARIOUS STAGES OF IN-PLANT TRAINING

Sr. No.	Name of the Document	Remark
1.	Student's Consent Letter, Parent/Guardian Consent Letter, Joining Letter, and Joining Report	To be submitted before start of In-plant training
2.	Weekly Report of In-plant Training, Daily Report of In-plant Training	To be maintained updated during In-plant training
3.	Industrial Training Completion Certificate, Term Work & Viva Marks by Industry supervisor in Sealed Packet, No Objection Certificate, and Feedback Form	To be submitted/completed after completion of In-plant training
4.	In-plant Training Diary, Daily Diary, and In-plant Training Report with Seal / Signature of concerned officers.	To be submitted in department at the time of In-plant Training Viva / presentation

OVERVIEW:

Government Polytechnic Mumbai (GPM), established in 1960, is a leading institute in Mumbai region, and has been conferred with an academically autonomous status by the Government of Maharashtra. GPM has always remained at forefront to impart high quality technical education to the society, and continuously updated its curricula as per the technological changes with respect to time, to cater the needs of industries. Considering this mandate Government Polytechnic, Mumbai has set its vision statement as 'Transform Knowledge into Work' and catering industrial needs successfully from few decades. Taking a step ahead, Government Polytechnic, Mumbai has uniquely introduced in-plant training in the curricula of all programs to realize its vision statement. In-plant training will not only help the fresh pass outs to gain professional knowhow but also benefit to industries on fresh perspectives, and even discovering future business leaders. The main aim of In-plant training is to increase the employability skills of the students of Mechanical engineering. For getting real time exposure of industrial environment, six- month in-plant training is incorporated in the curriculum. *'Promoting Sustainable Development of Students'* is the vision of Mechanical Engineering Department. The outcomes of the training will definitely be a step ahead in making students employment-ready and will augment various attributes in student for his/her sustainable development.

To implement the course of in-plant training effectively, this training manual has been developed. The in-plant training manual details the guidelines for students, faculty members, departments of the institute, industry persons at different levels, and other persons involved from academic organization as well as industries for effective implementation of the in-plant training during last term of the program. It provides practical advice about developing links with industry and setting up appropriate placement opportunities for students. The manual highlights procedure/guidelines related to placement of the students to in-plant training, selection of various training areas, documentation, guidelines for students, daily and

weekly diary formats, student and parent consent forms, monitoring and evaluation, report preparation and certification etc., essential for the successful completion of the in-plant training.

1. INTRODUCTION

Indian industrial sector is passing through highly competitive phase due to globalization. Cut throat competition is predominant and quality is one of the decisive factors for sustainability. Quality has become a decisive factor in attracting students and faculty to an institution. The institutions which offer quality education will survive in present scenario. Industrial training is one of the essential curriculum requirements of every technical institute. In this context Government Polytechnic, Mumbai (Academically Autonomous Institute of Government of Maharashtra) has taken initiative and included in-plant training for all the programs. The intention of including the in-plant training is to provide the exposure of actual industrial environment, industrial practices etc. to the students, and enrich their theoretical concepts, as well as practical skills to make them more employable. Industrial Training helps in increasing the knowledge and skill of a person for doing a particular job. Training enables acquisition of latest skills, and thus increases the versatility of the person for boosting his/her career. Appropriate training teaches proper operation, proper handling of equipment's and develops working confidence with whatever students have learnt. After completion of training, the students will feel much more confident about the field in which they have specialized. If some concepts remain unclear to the students during theoretical learning then at the time of interview, examinations or in professional life, students may have to face many problems. Professional people always expect specific and accurate solution to every problem. Hence, in-plant training will be very much useful to the students to clear some concepts, acquire different skills, get new ideas, and mainly to get introduced to the latest technological developments in various fields. Ultimately in-plant training will be useful to enhance the professional life of the students in terms of various skills achieved, intelligence, sharpness, and mainly confidence.

2. PURPOSE OF INDUSTRIAL TRAINING

Industry training has been established to provide students with an overview of industries and to expose them to different aspects of a business, all under the guidance of skilled and experienced persons within the organization. This exposure should include all or most of the following aspects of business such as: management- and personnel policies, financial, marketing and purchasing functions, legal and social aspects, operations and technical activities. These goals can be achieved through the following forms of interaction:

- Introduction to the organizational policy and culture
- Organisation of the structure and hierarchy of ranks within the organization
- Liaison with employees at different levels.
- Liaison and cooperation with other engineering disciplines.
- Meaningful work programs or projects done from planning to completion and reporting.

3. OBJECTIVES OF INDUSTRIAL TRAINING

An ultimate objective of an Industrial Training is to make students ready for the employment in the specific discipline at the conclusion of the diploma course in specific branch of engineering. The program wise knowledge will be enhanced by this opportunity, to relate academic and professional aspects of engineering disciplines. Various objectives of industrial training can be listed as:

- To gain hands-on experience of working as an engineering professional, including the technical application of engineering principles and methods.
- To work with other engineering professionals.
- To experience the work discipline in a professional organization.
- To develop technical, interpersonal and communication skills, both oral and written.
- To observe interactions of engineers with other professional groups.
- To study the structure of an organization and observe its functioning.

- To get the exposure of management programms and systems, effective administration methods.
- To understand the process, drawings, techniques, methods etc., and compile it in documentation form.

4. PLANNING OF IN-PLANT TRAINING

The successful implementation of in-plant training involves precise planning. The steps to be followed for its effective implementation are discussed below.

4.1 Planning for In-plant Training

- This step includes the collection of data from various sources such as BOAT, Confederation of Indian industry (CII), websites, of the prospective industries/offices for student's placement etc. The data includes the name of industry, addresses, contact persons, phone nos. and mail id of contact persons, type of business and product etc.
- These prospective industries are to be visited by TPO, HoD, and departmental faculties, etc. to collect the necessary information. This is continuous activity and data is updated regularly.
- Submission of an introductory letter/mail to industrial undertakings.
- Obtaining placements for the students,
- Issue of letters and completion of procedures,
- Assigning industries to departmental faculties for monitoring the in-plant trainees.
- Orientation program for students two weeks before reporting for in-plant training.
- Monitoring in-plant training (at least once in two weeks for each industry).
- Implementation and evaluation of in-plant training

4.2 Placement Procedure

- Training can be done in one or more areas, such as production, processing, maintenance service, construction, engineering and development, etc. Relevant information about different firms participating in training scheme

can be obtained from the following sources:

i. Training and Placement Officer and

ii. Websites, Apps etc.

- Eligible students can seek guidance from Head of Department, Faculty Members, and Training and Placement Officer for selection of firms.
- Students should give choice of firms in order of preference, to the Training and Placement Officer through concerned Head of Department (keeping in view facilities available and individual's interests).
- A student can also be placed in a new establishment, which has adequate training facilities if specific request for approval is made prior to the start of placement activities.
- Some companies conduct interview and select the candidates. The interviews may be conducted in industry premises or in our institute. Students will be given chance to appear for interview if they satisfy the minimum requirements laid down by the particular establishment. Once selected, no student will be allowed to appear for subsequent interviews with other establishments.
- Students will be placed at other available establishment depending upon the availability of seats, choice and merit. Students are required to be in touch with their department and finalize their placement.
- Once placed into a particular establishment, students are not allowed to change that establishment on any account. Factors like closeness to residence, stipend paid, etc. will have to be taken into account only at the beginning of training in the larger interest of the polytechnic.
- Approval/consent from the parent/ guardian, and student is required in prescribed form before the students are placed for In-plant Training. Students should collect all forms, letters for the company after submitting the approval.
- Report to the Personnel Manager/Officer or Training Manager/Officer or to the Officer who is in-charge of apprentices/training. In a small firm, this

officer may be one of the Directors himself.

