PRESENTATION ON
Route to MIEM and P.Eng.

8th April 2016

Universiti Teknologi Malaysia
Dewan Seminar, Menara Razak,
Jalan Yahya Petra, 54100 Kuala Lumpur

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This is a Presentation of
THE INSTITUTION OF ENGINEERS
MALAYSIA (IEM)
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

** Foreign practicing engineer with recognized engineering degree can now register with BEM.
Route to MIEM / P Eng.

Step 1 – Have an Accredited Engineering Degree
Recognized Engineering Degree
vis a vis WASHINGTON ACCORD

The Washington Accord, signed in 1989, is an international agreement among bodies responsible for accrediting engineering degree programs.

The Accord recognizes the substantial equivalency of programs accredited by those bodies and recommends that graduates of programs accredited by any of the signatory bodies be recognized by the other bodies as having met the academic requirements for entry to the practice of engineering.
FOREIGN UNIVERSITIES
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)
Route to MIEM / PE

Engineering Programmes in MALAYSIAN PUBLIC & PRIVATE UNIVERSITIES are accredited by Engineering Accreditation Council (EAC) on a case by case basis
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
Route to MIEM / P Eng.

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)**
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)**
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
Route to MIEM / P Eng.

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 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.
Route to MIEM / P Eng.
Registration with BEM

- Graduate Engineer
- Professional Engineer (carry the title “Ir.”)
- Professional Engineer with Practising Certificate
- Accredited Checker (structural and geotechnical)
- Engineering Technologist
- Inspector of Works.

For more details
Web site: www.bem.org.my
Foreign Engineer Membership

- Foreign engineers with a “recognized engineering degree” can register with BEM as a *Graduate Engineer*.

- 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
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 March 2016 is about 39,000 members comprising of …
Membership Grades & Number as in 01 March 2016

- **Members**: +/- 9,300
- **Fellows**: +/- 700
- **Honorary Fellows**: 30
- **Senior Members**: +/- 20
- **Companions**: +/- 180
- **Graduates**: +/- 9,200
- **Affiliates**: 20
- **Incorporated Member**: +/- 60
- **Associate Member**: +/- 30
- **Distinguished Hon Fellows**: 2
- **Students**: +/- 20,000
Regional Branches of IEM

**Perlis & Kedah**  
(+/- 2130 members)

**Penang**  
(+/- 1960 members)

**Perak**  
(+/- 2960 members)

**HQ (KL & Selangor)**  
(+/- 15,700 members)

**Negeri Sembilan**  
(+/- 1470 members)

**Melaka**  
(+/- 1170 members)

**Kelantan**  
(+/- 1730 members)

**Terengganu**  
(+/- 1370 members)

**Pahang**  
(+/- 1410 members)

**Southern (Johor +)**  
(+/- 4190 members)
Regional Branches of IEM

Miri
(+/- 460 members)

Sarawak
(+/- 2,950 members)

Sabah
(+/- 1,800 members)
Introduction to IEM

IEM Management Structure

COUNCIL

EX-COMM

STANDING COMMITTEE (8)
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

TECHNICAL DIVISION (17 TDs + 4 SIGs)
1. Mechanical Eng. TD
2. Electrical Eng. TD
3. Civil & Struc. Eng. TD
4. Building Serv. TD
5. Geotech. Eng. TD
6. Highway & Transp. TD
7. Tunneling & U/G TD
8. Environmental TD
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

GRADUATE & STUDENT (YES)

WOMEN ENGINEER (WES)
Types of IEM Membership include:-

- **Student Member** – open to all engineering students.
- **Graduate Member** – open to all engineering graduates who are “registered with BEM”.
- **Incorporated Member** – open to engineering graduates with unrecognised engineering degree. (Not listed as accredited degree by BEM/IEM)
- **Associate Member** – open to graduates with recognised engineering diploma or equivalent qualification from a polytechnic /college
Introduction to IEM

- **Companion** - open to all practicing engineers “registered with BEM” who have not less than 8 years of experience in engineering.

- **Member** – open to experienced engineers for election as or transfer to Corporate Membership (MIEM) that leads to Professional Engineer (PE) status.

- **Senior Member** – open to MIEMs with not less than 15 years experience.

- **Fellow Member** – open to MIEMs who satisfy the criteria for upgrading to grade of Fellow.

