



2140301 INDUSTRIAL TRAINING BOOKLET  
INTERNATIONAL SCHOOL OF ENGINEERING  
FACULTY OF ENGINEERING  
CHULALONGKORN UNIVERSITY

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## PREFACE

International School of Engineering, the Faculty of Engineering, Chulalongkorn University realises the importance of industrial training, or internship, as a means to provide our students a chance to practice, adapt knowledge from classes, be familiar with engineering works and learn how to cooperate with other people long before they graduate and begin their careers. Thus, we have included 2140301 Industrial Training as a required course for all 3<sup>rd</sup> year undergraduate students.

The main purpose of this booklet is to provide the students clear procedures and guidelines for carrying out the internship and complete the Industrial Training course. Its content includes instructions for registration, course requirements, assessment and evaluation criteria. Most of the materials are extracted from the previous edition printed in 2015. Every student should read this booklet thoroughly before starting their training. We also advise students to strictly follow the safety guidelines of the training organisation, especially when working with heavy machines, high voltage equipments and chemical substances.

To oversee the industrial training of students, the Faculty of Engineering has formed an internship committee. At the end of summer semester, the committee will determine the course grade which will be given as “satisfied” or “unsatisfied”.

Finally, every student should be aware of his/her university status at all time while doing their training. Good behavioral conducts are to be expected, since each student will be seen as a representative of Chulalongkorn University.

Chairman of Internship Committee  
January 2019

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<b>Course Number</b>	2140301
<b>Course Title</b>	Industrial Training
<b>English Abbreviation</b>	INDUS TRAINING
<b>Credit</b>	2(0-6-0)
<b>Responsible Section</b>	International School of Engineering (ISE), Faculty of Engineering
<b>Method of Measurement</b>	Letter grade (S, U)
<b>Semester</b>	Intl summer semester
<b>Programme</b>	AERO/ADME/NANO/ICE
<b>Degree</b>	Bachelor Year 3

### 1. COURSE DESCRIPTION

Engineering practice in related areas under supervision of experienced engineers in private sectors or government agencies.

### 2. COURSE OBJECTIVES

Industrial training or internship gives students a chance to experience a real working situation. At the end of the training, students are expected to achieve the following:

1. Describe the aspects of engineering work and how engineering works are managed
2. Distinguish the roles of engineering in the workplace
3. Cooperate with other engineers
4. Determine the way to solve engineering problems by applying technical knowledge in practice

### 3. REGISTRATION

A student who registers for the industrial training course must acknowledge the following rules:

1. The course only runs during summer semester.
2. Eligible students must be at least in the third year, and have accumulated at least 64 credits at the first semester of that academic year.
3. It is not permitted to register any other course concurrently.
4. If a student obtained grade I (Incomplete) in any course from the previous semester, he/she needs to resolve the course to formal grades within the first two weeks of the summer semester. Otherwise, it will be automatically converted to grade F.

#### **Registration procedure:**

1. Register 2140301 Industrial Training at <http://www.reg.chula.ac.th>
2. Pay the tuition fee for summer session at Chulalongkorn University registrar
3. Pay the programme fee at ISE office

### 4. RELATED DOCUMENTS

Before the training starts:

- FC0 Students' internship request form
- FC1 Request letter to organisation
- FC2 Confirmation of student's workplace
- FC3 Assigning letter

After the training starts:

- MD1 Information of the training organisation and supervisor
- MD2 Bi-weekly report
- MD3 Cover page of an Industrial Training report
- MD4 Industrial Training report
- MD5 Supervisor evaluation form
- MD6 Industrial visit report form

## 5. COURSE REQUIREMENTS

Failure to comply with the following requirements will automatically result in a U grade.

