

**GUIDELINES FOR INDUSTRIAL TRAINING**  
**SCHOOL OF COMPUTING**  
**FACULTY OF ENGINEERING**  
**UNIVERSITI TEKNOLOGI MALAYSIA**

## **1.0 INTRODUCTION**

### **1.1 Definition**

Industrial training is a main component in the Bachelor of Computer Science curriculum at Universiti Teknologi Malaysia (UTM). A successful Industrial training is essential for the students to be eligible for the degree. During the Industrial training, the students shall be placed at selected organisations for a minimum of **TWENTY** (20) weeks to experience and apply their knowledge theoretically in the professional employment. It is also intended for the student to gain exposure in every aspects of career life - socially, culturally, interactions and work conducts.

### **1.2 Goal**

Industrial training aims to elevate the students' knowledge and skills in a specific profession of their respective fields and at the same time produce graduates who are credible, creative and proficient.

### **1.3 Objectives**

The objectives of the Industrial training are as follows:

- i) Enable the students to adapt to the dynamic working atmosphere;
- ii) Apply the academic knowledge in managing workplace challenges;
- iii) Acquire working experience and develop intellectual knowledge;
- iv) Build effective interaction and communication capabilities at all levels;
- v) Promote teamwork spirit;
- vi) Practise good ethical values and work conducts;
- vii) Establish the University–Industry collaboration;
- viii) Educate the students in producing related technical report.

### **1.4 Learning Outcomes**

Upon successful completion of the Industrial training, the students shall be able to:

- i) Apply the knowledge acquired at the organisation;
- ii) Recognize the industry organisational structure and the roles and responsibilities within the organisation;
- iii) Interact and communicate effectively at all levels;
- iv) Present critical and innovative opinions with confidence, as well as be capable of resolving problems professionally;

- v) Demonstrate excellent ethics and integrity in their work conducts;
- vi) Work as a team player efficiently;
- vii) Deliver a comprehensive technical report.

## 1.5 Industrial Training Scopes

The scopes of the Industrial training include but not limited **to**:

- i) The students should be involved in any phases of system development (system design, system coding, system testing, system documentation and system maintenance, etc. ) either in a group or individually.
- ii) Data analysis - descriptive, predictive and prescriptive analytics.
- iii) Experience in various line of work through guided tasks such as data collection, experiment sampling, computer hardware installation, maintenance and repair, system design and development, resource management and etc.;
- iv) Exposure in management and administration aspects including acquiring overall understanding about processes and operations of a system;
- v) Involvement in positive activities within the organisation.

## 1.6 Requirement

The students are eligible to enrol for Industrial training only if the following requirements are met:

- 1) Achieve the '*acquired credit*', minimum of 92 credits (for SCSJ, SCSR and SCSV programmes)
- 2) Attain the CPA in '*Good Position*' (KB: *Kedudukan Baik*) status with CPA  $\geq$  2.0.

However, the student who does not meet these conditions may appeal to the Associate Chair (Academic and Student's Development) by submitting the completed *Industrial Training Appeal Form* (BLI-1B). Should the appeal is rejected; the student is required to take on the Industrial training in the subsequent semester.

## 1.7 Course Registration

It is compulsory for the students to register for the following course codes:

- **SCS\*4114** (Industrial Training Report) - Graded
- **SCS\*4118** (Industrial Training) – (HW: *Hadir Wajib*)

(\*J (Software Engineering) and R (Computer Network and Security )

The students are not allowed to enrol for other courses while undergoing the Industrial training. It shall be taken during the normal semester prior to the final semester of the

students' programme. The students are not allowed to undertake the Industrial training during the final semester of their programme.

### **1.8 Credit Exemption**

All direct admission students with related working experience for at least TWO (2) years may apply for credit exemption for the Industrial training. However, Industrial training which was completed during Diploma programme IS NOT QUALIFIED for credit exemption.

## **2.0 INDUSTRIAL TRAINING PREPARATION**

### **2.1 Industrial Training Briefing**

The Industrial training briefing shall be held with students for placement and during Industrial Training procedure :

#### **1. Industrial Training Placement**

The briefings are intended to guide the students on placement process procedure and timeframe for selecting and applying for the placement.

#### **2. Process during Industrial Training Process**

Briefing to guide the students of the procedures and process during industrial training, Industrial training assessments and also rules and misconducts during Industrial training.

Students' attendance to all the briefings are **mandatory**.

