

IEM

The Institution of Engineers, Malaysia



Federation of Engineering Institutions
of Asia and the Pacific (FEIAP)

PRESENTATION ON
**Route to Professional Engineer
- Malaysia Experience**



MYANMAR ENGINEERING SOCIETY (MES)

အင်ဂျင်နီယာစွမ်းအား ပြည်ထွန်းကား

Presented by:
Ir. Tan Yean Chin
President of IEM
Secretary General of FEIAP

13 Jan 2017



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Route to MIEM / P Eng.

Overview

Routes to Professional Engineer

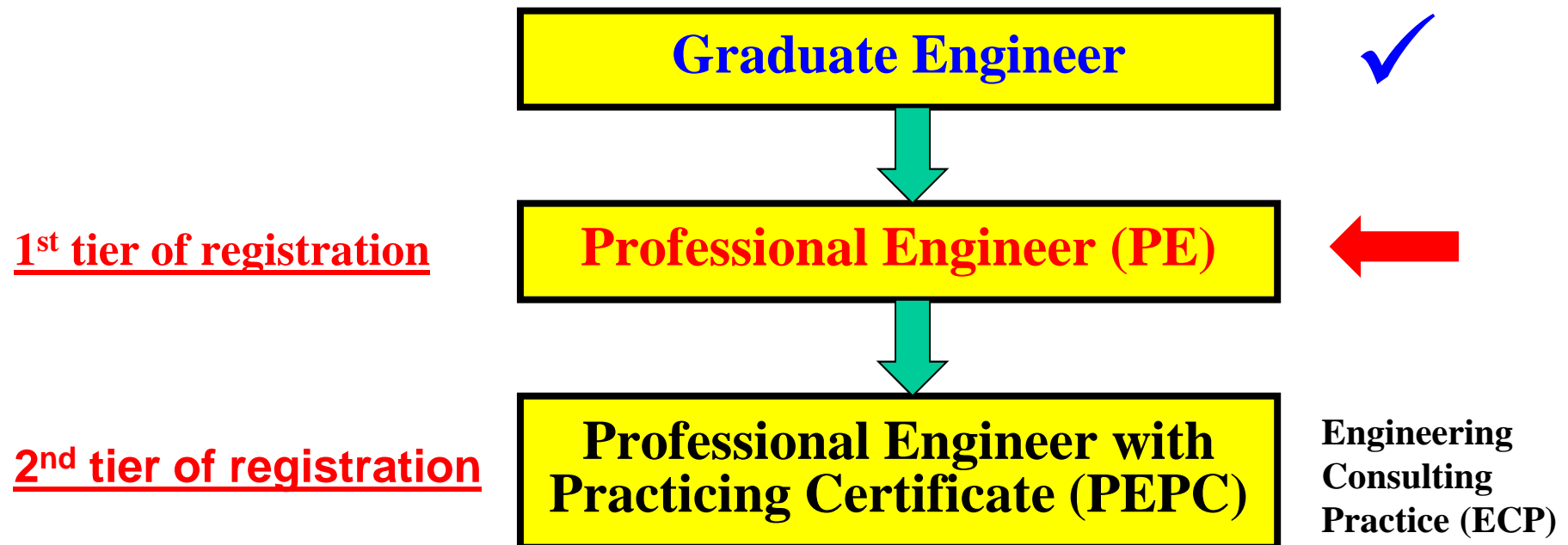


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Registration of Engineers Act

2-Tier Registration of Professional Engineers

Jurisdiction of Board of Engineers Malaysia (BEM)





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Registration of Engineers Act

Three (3) Routes to Professional Engineers (PE)

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)**. ←



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Route to MIEM / P Eng.

Route to Professional Engineer By Becoming MIEM



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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.