1. Students must attend the orientation organised by ISE before the industrial training.
2. Students must register for Industrial Training course.
3. The training period must cover at least 280 working hours (35 working days and 7 working weeks).
4. Students must submit the information of the training organization and supervisor (MD1), within 7 days after the first day of training.  
Note: MD1 form will be approved by the supervisor.
5. Students must submit a biweekly report (MD2) every two weeks, covering the whole training period.  
Note: MD2 form will be approved by the supervisor, and graded by the evaluator.
6. Students must submit an industrial training report (MD4).
7. **Students must not receive "Fail" result for one of the following criteria in Supervisor evaluation form (MD5):**  
Criteria 2.1 Student "Was punctual"  
Criteria 2.2 Student "Abided by the internal rules and regulations"  
Criteria 4.1 Student "Participated in events or workshops provided"

## 6. INDUSTRIAL TRAINING MANAGEMENT

All submission, approval and evaluation must be done through <https://moodle.ise.eng.chula.ac.th>. All communication, enquiry and email correspondence must be through [moodle@eng.chula.ac.th](mailto:moodle@eng.chula.ac.th).

## 7. ASSESSMENT AND GRADING

	Documents assessed	%	Assessed by
MD1	Information of the training organisation and supervisor (to be submitted within the first week of training)	Completion 5% Timeliness 5%	Internship Coordinator
MD2	Bi-weekly report (to be submitted no later than 3 days after every bi-weekly)	Completion 5% Timeliness 5%	Evaluator
MD4	Industrial Training report (to be submitted before the due date)	40%	Evaluator
MD5	Supervisor evaluation form	40%	Supervisor

The minimum total score of 60 % is required for grade Satisfactory 'S'. Otherwise, the student will receive grade Unsatisfactory 'U'.

## 8. SCORING CRITERIA

### Scoring criteria for Industrial Training report (MD4):

- |   |           |
|---|-----------|
| 1. Introduction to the organisation                             | 10 points |
| 2. Description of internship activities/projects                | 10 points |
| 3. Application of theoretical knowledge to practical experience | 10 points |
| 4. Assessment of internship experience                          | 10 points |

	<b>Revision needed</b>	<b>Poor</b> Some components are included with lacking details	<b>Acceptable</b> Most components are included with little details	<b>Satisfactory</b> Most components are included with sufficient details	<b>Good</b> All components are included with sufficient details	<b>Excellent</b> All components are included in detail
<b>Introduction to the organisation</b> - Introduction and mission statement of the organisation - Brief history of the organisation - Organisation chart/details - Organisation policies/procedures affecting interns						
<b>Description of Internship activities/projects</b> - Describe the internship responsibilities - Describe all internship activities carried out - State problems encountered and the decisions made and trainings/ advises received						
<b>Application of theoretical knowledge to practical experience</b> - Describe how theoretical knowledge is applied to the job/ projects assigned - Describe practical skills gained - Show examples of projects/ products accomplished or research results						
<b>Assessment of internship experience</b> - If possible, identify courses relevant to your internship - Suggest courses or topics which would be beneficial for your internship, but not currently available - Describe benefits gained through internship - Describe co-worker and supervisor relationships - Suggest changes that could have strengthened your internship experience - Other comments and any feedback						

**Scoring criteria for supervisor evaluation (MD5):**

- |  |           |
|--|-----------|
| 1. Job performance                         | 10 Points |
| 2. Discipline, conduct and integrity       | 10 Points |
| 3. Communication and teamwork              | 10 Points |
| 4. Motivation and professional development | 10 Points |