### **2.2 Industrial Training Placement Application Procedure**

The students should apply placement at external organisation by following rules and guidelines outlined by the Industrial training Committee

#### **2.2.1 Identify Industrial Training placement organisation**

##### **1) Determine the potential organisations.**

The students should obtain detailed information about the organisation - including but not limited to:

- i) Organisation/Company background; attach the organisation detailed profile(number of staff, department, location;
- ii) Type of activities:
  - Service(s) provided;
  - Ongoing and/or future projects;
  - Products or goods produced;

- iii) The relevant work scope of the Industrial training.
- iv) Application procedure, LI Duration, allowance ect.

This information may be acquired directly from the respective organisation website, LinkedIn, media social or via the students who have formerly completed their training at the organisation.

- 2) Identify the suitable needed transportation and accommodation during Industrial training.
- 3) Fill up Application of Potential Organisation for Industrial Training form (BLI-1C) and email to Industrial Training Committee for approval. Students are allowed to submit 3 applications at once time,
- 4) Once the organisation is approved by Industrial Training Committee, the Industrial training verification letter will be issued to the student from the Industrial training Secretariat

### **2.2.2 Industrial Training Application**

Submit to the organisation the following documents for Industrial Training application:

- 1) The Industrial Training verification letter;
- 2) The student's résumé;
- 3) Acceptance for Industrial Training Form (BLI-2A)
- 4) Guideline to the organisation
- 5) Other supporting documents required by the organisation.

### **2.2.3 Follow-up Procedures**

Students need to do follow-up with the organisation should there be no response received within two weeks of the application.

Steps to be taken following this conditions:

#### **1) Accepted**

The organisation should return the BLI-2A form with accepted reply or provide the acceptance letter to the student or directly to the Industrial Training Committee within the period given in the Industrial training calendar.

#### **2) Rejected**

In the event the application is rejected, the student is required to submit evidence of rejection from the organisation such as BLI-2A form, official letter from the organisation or email and student needs to repeat the application steps in Section 2.2.1 for new placement application.

### 3) No Feedback From Organisation:

In the event the organisation fails to respond within the specified timeframe, the students are expected to revoke the application with a written withdrawal letter to the organisation. Students need to Cc the withdrawal letter to Industrial Training Committee and repeat steps in Section 2.2.1 for new placement application.

## 2.2.4 The Process Flow of Pre –Industrial Training

Procees Flow for Industrial Training placement as shown in Figure 1

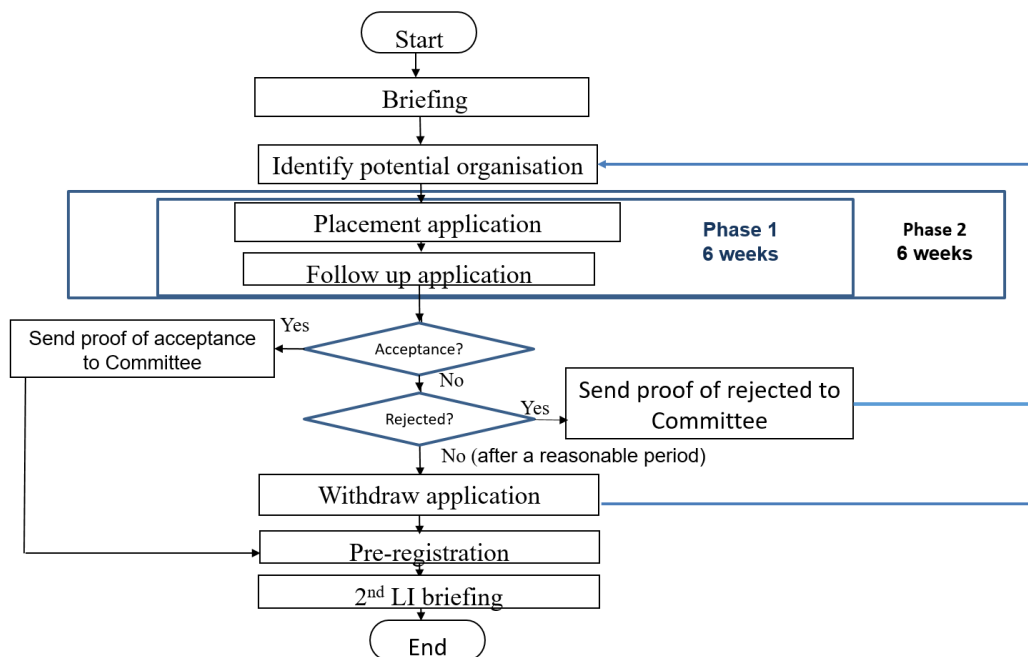


Figure 1: Process Flow of Industrial Training Placement

## 2.3 Industrial Training Placement

The Faculty shall release to the students the confirmation letter for reporting for Industrial training with the following details:

