



Mandatory Registration with Board of Engineers Malaysia

Presented by:

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Board Member & Chair, Examination and Qualification Committee

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Date: 16th December 2020

Venue: ZOOM



Outline of Presentation

Introduction

Registration as Graduate Engineer

Role as Engineering Technologist

Role as Inspector of Works

Registration as Professional Engineer

Role as Professional Engineer with Practicing Certificate

Role as Accredited Checker

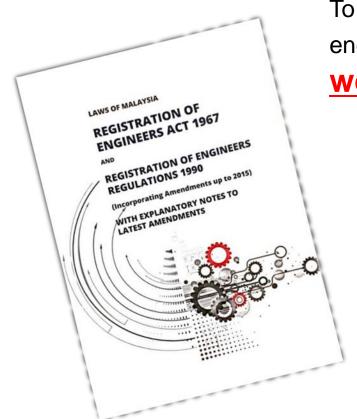
Role as Engineering Consultancy Practice





Introduction

THE PURPOSE OF THE ENGINEERS' ACT



To **protect the public** by legislative control so that the practice of engineering, which has a bearing on **public safety**, **health and welfare**, can only be carried out by **licensed** professional engineers.

To create a **regulatory body** with mandate to carry out licensing of professional engineers and regulation of the profession

To set regulations pertaining to the practice of engineering; qualifications for licensing; and code of professional conduct for registered persons;



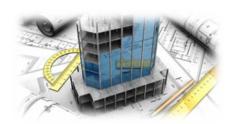
Introduction

Registered Person

- Graduate Engineers
- Professional Engineers
- Inspector of Works
- Engineering Technologist
- Professional Engineers with Practising Certificate

Business Entities

- Sole proprietorship
- Partnership
- Body corporate
- Multi-disciplinary practice



Registered Person	2020 (2.9.2020)
Graduate Engineer	139,131
Professional Engineer	4,713
Inspector of Works	6,339
Engineering Technologist	5,849
PE with Practicing Certificate	9,275
REGISTERED PERSON (TOTAL)	165,335

Business Entities	2020 (2.9.2020)
Sole Proprietorship	1,144
Partnership	222
Body Corporate	1,234
Multidisciplinary	49
ECPs (TOTAL)	2,649



INTRODUCTION

It is mandatory for university graduate to <u>register</u> as Graduate Engineer if he/she wants to take up employment as a Graduate Engineer.

A Graduate Engineer is a person registered under $\frac{\text{Section } 10(1)}{\text{(Revised 2015)}}$ of the Registration of Engineers Act 1967

According to Section 7(1B), a Graduate Engineer will be entitled to describe himself or hold himself out under any name, style or title using the abbreviation "**Grad.Eng.**" after his name or in any way associate with his name.

Mandatory Registration for Employment

Section 7(2) (a)

"a **Graduate Engineer** who is registered with the Board may subject to **section 8**, take up employment which requires him to **perform professional engineering services**"

REQUIREMENTS

Section 10(1) defines the qualification for registration as a Graduate Engineer with BEM. A person who holds any qualifications in engineering which is recognised by the Board shall be entitled on application to be registered as a Graduate Engineer.

The recognised academic qualification for registration as a Graduate Engineer with BEM includes the following:

1. Engineering Degree awarded by Malaysia:

An engineering degree accredited/recognised by Engineering Accreditation Council (EAC). The latest List
of Accredited Engineering Programme (Malaysia) is available in EAC website at
http://www.eac.org.my/web/list_accredited.html

2. Engineering Degree awarded by Other Countries

- The recognition of engineering degree from overseas (outside Malaysia) will be based on the accreditation given by professional body who is a signatory of **Washington Accord** (WA).
- In Malaysia, Engineering Accreditation Council (EAC) which comprises of BEM, MQA, JPA and IEM is the body accrediting engineering programme offered by local university.

3. CAAM / DCAM Aircraft Maintenance License

Type Category C of Aircraft Maintenance Licence (AML)

4. Certificate of Competency as Marine Engineer

• Class 1 Chief Engineer (Senior Marine Engineer) or "holder of First Class Certificate of Competency (CoC) as Marine Engineer"



Accredited Engineering Degrees by EAC at 48 IHLs with 329 programmes





































































UNIVERSITI

MALAYSIA

MAP PERLIS



















SWINBURNE

TECHNOLOGY

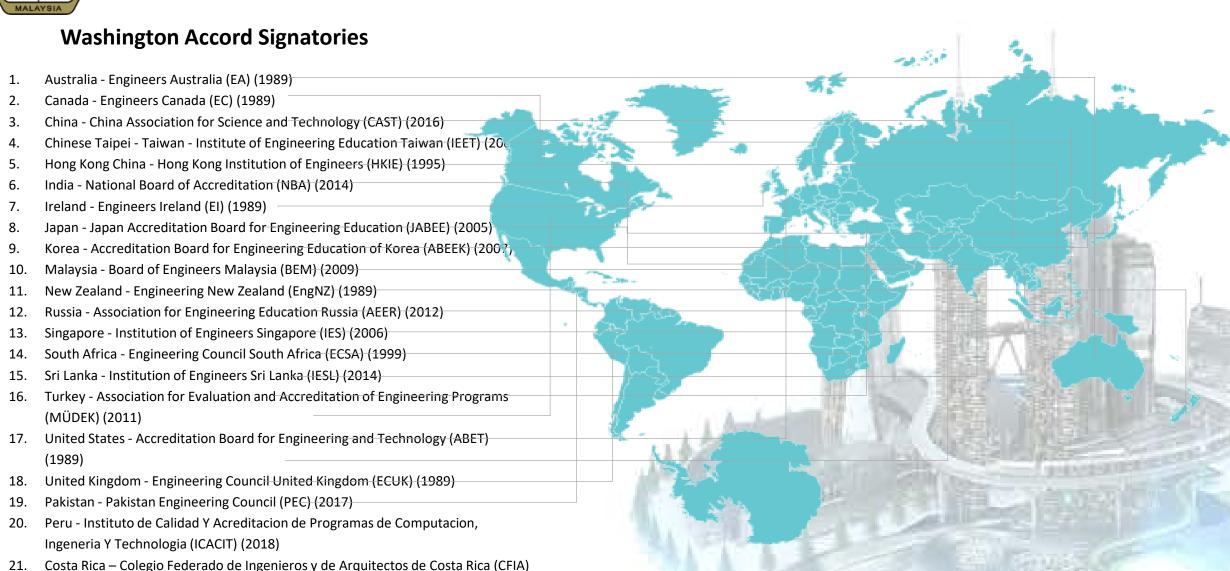










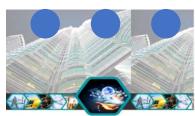




Submission

MyBEM Online Reg. System

www.engineer.org.my





Processing fee of RM 50.00













(*Confirmation letter from Jab. Laut Malaysia)















