

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

Presented by:
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President of IEM
Secretary General of FEIAP

March 2017



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Malaysia

Route to MIEM / P Eng.

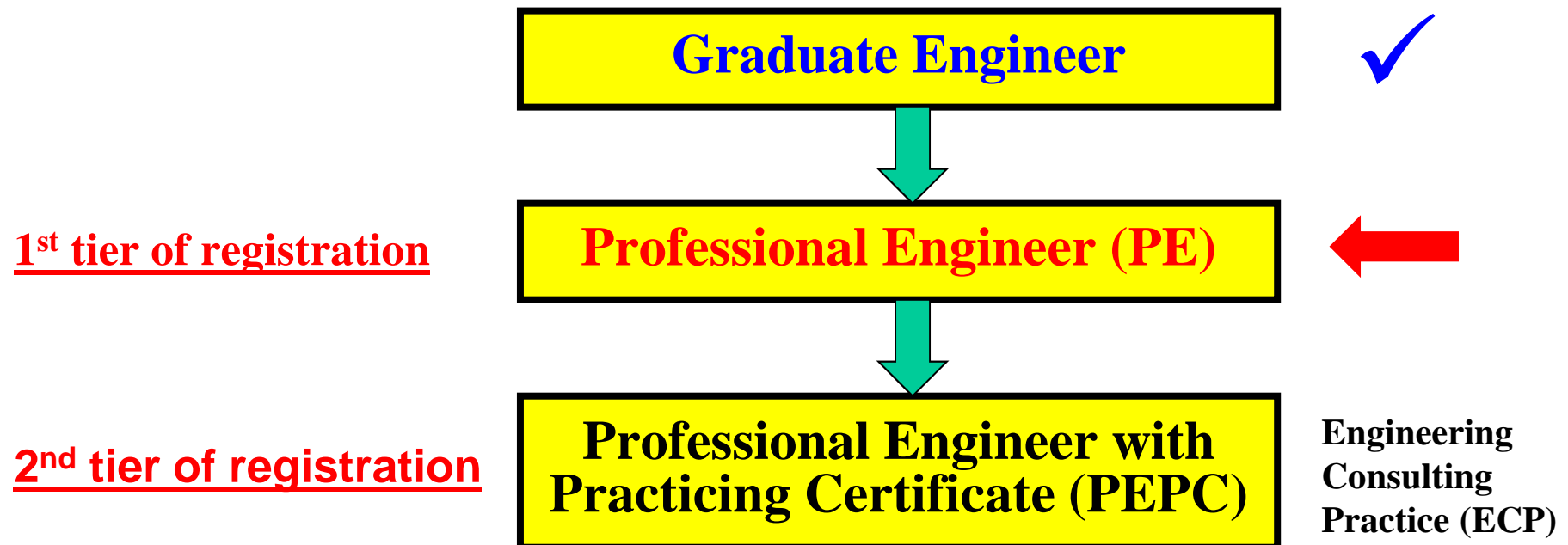
Overview

Routes to Professional Engineer

Registration of Engineers Act

2-Tier Registration of Professional Engineers

Jurisdiction of Board of Engineers Malaysia (BEM)





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Route to MIEM / P Eng.