Students are required to:

- Fill in the Joining Report in duplicate and get it endorsed by the concerned Officials. Fill in the Joining Report, if any, of the organization also.
- Request the concerned officer to explain to you the rules, regulations and procedures of the organization and to take you around the plant so as to get an overview of the company's facilities, products, processes and organization.
- Get introduced to all the concerned persons of the organization. Request for a plan of "Training Program" for the students, if not prepared. The industry and Polytechnic Supervisors may jointly plan for training program.
- Submit all forms duly filled in to the Polytechnic Supervisor.

4.3 In-plant Training Program:

- Organizing a rigid and identical training program for each student in a discipline may not be practically possible. The training program has to be around facilities available in an individual unit and must fit in the philosophy and thinking of the training organization. Generally, medium and large scale industries have organized training departments. These industries are interested in absorbing the students later in their expansion programm, industries having one-off, batch and mass production activities, industries having a few processes and also industries which have sophistication.
- Some industries believe in 'on-the-job training', some take all six months to give the students understanding of products and processes in their complex, multi-plant organization, some give assignments, while others give meaningful projects and responsible tasks.
- Very important aspect is an understanding for meaningful training which fits in the framework of both our curriculum and organization's philosophy. Training programs have to be structured around the student, the curriculum, facilities and the thinking about how to train. Every task provides an opportunity to learn through observations, doing, reading and discussion

around the task/assignment/problem or project.

Students who are modest and inquisitive, who take initiative, keep their eyes, ears open and demonstrate better attitudes for learning gain most. one realizes what is right and what should be done. Exact repetition of tasks like copying or memorizing does not provide learning of skills or knowledge.

4.4 Monitoring of In-plant training

- Department has organized and well-planned system for supervision of the students while they are in training. A faculty member is assigned to a group of students and firms.
- He / She visit each student once a fortnight on the average and maintains close liaison with his/her counterpart in the organization.
- In case of any problem or difficulty, students have to contact their Polytechnic supervisor and communicate the issue.
- All reports, records and project work are to be submitted through this polytechnic supervisor. Respective Heads of Department of concerned disciplines are in charge for satisfactory implementation of the scheme including placement, supervision, evaluation and related issues. Overall co-ordination of the program is affected by Principal's Office and Training and Placement Officer.
- In case of strike/lockout or urgency, students should contact section in-charge of industry in which they are working, polytechnic supervisor, concerned Head of Department and Training and Placement Officer.

4.5 Daily and Weekly Diaries

Students are required to maintain the record of day-to-day work done in industry. Such records are called 'Daily Diaries'. The main purpose of writing daily and weekly diary is to nurture the habit of documenting and to encourage the students to search for details. It also cultivates the students' own thought process and reasoning abilities. The students should record day to day account of the observations, processes, impressions and information gathered etc. in the daily

training diary. It should contain the sketches, calculations, planning, rough works, & drawings etc. related to the observations made by the students. The diaries are to be written regularly and records are to be maintained updated in diaries. The weekly diary has also to be maintained and it should contain the salient work performed in the particular week. All days for the week should be accounted for clearly giving attendance, absenteeism, leave, etc. The daily and weekly training diaries should be signed after every week from the supervisor/ in-charge of the section in which the student has been working. The diary should also be produced to the polytechnic supervisor visiting the industry from time to time and get signed on the day of his visit.

4.6 Attendance Certification

Every week, students have to get their attendance certified by the training supervisor of the industry in the weekly diary. Regularity in attendance and submission/completion of reports will be duly considered while giving the term-work marks. The students may be allowed to take leaves as per rule of the industry/Government Polytechnic Mumbai. If, at any stage, the leaves are exceeded beyond the limit, the employer may take action such as stopping the payment of stipend or Principal may extend the training period in marginal cases. If the students remain absent for the considerable period, he/she may be detained for the term as per the rules, ultimately training may be cancelled. In such cases, final decision taken by respective head of department and the Principal will be the final.

5. GUIDELINES FOR INDUSTRIAL TRAINING

It is mandatory for all the students of Mechanical Engineering to complete in-plant training at an approved organization, during final year. The duration of training will be of minimum 20 weeks or 800 hours (considering 5 days/week x 8 hrs shift x 20 weeks) of training or number of weeks of training as per the norms of the respective industries.

Important aspects of in-plant training can be highlighted as:

5.1 Role of Department

- Department have to send training request letter to various industries well in advance before commencement of training.
- After getting sufficient number of seats from the industries, students will be placed in different industries for in-plant training.
- Students will have to fill up training form.
- Department will issue an order letter to industry for the said training mentioning the name and registration number of students.
- All above activities have to be carried out in advance of previous term as plan out of placement in consultation with students. The students would normally be placed as per their choices, in case of more demand for a particular industry/service centre students would be allocated place based on their relative merit (based on declared last term result)
- During the training period, the departmental supervisor in consultation with head of department will maintain a schedule for monitoring of industrial training and according to it he/she will monitor training of students in various industries.
- Visit industry/ follow up the students at training place at least once in every two weeks for evaluating student's activity and their progress.
- The institutional guide during the visit to industry will check the progress of the student in the training, his/ her attendance, discipline, presentation if any, and in-plant training report preparation etc.
- Evaluate the daily diary, weekly diary, training reports etc. as a part of the term work assessment.
- Evaluate the students through presentation, viva at the end of the term as a part of term end assessment.

5.2 Role of Industry:

- Industry will give effective training to the students for improving their practical/professional skills.
- Industry is expected to assign group of the students under training to some middle management level person as on job industrial guide for supervision and guidance (industrial guide).
- Industrial supervisor has to assign the daily work to the students and monitor the students on daily basis. Industrial supervisor has also to sign the daily and weekly diaries also.
- Industry supervisor may allot some projects, assignments, tasks to an individuals or group of students under training. Those students who have been allotted such assignments, projects, etc. has to include a dedicated chapter about the task, problem solution methodology etc. in industrial training report.
- Industry supervisor should see that, the students are performing the given task under his/her supervision only.
- Industrial supervisor has to guide students for preparing the industrial training report. This report should not contain any confidential document /drawing/formula/specifications etc. of the industry. He should verify/certify training report from rules and regulation of industry related to confidentiality of the content.
- Industry is expected to maintain attendance of the students undergoing training and report any irregularity of the students to the concerned polytechnic supervisor, Head of Department, or Training and placement officer.
- Industry is also expected to issue a certificate of attending training on their letter head with comments if any for student's record and motivation.

5.3 Guidelines for Students

- Students would interact with the identified faculty of the department to suggest his/her choices for suitable industry/service center.
- Students have to fill the forms, duly sealed and signed by authorities along with training order letter and submit it to training officer in the industry on the first day of training.
- Students must carry his/her Identity card issued by institute during training period.
- He/she will have to get the entire necessary information from the training officer regarding schedule of the training, rules and regulations of the industry. Student is expected to follow these rules, regulations, procedures etc obediently.
- During the training period students has to keep record of all the useful information in note book (daily diary) and maintain the daily, and weekly diary
- Prepare an industrial training report finally about the whole training for submitting to the department at the time of final presentation and viva.