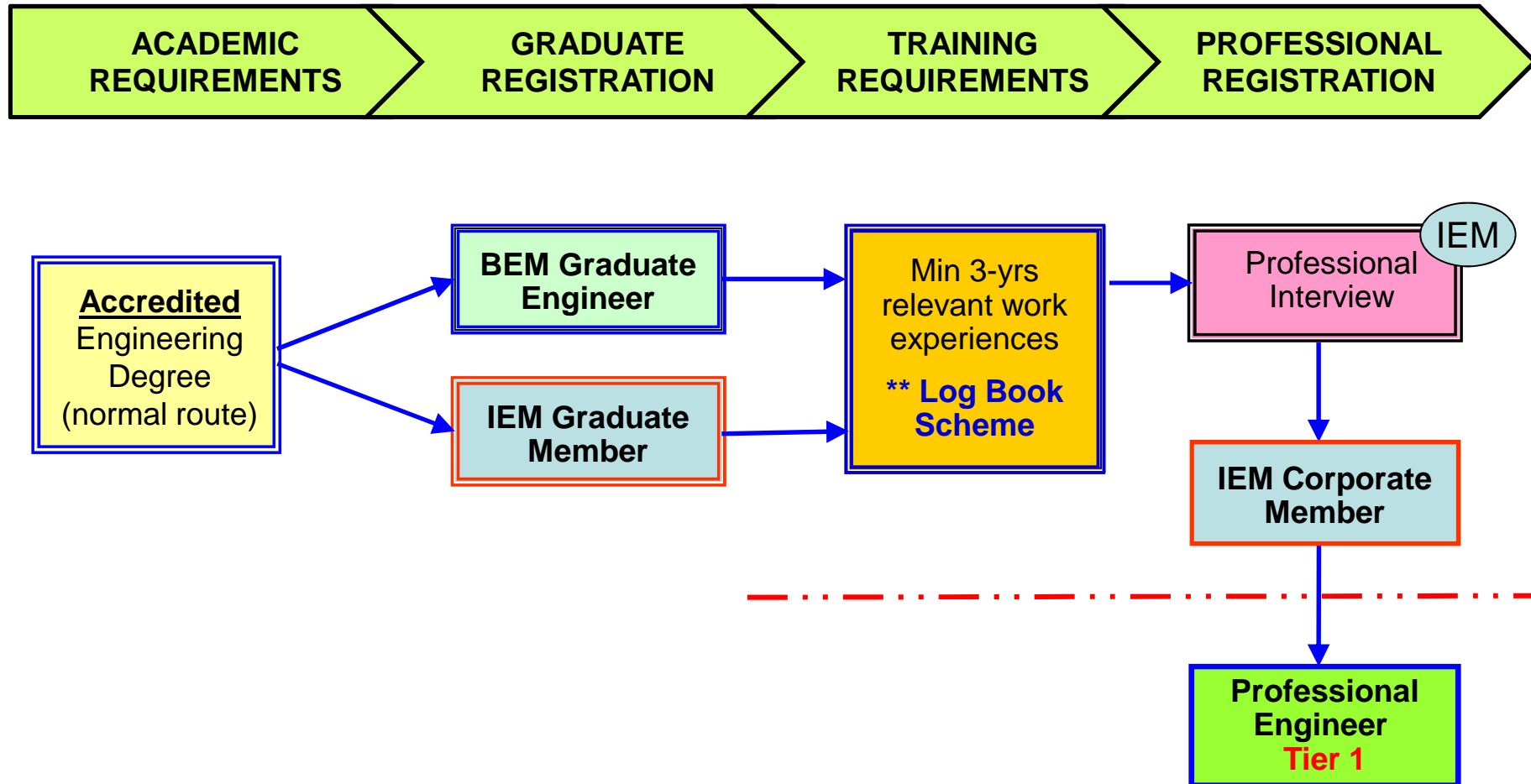


How to go about becoming MIEM / PE ?



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





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Route to MIEM / P Eng.

**Step 1 – Have an
Accredited Engineering Degree**



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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.



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Route to MIEM / PE

FOREIGN UNIVERSITIES

Engineering programmes are accredited
by their respective **Signatory Bodies** such as

United Kingdom (UK)

Engineering Council, United Kingdom; www.engc.org.uk

United States of America (USA)

ABET, USA; www.abet.org

Australia

IEAust, Australia; www.engineersaustralia.org.au

New Zealand

IPENZ, New Zealand; www.ipenz.org.nz



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Route to MIEM / PE

**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)**



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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).



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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



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Route to MIEM / P Eng.

Un-Recognized Degree REQUIREMENTS



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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**.



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Route to MIEM / P Eng.

Step 2 – Register as

1. Graduate Engineer with **BEM**
2. Graduate Member with **IEM** ..



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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.



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Introduction to **BEM**



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Route to MIEM / P Eng.

ENGINEERING PRACTISE IN MALAYSIA



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- The professional engineering practice in Malaysia is regulated by the *Registration of Engineers Act (REA), 1967* (revised in 1974, 1987, 1989, 2002, 2007, **2015**)



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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 (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.



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Route to MIEM / P Eng.

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**.



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Introduction to **IEM**



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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**



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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.**



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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.



