



LJM

LEMBAGA JURUTERA MALAYSIA

LAPORAN TAHUNAN

ANNUAL REPORT

2020



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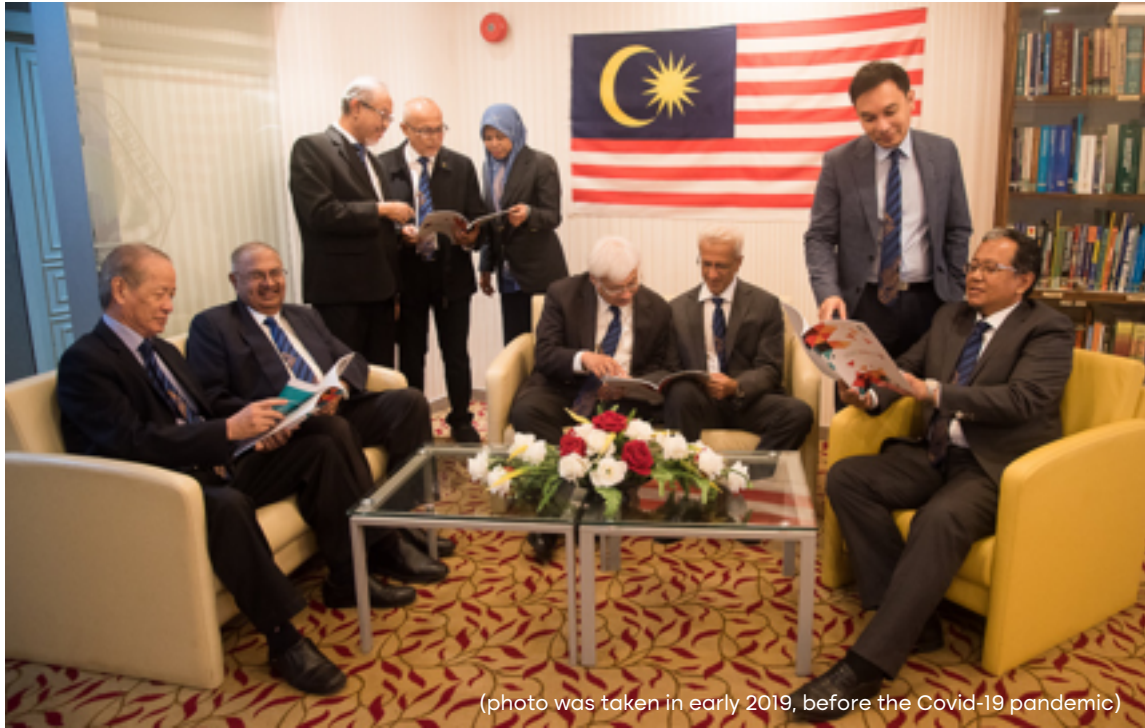
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LEMBAGA PENGARANG LAPORAN TAHUNAN *Annual Report Editorial Board*

Pengerusi ***Chairman***

Dato' Ir. Dr Ali Askar Sher Mohamad

Ahli ***Members***

First Admiral (R) Dato' Ir. Dr. Ahmad Murad bin Omar

Dato' Ir. Fong Tian Yong

Prof. Emeritus Ir. Dr K S Kannan

Ir. Prem Kumar Vasudevan

Ir. Hizamul-din Ab Rahman

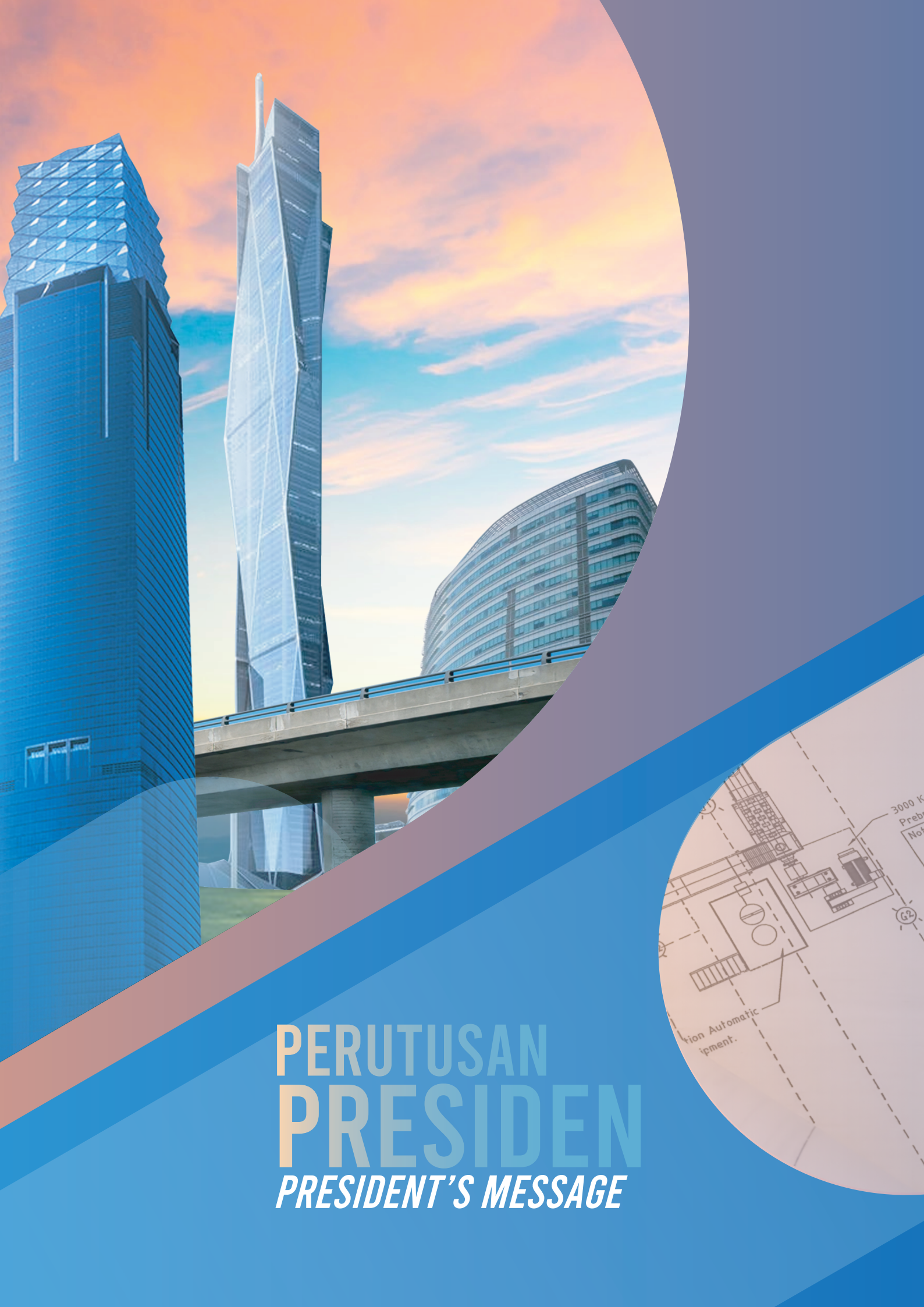
Ir. Dr. Zuhairi Abd Hamid

Ir. Mohd Rasid Osman

Ir. Dr. Megat Zuhairi Megat Tajuddin

Ir. Suhaizad Haji Sulaiman

Ir. Mohd Noramil Mohd Daril



PERUTUSAN PRESIDEN

PRESIDENT'S MESSAGE

PERUTUSAN PRESIDEN 2020



Di dalam keadaan pandemik COVID-19, kebanyakan aktiviti BEM pada tahun 2020 dijalankan secara dalam talian.

Pendaftaran merupakan fungsi utama LJM dengan statistik pendaftaran pada akhir tahun 2020 (dengan nombor masing-masing pada akhir 2019 dalam kurungan) seperti berikut:- Jurutera Profesional dengan Perakuan Amalan 10,511 (10,484); Jurutera Profesional 10,505 (9,917); Jurutera Siswazah 141,795 (132,580); Teknologis Kejuruteraan 9,398 (8,740); dan Pemeriksa Tapak 7,472 (6,844)

Bagi pendaftaran Amalan Perunding Kejuruteraan, bilangan ECP yang didaftarkan (dengan nombor yang didaftarkan pada tahun 2019 dalam kurungan) ialah:- Pertubuhan Perbadanan 1,621 (1,588); Multidisiplin 69 (67); Perkongsian 356 (352); Pemilik Tunggal 1,884 (1,840).

BEM menyelenggara Peperiksaan Profesionalnya iaitu Peperiksaan Penilaian Profesional (PAE) dan Peperiksaan Kecekapan Profesional (PCE) agar selaras dengan piawaian antarabangsa. PAE sedang menuju ke arah peperiksaan kompetensi berasaskan hasil, sementara PCE pula sedang dikaji keberkesanannya termasuk penambahan cawangan kejuruteraan.

