"In the name of God, most Gracious, most Compassionate".
ACHIEVING PROFESSIONAL STATUS

by:

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Executive Director,
Board of Engineers Malaysia
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REGISTRATION OF ENGINEERS ACT 1967

Act of Parliament

Act 138

Regulations Governing the Engineering Profession, Practice & Services
Who are we

• A statutory body constituted under the Registration of Engineers Act (1967)

• Formed on 23rd August 1972
Functions of BEM (section 4)

- Keep and maintain the Register
- Process the Application for Registration
- Fix the Scale of Fees
- Assess Academic Qualification
- Regulates the Practice & Conduct of the Engineering Profession
Functions of BEM (section 4)

- Act as a stakeholder in a contract for professional engineering services when requested
- Conduct Professional Development programmes
- Conduct Professional Assessment Examination
## Category of Registration

- Graduate Engineer
- Professional Engineer
- Temporary Engineer
- Accredited Checker
- Engineering Consultancy Practice
  - i) Body Corporate
  - ii) Multi Disciplinary
  - iii) Sole Proprietorship
  - iv) Partnership
Accredited Engineering Degree by EAC

Registration as a Graduate Engineer with BEM

Practical experience of minimum three years as prescribed in Regulations 22(1) Registration of Engineers Regulations 1990 (Revised 2003)

Professional Assessment Exam. (PAE) now conducted by IEM

IEM Professional Interview

Pass

IEM Corporate Membership

Pass

Apply to BEM for upgrading to Professional Engineer
Route to Accredited Checker

Registered Professional Engineer in Civil, Structural or Geotechnical engineering discipline

HAS:
- Minimum 10 years' relevant practical experience in the design or construction of buildings.
- During the period 7 years immediately preceding the date of application, has been engaged in geotechnical or structural design after registration as a Professional Engineer.
- For a continuous period of 1 year immediately preceding the date of his/her application, has had such practical experience in the relevant field gained in Malaysia.
Route to Accredited Checker

Attended the Interview conducted by Accredited Checkers Committee

On passing

ACCREDITED CHECKER
BEM is the only body certifying Professional Engineers
GRADUATE ENGINEERS: Qualifications, Requirements and Procedures for Registration
Qualification for Registration - section 10(1)(a)

- Engineering graduate from accredited Institution of Higher Learning in Malaysia or Overseas.
- Graduate membership of IEM
Special Case:

Electronic Engineer who wish to be upgraded as an Electrical Engineer must fulfil:
### Graduate Engineers

<table>
<thead>
<tr>
<th>SUBJECT</th>
<th>MIN. CREDIT HOUR</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Machines &amp; Drives or;</td>
<td>2</td>
</tr>
<tr>
<td>(b) Machine &amp; Power Electronic</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>3</td>
</tr>
<tr>
<td>SUBJECT</td>
<td>MIN. CREDIT HOUR</td>
</tr>
<tr>
<td>------------------------------</td>
<td>------------------</td>
</tr>
<tr>
<td>(a) Fields (EM) &amp; Circuit</td>
<td>2</td>
</tr>
<tr>
<td>(b) Fields &amp; Circuit Theory</td>
<td>2</td>
</tr>
<tr>
<td>SUBJECT</td>
<td>MIN. CREDIT HOUR</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>------------------</td>
</tr>
<tr>
<td>(a) Power Engineering or;</td>
<td>2</td>
</tr>
<tr>
<td>(b) High Voltage or;</td>
<td>2</td>
</tr>
<tr>
<td>Others</td>
<td></td>
</tr>
</tbody>
</table>
Requirement for Topping Up

(a) Master’s Degree:
- University recognised by BEM
- by Coursework with the above subjects

(b) BEM/IEM Graduate Examination

Note: Classification of discipline for degree courses conducted by local universities is determined by EAC
Procedure for Registration

• Submit Form A accompanied by:
  • a non-refundable processing fee of RM 50.00
  • Copy of degree certificate duly certified by Professional Engineer
  • Copy of transcript of academic record duly certified by Professional Engineer
Practical Experience

Regulation 22, Registration of Engineers
Regulation 1990 (Revised 2003)