Route to Professional Engineer By Becoming MIEM

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

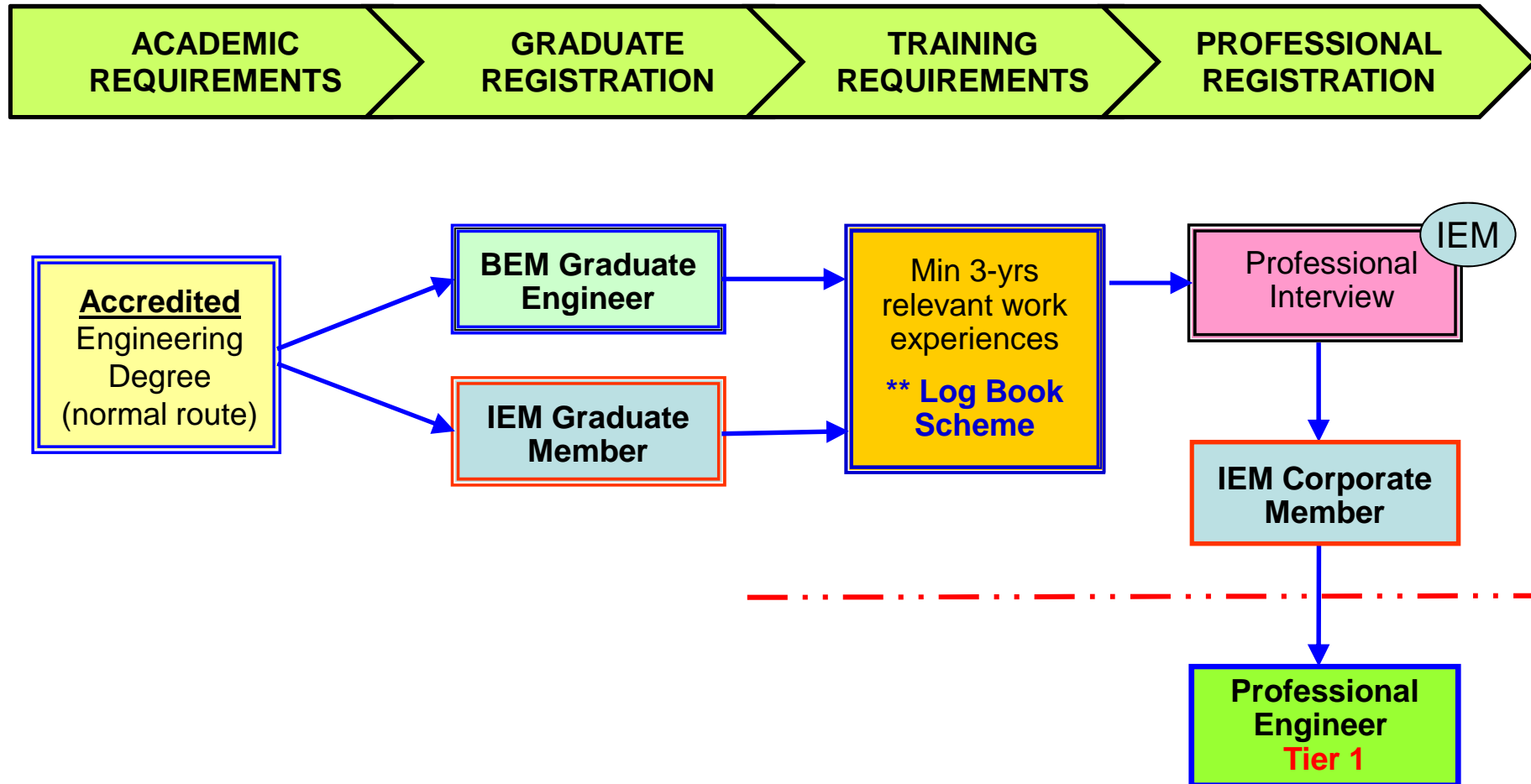
A registered Graduate Engineer who wishes to become a **Corporate Member of the Institution of Engineers, Malaysia (MIEM)** must attend and pass the **Professional Interview (PI)** conducted by IEM.

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



How to go about becoming MIEM / PE ?

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





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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)

*** (Malaysia also comply to 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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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.

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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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**

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.



