



GUIDE BOOK

INDUSTRIAL TRAINING FOR STUDENTS

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FOREWORD

This Guide Book consists of guidelines for the off-campus Industrial Training students. It is expected to assist the students with their responsibilities and the implementation of the off-campus Industrial Training.

We hope that with this guidelines, the Industrial Training Program can be carried out smoothly and effectively thus the objective of the program can be achieved.

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1.0 INTRODUCTION

1.1 Background

All Faculty of Mechanical Engineering undergraduate students are required and compulsory for them to undergo 12 weeks of Industrial Training during the duration of their studies. This training is part of the teaching course that provide hands on exposures in the working environment after gaining theories from lectures.

1.2 Related Programs for Industrial Training

Bachelor programs that required Industrial Training are as follows:-

- i. Bachelor of Engineering (Mechanical) (SKMM)
- ii. Bachelor of Engineering (Naval Architecture And Offshore Engineering) (SKMO)
- iii. Bachelor of Engineering (Mechanical - Aeronautics) (SKMT)
- iv. Bachelor of Engineering (Mechanical - Automotive) (SKMV)
- v. Bachelor of Engineering (Mechanical - Materials) (SKMB)
- vi. Bachelor of Engineering (Mechanical - Manufacturing) (SKMP)
- vii. Bachelor of Engineering (Mechanical - Industrial) (SKMI)

Students will undergo training in Year Three in short semester of their studies. To undertake this Industrial Training, students must get minimum grade D-(30%) for the core courses (SKMM2123, SKMM2223, SKMM2323, SKMM2423, SKMM2433 and SKMO2123) and obtained at least a total of 80 credits.

2.0 OBJECTIVES OF INDUSTRIAL TRAINING

The objectives of Industrial Training are to enhance students' knowledge and skills to a career in their respective professions, as well as to produce graduates with professional, ethical, skilled, creative and competent.

3.0 OBJECTIVES

Industrial Training objectives are:

- i. to expose students to the environment and working conditions in their respective fields
- ii. to gain working experiences in the organization/industry related field of study
- iii. to use the knowledge of the Industrial Training, which was followed at university
- iv. to train students to interact and communicate effectively at all levels in the workplace
- v. to train students to prepare technical reports related to the Industrial Training which conducted
- vi. to inspire a spirit of working as a team
- vii. to appreciate the ethical values of their profession

4.0 SCOPE AND TRAINING PROGRAM

The scope of training to be passed by students in the company/organization includes various aspects such as:

- i. to observe organization's operations/ factories/ companies
- ii. to perform operations by making use of machinery and equipment
- iii. to work on the installation and fabrication
- iv. inspection and quality control
- v. to work on process control and instrumentation
- vi. to work on project design
- vii. maintenance and repair of machinery and equipment
- viii. installation of new equipment and testing
- ix. management and administration
- x. consultation

However, the scope and the actual training program is depends on the type of companies/organizations involved. The program which only requires students to carry out production work alone is not sufficient and will not ratify by the faculty.

The companies/organizations are requested to provide appropriate training to students who will work as an engineer/industrial designer after completing their studies.

Faculty supervisor will visit the company/organization to monitor and discuss about student progress.

Company/organization's supervisor is requested to submit student's evaluation reports at week 12 of training, which is shortly after the end of Industrial training.

5.0 PLACEMENT

Students are responsible for finding their own place for Industrial Training after obtaining permission from the faculty. Students are allowed to apply for only two organization/industry and submitted the organization/industry's name and address to the Faculty's Academic Office for official application to the organization/industry. Students who are not accepted to undergo their industrial training upon receiving respond from the respected organization/industry within the specified time as stated by the Faculty's Industrial Training Committee, are allowed to submit to the Faculty's Academic office another two organization/industry for new application.

6.0 RESPONSIBILITIES OF STUDENTS

Students who carry out Industrial Training is responsible to complete all projects and tasks given by the organization within the specified time. Particularly, other student responsibilities are:

- i. to find two organization/industry and get information about jobs in the organization/industry and submitted them submitted the organization/industry's name and address to the Faculty's Academic Office for official application to the organization/industry
- ii. to inform officially to the faculty if students want to withdraw from training attachment
- iii. to attend a briefing/explanation on Industrial Training
- iv. to inform the Faculty's Industrial Training Committee immediately after start of training (use Form BLP-01)
- v. to comply with all the organization's regulations
- vi. to comply with the University and University College's Acts

- vii. to ensure full attendance in the organization. The company/organization is encouraged not to give permission for students to take leave during the training except for emergencies or company's holiday. Students who wanted to take leave due to illness, must enclosed a medical certificate and are only allowed not more than 7 days to which no replacement needed to cover the days of leave taken
- viii. to perform all the duties and responsibilities assigned by the organization
- ix. to meet the scope of required training
- x. to preserve the university's reputation
- xi. to cooperate with the organization all the time
- xii. to contact the faculty's supervisor immediately if any problem's arised during the training
- xiii. to write notes in the log book, write final Industrial Training report and perform any other tasks given during the training
- xiv. to submit all training related documents to the Faculty's Industrial Training Committee
- xv. always be positive and contribute according to student's ability
- xvi. to maintain good relationship with the organization for future career path.