Approval within 1 – 4 months

BEM Application Committee

Output

Download, print & save e-certificate.



REGISTRATION OF ENGINEERS ACT 1967 REGISTRATION OF ENGINEERS REGULATIONS 1990



BOARD OF ENGINEERS MALAYSIA

CERTIFICATE OF REGISTRATION OF GRADUATE ENGIN

THIS IS TO CERTIFY THAT

Address : 11 JALAN INDAH : 68000 AMPANG

Gerrine Carl No. - 90000000000 Nationality - MATAVSIAN

having complied with the requirements of Registration of Engineers Act 1967 is registered as a

Registration No :

Branch of Engineering :

GH00000A **CIVIL**

Approval Date: 15 August 2019
 Comply with Section 10(2) of the Registration of Engineers Act 1967 (Revised 2015) a





(Ir. HIZAMUL-DIN BIN AB. RAHMA Registrar



Engineering Branch/ Discipline







Civil

- Building
- Construction
- Environment
- Geotechnical
- Mining
- Structural
- Transportation

Mechanical

- Aerospace
- Agricultural
- Automotive
- Building Services
- Manufacturing
- Marine
- Material
- Mechatronic
- Metallurgy
- Mining
- Naval Architectural
- Nuclear

Electrical

- Computer
- Electronics
- Communication

Chemical

- Environmental
- Nuclear
- Petroleum
- Process (Polymer, Pharmaceutical, Food)



FOR UNRECOGNISED ENGINEERING DEGREES (INTERNATIONAL):

- Top-up by Master's engineering course (coursework) that enhance the 1st Engineering Degree Program from the same engineering discipline
- from any universities which offer accredited 1st Engineering Degree Programme by BEM or Washington Accord

SUSPENDED & CURRENTLY UNDER REVIEW BY BEM



INTRODUCTION

It is mandatory for university graduate to register as **Engineering Technologist** if he/she wants to take up **employment as an Engineering Technologist**.

An Engineering Technologist is a person registered under $\frac{Section}{10(C)}$ of the Registration of Engineers Act 1967 (Revised 2015).

According to Section 7 (1B) of the Act, an Engineering Technologist will be entitled to describe himself or hold himself out under any name, style or title using the abbreviation "Eng.Tech." after his name or in any way associate with his name.

Mandatory Registration for Employment

Section 7(2) (aa)

"an Engineering Technologist who is registered with the Board may subject to Section 8, take up employment which requires him to perform professional engineering services"



REQUIREMENTS

Section 10(C) explains the qualification for registration as an Engineering Technologist with BEM. A person who holds any qualification which is recognised by the Board shall be entitled on application to be registered as an Engineering Technologist. The recognised academic qualification for registration as an Engineering Technologist with BEM includes the following:

1. Engineering Degree awarded by Malaysia:

- Bachelor Degree in Engineering Technology accredited by the Board's Engineering Technology Accreditation Council (ETAC).
- For applicants graduating before 1st January 2017, degrees accredited by Malaysian Qualifications Agency (MQA) are accepted.
- For applicants graduating after 1st January 2017, degrees accredited by Malaysian Qualifications Agency (MQA) within the six (6) years maximum from the date of accreditation prior to 1st January 2017 are accepted.

2. Engineering Degree awarded by Other Country

- An engineering technology degree accredited by professional body who is a signatory of Sydney Accord (SA).
 http://www.ieagreements.org/accords/Sydney
- In Malaysia, Engineering Technology Accreditation Council (ETAC) is the body accrediting engineering programme offered by local university.

1. CAAM / DCAM Aircraft Maintenance License

Type Category B (with type rating) of Aircraft Maintenance Licence (AML)

2. Certificate of Competency as Marine Engineer

Second Engineer (Senior Marine Engineer) or "holder of Second Class Certificate of Competency (CoC) as Marine Engineer"



