PRESENTATION ON
Route to Professional Engineer - Malaysia Experience

MYANMAR ENGINEERING SOCIETY (MES)
Presented by:
Ir. Tan Yean Chin
President of IEM
Secretary General of FEIAP

13 Jan 2017
Overview
Routes to Professional Engineer
Registration of Engineers Act

2-Tier Registration of Professional Engineers

Jurisdiction of Board of Engineers Malaysia (BEM)

Graduate Engineer

1st tier of registration

Professional Engineer (PE)

2nd tier of registration

Professional Engineer with Practicing Certificate (PEPC)

Engineering Consulting Practice (ECP)
A registered Graduate Engineer who:

1. Has passed a professional assessment examination (PAE) conducted by the Board;

2. Holds a professional qualification which the Board considers to be equivalent to the professional assessment examination conducted by the Board;

3. Is a Corporate Member of the Institution of Engineers, Malaysia (MIEM).
Route to MIEM / P Eng.

Route to Professional Engineer
By Becoming MIEM
Route to Member of Institution of Engineers Malaysia (MIEM) / Professional Engineer (PE)

A registered Graduate Engineer who wishes to become a Corporate Member of the Institution of Engineers, Malaysia (MIEM) must attend and pass the Professional Interview (PI) conducted by IEM.

The professional Interview is a peer review process comprising oral interview and essay writing.

How to go about becoming MIEM / PE?
Route to Member of Institution of Engineers Malaysia (MIEM) / Professional Engineer (PE)

- **ACADEMIC REQUIREMENTS**
  - Accredited Engineering Degree (normal route)
  - BEM Graduate Engineer
  - IEM Graduate Member

- **GRADUATE REGISTRATION**

- **TRAINING REQUIREMENTS**
  - Min 3-yrs relevant work experiences
  - **Log Book Scheme**

- **PROFESSIONAL REGISTRATION**
  - Professional Interview
  - IEM Corporate Member
  - Professional Engineer Tier 1
Route to MIEM / P Eng.

Step 1 – Have an Accredited Engineering Degree
Recognized Engineering Degree

Washington Accord (for BEM Malaysia)
* (for MES, FEIAP Engineering Education Guidelines)

- Accreditation of engineering academic programs is a key foundation for Graduate Engineers to go into the engineering practice in member countries.

- Agree that the criteria, policies and procedures used in accrediting engineering academic programs are substantially equivalent.

- In Malaysia, Engineering Programme Accreditation Manual (2012) provides these criteria, policies and procedures.
FOREIGN UNIVERSITIES

Engineering programmes are accredited by their respective Signatory Bodies such as

- **United Kingdom (UK)**
  Engineering Council, United Kingdom; [www.engc.org.uk](http://www.engc.org.uk)

- **United States of America (USA)**
  ABET, USA; [www.abet.org](http://www.abet.org)

- **Australia**
  IEAust, Australia; [www.engineersaustralia.org.au](http://www.engineersaustralia.org.au)

- **New Zealand**
  IPENZ, New Zealand; [www.ipenz.org.nz](http://www.ipenz.org.nz)
Engineering Programmes in MALAYSIAN PUBLIC & PRIVATE UNIVERSITIES are accredited by Engineering Accreditation Council (EAC) on a case by case basis (evaluated for each Engineering Programme)
Engineering Accreditation Council (EAC) Malaysia

- Engineering Accreditation Council (EAC) is the body delegated by BEM to accredit engineering degrees.

- Members of EAC comprise representatives from:
  1) The Board of Engineers, Malaysia (BEM)
  2) The Institution of Engineers, Malaysia (IEM)
  3) The Malaysian Qualification Agency (MQA)
  4) The Public Services Department Malaysia (PSD) / Jabatan Perkhidmatan Awam Malaysia (JPA).
Objective of Accreditation

The **objective** of accreditation by EAC is to ensure that graduates of the accredited engineering programmes satisfy the minimum academic requirements for registration:-

1) *with the Board of Engineers Malaysia (BEM)*, as a graduate engineer.

2) *with the Institution of Engineers Malaysia (IEM)*, as a graduate member.

*Engineering Programme Accreditation Manual 2012*
Un-Recognized Degree

REQUIREMENTS
Route to MIEM / PE

**Un-Recognized Degree Membership**

- All Unrecognized Engineering Degrees must have a **Top-Up** in order to make the degrees acceptable by the BEM.

- Top-Up can be in the form of a **“Master Degree”** in Engineering **by Coursework**.

- The Master Degree must be recognised in that the related Bachelor Degree is accredited, and that the University is recognised.

- However, unrecognized engineering degree holders can join IEM as **Incorporated Member**.
Route to MIEM / P Eng.