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IEM

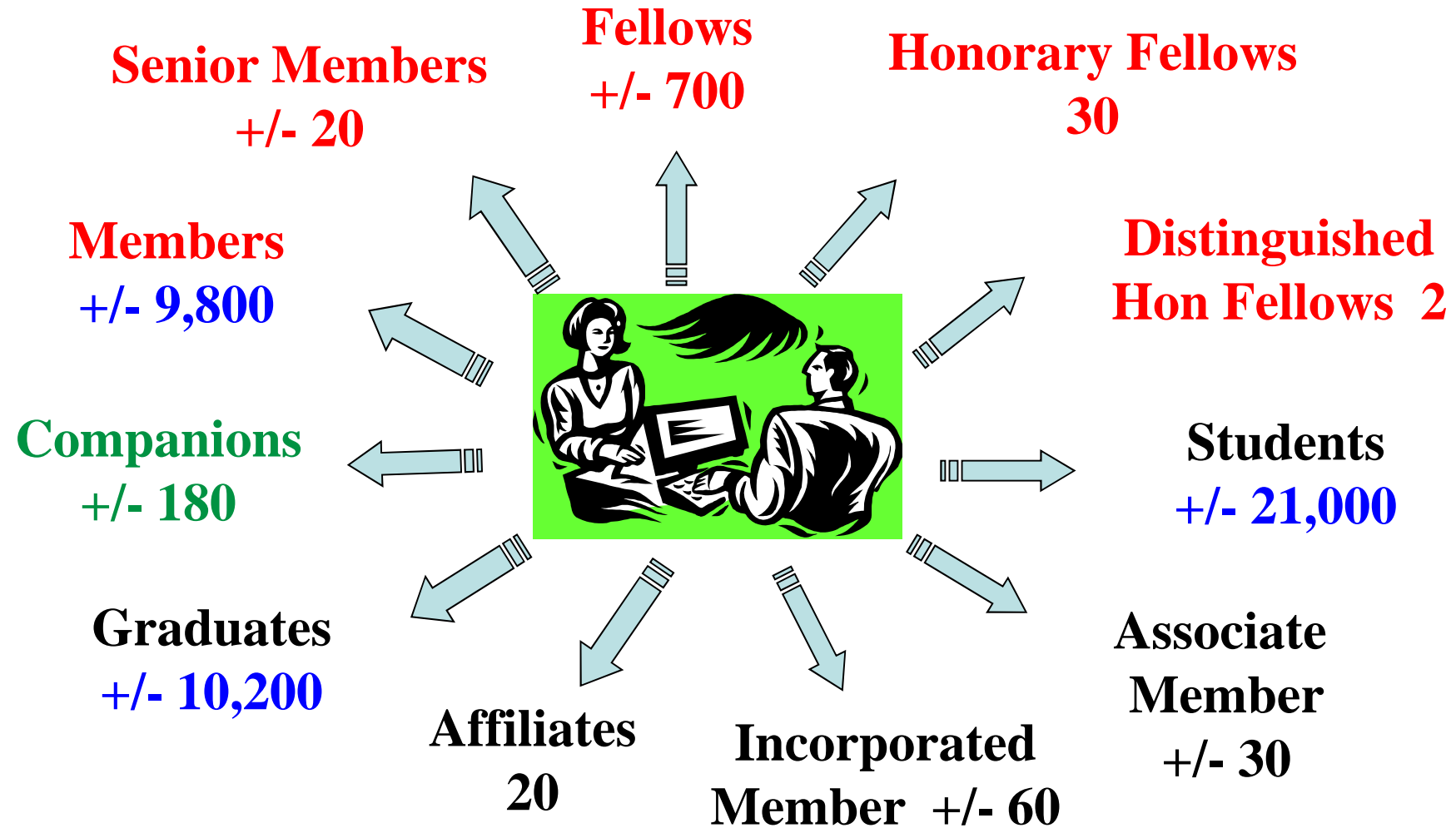


**Membership strength as in
01 July 2016 is about 42,000
members comprising of ...**



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Membership Grades & Number as in 01 July 2016