Accredited Engineering Degrees by ETAC at 5 IHLs with 44 programmes



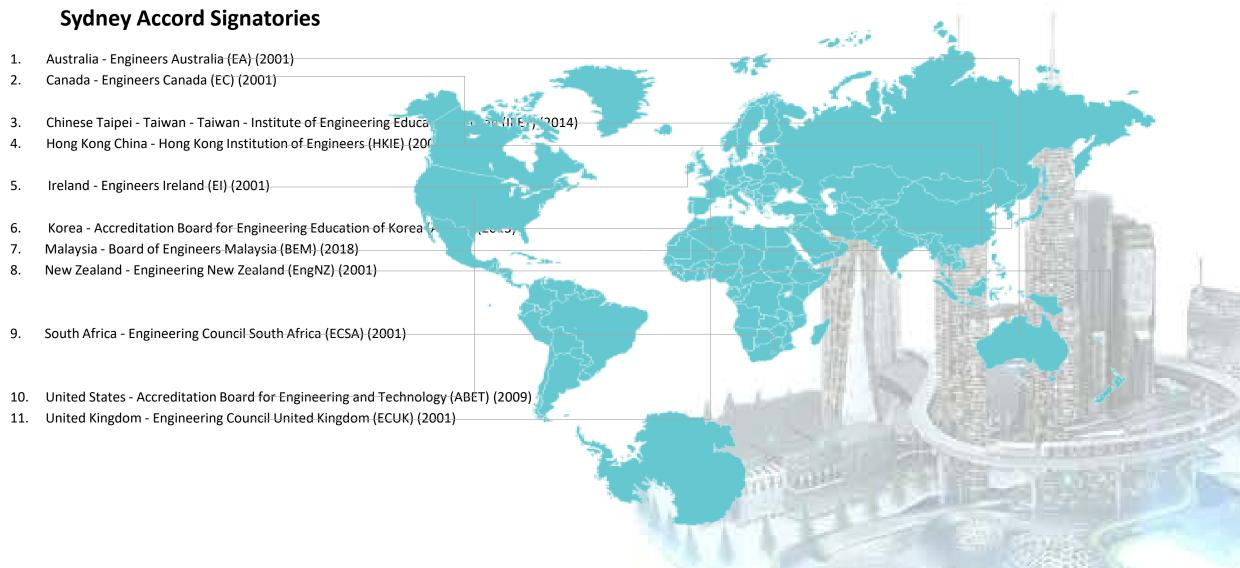




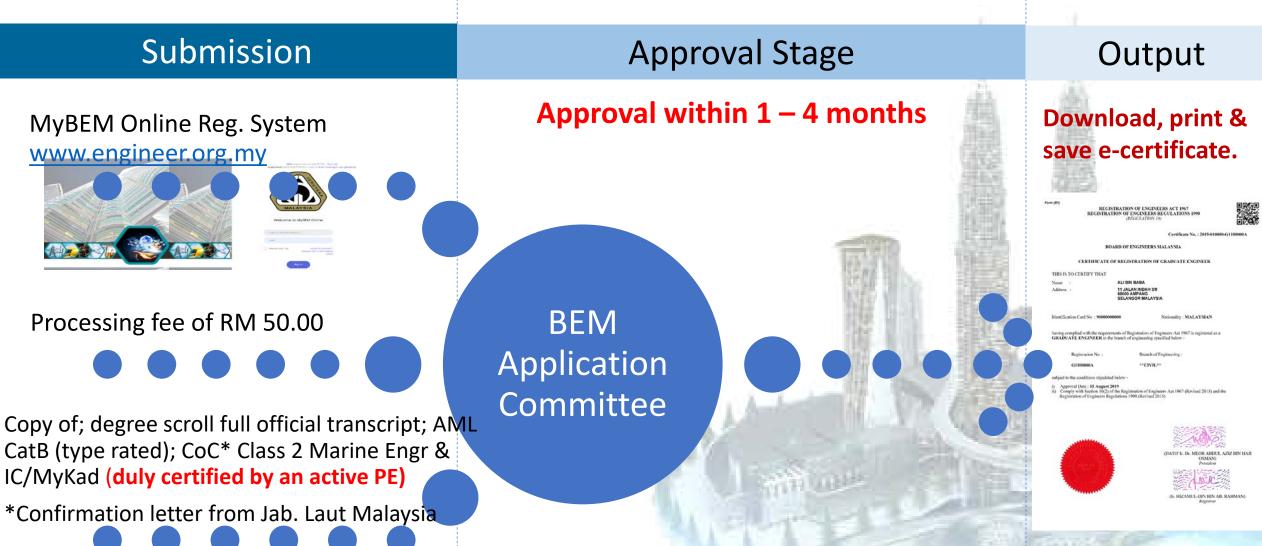










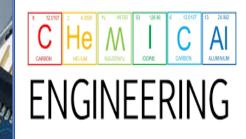




Engineering Branch/ Discipline







Civil

- Building
- Construction
- Environment
- Geotechnical
- Mining
- Structural
- Transportation

Mechanical

- Aerospace
- Agricultural
- Automotive
- Building Services
- Manufacturing
- Marine
- Material
- Mechatronic
- Metallurgy
- Mining
- Naval Architectural
- Nuclear

Electrical

- Computer
- Electronics
- Communication

Chemical

- Environmental
- Nuclear
- Petroleum
- Process (Polymer, Pharmaceutical, Food)



INTRODUCTION

It is mandatory for applicants with diploma in engineering to register as Inspector of Works (IOW) if he/she wants to take up employment as an Inspector of Works (IOW).

An Inspector of Works (IOW) is a person registered under $\frac{\text{Section } 10(E)}{\text{Constant}}$ of the Registration of Engineers Act 1967 (Revised 2015).

A registered IOW shall conduct himself / herself honourably, responsibly, ethically and lawfully by following the **Code** of **Conduct** as determined by the Board.

The registration of IOW would be under the four (4) main engineering disciplines i.e. Civil, Electrical, Mechanical or Chemical.

Mandatory Registration for Employment

Section 7(2) (ab)

"an Inspector of Works who is registered with the Board may subject to section 8, take up employment which requires him to assist Professional Engineers in supervision of engineering works"



IOWs IN EXISTING PRACTICE

After 31st December 2018, existing IOWs having qualifications not related to engineering such as SPM, Drafting, Architecture, Quantity Surveyor and Science will not be considered for IOW registration until they have obtained the required engineering related qualifications as stated herein for new IOW.

NEW IOW NOT YET IN EXISTING PRACTICE

Qualification of IOW to be eventually minimum at **Diploma level** as stated in the Requirements section.

New IOW applicants shall be registered as Intern IOW and must work under the supervision of a registered IOW or a registered Engineer / Engineering Technologist with the minimum stipulated experience. His role is to assist his immediate superior(s) having oversight on him and he is not permitted to certify completion of site works by the Contractor during his internship, which shall be carried out by his superior(s).

He/she can apply to be a registered IOW subject to the following conditions:

- •Diploma holders minimum 2 years experience, and
- Degree holders minimum 1 years experience,

EXPERIENCED SITE SUPERVISION PERSONNEL REGISTERING AS IOW

Applicant with the minimum academic qualification and has already acquired the requisite supervision experience situated nationally or internationally, can apply to be registered as IOW without the need to go through the internship period. His experience record shall be endorsed by his Employer's Professional Engineer or Engineering Consultancy Practice to be true before submitting together with his application form.