	<b>Fail</b> Performance fails to meet expectation	<b>Poor Performance</b> Performance needs significant improvement	<b>Below Expectation</b> Performance needs some improvement	<b>Meets Expectations</b> Performance always meets expectations	<b>Exceeds Expectations</b> Performance sometimes exceeds expectations	<b>Outstanding</b> Performance consistently exceeds expectations
<b>1. Job Performance</b>						
Completed all tasks assigned						
Completed all tasks assigned in a timely manner						
Followed instructions and suggestions with a positive attitude						
Demonstrated learning and problem-solving skills for and tasks assigned						
Added value to the organisation						
<b>2. Discipline, Conduct and Integrity</b>						
Was punctual	***					
Abided by the internal rules and regulations	***					
Respected firm's policies, procedures, co-workers and their opinion						
Openly accepted suggestions and constructive criticism						
Demonstrated good character and mindset						
<b>3. Communication and Teamwork</b>						
Demonstrated good listening and speaking skills						
Conveyed ideas with clear explanation and reasoning						
Established good rapport with co-workers						
Listened and cooperated well with other team members						
Demonstrated leadership skills						
<b>4. Motivation and Professional Development</b>						
Participated in events or workshops provided	***					
Sought additional responsibility						
Displayed initiative and attempted to solve problems independently						
Handled difficult situations in a professional manner						
Demonstrated true interest in his/her profession						

\*\*\* "Fail" result for one of these three criteria will result in the student failing this Industrial Training course.

## STEPS FOR STUDENTS

STEPS	DESCRIPTION	DOCS	RESPONSIBLE PERSON(S)
1. Finding workplace	Students can contact and find workplace by themselves. ISE will also announce overseas and local internship opportunities on ISE website and Facebook page.		Student
2. Requesting organisation	Students fill in their personal details and upload photo through Moodle ( <a href="https://moodle.ise.eng.chula.ac.th">https://moodle.ise.eng.chula.ac.th</a> )		Student
	When a student wishes to apply for internship at specific workplace, he/she will need to fill in the students' internship request form (FC0) through Moodle	FC0	Student
	Students can print/collect FC1 letter and send to organisation	FC1	ISE/Student
	Organisation will fill in confirmation of student's workplace form (FC2), replying whether to accept or reject students	FC2	Organisation
	If rejected, back to Step1. (Note that FC0 can be requested again only when the previous organisation has rejected the student)		
3. Orientation of Industrial Training	Attendance is <b>compulsory</b>		Student
4. Registration for Industrial Training course (2140301)	Students register the course for a summer semester and pay tuition fees		Student
5. Conducting internship training (minimum of 280 working hours, covering at least 35 working days or 7 weeks)	Students submit an assigning letter (FC3) to their supervisors on the first day of training	FC3	Student
	Students fill in a complete detail of training organisation (MD1) within the first week of training (10%)	MD1	Student
	Students submit a bi-weekly report (MD2) within 3 days after every two weeks	MD2	Student
	Evaluators grade the bi-weekly reports (10%)	MD2	Evaluator
6. Industrial visit from evaluator (for domestic internship only)	Students arrange for industrial visit with their supervisor and evaluator		ISE/Student/ Evaluator/ Supervisor
	After the visit to companies, evaluators fill in an Industrial Visit report (MD6)	MD6	Evaluator
7. Report submission	Students follow guideline, cover page (MD3) and submit Industrial Training report (MD4) on Moodle	MD3, MD4	Student
8. Evaluation	Evaluators grade Industrial Training report (40%)	MD4	Evaluator
	Supervisors evaluate students (40%)	MD5	Supervisor
	Industrial Training coordinators summarise result and submit grades. If result is "U", back to step 1.	CR58	Industrial Training coordinators



## INDUSTRIAL TRAINING CALENDAR FOR ACADEMIC YEAR 2018

Students at the International School of Engineering (ISE) who wish to register for the 2140301 Industrial Training for the summer of academic year 2018 must strictly follow the following schedule and procedures, otherwise they will be disqualified from the Industrial Training registration.