Step 2 – Register as
1. Graduate Engineer with BEM
2. Graduate Member with IEM
Introduction to IEM

Understanding the different roles …
… between BEM and IEM

**Board of Engineers Malaysia (BEM) = MEC**
The regulatory body for engineering practices in Malaysia, set-up by the Malaysian Government under the Registration of Engineers Act (1967) to administer and enforce the Act and its provisions to protect public interest.

**Institution of Engineers Malaysia (IEM) = MES**
A learned institution for practicing engineers in Malaysia, set up as a professional group to promote and advance engineering as well as to facilitate networking, learning and socializing.
Introduction to BEM
Board of Engineers Malaysia (BEM) is the regulatory body, set-up by the Malaysian Government under the Registration of Engineers Act (1967) -- REA to regulate engineering practice in Malaysia by administering and enforcing the Engineering Act and its provisions to protect public interest.

☑️ Only Graduate Engineers or Professional Engineers (Tier 1 and Tier 2) registered with the Board are allowed to practice engineering in Malaysia.

☑️ Engineering graduates must register as a graduate engineer with BEM within 6 months of practice.
Foreign Engineer Membership

- Foreign engineers having a “recognized engineering degree” can register with BEM as a *Graduate Engineer* – Liberalization.
- Foreign engineers registered with BEM as Graduate Engineer can apply as *Graduate Member* with IEM.
- With a “non-recognized engineering degree”, foreign engineer can apply as *Incorporated Member* with IEM.
Introduction to IEM
The Institution of Engineers, Malaysia is commonly known as the IEM.

The IEM is a Professional Learned Society formed in 1959 and registered with the Registrar of Societies.
Introduction to IEM

Primary Objectives

✓ To promote and advance the science and profession of engineering in any or all of its disciplines; and

✓ To facilitate exchange of information and ideas related to engineering.
Introduction to IEM

- IEM is a **learned society** where engineers of various disciplines from all sectors of economy come together to share experience and expertise for mutual benefits.

- It is a **platform** for the aspiring engineering students as well as practicing engineers to work together for the betterment of the engineering profession.

- IEM has **strong membership** strength spread across branches all over Malaysia.
Membership strength as in 01 July 2016 is about 42,000 members comprising of …
Membership Grades & Number
as in 01 July 2016

Members
 +/- 9,800

Fellows
 +/- 700

Honorary Fellows
 30

Associate Member
 +/- 30

Incorporated Member
 +/- 60

Affiliates
 20

Graduates
 +/- 10,200

Companions
 +/- 180

Senior Members
 +/- 20

Distinguished Hon Fellows
 2

Students
 +/- 21,000
Introduction to IEM

IEM Management Structure

COUNCIL

EX-COMM

STANDING COMMITTEE (8)

TECHNICAL DIVISION (17 TDs + 4 SIGs)

GRADUATE & STUDENT (YES)

WOMEN ENGINEER (WES)

1. Activities SC
2. E&Q SC
3. APT SC
4. PPC SC
5. Welfare SC
6. Publication SC
7. Corp. Affair SC
8. Finance SC
9. Chemical Eng. TD
10. Agri. & Food TD
11. Oil, Gas & Mining TD
12. Water Resources TD
13. Project Management TD
14. Eng. Education TD
15. Prod & Manuf. TD
16. Electronic Eng. TD
17. Marine Eng. TD
18. IT SIG
19. Public Sector Engineers SIG
20. Senior Engineer SIG
21. Consulting Engineers SIG
Introduction to IEM

IEM provides the following **SERVICES**:

- Courses, Talks and Visits;
- Educational and Social Activities;
- Publications;
- Library;
- Affinity Card Programmes;
- Insurance Schemes;
- Others.

Web site: [www.iem.org.my](http://www.iem.org.my)
Introduction to IEM

- IEM conducts **Professional Interviews (PI)** for those who wish to become Corporate Member (**MIEM**).

- **Corporate Members** carry the title “**M.I.E.M.**”

- Only Professional Engineers (**PE**) registered with **BEM** are entitled to use the designation “**IR.**” (**Ingenieur**).
Step 3 – Gain
Minimum 3 Years of Practical Training and Experience
After completing an accredited engineering degree, Graduates are required to obtain at least 3 years of practical training and experience in engineering works as are comprised within the profession of an Engineer before they are eligible to apply to sit for Professional Interview.
Route to MIEM / P Eng.

Practical Experience

Practical training and experience must be obtained under the supervision of a Professional Engineer who is in the same discipline as the candidate.

Preferably the Supervising PE can come from the same organisation.

What if there is no PE of the same discipline within the organization?
For Graduate Engineer who does NOT have a Professional Engineer (PE) of same discipline within the organization, he can:

- Arrange a Mentor of the same discipline with IEM. Graduate Members have access to a pool of MIEMs / PEs who are qualified and willing to be a Mentor under the Log-Book Training Scheme.

