INDUSTRIAL TRAINING
GUIDELINE
INDUSTRY PARTNER 2012
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“there must be a conscientious effort within the business community to upscale all aspects of operations and management, including the development of a value-added workforce”

BERNAMA, 9 June 2010

Y.A.B. DATO’ SRI HJ. MOHD. NAJIB BIN TUN HJ ABDUL RAZAK
PRIME MINISTER

“The subsequent innovation is by means of more efficient industrial training methods to enhance employability and entrepreneurial skills among polytechnic graduates”

YAB TAN SRI MUHYIDDIN BIN HAJI MOHD YASSIN
TIMBALAN PERDANA MENTERI

Opening Speech during the ‘Majlis Pelancaran Transformasi Politeknik’ at PICC, 2010

“The National Mission objectives, namely to develop and build human capital and quality intellectual capital for the success of Malaysia’s aspirations in becoming progressive, prosperous and competitive.”

Y.B. DATO’ SERI MOHAMED KHALED BIN NORDIN
MINISTER OF HIGHER EDUCATION

Opening Remarks ‘Halatuju Transformasi Politeknik; Ke arah kelestarian penghasilan Modal Insan Negara, 2009’
INDUSTRIAL TRAINING constitutes an essential part of the polytechnic education. It is the window to the industries and provides students with their first opportunity to real-life work situations. Through Industrial Training students could develop their awareness on workplace behavior and build up their interpersonal skills.

Industrial Training is also the training ground for students to learn the secret traits of their future occupations. When presented with problem solving tasks, students will summon their nexus of information and experiences in trying to overcome the work-based problems. This is what learning is all about. The process will enrich their experiences and bring their understanding of the matter to a better level. This kind of exposure cannot be taught in the classroom. Yet, it is the kind that employers are looking for when hiring new workers.

In the Polytechnic Education, we want the industries to regard our students as novice workers. As such, changes have been made to the way that the Industrial Training session is conducted. The new way requires the industries to play the main part in the assessment component of the industrial training. In order to do that, industries will have to plan for an effective training schedule. Hence, the guideline is designed with the aim of helping you, our industry partner to understand how you could best help the polytechnic students in their industrial training exercise.

This guideline covers general information about the polytechnics as well as the courses offered. It also contains suggestions on how students can acquire course-related skills and knowledge during their industrial training session. Hopefully, the information given in this guideline could assist the industries in planning an effective training schedule for the students.

I would like to extend my utmost gratitude to the Industry Advisory Committee, Department of Polytechnic Education (DPE) for their earnest commitment in guiding us towards the development of this guideline. Our sincere gratitude also goes to our industry partners for their willingness to share their expertise and resources in training our students during their industrial placement. This synergized collaboration between polytechnics and industries is definitely a positive step towards a developed nation by 2020.
ACKNOWLEDGEMENT

The Polytechnic Management Division, Ministry of Higher Education Malaysia, wish to extend their utmost appreciation to all organisations for the support and cooperation in making the industrial training programme a success.

Your invaluable contributions have enabled the polytechnics to achieve the goal of producing quality graduates to meet the skilled manpower requirements of the nation.

It is hoped that this collaboration would continue to grow in the years to come.

We welcome further inputs or comments with regards to this guideline.

Bahagian Kecemerlangan Instruksional
Jabatan Pengajian Politeknik
Kementerian Pengajian Tinggi
Galeria PjH
Aras 4,Jalan P4W
Persiaran Perdana Presint 4
62100 WP Putrajaya

☎ 03 – 8891 9000
Fax 03 – 8891 9056
👋 www.politeknik.gov.my
✉ intern.poly@mohe.gov.my
INDUSTRIAL TRAINING exposes students to related workplace competencies demanded by industries. This course provides exposure to students in term of technology literacy, effective communication, practice social skills and teamwork, policies, procedures and regulations, professional ethics and reporting. It also equips students with real work experience, thus helping students to perform as novice workers.

Upon completion of this course, students should be able to:
- apply related knowledge and skills at the workplace
- communicate effectively with others
- practice teamwork
- professionally and ethically comply with policies, procedures and rules of the organisation
- the tasks assigned (during the industrial training) according to the prescribed format

A checklist is intended to provide guideline to the role played by organizations, polytechnics and even students in the process of Industrial Training. The process contained in this check list is expected to be provided by the parties concerned to ensure the smooth implementation of Industrial Training.

<table>
<thead>
<tr>
<th>RESPONSIBILITIES</th>
<th>ORGANISATION</th>
<th>POLYTECHNIC</th>
<th>STUDENT</th>
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<tr>
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<td>Trainee manual</td>
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<tr>
<td>Appropriate and various tasks in related field</td>
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<tr>
<td>Assessment</td>
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<td>✓ (notification)</td>
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<td>Rules &amp; Regulation</td>
<td>✓</td>
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<td>✓</td>
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<tr>
<td>Emergencies</td>
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INTRODUCTION

The industrial training course has played an important role in providing polytechnic students with opportunities for hands-on experience. It has also provided insights into real-life work experience in the industry to ensure the students are adequately prepared when entering the job market.

The duration of each training session is one semester, that is, approximately 22 weeks. Students are required to undergo industrial training in their field of studies with participating organisations. During the industrial training, the students are guided by personnel appointed by the organisations.

The Industrial Liaison & Training Unit (UPLI) is responsible for managing students’ industrial training affairs. Students will be attached to a particular organisation during their training period based on their respective fields of study.

The placement process is finalized before commencement of training. Students are constantly advised to maintain a high level of discipline. They should abide by the rules and regulations of both the polytechnics and organisations concerned. Organisations are advised to consult the polytechnic immediately if there are any disciplinary problems.

Students should be given the chance to try various tasks and develop skills that will make them more attractive to prospective employers, but they should not be relied upon to take on roles meant for full-time staff.

At the end of their placement, it is hoped that both parties could benefit from the programme.
ROLES AND RESPONSIBILITIES

RESPONSIBILITIES OF THE POLYTECHNIC TOWARDS THE ORGANISATION

• To provide relevant information about the polytechnics, industrial training guidelines and students’ scope of work
• To network wise the respective organisations and to observe/monitor/coach the students
• To advise on matters pertaining to the industrial training programme
• To establish and maintain good rapport with the organisations
• To discuss and deal amicably with problems involving students
• To prepare students to meet the needs of the organisations

RESPONSIBILITIES OF THE STUDENTS TOWARDS THE ORGANISATION

• To report for training as instructed
• To follow all rules and regulations of organisations. Students must adhere to, among others, the dress code, working hours and working practices of the company
• To interact productively with the supervisors, subordinates and others in the organisations
• To obtain the organisation’s approval before taking leave
• To notify the supervisor and polytechnic in the event of any accident
• To complete assignments or projects promptly
• To submit journal containing their reflections to the supervisor for verification
• To deal with any issues or problems that arise, with the co-operation of supervisor
• Students are prohibited from destroying or misusing any property belonging to the organisation.
• Students are prohibited from exposing confidential information, or providing any information related to the business of the organisation or its clients or any other information acquired during or after the training period, to outside parties
ROLES OF THE ORGANISATION TOWARDS THE POLYTECHNIC

• To inform the polytechnic if students fail to turn up for training
• To discuss with the polytechnic representatives regarding students’ performance and/or any other matters that may arise
• To provide constructive feedback to the polytechnic on ways to improve the industrial training programme
• To notify the polytechnic immediately on accidents involving the students
• To consult the polytechnic for any breach of code of conduct by students
• To provide a safe environment for the students to work in
• To complete an evaluation form at the end of the placement. This assessment form contributes to the percentage of the students’ overall internship grade; the other component of the placement grade is based upon academic work
• To notify the polytechnic of any terminations