7.0 NOTES AND STUDENT'S REPORT

All students undergoing their Industrial Training are required :

- i. to write the training program (after consultation with the supervisor of Industrial Training) and work/activities undertaken during their Industrial Training in the log book.
- ii. to prepare a comprehensive final report on training programs (not less than 50 pages) and the report must follow the UTM Thesis Writing Handbook's format.

8.0 ROLE OF THE COMPANY/ORGANIZATION

To ensure that the Industrial Training program runs smoothly, the company/organization is expected as follows:

- i. To appoint industrial's supervisor

Among the role of industrial's supervisors are:

- To inform the faculty willingness to accept students within one month from the date of application/before training begins.
 - To appoint officers as student's supervisor
 - To develop overall training plan after discussions with representative from departments who involves in the training program. The planned programme should gives as much as possible the experience/exposure in line with the existing facilities at the company/organization, and taking into account student's academic level.
 - To provide a brief background on the company/organization and to inform overall training programs to students. Plans are updated as necessary if there is feedback from students.
 - To complete the administrators report (Form BLP-03) after consultation with the supervisor involved during the training if necessary.
- ii. To appoint the site supervisor (the actual place the students undergo their Industrial Training)

Among the responsibilities of the site supervisors are:

- Discuss with the students to work out on weekly activities
- To supervise the student's works
- To do a weekly evaluation about the work done by the students in the log book (Part B)
- To inform student's performance to the trainer's supervisor, if necessary
- To coordinate, guide and provide guidance to students who are undergoing Industrial Training
- Review the log book
- Evaluate the performance of students in the organization

Explanations in (i) and (ii) are for situations where the training's program involving several sections. If the training program involves just one site/section only, the site's supervisor and training's supervisor is the same officer/person. Therefore, the officer must perform both responsibilities in (i) and (ii).

- iii. To provide reasonable training's facilities to the students
- iv. To consider to give some allowance to students who undergoing Industrial Training

- v. To allow faculty's member to make a visits to companies/organizations for supervision purposes
- vi. To issue a certificate of completion to students at the end of the training program

9.0 ASSESSMENT OF TRAINING

The performance of students during their Industrial Training and personality development should be evaluated by both faculty's supervisor and industrial's supervisor. The assessment includes quality of work and student's personality. In overall Industrial's Training assessment are includes:

- i. Observations and reports from faculty's supervisor
- ii. Observations and reports from the supervisor's of the company/organization
- iii. Examination of log books
- iv. Examination of the final report

9.1. Observations and reports from faculty's supervisors and supervisor's of the company/organization

9.1.1. Faculty's Supervisory Report (20%)

The performance of students during their Industrial Training which assessed by the faculty's supervisor is based on face-to-face interviews with the student and feedback from industrial's supervisor. BLP-02 form is used for the purposes of this assessment. Overall mark for this report is 20%. Evaluation of supervisor reports were made through interviews that includes:

- a. Ability to describe clearly their training experiences. Capability to describe their adaptability with the company/organization.
- b. Maturity answering questions. Ability to discuss problems with supervisors.

9.1.2 Industrial/Organization Supervisory Report [30%]

Industrial supervisor is also asked to assess student's performance. The assessment of students including job performance, work and character building. BLP-03 is used (Appendix 3) for the purposes of this assessment.

Overall mark for this report is 30%. Industrial's supervisors are required to provide an assessment of student performance which includes the two scopes as below :

- a. Performance of work
 - Knowledge of work
 - The credit for completing work on time
 - The time taken to obtain job skills
 - The need for supervision
 - Quality of work
- b. Personality
 - The ability to communicate
 - Initiative and motivation
 - Attitude towards work
 - Discipline

9.2 Log Book [10%]

Log book is a student's diary. Through log book, the supervisor can understand the activities undertaken by students during their Industrial Training. Log book contains all the job experiences, discussions with supervisors, comments, data and information from the company/organization, and library's references. Overall score for the log book is 10%. The components which evaluated from the log book includes:

- a. tidiness of the log book (1%)
- b. Confirmation by the organization's supervisor (at least once a week) (1%)
- c. Description of equipment or systems to use and simple procedure (4%)
- d. The detailed of content and student's learning experiences (3%)
- e. The learning experienced by students (1%)

The log book assessment is assessed by the faculty's supervisor

9.3 Final Report [40%]

Apart from the log book, students are also required to prepare the final report. This report contains brief information about the background of the company/organization, the scope of training, the content of the training provided with detailed proposals to the company/organization and faculty and the conclusions.

