



FINAL REPORT

INDUSTRIAL TRAINING

(ENGINEERING)

INDUSTRY:

XX

TRAINING PERIOD:

XX to XX

Prepared By:

Name:

1. APPROVED BY: SUPERVISOR (INDUSTRY)

COMMENT:

Signature:

NAME:

(Professional Stamp /if any)

POSITION:

DATE:

2. APPROVED BY: MENTOR (UTM)

COMMENT:

Signature:

NAME:

(Professional Stamp)

POSITION:

PTJ:

DATE:

3. APPROVED BY: PANEL (TFLIKP)

COMMENT:

Signature:

NAME:

(Professional Stamp)

POSITION:

PTJ:

DATE:

FINAL REPORT

(Explanation - Report base on 1 year training)

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ACKNOWLEDGEMENT

EXECUTIVE SUMMARY

1.0 INTRODUCTION

- **COMPANY BACKGROUND**

- **TRAINING JOB SCOPE**

2.0 PROFESSIONAL DEVELOPMENT OR TRAINING SCHEMES

Training Period	Training Description / Training Institution	Competencies Gained

3.0 COMPETENCY AREA A: KNOWLEDGE AND UNDERSTANDING OF ENGINEERING

Competency Element	COMPETENCY AREA A: KNOWLEDGE AND UNDERSTANDING OF ENGINEERING (25%)
A1	Broadening personal knowledge, understanding and technical skills in applicant's own and/ or allied fields of specialization
A2	Broadening personal knowledge and experience in relation to products or services engaged by applicant, possibly with a view to improvement
A3	Learning, comprehension and application of relevant engineering codes, standards, specifications and / or guidelines, especially those appropriate to local context, requirements, and application.

4.0 COMPETENCY AREA B: PRACTICAL APPLICATION OF ENGINEERING

Competency Element	COMPETENCY AREA B: PRACTICAL APPLICATION OF ENGINEERING: Application of appropriate theoretical and practical methods to the analysis, design and/ or solution of engineering problems. (Drawing & Calculation) (25%)
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B1	Review and / or identification of project requirements, problems, opportunities and / or engineering techniques.
B2	Investigations, analysis, design and development of engineering solution
B3	Implementation of design solutions or other engineering tasks, and evaluating their effectiveness.

5.0 COMPETENCY AREA C: MANAGEMENT AND LEADERSHIP

Competency	COMPETENCY AREA C: MANAGEMENT AND LEADERSHIP
Element	Responsibility, management and leadership in relation to technical, commercial and financial matters. (25%)
C1	Planning to enable effective implementation of projects or engineering tasks.
C2	Managing, budget, people and other resources for an engineering task or project
C3	Leadership of teams in the workplace, developing and assisting colleagues to meet changing technical and managerial needs.
C4	Promotion of continuous quality improvement and best practices

6.0 COMPETENCY AREA D: COMMUNICATION AND INTERPERSONAL SKILLS

Competency	COMPETENCY AREA D: COMMUNICATION AND INTERPERSONAL SKILLS
Element	Ability to work with others constructively, to explain ideas and proposals clearly and to discuss issues objectively and constructively. (25%)
D1	Effective communication in the National Language and/ or English Language with others, at all levels.
D2	Effective presentation and discussion of proposals, justifications and conclusions
D3	Personal and social skills, with awareness of diversity and inclusion issues

7.0 ATTACHMENT

7.1 Testimonial from Industry

.2 Others

LOG BOOK

INDUSTRIAL TRAINING

INDUSTRY:

XX

TRAINING PERIOD:



UTM
UNIVERSITI TEKNOLOGI MALAYSIA

XX to XX

Prepared By:

Name:

1. APPROVED BY: SUPERVISOR (INDUSTRY)

COMMENT:

Signature:

NAME OF PANEL:

POSITION:

DATE:

(Stamp)

2. APPROVED BY: MENTOR (UTM)

COMMENT:

Signature:

NAME OF SUPERVISOR:

(Stamp)

POSITION:

PTJ:

DATE:

LOG BOOK

1.0 COMPETENCY AREA A: KNOWLEDGE AND UNDERSTANDING OF ENGINEERING (1st Quarter)

Competency Element	COMPETENCY AREA A: KNOWLEDGE AND UNDERSTANDING OF ENGINEERING (25%)
A1	Broadening personal knowledge, understanding and technical skills in applicant's own and/ or allied fields of specialization

A2	Broadening personal knowledge and experience in relation to products or services engaged by applicant, possibly with a view to improvement
A3	Learning, comprehension and application of relevant engineering codes, standards, specifications and / or guidelines, especially those appropriate to local context, requirements, and application.

