



اَبُو سَيِّدِي تَيْبُو لُو كَيْسَالَا
UNIVERSITI TEKNOLOGI MARA

GUIDELINES FOR INDUSTRIAL TRAINING ECM 598

BACHELOR OF ENGINEERING (HONS) CIVIL

FACULTY OF CIVIL ENGINEERING UITM SHAH ALAM

MAY-JULY 2011

GUIDELINES FOR INDUSTRIAL TRAINING

1.0 INTRODUCTION

Industrial Training is a compulsory component of the curriculum which aims to expose students to the real nature of the engineering works and to get them involved in civil engineering projects. The technical and non-technical outcomes of the course may be assessed and evaluated through this industrial training.

2.0 COURSE OUTCOMES

At the end of this industrial training, students should be able to:-

- CO 1: communicate effectively with fellow workers and supervisors on issues related to projects undertaken.
- CO 2: demonstrate and practice good working ethics and to internalise excellence.
- CO 3: demonstrate and practice good organisational skills in enhancing individual and group effectiveness and productivity.
- CO 4: demonstrate creativity and innovation in solving problems related to real-life projects.
- CO 5: demonstrate pleasant interpersonal skills in developing understanding and appreciation of individual differences in building self-confidence.
- CO 6: work independently or under very minimal supervision.
- CO 7: demonstrate good planning, good management, constant monitoring and quality delivery of projects undertaken.

CO – PO Matrix refer to **Appendix E**.

3.0 QUALIFICATION OF TRAINEE

Student can only carry out industrial training after semester 06 or 07

4.0 PROPOSED TRAINING ACTIVITIES

The following are examples of proposed training activities which students can participate:

- a) Appreciation of client's requirements
- b) Participation in coordination meetings with different disciplines
- c) Attending site visits
- d) Interpretation of construction drawings from other disciplines such as Architecture or Mechanical & Electrical Engineering.
- e) Interpretation and checking of construction drawings produced by the company whom the student is attached to
- f) Interpretation of contract specification and involvement in contract administration.
- g) Involvement in project management (coordination between third parties, internal coordination, scheduling, documentations, logistic, erections, mobilization, tendering, safety requirement and etc.)

Other activities relevant to the training, as directed by the supervisor can also be included.

5.0 BRIEFING TO TRAINEES

Faculty will arrange a briefing regarding the industrial training to students in order to **ensure they are aware of the requirements** before they start the training.

6.0 PLACEMENT OF TRAINEES

The faculty will make every effort to place students with local companies or government agencies. However, students are encouraged to suggest firms that are willing to accommodate them for the industrial training.

7.0 DURING TRAINING

The student will be supervised by a 'field supervisor' (preferably a registered professional engineer), who will monitor his/her progress throughout the training. The faculty will also check up on the trainees if necessary by contacting them and/or their supervisors. The faculty will arrange visits by lecturers during the last two weeks of the training duration.

8.0 PROCEDURES DURING INDUSTRIAL TRAINING

- a) Trainee need to show good personality which includes behaviour, cooperation and good manners.
- b) Trainee need to follow the dress code of the organisation and suit with working environment.
- c) Trainee must not miss any day of the training. In case of emergency, the trainee must inform both the field supervisor and the student's faculty practical training advisor. Any absenteeism or late attendance without valid reasons will result in failing the Industrial training course.
- d) Trainee should record their daily activities in the logbook and certified by supervisor in charge.
- e) Trainees are bonded by the rules and regulations of the organisation throughout the training. Failure to obey the requirement may cause the termination of the training.
- f) Changing of the placement is not allowed unless approved by the faculty

9.0 STUDENT SPECIAL FUND

All UiTM students are covered by this fund and to be used to help students in case of death/ accident or calamities. The maximum amount entitled for death is RM 7000.00 and for any other cases is based on the seriousness endorsed by the Student Affairs Committee. Students are advised to forward the claim as soon as possible after being discharged from a government hospital.

10.0 FACULTY SUPERVISOR VISIT

The faculty will send faculty members to the respective organisations after week four (4) or five (5) of the industrial training in order to assess the student training program.

11.0 RESPONSIBILITY OF THE FACULTY SUPERVISOR

- a) Visit the student at the training place
- b) Go through the student's logbook and discuss any problems encountered
- c) Discuss with the field supervisor regarding the overall performance of the trainee
- d) Assess the student's performance using the OMR Form.