Dalam proses memastikan profesionalisme Jurutera Profesional dalam memberikan perkhidmatan yang memuaskan kepada industri, BEM amat serius dan telah mengambil tindakan wajar apabila diperlukan. Mengenai aduan yang diterima, terdapat 38 kes baharu di mana 9 daripadanya mempunyai prima facie. Pada 2020, 19 kes telah disyorkan untuk dibicarakan dan 15 didapati bersalah oleh Jawatankuasa Tatatertib.

Majlis Akreditasi Kejuruteraan (EAC) terus memantau dan mengakreditasi ijazah kejuruteraan yang dianugerahkan oleh universiti tempatan bagi mematuhi keperluan Washington Accord. Pada tahun 2020, EAC menilai 88 program ijazah kejuruteraan di 40 institusi pengajian tinggi (IHL). Sebanyak 27 program lagi diberi lanjutan selama setahun untuk 2020/2021 kerana penilaian dihentikan kerana pandemik COVID-19.

Pada tahun 2020, Majlis Akreditasi Teknologi Kejuruteraan (ETAC) mengakreditasi 50 program teknologi kejuruteraan di 14 buah IHL dan 159 program diploma di 44 buah IHL bagi mematuhi keperluan Sydney Accord dan Dublin Accord.

Malaysia telah menyertai Mesyuarat International Engineering Alliance (IEA) pada Jun 2020 melalui persidangan video dalam talian. LJM juga telah menghantar wakil ke Mesyuarat Jawatankuasa Penyelaras ASEAN mengenai Perkhidmatan (diadakan pada Mac dan Disember 2020). Untuk perkhidmatan kejuruteraan, LJM telah menghadiri Mesyuarat Jawatankuasa Penyelaras Jurutera Profesional Bertauliah ASEAN ke-40 secara dalam talian.

Disebabkan oleh pandemik COVID-19, siri Jerayawara LJM 2020 telah digantikan dengan Webinar LJM bagi memastikan jurutera sentiasa mengikuti perkembangan pengetahuan dan perkembangan terkini. Sebanyak tujuh webinar telah dijalankan. Selain itu, 12 program Outreach LJM telah dijalankan di pelbagai organisasi untuk mewujudkan kesedaran di kalangan fraternti kejuruteraan. LJM juga telah mengambil bahagian dalam Hari Profesion Teknikal Negara 2020 secara maya yang pertama yang telah membantu dalam mempromosi dan mewujudkan kesedaran di kalangan Orang Berdaftar dan orang ramai amnya tentang fungsi dan peranan LJM.

Sebagai badan pengawalseliaan, LJM akan terus waspada terhadap proses pendaftarannya serta tingkah laku Orang Berdaftar yang memberikan perkhidmatan mereka kepada industri dan pelanggan dengan mengambil kira faktor keselamatan dan kualiti. Dalam konteks ini, BEM telah memulakan penyediaan Pelan Strategik Lima (5) Tahun untuk dilaksanakan dalam tempoh 2021-2025. LJM juga akan terus proaktif dalam menjangkau pihak berkepentingan dan mengambil bahagian dalam aktiviti badan profesional berkaitan.

PRESIDENT'S MESSAGE 2020

Under the COVID-19 pandemic condition, most of BEM activities in 2020 were conducted online.

Registration being the main function of BEM, the registration statistics at the end of year 2020 (with the respective numbers at end of 2019 in brackets) are:- Professional Engineers with Practicing Certificate 10,511 (10,484); Professional Engineers 10,505 (9,917); Graduate Engineers 141,795 (132,580); Engineering Technologists 9,398 (8,740); and Inspector of Works 7,472 (6,844)

As for the registration of Engineering Consultancy Practices (ECP), the numbers of ECP registered (with the numbers registered in 2019 in brackets) are:- Body Corporate 1,621 (1588); Multi Disciplinary Practice 69 (67); Partnership 356 (352); Sole Proprietorship 1,884 (1840).

BEM maintains its Professional Examinations, the Professional Assessment Examination (PAE) and the Professional Competency Examination (PCE) to be in line with international standards. The PAE is moving towards the outcome-based competency examination whilst the PCE is being reviewed for its effectiveness and inclusion of additional engineering branches.

In the process of ensuring the professionalism of Professional Engineers in delivering the satisfactory services to the industries, BEM has been stringent and taken necessary action when required. On the complaints received, there were 38 new cases out of which 9 had prima facie. In 2020, 19 cases were recommended for hearing and 15 were found guilty by the Disciplinary Committee.

The Engineering Accreditation Council (EAC) continues to monitor and accredit engineering programmes awarded by local universities to conform with the requirements of the Washington Accord. In 2020 the EAC evaluated 88 engineering degree programmes in 40 institutions of higher learning (IHLs). Another 27 programmes

were given a blanket one year extension for 2020/2021 as the evaluation was halted due to the COVID-19 pandemic.

The Engineering Technology Accreditation Council (ETAC) accredited 50 engineering technology programmes in 14 IHLs and 159 diploma programmes in 44 IHLs in 2020, to conform with the requirements of the Sydney Accord and the Dublin Accord respectively.

Malaysia participated in the International Engineering Alliance (IEA) meeting in June 2020 via online video conference. BEM was represented in the ASEAN Coordinating Committee Meeting on Services (held in March and December 2020). For engineering services, BEM attended the 40th ASEAN Chartered Professional Engineers Coordinating Committee Meeting online.

Due to COVID-19 pandemic, the BEM Roadshow 2020 was replaced by BEM Webinar to keep engineers abreast with the latest knowledge and development. A total of 7 webinars were conducted. In addition, 12 BEM Outreach programmes were conducted in various organisations to create awareness amongst engineering fraternity. BEM has also participated in the first virtual "Hari Profesion Teknikal Negara 2020" which has helped in promoting and creating awareness amongst Registered Persons and the public in general on the roles and functions of BEM.

As a regulatory body, BEM will continue to be vigilant in its registration process and on the conduct of its registered persons delivering their services to the industry and clients with safety and quality in mind. In this context, BEM has embarked on the preparation of 5-year Strategic Plan to be implemented for 2021-2025. BEM will also continue to be proactive in reaching out to its stakeholders and participate in activities of related professional bodies.

DATUK Ir. HAJI MOHAMAD ZULKEFLY BIN SULAIMAN
President
President



MAKLUMAT
KORPORAT
CORPORATE INFORMATION

MAKLUMAT KORPORAT CORPORATE INFORMATION

LEMBAGA JURUTERA MALAYSIA

Lembaga Jurutera Malaysia (LJM) adalah sebuah badan berkanun persekutuan di bawah Kementerian Kerja Raya Malaysia yang ditubuhkan mengikut Undang-undang Malaysia, Akta Pendaftaran Jurutera 1967 (Akta 138). Peranan utama LJM adalah mendaftar Jurutera, Pemeriksa Bertauliah, Teknologis Kejuruteraan, Pemeriksa Tapak dan syarikat Amalan Perunding Kejuruteraan seperti pemilik tunggal, perkongsian dan badan korporat yang menyediakan perkhidmatan kejuruteraan profesional. LJM juga mengawal selia tata kelakuan profesional dan amalan orang berdaftar bagi melindungi kepentingan orang ramai.

VISI

Sebuah badan berkuasa yang berwibawa bertaraf antarabangsa yang mengawal selia amalan kejuruteraan.

MISI

Mengawal selia perkhidmatan kejuruteraan, mematuhi etika profesional dan amalan terbaik antarabangsa, dalam memastikan keselamatan awam.

POLISI KUALITI

Lembaga komited untuk memberikan perkhidmatan terbaik kepada pihak yang berkepentingan dalam mematuhi keperluan berkanun dan pengawal seliaan dan berterusan memperbaiki sistemnya.

PIAGAM PELANGGAN

- Semua urusan pendaftaran jurutera akan diproses dalam tempoh masa yang ditetapkan.
- Mengambil bahagian secara aktif dalam aktiviti-aktiviti yang berkaitan dengan profesion kejuruteraan dengan agensi-agensi kerajaan yang lain atau pihak yang berkepentingan.
- Semua aduan dan pertanyaan daripada orang ramai berkaitan dengan perkhidmatan kejuruteraan akan dilayan dalam kadar segera.

BOARD OF ENGINEERS MALAYSIA

The Board of Engineers Malaysia (BEM) is a federal statutory agency under the Ministry of Works Malaysia. It was established under the laws of Malaysia, the Registration of Engineers Act 1967 (Act 138), with primary role to register Engineers, Engineering Technologists and Inspectors of Works. BEM also registers Engineering Consultancy Practices in the form of sole proprietorships, partnerships and body corporates providing professional engineering services. BEM also regulates the professional conduct and practice of registered person in order to safeguard the interest of the public.

VISION

An authoritative body of international standing that regulates engineering practice.

MISSION

Regulate engineering services, conforming to professional ethics and international best practices, in ensuring public safety.

QUALITY POLICY

The Board is committed to providing excellent services to interested parties in compliance to statutory and regulatory requirements and continually improves its system.

CLIENT CHARTER

- All matters pertaining to the registration of engineers will be processed within stipulated time frame.
- BEM shall actively participate in activities related to the engineering profession with other government agencies or interested parties.
- All complaints and enquiries from public relating to engineering services shall be attended to expeditiously.