ROLES OF THE ORGANISATION TOWARDS THE STUDENTS

• To provide a training schedule that facilitates students’ achievement of Industrial Training outcomes
• To provide students with industry experience that is relevant to the students’ programme of study
• To assign industry mentor as supervisor to coach and develop the students’ technical competency and communication skills
• To provide appropriate and various tasks in related field
• To clarify confidential aspects of the organisation
• To verify contents of journal containing students’ reflections
• To assess students’ performance at the end of training period
• To provide a safe environment for students to work in and brief the students on health and safety precautions. The company should provide safety tools and equipment
• To ensure that the working hours do not exceed 48 (forty-eight) hours per week. Students are not required to work overtime; nevertheless if this is unavoidable students should be paid accordingly
• The organisation has the right to approve leave requested by students, the leave has to be recorded for cross-referencing by polytechnics
BENEFITS TO THE ORGANISATION

- Organisation gains valuable skills, knowledge and fresh ideas injected by the students
- Cost-effective interns are available for extended periods
- Enthusiastic and motivated employees are given on the job training early in their careers
- Students’ judgement, creativity and analytical skills are valuable contributions to participating organisations
- Industry staff gain opportunities to develop supervisory skills and aid young people in their life choices
- Continuous feedback to the polytechnics ensures academic programmes meet the future needs of the industry
- Recruitment and training costs are reduced when organisations employ placement students after they graduate

GOOD SUPERVISOR CRITERIA

A supervisor should fulfil the following criteria to facilitate students in achieving the desired learning outcomes:
- A good working experience
- Willing to take on a supervisory role
- Able to advise and encourage students
- Able to provide a fair assessment of students
- Able to provide students with real life work experience
- Able to build rapport with students

The selection of students’ supervisor is subject to the approval of the management.
# LIST OF POLYTECHNICS IN MALAYSIA & PROGRAMME OFFERED

Note: All the programmes below provide Industrial Training courses. Kindly log on to the website for details.

<table>
<thead>
<tr>
<th>POLYTEKNIK UNGKU OMAR</th>
<th>Industrial Liaison &amp; Training Unit</th>
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<tbody>
<tr>
<td>JALAN RAJA MUSA MAHADI, 31400 IPOH, PERAK</td>
<td>05 – 542 5509</td>
</tr>
<tr>
<td>General contact</td>
<td><a href="mailto:upli@puo.edu.my">upli@puo.edu.my</a></td>
</tr>
<tr>
<td>05 – 545 7622/7656/7260</td>
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<tr>
<td>05 – 547 1162</td>
<td></td>
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<tr>
<td><a href="http://www.puo.edu.my">www.puo.edu.my</a></td>
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- **CIVIL ENGINEERING**
  - Diploma in Civil Engineering
  - Diploma in Architecture
  - Diploma in Land Surveying

- **MECHANICAL ENGINEERING**
  - Diploma in Mechanical Engineering
  - Diploma in Mechanical Engineering (Automotive)
  - Diploma in Mechanical Engineering (Air Conditioning and Refrigeration)
  - Diploma in Mechatronic Engineering

- **MARINE ENGINEERING**
  - Diploma in Marine Engineering

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<th>POLYTEKNIK SULTAN HAJI AHMAD SHAH</th>
<th>Industrial Liaison &amp; Training Unit</th>
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<tbody>
<tr>
<td>SEMAMBU, 25350 KUANTAN, PAHANG</td>
<td><a href="mailto:upli@polisas.edu.my">upli@polisas.edu.my</a></td>
</tr>
<tr>
<td>General contact</td>
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<tr>
<td>09 – 565 5300</td>
<td></td>
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<tr>
<td>09 – 566 3104</td>
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- **CIVIL ENGINEERING**
  - Diploma in Civil Engineering
  - Diploma in Architecture
  - Diploma in Land Surveying

- **MECHANICAL ENGINEERING**
  - Diploma in Mechanical Engineering
  - Diploma in Mechanical Engineering (Automotive)

- **FOOD TECHNOLOGY**
  - Diploma in Food Technology

- **ELECTRICAL ENGINEERING**
  - Diploma in Electronic Engineering (Communication)
  - Diploma in Electronic Engineering (Computer)

- **COMMERCE**
  - Diploma in Accountancy
  - Diploma in Secretarial Science
  - Diploma in Logistic and Supply Chain Management

- **INFORMATION TECHNOLOGY**
  - Diploma in Information Technology (Programming)
  - Diploma in Information Technology (Networking)
### POLITEKNIK SULTAN ABDUL HALIM
**MU’ADZAM SHAH**
BANDAR DARULAMAN, 06000 JITRA, KEDAH

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<td>📞 04 – 917 4232</td>
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**CIVIL ENGINEERING**
- Diploma in Civil Engineering
- Diploma in Architecture
- Diploma in Quantity Surveying
- Diploma in Building Services Engineering
- Diploma in Town and Regional Planning

**INFORMATION TECHNOLOGY & COMMUNICATION**
- Diploma in Information Technology (Programming)

**COMMERCE**
- Diploma in Accountancy
- Diploma in Marketing

**MECHANICAL ENGINEERING**
- Diploma in Mechanical Engineering
- Diploma in Mechanical Engineering (Plant)
- Diploma in Mechanical Engineering (Manufacturing)
- Diploma in Mechanical Engineering (Plastic)
- Diploma in Mechatronic Engineering

### POLITEKNIK KOTA BHARU
KM. 24, KOK LANAS, 16450 KETEREH, KELANTAN

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**CIVIL ENGINEERING**
- Diploma in Civil Engineering
- Diploma in Quantity Surveying

**MECHANICAL ENGINEERING**
- Diploma in Mechanical Engineering
- Diploma in Mechanical Engineering (Automotive)
- Diploma in Mechanical Engineering (Agriculture)
- Diploma in Mechatronic Engineering

**ELECTRICAL ENGINEERING**
- Diploma in Electrical Engineering
- Diploma in Electrical and Electronics Engineering

**COMMERCE**
- Diploma in Accountancy
- Diploma in Marketing
- Diploma in Business Studies

### POLITEKNIK KUCHING SARAWAK
KM. 22 JALAN MATANG, 93050 KUCHING, SARAWAK

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<td>🌐 <a href="mailto:upli@poliku.edu.my">upli@poliku.edu.my</a></td>
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**CIVIL ENGINEERING**
- Diploma in Civil Engineering
- Diploma in Land Surveying
- Diploma in Building Services Engineering

**MECHANICAL ENGINEERING**
- Diploma in Mechanical Engineering
- Diploma in Mechanical Engineering (Automotive)
- Diploma in Mechanical Engineering (Manufacturing)
- Diploma in Mechanical Engineering (Air Conditioning and Refrigeration)

**ELECTRICAL ENGINEERING**
- Diploma in Electronic Engineering (Communication)

**INFORMATION TECHNOLOGY & COMMUNICATION**
- Diploma in Information Technology (Networking)
- Diploma in Information Technology (Programming)

**COMMERCE**
- Diploma in Accountancy
- Diploma in Business Studies

**PETROCHEMICAL ENGINEERING**
- Diploma in Process Engineering (Petrochemical)
### Politeknik Port Dickson

**General contact**
- 06 – 662 2000
- 06 – 662 2026/2027
- www.polipd.edu.my

**Industrial Liaison & Training Unit**
- upli@polipd.edu.my

**Civil Engineering**
- Diploma in Civil Engineering
- Diploma in Architecture

**Mechanical Engineering**
- Diploma in Mechanical Engineering
- Diploma in Mechanical Engineering (Automotive)
- Diploma in Mechanical Engineering (Manufacturing)
- Diploma in Mechatronic Engineering

**Electrical Engineering**
- Diploma in Electrical Engineering
- Diploma in Electronic Engineering (Computer)
- Diploma in Electronic Engineering (Communication)

**Commerce**
- Diploma in Accountancy
- Diploma in Marketing
- Diploma in Secretarial Science

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### Politeknik Kota Kinabalu