2.0 COMPETENCY AREA B: PRACTICAL APPLICATION OF ENGINEERING (2nd Quarter)

Competency Element	COMPETENCY AREA B: PRACTICAL APPLICATION OF ENGINEERING: Application of appropriate theoretical and practical methods to the analysis, design and/ or solution of engineering problems. (25%)
B1	Review and / or identification of project requirements, problems, opportunities and / or engineering techniques.
B2	Investigations, analysis, design and development of engineering solution

B3	Implementation of design solutions or other engineering tasks, and evaluating their effectiveness.

3.0 COMPETENCY AREA C: MANAGEMENT AND LEADERSHIP (3rd Quarter)

Competency Element	COMPETENCY AREA C: MANAGEMENT AND LEADERSHIP Responsibility, management and leadership in relation to technical, commercial and financial matters. (25%)
C1	Planning to enable effective implementation of projects or engineering tasks.
C2	Managing, budget, people and other resources for an engineering task or project

C3	Leadership of teams in the workplace, developing and assisting colleagues to meet changing technical and managerial needs.
C4	Promotion of continuous quality improvement and best practices

4.0 COMPETENCY AREA D: COMMUNICATION AND INTERPERSONAL SKILLS (4th Quarter)

Competency Element	COMPETENCY AREA D: COMMUNICATION AND INTERPERSONAL SKILLS Ability to work with others constructively, to explain ideas and proposals clearly and to discuss issues objectively and constructively. (25%)
D1	Effective communication in the National Language and/ or English Language with others, at all levels.

D2	Effective presentation and discussion of proposals, justifications and conclusions
D3	Personal and social skills, with awareness of diversity and inclusion issues

REFERENCES

EXAMPLES OF POINTS FOR THE WRITE-UP

Competency Element	Competency Area A: KNOWLEDGE AND UNDERSTANDING OF ENGINEERING
A1	<p>Broadening personal knowledge, understanding and technical skills in applicant’s own and/or allied fields of specialisation.</p> <p>Examples of activities as evidence to demonstrate this competency:</p> <ul style="list-style-type: none"> • Formal training or post-graduate study related to your role • Learning and/or developing new engineering knowledge in a different industry or role • Learning current and/or emerging technology and technical best practice in your area • Developing a broader and deeper knowledge base through research and experimentation • Learning and developing new engineering techniques and theories in the workplace
A2	<p>Broadening personal knowledge and experience in relation to products or services engaged by applicant, possibly with a view to improvement.</p> <p>Examples of activities as evidence to demonstrate this competency:</p> <ul style="list-style-type: none"> • Carrying out technical research and development • Learning, analysing and/or developing solutions involving complex, non-standard, multidisciplinary or safety-critical problems • Learning and/or developing new applications, designs, processes or systems based on new, established or evolving technology • Learning, developing and/or evaluating continuous improvement systems • Identify constraints and exploit opportunities for development and transfer of technology
A3	<p>Learning, comprehension and application of relevant engineering codes, standards, specifications and/or guidelines, especially those appropriate to local context, requirements, and application.</p> <p>Examples of activities as evidence to demonstrate this competency:</p> <ul style="list-style-type: none"> • Understanding and applying the relevant codes and standards relevant to engaged projects • Development of codes, standards, specifications and/or guidelines • Localisation of international codes, standards, specifications and/or guidelines

Competency Element	Competency Area B: PRACTICAL APPLICATION OF ENGINEERING: Application of appropriate theoretical and practical methods to the analysis, design and/or solution of engineering problems
B1	<p>Review and/or identification of project requirements, problems, opportunities and/or engineering techniques.</p> <p>Examples of activities as evidence to demonstrate this competency:</p> <ul style="list-style-type: none"> • Identifying/defining engineering problems or future needs in work place • Reviewing/identifying technical improvements to services, products, processes or systems • Preparing specifications, taking account of functional and other requirements • Establishing user requirements for solution of engineering problems • Reviewing specifications and tenders to identify technical issues and potential improvements • Carrying out technical risk analysis and identifying mitigation measures • Reviewing and selecting techniques to undertake engineering tasks. • Exploring and assessing opportunities relating to new and emerging technologies
B2	<p>Investigations, analysis, design and development of engineering solutions.</p> <p>Examples of activities as evidence to demonstrate this competency:</p> <ul style="list-style-type: none"> • Selecting appropriate investigation and research methodologies needed to undertake engineering tasks • Investigating a technical issue, identifying potential solutions and determining the factors needed to compare them • Identifying and carrying out tests or trials, and analysing and evaluating the results • Carrying out technical design, simulations, analysis or value engineering. • Preparing, presenting and deciding on design recommendations, with appropriate analysis of risk, and taking account of cost, quality, safety, reliability, accessibility, appearance, fitness for purpose, security (including cyber security), intellectual property constraints and opportunities, and environmental impact
B3	<p>Implementation of design solutions or other engineering tasks, and evaluating their effectiveness</p> <p>Examples of activities as evidence to demonstrate this competency:</p> <ul style="list-style-type: none"> • Implementing solutions to engineering tasks. This includes construction, fabrication, supervision and/or commissioning of projects in accordance to design and specifications. The implementation takes account of critical constraints, including due concern for safety, sustainability and disposal or decommissioning. • Identifying lessons learned • Ensuring that the implementation will result in the appropriate practical outcome • Evaluating existing designs or processes and identifying faults or potential improvements including risk, safety and life cycle considerations • Actively learning from feedback on results to improve future design solutions and contributing to accepted best practices

