TR400 - Industrial Training Student Guide

Industrial Training & Career Guidance Unit

Faculty of Engineering,

University of Peradeniya

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Contents

1. Introduction

Industrial Training refers to a programme which aims to provide industrial exposure for undergraduate students under the supervision of professionals within a specified time frame. Through the industrial training programme, engineering undergraduates are exposed to industrial/research and development organizations; hence, they are expected to gain professional skills and experiences, which are of the utmost importance as a fresh engineer to succeed in their career. The training can be carried out either in government organizations or in private organizations (Organizations in foreign countries are also considered subject to the approval of the relevant Head of the Department and the Director of the Industrial Training and Career Guidance Unit).

Industrial Training (TR400) is a course offered for the engineering undergraduates who are following the Specialization Programme in Engineering. TR400 is a six (6) credit course and the successful completion of the course is a mandatory requirement to claim the degree of Bachelor of the Science of Engineering (B.Sc.Eng.). The Industrial Training and Career Guidance Unit (ITCGU) in the Faculty of Engineering, University of Peradeniya is responsible for arranging, monitoring and evaluating the industrial training in liaison with the National Apprentice and Industrial Training Authority (NAITA).

This document provides a certain guidelines that will be helpful for the students to identify the essential components of Industrial Training. This mainly includes the details of the Industrial Training program including the intended learning outcomes, placing of the students for training organizations, the expected industry exposure from the training. Further, this outlines the records of training that the trainees/students should maintain and the evaluation process in order to fulfill the requirement of their successful completion of the course. Apart from that, the related documents in connection with the assignment of the trainees in training and the responsibility and the discipline of the trainees at training are summarized.

2. Objectives

The main objective of the Industrial Training program is to produce, knowledgeable, skilled and experienced graduates who are ready to face the real working environment. Apart from this, the training experience will further solidify the on-campus learning process and activities, while providing engineering undergraduates with the relevant work experience. In order to achieve the objectives through industrial training, engineering undergraduates are provided with an opportunity to:

1. Gain training and working experience in a real world industrial development environment while understanding the organizational structure, professional communication channels, operational procedures and organizational protocols.

2. Professionally interact with engineering and non-engineering individuals and/or groups while acquiring practical skills and experience in handling technical matters, physical and human resources in engineering projects.

3. Use existing knowledge and acquire new knowledge to solve engineering problems in industry or research and development environment.

4. Learn professional conduct and work ethics.

5. Learn health hazards and safety practices in the work environment.

3. Intended Learning Outcomes

On successful completion of the course, the students should be able to;

ILO1: Describe the organization and its Management, Operational procedures and Quality assurance and standards.

ILO2: Describe how Engineering Principles are applied in real situations with practical issues and possible solutions in such applications.

ILO3: Explain ethical practices, professionalism, health and safety, social aspects and sustainability practices in industrial/ research and development environments.

ILO4: Present training experience to an expert panel.

4. Industrial Training Programme

The Industrial Training course (TR400) is a compulsory component of the engineering degree programme and successful completion of the course is required for the award of the Bachelor of the Science of Engineering. The Industrial Training programme is scheduled for a total of 24 weeks duration and it is conducted as two sessions of 12 weeks duration each or a total of 24 weeks duration at a single stretch. However, the arrangement of industrial training as two sessions or a single stretch for a batch/ specialization is decided by the Faculty Board.

Assessment of industrial training is done based on; (i) the daily diary and the report/s submitted by the student; (ii) performance of the student at their individual presentations after completion of the first training session or at the middle of the training; and (iii) viva voce examination after completion of the industrial training component.

5. Industrial Training and Career Guidance Unit (ITCGU)

Industrial Training and Career Guidance Unit (ITCGU) plays an important role in arranging, monitoring and evaluation of the industrial training in liaison with the National Apprentice and Industrial Training Authority (NAITA). In addition to that, the ITCGU is also responsible for planning and organizing activities in guiding students for gainful employment prospects.