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IEM

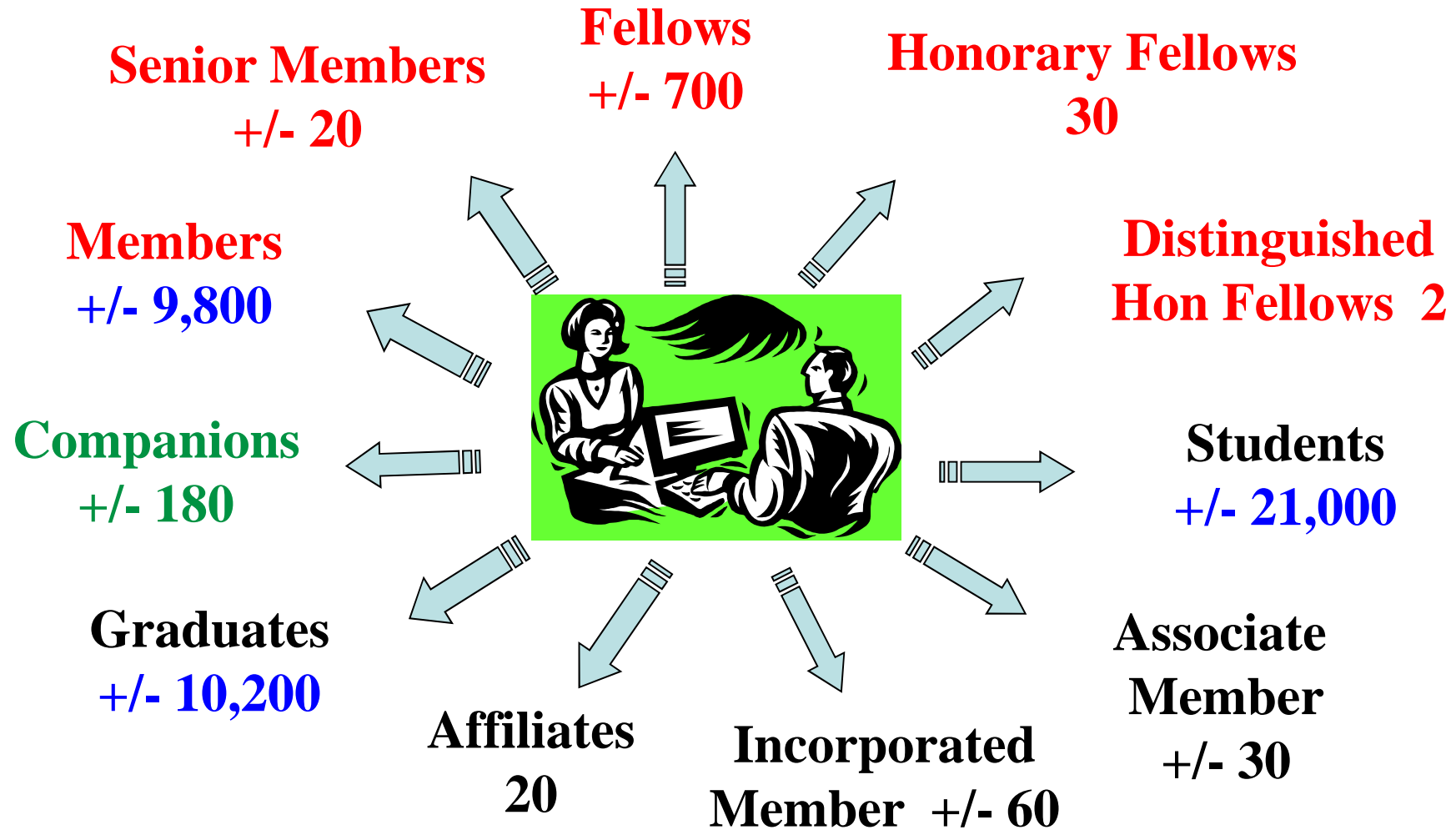


**Membership strength as in
01 July 2016 is about 42,000
members comprising of ...**



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Membership Grades & Number as in 01 July 2016