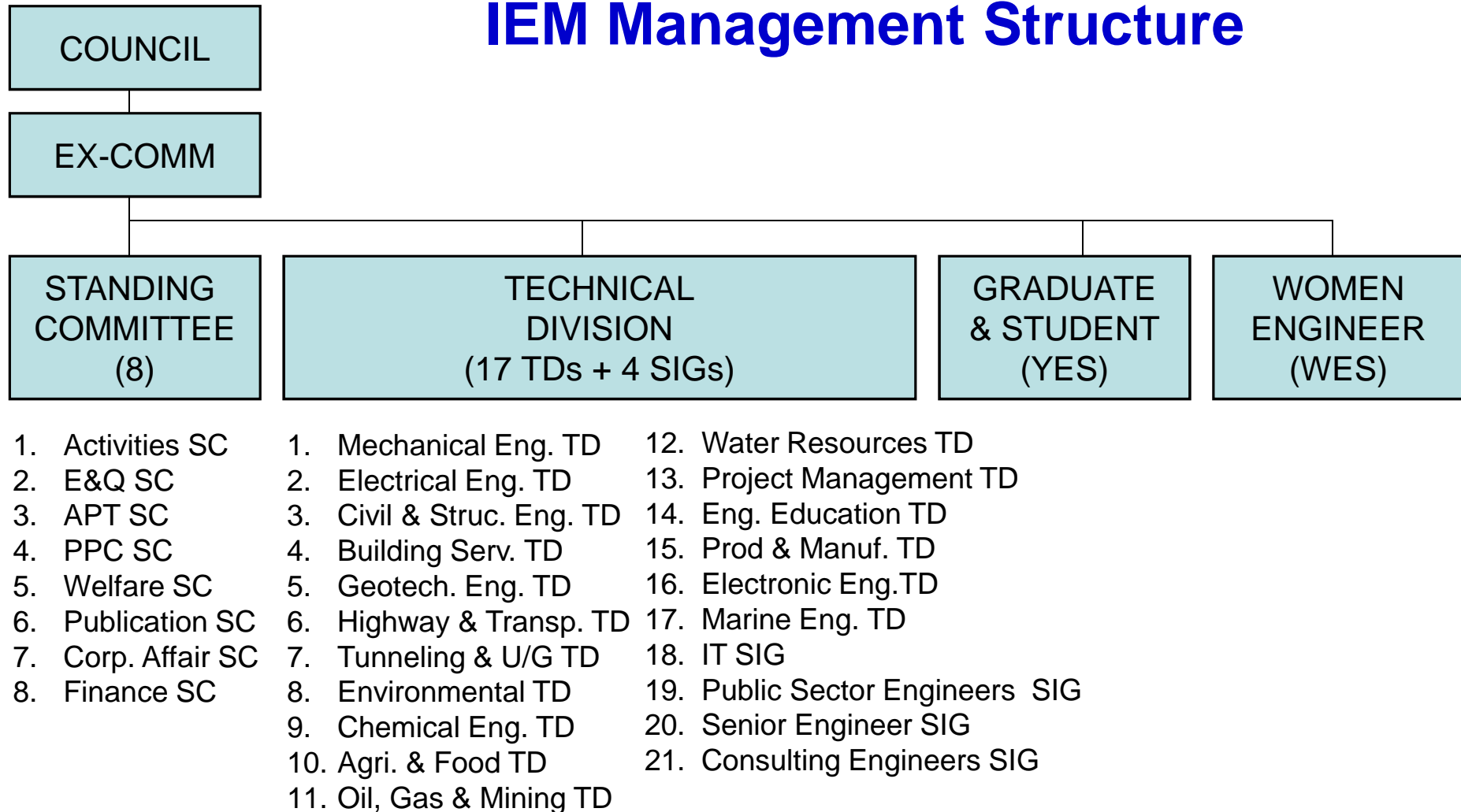




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Introduction to IEM

IEM Management Structure



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.” (Ingénieur)**.

Route to MIEM / P Eng.