Inspector of Works Registration MALAYSIA REQUIREMENTS

Subsection 10(E) stipulates the qualification for registration as an Inspector of Works with BEM. A person who holds any qualification which is recognized by the Board shall be entitled on application to be registered as Inspector of Works.

The recognized academic qualification for registration as an Inspector of Works with BEM includes the following:

1. Engineering Diploma awarded by Malaysia:

- Minimum Diploma in Engineering accredited by the Board's Engineering Technology Accreditation Council (ETAC).
- Minimum Diploma in Engineering accredited by Malaysian Qualification Agency (MQA) or equivalent recognised by BEM (before 31st Dec 2018)

2. Engineering Diploma awarded by Other Country:

Diploma in Engineering accredited by professional body who are signatory of <u>Dublin Accord (DA) are accepted</u>.

3. CAAM / DCAM Aircraft Maintenance License

Type Category B (without type rating) of Aircraft Maintenance Licence (AML)

4. Certificate of Competency as Marine Engineer

Third, Fourth (Junior Marine Engineer) or "holder of Fourth Class Certificate of Competency as Marine Engineer"



Accredited Engineering Degrees by ETAC at 34 IHLs with 142 programmes





























































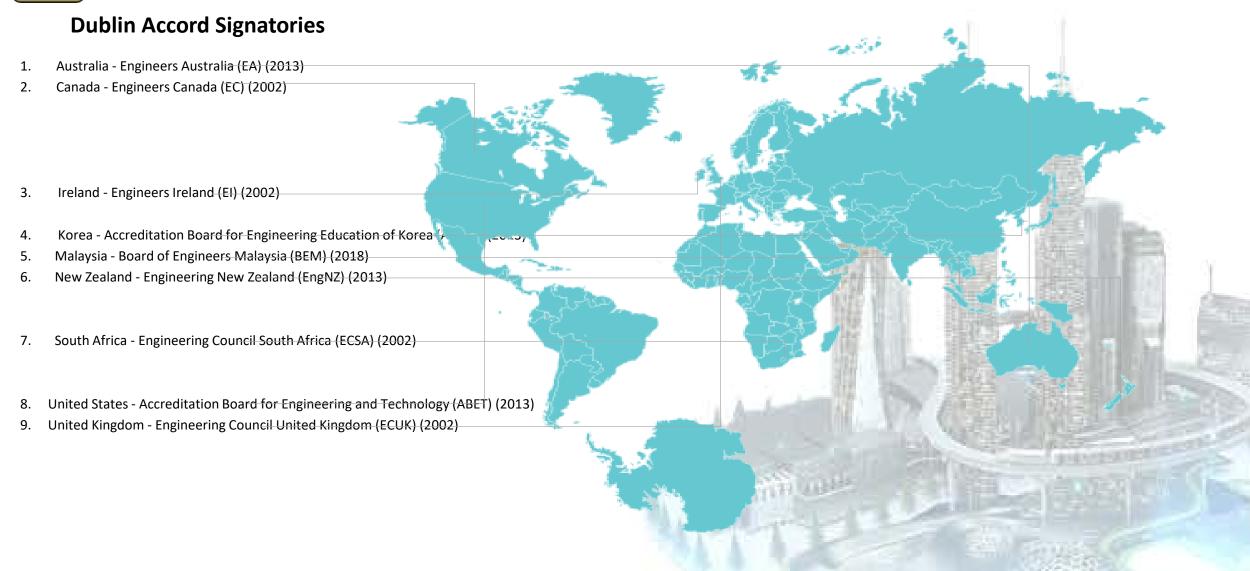




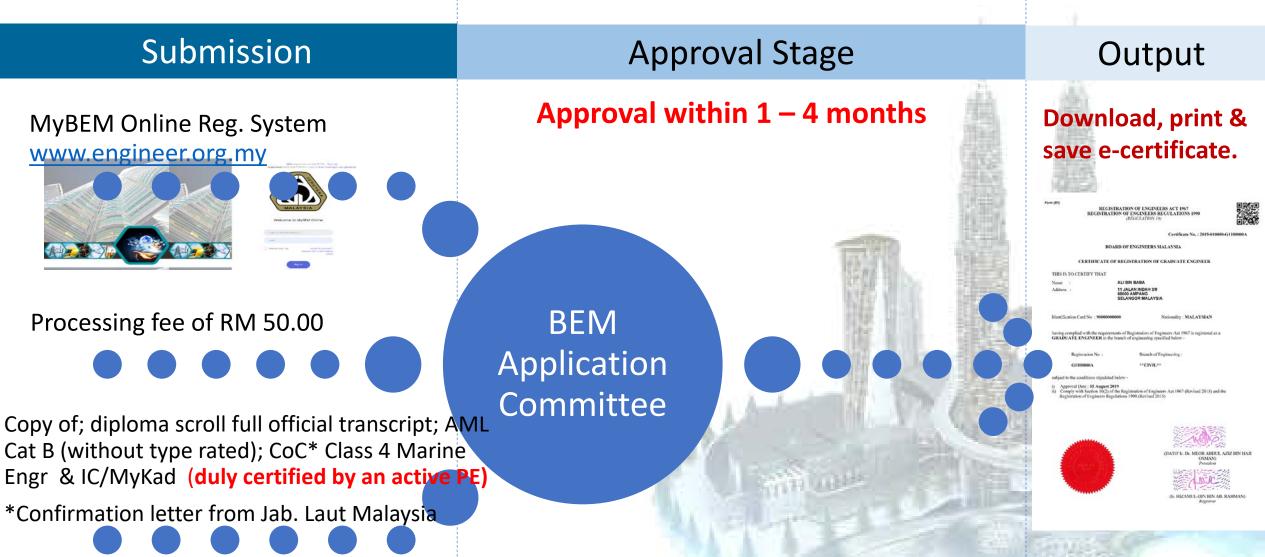
POLITEKNIK





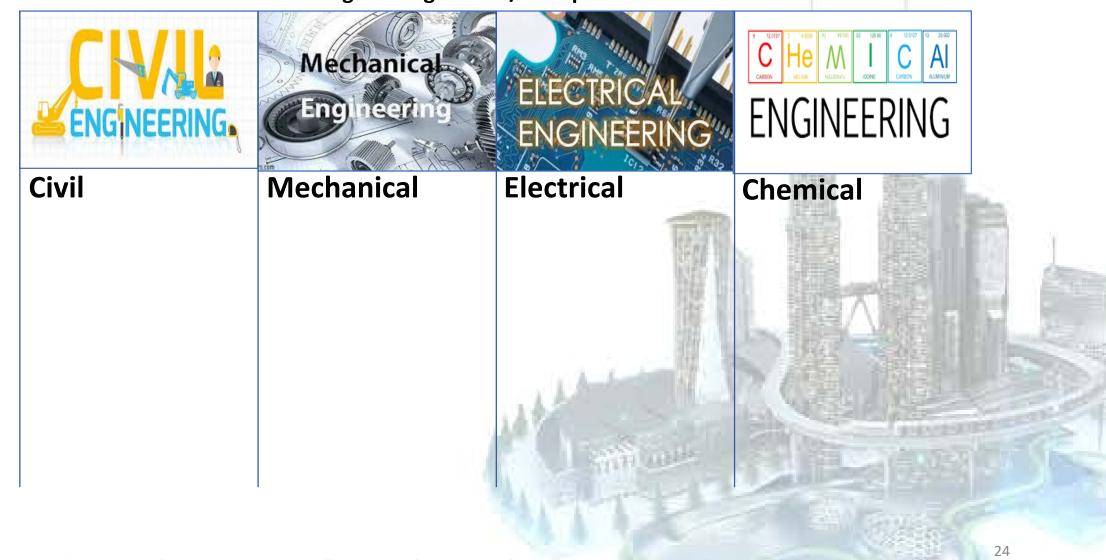








Engineering Branch/ Discipline





INTRODUCTION

- A Professional Engineer is a person registered under Section 10(2) of the Registration of Engineers Act 1967 (Revised 2015).
- A Professional Engineer who is registered with the Board may:
 - > take up employment which requires him to carry out or perform professional engineering services;