5.3.1 Learning through placement

Industrial training provides an opportunity for students to develop new skills and attributes, to apply theoretical concepts they have learnt within their programm and to contextualize what they have learnt. Work-based learning is very different to traditional class-based learning in a number of ways:

- First, work-based learning is centered around reflection on work practices; it is not merely a question of acquiring knowledge and a set of technical skills [although these are important], but a case of reviewing and learning from experience.
- Secondly, work-based learning views learning as arising from action and problem-solving within a working environment, and this is centered on live projects and challenges to individuals and organizations. Work-based

learning also sees the creation of knowledge as a shared and collective activity, one in which people discuss ideas and share problems and solutions.

- Finally, work-based learning requires not only the acquisition of new knowledge but the acquisition of meta-competence – learning to learn.

The student should also focus on additional areas during In-plant Training

- Location and Description of industrial facility
- Company Profile
- Complete set of Technical datasheets covering the full range of products and/or services Proper specifications and technical procedures for performing all contracted and/or commissioned work
- Types of raw materials used, including unit prices, storage & procurement procedures
- Role of various departments in industries.
- Procedures used in manufacturing products and related equipment's.
- Learn and employ any software packages and/or tools which are employed in industries.
- Grievance handling procedures.
- Identify proper procedures for requesting and performing all types of changes.
- Identify any discrepancies between design and analysis methods covered in theory and practical considerations and procedures that might be employed in practice.
- Learn & practice industrial detailing procedures.
- Review all necessary steps for approval of design documents and/or drawings
- Review and practice necessary procedures for approving completed works.
- Identify proper procedures for creating bill of quantities.

- Review industrial safety procedures and whether these are properly implemented
- Review quality assurance regulations and procedures which are implemented in the facility.
- Material handling systems
- Preventive and breakdown maintenance procedure

5.3.2 Discipline:

Students are required to follow the rules and regulation of the organization. Their attitude and discipline should be exemplary. Students should remember that they are an ambassador of our institute when they are working as a trainee. Training of the students in future will depend upon the image created by the trainees. Hence, trainees must maintain good relations with the company authorities.

Students behavior may create positive or negative response and subsequent batches of students will be affected by the same. The following acts are highly undesirable by any of the students undergoing training and may result in severe punishment and cancellation of the term. Such instants have been observed and properly dealt with in the past. Students were punished for the same after proper investigation:

- Offending behavior with the supervisors, colleagues and workers.
- Refusal to work if a job / problem is given.
- Mixing with the workers and involving in labor union activities
- Threatening staff of the company and also instigating worker against staff and superiors.
- Not remaining on the job assigned.
- Grouping with other trainees and passing away time.
- Loitering outside, sitting in the canteen during working hours.
- Asking someone else to sign for him on the muster or punch his card.

5.3.3 Punctuality:

Students should be regular and punctual during complete training period. Students must avoid the following:

- Late going to or coming early from the organization without permission or proper reason
- Taking leave without prior sanction from concerned person/s
- Habitual absenteeism
- Taking leave in excess of what is allowed.

If it becomes essential to take leave for the considerable period, due to unavoidable circumstances, contact with reasons to industrial supervisor, training supervisor from institute and Head of Department, prior going to leave.

5.3.4 Safety:

If you are safe, then only the question of further training comes. Students should not operate any machine without permission. He/she must familiarize with the job requirements/method/sequence of operation and safe practices. Students may be injured or may cause injuries to others or damage to the property. The following are some of the examples.

- Finger cut on press operation
- Grinding wheel gave away while working
- Simultaneous operation by operator and trainee on Boring machine resulting in jamming and damage to machine.
- A machine was under erection and its limit switch was not adjusted. The trainee pressed the button resulting in damage to machine.
- Falling from false roof/ceiling while doing maintenance work.
- Palm crushed on injection moulding machine.

These are mentioned here so that students should be careful and avoid any type of hazards.

5.3.5 Access to Information

Companies need to maintain secrecy regarding their design/ product/process. Student should co-operate with the company in maintaining this secrecy. Student should not present any information/sketches/calculations, etc., of company without prior permission of the officials. Student should attach therefore 'No Objection Certificate' from the company in industrial training report. No company would like such information to go to their competitors or any others. Proper identity regarding student/guardian background should be revealed to the company before start of the training so that later on problems do not arise.

5.3.6 Changeover to Other Company

Once placed in a company, no change is allowed during the training period. Students should not change the companies amongst their self. Similarly, he/she should not join any company on his/her own. Students have to join the company where they are placed by the Polytechnic.

If students wish to take training in any company not on departmental list, he/she may apply to Training and placement officer / Head of department and get a request letter. Specific approval of company has to be obtained well in advance. Training supervisor/ department head/TPO from the institute may then visit the company, or discuss with the company persons. If they are satisfied that adequate training facilities and staff are available, then only student will be placed in that factory.

Once the students are placed, change of the company will not be allowed on any account, and students are required to adopt to work situations. If students change the company by his/her own and does not inform to the Head of department or Polytechnic supervisor, training may not be approved, in such case students may have to repeat the term.

5.3.7 Clarification of Training Term

Students will surely gain when they will try to correlate theoretical concepts with practice. Every student must ensure that he/she has acquired some skills, gained experience, observed practices, visualized work situation, and thus learnt something.

Students may have some doubts or queries about product process etc.

- Every student will see that all progress or work diaries are written, countersigned, and submitted to the polytechnic supervisor time to time.
- Student shall also ensure that in-plant training report is completed, duly cleared by the company and duly signed by concerned supervisors.

6. TRAINING AREAS

The students may be the part of the project, small tasks, observe the procedures or collect the information pertaining to the following broad areas:

6.1 Mechanical Engineering Areas

Mechanical Engineering students study various courses that enable them to work in number of fields related to mechanical engineering namely and not limited to: design, thermal engineering, management and industrial engineering, mechatronics, production processes, materials engineering, power engineering, fluid mechanics, etc. Mechanical engineering students may undertake project or collect the information pertaining to the following areas:

1. **Production systems and processes**
   - Product development , process planning and selection of equipment
   - Design and installation of quality engineering and analytical systems
   - Investigations regarding mechanization, automation and robotics etc.
   - Computer-supported production systems etc.
2. **Work study**
   - Method study, activity sampling and determination of time standards and Labour/machine costs
   - Development of wage incentive schemes, work performance,
   - Measures and task/process evaluation systems, determination of human resource requirements, occupational safety and health, Productivity measurement
3. **Quality assurance**
   - Quality assurance techniques, e.g. application of statistical process control techniques, control charts,
   - Inspection methods, measurement techniques, sampling for quality control and metrology ,

- Implementation of quality management systems, standards like ISO 9000.
- Creation of a quality culture and total quality management .

4. **Production planning and control**

- Stock and purchasing management
- Design and implementation of production planning- and control systems
- Distribution planning, Capacity planning
- Material requirements planning, production scheduling
- Development and implementation of maintenance planning systems

5. **Project management**

- Project planning, -organizing and -control
- Scheduling and network planning
- Resource allocation , work division
- Design and implementation of management information systems and data warehousing and processing systems

6. **Thermal Engineering**

- Refrigeration, Air-conditioning, HVAC
- IC engines, power engineering

7. Automobile Engineering

- Design of Automobiles
- Design and fabrication of automobile components

8. Hydraulics and Pneumatics

9. Tool Room, CAD/CAM/CAE and Automation etc.

10. Purchase

- Purchase procedures, vendor finalization, costing and estimating, etc.

11. Marketing

- Marketing activities such as advertising by various tools, market research, future product marketing strategies, etc.