ITCGU carries out the following functions with regard to industrial training;

i. Requesting training opportunities from relevant industrial organizations for arranging training placements in the industry for the undergraduates.

ii. Preparing and providing necessary documents for students in liaison with NAITA, which is the national governing authority for industrial training.

iii. Organizing and conducting lectures, seminars, workshops and other programmes in relation with industrial training, Leadership Development and Career Development.

iv. Organizing visits to the relevant organizations together with staff of the relevant academic departments to monitor the progress of trainees.

v. Evaluation of industrial training diaries and reports.

vi. Conducting Industrial Training presentations and oral assessments.

vii. Advising on issues raised by students regarding industrial training.

6. Registration for Industrial Training Course (TR 400)

All the undergraduates who are eligible to follow the Specialization Programme in Engineering are qualified to register for the course of industrial Training (TR400). The qualified students should register for TR400 (once for the entire course) as and when instructed by the ITCGU.

7. Notices

All the notices related to TR400 are displayed in the Faculty e-Learning System (FEeLS). Therefore, all the students who have registered for TR400 should make sure that they have been enrolled for TR400 in FEeLS, so that they will be able to access the notices and other resources displayed by the ITCGU. In addition, ITCGU may contact students via email as well. Therefore all undergraduates who have registered for TR400 course are required to provide their correct contact information to the ITCGU when requested.

8. Assigning for training organizations

a) Selection of training organizations:

The following aspects are considered in recognizing organizations for undergraduate industrial training.

- Capability of providing expected training exposure
- Availability of competent staff for guidance
- Projects and processes
- Nature of Work
- Safety and health aspects etc.

b) Placement procedure

The respective organizations are contacted by the ITCGU to find the available training opportunities. After receiving the relevant information, the responsible persons of the responded organizations, are contacted to get the confirmation of the training opportunities, information on

the nature of the training, preferred selection method etc. Briefing sessions will be conducted by the ITCGU to explain the students about the placement procedure for industrial training.

Three selection methods listed below are generally adapted by the ITCGU together with industrial organizations and NAITA in assigning undergraduates for different organizations.

    i. Selection based on CV and interviews conducted by the respective industrial organizations
    ii. Selection based on only CV
    iii. Selection based on the students preferences and availability of opportunities

In addition, self-arranged training placements are also considered with the formal involvement of the ITCGU.

Names of the organizations which prefer selecting trainees through CVs and/or interviews are displayed in FEeLS and links are provided for the interested students to submit their CVs for making necessary arrangements. The rest will be placed by the ITCGU using the last method mentioned above. Whenever possible, the distance from the organization to the student's residence is considered in placing the students for their first training session. An adequate time period is given for students to submit any requests for changing their placements with acceptable reasons.

Finally, the training placement letter with other relevant documents will be issued by the ITCGU in liaison with NAITA.

9. Related Documents

The following are issued to the undergraduates by the ITCGU together with NAITA.

    i. A daily diary
    ii. Official training placement letter
    iii. Contract document that has to be signed between the training organization and NAITA
    iv. Worksite form to inform the details of the work place to the University and NAITA, after reporting to the work place
    v. Supervisor's Feedback form

Students should report to the respective training organizations as stated in the training placement letter for commencement of the training. On commencement of training, the students should attend to the following without any delay.

Contract Form:

Three copies of the contract form are provided. Each copy has to be signed by the student as the trainee or apprentice, the employer of the organization and two witnesses. All copies should be posted/ email to NAITA for registration.

Postal address of NAITA:

> Assistant Director (*Special Industrial Training*)
> National Apprentice and Industrial Training Authority
> 971, Sri Jayawardenapura Mawatha,
> Welikada,
> Rajagiriya.

Email: uopeng.naitasitd@gmail.com

Work site Form:

One copy of duly completed worksite form, with the certification of the officer in-charge of the workplace, should be sent by post/ email to the Director of the ITCGU within one week of the commencement of the training.

Postal address of ITCGU:

> Director
> Industrial Training and Career Guidance Unit
> Faculty of Engineering
> University of Peradeniya
> Peradeniya.

Email: itcgu@eng.pdn.ac.lk

> **Note: Student's Registration Number should be written in the space provided in the copy of the worksite form before sending it to the university.**

The second copy of the Work site form, together with the contract forms, should be posted to the NAITA.