XX Nov 2018	<p><b>Orientation for the Industrial Training</b> Students who fail to attend the orientation will fail 2140301 Industrial Training course</p> <p><b>Moodle account</b> Students will receive login information to use Moodle for internship management. Students must fill in personal details and upload official photo on Moodle, <a href="https://moodle.ise.eng.chula.ac.th">https://moodle.ise.eng.chula.ac.th</a>.</p>
Before 31 May	<p><b>Finding workplace</b> ISE will announce overseas and local internship opportunities on ISE website. Students can also contact and find the workplace by themselves.</p> <ol style="list-style-type: none"> <li>a. If the application is to be sent through ISE, a student will need to apply for the position by contacting ISE.</li> <li>b. If the application is to be sent directly to an organisation, a student will contact and apply to the organisation by him/herself.</li> </ol> <p><b>Requesting organisation</b></p> <ul style="list-style-type: none"> <li>• When a student wishes to apply for internship at specific workplace, he/she will need to fill in the students' internship request form (FC0) on Moodle</li> <li>• Students can print/collect FC1 letter and email to the organisation. Note that for any communication with the organisation, ISE (<a href="mailto:moodle@eng.chula.ac.th">moodle@eng.chula.ac.th</a>) should be copied (cc'd) in the email.</li> <li>• The organisation will fill in confirmation of student's workplace form (FC2), replying whether to accept or reject students.             <ol style="list-style-type: none"> <li>a. If students are rejected by the organisation, he/she will have to find a new place and fill in the request form (FC0) again. Note that FC0 can be filled only one at a time, and when the record shows that the previous organisation has rejected the students.</li> <li>b. If students are accepted by the organisation, students must fill in the details of the training organisation, and the expected training period on Moodle at the earliest opportunity</li> </ol> </li> </ul>
13 - 17 May	Register for the 2140301 Industrial Training
13 - 31 May	<p><b>Assigning students to the organisation</b> Students print/collect an assigning letter (FC3). The letter is to be handed to their internship supervisor the first day the students arrive at the organisation. (The letter contains the information of the internship requirement such the minimum working period, and the instruction for supervisors to evaluate intern students).</p>
3 June 2019	<p><b>First day of the training</b></p> <ul style="list-style-type: none"> <li>• Students give FC3 to their supervisors on the first day of training</li> <li>• students fill in a complete detail of training organisation (MD1) on Moodle within the first week of training</li> </ul>
3 June - 31 July	<ul style="list-style-type: none"> <li>• Students fill in a bi-weekly report (MD2) within 3 days after every two weeks</li> <li>• Supervisors approve each bi-weekly report on Moodle</li> <li>• Students arrange for industrial visit with their supervisor and evaluator (for domestic internship only)</li> </ul>
2 August 2019*	Last day of the summer industrial training
7 August 2019	<p><b>Completion</b></p> <ul style="list-style-type: none"> <li>• Last day to submit an Industrial Training report (MD4) on Moodle</li> <li>• Failure to submit the report within this date will result in <b>grade I</b> (Incomplete)</li> <li>• Failure to submit all required documents will result in <b>grade U</b> (Unsatisfactory)</li> <li>• Note: If the last day of your internship is after 2 August, please contact industrial training coordinators to request for an extension of the final report submission</li> </ul>

\* Students who finish training after this date must notify us within the first week of training, or at the earliest opportunity.

\*\* For internship financial support, please follow the Faculty of Engineering's announcement.



FC0: STUDENTS' INTERNSHIP REQUEST FORM

Details of the requested training organisation

Name of organisation .....
Address .....
Country .....
Contact person of organisation
Name .....
Position .....
Phone Number .....
Email address .....

Details of the students

Student name .....
ID.....
Programme of study.....



FC2: CONFIRMATION OF STUDENT'S WORKPLACE

แบบฟอร์มตอบรับนิสิตฝึกงาน

1. Contact details of organisation representative

1.1 Contact person

Name .....

Position .....

Phone number.....

Email address .....

1.2 Name of organisation .....

Address .....

.....

Country .....

Postcodes.....

2. Organisation's decision

[ ] ACCEPT the student for industrial training.

[ ] REJECT the student for industrial training, because

.....

If choose to ACCEPT, please provide details for the following:

3. Name of the student accepted

.....

4. Internship works/activities/projects which may be assigned for the student:

.....

.....

.....