- Nominate a Mentor, who is typically a PE / MIEM of same discipline from another organization (preferably same industry BUT not mandatory). Ask the Mentor to register with IEM under the Log-Book Training Scheme.
Log-Book Training Scheme

- Under the Log-Book Training Scheme, the Mentor will guide, couch and verify the practical training and experience of the Graduate Engineer (Mentee).
- Mentee must meet Mentor regularly (at least quarterly) for guidance on and verification of the practical training and experience.
- Mentee must submit his log-book to IEM for endorsement once a year.
Route to MIEM / P Eng.

Practical Experience

Graduates with **international work experience**

- The “foreign” experience” MUST be certified by a Professional Engineer or **its equivalent** of the respective country; and counter-signed by a local MIEM/PE (usually the current employer).

- BEM requires the candidate to have gained at least **one year** working experience in Malaysia before he can practise.
# Route to MIEM / P Eng.

## Professional Experience

<table>
<thead>
<tr>
<th>Engineering Discipline</th>
<th>Minimum Months</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Design</td>
</tr>
<tr>
<td>Civil Engineering</td>
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<tr>
<td>Electrical Engineering</td>
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</tr>
<tr>
<td>Electronic Engineering</td>
<td>6</td>
</tr>
<tr>
<td>Mechanical Engineering</td>
<td>6</td>
</tr>
<tr>
<td>Other Engineering</td>
<td>6</td>
</tr>
</tbody>
</table>

Please indicate in the Application Form the cumulative experience in months for design and site which are related to **B2 and B3** respectively.
Route to MIEM / P Eng.

Design Experience

It means the training and experience that the candidate spends in:

- Conducting appropriate research to evaluate options, considering cost, resource, safety and environmental implications; and
- Developing concept and final engineering design of engineering solution, process, system, product, and others.
Site Experience

- It means the training & experience that the candidate spends on site implementing design solutions, monitoring & evaluating progress and outcomes, supervising engineering work, or performing operation & maintenance, etc.

- It shall not merely consist of periodical or routine site/field inspections, attending site meetings, etc.
Site Experience

It shall include activities that demonstrate applying engineering fundamentals such as trouble-shooting, in-situ problem solving, clarifying design uncertainties, proposing alternative designs, reviewing parameters, improving work procedures and standard practice, as well as conducting surveys, material testing and work sequencing.
Route to MIEM / P Eng.

Candidate Teaching In Engineering

- Is engaged in lecturing EAC approved engineering degree program(s) in IHL at the time of application;

- Has been teaching final two years of engineering degree courses for at least twelve (12) months, cumulatively;

- Has an equivalent of one year’s practical engineering experience; can be cumulative;

- In addition, has more than 3-years’ experience on (a) approved full-time post-graduate study, or (b) research for the award of a higher degree, or (c) research done while holding the lecturing post.
Route to MIEM / P Eng.

**Research Candidate**

- Is engaged in engineering research at the time of application as a prerequisite for practical experience;
- has been engaged, in a responsible position, in engineering research for a period of at least 2 years.
- Has at least five (5) years of experience made up of:
  - Responsible position in engineering research; research for the award of a post graduate Master or Doctorate degree could be considered for an aggregation of a maximum of one or two years respectively.
  - A minimum of two (2) years’ practical experience aggregated of one year on site and one year of approved relevant experience under the supervision of Corporate Member of the same discipline.
Route to MIEM / P Eng.

Step 4 – Apply to sit for Professional Interview with IEM / BEM
Currently, IEM has two types of PI Processes, namely:

- **Conventional PI Process**
- **Enhanced PI Process**

The Enhanced PI Process is implemented in parallel to the Existing PI Process. Applicants are free to choose either one of the two PI Processes.

The purpose of this session is to brief you on the Enhanced PI Process.
ENHANCED PI PROCESS
Currently, we have two PI Processes in operation. Applications have the choice to select one of the two processes for professional interview.

The purpose of this session is to brief you on the Enhanced PI Process.
Enhanced PI Process

The existing PI Process has been revised for enhancement.

The Revised PI Process is not a new PI Process; it is the enhanced version of the existing PI Process.

Thus, we call the revised version as the Enhanced PI Process and the existing version as the Conventional PI Process.
The **Enhanced PI Process** has the same structure as the Conventional PI Process that consists of two parts, namely:

**Part 1** : Documentary review of competency evidence to assess Applicant’s eligibility and readiness for Professional Interview.

**Part 2** : In-person assessment of Candidate that consists of face-to-face oral interview as well as writing two essays.
Key Enhancement (1)

1) Give PI Candidates a more objective and more balanced assessment.

Current assessment for both oral interview and written papers are mainly performed with subjective judgment of Interviewers -- individual ruler.