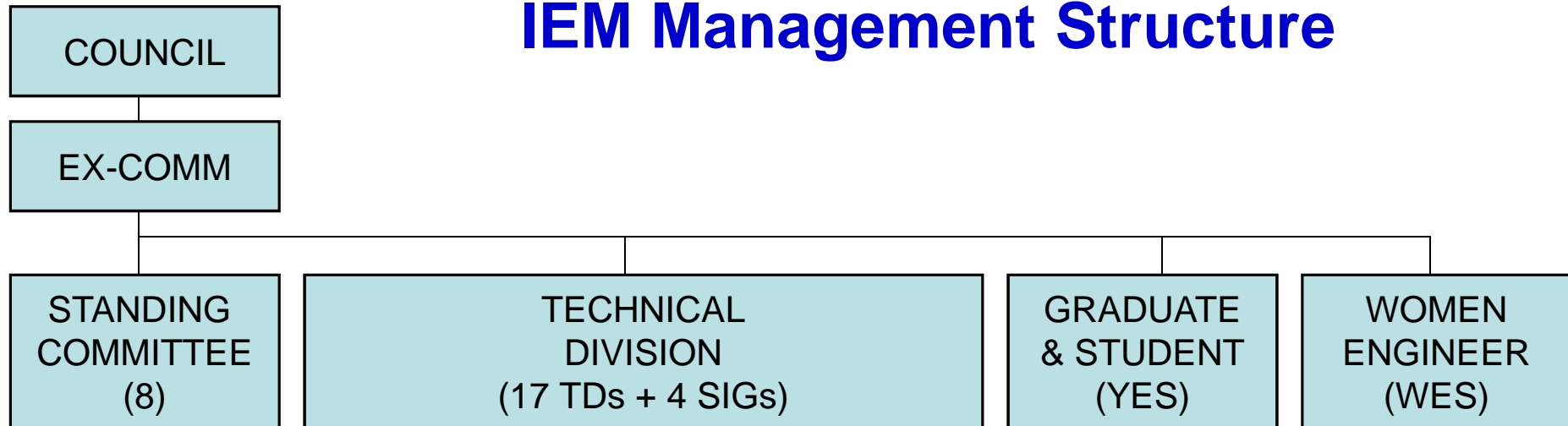




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Introduction to IEM

IEM Management Structure



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

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



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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



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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**).



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Route to MIEM / P Eng.

Step 3 – Gain
Minimum 3 Years of Practical
Training and Experience



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Route to MIEM / P Eng.

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.



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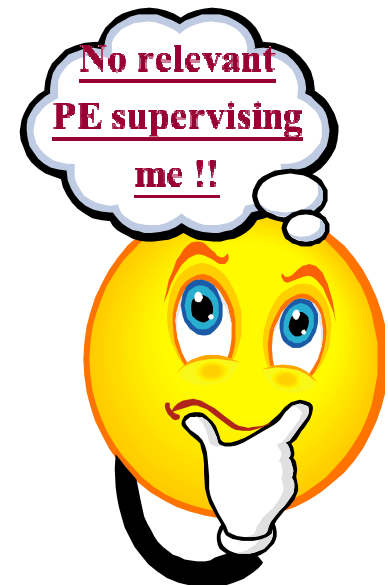
Route to MIEM / P Eng.

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?





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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.



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Route to MIEM / PE

Log-Book Training Scheme

- Under the Log-Book Training Scheme, the Mentor will guide, coach 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.



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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.



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Route to MIEM / P Eng.

Professional Experience

Engineering Discipline	Minimum Months	
	Design	Site
Civil Engineering	12	12
Electrical Engineering	12	6
Electronic Engineering	6	12
Mechanical Engineering	6	12
Other Engineering	6	6

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



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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.



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Route to MIEM / P Eng.

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.



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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.



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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.



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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.



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Route to MIEM / P Eng.

**Step 4 – Apply to sit for
Professional Interview
with IEM / BEM**



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Two PI Processes

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**.



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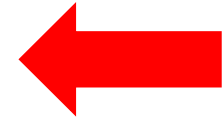
MIEM / PI Application

ENHANCED PI PROCESS

Enhanced PI Process



Enhanced PI Process



Conventional PI Process

Currently, we have two PI Processes in operation.

Applicants 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.**

Same In Structure

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.**

Key Enhancements (2)

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) 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