- **Honorary Member** – conferred to distinguished persons who have contributed to engineering profession.
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)
The close co-operation between the BEM and the IEM has resulted in the recognition of the M.I.E.M. as satisfying the criterium for P.Eng registration with the BEM.
Route to MIEM / P Eng.

Step 3 - Gain minimum 3 Years of Practical Experience
Route to MIEM / P Eng.

RER 1990 (2015)
REQUIREMENTS
Route to MIEM / P Eng.

Practical Experience

The Graduate Engineer must undergo:

i. at least two years of general training that will provide a sound basis for professional development; and

ii. at least one year of professional career development and training providing wide exposure to the various managerial and technical expertise in engineering practice.
Route to MIEM / P Eng.

Practical Experience

- Where at least one year of the training must be obtained in Malaysia under the supervision of a Professional Engineer in the same branch of engineering.

- Where the experience is obtained outside Malaysia, the supervision must be under an engineer acceptable to the Board.
Route to MIEM / P Eng.

IEM REQUIREMENTS
Practical 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.
Practical Experience

Practical training and experience must be 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?
Institution of Engineers

Malaysia

Route to MIEM / PE

Log-Book Training Scheme

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.
Route to MIEM / PE

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.
Route to MIEM / P Eng.

IEM REQUIREMENTS

Conventional PI Process

Under the IEM Conventional PI Process, there are requirements in terms of time duration specifically for obtaining practical experience in design and site under various engineering branches / disciplines.

Note that these are input-based requirements.
Professional Experience

For **Civil Engineering**, candidates must obtain professional experience as follows :-

- Minimum **twelve months** of design experience.
- Minimum **twelve months** of site experience.
Professional Experience

For **Electrical Engineering**, candidates must obtain professional experience as follows:

- ✔ Minimum **twelve months** of design experience.
- ✔ Minimum **six months** of site experience.
Route to MIEM / P Eng.

Professional Experience

For Electronic Engineering, candidates must obtain professional experience as follows :-

- Minimum six months of design experience.
- Minimum twelve months of site experience.
Route to MIEM / P Eng.

Professional Experience

For **Mechanical Engineering**, candidates must obtain professional experience as follows :-

- Minimum **six months** of design experience.
- Minimum **twelve months** of site experience.
Professional Experience

For other Engineering Disciplines, candidates must obtain professional experience :-

- Minimum six months of design experience.
- Minimum six months of site experience.
Design Experience

It means the period, in months, of training and experience that the candidate spends in planning, managing and executing design work, feasibility study, or research and development work, under a Supervising Engineer.
Route to MIEM / P Eng.

Site Experience

- It means the period, in months, of training and experience that the candidate spends in the site or field either supervising engineering work, conducting research and development work, or performing operation & maintenance work.

- It shall not merely consist of periodical or routine site/field inspections, attending site meetings, etc.
Route to MIEM / P Eng.

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.

IEM REQUIREMENTS
Enhanced PI Process

Under the IEM Enhanced PI Process, the emphasis is on **outcome-based measures** in terms **professional engineering competencies** as demonstrated by the **evidence**.

The Enhanced PI Process does not emphasize the input-based requirements in terms of time duration for design and site.
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
Two PI Processes

Currently, IEM has two types of PI Processes, namely:

✓ Conventional PI Process (Existing)

✓ Enhanced PI Process (Revised)

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

CONVENTIONAL

PI PROCESS
MIEM / PI Application

IEM PI FORMS

IEM / PI (1) and IEM / PI (2)
## PERMOHOKAN MENJADI AHLI KORPORAT

**APPLICATION FOR ELECTION AS CORPORATE MEMBER**

**PART A**

1. **BUTIRAN PEREBADI**

   | Name and Title: | (Nama dan jawatan:)
   |-----------------|------------------
   | First Name(s):  | (Nama depan:)
   | Middle Name(s): | (Nama tengah:)
   | Last Name:      | (Nama belakang:)

2. **Alamat Tempat**

   | Address: | (Alamat:)
   |----------|----------
   | City:    | (Bandar:)
   | State:   | (Negeri:)
   | Postcode:| (Poskod:)

3. **Identifiers**

   | National ID: | Nombor Kewarganegaraan:
   |--------------|------------------

4. **Contact Details**

   | Name: | (Nama:)
   | Email:| (E-mel:)
   | Phone:| (Telefon:)