- i) Name and address of the organisation;
- ii) Name of the officer in charge;
- iii) Reporting date and time;

### **3.0 DURING INDUSTRIAL TRAINING**

#### **3.1 Reporting at Industrial Training Site**

The students are required to report for the Industrial training at the organisation on the set date and time. Upon reporting, the students are expected to:

- i) Submit Confirmation letter for reporting for Industrial training
- ii) Complete the Report Duty Verification form (BLI-1D) and must be validated by the Organisation Supervisor;
- iii) Consult the Organisation Supervisor pertaining to the scope of responsibilities;
- iv) Communicate to the Faculty Supervisor concerning the work scopes assigned by the organisation and provides organisations and supervisor details.
- v) Complete the organisation supervisor survey with the following details:
  - a) Full Name of Organisation Supervisor
  - b) Position at the organisation
  - c) Email
  - d) Contact Number

#### **3.2 Change of Industrial Training Organisation**

Students are not allowed to change the place of Industrial training unless with a written consent from the Industrial Training Committee. For the permitted change of organisation, the students should comply with the following rules:

- i) Change of organisation should only take place not later than the second week of the Industrial training;
- ii) Obtain in advance a written approval from the Industrial Training Coordinator and ensure that the Faculty Supervisor is informed;
- iii) Receive the withdrawal letter from the former organisation;
- iv) Receive the Industrial training placement confirmation letter from the new organisation;

#### **3.3 Leave**

The students are not entitled to apply for rest leave or annual leave. Nevertheless, leave for official matters must be approved in advanced by the Organisation Supervisor. In case of emergency, the students should immediately notify the organisation and obtain the leave approval letter from the organisation. The students should affix a copy of the medical certificates in the log book and send another copy to the Industrial Training Committee and Faculty Supervisor.

The students who go on leave without the organisation's approval shall be considered violating the Industrial training regulations and may be imposed with disciplinary actions. Students who are absent from industrial training for more than ten (10) days

due to emergency or sick leave are ineligible and will have to repeat the industrial training.

### **3.4 Visit by Faculty Supervisor and Oral Presentation**

The Faculty Supervisor will visit the Industrial training site to monitor and assess the student's performance. Generally, the official visit takes place starting week 18<sup>th</sup> of the Industrial training period. The Faculty Supervisor must determine the visit date at week 13<sup>th</sup> and the students are expected to present their Industrial training outcomes during the visit. It is the responsibility of the students to notify the organisation Supervisor and get approval from the organisation for the visit.

During Covid19 Pandemic, the industrial training presentation and discussion between Faculty Supervisor and Organisation Supervisor can be conducted online.

## **4.0 INDUSTRIAL TRAINING EVALUATION**

Industrial training evaluation is intended to measure the students' performances, work quality, and assess their personality development during the Industrial training.

The following components shall be assessed:

- i) Industrial Training Report;
- ii) Log Book;
- iii) Industrial Training Oral Presentation;
- iv) Ethics
- v) Student Performance Evaluation by Organization Supervisor;
- vi) Student Performance Evaluation by Faculty Supervisor.

Student assessment is carried out through two course codes (Industrial Training Report (SCS\*4114) and Industrial Training Performance Evaluation (SCS\*4118). Table 1 shows the components and mark distribution for UTM Supervisor, Faculty Supervisor from Qaiwan International University and Organisation Supervisor.

Table 1

|       | Content                                                      | Marks (%) | UTM Supervisor | QIU Faculty Supervisor | Organisation Supervisor |
|-------|--------------------------------------------------------------|-----------|----------------|------------------------|-------------------------|
|       | <b>Industrial Training Report (SCS*4114)</b>                 |           |                |                        |                         |
| 1.    | Technical Report                                             | 40        | 20             | 20                     | 0                       |
| 2.    | Oral Presentation                                            | 25        | 15             | 10                     | 0                       |
| 3.    | Log Book                                                     | 20        | 0              | 20                     | 0                       |
| 4.    | Ethics                                                       | 15        | 5              | 10                     | 0                       |
| TOTAL |                                                              | 100       | 40             | 60                     |                         |
|       | <b>Industrial Training Performance Evaluation (SCS*4118)</b> |           |                |                        |                         |
| 1.    | Faculty Supervisor Evaluation                                | 40        | 0              | 40                     | 0                       |
| 2.    | Organisation Supervisor Evaluation                           | 60        | 0              | 0                      | 60                      |
| TOTAL |                                                              | 100       |                |                        |                         |