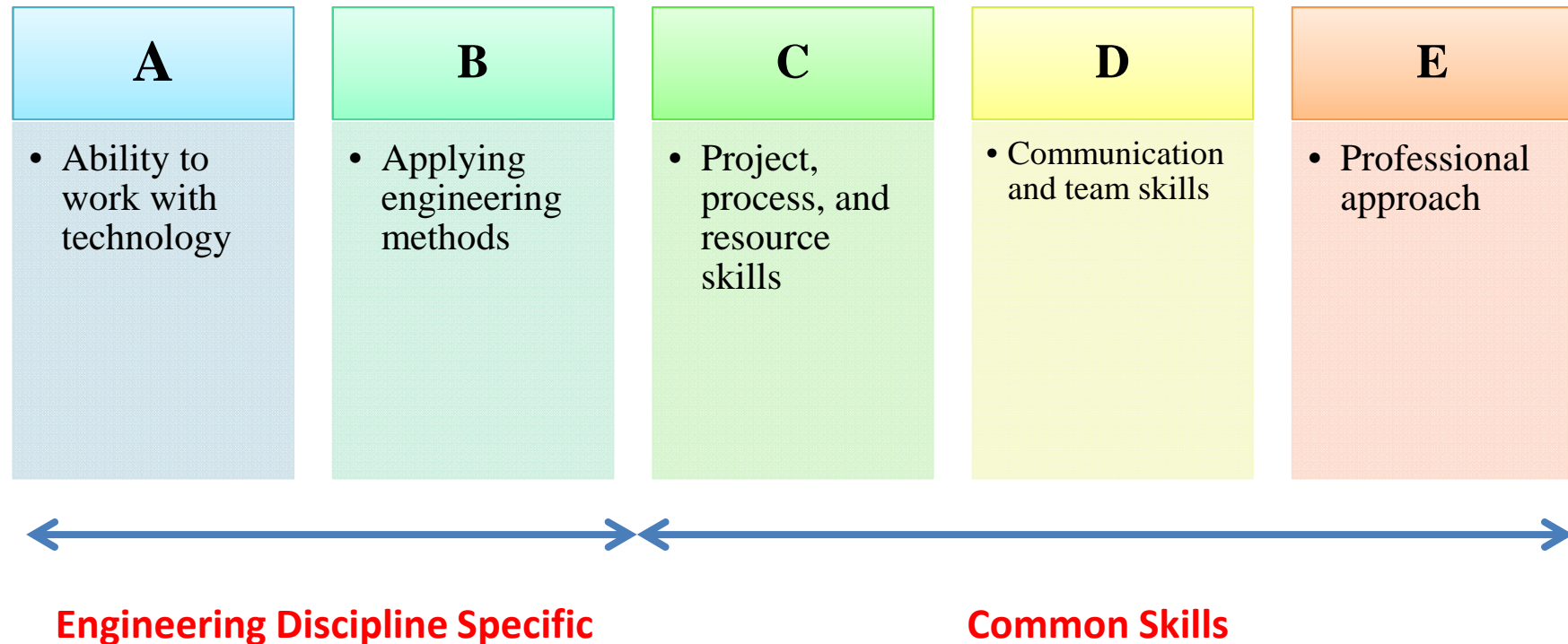
C -- Responsibilities, Management and Leadership

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:



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

Mark	Generic Statement of Attainment
1	Little or no evidence of competency
2	Some evidence of competence identified
3	Fully acceptable level of competency
4	Exceptionally strong level of competency

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.

Forms and Guidance Notes

IEM PI A100	Professional Interview Application Form
IEM PI A200	Guidance Notes For PI Application
IEM PI A300	MIEM Application Form
IEM PI A401	Training & Experienced Report (Portfolio of Evidence)
IEM PI A501	Guidance Notes For Training & Experienced Report (Portfolio of Evidence)
IEM PI A600	Guidance Notes For Technical Report

Document Required For PI

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)**





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MIEM / PI Application

IEM PI A100

PI APPLICATION FORM

IEM PI A100 - Professional Interview Application Form

Personal Details			
Personal Details			
Title	Full Name :		
Nationality :	Age :	IC No :	
Place of Birth :	Date of Birth DD/MM/YYYY		
Contact Address			
State	Postcode	Country	
Home Phone	Mobile	Email	
Preferred Venue for Interview			

Please specify your gender: Male Female

Please specify your language: English B Malaysia Please tick one only.

Current Employment			
Employer			Job Title
Business Address			
County/State	Postcode	Country	
Business Phone	Business Email		

Your Expertise	
Select the main and sub sectors most relevant to you and your expertise:	
Industry	<input type="checkbox"/> Consultancy & Design <input type="checkbox"/> Construction & Contract <input type="checkbox"/> Project Management <input type="checkbox"/> Manufacturing & Production <input type="checkbox"/> System Development <input type="checkbox"/> Operation & Maintenance
Academia	<input type="checkbox"/> Teaching <input type="checkbox"/> Research
Others	_____

Engineering Discipline :

Date of Registration with BEM :

IEM PI A100 - Professional Interview Application Form

D Tertiary Education

Tertiary Education

Start Date	Institution of Higher Learning	Degree Awarded
An accredited engineering degree in relevant engineering branch / discipline.		

E Professional Development or Training Schemes (if applicable)

Professional Development & Training

Training Period	Training Institution	Competencies Gained	Accreditation number
Initial professional training and development after graduation, if any.			

F Professional Services, Papers Presented etc.

Professional services, papers presented, patent granted, etc.

Date	Title

IEM PI A100 - Professional Interview Application Form

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?