12.0 FIELD SUPERVISOR RESPONSIBILITY

- a) Supervise the student according to the training program
- b) Certify the student's logbook weekly
- c) Assess the student's performance using the OMR Forms (see **Appendix A**)

13.0. ASSESSMENT OF THE INDUSTRIAL TRAINING

Trainees will be assessed by the organisations as well as the university. The training is graded on a PASS/FAIL basis. The students will be evaluated based on the followings:

13.1 LOGBOOK AND REPORT

13.1.1. STUDENT LOGBOOK (10%)

The logbook must be signed by the supervisor each week and must include daily entry into the summary report and detail documentation of daily activities. The logbook will be assessed by the academic advisor (See **Appendix B**)

13.1.2. STUDENT PLACEMENT REPORT (30%)

- a) Include summary report which must be type written.
- b) Describe how the activities in the practical training have contributed towards each of the course outcomes (1 to 7) listed.
- c) The report should be written according to the industrial training report guidelines (See **Appendix C**)
- d) The placement report will be assessed by the academic advisor (See **Appendix D**)

13.2. OVERALL ASSESSMENT

a) Industrial Supervisor	30%
b) Faculty Supervisor	30%
c) Student Placement Report	30%
d) Student logbook	10%
Total	100%

Students must obtain a minimum of 50% in each of the above component and 50% on the overall assessment in order to pass.

APPENDIX A

Student's Number	0	1	2	3	4	5	6	7	8	9
	0	1	2	3	4	5	6	7	8	9
	0	1	2	3	4	5	6	7	8	9
	0	1	2	3	4	5	6	7	8	9
	0	1	2	3	4	5	6	7	8	9
	0	1	2	3	4	5	6	7	8	9
	0	1	2	3	4	5	6	7	8	9
	0	1	2	3	4	5	6	7	8	9
	0	1	2	3	4	5	6	7	8	9
	0	1	2	3	4	5	6	7	8	9

PROGRESS REPORT FOR INDUSTRIAL TRAINING

Student's Name : _____

Programme : _____

Date : _____

Semester	01	02	03	04	05	06	07	08	09	10	
	11	12	13	14	15	16	17	18	19	20	
Mode of Programme	FT	PT									
	<input type="radio"/>	<input type="radio"/>									



INSTRUCTION

1. Use only 2B pencil.
2. Please be sure to fill the circle completely.
3. Erase clearly any marker you wish to change.
4. Do not fold this form.

Proctor Mark
Impover Mark

This form should be filled by the supervisor / lecturer. Please return the form to the following address:
Executive Officer (Academic)
Faculty of Civil Engineering
Universiti Teknologi MARA
40450 Shah Alam, Selangor Darul Ehsan.

		Excellent	Good	Average	Weak	Very Weak
1. MENTAL CAPABILITY						
a) Intelligence level (PO11)	5	4	3	2	1	
b) Ability to acquire, understand and use information (PO1)	5	4	3	2	1	
c) Level of technical skills (PO10)	5	4	3	2	1	
2. ABILITY						
a) Ability to acquire and apply knowledge in science and engineering (PO1)	5	4	3	2	1	
b) Ability to identify and solve technical problems (PO3)	5	4	3	2	1	
c) Ability to communicate with colleagues (Engineers and Non-Engineers) and others (PO2)	5	4	3	2	1	
d) Ability to adapt to the working environment as an individual and in a group (PO5/PO9)	5	4	3	2	1	
3. PROFESSIONAL RESPONSIBILITIES, ATTITUDES AND ETHICS (PO6)	5	4	3	2	1	
4. INITIATIVE						
a) Ability to take appropriate measures without instructions or with minimum supervision (PO7)	5	4	3	2	1	
b) Effort and initiatives in acquiring new knowledge in carrying out duties / tasks (PO1)	5	4	3	2	1	
5. WORK DISCIPLINE						
a) Trainee shows positive attitudes in carrying out duties in accordance to rules and regulations (PO5)	5	4	3	2	1	
b) Able to complete assigned tasks on time (PO5)	5	4	3	2	1	
6. SELF CONFIDENCE (PO5)	5	4	3	2	1	
7. ORAL PRESENTATION SKILLS						
a) Bahasa Melayu (PO2)	5	4	3	2	1	
b) English (PO2)	5	4	3	2	1	
8. WRITTEN PRESENTATION SKILLS						
a) Bahasa Melayu (PO2)	5	4	3	2	1	
b) English (PO2)	5	4	3	2	1	
9. STUDENT ASSESSMENT						
a) Performance (PO5)	5	4	3	2	1	
b) Awareness (of the environment) (PO11)	5	4	3	2	1	
c) Trustworthiness (PO6)	5	4	3	2	1	
d) Leadership (PO5)	5	4	3	2	1	
A) Attendance	Number of days : _____					
B) Experience acquired during training	_____					
C) Suggestions for Improvement (CQ1)	_____					
Signature :	_____ (Supervisor / Lecturer)					
Name :	_____ (Official Stamp)					
Position :	_____					