 - > be entitled to describe himself or hold himself out under any name, style or title -
 - * bearing the words "Professional Engineer" or the equivalent thereto in any other language;
 - using the abbreviation "Ir." before his name or the abbreviation "P.Eng." after his name or in any way in association with his name;
 - > use the stamp as may be determined by the Board.

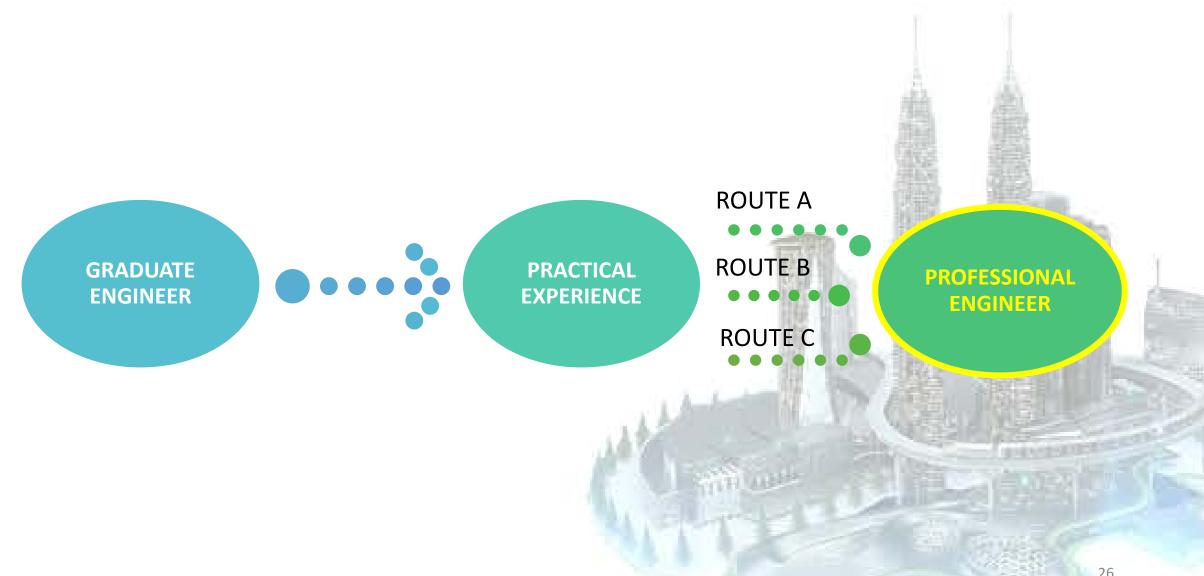
Mandatory Registration for Employment and Entitlement Section 7(1)(a)

"No person shall, unless he is a **Professional Engineer** – take up employment which requires him to carry out or perform **professional engineering services**"

Section 8A

"A Professional Engineer may submit plans or drawings to any person or authority in Malaysia where such plans or drawings are in relation to an equipment, a plant or a specialized product invented or sold by him or his employer.







ROUTE A (Professional Assessment Examination)

ROUTE B (Professional Qualification Equivalent to PAE) -Foreign-

ROUTE C (Corporate Member of IEM)

- I. Graduate Engineer registered with BEM
- II. has obtained 3 years practical experience as specified in Regulation 22(1)
- III. has passed a Professional Assessment
 Examination (PAE) conducted by the Board
 - a. Interview
 - b. Written technical paper
 - c. Written code of professional conduct

- I. Registered Professional Engineer (in good standing) from recognized Professional Bodies with substantially equivalent assessment
- II. Graduate Engineer registered with BEM
- III. has obtained 3 years practical experience as specified in Regulation 22(1)
- IV. has passed Code of Professional Conduct Assessment;

- I. A Corporate Member of the Institution of Engineers Malaysia (IEM)
- II. has obtained 3 years practical experience as specified in Regulation 22(1)