12. Maintenance Engineering

- Maintenance procedures of various machines, check list, types of maintenance, TPM activities
- Installation of new machines
- Defining safety procedures of machines, safety trainings, etc.

7.CURRICULUM OF IN-PLANT TRAINING

Government Polytechnic Mumbai has been awarded an academic status by Government of Maharashtra vide government resolution, Higher and Technical Education, and Employment Department No. WBP-1093/(2640)(69)/VE-5, dated 30th May, 1994 to fulfill the demands of the industry as per the technological changes taking place in various fields of application. In this context, to monitor the overall functioning of the institute, various committees namely Governing Body, Board of Studies, Planning Committee, Evaluation Committee, Examination Committee, Appeal and Grievances Committee, and Purchase Committee were constituted under the autonomous institute by Government of Maharashtra vide Government Resolution, Higher and Technical Education, and Employment Department No. WBP-1093/(2640)(69)/VE-5, dated 31st May, 1994. As per the above referred resolution, Governing body is empowered to approve modifications in the present curriculum in order to meet the changed demands of the industry, society from time to time (Governing body- Function 7). In tune with the same, Board of Studies committee, is also empowered to prepare the syllabi of various courses, and develop curriculum, keeping in view the objectives of institute and the national requirement, provided syllabi shall be equivalent to the syllabi of Board of Technical Education (Board of Studies-function 1).

Curriculum. is developed by department under P19 Scheme, and approved by Head of the Department, Academic co-ordinator, Principal, and Program wise Board of Studies (PBOS). The proposed schemes also have MSBTE equivalence for the academic year 2015-18 vide letter no.: MSBTE/D-52/Auto-Poly/Eqv. (2015-2018)/2018/1056, Dated: 14 Feb. 2018. As per the scheme, in-plant training is mandatory for all the students of the programs. The student must complete in-plant training at an approved organization, during even term of the final year. The duration of training will be of minimum 20 weeks of training or 800 hours

(considering 5 days/week x 8 hrs shift x 20 weeks) of training or number of weeks of training as per the norms of the respective industries.

Programme: Diploma in AI/CE/CO/EE/EC/IT/IS/ME/LT/LG/RT													
Course Code: IP23401					**Course Title: Inplant Training**								
Compulsory / Optional:Compulsory													
Learning Scheme and Credits						**Assesement Scheme**							
CL	**TL**	**LL**	**SLH**	**NLH**	**Credits**	**FA-TH**		**SA-TH (2.30 Hrs.)**	**FA-PR**	**SA**		**SLA**	**Total**
						T1	**T2**			**PR**	**OR**		
-	-	40	-	40	20	-	-	-	200	-	200	-	400

Total IKS Hrs. for course: -

Abbreviations: CL- ClassRoom Learning, TL- Tutorial Learning, LL- Laboratory Learning, SLH-Self Learning Hours, NLH-Notional Learning Hours, FA - Formative Assessment, SA -Summative assessment, SLA- Self Learning Assessment

Legends: @ Internal Assessment, # External Assessment, *# On Line Examination, @$ Internal Online Examination

Note:

1. FA-PR represents formmative assesement of 200 marks.
2. SA-OR represents Summative assesement of 200 marks.

I. Rationale:

Inplant training bridges the gap between academic theory and real-world industry application, providing students with practical skills, industry exposure, and enhanced employability.

II. Industry / Employer Expected Outcome: The aim of this course is to help the student to attain the following industry identified competency through various teaching learning experiences:

- Acquiring fresh perspectives and potential future hires, developing a skilled talent pool to fill immediate needs, and improving productivity through the application of new ideas and solutions.

III. Course Outcomes: Students will be able to achieve & demonstrate the following COs on completion of course based learning

CO1	Apply engineering knowledge to industrial practices.
CO2	Operate tools, equipment, and software safely.
CO3	Work effectively in teams with good communication.
CO4	Identify and solve practical engineering problems.
CO5	Understand quality standards, ethics, and workplace culture

IV. Course Content Details

IMPORTANT GUIDELINES FOR STUDENTS

3. Students will be placed in different industries for in-plant training. Student has to complete minimum 20 weeks of training **or** 800 hours (considering 5 days/week x 8 hrs per shift x 20 weeks) of training **or** number of weeks of training as per the norms of the respective industries.
4. During In-plant training, student will be assigned to a polytechnic supervisor and industry supervisor. Polytechnic supervisor will visit the industry during training, guide the students, and resolve the issues of students if any. Industry supervisor will be the officer/shop in-charge/work manager etc., under whom student is working in industry daily.
5. Student has to maintain in-plant training diary & in-plant training manual regularly.
6. Student has to prepare the In-plant training report at the end of training under the supervision of polytechnic supervisor and industry supervisor.
7. Student has to present their work in a seminar.
8. TW will consist of updated and signed/certified copies of daily in-plant training diary, weekly diary/in-plant training manual, and In-plant training report.
9. Participating/completing specific project, mini project, special assignment etc. and including it in in-plant training report will be an added advantage for the students.

V. Assesement Methodology

Type of Assesement	Formative Assesement		Summative Assesement		
Assesor	Institute mentor /guide	Industry Supervisor / guide	Institute mentor /guide		Industry Supervisor / guide
Criterions	(On the basis of In-plant trainng diary & Manual)	(On the basis of Attendence & Perfromance at Industry)	Oral	Presentation/ Seminar	Oral
Alloted Marks	100	100	50	100	50

CO Vs PO and CO Vs PSO Mapping

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2
CO 1	3	3	2	2	2	1	1	3	2
CO 2	2	2	3	3	2	2	2	3	1
CO 3	2	2	2	1	3	2	3	1	3
CO 4	3	3	3	2	2	2	2	3	3
CO 5	2	2	2	1	2	2	3	1	3

Consultation Committee:

Sr. No	Name	Designation	Institute/Organisation
1	Ms.Pritam A Khande	Lecturer in Electrnics Engineering	Govt. Polytechnic Mumbai
2	Ms.Swati T.Shinde	Lecturer in Instrumentation Engineering	Govt. Polytechnic Mumbai
3	Ms.Namrata Wankhade	Lecturer in Information Technology	Govt. Polytechnic Mumbai
4	Dr.Mahesh S.Narkhede	Incharge -Curriculum Development Cell	Govt. Polytechnic Mumbai

Coordinator,
Curriculum Development,
Department of Mechanical Engineering

Head of Department
Department of Mechanical Engineering

I/C, Curriculum Development Cell

Principal

7.1 Formative Assesement

Regular monitoring of the students will be done by the polytechnic supervisors. Progress of the students will be monitored jointly by the supervisor from institute and industry. Polytechnic supervisors will take review of daily and weekly diary during every visit.

Formative Assesement of the students will be evaluated jointly by the industry supervisor and polytechnic supervisors, based upon the performance of the students, work done by the student during the training. As a part of Formative Assesement, industry supervisor will evaluate out of 100 marks, considering the following points i) Punctuality , ii) Discipline, iii) Learning initiatives, iv) Daily and weekly diary maintenance, and v) knowledge gained /skills achieved. Polytechnic supervisor will evaluate the students out of 100 marks considering the following points i) Punctuality , ii) Daily and weekly diary maintenance, iii) Learning initiatives, iv) In-plant training report writing, and v) knowledge gained /skills achieved.

Total Formative Assesement marks given by industry supervisor and polytechnic supervisor will be the total term work marks obtained by students during in-plant training (out of 100+100 =200). Respective polytechnic supervisor/ department shall maintain the record of the same.