EVALUATION OF LOGBOOK FOR THE INDUSTRIAL TRAINING

[A] STUDENT PARTICULARS	
Name	
Matric number	
Training period	
[B] ORGANISATION PARTICULARS	
Name of organisation	
Address	
[C] LECTURER PARTICULAR	
Name	

Note : 1 – Excellent (5 MARKS) 2 – Good (4 MARKS) 3 – Satisfactory (3 MARKS) 4 – Average (2 MARKS) 5- Weak (1 MARK)

LOGBOOK	5	4	3	2	1
1) Logbook illustrated weekly activities and initialled by trainee's supervisor {CO7}					
2) Logbook is complete which include relevant sketches to support the description of the activities {CO7}					
3) Additional information such as drawings, specifications, design calculations, references had been placed in the training report.					
TOTAL MARKS EARNED FROM LOGBOOK					

$$\text{PERCENTAGE EARNED FROM LOGBOOK} = \frac{\text{TOTAL MARKS EARNED FROM LOGBOOK} \times 10\%}{15}$$

$$= \text{ x \%}$$

APPENDIX C(1)

The Industrial Training Report Guidelines

Objective

The Industrial Training report should cover all periods of approved employment. The report document is expected to demonstrate development of practical and professional skills in Engineering through technical experience and application of theoretical knowledge. Development of skills in dealing with people, and communication skills are part of the subject objectives.

Submission

Typed reports must be submitted to the Faculty of Civil Engineering one (1) week after completion of the training at the Academic Office, level 7 ,Tower 1, S & T Building.

Length

The main text of the report should be between 3,000 and 5,000 words maximum, not including preliminary information, tables, figures, photos, and appendices.

Preliminary Information

A contents list, abstract and employment details should precede the main technical report. The abstract should be a summary of the report and comprise about 300 words on one page. The employment details should set out names of employing organizations, specific periods of employment, and nature of appointments (eg. trainee engineer, technical assistant and etc.). Also required are details of job locations, name, phone number and designation of immediate superior, projects in which the student was directly involved, and their degree of responsibility.

Technical Report

The major portion of the report should be set out as a technical report, divided into suitable sections, and with an introduction to each major or different aspect of work. Students need not report on all projects listed in the employment details. You may select one or two projects which have significant or interesting aspects. Noteworthy technical details of projects in which the student was directly involved, or of projects which the student observed, should also be included.

These may include investigation, feasibility, design, construction, management, commissioning or operational aspects etc... Students should openly discuss aspects of the work they have performed or observed and indicate their involvement in their work throughout the text.

To be able to produce an accurate and comprehensive report it is recommended that students keep on updating the log book for their reference in preparing the report.

All project data and information must be cleared by the employers for confidentiality prior to its incorporation in the report. It is generally advisable that you avoid all sensitive information related to your employment by limiting the contents to the general or public aspects of each specific project.

The technical discussion should demonstrate detailed understanding of at least one part of the work which the student considers to be interesting, unusual or important to a civil engineer.

References should be made in the text to books, technical papers, standards etc., used during the training period and should be listed.

Finally, a Conclusion should include comprehensive comments on the type and value of experience gained, and how this relates to your professional career.

Presentation

Reports should be written in English and typed. Aspects such as layout, clear expression, spelling, punctuation, quality of figures and photos will all be assessed. Reports must be presented on A4 paper with an appropriate cover. Normally the text will include relevant tables, photos and figures.