- Pass or fail in existing PI assessment sometimes depends on whether the Candidate is interviewed by a stringent or lenient Interviewers – luck factor.
- Candidate can fail just because of only one item assessed as not satisfactory even though other items are assessed as more than satisfactory.
Key Enhancement (1)

- Adopt the outcome based UK Standard for Professional Engineering Competence for CEng. – competency based and outcome based.
- Use standard competency descriptors as the only assessment yardsticks – one common ruler.
- Use rubrics to quantitatively mark the assessment, and minimize individual subjectivity – more objective.
- Mandate PI Interviewer to justify their assessment based on demonstrated evidence – evidence based.
2) Revise Application Form to provide evidence required by the Competency Model and make it equally friendly to all professional engineering practices.

Current Application Form is tailored more towards engineering consultancy practices; other engineering practices often find it difficult to use.

- Ask PI Applicant to give sufficient evidence of various competencies required.
- Require only one Application Form instead of two current PI Forms.
3) Prescribe a suitable format for the Training & Experience Report with the view to providing evidence for specific Competency Categories. Current Training & Experience Report often gives little information about Applicant’s competencies.

- Ask PI Applicant to understand the competencies required for MIEM.
- Mandate PI Applicant to focus on providing the evidence for the required competencies.
Competency Categories – Oral Interview

A -- Knowledge and Understanding

B -- Design & Development of Process, System, Service & Product

C -- Responsibilities, Management and Leadership

D -- Communication and Inter-personal Skills

E -- Professional Commitment
Defining Competency Categories – Oral Interview

Interviewers will probe the five competency and commitment statements as follows:

A • Ability to work with technology
B • Applying engineering methods
C • Project, process, and resource skills
D • Communication and team skills
E • Professional approach

Engineering Discipline Specific

Common Skills
Competency Elements – Oral Interview

- Each Competency Category consists of a few Competency Elements.
- There are 18 Competency Elements under the 5 Competency Categories – refer to document IEM PI 0100.
- The professional Interview will directly assess PI Candidates on all the 18 Competency Elements.
- There are four (4) levels for marking Candidate’s attainment of each competency element.
### Objective Assessment -- Rubrics

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<tr>
<th>Mark</th>
<th>Generic Statement of Attainment</th>
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<tbody>
<tr>
<td>1</td>
<td>Little or no evidence of competency</td>
</tr>
<tr>
<td>2</td>
<td>Some evidence of competence identified</td>
</tr>
<tr>
<td>3</td>
<td>Fully acceptable level of competency</td>
</tr>
<tr>
<td>4</td>
<td>Exceptionally strong level of competency</td>
</tr>
</tbody>
</table>

The **mark awarded** by PI Interviewers for each of the 18 Competency Elements will be based on the **evidence demonstrated** by the PI Candidates in the document submitted and also during oral interview.
Defining Competency Categories – **Written Papers**

**Technical Essay**

T -- Evidence of technical competencies.

W -- Evidence of writing (and reading) competencies.

**Ethical Essay**

P -- Evidence of competencies related to ethical conduct.

W -- Evidence of writing (and reading) competencies.
<table>
<thead>
<tr>
<th>IEM PI A100</th>
<th>Professional Interview Application Form</th>
</tr>
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<tbody>
<tr>
<td>IEM PI A200</td>
<td>Guidance Notes For PI Application</td>
</tr>
<tr>
<td>IEM PI A300</td>
<td>MIEM Application Form</td>
</tr>
<tr>
<td>IEM PI A401</td>
<td>Training &amp; Experienced Report (Portfolio of Evidence)</td>
</tr>
<tr>
<td>IEM PI A501</td>
<td>Guidance Notes For Training &amp; Experienced Report (Portfolio of Evidence)</td>
</tr>
<tr>
<td>IEM PI A600</td>
<td>Guidance Notes For Technical Report</td>
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</tbody>
</table>
For the Enhanced PI Process, Applicant is required to submit the following document on application:

1. **PI Application Form** (IEM PI A100)
2. **Training & Experience Report** (IEM PI 401)
3. **Technical Report**

Since the PI is for the purpose of becoming MIEM, Applicant must also submit the **MIEM Application Form** (IEM PI A300)
MIEM / PI Application

IEM PI A100

PI APPLICATION FORM
## Personal Details

<table>
<thead>
<tr>
<th>Field</th>
<th>Information</th>
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<tbody>
<tr>
<td>Title</td>
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<tr>
<td>Full Name</td>
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<td>Nationality</td>
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<td>Age</td>
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<td>IC No</td>
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<tr>
<td>Place of Birth</td>
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<td>Date of Birth</td>
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<tr>
<td>Contact Address</td>
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<td>State</td>
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<td>Postcode</td>
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<tr>
<td>Country</td>
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<tr>
<td>Home Phone</td>
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<td>Mobile</td>
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<tr>
<td>Email</td>
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<tr>
<td>Preferred Venue for Interview</td>
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<tr>
<td>Please specify your gender:</td>
<td>Male</td>
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<tr>
<td>Please specify your language:</td>
<td>English</td>
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## Current Employment