FUNGSI

Selaras dengan Akta Pendaftaran Jurutera 1967 (Pindaan 2015), fungsi LJM adalah:

- (a) untuk menyimpan dan menyenggarakan Daftar;
- (b) untuk meluluskan atau menolak permohonan untuk pendaftaran di bawah Akta ini atau untuk meluluskan apa-apa permohonan tertakluk kepada apa-apa syarat atau sekatan yang difikirkan patut dikenakan;
- (c) untuk memerintahkan pengeluaran amaran bertulis atau teguran, pengenaan denda, penggantungan, pembatalan, penghapusan atau pengembalian semula mengikut Bahagian III dan IV;
- (d) untuk menetapkan dari semasa ke semasa dengan kelulusan Menteri, skala fi yang akan dikenakan oleh Jurutera dan syarikat Amalan Perunding Kejuruteraan berdaftar untuk perkhidmatan kejuruteraan profesional yang diberikan;
- (e) untuk mendengar dan memutuskan pertikaian yang berkaitan dengan tingkah laku atau etika profesional orang berdaftar atau melantik suatu jawatankuasa atau penimbang tara atau penimbang tara – penimbang tara untuk mendengar dan menentukan pertikaian itu;
- (f) untuk bertindak sebagai pihak berkepentingan dalam suatu kontrak bagi perkhidmatan kejuruteraan profesional, apabila diminta;
- (g) untuk mengambil bekerja mana-mana orang, sebagaimana difikirkan perlu, untuk membantu Lembaga menjalankan fungsi, kuasa dan kewajipan tertakluk kepada apa-apa terma dan syarat sebagaimana yang ditentukan;
- (h) menyediakan kemudahan untuk menggalakkan pembelajaran dan pendidikan dan untuk mengadakan atau menyebabkan supaya diadakan program pembangunan profesional, termasuk Program Pembangunan

FUNCTIONS

In accordance to the Registration of Engineers Act 1967 (Revised 2015), the functions of the Board shall be:

- (a) to keep and maintain the Register;*
- (b) to approve or reject applications for registration under this Act or to approve any such application subject to such conditions or restrictions as it may deem fit to impose;*
- (c) to order the issuance of a written warning or reprimand, the imposition of a fine, suspension, cancellation, removal or reinstatement in accordance with Parts III and IV;*
- (d) to fix from time to time with the approval of the Minister the scale of fees to be charged by registered Engineers and Engineering consultancy practices for professional engineering services rendered;*
- (e) to hear and determine disputes relating to professional conduct or ethics of registered Persons or to appoint a committee or arbitrator or arbitrators to hear and determine such disputes;*
- (f) to act as a stakeholder in a contract for professional engineering services, when requested;*
- (g) to employ any person, as it deems necessary, to assist the Board in carrying out its functions, powers and duties subject to such terms and conditions as it may determine;*
- (h) to provide facilities for the promotion of learning and education and to hold or cause to be held professional development programmes, including continuing professional development programmes, for registered Persons to*

Profesional untuk Orang Berdaftar bagi meningkatkan pengetahuan mereka dalam perkembangan terkini berkaitan dengan profesion;

- (i) untuk melantik suatu jawatankuasa yang terdiri daripada orang yang akan ditentukan oleh Lembaga –
- (i) untuk menjalankan peperiksaan penilaian profesional untuk tujuan kemasukan sebagai Jurutera Profesional; atau
- (ii) untuk menjalankan peperiksaan kompetensi profesional untuk tujuan mengeluarkan Sijil Amalan kepada Jurutera Profesional;
- (j) untuk melantik mana-mana orang untuk mewakili Lembaga dalam mana-mana jawatankuasa, panel atau institusi, di mana orang tersebut kemudiannya akan membuat cadangan kepada Lembaga mengenai semua perkara mengenai kelayakan untuk kemasukan ke profesion;
- (k) untuk melantik sebuah badan yang terdiri daripada ahli-ahli Lembaga, Jurutera Profesional dan orang lain sebagaimana yang ditentukan oleh Lembaga untuk menasihati Kerajaan dan orang awam mengenai perkara-perkara yang berhubungan dengan pendidikan kejuruteraan, termasuk pensijilan program tersebut;
- (l) untuk menyebabkan peperiksaan dijalankan oleh sesebuah institusi yang diiktiraf oleh Lembaga bagi maksud kemasukan ke dalam profesion;
- (m) untuk menentukan dan mengawal kelakuan dan etika profesion kejuruteraan; dan
- (n) Secara amnya, untuk melakukan segala tindakan, perkara dan benda yang perlu bagi melaksanakan peruntukan Akta ini.

further enhance their knowledge in the latest developments relating to that profession;

- (i) to appoint a committee consisting of persons to be determined by the Board –*
- (i) to conduct professional assessment examinations for the purpose of admission as a Professional Engineer; or*
- (ii) to conduct professional competency examinations for the purpose of issuing a Practising Certificate to the Professional Engineer;*
- (j) to appoint any person to represent the Board in any committee, panel or institution, where that person would subsequently make recommendations to the Board on all matters regarding the qualifying for admission to the profession;*
- (k) to appoint a body consisting of members from the Board, Professional Engineers and other persons as may be determined by the Board to advise the Government and the public on matters relating to engineering education, including the certification of such programmes;*
- (l) to cause examinations to be conducted by an institution recognized by the Board for the purpose of admission to the profession;*
- (f) to determine and regulate the conduct and ethics of the engineering profession; and*
- (g) Generally, to do all such acts, matters and things as are necessary to carry out the provisions of this Act.*

AHLI LEMBAGA

Lembaga hendaklah terdiri daripada ahli berikut yang mestilah warganegara Malaysia dan yang dilantik oleh Menteri:

- (a) seorang Presiden yang mestilah merupakan seorang Jurutera Profesional atau Jurutera Profesional dengan Perakuan Amalan;
- (b) tidak lebih daripada empat belas orang Ahli yang hendaklah merupakan Jurutera Profesional dan Jurutera Profesional dengan Perakuan Amalan, lima daripada mereka hendaklah daripada senarai pencalonan dikemukakan oleh Majlis Institusi Jurutera (Malaysia);
- (c) seorang Ahli yang dinamakan oleh Lembaga Arkitek daripada kalangan Ahli Lembaga itu yang ditubuhkan di bawah Akta Arkitek 1967; dan
- (d) seorang Ahli yang dinamakan oleh Lembaga Juruukur Bahan dari kalangan Ahli Lembaga yang ditubuhkan di bawah Akta Juruukur Bahan 1967.

Dan yang hendaklah terdiri daripada berikut:

- (i) tiga orang Jurutera Profesional dan dua Jurutera Profesional dengan Perakuan Amalan di dalam perkhidmatan awam Persekutuan;
- (ii) tidak lebih daripada dua orang Jurutera Profesional di dalam perkhidmatan pihak berkuasa tempatan atau pihak berkuasa berkanun;
- (iii) tidak lebih daripada lima orang Jurutera Profesional dengan Perakuan Amalan yang merupakan kakitangan, pemilik tunggal, rakan kongsi atau pengarah syarikat amalan perunding kejuruteraan; dan
- (iv) Jurutera Profesional dan Jurutera Profesional dengan Perakuan Amalan yang merupakan kakitangan mana-mana orang atau kumpulan orang, yang bukan dalam perkhidmatan awam Persekutuan atau dalam perkhidmatan mana-mana pihak berkuasa tempatan atau pihak berkuasa berkanun.

BOARD MEMBERS

The Board shall consist of the following members who shall be Malaysian citizens and who are appointed by the Minister:

- (a) a President who shall be a Professional Engineer or a Professional Engineer with Practising Certificate;*
- (b) not more than fourteen members who shall be Professional Engineers and Professional Engineers with Practising Certificates, five of whom shall be from a nomination list submitted by the Council of the Institution of Engineers (Malaysia);*
- (c) one member on the nomination of the Board of Architects from among members of that Board established under the Architects Act 1967; and*
- (d) one member on the nomination of the Board of Quantity Surveyors from among members of that Board established under the Quantity Surveyors Act 1967.*

And who shall consist of the following:

- (i) three Professional Engineers and two Professional Engineers with Practising Certificate who are in the public service of the Federation;*
- (ii) not more than two Professional Engineers who are in the service of any local authority or statutory authority;*
- (iii) not more than five Professional Engineers with Practising Certificates who are employees, sole proprietors, partners or directors of an engineering consultancy practice; and*
- (iv) a Professional Engineer and a Professional Engineer with Practising Certificate who are employees of any person or body of persons, not being in the public service of the Federation or in the service of any local authority or statutory authority.*

MESYUARAT LEMBAGA 2020

Mesyuarat Lembaga telah diadakan sebanyak empat (4) kali pada tahun 2020 seperti berikut:

No.	Bil. Mesyuarat	Tarikh
1	340	19.5.2020
2	341	15.9.2020
3	342	13.10.2020
4	343	1.12.2020

Akta Pendaftaran Jurutera 1967 menetapkan Lembaga untuk bermesyuarat sekurang-kurangnya sekali setahun.