**General contact**
- 088 – 499 980
- 088 – 499 960
- www.polikk.edu.my

**Industrial Liaison & Training Unit**
- 088 – 401836/840
- upli@polikk.edu.my

**Civil Engineering**
- Diploma in Civil Engineering
- Diploma in Quantity Surveying
- Diploma in Wood-based Technology

**Mechanical Engineering**
- Diploma in Mechanical Engineering
- Diploma in Mechanical Engineering (Manufacturing)
- Diploma in Mechatronic Engineering

**Electrical Engineering**
- Diploma in Electrical Engineering
- Diploma in Electronic Engineering (Computer)
- Diploma in Electronic Engineering (Communication)

**Commerce**
- Diploma in Accountancy
- Diploma in Marketing
- Diploma in Business Studies

**Hospitality**
- Diploma in Hotel and Catering Management

---

### Politeknik Sultan Salahuddin Abdul Aziz Shah

**General contact**
- 03 – 5163 4000
- 03 – 5569 1903
- www.psa.edu.my

**Industrial Liaison & Training Unit**
- upli@psa.edu.my

**Civil Engineering**
- Diploma in Civil Engineering
- Diploma in Building Services Engineering
- Diploma in Wood-based Technology

**Mechanical Engineering**
- Diploma in Mechanical Engineering
- Diploma in Mechanical Engineering (Packaging)

**Electrical Engineering**
- Diploma in Electronic Engineering (Control)
- Diploma in Electronic Engineering (Medical)
- Diploma in Electronic Engineering (Communication)

**Commerce**
- Diploma in Insurance
- Diploma in Marketing
- Diploma in Business Studies
- Diploma in International Business

**Aircraft Maintenance**
- Diploma in Aircraft Maintenance
### POLITEKNIK IBRAHIM SULTAN
KM. 10, JALAN KONG KONG 81700 PASIR GUDANG JOHOR

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<th>VISUAL COMMUNICATION DESIGN</th>
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### POLITEKNIK SEBERANG PERAI
JALAN PERMATANG PAUH, 13500 PERMATANG PAUH PULAU PINANG

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<tr>
<td>📞 04 – 538 3322</td>
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### POLITEKNIK MELAKA
NO. 2, JALAN PPM 10PLAZA PANDAN MALIM 75250 BALAI PANJANG MELAKA

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<td>📞 06 – 337 6007</td>
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## POLYTECHNIC KUALA TERENGGANU
JALAN SULTAN ISMAIL, 20200 KUALA TERENGGANU TERENGGANU

<table>
<thead>
<tr>
<th>General contact</th>
<th>Industrial Liaison &amp; Training Unit</th>
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<tbody>
<tr>
<td>09 – 620 4100</td>
<td>09 – 620 4116</td>
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<tr>
<td>09 – 620 4102</td>
<td><a href="mailto:upli@pkkt.edu.my">upli@pkkt.edu.my</a></td>
</tr>
<tr>
<td><a href="http://www.pkkt.edu.my">www.pkkt.edu.my</a></td>
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**ELECTRICAL ENGINEERING**
Diploma in Electronic Engineering (Communication)

**INFORMATION TECHNOLOGY & COMMUNICATION**
Diploma in Information Technology (Programming)

## POLYTECHNIC SULTAN MIZAN ZAINAL ABIDIN
KM. 8, JALAN PAKA, 23000 DUNGUN, TERENGGANU

<table>
<thead>
<tr>
<th>General contact</th>
<th>Industrial Liaison &amp; Training Unit</th>
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<tbody>
<tr>
<td>09 – 840 0800</td>
<td>09 – 840 0913</td>
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<tr>
<td>09 – 845 8781</td>
<td>09 – 845 8775</td>
</tr>
<tr>
<td><a href="http://www.psmza.edu.my">www.psmza.edu.my</a></td>
<td><a href="mailto:latihan.industri@psmza.edu.my">latihan.industri@psmza.edu.my</a></td>
</tr>
</tbody>
</table>

**CIVIL ENGINEERING**
Diploma in Civil Engineering

**MECHANICAL ENGINEERING**
Diploma in Mechanical Engineering
Diploma in Mechanical Engineering (Automotive)
Diploma in Mechanical Engineering (Manufacturing)
Diploma in Mechanical Engineering (Plastic)
Diploma in Mechatronic Engineering

**INFORMATION TECHNOLOGY & COMMUNICATION**
Diploma in Information Technology (Programming)

## POLYTECHNIC MELAKA MELAKA
JALAN JASIN, 77300 MERLIMAU, MELAKA

<table>
<thead>
<tr>
<th>General contact</th>
<th>Industrial Liaison &amp; Training Unit</th>
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<tbody>
<tr>
<td>06 – 263 6687</td>
<td><a href="mailto:upli@pmm.edu.my">upli@pmm.edu.my</a></td>
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<tr>
<td>06 – 263 6678</td>
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<tr>
<td><a href="http://www.pmm.edu.my">www.pmm.edu.my</a></td>
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</table>

**CIVIL ENGINEERING**
Diploma in Civil Engineering
Diploma in Architecture
Diploma in Land Surveying

**MECHANICAL ENGINEERING**
Diploma in Mechanical Engineering
Diploma in Mechanical Engineering (Manufacturing)
Diploma in Mechatronic Engineering

**ELECTRICAL ENGINEERING**
Diploma in Electrical Engineering
Diploma in Electronic Engineering (Computer)
Diploma in Electronic Engineering (Communication)

**HOSPITALITY**
Diploma in Hotel and Catering Management
Diploma in Tourism Management
Diploma in Event Management
Diploma in Food Management (Halal Practices)
POLITEKNIK SULTAN AZLAN SHAH
BEHRANG STESEN, 35950 BEHRANG, PERAK

General contact
05 – 454 4431
05 – 454 4993
www.psas.edu.my

Industrial Liaison & Training Unit
05 – 454 4607
unit_li@psas.edu.my

CIVIL ENGINEERING
Diploma in Civil Engineering
Diploma in Quantity Surveying
Diploma in Building Services Engineering

MECHANICAL ENGINEERING
Diploma in Mechanical Engineering
Diploma in Mechanical Engineering (Automotive)
Diploma in Mechanical Engineering (Manufacturing)
Diploma in Mechatronic Engineering

ELECTRICAL ENGINEERING
Diploma in Electrical Engineering
Diploma in Electronic Engineering (Computer)
Diploma in Electronic Engineering (Communication)

COMMERCE
Diploma in Accountancy
Diploma in Marketing
Diploma in Business Studies
Diploma in Retail Management

POLITEKNIK TUANKU SULTANAH BAHYIAH
KULIM HI-TECH PARK, 09000 KULIM, KEDAH

General contact
04 – 403 3333
04 – 403 3033
www.ptsb.edu.my

Industrial Liaison & Training Unit
04 – 4033333
04 – 4032919
upli@ptsb.edu.my

CIVIL ENGINEERING
Diploma in Civil Engineering
Diploma in Land Surveying

MECHANICAL ENGINEERING
Diploma in Mechanical Engineering
Diploma in Mechanical Engineering (Manufacturing)
Diploma in Mechatronic Engineering

ELECTRICAL ENGINEERING
Diploma in Electrical Engineering
Diploma in Electronic Engineering (Computer)
Diploma in Electronic Engineering (Communication)

COMMERCE
Diploma in Accountancy
Diploma in Marketing
Diploma in Business Studies

POLITEKNIK SULTAN IDRIS SHAH
SUNGAI LANG, BAGAN NAKHODA OMAR, 45100 SG AIR
TAWAR, SELANGOR

General contact
03 – 3280 6200
03 – 3280 6400
www.psis.edu.my

Industrial Liaison & Training Unit
03 – 3280 6234
03 – 3280 6401
upli@psis.edu.my

CIVIL ENGINEERING
Diploma in Civil Engineering
Diploma in Architecture
Diploma in Environmental Engineering

ELECTRICAL ENGINEERING
Diploma in Electronic Engineering (Computer)
Diploma in Electronic Engineering (Communication)

INFORMATION TECHNOLOGY & COMMUNICATION
Diploma in Information Technology (Networking)
Diploma in Information Technology (Programming)