IEM PI A100 - Professional Interview Application Form

H Relevant Career History		Relevant Career History	
Start / End Date	Employer, Job Title & Supervising Engineer	Experience (Areas of Competencies)	Endorsement By 2 Supporters or Equivalent
<p><u>Career History</u></p> <ul style="list-style-type: none">✓ 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.✓ Show you have attained the breadth and depth of practical training and experience for the professional interview. <p><small>Note: (1) professional engineers or corporate members of IEMPI shall refer to the guidelines here on the application on the submission of supporting documents.</small></p>			

Typically it should have more than 2 pages depending on the length of working

IEM PI A100 - Professional Interview Application Form

H Relevant Career History		Relevant Career History	
Start / End Date	Employer, Job Title & Supervising Engineer	Experience (Areas of Competencies)	Endorsement By 2 Supporters or Equivalent
Date	(1) Job Title	Concise description of the work experience	Supporter's Endorsement
Date	(2) Job Title	Concise description of the work experience	Supporter's Endorsement
Date	(3) Job Title	Concise description of the work experience	Supporter's Endorsement
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

I Declaration

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

J Supporters' Details

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.

Supporter 1 (mandatory)

Name (print)		Signature (sign)	Date
Address for communication			
Postcode	Phone	Email	
Professional Registration (if applicable) e.g. PEng, CEng		Membership of Engineering Institutions e.g. MIEM, FIEM	
Membership Number (if applicable)			

Supporter 2 (mandatory)

Name (print)		Signature (sign)	Date
Address for communication			
Postcode	Phone	Email	
Professional Registration (if applicable) e.g. PEng, CEng		Membership of Engineering Institutions e.g. MIEM, FIEM	
Membership Number (if applicable)			

Supporter 3 (optional)

Name (print)		Signature (sign)	Date
Address for communication			
Postcode	Phone	Email	
Professional Registration (if applicable) e.g. PEng, CEng		Membership of Engineering Institutions e.g. MIEM, FIEM	
Membership Number (if applicable)			

PI Application Sponsorship

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

PI Application Supporters

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.

PI Application Form

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





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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**

IEM PI A300 – MIEM Application Form

1. BUTIRAN PERIBADI PERSONAL PARTICULARS

Personal Details

Nama Pemah:
Full Name:
 (Guna huruf besar dan garis nama keluarga.)
 (Use block letters and underline surname)

Alamat:
Address

Nombor Telefon : Rumah
Telephone Number: Residential

Pejabat:
Office

Bimbit:
(Handphone)

Email:
Email Address:

Tempat Lahir:
Place of Birth:

Tarikh Lahir:
Date of Birth:

Umrur: Kewarganegaraan: Nombor K.P
Age: Nationality I.C.A.N.

(Perhatian : Sebarang perubahan alamat, nombor telefon pekerjaan hendaklah diberitahu kepada IJM dengan segera).
 (N.B. Any change of address, employment telephone number must be notified promptly)

Engineering Discipline Applied

2. DISPLIN KEJURUTERAAN YANG DIPOHON: *Awam / Mekanik, Elektrik, Kimia, etc.
*DISCIPLINE OF ENGINEERING APPLIED FOR: *Civil/Mechanical/Electrical/Chemical, etc*

3. SILA NYATAKAN BUTIR-BUTIR PERMOHONAN SEBELUM INI (jika ada):
PLEASE STATE PARTICULARS OF PREVIOUS APPLICATION (if any)

Previous Application, if any

Tarikh temuduga yang lepas
Date of previous interview
 (Write *N/A* if not applicable)

Sebab-sebab tidak berjaya : Tidak memenuhi kelayakan menduduki Temuduga Profesional/
Reasons for unsuccessful: Unable to meet the requirement to sit for the Professional Interview/
 Tidak dapat menghadiri Temuduga Profesional pada masa yang ditetapkan/
Unable to attend the Professional Interview at the allocated time/
 Kandas Temuduga
Professional/ Fail the Professional
 Interview/ Tarik diri
Withdraw

Graduate Membership No., if any

5. NOMBOR AHLI SISWAZAH IJM (jika ada) :
IJM GRADUATE MEMBERSHIP NUMBER: (if any)

6. SAYA SERTAKAN YURAN TEMUDUGA PROFESIONAL: RM150.00 untuk Ahli Siswazah IJM
I TENDER HERE WITH THE PROCESSING FEE OF RM150.00 for Graduate Member of IJM
 RM200.00 untuk bukan ahli IJM
RM200.00 for Non-member of IJM

IEM PI A300 – MIEM Application Form

7. PENGAKUAN (silabaca dengan teliti) *DECLARATION (Please read carefully)*

Saya, yang bertandatangan di bawah, berjanji bahawa sekiranya diterima sebagai Ahli Korporat IJM, saya akan mematuhi Perlembagaan, Undang-Undang dan Peraturan-Peraturan Institusi pada masa ianya dikuatkuasakan dan saya akan menerima sebagai muktamad segala keputusan Majlis terhadap semua perkara yang dilakukan oleh Majlis setaraf dengan peruntukan Perlembagaan, Undang-Undang dan Peraturan-Peraturan.