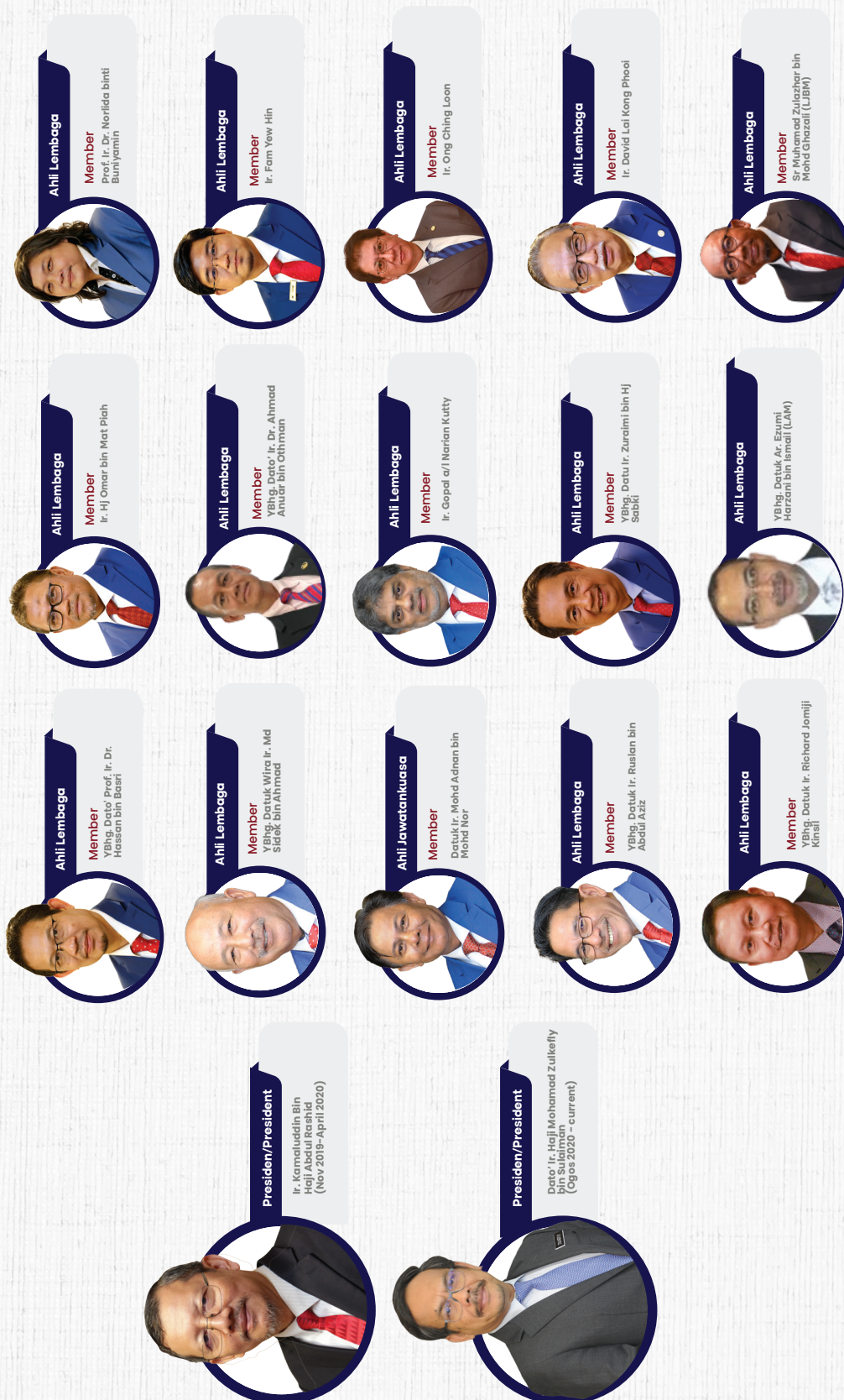
MEETINGS OF THE BOARD 2020

The Board held four (4) meetings in year 2020 as follows:

No.	Meeting No.	Date
1	340	19.5.2020
2	341	15.9.2020
3	342	13.10.2020
4	343	1.12.2020

The Registration of Engineers Act 1967 requires the Board to convene meeting at least once a year.

AHLI LEMBAGA 2019-2020 BOARD MEMBERS 2019-2020



JAWATANKUASA PENGURUSAN 2019-2020 MANAGEMENT COMMITTEE 2019-2020



Pengerusi / Chairman
(Nov 2019 - April 2020)

Ir. Kamaluddin bin Haji Abdul
Rashid



Ahli Jawatankuasa

Member

Datuk Paduka Ir. Keizrul bin
Abdullah



Pengerusi / Chairman
(Aug 2020 - current)

Member (up to Aug 2020)

Dato' Ir. Haji Mohamad
Zulkefly bin Sulaiman



Ahli Jawatankuasa

Member

Dato' Wira Ir. Md Sidek bin
Ahmad



Ahli Jawatankuasa

Member

Dato' Ir. (Dr) Abdul Rahim bin
Hashim



Ahli Jawatankuasa

Member

Ir. Prem Kumar



Ahli Jawatankuasa

Member

Ir. Mohd Rousdin Hassan



Ahli Jawatankuasa

Member

Datuk Ir. Mohd Adnan bin
Mohd Nor



Ahli Jawatankuasa

Member

Datuk Ir. Ruslan bin Abdul
Aziz



Setiausaha

Secretary

Ir. Suhaizad Hj Sulaiman



Pendaftar

Registrar (1st June 2020 - current)