10. Expected Industry Exposure in Training

After reporting for training, the trainee should initially understand the nature of the organization he/she has been assigned with the available information such as:

- Name and location – Head office, branches, sections, worksites, divisions, company logo etc.
- Category of the organization
    - Government/Semi government/Private/Multi-national etc.
    - Client/Consultant/Contractor/Service Provider/Agent/Supplier/Manufacturer/Product developer/Value adder etc.
    - Main businesses
    - Work capacity: Mass/Medium/Small scale, import, export etc.
- Vision and Mission, if available
- Company history, major projects handled.

- Information on shareholders, Market share

- Management details: Organization structure, Operational procedures etc.

With the above exposure, the trainee should focus and gain experience on the technical aspects such as:

- Main processes, activities and related issues in the industry
- Relating the engineering aspects of the relevant industry with the knowledge acquired in the degree program
- Specific engineering problems and solutions that have been rendered or could be rendered
- Quality assurance practices and standards
- Sustainability practices

Further, the trainee needs to have an exposure in aspects such as,

- Communicating effectively on engineering activities with the Engineering & technical personnel as well as non-technical individual or groups.
- Professional conduct and ethical practices at work
- Functioning effectively as an individual or a member/leader of a team in a multi-disciplinary setting
- Safety and health practices in the industrial environment
- Interpersonal skills required to adapt to the industrial environment

11. Visits of staff members to training organizations

ITCGU organizes visits to training organizations during the industrial training sessions with the participation of academic staff members of the respective departments

The purposes of the visit to the training place are as follows.

a) To monitor the progress of the trainees.
b) To obtain views of the respective supervisor on the performance of trainees.
c) To look for future training opportunities.
d) To assess the capability of the organization in providing expected industrial exposure.
e) To establish/ improve relationship between the university and industries.

12. Responsibilities of Students

Undergraduates who have registered for the industrial training course should bear the following responsibilities before, during and after the training.

12.1 To-do list

12.1.1 Prior to industrial training

i. Register for TR400 at the appropriate time.

ii. Attend all lectures, seminars and workshops and other programmes conducted by the ITCGU.

iii. Follow the industrial placement procedure.

iv. Obtain the placement letter and other documents given in Section 9 from the ITCGU and report for training on the given date.

v. Submit the documents to the relevant organization on the first day of training session, fill the relevant forms and post to respective institutions.

12.1.2 During the training session

i. Be on time every day for training.

ii. Must follow the training schedule provided by the organization.

iii. Must try to have regular meetings with the supervisor at the place of training to discuss the individualized instruction or plan of internship.

iv. Should follow the rules and regulations of the organization.

v. Must maintain the Industrial training diary to document the day-to-day activities of the training and get the signature from the training supervisor every week.

vi. Must keep in mind that learning new things and gaining practical experience are the key objectives of training in industry.

vii. Must try to achieve learning objectives to the best of student's ability.

viii. Must carry out assignments and work given by the organization.

ix. Must meet the faculty/ NAITA staff member during their visits to the respective training institution with the training diary.

x. Must maintain standards of professional excellence, promptness, initiative and dependability.

xi. Must always follow the health and safety rules and procedures.

xii. Must attend to the mid training review/presentations in the middle of the training when it is scheduled by the ITCGU.

xiii. In case of any difficulty, the trainee should not hesitate to contact his/her supervisor or liaison person.

xiv. Should not mind soiling hand and dress as hands on experiences will benefit the student.

xv. Must try to use the opportunity to make professional linkages for mutual benefit.

xvi. Must look for opportunities for taking initiatives and identify unique features of the industry or organization.

xvii. Must respect the culture and the people.

xviii. Must complete the whole training session.

xix. In the event of failure to complete the industrial training due to unavoidable reasons, student must inform the respective organization, ITCGU, and the Dean in writing as soon as possible. Such students should make a formal request to the Dean through their academic advisor with valid supporting documents to rearrange training at the next eligible opportunity. The ITCGU considers rearranging required training in the industry upon the approval of the Dean.

12.1.3 After Completion of a training session

i. Should submit the training diary and supervisor's feedback form to the ITCGU on or before the deadline.

ii. Should submit student's feedback on training when instructed by the ITCGU.

iii. Must submit the industrial training report prepared according to the given guidelines before the deadline.

iv. After completion of the total period of training, appear for the oral examination on the date scheduled by the ITCGU

13. Discipline during Industrial Training

During the training period, the organization takes authority and responsibility of the students. Accordingly, the students must adhere to all the rules and regulations of the organization during the entire training period.