COMMERCE
Diploma in Secretarial Science
Diploma in Islamic Finance and Banking

HOSPITALITY
Diploma in Hotel and Catering Management
Diploma in Tourism Management
# Industrial Training Guideline

**Politeknik Tuanku Syed Sirajuddin**

**General contact**
- 04 – 988 6200
- 04 – 988 6300
- www.ptss.edu.my

**Industrial Liaison & Training Unit**
- 04 – 988 6243
- 04 – 988 6245
- upli@ptss.edu.my

**Mechanical Engineering**
- Diploma in Mechanical Engineering

**Electrical Engineering**
- Diploma in Electronic Engineering (Computer)
- Diploma in Electronic Engineering (Optoelectronic)
- Diploma in Electronic Engineering (Communication)

**Design & Visual Communication**
- Diploma in Digital Art
- Diploma in Video and Film Studies

**Politeknik Muadzam Shah**

**General contact**
- 09 – 450 2005
- 09 – 450 2009
- www.polimuadzam.edu.my

**Industrial Liaison & Training Unit**
- 084 – 874 003
- uplipmu@pmu.edu.my

**Mechanical Engineering**
- Diploma in Mechanical Engineering (Auto Manufacturing Design)
- Diploma in Mechanical Engineering (Product Design)
- Diploma in Mechanical Engineering (Automation)

**Hospitality**
- Diploma in Tourism Management

**Politeknik Mukah Sarawak**

**General contact**
- 084 – 874 001
- 084 – 874 005
- www.pmu.edu.my

**Industrial Liaison & Training Unit**
- 084 – 874 003
- uplipmu@pmu.edu.my

**Civil Engineering**
- Diploma in Civil Engineering

**Mechanical Engineering**
- Diploma in Mechanical Engineering

**Electrical Engineering**
- Diploma in Electronic Engineering (Communication)
<table>
<thead>
<tr>
<th>Institution</th>
<th>Address</th>
<th>General Contact</th>
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<tbody>
<tr>
<td><strong>POLITEKNIK BALIK PULAU</strong></td>
<td>1-3-61, BANGUNAN IDEAL AVENUE, MEDAN KAMPUNG RELAU 11900 BAYAN LEPAS, PULAU PINANG</td>
<td>04 – 638 1926 04 – 641 0219</td>
<td>04 – 638 1931 politeknikbalikpulau@gmail</td>
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<td><strong>INFORMATION TECHNOLOGY &amp; COMMUNICATION</strong></td>
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<tr>
<td><strong>POLITEKNIK JELI KELANTAN</strong></td>
<td>LOT 4922, TAMAN KOTA HARMONY, JALAN CEMPALA MERAH, 17500, TANAH MERAH, KELANTAN</td>
<td>09 – 955 0501/0502 09 – 955 0503</td>
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<td><strong>POLITEKNIK NILAI NEGERI SEMBILAN</strong></td>
<td>KOMPLEKS PENDIDIKAN BANDAR ENSTEK, 71760, BANDAR ENSTEK, NEGERI SEMBILAN</td>
<td>06 – 791 1280 06 – 791 1269 <a href="http://www.polinilai.edu.my">www.polinilai.edu.my</a></td>
<td></td>
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<tr>
<td><strong>COMMERCE</strong></td>
<td>Diploma in Business Studies (e-Commerce) Diploma in Islamic Finance and Banking Diploma in Logistic and Supply Chain Management</td>
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<tr>
<td><strong>POLITEKNIK BANTING SELANGOR</strong></td>
<td>LOT 1-5A, JALAN EMAS 2, BANDAR SUNGAI EMAS, 42700 BANTING, SELANGOR</td>
<td>03 – 3187 5600 03 – 3187 2100</td>
<td></td>
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<tr>
<td><strong>ELECTRICAL ENGINEERING</strong></td>
<td>Diploma in Electrical Engineering</td>
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<tr>
<td><strong>POLITEKNIK MERSING JOHOR</strong></td>
<td>LOT 94-98, JLN DATO’ MOHD ALI, BANDAR TEPIAN 5G, MERSING, 86800 MERSING, JOHOR</td>
<td>07 – 799 5523 07 – 799 1042</td>
<td>07 – 799 1021 04 – 988 6245 <a href="mailto:uplipmj@yahoo.com">uplipmj@yahoo.com</a></td>
</tr>
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<td><strong>INFORMATION TECHNOLOGY &amp; COMMUNICATION</strong></td>
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</table>
# Industrial Training Guideline

## Politeknik Hulu Terengganu
**General Contact**
- 09 – 682 5555
- 09 – 682 5556

**Commerce**
- Diploma in Accountancy
- Diploma in Tourism Management

**Hospitality**
- Diploma in Tourism Management

## Politeknik Sandakan Sabah
**General Contact**
- 089 – 219 800
- 089 – 220 801
- www.pss.edu.my

**Electrical Engineering**
- Diploma in Electrical Engineering
- Diploma in Tourism Management

**Hospitality**
- Diploma in Tourism Management

## Politeknik METRO Kuala Lumpur
**General Contact**
- 03 – 4251 8000
- 03 – 4251 7979

**Commerce**
- Diploma in Retail Management
- Diploma in Hotel and Catering Management

**Hospitality**
- Diploma in Hotel and Catering Management

## Politeknik METRO Kuantan
**General Contact**
- 09 – 565 9000
- 09 – 517 3259
- www.polimetrokuantan.net

**Hospitality**
- Diploma in Food Services (Halal Practices)
- Diploma in Tourism Management

## Politeknik METRO Johor Bahru
**General Contact**
- 07 – 261 1755
- 07 – 261 2963

**Commerce**
- Diploma in Islamic Finance and Banking
JOB SCOPE

FUNDAMENTAL SKILLS FOR ALL COURSES

- Communication Skills
- Technical Report Writing
- Office/Workshop Management
- Team Work
- Industrial Safety and Environmental Awareness
- Entrepreneurship

ELECTRICAL ENGINEERING

DIPLOMA IN ELECTRICAL ENGINEERING

- Industrial Safety and Environmental Awareness
- Entrepreneurship
- Circuitry and equipment for electrical transmission system and machine control
- High power apparatus and systems
- Electrical power equipment protection
- Skills related on AC motor control
- Skills related on DC motor control
- Power electronic devices
- Industrial power electronic installation and maintenance
- Automation system based on the applications of PLC
- Microcontroller system based on Peripheral Interface Controller (PIC)
- Power system (power generation, power transmission, power distribution, power protection)
- Electrical circuit simulation using software simulation
Electrical wiring installation and testing
Electronic circuits and electronic devices
Troubleshooting and repairs of electronic appliances
Electrical power and control
Programming and computer systems
Wireless communication system
Data transmission and computer networks
Power system and electrical machine
Automation system based on the applications of PLC
Microcontroller system based on Peripheral Interface Controller (PIC)
Manufacturing process for CMOS integrated circuit
Electrical and Electronic circuit simulation using software simulation
Programming microprocessor-based systems
Integrated circuit (IC) fabrication processes, testing and packaging technology

Electronic circuits and electronic devices
Automation system based on the applications of PLC
Microcontroller system based on Peripheral Interface Controller (PIC)
Instrumentation drawing
Instrumentation equipment used in the processing industries
General equipment in process system
Instrument calibration in processing industry
Troubleshooting for process measurement equipment
Troubleshooting for electrical and electronic equipment in industrial control
Industrial robot system
Automation and production systems used in industry
Industrial control networks
Combination of mobile robots and embedded systems
DIPLOMA IN ELECTRONIC ENGINEERING
(OPTOELECTRONIC)

- Electronic circuits and electronic devices
- Automation system based on the applications of PLC
- Microcontroller system based on Peripheral Interface Controller (PIC)
- Optical instruments
- Testing instruments on optoelectronic devices
- Semiconductor testing in industry
- Fiber optic communications system
- Splicing techniques and multiplexing techniques
- Fiber optic measurement and testing
- Integrated circuit (IC) fabrication processes, testing and packaging technology
- Manufacturing process for CMOS integrated circuit
- Electronic circuit simulation using software simulation
- Troubleshoot, repair and do maintenance work for electronics equipment with specialization in optoelectronic