**PART B**

2. **KEDUDUKAN SEMASA**

   | Position: | (Jawatan:)
   |-----------|---------

3. **LATAR BELAKANG PENDIDIKAN**

   | Name of University College or Institution: | (Nama Universiti/Politeknik/Selatan atau Menengah Lestar:)
   | Degrees: | (Derajat:)
   | Date of Graduation: | (Tarikh Pencapaian:)

**PART C**

2. **KERJASAMA**

   | Name of University College or Institution: | (Nama Universiti/Politeknik/Selatan atau Menengah Lestar:)
   | Degrees: | (Derajat:)
   | Date of Graduation: | (Tarikh Pencapaian:)

**Implementation Date:** September 2007
MIEM / PI Application

Form IEM/PI(1)

- **IEM/PI(1) Form** is used in applying to sit for [Professional Interview](#) for election as or transfer to Corporate Member of IEM.

- Complete the IEM/PI(1) application form in full with correct details of contact mailing addresses and telephone numbers.

- Ensure that the signatures on this form are original.
1. Proposer and 2. Seconder

Indicate discipline

Choice of language
Ensure that this application form is signed by a Proposer and a Seconder, one of them MUST be either a “Fellow” or a “Member” with IEM for more than ten (10) years. However, they DO NOT have to be in the same engineering discipline as the applicant.

Indicate the language and discipline that you wish to be interviewed in.
Submit this form together with the PI fee.

RM212 for Non-Graduate Member of the IEM.

RM159 for Graduate Member of the IEM.
Detailed Work Experiences

D1. Design
D2. Site / Field
D3. Planning / Management
D4. Other Engineering Works
D5. Post Graduate Studies
Note that the total period is to be stated in terms of **months** and should be counted from the **date of graduation** of first engineering degree, assuming but not mandating that the applicant has registered with BEM as a graduate engineer for at least three years.

Ensure that description of practical training and working experience MUST be **clear, concise and properly categorized into** D1, D2, D3, D4 & D5 as per the format given.
Signature of at least one Professional Engineers (PE) who is:

a. of same discipline; within the same organization

b. The Mentor
Note that pages 3 and 4 should be endorsed by two (2) supervising engineers, at least one of them is a PE / MIEM of the same discipline and within the same organisation. (the Proposer / Seconder on Page 1 can sign if they meet the requirements).

Ensure that the date of your declaration MUST be after the dates of signatures of your Proposer and Seconder.

Submit one (1) set of Training & Experience Report together with IEM/PI(1) Form (01 June 2012).
Suppose that the IEM/PI(1) Form and the Training & Experience Report are duly submitted and accepted:

✓ The PI Board (IEM) will assign a suitably qualified and trained MIEM/PE as **Principal Interviewer** to conduct the professional interview.

✓ The Principal Interviewer will nominate the Second Interviewer for the professional interview.
The Principal Interviewer will notify the PI Candidate of the timeline to submit the IEM/PI (2) Form together with following documents:

- **Training and Experience Report** on detail chronological work experience and training – 1 set.
- **Technical Report / Drawings** on planning, design and execution of “project” or “operations and maintenance” work – 1 set.
INSTITUT JURUTERA MALAYSIA (IJM)
The Institution of Engineers, Malaysia (IEM)
Bengkel Ingenieur, Lek 63, Jalan 2/34, Petaling Jaya, Selangor 46100, Malaysia.
Telephone: 03-76989331/32 / 76889280 / 76885080 Email: office@ijm.org.my Fax No: 03-7571778

TEMUDUGA PROFESIONAL - BORANG PERAKUAN DAN FENGESAHAN DOKUMEN UNTUK TEMUDUGA

Nota Pemilihan: Persyaratan yang memandangkan Borang ini (masa lalu Asli Institusi jurutera Malaysia dan dilarang dicurah yang cenderung dengan pemborong) perlu dilengkapi dalam bentuk bentuk tertanggung yang mempunyai bahawa bahawa bahasa bahasa / dokumen yang diperlukan telah dilipat dikeluarkan oleh pemborong Associate Pemudah.

Assurance Note: The Engineer signing this Form must be a Corporate Member of the Institution of Engineers, Malaysia and the same disciplines is required that be in place for confirming that the drawings/sketches are so submitted have been executed by the candidate in the ordinary course of his employment.

* (a) Saya povau rasai yang tidak berkenan.
* (b) Saya povau kesah ini adalah salah dalam bentuk foto atau laporan ditandatangani oleh penubuh asal, maka Mothikan / Jurutera diberhentikan juga menandatangani selain yang ditandatangani.
* (c) Penerima atau maksud ini adalah salah dalam bentuk foto atau laporan ditandatangani oleh penubuh asal, maka Mothikan / Jurutera diberhentikan juga menandatangani selain yang ditandatangani.