Detailed and essential material, referred to in the text, should be placed in appendices. Oversize diagrams, plans etc. if used, they should be folded in the proper manner.

APPENDIX C(2)

GENERAL FORMAT OF THE INDUSTRIAL TRAINING REPORT

A) PRELIMINARY INFORMATION

- Summary
- Organization profile/data
- Period of employment
- Nature of appointments
- Details of job locations
- Details of immediate superior
- Projects where student directly involved

B) TECHNICAL REPORT

- Nature of work –design, supervision, Investigation commissioning, Maintenance, supply, Management, construction etc...
- Problem encountered and how overcome it
- Experience gained
- Suggestions
- Conclusion
- References

EVALUATION OF PLACEMENT REPORT FOR THE INDUSTRIAL TRAINING

[A] STUDENT PARTICULARS	
Name	
Matric number	
Training period	
[B] ORGANISATION PARTICULARS	
Name of organisation	
Address	
[C] LECTURER PARTICULAR	
Name	

Note: Excellent (5 Marks) Good (4 Marks) Satisfactory (3 Marks) Average (2 Marks) Weak (1 Mark)

PLACEMENT REPORT	5	4	3	2	1
1) Placement report address the business and structure of the placement organization and the role played by the trainee. {CO3 – PO9}					
2) Placement report give an account of the whole placement experience, including a critical appraisal and reflect a personal, professional and technical achievement. {CO5 – PO7}					
3) Placement report include a detailed description of the work undertaken. {CO3 – PO7}					
4) Placement report provide an abundance of evidence that skills and knowledge gained at university by the trainee were applied to real life application. {CO7 – PO11}					
5) Placement report provide evidence to support development of practical skills appropriate to the area of the trainee. {CO3 – PO9} {CO6 – PO5}					
6) Placement report provide evidence to support participation of the trainee in discussion concerning his/her work. {CO1 – PO2}					
7) Placement report provide evidence to support contribution of ideas as appropriate from the trainee. {CO4 – PO10}					
8) Placement report is concise, clear, legible, logical and well presented. {CO1 – PO2}					
9) Placement report showed extensive use of cross-referencing to the logbook. {CO1 – PO2}					
10) Placement report clearly acknowledge the work and contribution of others where appropriate. {CO3 – PO9}					
TOTAL MARKS EARNED FROM PLACEMENT REPORT					

PERCENTAGE FROM PLACEMENT REPORT = TOTAL MARKS EARNED FROM PLACEMENT REPORT X 30%

50

= y %

APPENDIX E

COURSE OUTCOMES – PROGRAM OUTCOMES MATRIX

COURSE CODE	ECM 598	CENTRE OF STUDY	CONSTRUCTION MANAGEMENT
COURSE NAME	INDUSTRIAL TRAINING	PREPARED BY	IR. SHAHARIN HAMID
CREDIT HOURS	4.0	DATE	JAN 2011

COURSE OUTCOMES	PROGRAM OUTCOMES											ASSESSMENT	
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11		
CO1) Able to communicate effectively with fellow workers and supervisors in issues related to projects undertaken.		3											Industrial and faculty supervisors. (OMR Forms)
CO2) Able to demonstrate and practice good working ethics and to internalise excellence.	3		3		3	3							Industrial and faculty supervisors. (OMR Forms)
CO3) Able to demonstrate and practice good organisational skills in enhancing individual and group effectiveness and productivity.					3					3			Industrial and faculty supervisors. (OMR Forms)

CO4) Able to demonstrate creativity and innovation in solving problems related to real-life projects.					3				3		3	Academic Advisor (Report and Logbook)
CO5) Able to demonstrate pleasant interpersonal skills in developing understanding and appreciation of individual differences and interpersonal skills in building self-confidence.					3							Industrial and faculty supervisors. (OMR Forms)
CO6) Able to work independently or under very minimal supervision.	3				3		3					Industrial and faculty supervisors. (OMR Forms)
CO7) Able to demonstrate good planning, good management, constant monitoring and quality delivery of project undertaken.					3				3			Academic Advisor (Report and Logbook)

RATING ON OBJECTIVE IN RELATION TO PROGRAM OUTCOMES: (1) VERY SLIGHTLY (2) MODERATELY (3) SUBSTANTIVELY