DIPLOMA IN ELECTRONIC ENGINEERING (MEDICAL)

- Use, repair and maintenance electronic medical equipment
- Biomedical amplifier, physiological measuring equipment
- Clinical and laboratory support equipment
- Use supporting equipment in the Intensive Care Unit and Operating Theatre
- Physiology and anatomy
- Imaging and radiation
- Life support and patient care
- Diagnostic and therapeutic
- Maintenance of biomedical equipment
- Manufacturing medicine or medical device
- Programming and computer systems
- Communication, signal processing and control system
- Troubleshoot, repair and do maintenance work for biomedical equipment according to IEC 62353 standards
Telecommunication systems (modulation, transmission, radar, telephony, fiber optic and communication)
Programming and computer systems
Wireless communication system
Cellular communication system
Data transmission and computer networks
Troubleshoot, repair and do maintenance work for electronics equipment with specialization in communications
Satellite
Electronic circuit simulation using software simulation
Programming microprocessor-based systems
Signal processing

Application of computer aided design (AutoCAD, Protel, Microcap, Spice, Eagle, Advanced Schematic and MicroLogic)
Integrated circuit (IC) fabrication processes, testing and packaging technology
Manufacturing process for CMOS integrated circuit
Computer troubleshoot, repair and maintenance
Electronic circuit simulation using software simulation
Programming on microprocessor-based systems
Error checking and debugging
Computer networking installation and maintenance
Operating system installation and maintenance (Windows, Linux, Mac and etc)
Graphic processing, video, audio and animation to produce a multimedia interactive presentation
Microcontroller system based on Peripheral Interface Controller (PIC)
Embedded systems
# Industrial Training Guidelines

**Diploma in Mechanical Engineering**

- Engineering drawing (orthographic, auxiliary and isometric projection)
- Electrical and electronic circuit diagram (machines & products)
- Computer Aided Design and Manufacture (CAD/CAM), CATIA, Solid Works etc.
- Electrical maintenance (including motor winding)
- Machine maintenance
- Workshop maintenance
- Lathe, shaping, milling, grinding and fitting machine operation and maintenance
- Mechanical testing methods
- Pneumatics, hydraulics, robotics, sensors/ transducers, microprocessors and PLCs
- Industrial welding skills (arc, MIG, TIG)
- Project Management (function, roles and responsibilities of team member, planning techniques, preparation of proposal and technical report)
- Foundry works
- Hand tool skills
- Green technology in latest technology

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**Diploma in Mechanical Engineering (Manufacturing)**

- Equipment maintenance schedule planning
- Workers’ supervisory schedule planning
- Production and inventory control
- Quality control and corrective procedures, TQM, QCC, Zero Defect, Kanban, Six sigma, Kaizen, lean)
- Troubleshooting of machines and maintenance
- Manufacturing technique/processes, injection moulding, simulation
- Product design, EDM
- Robotics and automation systems
- Computer Aided Design and Manufacture (CAD/CAM)
- Foundry works, die and mould
- Industrial welding skills (arc, MIG, TIG and gas, submerged, plastic welding, oxy-cutting automatic / manual)
- Project Management, production report writing
- Simulation application such as lean, MRP etc.
- CNC (Lathe process, milling process, programming and simulation)
- Industrial safety related to the factory and manufacturing machines
Automation and robotic system in the industry
Design and installation of low-cost single or multi-tasking automation systems
Designing printed circuit boards and positioning of components on the PCBs
Electro-mechanical or mechatronic system maintenance
Industrial hydraulic and pneumatic systems
Control and instrumentation in mechatronic products or systems
Real time programming for real time systems
Microprocessor, micro Controller, sensors and transducer utilization
Computer Aided Design and Manufacture (CAD/CAM)
Project Management
Product design and marketing
Inventory management
Vision system in robotics and QA systems
Signal processing (digital or analog)

Boiler operation, troubleshooting and maintenance
Boiler control and instrumentation
Boiler feed water treatment
Boiler pumps and valves
Gas turbine operations
Air compressor operation and maintenance
Compressed air piping and valves – layout, installation and maintenance
Air conditioning and refrigeration operation and maintenance
Heating Ventilation Air Conditioning Repair and Maintenance
Electrical wiring
Power generation plants and generators
Lathe, shaping, milling, grinding and fitting machine operation and maintenance
Foundry works
Industrial welding skills (arc, MIG, TIG and gas)
Safely precaution and Regulation
Steam Turbine Operation
Textile machine operation and maintenance
Textile production process
Stock and inventory management
Textile materials
Dyeing and Finishing
Fabric design / Structure design
Material Handling
Control System and instrumentation in textile industry
Quality control and assurance
Textile testing
Lathe, shaping, milling, grinding and fitting machine operation and maintenance
Green technology in textile latest technology

Petrol and diesel engine maintenance, repairs and overhauling
Transmission system service and testing
Suspension and braking system servicing
Auto-electrical wiring, service and testing
Wheel alignment servicing, tyre balancing/ changing tyre
Diesel and petrol fuel system servicing (including injection system)
Engine tuning
Body panel beating and spray painting
Lathe, milling, grinding, drilling machine operation
Welding skills ( gas, TIG, MIG, arc )
Workshop and inventory management
Engineering drawing, CAD, CATIA, Inventor, Solid Works
Exposure on the latest automotive technology and design such ad hybrid, CVT, DVVT etc.
Air Conditioning system servicing, repairing, testing and maintenance
Steering system and electrical steering, power steering
Diagnosis engine, EFI, ECU
QA, QC
Material Technology, Automotive Design and testing
Service Advisory
Warranty terms and condition
Accessories for cars, 4WD, MPV etc.
Operation and maintenance of agricultural machinery
Management of agricultural machinery
Agricultural processing engineering and engineering mechanics
Workshop practices – welding, machining etc.
Workshop and inventory management
Drainage and irrigation systems
Exposure on farm structure
Robotic and Automation in Agriculture
Biosystems Engineering
Green Technology practice in agriculture

Engineering drawing
Machining – lathe, shaping, grinding and fitting
Welding skills (gas, TIG, MIG, arc)
Metal fabrication – shearing, bending, rolling, soldering and riveting
Fitting – drilling, sawing, chiseling, marking and assembling
Workshop management
AutoCAD and CAD/CAM
Conversion process of materials into packaging
Design of packaging materials
Printing processes – labeling, sealing, coding and bar coding
Preparation of specification
Purchasing
Quality control
Green Technology in packaging technology

Plastic materials, types of mould and production of plastic materials
Plastic mould repairs and modification
Operation and maintenance of plastic production machines
Machines, mould and plastic material problems and troubleshooting
Injection molding machines and processes (special emphasis on extrusion, blow, pipe and film processes)
Project Management
CAD/ CAM
Product design
Green Technology in plastic latest technology
DIPLOMA IN MECHANICAL ENGINEERING (MATERIAL)

- Material manufacturing technology
- Metallurgy
- Industrial Management
- Quality control
- Ceramic technology
- Composite glass and polymer technology
- Material testing
- R & D in metal, plastic and ceramic based technology
- Non-destructive Testing Inspection
- Biomaterials and nanotechnology
- Smart material technology
- Green Technology practice in material latest technology

DIPLOMA IN MECHANICAL ENGINEERING (AIR CONDITIONING AND REFRIGERATION)