Nama Pemudah: ____________________________
Profesional rasah / talah "Selat" dibawah penyelenggaran saya dalam jawatanku.

| Darai | Ia |

Saya telah menyertai dan menandatangai Lahan "**Dan** / **An** * Dokumen* seperti tercatat dibawah yang ditandatangani oleh pemudah untuk Peraturan.

[Signature]

KENTAYSAN LUKISAN "**Dan** / **An** *DOKUMEN* DESKRIPSI DOKUMEN "**Dan** / **An** *DOKUMEN*"

I. PENGESAHAN LUKISAN / DOKUMEN ASAL OLEH MAJIKAN / JURUTERA

Saya mengesahkan bahawa lukisan / foto * adalah dokumen asal / tanda dengan pisau penawar yang dibuat oleh penubuh tepat seperti.

| Tarikh: |

Nama Majikan: ____________________________
Nama Engineer: ____________________________
Jawatan: ____________________________
Posisi: ____________________________

Saya mengesahkan bahawa laksana / foto * terdapat di dalam laksana:

| Tarikh: |

Nama Majikan: ____________________________
Nama Engineer: ____________________________
Jawatan: ____________________________
Posisi: ____________________________

Implementation Date: September 2007
Submit **IEM/PI(2)** upon notification or request by the Principal Interviewer, together with **two types of reports** viz:

- One set of Training and Experience Report;
Submission of Reports – Important Notes

- Many candidates submit documents that do not meet the criteria. The resubmission will take up a lot of time and cause delay;

- In order to have your application processed promptly, ensure that all required documents are submitted and forms completed according to instructions.
Preparation of Reports

Two types of reports are required to be prepared and submitted:

✓ Training & Experiences Report
✓ Technical / Project Report
Route to MIEM / PE

Training & Experience Report

✔ Submit two (2) copies of the Training & Experience Report printed on A4 paper.

✔ Provide a detailed description of the Candidate’s engineering training and experience throughout his career. Typically, it has 2,000 to 4,000 words.

✔ Summarise in chronological order, the employment records inclusive of the dates of each position held. Explain precisely the positions that the Candidate has occupied and the roles and responsibilities assigned.
Training & Experience Report

- Deal fully with the tasks on which he has been employed -- design, construction, site, operations and maintenance, manufacturing, teaching or research.
- Elaborate on any subject / expertise area in which the Candidate has specialized, or obtained exceptionally good experience.
- Elaborate on any special problems the candidate had encountered, explaining how they were dealt with.
- Indicate the size and cost of the works; not an inventory of works.
**Route to MIEM / PE**

**Training & Experience Report**

- Categorise precisely the total time the Candidate has spent on design (D1), field/site work (D2), planning and management (D3), other engineering works (D4), and post-graduate studies (D5).

- Throughout the Report, reference should be made to the Candidate’s employer or immediate superior under whom he/she has served, giving the name, designation, professional affiliation and stating their membership grade, if any.
Training & Experience Report

Training & Experience Report should be verified or certified by a Professional Engineer (PE) or MIEM:

- Who is of the same discipline within the same organization; or

- Who is the Mentor of the Candidate under the IEM Log-Book Training Scheme if there is no PE / MIEM within the organization.
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
Route to MIEM / PE

Technical Report – Design Work

✓ At least two (2) but not more than four (4) working drawings of appropriate readable scale; and

✓ Detailed design or engineering analysis / calculations relating to one or more of the candidate’s own submitted drawings; and

✓ Specifications which candidate has contributed to or executed in the course of design or filed work; and

✓ One set of Bill of Quantities (BQ), comprising abstract and take-off sheets relating to one or more of the submitted drawings, whether or not prepared by the Candidate.
Technical Report – Feasibility Study

The feasibility study should involve one or more of the following as part of the study:

- Functional and economic comparison of preliminary designs of an engineering system;
- A comprehensive report of a major engineering project;
- A system design of a major engineering work.
Technical Report – Feasibility Study

Document should include the following:

✓ At least one relevant **drawing** that conveys essential features and details of a structure or system;

✓ At least three **sketches** that contain sufficient details to enable a draughts person to work them up into conceptual tender drawings without further guidance;

✓ Preliminary stress, system or other pertinent analysis;

✓ Bill of Quantities, cost /economic analysis as appropriate;