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<td>Employer</td>
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<tr>
<td>Job Title</td>
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<tr>
<td>Business Address</td>
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<tr>
<td>County/State</td>
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<tr>
<td>Postcode</td>
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<td>Country</td>
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<tr>
<td>Business Phone</td>
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<tr>
<td>Business Email</td>
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## Your Expertise

Select the main and sub sectors most relevant to you and your expertise:

**Industry**
- Consultancy & Design
- Construction & Contract
- Project Management
- Manufacturing & Production
- System Development
- Operation & Maintenance

**Academia**
- Teaching
- Research

**Others**

**Engineering Discipline :**

**Date of Registration with BEM :**

Dec 2015
### Professional Development & Training

<table>
<thead>
<tr>
<th>Training Period</th>
<th>Training Institution</th>
<th>Proficiency/Speciality</th>
<th>Accreditation Number</th>
</tr>
</thead>
</table>

Initial professional training and development after graduation, if any.

### Professional services, papers presented, patent granted, etc.

<table>
<thead>
<tr>
<th>Date</th>
<th>Title</th>
</tr>
</thead>
</table>

Professional services, papers presented, patent granted, etc.
Organisation Chart

Organisation chart generally shows the Applicant’s accountability:

✓ Show two or three levels of authority above and below your post.
✓ Where in organisation hierarchy the Applicant sits?
✓ Who does the Applicant report to?
✓ Who reports to the Applicant?
✓ Who are the peers of the Applicant?
✓ Who in the organisation chart are MIEM/PE already?
Career History

✓ Provide details of work experience in chronological order.
✓ Summarise employment history covering all posts – title, duration, employer, etc.
✓ Give main responsibilities, authority and autonomy for each post.
✓ Present evidence of competencies as required by the Competency Model.
✓ Give extended description of your current role, and other roles that demonstrate the required competencies.
✓ Keep the evidence simple and personal; specify your own achievements.
✓ Give examples of how you analyze and solve engineering problems; and/or make engineering judgment / decision.
✓ Indicate the size and complexity of tasks / projects you have direct responsibility for.
✓ Show you have attained the breadth and depth of practical training and experience for the professional interview.

Typically it should have more than 2 pages depending on the length of working
# Relevant Career History

<table>
<thead>
<tr>
<th>Date</th>
<th>(1) Job Title</th>
<th>Concise description of the work experience</th>
<th>Supporter’s Endorsement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date</td>
<td>(2) Job Title</td>
<td>Concise description of the work experience</td>
<td>Supporter’s Endorsement</td>
</tr>
<tr>
<td>Date</td>
<td>(3) Job Title</td>
<td>Concise description of the work experience</td>
<td>Supporter’s Endorsement</td>
</tr>
</tbody>
</table>

Note: (1) The information provided above will be used to carry out an initial assessment of your application. As a result of this initial assessment you may be required to provide further information to support your application; (2) The Supporters are typically the Supervising Engineers or Mentors who are professional engineers or corporate members of IEM. Please refer to the Guidance Notes on PI Application on the definition of Supporters.
**IEM PI A100 - Professional Interview Application Form**

### Declaration

I declare that I do not plagiarise in this application. I understand and consent to the information provided on this form being processed by the IEM for its sole use and that of its associated organisations, including the Board of Engineers, Malaysia (BEM) for professional interview purpose. I declare that the statements made on this form are to the best of my knowledge true, and agree that the validity of my election shall depend upon the accuracy of the particulars contained herein. I acknowledge that in the event my qualifications are found to be non-compliant to the admission criteria of the Institution due to changes in policies or oversight at the time of admission, the Institution reserves the right to withdraw my membership. In the event of my election, I agree to comply with the Constitution, By-Laws and Regulations of the Institution for the time being in force, and understand that this is a commitment to behave ethically within my profession; please refer to IEM Website.

**Signature of Candidate**

**Date**

### Supporters’ Details

I, the undersigned, support the candidate from professional knowledge as worthy of consideration for the Professional Interview and I endorse the content of this application.

<table>
<thead>
<tr>
<th>Supporter 1 (mandatory)</th>
<th></th>
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<tbody>
<tr>
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<tr>
<td><strong>Signature (sign)</strong></td>
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<tr>
<td><strong>Date</strong></td>
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<tr>
<td><strong>Address for communication</strong></td>
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<td><strong>Postcode</strong></td>
<td><strong>Phone</strong></td>
</tr>
<tr>
<td><strong>Professional Registration (if applicable) e.g. PEng, CEng</strong></td>
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<tr>
<td><strong>Membership of Engineering Institutions e.g. MIEM, F.IEM</strong></td>
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<td><strong>Membership Number (if applicable)</strong></td>
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<tr>
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</table>
All PI applications should be sponsored or supported by at least two (2) suitably qualified persons.