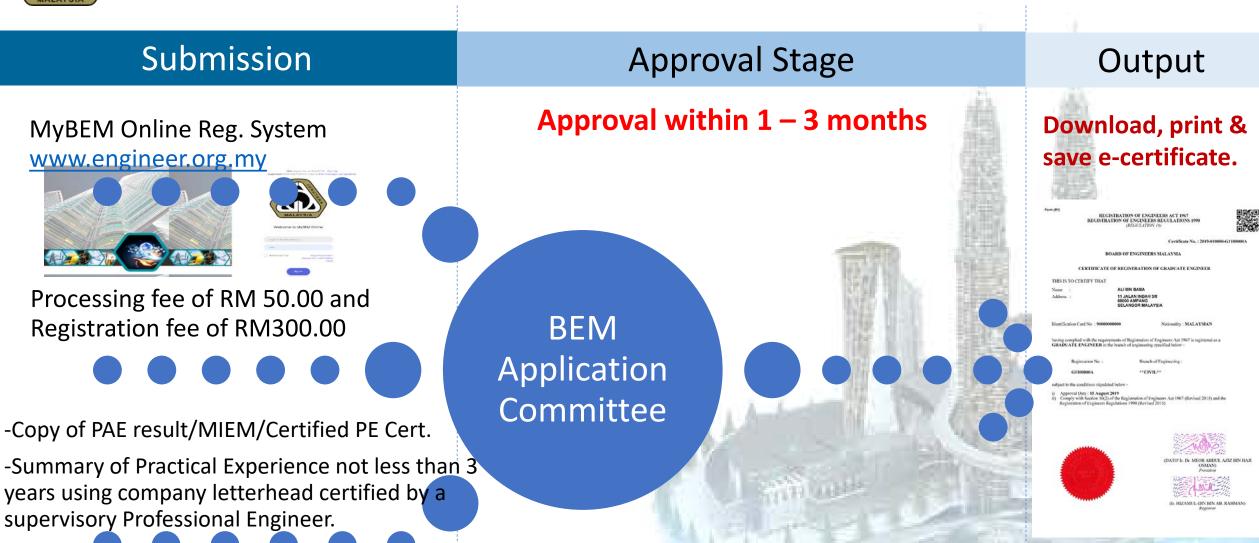












Rrofessional Engineer with Practicing Certificate Registration

INTRODUCTION

- A Professional Engineer with Practising Certificate is a person registered under subsection 10D of the REA (Revised 2015).
- A Professional Engineer with Practicing Certificate who is registered with the Board may:
 - practise, carry on business or take up employment which requires him to carry out or perform professional engineering services for designated engineering works subject to section 8;
 - > be entitled to describe himself or hold himself out under any name, style or title
 - bearing the words "Professional Engineer with Practising Certificate";
 - ❖ using the abbreviation "Ir." before his name or the abbreviation "P.Eng." after his name or in any way in association with his name;
 - ➤ be entitled to recover in any court any fee, charge, remuneration or other form of consideration for any professional engineering services rendered subject to section 8.
 - use the stamp as may be determined by the Board.

Mandatory Registration for Employment and Entitlement

<u>Section 7(1A)(a)</u>

"A person shall not, unless he is a **Professional Engineer with Practicing Certificate** – practice, carry on business or take up employment which requires him to carry out or perform **professional engineering services** for designated engineering works subject to Section 8"

Section 8(1)

"....no person or body, other than a Professional Engineer with Practicing Certificate who is residing and practicing in Malaysia or an Engineering Consultancy Practice providing professional engineering services in Malaysia, shall be entitled to submit plans, engineering surveys, drawings, schemes, proposals, reports, designs or studies to any person or authority in Malaysia."

Professional Engineer with Practicing Certificate Registration

REQUIREMENTS

Applicant shall be entitled on application to be registered as a Professional Engineer with Practising Certificate if he/she:

- 1. is a registered Professional Engineer with the Board;
- 2. has passed a Professional Competency Examination conducted by the Board;
- 3. has been residing in Malaysia for a period of not less than six months immediately prior to the date of application.

Professional Engineer with Practicing Certificate Registration

Submission Approval Stage Output MyBEM Online Reg. System Approval within 1-3 months Download, print & www.engineer.org.my save e-certificate. Processing fee of RM 50.00 and BEM Registration fee of RM200.00 **Application** Committee Copy of PCE result



Accredited Checker Registration

INTRODUCTION

- The explanatory notes herein are to assist Professional Engineers seeking registration as Accredited Checkers in geotechnical and/or structural engineering works. They are in furtherance of Section 10B of the Registration of Accredited Checker, Registration of Engineers Act 1967 (Revised 2015).
- Any person applying for registration as an Accredited Checker shall:
 - ▶ be a practising Professional Engineer registered under the Act in the civil, structural or geotechnical engineering discipline;
 - has at least 10 years' relevant practical experience in the design or construction of engineering works in geotechnical or structural;

Requirement for registration

- (a) Professional Engineer with Practising Certificate;
- (b) at least 10 years relevant practical experience in the design and construction of buildings as defined in the Street, Drainage and Building Act 1974 [Act 133]; and
- (c) he satisfies the Board that by virture of his ability, standing in the profession, special knowledge or practical experience.

32



Accredited Checker Registration

Submission 3 copies of AC Report and Design Report by PEPC who has adequate hands-on experience in the following;

Geotechnical

Compulsory requirement:

- Design of slopes greater then 25 degrees and total vertical height more then 10 meters, or
- Design of retaining wall greater than 10m high (wall can be reinforced concrete, reinforced earth or gravity wall) Supplementary requirement:
- Design of basements greater than 2 levels, or
- Design of foundation (include both shallow and deep foundations) for buildings higher than 10 stories, or
- Design of ground treatment and embankment greater than 5m deep.