✓ Specifications to which candidate has contributed for subsequent design and field execution.
Route to MIEM / PE

Technical Report – R & D Work

✓ Description of the R&D work detailing the planning, execution (methodology) and deliverables of the work that clearly demonstrate sound application of engineering principles;

✓ Details of progressive pilot or prototyping work from computer and/or laboratory models shall also be submitted;

✓ The work actually carried out by the Candidate, appended with any engineering document including drawings produced by him/her;

✓ A critical appraisal of the design on any research experiments or systems which may or may not be the work of the Candidate may be included.
Route to MIEM / PE

Technical Report – O & M Work

✓ A detailed description of the operations of the plant or system together with the maintenance schedule, which the Candidate has formulated or designed;

✓ In the submission, the Candidate should clearly indicate his contribution which would demonstrate a sound understanding of the engineering principles and application.

✓ A critical appraisal of the design of the engineering system which may or may not be the work of the Candidate should be included.

✓ Details of modifications made to the existing system which are the work of the Candidate may also be submitted.
Certification of Document

✓ Every drawing and document (supporting sheet, calculation, table, chart, and diagram) wherever relevant is to be signed by the Supervising Engineer or Mentor who must also certify on Form IEM/PI (2) 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 and certified.

✓ 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.
Route to MIEM / PE

Professional Interview

Requirements

1. Attend an Oral Interview.
   ✓ Principal interviewer will normally set the date / time and venue.

2. Write 2 Essays - after the Oral Interview
   ✓ One related to the submitted Technical Report.
   ✓ One on Code of Ethics (chosen from listed topics)
Oral Interview

Two senior corporate members will interview the candidate regarding the following:

- Adequacy of training and experience.
- Adequacy of technical competency - understanding and application of engineering fundamentals.
- Skills related to design, site, planning, management, communication, project, contract, risk etc.
- Personal attitude and maturity related to professional responsibilities, code of ethics etc.

It normally takes about 45 – 60 minutes.
Oral Interview

The **Oral Interview** is intended to assess Candidate’s:

- **Design Experience** - Understanding with full participation
- **Site/Field Experience** - Degree of exposure and effective participation
- **Management Experience** - Capability to organise assignment and accept responsibility
- **Engineering Application** – Resourcefulness and ingenuity in giving solution with sound fundamentals
- **Communication Skill** - Ability to communicate verbally, clarity in speech
Route to MIEM / PE

Oral Interview

- **Maturity of Thought** - Development of professionalism, ability to focus on material issues rather than personal and petty matters

- **Professional Responsibility** - Capability to accept professional responsibility and accountability, not passing the buck and blame others

- **Ethical judgment in the conduct of works** – Integrity and good governance

- Awareness of engineering **sustainability, health and safety issues**
Oral Interview

The Candidate will be required to show that he:

- Can apply in practice, the theory of at least one of the branches of engineering science; and

- Has acquired an understanding of the fundamental processes of research, investigation, planning, analysis, design and construction wherever relevant by actually contributing to these processes in connection with an engineering research or project, whether or not it is brought to conclusion or fruition.
Essay Writing

✓ **Two essays** to be completed within 3 hours.

✓ **Section A**: Basic engineering typically related to candidate’s submitted Reports / Drawings.

✓ **Section B**: Ethic typically related to the 13 topics related to IEM & BEM Regulations on Code of Professional Conduct.
Section A - 1 ½ hour

- The Interviewers normally set two questions, of which the Candidate chooses one to answer. The time allowed for answering this question is 1 ½ hour.

- The essay questions are typically related to the technical aspects of the reports submitted by the Candidate. It would test Candidate’s knowledge on the subjects in which he has gained substantial experience.

- Points put forth by the Candidate should show sound engineering basics and professionalism.
The Interviewers would choose two questions from the list of 13 printed questions on the IEM Regulations of Professional Conduct, of which the Candidate chooses one to answer. The time allowed is 1½ hour.

The Candidate will be expected to demonstrate that he has good understanding of the professional code of conduct and the role of engineer in society vis-à-vis the Regulations of Professional Conduct.

Ethical judgments put forth by the Candidate should be supported by sound and cogent arguments.
Essay Writing

- Understand the question clearly and answer with suitable contents and relevant examples.
- Present the answer with good structure, heading and paragraphing as well as conciseness, coherence and cohesion.
- Write the answer legibly with good grammar, lexicon, spelling, and punctuation.
MIEM / PI Application

REVISED / ENHANCED

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

Thus, we have two PI Processes currently in operation, namely:

- **Enhanced PI Process**
- **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 – Role of **Assessor**.