- Engineering drawing
- Electrical and electronic circuit diagram (machines n products)
- Computer Aided Design and Manufacture (CAD/CAM)
- Electrical maintenance and troubleshooting
- Machine maintenance
- Workshop maintenance
- Inventory management
- Latest Air conditioning and refrigeration technology
- Workshop practice in air conditioning and refrigeration
- Control and design system
- Servicing and Maintenance
- Air Conditioning Installation
- Industrial Refrigeration Service and Maintenance
- Building Automation System
- HVAC codes and ordinances
Engineering drawing
Electrical and electronic circuit diagram (machines or products)
Computer Aided Design and Manufacture (CAD/CAM), CATIA, Solid Works
Electrical maintenance (including motor winding)
Machine maintenance
Workshop maintenance
Lathe, shaping, milling, grinding and fitting machine operation and maintenance
Mechanical testing methods
Pneumatics, hydraulics, robotics, sensors/tranducers, microprocessors and PLCs
Industrial welding skills (arc, MIG, TIG and gas)
Project Management
Hand tool skills
Computer Integrated Manufacturing (CIM) Process
Robots Automation Applications
Design example of automation and robotics
Power electronic
Visual Programming

Engineering drawing (Geometric Dimensional and Tolerance)
Sheet Metal Process (Bending, Punching, Stamping)
Electrical and electronic circuit diagram (machines or products)
Computer Aided Design and Manufacture (CAD/CAM)
Electrical maintenance (including motor winding)
Machine maintenance
Workshop maintenance
Lathe, shaping, milling, grinding and fitting machine operation and maintenance
(Conventional lathe and CNC)
Mechanical testing methods
Pneumatics, hydraulics, robotics, sensors/tranducers, microprocessors and PLCs
Industrial welding skills (arc, MIG, TIG and gas)
Project Management (function, roles and responsibilities of team member, planning techniques, preparation of proposal and technical report)
Supply chain management
EDM die sinking and wire cut
Ethics applied in product design
Ergonomics in design
Model making
Design presentation
Rapid prototyping (process)
DIPLOMA IN MECHANICAL ENGINEERING (AUTOMOTIVE MANUFACTURING DESIGN)

- Engineering drawing
- Electrical and electronic circuit diagram (machines or products)
- Computer Aided Design and Manufacture (CAD/CAM), CATIA, Solid Works
- Electrical maintenance (including motor winding)
- Machine maintenance
- Workshop maintenance
- Lathe, shaping, milling, grinding and fitting machine operation and maintenance
- Mechanical testing methods
- Pneumatics, hydraulics, robotics, sensors/transducers, microprocessors and PLCs
- Industrial welding skills (arc, MIG, TIG and gas)
- Project Management
- Foundry works
- Exposure on the entrepreneurship skills
- Rapid prototyping (process)
- Project Management (function, roles and responsibilities of team member, planning techniques, preparation of proposal and technical report)
- Design presentation
- Engine Management (engine component, cooling system, lubricating, ignition, suspension, tyre and wheel)
- Transmission, clutch, steering and brake system
- Latest Automotive Technology
IT & Computer Application
Maintenance and Practices in Live Aircraft (disassembly, inspection, repair and assembly techniques, maintenance procedures)
Aircraft Maintenance Workshop
Aircraft Support workshop
Aviation Legislation
Gas Turbine Engine
Propeller
Supervision and Administration
Communication
Industrial Safety
Human Factor
Fundamental Electrical
Electronic Systems
Pneumatic & Hydraulics
Aircraft Handling and Storage
Aircraft Structure and System

Mass and Energy Balance
Mechanical Plant Equipment
Separation Process
Process Instrumentation and control
Piping and instrumentation diagram
Process Plant
Process Simulation
Plant Utility
Green technology in process engineering
Industrial safety and pollution control
Project management
Chemical industry based
Centrifugal and static equipment
DIPLOMA IN CIVIL ENGINEERING

- Engineering survey
- Site supervision and management
- Structural design
- Calculation of material quantities
- Costing
- Taking-off
- Tests and reports on concrete, soil, water and aggregates
- Inspection of concrete reinforcement according to drawings and standards
- Contract procedures
- Drainage and sewerage systems
- Soil mechanics
- Water treatment
- Safety and health measures at construction sites
- Highway construction management and supervision
- Site meeting
- Technical drawing (manual or computer aided) in drafting, convention and interpretation
- Managing clients and material suppliers
- Contract administration – tender pricing, cost estimation, analyzing tenders, work progress evaluation, preparing work progress claims and VO evaluation

DIPLOMA IN BUILDING SERVICES ENGINEERING

- Electrical installation and maintenance
- Elevator and escalator installation and maintenance
- Air conditioning installation and maintenance
- Lighting system design and maintenance
- Hot and cold water systems and maintenance
- Sewerage system maintenance
- Fire fighting systems and maintenance
- Acoustics
- Site meeting
- Green technology equipment installation
- Managing clients and material suppliers
- Contract administration – tender pricing, cost estimation, analyzing tenders, work progress evaluation, preparing work progress claims and VO evaluation
### Concept of wood-based technology industry
- Process cycle from raw material to finished product (e.g. furniture, paper, panel product etc.)
- Computer applications in the wood industry (e.g. use of CNC)
- Product design
- Basic management and marketing skills in wood-based industry
- Cost estimation in the manufacturing process
- Management of waste disposal
- Industrial safety
- Managing clients and material suppliers

### Standard procedures for plan submission and approval by related authorities
- Drafting and colouring of working drawings
- CAD with emphasis on architecture
- Illustration techniques
- Building design processes
- Site/field visits
- Local government legislation and procedures with regards to building design
- Managing clients and material suppliers
- Contract administration – tender pricing, cost estimation, analyzing tenders, work progress evaluation, preparing work progress claims and VO evaluation
- Construction planning and feasibility studies
- Quantitative measurement of sub-structure, superstructure, finishes, services and external works
- Site supervision
- Preparing building procedures
- Building technology and materials
- Managing clients and material suppliers
- Contract administration – tender pricing, cost estimation, analyzing tenders, work progress evaluation, preparing work progress claims and VO evaluation
CIVIL ENGINEERING

DIPLOMA IN QUANTITY SURVEYING
- Construction planning and feasibility studies
- Quantitative measurement of sub-structure, superstructure, finishes, services and external works
- Site supervision
- Preparing building procedures
- Building technology and materials
- Managing clients and material suppliers
- Contract administration – tender pricing, cost estimation, analyzing tenders, work progress evaluation, preparing work progress claims and VO evaluation

DIPLOMA IN LAND SURVEY
- Conventional and computerized data processing and analysis
- Topographical information system
- Cadastral survey
- Photogrammetric, geodesy, geographical information system (GIS)
- Remote sensing
- Land law
- Engineering surveying
- Calibration survey
- Utility mapping
- Managing clients and material suppliers
- Contract administration – tender pricing, cost estimation, analyzing tenders, work progress evaluation, preparing work progress claims and VO evaluation

DIPLOMA IN TOWN AND REGIONAL PLANNING
- Town centre planning
- Housing & commercial planning
- Industrial planning
- Landscape & recreational planning
- Transport planning
- Rural planning
- Growth regional planning
- Environmental study
- Sewerage treatment plant operation
- Standard ISO 14001, OHSAS 18001, MS ISO 9001
- Managing clients and material suppliers
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<th>Waste water management</th>
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### Diploma in Industrial Design
- Computer systems
- Engineering drawing
- Industrial design
- Workshop technology
- Design engineering
- Material and processes
- AutoCAD
- 3D CAD (Rhino, Solid Work)
- Design production
- Industrial design management

### Diploma in Digital Arts
- Interactive CD development
- Interactive web page development
- Computer graphic and software
- Audio/video editing
- Animation

### Diploma in Video and Film Studies
- Video production
- Film editing & production
- Media production management
- Story board development