The Sponsors / Supporters are accountable to IEM to confirm, through direct experience, the suitability of Applicant for election / transfer to the grade of MIEM. Their Responsibilities include:

 ✓ Satisfy themselves that the Applicant has a realistic chance of becoming a MIEM.

 ✓ Certify that the submission is a reasonable and honest reflection of the Applicant’s experiences and competencies.

 ✓ Ensure that they have detailed and up-to-date knowledge of the Applicant’s work to verify information in the application.
PI Application Supporters

Practical training and experience must be obtained under the supervision of a Professional Engineer who is in the same discipline as that of the Applicant.

All PI applications should be sponsored or supported by at least two (2) suitably qualified persons.

The supporters must be a Professional Engineer registered with the BEM, or a Corporate Member of the IEM who knows the PI Applicant well and has detailed knowledge of Applicant’s work so that all the information in the application can be verified.

PE / MIEM
At least one of the two supporters must be of the same discipline as that of the Applicant, and preferably from the same organisation as the Applicant.

What if there is no PE of the same discipline within the same organization?

For those Applicants who do NOT have a Professional Engineer of same discipline within the organization, they can opt to get a Mentor under the Log Book Training Scheme.

A supporter is typically the Supervising Engineer or the Mentor of the Applicant.
The PI Application Form should contain documentary evidence to show that the Applicant has the necessary education, training, and practical experience for the Professional Interview.

It is important to write with a purpose of providing evidence to the 18 Competency Elements.

Applicants will be provided with the Guidance Notes -- IEM PI A200 on how to fill up the PI Application Form
MIEM / PI Application

IEM PI A300

MIEM APPLICATION FORM
Applying For MIEM

Applicant must apply for the Corporate Membership of IEM, viz. MIEM.

The purpose of this Professional Interview (PI) is to assess whether the Applicant has the necessary competencies to become a MIEM.

Passing the PI will earn you the status of MIEM.
# IEM PI A300 – MIEM Application Form

## 1. BUTIRAN PEMADAH

**PERSONAL PARTICULARS**

**Name:**

(Use block letters and underlined surname)

**Alamat:**

Address

**Nomor Telepon:**

(Rumah)

**Tempat Lahir:**

Place of Birth

**Usia:**

Kewarganegaraan:

**Alamat:**

Small Address:

**Email:**

**Nombor K.P.:**

(N.B. any change of address, employment telephone number must be notified promptly)

## 2. DISPLIN KEJURUTERAAN YANG DIOHON:

"Awam / Mekanikal / Elektrikal / Komputer / Chemical, etc.

## 3. SILA NYATAKAN BUTIR BUTIR PERMOHONAN SEBELUM INI (jika ada):

**Tarikh berlaku yang lama:**

(Date of previous interview)

**Sebab-sebab tidak berjaya:**

Tidak memenuhi kelayakan menduduki Tamuusaha Profesional

**Reasons for unsuccessfull:**

Unable to meet the requirement to sit for the Professional Interview

## 4. NOMBORAHLI SISWAZAH IJM (jika ada):

*IERM GRADUATE MEMBERSHIP NUMBER:*

## 5. SAWA SERTAKAN YURAN TEMUDUGA PROFESIONAL:

**RM150.00 untuk Alihi Siswaah IJM**

**RM300.00 for Graduate Member of IJM**

**RM400.00 untuk bukan ahli IJM**

**RM500.00 for Non member of IJM**
The Personal Data Protection Act 2010

With the enforcement of the Personal Data Protection Act 2010 from 15 November 2013, we would like to inform you that your personal data provided to the Institution will only be posted in the IEM Directory both online and printed, with your consent. Please note that IEM ensures that your consent is received before we proceed to publish your personal data in the abovementioned channels of communication.

In addition, you have the prerogative to determine the information/personal data to be published by indicating your consent in the members’ homepage in the IEM website. You should also check the records in the members’ homepage to ensure that the personal data recorded is accurate, complete and up-to-date. Please log-in to your homepage in the MyIEM portal at http://www.myiem.org.my.
MIEM / PI Application

IEM PI A401

TRAINING & EXPERIENCE REPORT (PORTFOLIO OF EVIDENCE)
The Training & Experience Report (Portfolio of Evidence) must be submitted together with the PI Application Form.

- Applicant is required to provide a portfolio of evidence to show adequacy of competence in all Competency Categories A, B, C, D and E as required for MIEM/PE.

- Applicant may attach other relevant document to support the portfolio of evidence if deemed necessary.

- Typically, each Competency Category should have about 500 words, excluding appendices / attachments.
Training & Experience Report (Portfolio of Evidence)

- Revision with resubmission date (Rev/Date) is to facilitate easy checking in case there is a resubmission.
- Supporters are required to endorse the portfolio of evidence and the supporting documentation.