Competency Element	Competency Area C: MANAGEMENT AND LEADERSHIP Responsibility, management and leadership in relation to technical, commercial and financial matters.
C1	<p>Planning to enable effective implementation of projects or engineering tasks.</p> <p>Examples of activities as evidence to demonstrate this competency:</p> <ul style="list-style-type: none"> • Preparing budgets and associated work programmes for projects or tasks • Systematically reviewing the factors affecting the project implementation including safety, sustainability and disposal or decommissioning considerations • Carrying out a task or project risk assessment and identifying mitigation measures • Leading on preparing and agreeing implementation plans and method statements • Negotiating and agreeing arrangements with customers, colleagues, contractors and other stakeholders, including regulatory bodies • Ensuring that information flow is appropriate and effective
C2	<p>Managing budget, people and other resources for an engineering task or project.</p> <p>Examples of activities as evidence to demonstrate this competency:</p> <ul style="list-style-type: none"> • Setting up appropriate management systems • Establishing and maintaining quality standards and budget within legal and statutory requirements • Organising/coordinating/directing work teams and project activities • Managing the balance between quality, cost and time • Scheduling, monitoring and control of work progress and costs , taking appropriate corrective actions when required • Interfacing effectively with customers, contractors and other stakeholders • Gather and evaluate feedback and recommend improvements.
C3	<p>Leadership of teams in the workplace, developing and assisting colleagues to meet changing technical and managerial needs.</p> <p>Examples of activities as evidence to demonstrate this competency:</p> <ul style="list-style-type: none"> • Agreeing objectives and work plans with teams and individuals • Reinforcing team commitment to professional standards • Leading and supporting team and individual development • Assessing team and individual performance, and providing feedback • Seeking input from other teams or specialists where needed and managing the relationship • Providing specialist knowledge, guidance and input to engineering teams, engineers, customers, management and relevant stakeholders • Leading a research programme • Leading an undergraduate university programme • Developing and delivering a teaching module/course at Masters or PhD level
C4	<p>Promotion of continuous quality improvement and best practices</p> <p>Examples of activities as evidence to demonstrate this competency:</p> <ul style="list-style-type: none"> • Promoting quality throughout the organisation as well as its customer and supplier networks • Developing and maintaining operations to meet accepted quality standards • Supporting or directing project evaluation and proposing recommendations for improvement • Implementing and sharing the results of lessons learned

Competency Element	Competency Area D: COMMUNICATION AND INTERPERSONAL SKILLS Ability to work with others constructively, to explain ideas and proposals clearly and to discuss issues objectively and constructively
D1	<p>Effective communication in the National Language and/or English Language with others, at all levels.</p> <p>Examples of activities as evidence to demonstrate this competency:</p> <ul style="list-style-type: none"> • Preparing reports, specifications and other documentation on complex matters • Leading, chairing, contributing to and recording meetings and discussions • Exchanging information and providing advice to colleagues • Engaging or interacting with professional networks
D2	<p>Effective presentation and discussion of proposals, justifications and conclusions.</p> <p>Examples of activities as evidence to demonstrate this competency:</p> <ul style="list-style-type: none"> • Contributing to scientific papers or articles as an author • Preparing and delivering presentations on substantive matters • Preparing and/or presenting bids, proposals, plans, studies, etc • Leading and sustaining debates with audiences • Feeding back results of discussion to improve proposals, papers, etc
D3	<p>Personal and social skills, with awareness of diversity and inclusion issues.</p> <p>Examples of activities as evidence to demonstrate this competency:</p> <ul style="list-style-type: none"> • Knowing and managing own emotions, strengths and weaknesses • Being confident and flexible in dealing with new and changing interpersonal situations • Identifying, agreeing and working together towards collective goals • Creating, maintaining and enhancing productive working relationships • Resolving conflicts • Being supportive of the needs and concerns of others, especially where this relates to issues of diversity and inclusion