**Part 2** : **In-person assessment** of Candidate that consists of face-to-face oral interview as well as writing two essays – Role of **Interviewer**.
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.
Key Enhancement (3)

3) Replace the Training & Experience Report with the **Portfolio of Evidence Report/Form** to provide required evidence for specific **competencies**.

**Current Training & Experience Report** often gives little information about Applicant’s competencies.

- Ask PI Applicant to understand what professional engineering competencies are required.
- Mandate PI Applicant to focus on providing the evidence for the competencies as specified in the Competency Model.
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**
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.
## Forms and Guidance Notes

<table>
<thead>
<tr>
<th>IEM PI A100</th>
<th>Professional Interview Application Form</th>
</tr>
</thead>
<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 A400</td>
<td>Portfolio of Evidence Form</td>
</tr>
<tr>
<td>IEM PI A500</td>
<td>Guidance Notes For Portfolio of Evidence</td>
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<tr>
<td>IEM PI A600</td>
<td>Guidance Notes For Technical Report</td>
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</tbody>
</table>
MIEM / PI Application

IEM PI A100

PI APPLICATION FORM
### PI Application Form

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<tbody>
<tr>
<td>A</td>
<td>Personal Details</td>
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<tr>
<td>B</td>
<td>Current Employment</td>
</tr>
<tr>
<td>C</td>
<td>Your Expertise</td>
</tr>
<tr>
<td>D</td>
<td>Tertiary Education</td>
</tr>
<tr>
<td>E</td>
<td>Professional Development or Training Schemes (if applicable)</td>
</tr>
<tr>
<td>F</td>
<td>Professional services, papers presented etc.</td>
</tr>
<tr>
<td>G</td>
<td>Organisation Chart / Accountability Diagram</td>
</tr>
<tr>
<td>H</td>
<td>Relevant Career History</td>
</tr>
<tr>
<td>I</td>
<td>Declaration</td>
</tr>
<tr>
<td>J</td>
<td>Supporters’ Details</td>
</tr>
<tr>
<td></td>
<td>Checklist</td>
</tr>
</tbody>
</table>
**Personal Details**

<table>
<thead>
<tr>
<th>Title</th>
<th>Full Name</th>
<th>Nationality</th>
<th>Age</th>
<th>IC No</th>
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<tr>
<th>Place of Birth</th>
<th>Date of Birth (DD/MM/YYYY)</th>
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<table>
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<tr>
<th>Contact Address</th>
<th>State</th>
<th>Postcode</th>
<th>Country</th>
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<tbody>
<tr>
<td>Home Phone</td>
<td></td>
<td>Mobile</td>
<td>Email</td>
</tr>
</tbody>
</table>

Please specify your gender:
- Male
- Female

Please specify your language:
- English
- B Malaysia

**Preferred Venue for Interview**

**Current Employment**

<table>
<thead>
<tr>
<th>Employer</th>
<th>Job Title</th>
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<tbody>
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<table>
<thead>
<tr>
<th>Business Address</th>
<th>County/State</th>
<th>Postcode</th>
<th>Country</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Business Phone | Business Email |
|               |                |

**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:
### Tertiary Education

<table>
<thead>
<tr>
<th>Start Date</th>
<th>End Date</th>
<th>Course / Qualification Title</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>An accredited engineering degree in relevant engineering branch / discipline.</td>
</tr>
</tbody>
</table>

### Professional Development & Training

<table>
<thead>
<tr>
<th>Training Period</th>
<th>Training Institution</th>
<th>Comprehension</th>
<th>Accreditation Number</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

Initial professional training and development after graduation, if any.

### Professional Services, Papers Presented etc.

<table>
<thead>
<tr>
<th>Date</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</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?
H Relevant Career History

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.

Note: (1) The information provided above will be used to carry out an initial assessment of your application. As a result ... 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.