Obtained at least 3 years practical experience at which:

a) 2 years general training
b) 1 year professional career development & training
c) 1 year of the above must be obtained in Malaysia
d) satisfactory attendance in courses and professional development programmes determined by the Board.
Satisfactory attendance in the following:

(i) Code of Ethics - 12 hrs
(ii) Health and Safety at Work - 12 hrs
(iii) Engineering Management Practice - 12 hrs
(iv) Courses related to graduate's branch of engineering - 24 hrs
Completion of not less than 30 units of Professional Development which includes:

(i) technical talks
(ii) seminars
(iii) society/association meetings
(iv) community services

1 unit PDP : 1 hour; Max. 4 units a day
PROFESSIONAL ENGINEERS:
Qualifications, Requirements
and Procedures for
Registration
Who Are Qualified?

A graduate engineer who has passed the Professional Assessment Examination (PAE)
• Registered as Graduate Engineers not less than 3 years
• Obtained the required practical experience as in Regulations 22
• Graduate Engineers in Civil are required to obtain at least 12 months experience in design/office & site/field
Candidates Engaged in Research & Teaching

• Must undergo at least 1 year of industrial training under the supervision of a Professional Engineer registration in the same branch of engineering as that practiced by the Graduate Engineer

• 2 years experience in research & teaching
How to Apply

• Starting 1.1.2007, the Professional Assessment Examination would be conducted by IEM on behalf of the BEM.
• Contact the Institution of Engineers Malaysia at 03.7968-4001 or visit www.iem.org.my
PROFESSIONAL ENGINEERS:
Requirements and Procedures for Registration
Requirements - Section 10(2)

- Registered as a graduate Engineer with BEM
- Have satisfied the training requirements of BEM
- Have passed the Professional Assessment Examination (PAE) of BEM
• be elected as a Corporate Member of the Institution of Engineers Malaysia (IEM)

• Has been residing in Malaysia for a period of not less than 6 months immediately prior to the date of application
How To Apply

• Be made in **Form B1**
• On approval of the application, the candidate has to pay a **processing fee of RM50.00 and a registration fee of RM300.00** within 2 months after date of notification
• On payment, a certificate of registration will be issued
CONTINUING PROFESSIONAL DEVELOPMENT FOR PROFESSIONAL ENGINEERS (CPD)
Requirements

Every Professional Engineer is required to start accumulating 50 CPD hours per year on average over 3 years with effect from 1st January 2005.
Objectives of CPD

• maintenance of technical knowledge, skill & competency

• engineers to stay abreast of new engineering development in their field and changes in codes and regulations.
Types of CPD

a) Formal Education and Training Activities
b) Informal Learning Activities
c) Conference and Meeting
d) Presentation of Papers
e) Services Activities.
f) Industry Involvement (mainly for academic)
## Summary of CPD

<table>
<thead>
<tr>
<th>Type</th>
<th>Times Weighted Factor</th>
<th>Max. Per Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formal Education And Training activities</td>
<td>2 x</td>
<td>No limit</td>
</tr>
<tr>
<td>Informal learning Activities</td>
<td>1 x - on job learning</td>
<td>Max. 20</td>
</tr>
<tr>
<td></td>
<td>0.5 x - private study</td>
<td>Max. 10</td>
</tr>
<tr>
<td>Conference and Meeting</td>
<td>1 x</td>
<td>No limit</td>
</tr>
<tr>
<td>Presentation of Papers</td>
<td>10 x</td>
<td>Max. 30</td>
</tr>
<tr>
<td>Services activities</td>
<td>1 x</td>
<td>Max. 30</td>
</tr>
<tr>
<td>Industry Involvement (for Academic)</td>
<td>1 x</td>
<td>Max. 30</td>
</tr>
</tbody>
</table>
Conduct of Registered Engineer:

• shall at all times uphold the dignity, high standing & reputation of the profession
Responsibility to employer, clients or profession:

• shall have full regard to the public interest
Discharge of duties:

• to employer and client with complete fidelity
Reputation of a Registered Engineer is not to be injured

• shall not maliciously injure or attempt to injure, directly or indirectly, the professional reputation, prospects or business of another registered engineer
Part IV - Code of Professional Conduct (Regulations 2003)

Canvassing and advertising are prohibited

(a) canvass or solicit professional employment;