7.2 Summative Assesement

Summative Assesement of end term external oral examination for 200 marks will be done jointly by the internal examiner from the respective department and external examiner, preferably from industries. Students should be evaluated based on presentation, knowledge gained and viva exam. The basic/core practical skills out of the total skills which students are supposed to have learnt during their industrial training should be examined. Various documents such as training report, daily and weekly diaries, special task work, projects, assignments etc. can be reviewed for the same.

- Formative Assessment criteria for In-plant Training is as given below:

Formative Assessment for In-plant Training	
Name of Trainee	Mr/Ms…… ……..
Enrolment No.	……
Period of Training	From ___/ ___/ 20 To ___/___/ 20
Industry Name	…… ……

Formative Assessment by Industry supervisor

	Punctuality/ Discipline	Learning initiatives/ Attitude	Daily and weekly diary maintenance,	In-plant training report writing	Knowledge gained /skills achieved	Total marks
Max. Marks	20	20	20	20	20	100
Marks obtained						
Name and signature, and seal of Industry supervisor						

Formative Assessment by Institute Mentor/ Guide

	Punctuality	Daily and weekly diary maintenance,	Learning initiatives taken,	In-plant training report writing	Knowledge gained and or skills achieved	Total marks
Max, Marks	20	20	20	20	20	100
Marks obtained						
Name, signature , and seal of Institute Mentor/ Guide						

- Summative Assesement criteria for In-plant Training is as given below:

Viva (Oral exam.) evaluation for In-plant Training	
Name of Trainee	Mr/Ms…… ……..
Enrolment No.	……
Period of Training	From ___/ ___/ 20 To ___/___/ 20
Industry Name	…… ……

Summative Assessment (Oral exam.) evaluation by Industry supervisor

	Ability to apply knowledge in practice	Leadership qualities	Interpersonal skills	Inculcation of safety attitude	Presentation & learning outcomes	Total marks
Max. Marks	10	10	10	10	10	50
Marks obtained						
Name and signature, and seal of Industry supervisor						

Summative Assessment (Oral exam.) evaluation by Institute Mentor/ Guide

	Review of industrial assignments/ work done	Team skills	Industrial safety awareness	Correlation of theory and industrial practices	Presentation & learning outcomes	Total marks
Max, Marks	10	10	10	10	10	50
Marks obtained						
Name, signature , and seal of Institute Mentor/ Guide						

- Summative Assesement criteria for In-plant Training is as given below:

Summative Assessment (Oral exam.) evaluation by Industry supervisor/ Guide based on Presetation/ Seminar

	Review of industrial assignments/ work done	Team skills	Industrial safety awareness	Correlation of theory and industrial practices	Presentation & learning outcomes	Total marks
Max, Marks	20	20	20	20	20	100
Marks obtained						
Name, signature , and seal of Institute Mentor/ Guide						

7.3 Suggested Work Load

Faculty members of the concerned department must visit periodically to the concerned industries to take follow up of the students during training for evaluating student's activity and their progress. The teaching load of 4 hrs per week may be considered for polytechnic supervisor for guiding and monitoring industrial trainees. Department has to prepare time table for the faculty members in such a way that the concerned teachers remain free for one complete day (may be different days for different teachers) in each week for industrial visits.

7.4 In-plant Training Report Format

It is essential to document the knowledge gained, skills achieved, activities performed, processes observed, and assignments completed during training period, etc. along with the brief information of section, department, and industry etc. in the form of industrial training report at the end of the training. The report is an important document for the reader who may be a technical or non-technical person, an expert and a third person not concerned with the training. The report should consist of major headings, results, conclusions and comments. Brief information of an industry, process performed, details of equipment's used, procedure followed, observations, calculations etc. must be included in this report. Statistical & data tables necessary but not essential can be placed in the appendix. The report should be written in such a way that a student should be able to refer the same in future. The report must reflect everything new the student has come across in the industry thus enlarging his horizon. Students may visit websites as their learning tool during industrial training. Such sources of learning like videos, animations are required for preparation of PPT, as well as literature for project report during the training period.

7.4.1 Page Specifications

The training report should be prepared with the following specification

Paper size	: A4
Left Margin	: 3.5 cm

Right Margin : 3.0 cm
Top Margin : 2.54 cm / 1 inch
Bottom Margin : 2.54 cm / 1 inch
Heading – Font Size: 14, Bold, Times New Roman.
Normally Body Text – Font Size: 12, Times New Roman, 1.5 Spacing, Paragraph Section Heading and Subsection Heading – Font Size: 12, Bold, Times New Roman.
Page numbers – All text pages as well as program source code listings should be numbered using numerals at the bottom centre of the pages.

7.4.2 Outline of Report

- Training report must have a formal title page.
- Report should include various certificates namely training completion certificate, No objection certificate etc. signed by the concerned authorities.
- Report must have preface at the beginning, stating the purpose of the report, sources of the information and the authority under which the work is conducted.
- The acknowledgement page follows the preface. The trainee has to express their gratitude where they underwent training, sponsor of the programme, industrial persons, polytechnic supervisor, Head of department, TPO, Principal, and other concerned.
- Table of contents or index.
- List of tables and list of figures
- Abstract- an abstract should summarize the outcomes of an in-plant training such as knowledge gained, skills achieved, special task performed if any, etc. during the complete training period, in one or two paragraphs.

Report should be divided into chapters or sections, major headings depending on the area and the size of operations. Each chapter may include organizational details of the particular industry, section wise report, learning experiences etc.

Chapter I	Introduction of the Industry, Location, Turn over, Man power, Technical, non-technical Skilled personnel, products and marketing strategies etc.
Chapter II	Organizational structure – hierarchy, administration chart, communication system and Categories of communication between personnel and department etc.
Chapter III	Department/Section wise report: Description of the department/ Section/Shop, the processes and procedures followed in it. Equipment's in the department, special attachment, indigenously adopted tools, learning experience, work culture, materials, safety, drawings, sketches, specification of equipment, should be given wherever essential. Incentives for production, quality control and problem solving strategies. Roll of the engineers, personnel & any other human resource features should be highlighted.
Chapter IV	Industry based learning materials collected : - photographs, charts, diagrams, pictures, Specifications, research papers, technical etc
Chapter V	Detail report on the specialised work, task, project, assignments, etc., undertaken during in-plant training.
Chapter VI	Conclusions should include overall learning outcome in form of gain in the area of technical knowledge, behaviour changes, personal gains etc. from in-plant training.
Chapter VII	Industrial authority based Suggestions for curriculum Modification: if perceived, changes in the curriculum could be Suggested which may include new technology, new techniques, obsolete techniques etc. With proper justification best on observation/ experience during training and in consultation with the higher authority from industries. The student should perceive the curriculum Modification with the higher authority from industries with the copy of institute curriculum.
Bibliography	Bibliography includes the references which are referred for completion of in-plant training report. The references includes the books, magazines, websites, video, research papers published etc.

Appendix:	This section could contain essential charts, diagram, tables, photographs, drawings, etc. necessary but not essential in the main frame of the report but must be referred to in the main report. Plant lay out and descriptions of the apparatus may be supported with well labelled diagrams rather than descriptions. Except for the suggestions & recommendations report must be written in past tense and first person.

8. LETTERS, FORMATS AND CERTIFICATES

This section includes various letters, formats, and certificates required to be filled, signed, and certified by the concerned authorities for the successful competition of the In-plant Training. Below table highlights the various documents (Performa's /Formats) to be submitted/completed at various stages of in-plant training.