Applicants will be provided with the Guidance Notes – IEM PI A501 on how to fill up the Training & Experience Report (Portfolio of Evidence).
A. Use a combination of general and specialist engineering knowledge and understanding to optimise the application of existing and emerging technology.

<table>
<thead>
<tr>
<th>Evidence of Your Competence on Competency Category A</th>
<th>Revision Date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**About 500 words**

<table>
<thead>
<tr>
<th>Declaration of The Candidate</th>
<th>Name : Signature :</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Declaration of The Supporter</th>
<th>I am confident that the evidence described above is a true record of the competencies that have been demonstrated by this Candidate. Name: Signature:</th>
</tr>
</thead>
</table>
MIEM / PI Application

IEM PI

TECHNICAL REPORT
**Technical Report**

**Applicant** will be required to submit two (2) copies of Technical Report together with the PI Application Form.

- The Technical Report shall demonstrate that the Applicant has attained the engineering knowledge, understanding, and application in his engineering discipline or expertise area at the level necessary to underpin the technical competencies required for MIEM/PE.

- Applicant can only proceed to sit for the Professional Interview provided that the Technical Report has been assessed to be satisfactory.
The Technical Report will be evaluated to ascertain:

✓ The depth of technical competence in Competency Categories A and B.

✓ Adequacy of the technical profile as a whole whether the Applicant is technically competent to sit for Professional Interview.

Generally the existing guidance for Technical Report under the Conventional PI Process is applicable.
The Technical Report typically has 4,000 – 6,000 words, excluding appendices and/or attachments. The content must be technical in nature. A pure management study is not acceptable.

Applicants will be provided with the Guidance Notes – IEM PI A600 on Technical Report.
Route to MIEM / PE

Technical Report

One (1) copy of the Technical Report printed on A4 paper shall be submitted with supporting sheets, calculations, tables, charts, diagrams and/or drawings duly certified.

This Report shall include one or more of the following:

- Design Work
- Feasibility Study
- Research and Development Work
- Operations and Maintenance Work
- Other Engineering Work
Certification of Document

Every drawing and document (supporting sheet, calculation, table, chart, and diagram) wherever relevant is to be signed by the **Supporter**, namely **Supervising Engineer or Mentor** that these are the works of the Candidate. If only a portion of the Documents has been prepared by the Candidate, this must be clearly indicated.

It is essential that the drawings and document submitted shall be the work of the Candidate in the ordinary course of his **permanent or long-term contractual employment**.
Rewarding - Enhanced PI Process

- PI Applicants might have to spend **a little more time** to write the evidence for their practical experience; but it will be **rewarding** – **why**?

- No Interviewers can fail a PI Candidate who has **demonstrated sufficient evidence** relating to the required competence elements in the submitted document as well as in the oral interview and essay writing.

- For those Applicants who do not have evidence to show the required competencies, they may try their luck through the conventional process.
Suppose that the IEM PI A100 Form, the IEM PI A401 Form, and the Technical Report are duly submitted and accepted:

- The PI Board (IEM) will assign two suitably qualified and trained MIEM/PE as Interviewers to conduct the professional interview.
- The IEM Secretariat will coordinate with the Interviewers and the Candidate on the date, time and venue for the professional interview.
Professional Interview
What to Expect
Once the applicant is assessed to be eligible and ready to sit for the professional interview, his **status** changes from Applicant to Candidate.

The format of Professional Interview shall consist of two parts:

- **The Oral Interview**
- **The Written Examination (Essay Writing)**

Candidate must complete the two parts in order to satisfy the Professional Interview’s requirements.
While there is a need to be flexible in the interview, the format is typically arranged as follows:

- Introduction
- 15 Minute Presentation by Candidate
- 60 Minutes Q&A Session
- Opportunity for Final Evidence
- Conclusion
The Candidate will have to give a 15 minutes presentation at the start of oral interview.

The presentation format is your choice. This may involve one or more of the following:

- A computer-based presentation such as PowerPoint
- A paper based presentation
- A verbal presentation without any other aids.

The Candidate is required to bring three paper copies of his presentation materials to the interview.

The Candidate can discuss with the Secretariat to help arrange the use of visual aids for his presentation.
The purpose of the presentation is to provide the Candidate with the opportunity to introduce himself, give an indication of the work he has been involved in, highlight the areas of the work deemed important, and give some appropriate examples.

The content of the presentation should be based on a piece of work or project from the Candidate's portfolio of evidence that can best demonstrate Competency Categories A and B. This should be concise, enough to give key points of personal technical contribution to the work or project presented.
Q & A Session

- Interviewers will generally use the career history of your application form as an agenda for the interview. They will encourage you to talk about your experience in chronological order to draw out evidence of competence during the discussion.

- You should be prepared to explain the technical content of your work as the Interviewers may probe specific competence areas.