> Structural

Compulsory requirement:

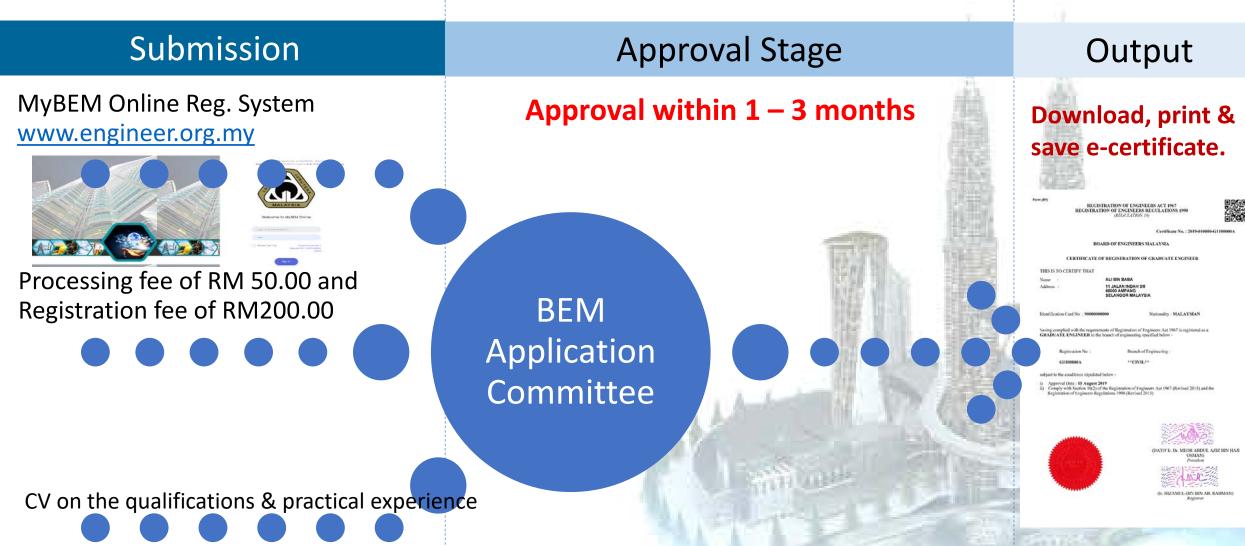
- Buildings exceeding 5 storeys but must have wind load experience;
- Buildings of unconventional construction with spans exceeding 10 metres; and
- Buildings that will result in complex interactions with existing buildings;

Supplementary requirement:

- Design of building of unconventional constructions (e.g. space frame structures, transfer structures etc.), or
- Design of buildings that will result in complex interactions with existing buildings.
- period 7 years has been engaged in geotechnical or structural design after registration as a Professional Engineer; and
- for a continuous period of 1 year has had such practical experience in the relevant field gained in Malaysia; and
- has attended and passed the interview conducted by the Accredited Checkers Committee.



Accredited Checker Registration





Engineering Consultancy Practice Registration

INTRODUCTION

The REA is one of the few engineering Acts that registers companies and firms. There are two sections: Section 7A which registers Single Disciplinary Practice (SDP) and Section 7B which registers Multi Disciplinary Practice (MDP). Section 7A of the REA covers three types of firms, sole proprietorship, partnership and body corporate. Section 7B covers engineering firms providing a combination of architectural or quantity surveying services. All firms registered under the Board are known as Engineering Consultancy Practice (ECP).

Requirement for registration

"Section 7A(3) The Board shall register a sole proprietorship, partnership or body corporate as an Engineering consultancy practice, subject to such conditions and restrictions as it may deem fit to impose, if

- (a) in the case of the sole proprietorship, the sole proprietor is a Professional Engineer with Practising Certificate:
- (b) in the case of the partnership, all the partners are Professional Engineers with Practising Certificates: or
- (c) in the case of the body corporate,
 - it has a board of directors who shall be subject to such conditions and qualifications as may be prescribed by the Board
 - its shareholdings shall be as may be prescribed by the Board:
 - iii. it has a minimum paid-up capital which shall be of an amount to be prescribed by the Board; and
 - iv. the day-to-day affairs of the body corporate shall be under the control and management of a person who
 - (A) is a Professional Engineer with Practising Certificate; and
 - (B) is authorized under a resolution of the board of directors of the body corporate to make all final engineering decisions on behalf of the body corporate in respect of the requirements under this Act or any other law relating t the supply of professional engineering services by the body corporate."



Engineering Consultancy Practice Registration

REQUIREMENT:				
ECP Type	Minimum Paid Up Capital	Equity	Board of Director	
Sole Proprietorship	NIL	NIL	Single by PEPC	
Partnership	NIL	NIL	Multiple by PEPC	
Body Corporate- Single Disciplinary	RM50,000	At least 70% by PEPC and balance by others	2/3 by PEPC1/3 by other	
Body Corporate- Multi Disciplinary	RM150,000	 at least sixty percent of its share equity held by Professional Engineers with Practising Certificate with combination of service comprising Architects or Professional Quantity Surveyors minimum share of ten percent shall be held by the Professional Engineers with Practising Certificate Balance by others. 	 at least 2/3 of its members are Professional Engineers with Practising Certificate with combination of service comprising Architects or Professional Quantity Surveyors Max. 1/3 by other 	



Engineering Consultancy Practice Registration

Submission

MyBEM Online Reg. System

www.engineer.org.my





Processing fee of RM 50.00 with Registration fee RM250(Sole Proprietorship), RM500 (Partnership) and RM1,000 (Body Corporate)

Sect 14, Cert. of Corporation of Private Company (SSM), Sect 105, 51, 58, 78, Director Resolution, Statutory Declaration, etc.













Approval within 1 – 3 months

BEM Application Committee

Output

Download, print & save e-certificate.

Form (B1)

REGISTRATION OF ENGINEERS ACT 1967 REGISTRATION OF ENGINEERS REGULATIONS 1990

Certificate No. : 2019-010000-G1

CENTRECATE OF DECISION OF COARSIATE ENCINEER

THIS IS TO CERTIFY THAT

Name: ALI BII

Address : 11 JALAN INDAH 31 68000 AMPANG

Service Cort No. - 90000000000 Nericoulin - MALAVSIAN

aving complied with the requirements of Registration of Engineers Act 1967 is registered as a

Registration No :

Branch of Engineering:

G1100006A **C1

Approval Date: 15 August 2019
 Comply with Section 10(2) of the Registration of Engineers Act 1967 (Revised 2015) and the Revised of Engineers (Revised 2016) and the Revised College of Engineers (Revised 2016).