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

<table>
<thead>
<tr>
<th>Start / End Date</th>
<th>Employer, Job Title &amp; Supervising Engineer</th>
<th>Experience</th>
<th>Areas of Competencies</th>
<th>Endorsement By 2 Supporters or Equivalent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date</td>
<td>(1) Job Title</td>
<td>Concise description of the work experience</td>
<td></td>
<td>Supporter’s Endorsement</td>
</tr>
<tr>
<td>Date</td>
<td>(2) Job Title</td>
<td>Concise description of the work experience</td>
<td></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></td>
<td>Supporter’s Endorsement</td>
</tr>
</tbody>
</table>

**Cross-reference to Portfolio of Evidence Form**

Note: (1) The information provided above will be used to carry out an initial assessment of your application. As a result, the information provided should be concise and relevant to your application process. (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 for the definition of Supporters.
# IEM PI A100 - Professional Interview Application Form

## I 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.

<table>
<thead>
<tr>
<th>Signature of Candidate</th>
<th>Date</th>
</tr>
</thead>
</table>

## 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>Supporter 2 (mandatory)</th>
<th>Supporter 3 (optional)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name (print)</td>
<td>Name (print)</td>
<td>Name (print)</td>
</tr>
<tr>
<td>Signature (sign)</td>
<td>Signature (sign)</td>
<td>Signature (sign)</td>
</tr>
<tr>
<td>Date</td>
<td>Date</td>
<td>Date</td>
</tr>
<tr>
<td>Address for communication</td>
<td>Address for communication</td>
<td>Address for communication</td>
</tr>
<tr>
<td>Postcode</td>
<td>Postcode</td>
<td>Postcode</td>
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<td>Phone</td>
<td>Phone</td>
<td>Phone</td>
</tr>
<tr>
<td>Email</td>
<td>Email</td>
<td>Email</td>
</tr>
<tr>
<td>Professional Registration (if applicable) e.g. PEng, CEng</td>
<td>Membership of Engineering Institutions e.g. MIEM, FIME</td>
<td>Professional Registration (if applicable) e.g. PEng, CEng</td>
</tr>
<tr>
<td>Membership Number (if applicable)</td>
<td>Membership Number (if applicable)</td>
<td>Membership Number (if applicable)</td>
</tr>
</tbody>
</table>

Dec 2015  
Route to PE  
111
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.
Supporter’s Credentials

A Professional Engineer registered with the BEM, or a Corporate Member of the IEM who know the PI Applicant well and is convinced, through personal experience, that the Applicant is suitable to be elected to the grade of MIEM. The Supporters typically have detailed and up-to-date knowledge of Applicant’s work so that all the information in the application can be verified.
PI Application Form

Provide the following evidence to help assess your competency:

- Applicant’s past and present work to establish the duration, extent and level of experience.
- Degree of autonomy and professionalism involved in exercising professional judgment.
- Technical content of Candidate’s normal duty of work and responsibility.
- Breadth of Candidate’s knowledge and experience.
PI Application Form

- Contribution to how work is designed, planned, implemented, and monitored.
- Responsibility and authority for budgets and organisational resources.
- Communication and interaction with various stakeholders.
- Compliance with the Acts, Regulations, and Codes of Practice related to his area of work.
- Dealing with the safety, health and environment issues.
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**.

*Join Us!*

**Corporate Membership**

**Route to PE**
# IEM PI A300 – MIEM Application Form

### Personal Details

1. **Nama Pemohon**: [Full Name]
2. **Alamat**: [Address]
3. **Nombor Telefon Rumah**: [Residential Telephone Number]
4. **Tempat Lahir**: [Place of Birth]
5. **Umur**: [Age]
6. **Nombor K.P**: [IC Number]

### Engineering Discipline Applied

1. [Discipline of Engineering Applied]

### Previous Application, if any

[Write Details if applicable]

### Graduate Membership No., if any

1. [Graduate Membership Number]

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Dec 2015  Route to PE  119
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.

Dec 2015
Route to PE 120

Your Signature
The Portfolio of Evidence Form 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 Elements under each of the Competency Categories A, B, C, D and E as required for MIEM/PE.
- All evidence should clearly be **cross-referenced** to the relevant part(s) of Applicant’s career history.
- Applicant may attach other relevant document to support the portfolio of evidence if deemed necessary.
Portfolio of Evidence Form

- The average words recommended for each Competency Category is about 500 words. This works out to be about 100-150 words for each Competency Element.