Saya berjanji akan meningkatkan Objektif Institusi mengikut seberapa daya yang boleh, melainkan apabila saya menulis kepada Setiausaha Kehormat bahawa saya akan mengundurkan diri sebagai Ahli Institusi dan saya akan dibebaskan daripada tanggungjawab ini selepas menjelaskan segala hutang tunggakan yuran kepada IJM. Saya bertanggungjawab terhadap ketepatan butiran yang terkandung dalam borang permohonan ini.

Saya setuju membuat sumbangan yang munasabah kepada Tabung Perpustakaan, dan sepanjang kerjaya Profesional saya, saya akan cuba mengemukakan kepada Institusi ini permbitan yang sesuai.

I the undersigned, do hereby promise that, in the event of my election, I will be governed by the Constitution, By-Laws and Regulations of the Institution for the time being in force, and that I will accept as final and binding the decisions of the Council on all matters dealt with by them in accordance with the Provisions of the said Constitution, By-Laws and Regulation; I further undertake that I will promote the objects of the Institution as far as may be in my power; provided that whenever I shall signify in writing to the Secretary that I am desirous of withdrawing from the Institution, I shall after the payment of any arrears, which may be due from me at the period, be free from this obligation.

I accept responsibility for the accuracy of the particulars contained in this application form and agree that if I am elected the validity of my election shall depend upon the accuracy of such particulars as required by the By-Laws. I will make an acceptable donation to the Library Fund, and in course of my professional career I will endeavour to present to the Institution an original communication or communication relating to engineering/science practice.

Saya mengakui bahawa sekiranya kelayakan saya didapati tidak sejajar dengan keperluan syarat kemasukan Institusi disebabkan perubahan polisi atau kesilapan semasa penerimaan kemasukan sebagai Ahli, maka Institusi berhak menarik balik status keahlian saya.

I hereby 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.

Your Signature

Tarikh:
Date

Tandatangan Pemohon:
Signature of Applicant

NOTA: IJM tidak bertanggungjawab keatas kehilangan atau kerosakan sebarang dokumen-dokumen ASAL yang dihantar bersama permohonan ini.

NOTE : IJM is not responsible for the loss of, or damage to, any ORIGINAL document forwarded with this application

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>.



Institution of Engineers
Malaysia

MIEM / PI Application

IEM PI A401

TRAINING & EXPERIENCE REPORT (PORTFOLIO OF EVIDENCE)

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)**.



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.

Evidence of Your Competence on Competency Category A	Revision Date
<div style="background-color: yellow; padding: 5px; display: inline-block;">About 500 words</div>	

Declaration of The Candidate	Name : Signature :
Declaration of The Supporter	I am confident that the evidence described above is a true record of the competencies that have been demonstrated by this Candidate. Name: Signature:



Institution of Engineers
Malaysia

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.

Technical Report

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.

Technical Report

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.**





Institution of Engineers

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**



Institution of Engineers
Malaysia

Route to MIEM / PE

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.

Appointment of Interviewers

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

Professional Interview Format

- 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.

Oral Interview – **Enhanced Process**

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



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

Presentation – 15 Minutes

- 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.

Written Examination

- 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.



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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.



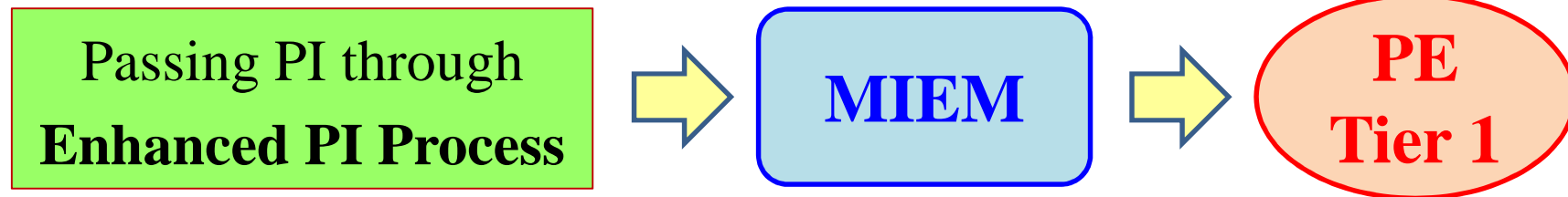
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Malaysia

Route to MIEM / PE

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**.