14. Leave

Students are not allowed to take leave without the approval of the organization while undergoing training.

15. Records of Training

15.1 Training Diary

Students should maintain a daily diary for recording their progress during training. The main purpose of writing daily training diary is to cultivate the habit of documenting and to encourage the students to search for details. It develops the students' own thought process and reasoning abilities.

Trainees should start filling the diary from the first day of reporting to the training. The students should record day to day training activities, their observation, and impressions and information gathered in the training diary. It should contain the sketches & drawings related to the observations made by the students. The entries should also include the work carried out on each day, problems encountered and the possible solutions. The diary should be submitted to the officer in-charge of training at the end of each week for his/her comments and certification. This

diary should always be in possession of the trainee and it should be produced to the officer in-charge and university staff/ NAITA officials who will visit the organization to inspect the trainees' progress during training.

15.2 Industrial Training Report

The trainee should prepare a training report on his/ her training experiences by following the guidelines given by the ITCGU.

Before the commencement of the training, ITCGU conducts introductory sessions on maintaining the daily diary and report writing for the students.

16. Training Supervisor's Feedback

Views of the respective training supervisor on the performance of each student during the industrial training period are collected through the training diary and a form specially prepared for that purpose.

Students should make sure that his/ her training supervisor fills the relevant page of the training diary on a weekly basis, and place the official seal and signature on the last day of the training period.

Further, the feedback form given to the students should be handed over to the training supervisor and get it filled on completion of training. This form should be handed over to the ITCGU when notified.

(Arrangements will be made to collect the feedback of the training supervisor through online forms whenever possible).

17. Students' Feedback

The student feedback on the training he/she received is collected online through FEeLS. All students should fill the feedback forms when instructed by the ITCGU.

18. Assessment of Industrial Training course (TR 400)

Upon completion of each training session/ training as a single stretch, students are requested to submit the completed daily training diary and report to the ITCGU before the given deadlines. Late submission of documents without any valid reasons are not accepted and marks will be reduced according to the number of days delayed. Further, totally or partly copied reports are not accepted and students may get zero marks in such situations.

Assessment of student performance on training is done based on the training presentation, daily diary, training report, and viva and marks breakdown for all these evaluation components are as below.

Mid Training Presentation	10 Marks
Training Diary	30 Marks
Training Report	30 Marks
Oral Examination (Viva)	30 Marks

Note: Students should score at least 50% of the marks assigned for each component above.

The presentations are scheduled after the first training session for the students who undergo two training sessions, while it is scheduled at the middle of the training session for the students who undergo training at a single stretch. The students have to present their experiences in front of an evaluation panel. The training diary and the report have to be submitted for the evaluation after the first and second training sessions separately. When it is a single training session, this submission has to be done after completion of the whole training session. However, the students who undergo the total training period at a single stretch are required to submit the completed diary with the progress at the middle of the training as a scanned copy before mid evaluation presentation for necessary feedback. After completion of the total period of training, the diary and the reports are evaluated and viva voce examinations are conducted. In the viva voce examination, the students should present their knowledge and experience gained through training in front of a panel appointed by the Faculty of Engineering and NAITA. Further, feedback of the officer in-charge of training on the student's performance during the training is also considered whenever necessary in the assessment process. Students should be ready to respond to any requests for clarifications and/or questions raised by the evaluation panel. After the assessment, students are given pass/fail grades.

The students who get fail grades have to re-register for TR400 following the formal Faculty procedures and undergo additional training prescribed by the ITCGU. They have to maintain the training diary for the additional training period and should submit the diary together with a written report on this training. A re-assessment will be done based on the diary, report and a viva and the students have to score satisfactory level of marks from these components for   successful completion of the TR 400 course.

19. The Award of J. B. Dissanayake Prize for Excellence in Industrial Training

The student who has recorded the best performance at the assessment process of TR 400 course is awarded with the "**J. B. Dissanayake Prize for Industrial Training**" at the respective General Convocation of the University.

20. Contact Information

ITCGU handles all the matters related with Industrial Training of engineering undergraduates and the students may contact the ITCGU whenever necessary.

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