#### 4.1 Industrial Training Report (SCS\*4114)

##### 4.1.1 Technical Report

The score for technical report contributes to 40% of the overall marks for the SCS\*4114. The report should incorporate the following contents and shall be assessed as per the weights below :



| Content |                                                             | Weight (%)          |
|---------|-------------------------------------------------------------|---------------------|
| 1.      | Report Title                                                | 2                   |
| 2.      | A Page of Abstract                                          | 5                   |
| 3.      | Introduction                                                | 5                   |
| 4.      | Specific Details on Projects/Training                       | 10                  |
| 5.      | Overall Information of the Industrial Training              | 5                   |
| 6.      | Conclusion                                                  | 5                   |
| 7.      | Writing Skills                                              | 5                   |
| 8.      | Report Format (refer to the UTM's Thesis Writing Guideline) | 3                   |
| TOTAL   |                                                             | 40<br>( $x/40*20$ ) |

The report should also must adhere to the following rules:

- a) The technical report must have a project title.
- b) The contents of the report must follow the format specified by the faculty and must not exceed 50 pages (excluding the terms and appendix)
- c) The report may be written in Bahasa Malaysia or English and should be submitted before/on the date as indicated by the faculty.
- d) The front page should be printed with orange coloured thick paper.
- e) The report format must follow the UTM's theses writing guideline:
  - i) A4 size papers;
  - ii) Font style Times New Roman, size 12;
  - iii) 1 ½ spacing;
  - iv) References format.

#### 4.1.2 Oral Presentation

The score for the oral presentation contributes to 25% of the overall marks for the SCS\*4114. The oral presentation is evaluated by the faculty supervisor during the visit and the evaluation is in accordance to the following weight:

| Content |                                              | Weight             |
|---------|----------------------------------------------|--------------------|
| 1.      | Presentation manner                          | 5 (QIU)            |
| 2.      | Accuracy, confidence and clarity of delivery | 5 (UTM)            |
| 3.      | Understanding towards project                | 5 (QIU)<br>10(UTM) |
| TOTAL   |                                              | 25                 |

#### 4.1.3 Log Book

The log book contributes to 20% of the overall marks for the SCS\*4114. The log book is evaluated by the faculty supervisor and UTM supervisor. The evaluation is in accordance to the following weight:

|       | Content                                       | Weight |
|-------|-----------------------------------------------|--------|
| 1.    | Presentation(Tidiness)                        | 5      |
| 2.    | Log Book Content                              | 10     |
| 3.    | Log book Writing Consistency and Verification | 5      |
| TOTAL |                                               | 20     |

#### 4.1.4 Ethics

Ethics contribute 15% of overall marks for SC\*4114. Ethics is evaluated by faculty supervisor to make sure students are fulfil with all the industrial training rules and regulations and fulfils responsibilities and commitments toward industrial training activities.

#### 4.2 Documents for submission

Students are expected submit the following documents to their UTM Supervisor within the specified timeframe based on Industrial Training Calendar for the evaluation:

- i) Industrial Training Report;
- ii) Log Book;

Log Book also need to submit to QIU Faculty Supervisor.

#### 4.3 Requirement to Pass the Industrial Training

The passing mark (minimum) for the Industrial Training Report (SCS\*4114) is 60% (grade B-), with condition that the student:

- must submit the technical report within the predetermined date.
- presents the training achievements to the faculty supervisor.

- fill in the online log book daily and must submit the printed log book that has been verified by the organisation supervisor within the predetermined date.

Student who fails Industrial Training Report (SCS\*4114), should resubmit a revised technical report and register for code SCSC\*4114 in the following semester.

The passing mark for the Industrial Training Performance Evaluation (SCS\*4118) is 60%, with condition that the student receives a total marks of at least 50% from the evaluation of both the organisation supervisor and the faculty supervisor. Student who fail the Industrial Training Performance Evaluation (SCS\*4118), need to repeat both courses, SCS\*4118 and SCS\*4114.

## **5.0 ROLE & RESPONSIBILITY**

The Industrial training related activities are coordinated by the Industrial Training Committee, who is accountable to the Faculty Academic Committee.