### Diploma in Print Media Technology
- Design & Visual Communication
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<tr>
<th>Course</th>
<th>Modules</th>
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| **Diploma in Fashion and Clothing Design** | Fashion illustration  
  Flat drawing/working drawing  
  Pattern construction  
  Garment Manufacturing technology  
  Fabrics  
  Men’s Wear  
  Women’s Wear  
  Visual Merchandising  
  Fashion Merchandising  
  Textile art and design  
  Basic accounting  
  Visual Merchandising  
  Fashion Merchandising |
| **Diploma in Marine Engineering** | Ship construction  
  Marine Engine operation and maintenance  
  Auxiliary machinery  
  Electrical Equipments  
  Workshop practice (machining, welding, fitting)  
  Marine boiler operation and maintenance  
  On-board material handling and transportation  
  Control systems (pneumatic Hydraulics)  
  Naval Architecture |
| **Diploma in Food Technology** | Food processing technology  
  Quality control  
  Food & material grading  
  Process equipment  
  Food processing plant  
  Food packaging and marketing  
  Machine maintenance  
  Laboratory work (analyzing and sampling)  
  R & D |
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<tr>
<th>Diploma: Accounting</th>
<th>Diploma in Accountancy</th>
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<td>Interaction and communication</td>
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<td>Financial reports</td>
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<td>Data interpretation and management</td>
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<th>Diploma: Insurance</th>
<th>Diploma in Banking and Finance</th>
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<td>Life insurance</td>
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<p>| Financial affairs |                       |
| Counter management|                       |
| Credit handling  |                       |
| Currency market  |                       |
| Islamic banking  |                       |
| Insurance        |                       |
| Banking procedures|                     |</p>
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<th>Diploma in Marketing</th>
<th>Diploma in International Business</th>
<th>Diploma in Business Studies</th>
<th>Diploma in Secretarial Science</th>
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Store layout, arrangement of product on sale and store performance, right technique and procedures in designing store layout, arrangement of product on sale and management of cashing in retail market industry

- Produce Store Design And Layout
- Display Product On Sale
- Manage Cashiering
- Monitor Sales Forecast And Performance

Important and rules in handling customer complaints, handle customers to provide and process information in response to inquiries, concerns and requests about products and services, issues related to barrier and challenges in retail sector

- Handle Customer Inquiries
- Conduct After Sales Service
- Process Form, Application, Request
- Conduct Sales Presentation
- Close Product Sales

Fashion merchandising and consumer behaviour towards fashion, interior design, fixture and visual merchandising for store's

- Identify trends in on-site and off-site fashion retailing
- Interior store's design and fixtures
- Organize visual merchandising

Press conference, press release, speeches and by lined articles, right technique in conducting press conference and corporate social responsibility program used in retail market industry

- Conduct Press Conference
- Produce Press Release
- Produce Speeches
- Produce By Lined Articles
- Develop Corporate Social & Responsibility Program

Human resources function in organization and principles of human resource management and its importance according to real practice - staff orientation and human resources development, recruitment process and employee compensation in the real situation.

- Conduct Recruitment And Selection Process
- Monitor Staff Orientation And Development
- Manage Employee Compensation
- Evaluate Employee Performance
- Manage Industrial Relation

Process of developing purchasing plan and evaluating supplier, right technique in developing purchasing and merchandise plan and prepare documentation and report related to purchasing in retailing activities based on the standard procedure.

- Develop Purchasing Plan
- Evaluate Supplier
- Prepare Documentation And Report
- Design Pricing

Safety and health procedures and manage security elements in retailing in order to avoid loss and integrate confidently legal issues in making decision for retailing industries.

- Implement Safety And Health Procedures
- Manage Security Elements
- Identify Procedures Of Halal Certification
- Associates Legal Issue In Making Decision

Analyze the components and channels of distribution management and operation and suitable mode of transport relating to retail business environment

- Manage goods distribution
- Implement Distribution Operation
- Organize Transportation for Distribution

Inventory control and merchandise handling, handle stock inventory control, receive return, checking, marking and tagging in retail market industry.

- Perform Inventory
- Handle Receive And Return Product
- Handle Checking And Marking
- Conduct Tagging

Process of making event and function, rental process and maintaining mall facilities - the right technique and procedures to organize mall event and function, meet with local and corporate tenants in dealing with rental process and the mall layout of various functions area.

- Organizing Mall Event And Functions
- Manage Rental Process
- Review And Enhancing Mall Layout Of Various Functions Area
- Maintain Mall Facilities And Conditions
types of websites, stages of developing web and web server relating to the latest web technologies.

design web pages using suitable hypertext markup language (HTML), codes and the latest web creation software.

concepts of Hypertext Preprocessor (PHP) as a preparation in developing a dynamic website

manipulate data creatively using Structure Query Language (SQL) to produce information required by end user

concept of catalogue, marketing campaign, customer profile and order accordingly to e-commerce site.

catalogue, marketing campaign, customer profile and order using e-commerce solution software as a preparation to produce an e-commerce site.

design appropriately a conceptual database model using entity-relationship diagram (ERD).

normalized logical database design by applying normalization technique.

database application system resourcefully for database manipulation using a database management system (DBMS)

classification of e-commerce relating to the latest online business transactions

current risk and security issues associated with electronic trade and commerce to ensure secured online business transactions.

process of e-commerce transactions and electronic payment systems implemented by online business organizations in the actual markets.

Basic concepts of supply chain management and buyer-supplier relationship in supply chain activities among services and manufacturing companies

• Conduct Supplier Evaluation
• Conduct Strategic Sourcing
• Apply SCM Performance Measurement

The export import documentation using the correct procedures procedures - INCOTERMS

• Manage The Related Form For Import Activities
• Manage The Related Form Of Export Activities
• Verify Compliance With INCOTERMS
• Calculate the import and export tariff

Managing warehouse - warehouse security and safety, equipment inspection, manpower requirement and Manage Warehouse Management System (WMS).

• Conduct Warehouse Safety and Security
• Manage Warehouse Equipment
• Organise Human Resource Planning

Warehouse operation concepts, importance, functions and the logistics activities that relate to warehousing using warehouse information technology.

• Manage Receiving and Storage Goods
• Handle Material Equipment (MHE) System
• Conduct Order Picking, Marshalling And Dispatch Shipment
• Conducting Value-Added Activities

Port location, port design, port operation functions and types of cargo.

• procedures for different types of cargo
• Handle Container And Cargo Loading
• Handle Container And Cargo Unloading
• Manage Storage Area

Components and channels of distribution management in logistics and supply chain activities

• Manage Goods Distribution
• Manage Material Distribution
• Organize Transportation For Distribution

Fundamental concepts and terms of procurement in logistics and supply chain procedure

• Conduct Procurement Negotiation Activity
• Conduct Pricing Activity
• Manage Quality In Procurement Activity

Types of inventory in a warehouse - display skills in inventory control, quality control and reverse logistics

• Organise Types Of Inventory
• Conduct Inventory Planning
• Manage Reverse Logistics
Types of plans, nature of risk and basic principles relation to insurance and Takaful in operating business activities.
- Identify Takaful Plan
- Monitor Underwriting Procedure
- Process Customer Claim

Operations of Islamic Deposit Products and the application of Islamic credit and financing, types of Islamic Deposit product, Islamic Credit and financing and other types of products provided in Islamic banking operation.
- Process Deposit Application
- Manage Credit Application
- Organize Banking Services

Writing credit memorandum, procedures in credit structuring, risk and compliance, terms and conditions of financing approval and contents in financing agreement, early signals of credit problem (red flags), credit control procedures and recovery bad credit
- Check Customer Background - Quantitative And Qualitative Aspects Of Credit Assessment
- Process Customer Document
- Monitor Financing Account

Basic knowledge of risk management in Islamic financial institution, the sources of risk and the unique risk available in Islamic banking, techniques for handling risks due to risk analysis and the risk present between Islamic and conventional in banking operations
- Islamic risk management - process of Islamic risk management
- Analyze Risk in Management - credit risk, market risk, liquidity risk and operational risk in Islamic banking
- Evaluate Risk in Islamic Finance - risk analysis and representing data

Importance of the banking ethics syariah governance framework to comply with banking standard, Malaysian Code of Corporate Governance to checking the document according to Standart Operating Procedures (SOP), customer complaint and shariah requirement.
- Apply Banking Ethic - ethics in a global context from conventional and Islamic point of view.
- Implementary Regulatory Framework - Shariah Governance Frameworks and Regulatory and Supervisory Framework in Islamic Finance
- Apply Audit A Nd Compliance - Malaysian Code of Corporate and Audit and Compliance for Islamic Financial Institutions