Sr. No.	Name of the Document	Remark
1.	Student's Consent Letter, Parent/Guardian Consent Letter, Joining Letter, and Joining Report	To be submitted before start of In-plant training
2.	Weekly Report of In-plant Training, Daily Report of In-plant Training	To be maintained updated during In-plant training
3.	Industrial Training Completion Certificate, Term Work & Viva Marks by Industry supervisor in Sealed Packet (Page no. 31 & 33), No Objection Certificate, and Feedback Form	To be submitted/Completed after completion of In-plant training
4.	In-plant Training Diary, Daily Diary, and In-plant Training Report with Seal / Signature of concerned officers.	To be submitted in department at the time of In-plant Training Viva / presentation

GOVERNMENT POLYTECHNIC, MUMBAI

(An Academically Autonomous Institute of Govt. of Maharashtra)
49, Kherwadi, Aliyawar Jung Road, Bandra (E), Mumbai-400051
Phone: 9029001925, **Website: www.gpmumbai.ac.in**
Email: gpmumbai@gpmumbai.ac.in,
Principal Mail: principal.gpmumbai@dtemaharashtra.gov.in
principal@gpmumbai.ac.in,
Office Mail : office. gpmumbai@dtemaharashtra.gov.in

` Date:

To,

_____

- -

SUB: IN-PLANT TRAINING

Sir/Madam,

As a part of prescribed curriculum of Mech. Engg., your son/daughter/ward ……, Enrolment no. ……, has to undergo 20 to 24 weeks of In-plant training in industry during even term of the final year. He/she is being placed at …… ……..…..(name and address of company, for in-plant training from date …… to …….

In this regard, I wish you to be acquainted with certain rules/regulations/aspects of in-plant training as detailed in students/parents consent letter attached herewith.

You are requested to go through the parents consent letter carefully and return to me duly signed.

Thanking you

Head
Mechanical Engineering Department

STUDENT'S CONSENT LETTER*

Date: / /

To,
The Principal,
Government Polytechnic, Mumbai
Kherwadi, Bandra (E),
Mumbai - 400 051.

Sub. : In-plant Training Consent

I undersigned Kumar/Ms….....Enrollment Number ...……., presently studying in Third year Mech. Engg. I am aware that during this term myself is being placed in …….(name of the company) for in-plant training as part of the Diploma programme in Mech. Engineering.

I am also aware that:

1. I will submit a joining report in the prescribed form, duly countersigned by the Officer of the Organization where I will be working as in-plant trainee.
2. If credits earned by me, upto fifth semester are not as prescribed by the department, my training may be discontinued at any stage of inplant traing.
3. I will entirely under the disciplinary control of the organization where I will be placed, and will abide by the rules and regulations in force of the said organization.
4. I will make aware of the safety rules, and regulations of the concerned industry in a first week of the training itself. I will not start/operate any machine, process, operations, work, etc. which may cause injury to me, others, an accident, or property loss etc. without permission and under the observations of the concerned supervisors
5. I will always work under the supervision of the industry supervisor allotted to me. In case, I do not follow the safety rules and regulations of the organization where I am placed for in-plant training, and some injury/accident takes place to me or others, myself will be responsible for it. In such cases, Government polytechnic Mumbai or concerned industry will not be responsible for it.

6. I am also aware that I will maintain the confidentiality of the industrial documents, formulas, processes, sequences, drawings, methods etc. If knowingly or unknowingly I am disclosing such documents, and industry suffers financial loss or any other kind of loss/defame, I will be responsible for it. No other persons like polytechnic supervisor or industry supervisor will be responsible for it.

7. I am also aware that if any property loss, injury occurs to me or others, because of my negligence, concerned organization as well as Government Polytechnic, Mumbai will not be responsible for it.

8. During training period, I will be entitled to the leave as per the rules laid down by the Polytechnic as well as concerned organization in this behalf. In case I need leave in unavoidable circumstances, I will get the leave sanctioned by the organization and my training supervisors.

9. I will maintain the prescribed daily diary, weekly diary etc. regularly and also get it countersigned by the concerned officer of the organization as well as training supervisor of the Polytechnic.

10. In-plant Training will be granted only if myself attends industry on all working days, completes minimum 20 weeks, maintains good progress, and undergoes the training to the satisfaction of the authorities of the Polytechnic and the Industry,

11. During the tenure of in-plant training period, myself may or may not get the stipend. Also the expenses such as travelling expenses, food charge etc. will be done by me.

12. Once myself joins the specific organization for in-plant training, I will not change/interchange the organization in any circumstance by my/our own, without informing the concerned authorities

13. After start of the in-plant training, I will follow the stipulated training programme. If I do not complete the in-plant training of minimum period, academic term of in-plant training i.e. last term may not be considered. In such a case I will have to complete the minimum period or repeat the complete term as decided by the concerned head of the department.

Yours faithfully,

Date:

Place:

Name and Sign of student with Enrl. No

*** Note: This copy should be submitted to the concerned Department**

PARENT/GUARDIAN CONSENT LETTER*

Date: / /

To,

The Principal,
Government Polytechnic, Mumbai
Kherwadi, Bandra (E),
Mumbai - 400 051.

Sub. : In-plant Training Consent

I undersigned Mr./Mrs…… aware that my son /daughter/ward Master/Ms..... , Enrolment Number ...……. is studying in Third year Mechanical Engineering in your Polytechnic. During this term he/she is being placed in ……..…… (name of the company) for in-plant training as part of the Diploma programme in Mechanical Engineering.

I am also aware that:

1. My son/daughter/ward will submit a joining report in the prescribed form, duly countersigned by the Officer of the Organization where he/she will be working.
2. My son/daughter/ward will be entirely under the disciplinary control of the organization where he / she will be placed, and he/she will abide by the rules and regulations in force of the said organization.
3. My son/daughter/ward will make aware of the various safety rules and regulations of the industry in the first week of the training.
4. My son/daughter/ward will always work under the supervision of the industry supervisor allotted to him/her. I am also aware that he/she will maintain the confidentiality of the industrial documents, formulas, processes, sequences, drawings, methods etc. If knowingly or unknowingly he/she is disclosing such documents, and industry suffers financial loss or any other kind of loss he/she will be responsible for it. No other persons like polytechnic supervisor or industry supervisor will be responsible for it.
5. I am also aware that during entire training period, if my son/daughter/ward is not following the safety rules, and regulations laid by the concerned organization, and if any injury /accident occur to him/her, only he/she will be responsible. Organization as well as Government Polytechnic Mumbai will not be responsible for such causes.
6. I am also aware that if any property loss, injury to him/her or others, an accident etc. occurs during the training period because of the negligence of my son/daughter/ward,

concerned organization as well as Government Polytechnic, Mumbai will not be responsible for it.

7. During training period, my son/daughter/ward is entitled to the leave as per the rules laid down by the Polytechnic as well as concerned organization in this behalf. In case he/she needs leave in unavoidable circumstances, he/she should get the leave sanctioned by the organization and his/her Training Supervisor.
8. My son/daughter/ward will maintain the prescribed daily diary, weekly diary etc. regularly and also get it countersigned by the concerned officer of the organization as well as training supervisor of the Polytechnic.
9. In-plant Training will be granted to my son/daughter/ward only if he/she attends his/her organization on all working days, completes minimum 20 weeks, maintains good progress, and undergoes the training to the satisfaction of the authorities of the Polytechnic and the organization of his/her in-plant training.
10. During the tenure of in-plant training period, my son/daughter/ward may or may not get the stipend. Also the expenses such as travelling expenses, food charge etc. will be done by him/her.
11. Once my son/daughter/ward joins the specific organization for in-plant training, he/she will not change/interchange the organization in any circumstance by his/her own, without informing the concerned authorities
12. Once my son/daughter/ ward starts his/her in-plant training, he/she will follow the stipulated training programme. If he/she do not complete the in-plant training of minimum period, his /her academic term of in-plant training may not be considered. In such a case he/she has to complete the minimum period or repeat the complete term as decided by the concerned head of the department.
13. I have explained all above contents to my son/daughter/ward, who has promised to adhere strictly to the rules and regulations of the industry as well as Government polytechnic Mumbai.