(b) offer to make by way of commission or any other payment for the introduction of his professional employment;

(c) except as permitted by the Board, advertise in any manner or form in connection with his profession; or
Canvassing and advertising are prohibited

(d) provide professional engineering services to any person, unless the scope of such services are clearly defined in a written agreement between both parties.
• A registered Engineer in an Engineering consultancy practice shall not practise engineering with any person whose registration has been cancelled.
Restrictions on making payments or placing contracts

- A registered Engineer in an Engineering consultancy practice shall not be a medium of payment made on his client's behalf unless he is so requested by his client nor shall he, in connection with work on which he is employed, place contracts or orders except with the authority of and on behalf of his client.
A registered Engineer shall not directly or indirectly intervene or take over the work of another.
Without prior approval, a registered Engineer in an Engineering Consultancy Practice shall not be a director / executive / substantial shareholder for any contracting or manufacturing company/firm/business related to building or engineering.
Disclosure of interest

- Shall disclose in writing any financial interest in any such company/firm/business, with which he deals on behalf of his client.
Qualifications
International Recognition
Washington Accord

Washington Accord is an agreement among the engineering quality assurance organisations of several nations that recognises the substantial equivalency of programs accredited by those organisations.
• Washington Accord is an agreement among the engineering quality assurance organisations of several nations that recognises the substantial equivalency of programs accredited by those organisations
• **Signatories** have full rights of participation in the Accord; qualifications accredited or recognised by other signatories are recognised by each signatory as being substantially equivalent to accredited or recognised qualifications within its own jurisdiction.
As a Washington Accord signatory, Malaysia's degrees that have been accredited by EAC will be accepted by other Washington Accord signatories.
Signatories of Washington Accord

• Australia
• Canada
• Chinese Taipei
• Hong Kong China
• Ireland
• Japan
• Korea
• New Zealand
• Singapore
• South Africa
• United Kingdom
• United States
• Malaysia has been conferred with the provisional membership status in June 2003 is currently in the process of gaining full signatory of Washington Accord by 2009.
International Recognition

ASEAN Chartered Professional Engineer
ASEAN MRA

The governments of member countries of the ASEAN have agreed on the ASEAN Mutual Recognition Arrangement on Engineering Services which aims to:

a) facilitate mobility of engineering service professionals

b) exchange information in order to promote adoption of best practices on standard and qualifications.
Member Countries

- Brunei Darussalam
- The Kingdom of Cambodia
- The Republic of Indonesia
- Lao People's Democratic Republic
- Malaysia
- The Union of Myanmar
- The Republic of the Philippines
- The Republic of Singapore
- The Kingdom of Thailand
- The Socialist Republic of Vietnam
Benefits to Malaysian Engineers

• Easy mobility within member countries

• Reduce barriers

• Registered ACPE would have easier access to practice throughout the member countries.

• Job and business opportunities
A professional engineer or practitioner who meets the following qualifications, practical experience and conditions is eligible for registration as an ACPE:

(a) completed an accredited or recognized engineering programme;

(b) is a registered professional Engineer with BEM
(c) possesses a minimum of seven years of practical experience since graduation

(d) has spent at least two years in responsible charge of significant engineering work
(e) complied with the Continuing Professional Development (CPD) policy at a satisfactory level

(f) agrees to be bound by code of professional conduct and ethics.
Benefits to Malaysian Engineers

• Easy mobility within member countries
• Reduce barriers
• Registered ACPE would have easier access to practice throughout the member countries.
• Job and business opportunities
International Relations

International Membership
Requirements for Registration

BEM has been a member of the following International Registration:

- APEC Engineers Register
- EMF International Engineer Register
International Recognition

APEC Engineers Register

EMF International Engineer Register
Signatories of APEC Engineers Register

- Malaysia
- Australia
- Canada
- Hong Kong (China)
- Chinese Taipei
- Indonesia
- Phillipines
Signatories of APEC Engineers Register

- Singapore
- Japan
- Korea
- New Zealand
- Thailand
- United States of America
Signatories of EMF International Engineers Register

- Malaysia
- Australia
- Canada
- Hong Kong (China)
- Sri Lanka
- Singapore
- Ireland
Signatories of EMF International Engineers Register