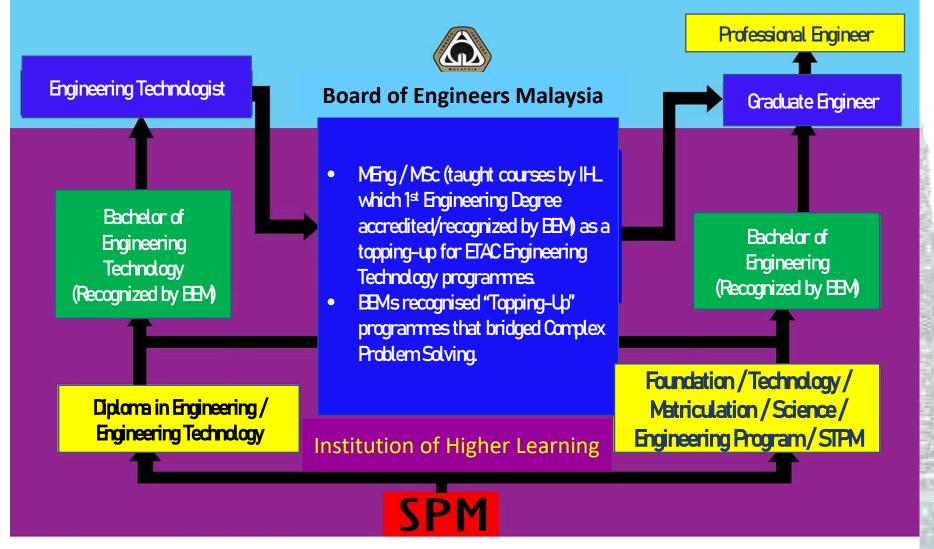




(ir. HIZAMUL-DIN BIN AB. RAHMA Registrar

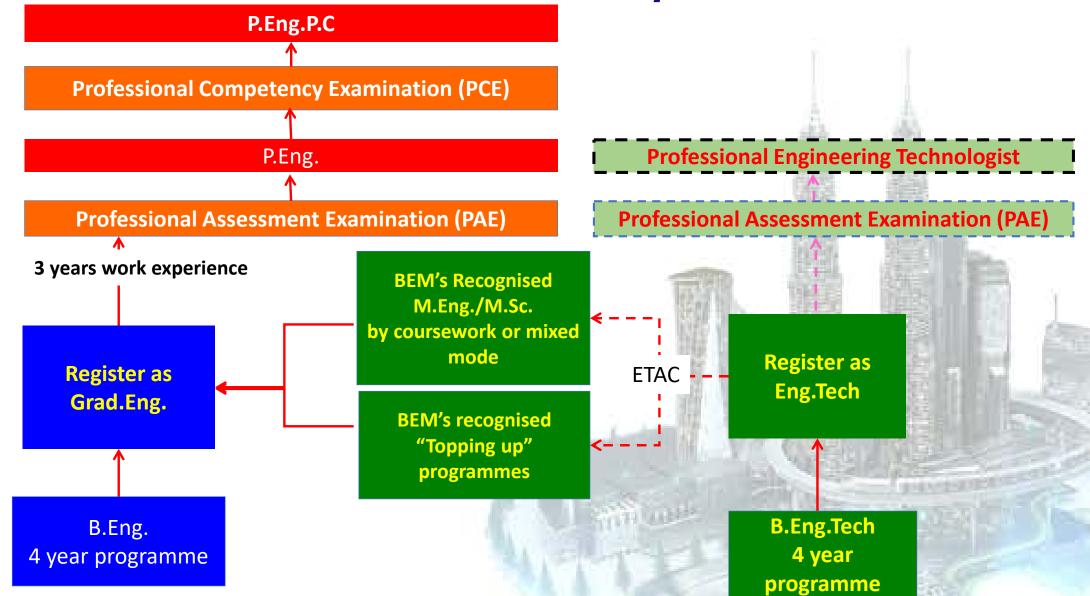


Engineering Academic Pathway





Professional Pathway



BEM Online Portal







Welcome to MyBEM Online

Login: IC Number (without -)

Password: Password

Remember me

Forget Password ?
Request for Confirmation



















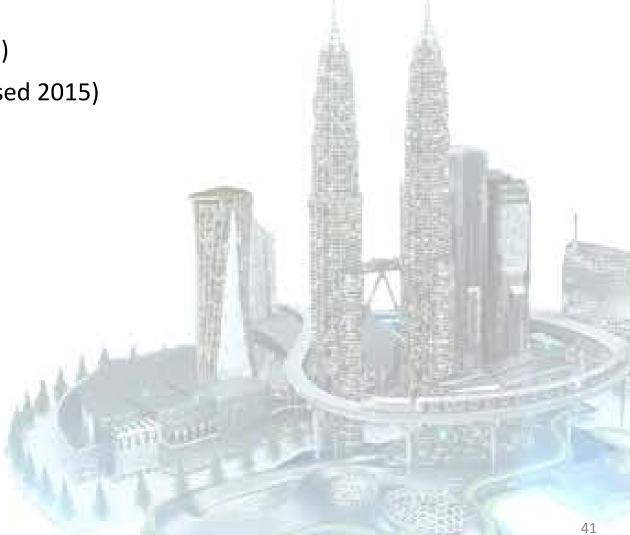








- Registration of Engineers Act 1967 (Revised 2015)
- Registration of Engineers Regulations 1990 (Revised 2015)
- BEM website at www.bem.org.my





BOARD OF ENGINEERS MALAYSIA

Tingkat 11 & 17, Blok F Ibu Pejabat JKR
Jalan Sultan Salahuddin, 50580 Kuala Lumpur
http://www.bem.org.my

enquiry@bem.org.my or complaint@bem.org.my.

Tel: 03-26912090; 03-26107095/96 Fax: 03-26925017