Yours faithfully,

Date:
Place:

Name and Sign of father/mother/ guardian

*** Note: This copy should be submitted to the concerned Department.**

JOINING LETTER

Date:… / … /20….

To,

…….
…….
…….
…….

Subject: Permission for joining the In-plant training at your organization
Reference: ……..

Respected Sir,

With reference to above subject, myself Mr./Ms ……..…… ….....…., student of Government Polytechnic Mumbai, Final year Mechanical Engineering , Enrolment number……., reporting for joining the In-plant Training at your organization on.....(date).

I assure that, during complete training period, I will follow the rules and regulation of your organization.

You are kindly requested to permit me to join the In-plant training.

Thanking you.

Yours obediently

(Signature of Student)

JOINING REPORT

Date:… / … /20….

To,

The Principal,

Government Polytechinc, Mumbai,
Kherwadi, Bandra (E),
Mumbai 400 051.

Subject: Joining report for the In-plant training

Reference: ……

Respected Madam / Sir,

With reference to above subject, myself Mr./Ms ……..…… ….....…, student of Government Polytechnic Mumbai, Third /second year Mechanical Engineering, Enrolment number.....…, joined for the In-plant Training at.....(name of organization) on.....(date).

I assure that, during complete training period, I will follow the rules and regulation of the said organization.

Thanking you.

Yours obediently

(Signature of Student)

Signature of the Officer (Industry)
Seal of the Organization

---

* This copy should be submitted to the concerned Head of Department

---

GOVERNMENT POLYTECHNIC, MUMBAI

49, Kherwadi, Ali Yawar Jung Marg, Bandra (E), Mumbai-51

Weekly Report of In-plant Training

Name of the Student _____Enrollment No:_____

Programme:._____Department/Plant/Section:_____

Company name & address_____

_____

Week No.	Date		Brief weekly report of the work done/observation made	Attendance No. of days
	From	To		
1				Present = Absent = Leave =
2				Present = Absent = Leave =

Students Signature:

Dated Signature of Industry Supervisor

Dated Signature of Polytechnic Supervisor

GOVERNMENT POLYTECHNIC, MUMBAI

49, Kherwadi, Ali Yawar Jung Marg, Bandra (E), Mumbai-51

Weekly Report of In-plant Training

Name of the Student _____Enrollment No:_____

Programme:._____Department/Plant/Section:_____

Company name & address_____

_____

Week No.	Date		Brief weekly report of the work done/observation made	Attendance No. of days
	From	To		
3				Present = Absent = Leave =
4				Present = Absent = Leave =

Students Signature:

Dated Signature of Industry Supervisor

Dated Signature of Polytechnic Supervisor

GOVERNMENT POLYTECHNIC, MUMBAI

49, Kherwadi, Ali Yawar Jung Marg, Bandra (E), Mumbai-51

Weekly Report of In-plant Training

Name of the Student _____Enrollment No:_____

Programme:._____Department/Plant/Section:_____

Company name & address_____

_____

Week No.	Date		Brief weekly report of the work done/observation made	Attendance No. of days
	From	To		
5				Present = Absent = Leave =
6				Present = Absent = Leave =

Students Signature:

Dated Signature of Industry Supervisor

Dated Signature of Polytechnic Supervisor

GOVERNMENT POLYTECHNIC, MUMBAI

49, Kherwadi, Ali Yawar Jung Marg, Bandra (E), Mumbai-51

Weekly Report of In-plant Training

Name of the Student _____Enrollment No:_____

Programme:._____Department/Plant/Section:_____

Company name & address_____

_____

Week No.	Date		Brief weekly report of the work done/observation made	Attendance No. of days
	From	To		
7				Present = Absent = Leave =
8				Present = Absent = Leave =

Students Signature:

Dated Signature of Industry Supervisor

Dated Signature of Polytechnic Supervisor

GOVERNMENT POLYTECHNIC, MUMBAI

49, Kherwadi, Ali Yawar Jung Marg, Bandra (E), Mumbai-51

Weekly Report of In-plant Training

Name of the Student _____Enrollment No:_____

Programme:._____Department/Plant/Section:_____

Company name & address_____

_____

Week No.	Date		Brief weekly report of the work done/observation made	Attendance No. of days
	From	To		
9				Present = Absent = Leave =
10				Present = Absent = Leave =

Students Signature:

Dated Signature of Industry Supervisor

Dated Signature of Polytechnic Supervisor

GOVERNMENT POLYTECHNIC, MUMBAI

49, Kherwadi, Ali Yawar Jung Marg, Bandra (E), Mumbai-51

Weekly Report of In-plant Training

Name of the Student _____Enrollment No:_____

Programme:._____Department/Plant/Section:_____

Company name & address_____

_____

Week No.	Date		Brief weekly report of the work done/observation made	Attendance No. of days
	From	To		
11				Present = Absent = Leave =
12				Present = Absent = Leave =

Students Signature:

Dated Signature of Industry Supervisor

Dated Signature of Polytechnic Supervisor

GOVERNMENT POLYTECHNIC, MUMBAI

49, Kherwadi, Ali Yawar Jung Marg, Bandra (E), Mumbai-51

Weekly Report of In-plant Training

Name of the Student _____Enrollment No:_____

Programme:._____Department/Plant/Section:_____

Company name & address_____

_____

Week No.	Date		Brief weekly report of the work done/observation made	Attendance No. of days
	From	To		
13				Present = Absent = Leave =
14				Present = Absent = Leave =

Students Signature:

Dated Signature of Industry Supervisor

Dated Signature of Polytechnic Supervisor

GOVERNMENT POLYTECHNIC, MUMBAI

49, Kherwadi, Ali Yawar Jung Marg, Bandra (E), Mumbai-51

Weekly Report of In-plant Training

Name of the Student _____Enrollment No:_____

Programme:._____Department/Plant/Section:_____

Company name & address_____

_____

Week No.	Date		Brief weekly report of the work done/observation made	Attendance No. of days
	From	To		
15				Present = Absent = Leave =
16				Present = Absent = Leave =

Students Signature:

Dated Signature of Industry Supervisor

Dated Signature of Polytechnic Supervisor

GOVERNMENT POLYTECHNIC, MUMBAI

49, Kherwadi, Ali Yawar Jung Marg, Bandra (E), Mumbai-51

Weekly Report of In-plant Training

Name of the Student _____Enrollment No:_____

Programme:._____Department/Plant/Section:_____

Company name & address_____

_____

Week No.	Date		Brief weekly report of the work done/observation made	Attendance No. of days
	From	To		
17				Present = Absent = Leave =
18				Present = Absent = Leave =

Students Signature:

Dated Signature of Industry Supervisor

Dated Signature of Polytechnic Supervisor

GOVERNMENT POLYTECHNIC, MUMBAI

49, Kherwadi, Ali Yawar Jung Marg, Bandra (E), Mumbai-51

Weekly Report of In-plant Training

Name of the Student _____Enrollment No:_____

Programme:._____Department/Plant/Section:_____

Company name & address_____

_____

Week No.	Date		Brief weekly report of the work done/observation made	Attendance No. of days
	From	To		
19				Present = Absent = Leave =
20				Present = Absent = Leave =