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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**.



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Route to MIEM / PE

PE with Practicing Certificate

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)



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Route to MIEM / PE

BEM REQUIREMENTS

After Becoming a Registered PE



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Route to MIEM / PE

BEM Requirements



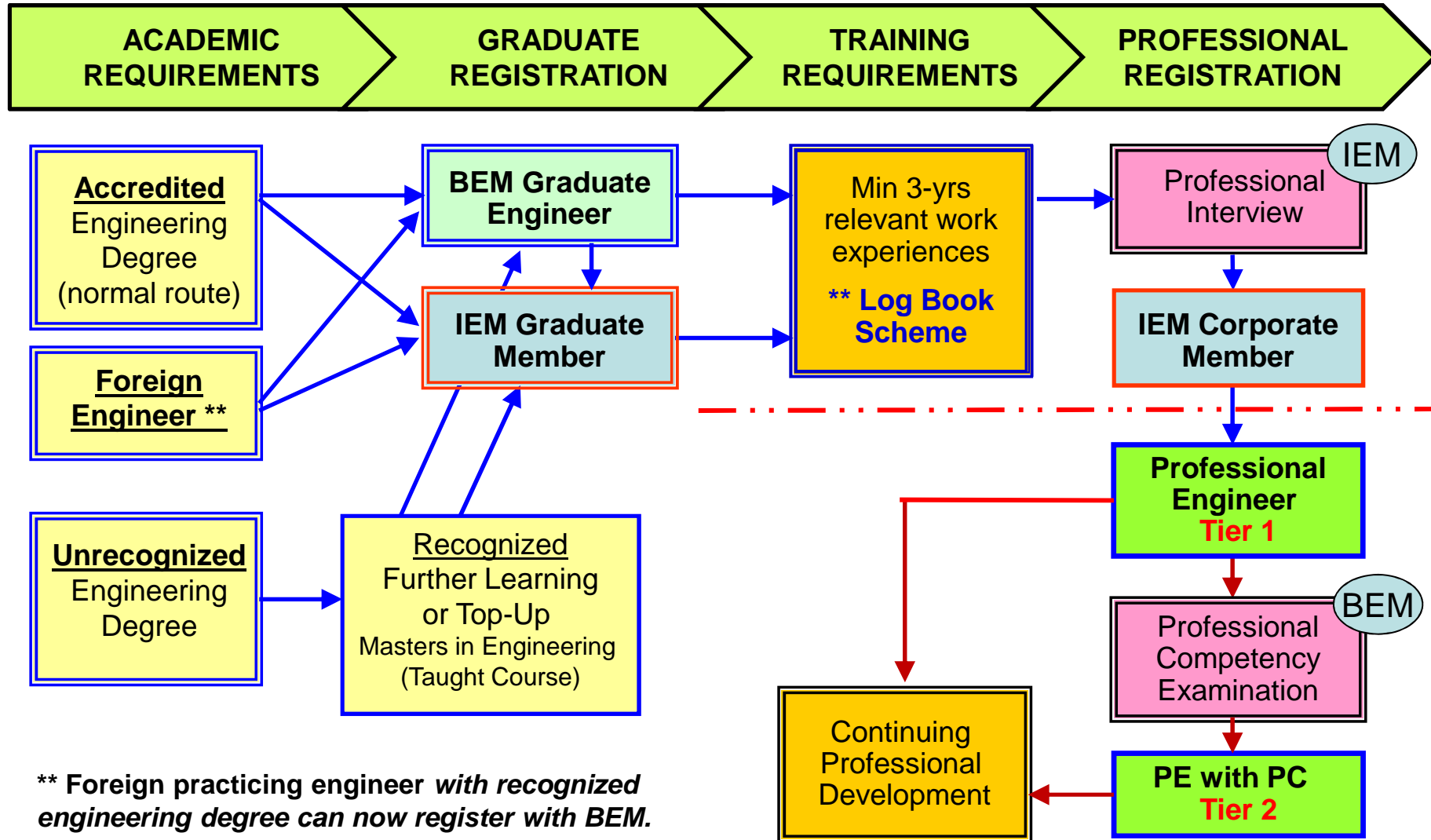
After **1st Jan 2006**, all **registered PEs** have to fulfill the **BEM's Continuing Professional Development (CPD)** requirements in order to maintain the PE status.

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.



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



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



MYANMAR ENGINEERING SOCIETY (MES)

အင်ဂျင်နီယာစွမ်းအား ပြည်ထွန်းကား

Presented by:
Ir. Tan Yean Chin
yctan@gnpgroup.com.my