Ir. Dr. Megat Zuhairy bin
Megat Tajuddin

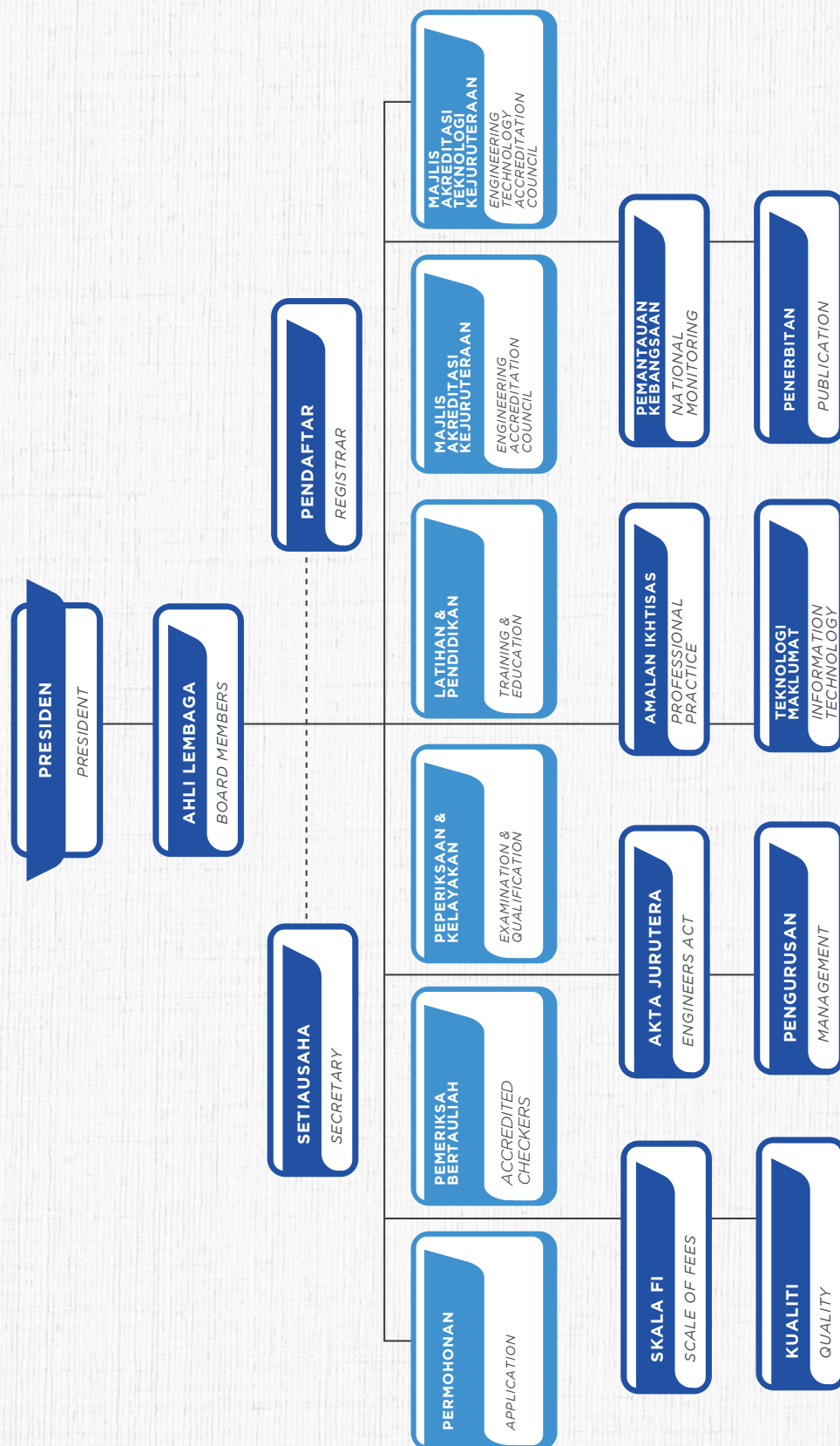


Pendaftar

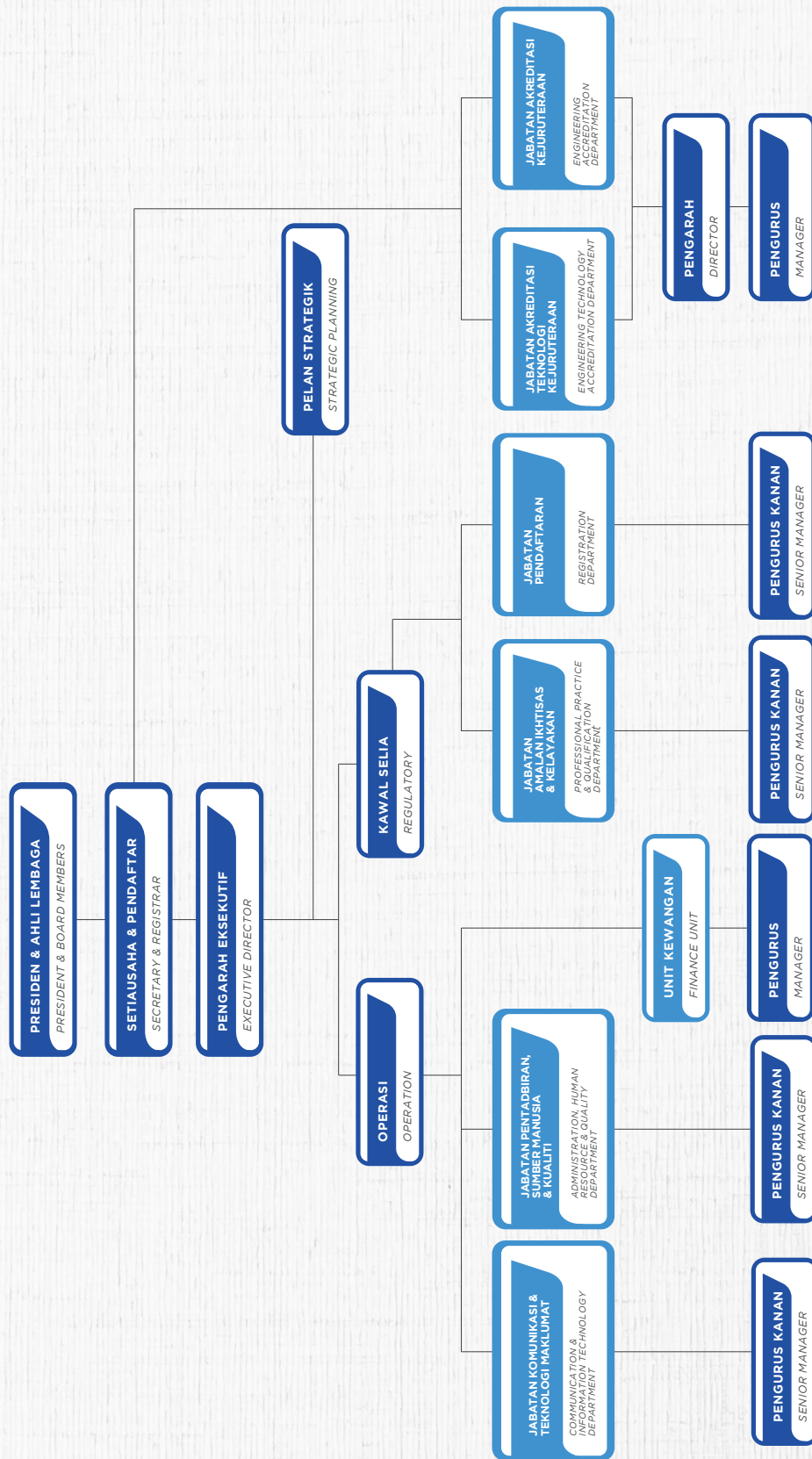
Registrar (up to 31st May 2020)

Ir. Hizamul-din Ab Rahman

STRUKTUR ORGANISASI LJM 2020 BEM ORGANISATIONAL STRUCTURE 2020



CARTA OPERASI LIM 2020 BEM OPERATIONAL CHART 2020





TADBIR URUS KORPORAT

CORPORATE GOVERNANCE

TADBIR URUS KORPORAT

Lembaga diuruskan berdasarkan prinsip Tadbir Urus Korporat dengan rujukan utama kepada Akta Pendaftaran Jurutera 1967 (REA1967) dan Peraturan Pendaftaran Jurutera 1990 (RER1990), sejajar dengan fungsinya seperti yang termaktub dalam Seksyen 4 REA1967.

Pelbagai jawatankuasa tetap telah ditubuhkan untuk memantau dan mengukuhkan pelaksanaan REA1967 dan RER1990 seperti:

JAWATANKUASA PENGURUSAN

Ahli:

- 1(a) Ir. Kamaluddin bin Haji Abdul Rashid (Pengerusi) (Awam) (Nov 2019-April 2020)
- 1(b) Dato' Ir. Haji Mohamad Zulkefly bin Sulaiman (Pengerusi) (Awam) (10 Ogos 2020-kini)
2. Datuk Paduka Ir. Keizrul bin Abdullah (Awam)
3. Datuk Wira Ir. Md Sidek bin Ahmad (Elektrikal)
4. Datuk Ir. (Dr) Abdul Rahim bin Hashim (Elektrikal)
5. Datuk Ir. Ruslan bin Abdul Aziz (Awam)
6. Datuk Ir. Mohd Adnan bin Mohd Nor (Awam)
7. Ir. Mohd Rousdin Hassan (Awam)
8. Ir. Prem Kumar (Elektrikal)

Terma Rujukan:

- Menguruskan pentadbiran Lembaga.
- Menyediakan dasar sokongan kewangan.
- Menyimpan dan menyenggara akaun dan rekod yang berkaitan dengan tepat dan betul:
- Aset dan liabiliti Lembaga
- Jumlah wang yang diterima dan dibelanjakan atau di bawah kuasa Lembaga.
- Menentukan pengambilan kakitangan, gaji dan skim perkhidmatan kakitangan LJM.

JAWATANKUASA AKTA JURUTERA

Ahli:

1. Datuk Ir. Mohd Adnan bin Mohd Nor (Awam) (Pengerusi)
2. Dato' Prof. Ir. Dr. Hassan bin Basri (Awam) (Pengerusi Gantian)

CORPORATE GOVERNANCE

The Board is managed based on its Corporate Governance principle, the Registration of Engineers Act 1967 (REA1967) and the Registration of Engineers Regulations (RER1990), in line with its functions as in Section 4 of the REA1967.

Numerous standing committees have been established to monitor and reinforce the implementation of the REA1967 and RER1990 such as:

MANAGEMENT COMMITTEE

Members:

- 1(a) Ir. Kamaluddin bin Haji Abdul Rashid (Chairman) (Civil) (Nov 2019 - April 2020)
- 1(b) Dato' Ir. Haji Mohamad Zulkefly bin Sulaiman (Chairman) (Civil) (10 August 2020-present)
2. Datuk Paduka Ir. Keizrul bin Abdullah (Civil)
3. Datuk Wira Ir. Md Sidek bin Ahmad (Electrical)
4. Datuk Ir. (Dr) Abdul Rahim bin Hashim (Electrical)
5. Datuk Ir. Ruslan bin Abdul Aziz (Civil)
6. Datuk Ir. Mohd Adnan bin Mohd Nor (Civil)
7. Ir. Mohd Rousdin Hassan (Civil)
8. Ir. Prem Kumar (Electrical)

Terms of Reference:

- Managing the administration of the Board
- Set up policy on financial support
- Keep and maintain proper accounts and records relating to:
 - Assets and liabilities of the Board
 - The sums of money received and expended or under the authority of the Board
 - Decide the new recruitment, salary and scheme of services of the Board's staff.