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

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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.

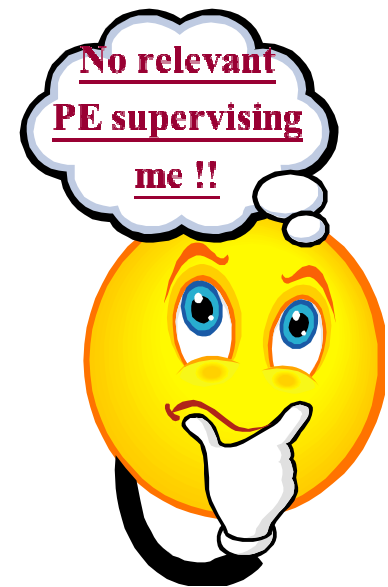
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Practical Experience

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

PI Process

The **PI Process** 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.



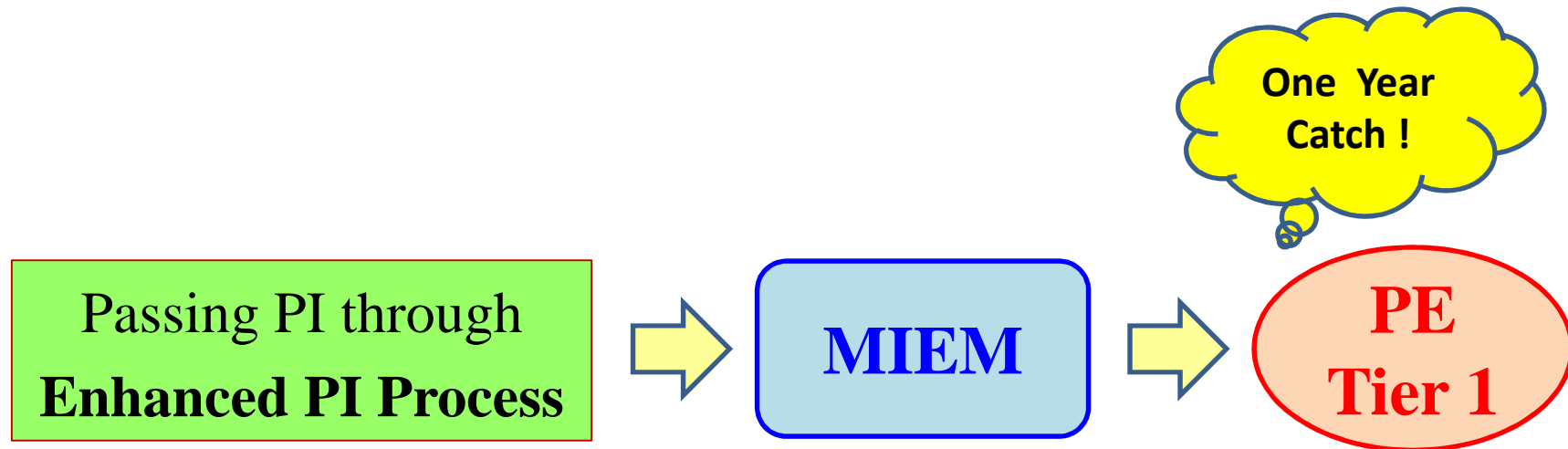
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Route to MIEM / PE

Step 5 – Register as Professional Engineer

From MIEM to PE

- ➡ **Passing the PI** 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

PE with Practicing Certificate

To qualify as PE Tier 2 or a **Professional Engineer with Practicing Certificate (PE with PC)**, the Candidate must :