- You should also be prepared to expand other aspects of your work including leadership & management, communication & interpersonal skills, professional commitment, etc.
Q & A Session

- Matters related to commercial sensitivity or governed by the Official Secrets Act are unlikely to be an essential part of the interview. You will not be expected to divulge them.

- Interviewers will normally cover the full range of competencies by the end of the Oral Interview.

- They will ask questions in a clear and concise manner. You will have to make sure that you understand the questions first before attempting to give your answer.
Opportunity for Final Evidence

At the end of the Oral Interview, you will be given an opportunity to:

- Raise any additional points of importance;
- Re-examine any area(s) not covered adequately;
- Give any evidence which you feel may help your case;
- Ask any questions you may have.
At the end of the Oral Interview, Candidate should proceed to the second part of the Professional Interview, namely the Written Examination.

Written Examination consists of two sections.

- Section A is on technical topics.
- Section B is on Code of Professional Conduct.

Improve your writing skills !?
Written Examination

Section A

- Interviewers will typically set two questions, of which the candidate chooses one to answer.

- The set questions are typically related to the technical report or portfolio of evidence on Competency Categories A and B submitted by the Candidate.

- It is intended to test candidate’s technical knowledge on the technical subjects on which he has gained substantial experience.

- Time to complete Section A paper is 1.5 hours.
Written Examination

Section B

- Interviewers will typically set two questions, of which the candidate chooses one to answer.
- The set questions are typically chosen from the official list of printed questions related to the IEM Regulations on Professional Conduct,
- It is intended to test how the Candidate thinks about the role of the engineer in society vis-à-vis the Regulations on Professional Conduct.
- Time to complete Section B paper is 1.5 hours.
Conducting Written Examination

- Candidate is required to answer the questions in both sections A and B in writing by hand, using a separate answer book for the essay in each section.

- Candidate is not allowed to bring in any form of reference materials, nor use electronic devices with content accessibility such as note book, portable computer or mobile phone during essay writing.
Preparing for Interview

- The best way to prepare for the professional interview is to review your Application Form, Portfolio of Evidence Form, and Technical Report.

- Identify and determine which of your experiences best demonstrate the required range of competencies. Highlight your personal contribution.

- You will receive Guidance Notes (IEM PI C100) on how to prepare for the professional interview when you are informed that IEM has accepted your application to sit for professional interview.
Step 5 – Register as Professional Engineer
From MIEM to PE

- Passing the PI through the Enhanced Process will Earn you the Corporate Membership of IEM viz. the status of MIEM.

- Gaining MIEM will enable you to fulfil the main pre-requisite to apply to BEM for registration as a Professional Engineer (PE) – Tier 1.

One Year Catch!
Route to MIEM / PE

Becoming MIEM First

Upon passing the Professional Interview, the candidate is eligible to become MIEM by making the payment.

✓ Transfer (IEM > 2 years):
  RM100 + RM100 + RM130 (annual fee)

✓ Transfer (IEM < 2 years):
  RM250 + RM100 + RM130 (annual fee)

✓ Election:
  RM350 + RM100 + RM130 (annual fee)

All Fees are subject to 6% GST.
To qualify as PE Tier 2 or a Professional Engineer with Practicing Certificate (PE with PC), the Candidate must:

☑ Be a Professional Engineer (PE Tier 1) in good standing.

☑ Pass Professional Competency Examination (PCE), which is conducted by BEM.

The fees for PCE consist of RM100 (Processing fee) + RM1,000 (Examination Fee)
Route to MIEM / PE

BEM REQUIREMENTS

After Becoming a Registered PE
Route to MIEM / PE

BEM Requirements

After 1st Jan 2006, all registered PEs have to fulfill the BEM’s Continuing Professional Development (CPD) requirements in order to maintain the PE status.

Note that the new proposed CPD Hours per year are 25 and 50 CPD Hours for both PE Tier 1 and PE Tier 2 respectively.
Route to Member of Institution of Engineers Malaysia (MIEM) / Professional Engineer (PE)

ACADEMIC REQUIREMENTS

- Accredited Engineering Degree (normal route)
- Foreign Engineer **
- Unrecognized Engineering Degree

GRADUATE REGISTRATION

- BEM Graduate Engineer
- IEM Graduate Member

TRAINING REQUIREMENTS

- Min 3-yrs relevant work experiences
- ** Log Book Scheme

PROFESSIONAL REGISTRATION

- Professional Interview
- IEM Corporate Member
- Professional Engineer Tier 1
- Professional Competency Examination
- PE with PC Tier 2

- Continuing Professional Development

** Foreign practicing engineer with recognized engineering degree can now register with BEM.
Conclusion

Any questions?

Look forward to your application using Enhanced PI Process
Acknowledgement:

The powerpoint slides are from presentation by

Ir. Lee Boon Chong,

Vice President of IEM

Chairman of Examination and Qualification Standing Committee of IEM.
Thank you.

Q&A

Presented by:
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