.....

5. Training duration: Start (dd/mm/yy) .....End (dd/mm/yy).....

(Signature).....

.....

Date (dd/mm/yy) ...../...../.....



# CHULA INTERNATIONAL SCHOOL OF ENGINEERING

An ingenuity of CHULA ENGINEERING

## MD1: INFORMATION OF THE TRAINING ORGANISATION AND SUPERVISOR (To be submitted within the first week of the training)

**Student name** .....

ID.....

Programme of study.....

Phone.....

Email address.....

### Training organisation

Name of organisation.....

Section/Department.....

Address.....

### Location

(Please find coordinates)

### Supervisor

Supervisor name.....

Position.....

Office phone number.....

Mobile phone number.....

Email address.....

**Training period:** Start (dd/mm/yy) .....End (dd/mm/yy).....

### If there are other students working at the same organisation, please provide their names.

1. Name..... Programme of study.....
2. Name..... Programme of study.....
3. Name..... Programme of study.....
4. Name..... Programme of study.....
5. Name..... Programme of study.....
6. Name..... Programme of study.....
7. Name..... Programme of study.....
8. Name..... Programme of study.....

(Approved by supervisor).....

Date (dd/mm/yy) ...../...../.....

SAMPLE: MD1  
 (This form is to be filled electronically through  
<https://moodle.ise.eng.chula.ac.th>)



# CHULA INTERNATIONAL SCHOOL OF ΣENGINEERING

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MD2: Bi-weekly report No.....

(To be submitted no later than 3 days after every two weeks.)

Student name .....

ID .....

Programme of study.....

Training organisation.....

**SAMPLE: MD2**  
**(This form is to be filled electronically through**  
**<https://moodle.ise.eng.chula.ac.th>)**

Date	Start Time	Finish Time	Number of hours	Summary of work

Training hours for this report ..... hours  
Training hours previously accumulated..... hours  
Total..... hours

Submission date (dd/mm/yy) ...../...../.....

(Approved by supervisor).....

.....

Date (dd/mm/yy) ...../...../.....



**INDUSTRIAL TRAINING REPORT**

Course number: 2140301

**Student name** .....

ID .....

Programme of study .....

**Training organisation**

Name .....

Address .....

.....

.....

Supervisor name .....

Position .....

Phone number .....

Email address .....

**Training period:** Start (dd/mm/yy) .....End (dd/mm/yy).....

Training duration ..... working hours; .....working days; .....weeks

**Submission date** (dd/mm/yy) ...../...../.....

**SAMPLE: MD3**  
**Cover page of Industrial Training report**  
**(This form is to be filled electronically through**  
**<https://moodle.ise.eng.chula.ac.th>)**

## GUIDELINE FOR INDUSTRIAL TRAINING REPORT (MD4)

A full report of industrial training must be typed and submitted as a single pdf file.

### FORMAT

Use font **Time New Roman 12, bold**, for main topics.

Use font **Time New Roman 12** for contents.

Each figure, table and graph must have caption.

All representation of another author's words, thoughts or ideas must strictly be acknowledged.

The report must be organised and should include contents as follows:

**Cover page** (Use MD3)

**Abstract** Briefly describe the training organisation, summarise the works you have done, and the main outcomes of the training

### **Chapter 1: Introduction to the organisation**

Introduction and mission statement of the organisation

Brief history of the organisation

Organisation chart/details (only with supervisor's permission)

Organisation policies/procedures affecting interns

### **Chapter 2: Description of Internship activities/projects**

Describe the internship responsibilities

Describe all internship activities carried out

State problems encountered and the decisions made and trainings/advises received

### **Chapter 3 Application of theoretical knowledge to practical experience**

Describe how theoretical knowledge is applied to the job/projects assigned

Describe practical skills gained

Show examples of projects/products accomplished or research results

### **Chapter 4 Assessment of internship experience**

If possible, identify courses relevant to your internship

Suggest courses or topics which would be beneficial, but not currently available

Describe benefits gained through internship

Describe co-worker and supervisor relationships

Suggest changes that could have strengthened your internship experience

Provide comments and any feedback

### **References**

**Appendices** This section must include all copies of bi-weekly reports (MD2); and other related technical information of the training (only with supervisor's permission)



## MD5: SUPERVISOR EVALUATION FORM

Please fill in the evaluation form for each training student. Your evaluation accounts for 40% of the student's total scores in determining the student's grade. If we do not receive it, the student is likely to fail. Please do not disclose the information to the student.