ENGINEERS ACT COMMITTEE

Members:

1. Datuk Ir. Mohd Adnan bin Mohd Nor (Civil) (Chairman)
2. Dato' Prof. Ir. Dr. Hassan bin Basri (Civil) (Alternate Chairman)

3. Datuk Paduka Ir. Keizrul bin Abdullah (Awam)
4. Datuk Wira Ir. Md Sidek bin Ahmad (Elektrikal)
5. Dato' Ir. Chew Swee Hock (Awam)
6. Dato' Ir. Fong Tian Yong (Awam)
7. Ir. Haji Omar bin Mat Piah (Mekanikal)
8. Ir. Prem Kumar (Elektrikal)
9. Ir. Lai Sze Ching (Mekanikal)
10. Ir. Ashari bin Mohd Yakub (Elektrikal)
11. Ir. Sharifah Azlina binti Raja Kamal Pasmah (Awam)

3. *Datuk Paduka Ir. Keizrul bin Abdullah (Civil)*
4. *Datuk Wira Ir. Md Sidek bin Ahmad (Electrical)*
5. *Dato' Ir. Chew Swee Hock (Civil)*
6. *Dato' Ir. Fong Tian Yong (Civil)*
7. *Ir. Haji Omar bin Mat Piah (Mechanical)*
8. *Ir. Prem Kumar (Electrical)*
9. *Ir. Lai Sze Ching (Mechanical)*
10. *Ir. Ashari bin Mohd Yakub (Electrical)*
11. *Ir. Sharifah Azlina binti Raja Kamal Pasmah (Awam)*

Terma Rujukan:

- Membantu dan menasihati dalam perkara yang berhubungan dengan –
- Akta Jurutera dan Peraturan; dan
- Akta dan Undang-Undang lain yang boleh menjejaskan profesion kejuruteraan.
- Membincangkan dan mempertimbangkan keperluan untuk mengemas kini mana-mana bahagian Akta Jurutera dan Peraturan, sekiranya terdapat sebarang permasalahan yang dihadapi oleh Lembaga dalam pelaksanaan undang-undang berkaitan;
- Menjawab pertanyaan yang berkaitan dengan Akta Jurutera dan Peraturan; dan
- Mencadangkan kepada Lembaga dari semasa ke semasa perubahan yang perlu pada mana-mana bahagian Akta Jurutera dan Peraturan, dan mendraf pindaan kepada undang-undang tersebut selepas Lembaga bersetuju dengan perubahan tersebut.

Terms of Reference:

- *Assist and advice in matters relating to –*
- *Engineers Act and Regulations; and*
- *Other Acts and Bills that may affect or infringe the engineering profession.*
- *Discuss and deliberate on the need to update any part of the Engineers Act and Regulations, should there be any difficulties encountered by the Board in the implementation of the related laws;*
- *Attend to any enquiry pertaining to the Engineers Act and Regulations; and*
- *Propose to the Board from time to time necessary changes to any part of the Engineers Act and Regulations, and draft amendments to the said laws after the Board has agreed to the changes.*

JAWATANKUASA SKALA YURAN

Ahli:

1. Ir. Haji Omar bin Mat Piah (Mechanical) (Pengerusi)
2. Ir. Fam Yew Hin (Mechanical) (Pengerusi Gantian)
3. Datuk Ar. Ezumi Harzani bin Ismail
4. Dato' Ir. Nor Hisham bin Mohd Ghazali (Awam)
5. Ir. Lai Sze Ching (Mechanical)
6. Ir. David Lai Kong Phooi (Awam)
7. Ir. Chen Thiam Leong (Mechanical)
8. Ir. Yau Chau Fong (Electrical)
9. Ir. Dr. Tan Chee Fai (Mechanical)
10. Ir. Bashir Ahamed bin Maideen (Awam)
11. Ir. Badioezaman bin Ab Khalik (Awam)

SCALE OF FEES COMMITTEE

Members:

1. *Ir. Haji Omar bin Mat Piah (Mechanical) (Chairman)*
2. *Ir. Fam Yew Hin (Mechanical) (Alternate Chairman)*
3. *Datuk Ar. Ezumi Harzani bin Ismail*
4. *Dato' Ir. Nor Hisham bin Mohd Ghazali (Civil)*
5. *Ir. Lai Sze Ching (Mechanical)*
6. *Ir. David Lai Kong Phooi (Civil)*
7. *Ir. Chen Thiam Leong (Mechanical)*
8. *Ir. Yau Chau Fong (Electrical)*
9. *Ir. Dr. Tan Chee Fai (Mechanical)*
10. *Ir. Bashir Ahamed bin Maideen (Civil)*
11. *Ir. Badioezaman bin Ab Khalik (Civil)*

Terma Rujukan:

- Mengkaji skala yuran dari semasa ke semasa dengan mengambil kira keperluan industri yang sentiasa berubah dan membuat cadangan kepada Lembaga.
- Mengemaskini Borang Model Perjanjian dari semasa ke semasa, dengan mengambil kira perubahan keperluan industri dan membuat cadangan kepada Lembaga.
- Membantu Lembaga membuat penjelasan kepada pertanyaan-pertanyaan mengenai perkara-perkara yang berkaitan dengan yuran profesional.
- Membantu Lembaga dalam membuat representasi kepada pihak berkuasa dan organisasi dalam perkara yang melibatkan Jurutera dengan mengambil kira yuran dan hak profesional.

JAWATANKUASAPEMANTAUANKEBANGSAAN Ahli:**BEM**

Ir. Kamaluddin bin Haji Abdul Rashid (Awam) (Pengerusi)
 Datuk Wira Ir. Md. Sidek bin Ahmad (Elektrikal) (Pengerusi Gantian)
 Datuk Ir. Abdul Rahim bin Hashim (Elektrikal)

JURUTERA PROFESIONAL DAN LAIN-LAIN

Datuk Ir. Ruslan bin Abdul Aziz (Awam)
 Ir. Rocky Wong Hon Thang (Elektrikal)
 Prof. Ir. Megat Johari bin Megat Mohd Noor (Awam)
 Ir. Anuar bin Mohd Aris (Awam)

IEM

Prof. Ir. Dr. Norlida binti Buniyamin (Elektrikal)
 Ir. Ong Ching Loon (Mekanikal)

ACEM

Datuk Ir. Mohd Adnan bin Mohd Nor (Awam)

Terma Rujukan:

- Mewakili Lembaga dalam mesyuarat / persidangan berkaitan dengan Perikatan Kejuruteraan Antarabangsa seperti Daftar APEC, IntPE, Permuafakatan Washington, Permuafakatan Sydney dan Permuafakatan Dublin.
- Melaksanakan fungsi Jawatankuasa Pemantauan mengikut Perkara 4.2, MRA ASEAN mengenai Perkhidmatan Kejuruteraan.

Terms of Reference:

- Review the scale of fees from time to time, taking into Committee consideration the changing need of the industry, and make recommendations to the Board.
- Update the Model Form of Agreement from time to time, taking into consideration the changing need of the industry, and make recommendations to the Board.
- Assist the Board in making clarifications to enquiries on matters relating to professional fees.
- Assist the Board in making representations to relevant authorities and organisations on matters affecting Engineers with regard to fees and professional rights.

NATIONAL MONITORING COMMITTEE**Members:****BEM**

Ir. Kamaluddin bin Haji Abdul Rashid (Civil) (Chairman)
 Datuk Wira Ir. Md. Sidek bin Ahmad (Electrical) (Alternate Chairman)
 Datuk Ir. Abdul Rahim bin Hashim (Electrical)

IDENTIFIED PE AND OTHERS

Datuk Ir. Ruslan bin Abdul Aziz (Civil)
 Ir. Rocky Wong Hon Thang (Electrical)
 Prof. Ir. Megat Johari bin Megat Mohd Noor (Civil)
 Ir. Anuar bin Mohd Aris (Civil)

IEM

Prof. Ir. Dr. Norlida binti Buniyamin (Electrical)
 Ir. Ong Ching Loon (Mechanical)

ACEM

Datuk Ir. Mohd Adnan bin Mohd Nor (Civil)

Terms of Reference:

- Represent the Board in meetings / conference in matter related to International Engineering Alliance such as APEC register, IntPE, Washington Accord, Sydney Accord and Dublin Accord.
- Perform the functions of the Monitoring Committee, i.e. MC as per Article of 4.2 of the ASEAN MRA on Engineering Services.

- Mewakili Lembaga dalam forum / persidangan yang berkaitan dengan amalan kejuruteraan profesional antarabangsa dan perkara-perkara lain yang berkaitan.
 - Mengambil bahagian secara aktif dalam organisasi antarabangsa:
 - dalam perkara yang berkaitan dengan amalan kejuruteraan terbaik
 - melindungi disiplin kejuruteraan Malaysia
 - Menasihat dan mengesyorkan tindakan yang perlu diambil oleh Lembaga mengenai perkara-perkara tersebut.
 - Menubuhkan satu pasukan petugas dalam bidang berkaitan.
- *Represent the Board at forum / conferences related to international professional engineering practice and other related matters.*
 - *Actively participate in international organisation:*
 - *in matter related to best engineering practice*
 - *to safeguard the Malaysian engineering discipline*
 - *Advise and recommend actions to be taken by the Board on such matters.*
 - *Set up a working group in areas of interest.*

JAWATANKUASA PERMOHONAN

Ahli:

1. Ir. Ong Ching Loon (Mekanikal) (Pengerusi)
2. Ir. Haji Omar bin Mat Piah (Mekanikal) (Pengerusi Gantian)
3. Ir. K. Sundraraj (Awam)
4. Dato' Ir. Dr. Khoo Ping Sen (Awam)
5. Dato' Prof. Ir. Dr. Othman bin A. Karim (Awam)
6. Ir. Magdalene Tan Lee (Elektrikal)
7. Ir. Prof. Dr. K. S. Kannan (Mekanikal)
8. Ir. Mohd Khir bin Muhammad (Aeronautikal)
9. Ir. Razmahwata bin Mohamad Razalli (Kimia)
10. Ir. Ashari bin Mohd Yakub (Elektrikal)
11. Ir. Dr. Lee Yun Fook (Awam)

Terma Rujukan:

- Memproses, menaksir, menilai, meluluskan dan menolak permohonan untuk pendaftaran sebagai orang yang berdaftar di bawah REA1967 seperti berikut:
 - o Jurutera Profesional dengan Perakuan Amalan
 - o Jurutera Profesional
 - o Pemeriksa Bertauliah
 - o Jurutera Siswazah
 - o Teknologis Kejuruteraan
 - o Pemeriksa Tapak
- Memproses, menaksir, menilai, meluluskan dan menolak permohonan untuk pendaftaran sebagai amalan perundingan kejuruteraan di bawah REA1967 seperti berikut:

APPLICATION COMMITTEE

Members:

1. Ir. Ong Ching Loon (Mechanical) (Chairman)
2. Ir. Haji Omar bin Mat Piah (Mechanical) (Alternate Chairman)
3. Ir. K. Sundraraj (Civil)
4. Dato' Ir. Dr. Khoo Ping Sen (Civil)
5. Dato' Prof. Ir. Dr. Othman bin A. Karim (Civil)
6. Ir. Magdalene Tan Lee (Electrical)
7. Ir. Prof. Dr. K. S. Kannan (Mechanical)
8. Ir. Mohd Khir bin Muhammad (Aeronautical)
9. Ir. Razmahwata bin Mohamad Razalli (Chemical)
10. Ir. Ashari bin Mohd Yakub (Electrical)
11. Ir. Dr. Lee Yun Fook (Civil)

Terms of Reference:

- *Process, assess, evaluate, approve and reject application for registration as registered person under the REA1967 as follows:*
 - o *Professional Engineer with Practising Certificate*
 - o *Professional Engineer*
 - o *Accredited Checker*
 - o *Graduate Engineer*
 - o *Engineering Technologist*
 - o *Inspector of Works*
- *Process, assess, evaluate, approve and reject application for registration as engineering consultancy practices under the REA1967 as follows:*

- o Pertubuhan Perbadanan (Badan Korporat)
 - o Perkongsian
 - o Pemilik Tunggal
 - o Amalan Pelbagai Disiplin
- o *Body Corporate*
 - o *Partnership*
 - o *Sole Proprietor*
 - o *Multi-disciplinary Practice*
- Memaklumkan keputusan permohonan pendaftaran dalam tempoh empat bulan dari tarikh permohonan lengkap diterima.
 - *Inform the decision of application for registration within four months for the date of receipt of complete application.*

JAWATANKUASA PEMERIKSA BERTAULIAH

Ahli:

1. Datuk Ir. Ruslan bin Abdul Aziz (Awam) (Pengerusi)
2. Ir. Gopal Narian Kutty (Mekanikal) (Pengerusi Gantian)
3. Dato' Ir. Fong Tian Yong (Awam)
4. Dato' Ir. Dr. Ashaari bin Mohamad (Awam)
5. Ir. Dr. Tan Yean Chin (Awam)
6. Ir. Dr. Wong Chin Chaw (Awam)
7. Ir. Dr. Mohd Asbi bin Othman (Awam)
8. Ir. Dr. Ooi Teik Aun (Awam)
9. Ir. Dr. Mohd Sabri bin Abdullah (Awam)
10. Ir. Ishak bin Abdul Rahman (Awam)
11. Ir. Mohd Noor Azudin bin Mansor (Awam)

Terma Rujukan:

- Membantu Lembaga dalam menjalankan fungsinya seperti yang ditetapkan di bawah Seksyen 4(1)(a) dan Seksyen 10B Akta Pendaftaran Jurutera 1967.
- Membantu Lembaga dalam merangka dan mengemaskini dasar dan prosedur pendaftaran Pemeriksa Bertauliah.
- Menilai permohonan untuk didaftarkan sebagai Pemeriksa Bertauliah
- Mengendali temuduga Pemeriksa Bertauliah.
- Mencadangkan kepada Lembaga senarai orang yang berkelayakan untuk didaftarkan sebagai Pemeriksa Bertauliah
- Merumus, mengemaskini dan menerbitkan garis panduan yang perlu.

JAWATANKUASA PEPERIKSAAN & KELAYAKAN

Ahli:

1. Ir. Prof. Megat Johari bin Megat Mohd Noor (Awam) (Pengerusi)
2. Ir. Ong Ching Loon (Mekanikal) (Pengerusi Gantian)
3. Dato' Prof. Ir. Dr. Hassan bin Basri (Awam)
4. Dato' Ir. Dr. Che Hassandi bin Abdullah (Awam)

ACCREDITED CHECKERS COMMITTEE

Members:

1. Datuk Ir. Ruslan bin Abdul Aziz (Civil) (Chairman)
2. Ir. Gopal Narian Kutty (Mechanical) (Alternate Chairman)
3. Dato' Ir. Fong Tian Yong (Civil)
4. Dato' Ir. Dr. Ashaari bin Mohamad (Civil)
5. Ir. Dr. Tan Yean Chin (Civil)
6. Ir. Dr. Wong Chin Chaw (Civil)
7. Ir. Dr. Mohd Asbi bin Othman (Civil)
8. Ir. Dr. Ooi Teik Aun (Civil)
9. Ir. Dr. Mohd Sabri bin Abdullah (Civil)
10. Ir. Ishak bin Abdul Rahman (Civil)
11. Ir. Mohd Noor Azudin bin Mansor (Civil)

Terms of Reference:

- *Carry out the functions of the Board as stipulated under Section 4(1)(a) and Section 10B of the Registration of Engineers Act 1967.*
- *Formulate and update policy and procedure for registration of Accredited Checkers.*
- *Assess the application for registration as Accredited Checker*
- *Conduct of Accredited Checkers Interview*
- *Recommend to the Board the list of qualified people to be registered as Accredited Checker*
- *Formulate, update and publish the necessary guidelines.*

EXAMINATION & QUALIFICATION COMMITTEE

Members:

1. Ir. Prof. Megat Johari bin Megat Mohd Noor (Civil) (Chairman)
2. Ir. Ong Ching Loon (Mechanical) (Alternate Chairman)
3. Dato' Prof. Ir. Dr. Hassan bin Basri (Civil)
4. Dato' Ir. Dr. Che Hassandi bin Abdullah (Civil)

5. Ir. Prem Kumar (Elektrikal)
6. Ir. Prof. Dr. K.S. Kannan (Mekanikal)
7. Prof. Ir. Dr. Abdul Aziz bin Abd Raman (Kimia)
8. Ir. Magdalene Tan Lee (Elektrikal)
9. Ir. Wong Shu Leong (Elektrikal)
10. Prof. Madya Ir. Dr. Abd Rahim bin Abu Talib (Aeronautikal)
11. Prof. Dr. Wan Mansor bin Wan Muhamad (Mekanikal)

Terma Rujukan:

- Menguruskan semua peperiksaan penilaian kejuruteraan sebagaimana yang dikehendaki oleh Lembaga.
- Memantau semua peperiksaan penilaian kejuruteraan sebagaimana yang dikehendaki oleh Lembaga.
- Menguruskan semua peperiksaan penilaian kejuruteraan yang diperlukan oleh Lembaga termasuk pentadbiran, penyumberan luar dan memastikan standard dan kualiti peperiksaan.
- Memastikan kualiti dan konsistensi pemeriksa dengan menjalankan latihan / bengkel dari semasa ke semasa.
- Melaporkan kepada Lembaga prestasi mana-mana organisasi sumber luar terlibat dalam menjalankan peperiksaan bagi pihak Lembaga dari semasa ke semasa.
- Menilai ijazah kejuruteraan yang tidak diiktiraf.
- Sebarang perkara yang dirujuk kepada Lembaga akan dipertimbangkan secara ad-hoc termasuk mengkaji penubuhan:
 - o Peperiksaan Kompetensi Profesional (PCE)
 - o Audit Keselamatan Jalan Raya dan Penilaian Kesan Trafik (RSA & TIA)
 - o Pemeriksa Tapak (IOW)
 - o Teknologis Kejuruteraan

5. Ir. Prem Kumar (Electrical)
6. Ir. Prof. Dr. K.S. Kannan (Mechanical)
7. Prof. Ir. Dr. Abdul Aziz bin Abd Raman (Chemical)
8. Ir. Magdalene Tan Lee (Electrical)
9. Ir. Wong Shu Leong (Electrical)
10. Prof. Madya Ir. Dr. Abd Rahim bin Abu Talib (Aeronautical)
11. Prof. Dr. Wan Mansor bin Wan Muhamad (Mechanical)

Terms of Reference:

- *Monitoring all engineering assessment examinations as required by the Board.*
- *Managing all engineering assessment examinations required by the Board including administration, outsourcing and ensuring the standard and quality of the examination.*
- *Ensure the quality and consistency of examiners by conducting training / workshops from time to time.*
- *Report to the Board the performance of any outsource organisation involved in conducting examinations on behalf of the Board from time to time.*
- *Evaluation and assessment of non-accredited engineering degrees.*
- *Any matter referred by the Board will be considered on an ad-hoc basis including looking into the establishment of:*
 - o *Professional Competency Examination (PCE)*
 - o *Road Safety Audit & Traffic Impact Assessment (RSA & TIA)*
 - o *Inspector of Works (IOW)*
 - o *Engineering Technologist*