Information on the department/unit which involves for A copy of the final report should be sent to the company/organization if requested. Details of the final report's format is as follows:

- a. Introduction (10%)**
 - Introduction to the Industrial Training
 - Objective of Industrial Training
 - Scope of Industrial Training
 - Summary of Industrial Training
- b. Background of Industrial/Organizational (10%)**
 - Company profile
 - Organizational structure
 - Industrial Training
 - Flow chart of the industry/organization
- c. Comprehensive Training Information (10%)**
 - Description of the training was conducted in general
 - The experience gained
- d. Project Information/Training in Specific (40%)**
 - The objective of the project/training is clearly presented
 - Implementation of project-related training
 - Results of project-related training
 - Ability to analyze, problems solving and links all the information, procedures and projects related to the field of study.
- e. Conclusion (10%)**
 - The conclusion of the report
 - Problems and recommendations
 - References
- f. Writing Skills (10%)**
 - Composition, sentence's structure and style
 - Appropriated and clearly presented all the figures, tables, charts etc.
- g. Format of the Report (refer to UTM's Thesis Writing Guide (10%))**
 - The composition and contents of the report
 - The size and format

10.0 WEIGHTAGE OF MARKING

The weighted score for the whole period of Industrial Training for 10 weeks are as follows:

- a. Report on Industrial Training (formal) - 40%
- b. Industrial/Organizational Supervisory Report - 30%
- c. Faculty Supervisory Report - 20%
- d. Log Book - 10%

11.0 INDUSTRIAL TRAINING REQUIREMENTS

- i. The passing marks are 60% of the overall mark, in condition where:
 - a. The marks's on industry supervisory report must be at least 15% (from 30% of total marks of industrial's supervisory report).
 - b. The total score for industrial's supervisory and faculty's supervisor report must be at least 25% (from both of the two supervisors).
- ii. The report must
- iii. be submitted to the faculty.

12.0 PLAGIARISM

Plagiarism is defined as "using other people's work without giving recognition to them, as a result of their own work." Ideas and writings taken from a source without citing the original source is called as plagiarism.

Here are the things that are considered plagiarism:

- i. Blindly copying sentences from the text as own writing. Sentences must be processed using your own words and stated the source.
- ii. The idea is taken directly from a reference without specifying its source. Should be placed in sentences and quote its source.

Further information on plagiarism can be found in the "Gaya Dewan" (1995)

Plagiarism is a serious academic misconduct that may be subjected to action under the Disciplinary Rules of the University.

13.0 VIOLATION OF INDUSTRIAL/ORGANIZATIONAL'S RULES

Students who violate the industrial's or organizational's where they do Industrial Training yet to destroy or harm the university name and reputation may be subject to disciplinary action in accordance with the provisions of the Universities and University Colleges Act, 1971, the Rules of Universiti Teknologi Malaysia (Students Discipline), 1999.

14.0 FACULTY'S SUPERVISOR

The faculty will appoint a supervisor from the academic staff to visit the company/organization during the students Industrial Training period.

The purpose of this visit is to provide guidance to students and to assist them should any problems arises during the training. In addition, this visit is also expected to strengthen the good relationship between the University/Faculty and the company/organization as well as to discuss matters which could benefited both parties.

15.0 INSURANCE, MEDICAL AND LETTER OF INDEMNITY

All UTM students are covered with insurance group based on the 'Group Personal Accident Takaful' (GPAT), which covers bodily injury that may be experienced by students as long as they are registered as a UTM's student, subject to conditions as mentioned in the GPAT's certificate.

During the Industrial Training, students can get treatments at any government's clinics or hospitals. In emergency cases, and where no government's clinics or hospitals in the area of training, students can be treated to a clinic or private hospital for immediate medical treatment. All related expenses can be claimed back from UTM with the receipts/relevant documents presented as evidence.

The Faculty of Mechanical Engineering will issue a letter of indemnity to the company/organization which have accepted students from the faculty to undergo their **Industrial Training**.

16.0 CONCLUSION

With the implementation of Industrial Training, it is hoped that all parties i.e the students, the company/organization and the faculty/university will gain benefits thus contributing towards

national developement. Exposures given to students are expected to benefit them towards completing their studies in the university and gained experiences with the real working environment.