- 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 A500 on how to fill up the Portfolio of Evidence Form.
## Portfolio of Evidence Form

### 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>Competency Element</th>
<th>Evidence Reference</th>
<th>Evidence of Your Competence – Category A</th>
<th>Rev. Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1</td>
<td>Maintain and extend a sound theoretical approach in enabling the introduction and exploitation of new and advancing technology and other relevant developments.</td>
<td>(i)</td>
<td></td>
</tr>
<tr>
<td>A2</td>
<td>Engage in the creative and innovative development of engineering technology and continuous improvement systems.</td>
<td>(i)</td>
<td></td>
</tr>
<tr>
<td>A3</td>
<td>Apply engineering knowledge related to local practices, codes, standards, specifications, materials, products, environmental plans and other requirements; and where appropriate, apply engineering knowledge contributed by others ...</td>
<td>(i)</td>
<td></td>
</tr>
</tbody>
</table>

Cross reference to Career History (i) = (1), (2), (3), ........ (n)
**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.
Suppose that the IEM PI A100 Form, the IEM PI A400 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.
Preparing for PI
by PI Candidate
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

Candidate must complete the two parts in order to satisfy the Professional Interview’s requirements.
The Oral Interview will normally be allocated about one (1) hour and forty five (45) minutes for each Candidate.

While there is a need to be flexible in the interview, the format is typically arranged as follows:

- Introduction
- 15 Minute Presentation by Candidate
- 60-90 Minutes Q&A Session
- Opportunity for Final Evidence
- Conclusion
Presentation – 15 Minutes

- 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, or 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.
Currently, IEM has two PI Processes running in parallel.

- The Enhanced PI Process
- The Conventional PI Process

The Enhanced PI Process will be scheduled to replace the Conventional PI Process in future.

Applicants are encouraged to apply for PI through the Enhanced PI Process. WHY?

The Enhanced PI Process will give PI Candidates a more objective and more balanced assessment.
MIEM / PI Application

TIPS TO CANDIDATES
Professional Interview
MIEM / PI Application

PREPARING REPORTS

x DO NOT WRITE

• Nonsense
• Inconclusive situations
• Non-specific jobs
• Unsure work
• Lengthy sentences without headings
• Works not carried out personally
MIEM / PI Application

DESIGN & DRAWINGS

✓ Many candidates submit design & drawings produced by the firm with minimal input by the candidate.

✓ The design & drawings should reflect the candidate’s own work.

✓ The design & drawings should be of sufficient level to justify and underpin the granting of professional status.
CALCULATIONS

Candidate can submit computer-aided calculations, analysis and design outputs BUT these must be accompanied by manual or hand calculations showing assumptions, considerations required in the design and why these were selected. This forms part of the verification.
MIEM / PI Application

Important Notes

- Always clarify your actual participation in a team effort - which part represents your personal contribution.

- Do not misrepresent your work by:
  - Taking someone else’s work, deliverables, and achievement as yours.
  - Presenting group work by a team as that of your own work as a team member.
PREPARING REPORTS

✓ DO WRITE

- RELEVANT AND ACTUAL EXPERIENCE
- FACTUAL AND ESSENTIAL DETAILS
- ENGINEERING PROBLEMS AND SOLUTIONS
- COGENT AND ACCEPTABLE CONCLUSIONS
- PERSONAL RESPONSIBILITY / CONTRIBUTIONS
- PERSONAL DECISIONS AND IMPLICATIONS
WHAT INTERVIEWERS NORMALLY ASK !!

- What has the candidate personally done
- Why and how has he done it
- Does he fully understand what he has done
- What engineering decisions has he made
- Does he understand the implications
- What investigations and/or considerations are taken to reach the decision / conclusion
Step 5 – Register as Professional Engineer
According to the **Registration of Engineers Act**, a person shall be entitled to apply as **Professional Engineer** if he satisfies the following:

- He is registered as **Graduate Engineer** with BEM and has obtained practical experience of at least three years.

- Either (i) He has passed the Professional Assessment Examination (PAE) conducted by BEM.

  Or (ii) He is a **Corporate Member of the Institution of Engineers, Malaysia (MIEM)**.

- He has complied with other requirements as may be determined by BEM. **Understand that PDP is no more required.**
From MIEM to PE

- Passing the PI through the Enhanced or Conventional 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.
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 1\textsuperscript{st} Jan 2006, all registered PEs have to fulfill the BEM’s \textbf{Continuing Professional Development (CPD) requirements} in order to maintain the PE status.

Note that the \textbf{new proposed} CPD Hours per year are 50 CPD Hours for both PE Tier 1 and PE Tier 2.
Route to MIEM / PE

THANK YOU

WE HOPE TO RECEIVE YOUR APPLICATION TO SIT FOR THE PI VERY SOON...........

Contact me
bc88lee@gmail.com