- Japan
- Korea
- New Zealand
- South Africa
- United Kingdom
- United States of America
Objectives & Benefits

- part of the initiatives for trade liberalisation in Professional Services
- reduce barriers
- ease the process for engineers to gain access to work (e.g. licensing) and practice in other economies
Qualifications for Registration

- Registered Professional Engineer with BEM
- Corporate Member of IEM
- Have completed an accredited or recognised engineering degree
- 7 years practical experience since graduation
Qualifications for Registration

• Spent at least 2 years practical experience in responsible charge of significant engineering work

• Maintained CPD at a satisfactory level.
How To Apply

• Contact the Institution of Engineers Malaysia or;

• Visit www.iem.org.my
International Relations

ASEAN FRAMEWORK AGREEMENT ON SERVICES (AFAS)
ASEAN Framework Agreement on Services (AFAS)

Launched jointly by ASEAN countries to work towards freer flow of trade in services within the region through the signing of ASEAN Framework Agreement on Services (AFAS) on 15.12.1995 by ASEAN Economic Ministers (AEM) during the 5th ASEAN Summit in Bangkok.
OBJECTIVES - AFAS

- to enhance cooperation in services amongst ASEAN Member Countries in order to improve the efficiency and competitiveness

- diversify production capacity and supply and distribution of services of their services suppliers within and outside ASEAN
OBJECTIVES - AFAS

• to eliminate substantially restrictions to trade in services amongst ASEAN Member Countries

• to liberalise trade in services by expanding the depth and scope of liberalisation beyond those undertaken by ASEAN Member Countries under GATS with the aim to realising free trade in services
Preparing for Globalisation

PRESENT SCENARIO
PRESENT SCENARIO

- As far as AFAS and WTO, we are prepared to export our engineering services abroad.

- As for ASEAN, we are spearheading the operationalisation of the MRA

- By end of the year, ACPE will be registered and ready to work in any of the ASEAN countries.
PRESENT SCENARIO

• At present, the industries are having “shortage” of experienced engineers in the countries.

• As it is now, most of our experienced engineers are working overseas for e.g. in Australia, Singapore, Middle East, etc.
Preparing for Globalisation

FUTURE SCENARIO
FUTURE SCENARIO

• With Malaysia becoming the full signatory of Washington Accord, our engineering graduates will be more marketable overseas.
We are also working together with MITI on Free Trade Agreement (FTA) with many countries and this will open opportunities for Malaysian to work overseas.
FUTURE SCENARIO

• Transfer of technology and job opportunities will be available with the opening of foreign companies offices in Malaysia.

• Malaysia can become hub for providing engineering services for overseas client with the help of IT world today
Registration of Engineers

STATISTIC

(as at 30.6.2008)
<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional Engineers</td>
<td>13,349</td>
</tr>
<tr>
<td>Graduate Engineers</td>
<td>45,869</td>
</tr>
<tr>
<td>Total Registered Engineers</td>
<td>59,218</td>
</tr>
</tbody>
</table>
Registered Professional Engineers By Discipline

- **Civil**: 6,801
- **Electrical**: 2,677
- **Mechanical**: 2,630
- **Chemical**: 411
- **Others**: 830

![Pie chart showing the distribution of registered professional engineers by discipline](image)
<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temporary Engineers</td>
<td>14</td>
</tr>
<tr>
<td>Accredited Checkers</td>
<td>28</td>
</tr>
<tr>
<td>Sole Proprietorship</td>
<td>645</td>
</tr>
<tr>
<td>Partnership</td>
<td>177</td>
</tr>
<tr>
<td>Body Corporate</td>
<td>984</td>
</tr>
<tr>
<td>Multidisciplinary Practice</td>
<td>16</td>
</tr>
</tbody>
</table>
our testimony

PROJECTS WORLD-WIDE
Projects world-wide
Robertson Quay Foot Bridge, Singapore
Emirates Office & Tower, Dubai, UAE
Avillion Hotel, Sydney
Burj al-Arab Hotel, Dubai, UAE
Pochentong Airport, Kampuchea
Western Access Tollway, Buenos Aires, Argentina
Gas Utilisation Project, Sudan
End of Presentation
THANK YOU
Wallahu’alam.

“Only God has all the knowledge”