Marketing plan by using appropriate format
- Develop To Marketing Plan and design a marketing plan
INDUSTRY PARTNER

2012

Diploma in Hotel and Catering Management

- Front office operations (manual)
- Housekeeping
- Kitchen management
- Nutrition
- Food preparation
- Food and beverage service
- Basic Accounting
- Sanitation
- Computer usage
- Front office operations (Hotel XL system)
- Laundry
- Commercial cookery
- Hospitality marketing
- Hospitality Management Accounting
- Hospitality Law
- Hospitality Strategic Marketing
- Maintenance Management
- Human Resource Management
- Small Business Management
- Hospitality Management
- Recreational tourism
- Conference and event management
- Malaysian tourism industry
- Interpersonal skills
- Eco-tourism
- Hospitality management

Diploma in Tourism Management

- Tour guide techniques
- Basic accounting
- Front office
- Hospitality marketing
- Tour operations
- Reservation and ticketing
- Computer reservation system
- Recreational tourism
- Conference and event management
- Malaysian tourism industry
- Interpersonal skills
- Eco-tourism
- Hospitality management
Food & Beverage (F&B) managers
Food Retails Managers
Restaurant Managers
Halal Auditor
Halal Executive
Halal Butcher
Entrepreneur
Quality Controller
Health Inspector/dietary controller
Chef/cook
Halal Enforcement Officer
Executive in foodservice industry
Foodservice personnel
Quality assurance personnel

AGROTECHNOLOGY & BIO-INDUSTRY

DIPLOMA IN BIOTECHNOLOGY
DIPLOMA IN ANDSCAPE HORTICULTURE
DIPLOMA IN ARGOTECHNOLOGY
DIPLOMA IN AQUACULTURE
ASSESSMENT

Generally, the assessment process divides to
- Assessment by Industry (by Industry Supervisor), and
- Assessment by Polytechnic as shown on Chart 1 below

Chart 1: Assessment distribution for industrial training

**ASSESSMENT BY INDUSTRY (60%)**

**Practical Task**
This assessment evaluated by Industry Supervisor to assess overall student performance during Industrial Training. The main aspect to be evaluated is technology literacy, communication and teamwork skill; comply with policies and procedure, ethics and skill of reporting.

**Reflective journal**
This assessment evaluated by Industry Supervisor to value all information recorded on student Reflective Journal. The main aspect to be evaluated is student reflection by all tasks given during Industrial Training and need to verify by Industry Supervisor every week.

**ASSESSMENT BY POLYTECHNIC (40%)**

**Observation**
This assessment evaluated by polytechnic lecturer to monitor the student progress during Industrial Training. The main aspect to be evaluated is effective communication, policies, procedures and regulations, professional ethics and reporting.

**Industrial Training Final report**
This assessment evaluated by polytechnic lecturer of student Final Report on Industrial Training.

**Presentation**
This assessment evaluated by polytechnic lecturer of student finding during their Industrial Training.
WHAT TO DO?

This section contains how to evaluate the student by their Industry Supervisor. Enclose here TWO (2) assessment forms:

- Appendix 1 Practical Task form (Green colour)
- Appendix 2 Reflective Journal Form (Yellow colour)

Both these forms must be completed by the Industry Supervisor. If there is more than a supervisor, only one form must be completed by any supervisor.

WHEN TO COMPLETE & SUBMIT?

Both of the form needs to complete and return back to the polytechnic by week 20th during student doing their Industrial Training.

HOW TO SUBMIT?

All completed form can be send by
- Post, OR
- Fax, OR
- Email (All the form need to be scan first)

(All the information regarding address/fax number/email address of polytechnics can be obtained from the assessment forms submitted by the polytechnics or on polytechnic website)

OR can submit both the form to students in the final weeks Industrial Training to be brought to the polytechnics.

NOTE

The attached form in this book is as a guide. For the evaluation process, Industry Supervisor asked to use the relevant form has been sent by the polytechnics. The form can also be downloaded from the web site of the polytechnics.
INSTRUCTION: Please rate each item below to reflect student’s performance.

<table>
<thead>
<tr>
<th>No</th>
<th>Item</th>
<th>CLO*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>TECHNOLOGY LITERACY (Perform hands-on tasks, usage of tools and equipment, adopt a variety of technologies, apply the knowledge gained to perform task, show development in knowledge and skills and/or think creatively and critically)</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>EFFECTIVE COMMUNICATION (Ability to acquire and understand information, carry out instructions, analyze linear and non-linear information, show appropriate non-verbal communication, communicate with employees at all levels and/or have basic negotiation skills)</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>TEAMWORK (Show positive personality traits, participate actively as a member of the team, carry out tasks in appropriate situations and/or build and maintain good relationships within the team)</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>POLICIES, PROCEDURES AND REGULATIONS (Comply with the policies and rules of the organization, job procedures and/or safety and health regulations)</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>PROFESSIONAL ETHICS (Report handed-in on time and verified by the supervisor, work independently with minimum supervision, attendance, punctuality and/or solve problems by taking the right action)</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>REPORTING (Present ideas and views and/or task reporting (Reflective Journal))</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td><strong>TOTAL</strong></td>
<td></td>
</tr>
</tbody>
</table>

*CLO = Course Learning Outcome. Kindly refer to Industrial Training Guideline (Industry Partner) for details.

Comments/recommendations

By 20th week of training, student must return the form (APPENDIX 1 & 2) to:

UNIT PERHUBUNGAN & LATIHAN INDUSTRI
Please refer to List of Polytechnic for completed address

fax
Please refer to List of Polytechnic

e-mail
Please refer to List of Polytechnic

To be completed by Student’s Supervisor

Name :
Position :
Date :
Signature :
Company/organization stamp:
INSTRUCTION: Please rate each item below to reflect student’s performance.

<table>
<thead>
<tr>
<th>NAME</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>REG. NO</td>
<td></td>
</tr>
<tr>
<td>PROGRAMME</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CRITERIA</th>
<th>CLO*</th>
<th>SCORE</th>
<th>MARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Content’s structure</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) Daily Activities</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(i) The writing format includes:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Task</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Equipment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Issues/challenges</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Solutions</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Figures/ Flowchart</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>Show extremely good understanding of the task</td>
<td>Show good understanding of the task</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Relevant use of figure and flowchart</td>
<td>Satisfactory use of figure and flowchart</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Able to identify, analyze problems and recommend effective solutions</td>
<td>Able to identify, analyze problems and recommend good solutions</td>
</tr>
<tr>
<td>Content’s structure</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) Daily Activities</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(ii) Work Process</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>Develop and organize work process well and creatively</td>
<td>Develop and organize work process well</td>
</tr>
<tr>
<td>Content’s structure</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b) Reflection</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>Relevant response to the task</td>
<td>Satisfactory response to the task</td>
</tr>
<tr>
<td>Language</td>
<td>5</td>
<td>Meaning is very clear.</td>
<td>Meaning comes across clearly.</td>
</tr>
<tr>
<td>Verification/Checking/ Monitoring</td>
<td>4</td>
<td>Verified by the supervisor and report always handed in on time</td>
<td>Verified by the supervisor and report seldom handed in on time</td>
</tr>
</tbody>
</table>

*CLO = Course Learning Outcome. Kindly refer to Industrial Training Guideline (Industry Partner) for details.

By 20th week of training, student must return the completed form (APPENDIX 1 & 2) to:

UNIT PERHUBUNGAN & LATIHAN INDUSTRI
Please refer to List of Polytechnic for completed address

Fax
Please refer to List of Polytechnic

E-mail
Please refer to List of Polytechnic

To be filled in by Student’s Supervisor

Name : 
Position : 
Date : 
Signature : 
Company/organization stamp:
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