Students Signature:

Dated Signature of Industry Supervisor

Dated Signature of Polytechnic Supervisor

GOVERNMENT POLYTECHNIC, MUMBAI

49, Kherwadi, Ali Yawar Jung Marg, Bandra (E), Mumbai-51

Weekly Report of In-plant Training

Name of the Student _____Enrollment No:_____

Programme:._____Department/Plant/Section:_____

Company name & address_____

_____

Week No.	Date		Brief weekly report of the work done/observation made	Attendance No. of days
	From	To		
21				Present = Absent = Leave =
22				Present = Absent = Leave =

Students Signature:

Dated Signature of Industry Supervisor

Dated Signature of Polytechnic Supervisor

GOVERNMENT POLYTECHNIC, MUMBAI

49, Kherwadi, Ali Yawar Jung Marg, Bandra (E), Mumbai-51

Weekly Report of In-plant Training

Name of the Student _____Enrollment No:_____

Programme:._____Department/Plant/Section:_____

Company name & address_____

_____

Week No.	Date		Brief weekly report of the work done/observation made	Attendance No. of days
	From	To		
23				Present = Absent = Leave =
24				Present = Absent = Leave =

Students Signature:

Dated Signature of Industry Supervisor

Dated Signature of Polytechnic Supervisor

GOVERNMENT POLYTECHNIC, MUMBAI

49, Kherwadi, Ali Yawar Jung Marg, Bandra (E), Mumbai-51

Weekly Report of In-plant Training

Name of the Student _____Enrollment No:_____

Programme:._____Department/Plant/Section:_____

Company name & address_____

_____

Week No.	Date		Brief weekly report of the work done/observation made	Attendance No. of days
	From	To		
				Present = Absent = Leave =
				Present = Absent = Leave =

Students Signature:

Dated Signature of Industry Supervisor

Dated Signature of Polytechnic Supervisor

GOVERNMENT POLYTECHNIC, MUMBAI

49, Kherwadi, Ali Yawar Jung Marg, Bandra (E), Mumbai-51

Daily Report of In-plant Training *

Name of the Student _____Enrollment No:_____

Programme:._____Department/Plant/Section:_____

Company name & address_____

Week No.	**Day and Date**	**Brief report of the work done/observation made etc. in a day**

Sign of the student

(* This is the format of daily report maintained by the student during training period. Students shall make separate 200 pages notebook as a daily diary, and maintain the records/observations / work/report etc. done on a particular day as per the above format.

Student shall carry this diary with them regularly during training period, and maintain the records in it. Also get this diary signed by the industry supervisor as well as polytechnic supervisor periodically. The information from this diary may be useful while writing the weekly diary, and in-plant training report, examinations etc.)

INDUSTRIAL TRAINING COMPLETION CERTIFICATE

This is to certify that the below student has successfully completed the In-plant Training of …… weeks at our organization …… ……
….....(name and address of organization).

Name of the student: ……

Programme and Year : Third Year ME

Enrolment No. : ……

Training start date: ……

Training completion date: ……..

During the complete training period, the his/her performance and conduct was good.

Name and Sign.
Section/ Industry Supervisor

Name and Sign.
Date: Head of Section/ Plant/ Officer (Industry)
Seal of the Organizatio

INDUSTRIAL TRAINING COMPLETION CERTIFICATE

This is to certify that Mr./Ms....., Enrolment No……..,Third/Second year student of Mechanical Engineering from Government Polytechnic, Mumbai has successfully completed the In-plant Training of ……weeks at our organization …… ……(name and address of organization).

Training start Date: ……

Training completion date: ……..

The performance and conduct of the above student was good during the complete training period.

Name and Sign.
Section/ Industry Supervisor

Name and Sign.
Date: Head of Section/ Plant/ Officer (Industry)
Seal of the Organization

***Note:** Two copies of this certificate are to be printed on the letterhead of the industry. One copy will be included in the industrial training report, and one copy will retained with the student.

NO OBJECTION CERTIFICATE

This is to certify that Mr./Ms....., Enrolment No……..,Third/Second year student of Mechanical Engineering, from Government Polytechnic, Mumbai has successfully completed the In-plant Training of …… weeks at our organization …… ……(name and address of organization) from …… (start date of training) to …… (completion date of training).

This report does not contain any confidential document of the company such as design, drawing, formula, specifications, documents, procedures, etc., which may cause any type of loss to this company.

Name and Sign.
Section/ Industry Supervisor

Name and Sign.
Date: Head of Section/ Plant/ Officer (Industry)
Seal of the Organization

***Note:** Student should take the printout of this certificate on the letterhead of the industry, and include in the industrial training report.

FEEDBACK FORM

A. Feedback about the student

(Name of student……..

Enrolment No......**)**

During complete training period,

i. Student performance and conduct was … Good/Average/poor

ii. Student was found to be good at …….

iii. Improvement of the student is desired in …….

iv. Students willingness to learn new things.....Good/Average/poor

v. Any other points……

……

……

……

B. Overall Feedback

i. Subjects/topics which you fill to be included in the new curriculum

……

……

……

ii. Areas that needs further improvement

……

……

iii. Suggestion for the modification of existing curriculum

……

……

iv. Any other points

……..

……

Name and Sign.

Date: Industry Supervisor/ Section / Plant/ Officer (Industry)

OUTCOMES OF THE IN-PLANT TRAINING COURSE

CO1	Apply engineering knowledge to industrial practices.
CO2	Operate tools, equipment, and software safely.
CO3	Work effectively in teams with good communication.
CO4	Identify and solve practical engineering problems.
CO5	Understand quality standards, ethics, and workplace culture
CO6	Operate tools, equipment, and software safely.

WHEN YOU ARE IN IN-PLANT TRAINING

T - To be in **T**ime
R - Remain attentive all the time
A - **A**ctively participate
I -
N - Note the important points
I - **I**mprove listening habits
N - **N**ever neglect the safety
G - **G**ain as much as you can

GOVERNMENT POLYTECHNIC, MUMBAI

(An Academically Autonomous Institute of Govt. of Maharashtra)

49, Kherwadi, Aliyawar Jung Road, Bandra (E), Mumbai-400051

Phone: 9029001925, **Website: www.gpmumbai.ac.in**

Email: gpmumbai@gpmumbai.ac.in,

Principal Mail: principal.gpmumbai@dtemaharashtra.gov.in

principal@gpmumbai.ac.in,

Office Mail : office. gpmumbai@dtemaharashtra.gov.in

PROGRAMMES

CIVIL ENGINEERING

-120

MECHANICAL ENGINEERING

-120

ELECTRICAL ENGINEERING

- 60

COMPUTER ENGINEERING

FIRST SHIFT - 60 (Intake)

SECOND SHIFT - 60 (Intake)

ELECTRONICS ENGINEERING

- 120

INFORMATION TECHNOLOGY

FIRST SHIFT - 60

SECOND SHIFT - 60

INSTRUMENTATION ENGINEERING

FIRST SHIFT - 60

RUBBER TECHNOLOGY

- 30

LEATHER GOODS & FOOTWEAR TECHNOLOGY

FIRST SHIFT - 15

LEATHER TECHNOLOGY

FIRST SHIFT - 15

ARTIFICIAL INTELIGENCE & MACHINE LEARNING

- 30