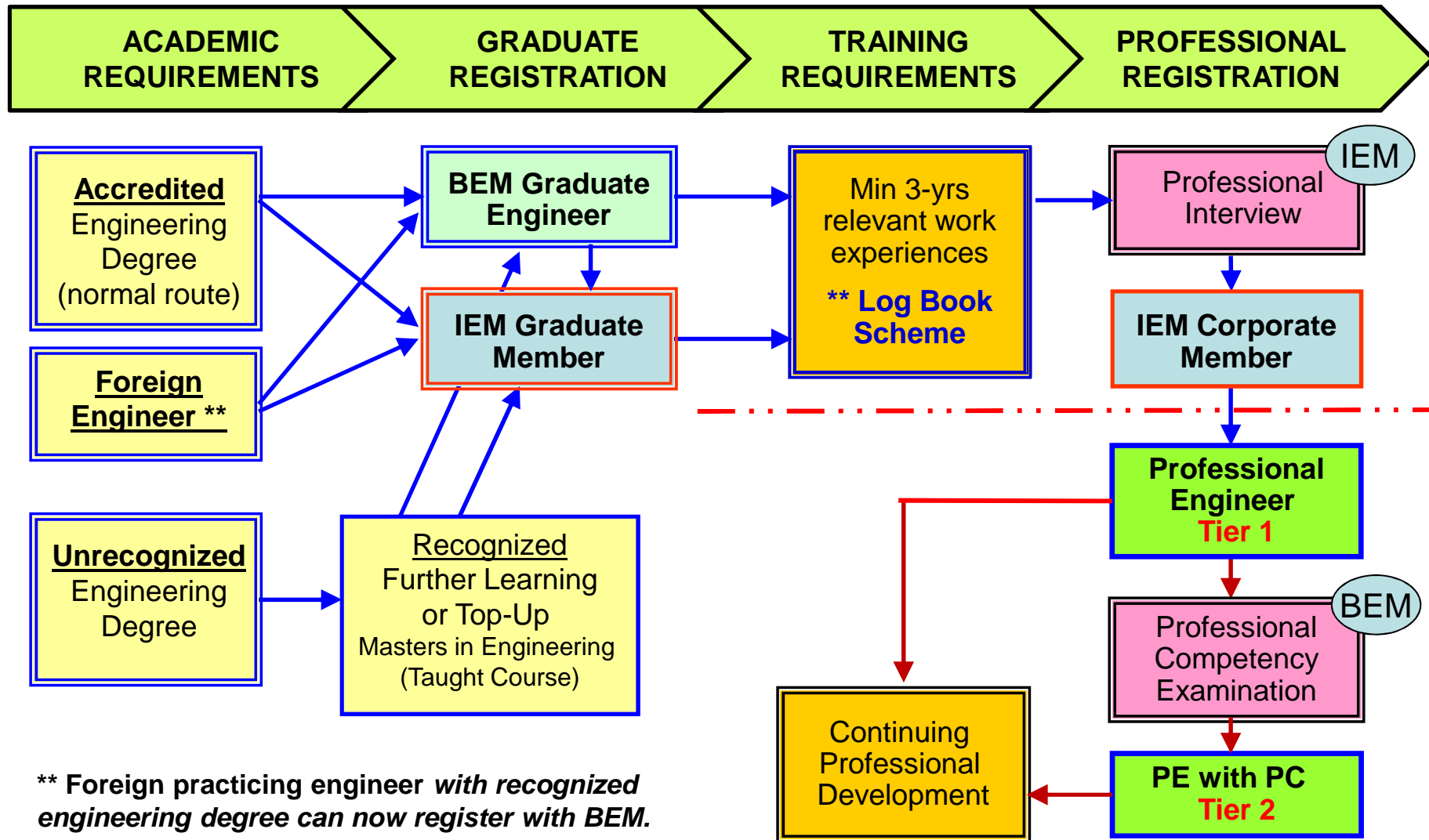
- ☑ Be a **Professional Engineer (PE Tier 1)** in good standing.
- ☑ Pass **Professional Competency Examination (PCE)**, which is conducted by BEM.

The fees for PCE consist of RM100 (Processing fee)
+ RM1,000 (Examination Fee)



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



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

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