### **5.1 UTM Faculty/School Industrial Training Committee Roles and Responsibilities**

The roles of the Faculty Industrial Training Committee include **but not limited to**:

1. Prepare Industrial Training implementation Schedule
2. Deliver Industrial Training briefing to IRK in order to help IRK to
  - set up Industrial Training Committee,
  - understand the Roles and Responsibility of the Committee
  - Setting up and maintain Industry database
  - evaluate the suitability of the proposed Industry
3. Receive Report and Carry Mark from IRK
4. Evaluate the Report and Presentation
5. Appoint School/Faculty Supervisor to evaluate the student report
6. Discuss with IRK if there is any issue

### **5.2 IRK / IRK Industrial Training Committee**

1. Check the student eligibility to go for Industrial Training
2. Set up Industrial Training Committee
3. Appoint School/Faculty Industrial Training Coordinator as a member in IRK Industrial Committee
4. Conduct Industrial Training briefing for students
5. Set up Industry Database for Industrial Training

6. Evaluate the suitability of the proposed Industry / Organisation for Industrial Training
7. Appoint Industrial Training Coordinator
8. Appoint Industrial Training Supervisor to conduct site visit and student evaluation
9. Prepare Support Letter and Student Insurance
10. Follow the datelines
11. Submit the Carry Mark and Report (60%) to SPACE and School/Faculty
12. Discuss with SPACE and School/ Faculty if there is any issue
13. Make sure the student undergo Industrial Training according to their field of study
14. Collect evaluation form from the Faculty and Industry Supervisor
15. Make sure students submit all the related Forms, Report and Logbook for Evaluation

### **5.3 QIU Faculty Industrial Training Supervisor Roles and Responsibilities**

The Faculty Industrial Training Supervisors are the QIU academic staffs - appointed by the Faculty Dean. Their main roles are:

- i) ensuring students are placed at the Industrial training organisation approved by the Industrial Training Committee;
- ii) ensuring students go through their Industrial training according to the defined scopes and students are in an appropriate work environment;
- iii) facilitating and guiding the students during the Industrial training;
- iv) visiting the organisation to monitor and evaluate the students presentation and performance.
- v) discussing with the Organisation Supervisors concerning the training programmes and establishing good rapport with the organisation.
- vi) discussing with Faculty Industrial Training Committee of any students issue
- vii) monitoring and evaluating the student's log book.
- viii) preparing the supervision and evaluation reports and providing recommendations for the Industrial training improvements;

### **5.4 UTM Supervisor Roles and Responsibility**

- i) Evaluating the student's Industrial Training report and oral presentation.
- ii) Discussing with Faculty supervisor of any student's issue

### **5.5 Deputy Registrar (Academic) Roles and Responsibilities**

The Deputy Registrar (Academic) is responsible for:

- i) acting as the secretariat to the Faculty Industrial Training Committee;
- ii) issuing official letters pertaining to the Industrial training matters, e.g. student's confirmation, indemnity, the visit notification letter and etc.;

### **5.6 Industry/Organisation Supervisor Roles and Responsibilities**

The roles of the industry/organisation are:

- i) appointing suitable officers as the Organisation Supervisors;
- ii) ensuring that the scope of student work is suitable with the students field of study.
- iii) facilitating and guide students undergoing the Industrial training;
- iv) discussing with Faculty supervisor in the event of any student misconduct.
- v) validating the student log book;
- vi) evaluating the student performance;
- vii) submitting the student performance evaluation report to the Faculty within the specified timeframe.

### **5.5 Students Roles and Responsibilities**

The student who undertakes Industrial training is responsible mainly to complete the project and tasks assigned by the organisation within the stipulated time frame.

The student is also responsible for:

- i) attending the Industrial training briefing;
- ii) exploring and gathering information about the Industrial training organisation for the approval of the Faculty Industrial Training Committee;
- iii) officially informing the Faculty Industrial Training Committee on the withdrawal of application and the acceptance or decline of the placement offer;
- iv) arranging for the accommodation and transportation for the Industrial training;
- v) notifying the Faculty Industrial Training Committee after reporting at the organisation by submitting the Report Duty form;
- vi) consulting the Faculty Supervisor when meet with challenges;
- vii) completing the tasks assigned by the organisation;
- viii) making notes of daily activities in log book, write the Industrial training report and execute any other tasks as instructed;

- ix) giving full cooperation to the organisation at all times;
- x) meeting the training scopes as required by the organisation;
- xi) contributing to the organisation in the right capacity and maintain positive attitude;
- xii) conforming to the organisation rules and regulations;
- xiii) ensuring full attendance at the organisation on every working day;
- xiv) observing self safety throughout the training;
- xv) building good rapport with the organisation as ground to venture into professional career;
- xvi) maintaining the University's good reputation;
- xvii) submitting all related documents to the Faculty Industrial Training Committee in the timeframe as scheduled in the Industrial training calendar;
- xviii) complying with the University and University College Act, 1971 and Universiti Teknologi Malaysia Practices (Students' Discipline), 1999.