### Training organisation

Name of organisation.....

Supervisor name.....

Position.....

Phone number.....

Email address.....

**Student name** .....

**Training period:** Start (dd/mm/yy) .....End (dd/mm/yy).....

Briefly describe the works/activities/project assigned  
.....  
.....  
.....

### Information about welfare of student

- 1. Allowance             Yes  No            Rate .....Baht/day
- 2. Accommodation     Yes  No
- 3. Transportation      Yes  No
- 4. Lunch                 Yes  No
- 5. Others .....

**(This form is to be filled electronically through  
https://moodle.ise.eng.chula.ac.th)**

(Signature).....

Date (dd/mm/yy) ...../...../.....



**Evaluation of the student's performance (total score 40 points)**

	<b>Fail</b> Performance fails to meet expectation	<b>Poor Performance</b> Performance needs significant improvement	<b>Below Expectation</b> Performance needs some improvement	<b>Meets Expectations</b> Performance always meets expectations	<b>Exceeds Expectations</b> Performance sometimes exceeds expectations	<b>Outstanding</b> Performance consistently exceeds expectations
<b>1. Job Performance (10 points)</b>						
Completed all tasks assigned						
Completed all tasks assigned in a timely manner						
Followed instructions and suggestions with a positive attitude						
Demonstrated learning and problem-solving skills for and tasks assigned						
Added value to the organisation						
<b>2. Discipline, Conduct and Integrity (10 points)</b>						
Was punctual	***					
Abided by the internal rules and regulations	***					
Respected firm's policies, procedures, co-workers and their opinion						
Openly accepted suggestions and constructive criticism						
Demonstrated good character and mindset						
<b>3. Communication and Teamwork (10 points)</b>						
Demonstrated good listening and speaking skills						
Conveyed ideas with clear explanation and reasoning						
Established good rapport with co-workers						
Listened and cooperated well with other team members						
Demonstrated leadership skills						
<b>4. Motivation and Professional Development (10 points)</b>						
Participated in events or workshops provided	***					
Sought additional responsibility						
Displayed initiative and attempted to solve problems independently						
Handled difficult situations in a professional manner						
Demonstrated true interest in his/her profession						

\*\*\* "Fail" result for one of these three items will result in the student failing this Industrial Training course.

**Please provide additional comments and suggestions regarding the student and this internship.**

.....  
 .....  
 .....

(Signature).....

.....  
 Date (dd/mm/yy) ...../...../.....



MD6: INDUSTRIAL VISIT REPORT FORM

Training organisation

Name of organisation.....

Address .....

Supervisor name.....

Phone number.....

Student name .....

Programme of study.....

When the industrial visit is completed, please fill in below information electronically through https://moodle.ise.eng.chula.ac.th.

(This form is to be filled electronically through https://moodle.ise.eng.chula.ac.th) SAMPLE: MD6

Date of visit (dd/mm/yy) .....

Briefly describe the works/activities/project assigned to the student

.....
.....
.....

Evaluation of the training organisation

Table with 6 columns: Evaluation criteria, Unacceptable, Poor, Fair, Good, Excellent. Rows include Training orientation, Works/activities/project assigned to the student, and Training support.

Please provide additional comments and suggestions regarding the training organisation, the student and your site-visit experience.

.....
.....
.....

.....

(Evaluator)

Date (dd/mm/yy) ...../...../.....