JAWATANKUASA LATIHAN & PENDIDIKAN

Ahli:

1. Prof. Ir. Dr. Norlida binti Buniyamin (Elektrikal) (Pengerusi)
2. Ir. Fam Yew Hin (Mekanikal) (Pengerusi Gantian)
3. Datuk Ir. Ahmad Redza bin Ghulam Rasool (Awam)
4. Dato' Ir. Dr. Che Hassandi bin Abdullah (Awam)
5. Prof. Ir. Dr. Rozita binti Yusoff (Kimia)
6. Ir. Dr. Muhamad Fuad bin Abdullah (Elektrikal)
7. Ir. Dr. Muhammad Arkam bin Che Munaaim (Elektrikal)
8. Ir. Mohd Khir bin Muhammad (Aeronautik)
9. Ir. Mohd Rasid bin Osman (Pembuatan)
10. Ir. K. Sundraraj (Awam)
11. Assoc. Prof. Dr. Tinia Idaty binti Mohd Ghazi (Kimia)

Terma Rujukan:

- Merancang dan memantau pelaksanaan CPD Orang Berdaftar.
- Menggalakkan, memulakan, memotivasi dan jika perlu, membantu dalam menjalankan aktiviti seperti kursus, bengkel, seminar yang sesuai untuk orang berdaftar.
- Mengikuti perkembangan dalam latihan dan pendidikan orang berdaftar dan menasihati Lembaga.
- Menyediakan kemudahan untuk mempromosikan pembelajaran dan pendidikan dan mengadakan atau menyebabkan diadakan program pembangunan profesional, termasuk program pembangunan profesional yang berterusan bagi orang yang berdaftar untuk meningkatkan lagi pengetahuan mereka dalam perkembangan terkini yang berkaitan dengan profesion itu.

JAWATANKUASA AMALAN IKHTISAS

Ahli:

1. Ir. Gopal Narian Kutty (Mekanikal) (Pengerusi)
2. Ir. David Lai Kong Phooi (Awam) (Pengerusi Gantian)
3. Dato' Ir. Fong Tian Yong (Awam)
4. Dato' Ir. Mohd Fazli bin Osman (Elektrikal)
5. Datuk Ir. Mohammad Azman bin Jamrus (Awam)
6. Ir. Dr. Mohd Asbi bin Othman (Awam)

TRAINING & EDUCATION COMMITTEE

Members:

1. Prof. Ir. Dr. Norlida binti Buniyamin (Electrical) (Chairman)
2. Ir. Fam Yew Hin (Mechanica006C) (Alternate Chairman)
3. Datuk Ir. Ahmad Redza bin Ghulam Rasool (Civil)
4. Dato' Ir. Dr. Che Hassandi bin Abdullah (Civil)
5. Prof. Ir. Dr. Rozita binti Yusoff (Chemical)
6. Ir. Dr. Muhamad Fuad bin Abdullah (Electrical)
7. Ir. Dr. Muhammad Arkam bin Che Munaaim (Electrical)
8. Ir. Mohd Khir bin Muhammad (Aeronautical)
9. Ir. Mohd Rasid bin Osman (Manufacturing)
10. Ir. K. Sundraraj (Civil)
11. Assoc. Prof. Dr. Tinia Idaty binti Mohd Ghazi (Chemical)

Terms of Reference:

- Plan and monitor the implementation of CPD for registered persons.
- Encourage, initiate, motivate and where necessary assist in the conducting of activities such as courses, workshops, seminars suitable for registered persons.
- Keep abreast of development in the training and education of registered persons and to advise the Board.
- To provide facilities for the promotion of learning and education and to hold or cause to be held professional development programmes, including continuing professional development programmes for registered persons to further enhance their knowledge in the latest developments relating to that profession.

PROFESSIONAL PRACTICE COMMITTEE

Members:

1. Ir. Gopal Narian Kutty (Mechanical) (Chairman)
2. (Mechanical) (Alternate Chairman)
3. Dato' Ir. Fong Tian Yong (Civil)
4. Dato' Ir. Mohd Fazli bin Osman (Electrical)
5. Datuk Ir. Mohammad Azman bin Jamrus (Civil)
6. Ir. Dr. Mohd Asbi bin Othman (Civil)

7. Ir. Wong Shu Leong (Elektrikal)
8. Ir. Anuar bin Mohd Aris (Awam)
9. Ir. K. Sundraraj (Awam)
10. Ir. Bashir Ahamed bin Maideen (Awam)
11. Ir. Mohamed Amin bin Kasim (Awam)
12. Ir. Yam Teong Sian (Awam)
13. Wakil daripada Polis DiRaja Malaysia

Terma Rujukan:

- Membantu Lembaga dalam perkara yang berkaitan dengan "tata kelakuan profesional" dan "etika" Jurutera Berdaftar; dan garis panduan ini adalah untuk penggunaan kedua-dua Jawatankuasa Amalan Profesional dan Jawatankuasa Penyiasat dengan tujuan untuk memastikan konsistensi dalam prosiding tatatertib yang dijalankan oleh Lembaga di bawah Akta Pendaftaran Jurutera.
- Menentukan dan mencadangkan kepada Lembaga untuk penerimaan Tata Kelakuan Profesional Jurutera; dan untuk mengkaji semula dan mengemas kini Tata Kelakuan Profesional.
- Menentukan dan mencadangkan kepada Lembaga untuk penerimaan garis panduan bagi tata-kelakuan Jurutera Profesional dan Amalan Perundingan Kejuruteraan; dan untuk mengkaji semula dan mengemas kini garis panduan tersebut.
- Membantu Lembaga dalam mendengar aduan dan menentukan hujah yang berkaitan dengan tata kelakuan profesional atau etika Jurutera berdaftar dan amalan perunding kejuruteraan.
- Mencadangkan kepada Lembaga bagi penubuhan Jawatankuasa Penyiasatan di mana Jawatankuasa Amalan Ikhtisas mendapati terdapat alasan prima facie untuk siasatan lanjut.
- Menasihati Lembaga mengenai skop dan tanggungjawab Amalan Profesional.

JAWATANKUASA TEKNOLOGI MAKLUMAT

Ahli:

1. Ir. Fam Yew Hin (Mekanikal) (Pengerusi)
2. Dato' Ir. Dr. Ahmad Anuar bin Othman (Awam) (Pengerusi Gantian)
3. Dato' Prof. Ir. Dr. Othman bin A. Karim (Awam)
4. Dato' Ir. Abdullah bin Isnin (Awam)

7. Ir. Wong Shu Leong (Electrical)
8. Ir. Anuar bin Mohd Aris (Civil)
9. Ir. K. Sundraraj (Civil)
10. Ir. Bashir Ahamed bin Maideen (Civil)
11. Ir. Mohamed Amin bin Kasim (Civil)
12. Ir. Yam Teong Sian (Civil)
13. Representative from Polis DiRaja Malaysia

Terms of Reference:

- Assist the Board in matters pertaining to "professional conduct" and "ethics" of Registered Engineers; and these guidelines are for the use of both the Professional Practice Committee and Investigating Committee with a view to ensuring consistency in disciplinary proceedings carried out by the Board under the Registration of Engineers Act.
- Determine and recommend to the Board for acceptance the Code of Professional Conduct for Engineers; and to regularly review and update them.
- Determine and recommend to the Board for acceptance the guidelines for professional conduct of Engineers and Engineering Consultancy Practices; and to regularly review and update them.
- Assist the Board in hearing complaints and determine disputes relating to professional conduct or ethics of registered Engineers and Engineering Consultancy Practices.
- Recommend to the Board for the formation of Investigating Committee where the Professional Practice Committee finds there are prima facie grounds for further investigation.
- Advise the Board on the scope of Professional Practice and responsibility.

INFORMATION TECHNOLOGY COMMITTEE

Members:

1. Ir. Fam Yew Hin (Mechanical) (Chairman)
2. Dato' Ir. Dr. Ahmad Anuar bin Othman (Civil) (Alternate Chairman)
3. Dato' Prof. Ir. Dr. Othman bin A. Karim (Civil)
4. Dato' Ir. Abdullah bin Isnin (Civil)

5. Ir. Dr. David Chuah Joon Huang (Komputer)
6. Ir. Lee Boon Chong (Elektrikal)
7. Ir. Kuah Kee Hong (Awam)
8. Dr. Yew Weng Kean (Elektrikal)
9. Dr. Shaiful Jahari Hashim (Elektronik)
10. Puan Marlina binti Maharon
11. Dr. Rosida binti Ab Razak

Terma Rujukan:

- Membangun, menyelenggara, mengemaskini secara berterusan dan menambah baik kemudahan dan sistem IT di BEM.
- Bertanggungjawab memantau dan menyelenggara kemudahan dan sistem IT di BEM.
- Berperanan sebagai penasihat kepada Lembaga dan jawatankuasa lain.
- Mewakili Lembaga mengenai perkara yang berkaitan dengan IT.
- Memudahkan penyebaran dan penerimaan maklumat secara elektronik.

JAWATANKUASA PENERBITAN

Ahli:

1. Ir. David Lai Kong Phooi (Awam) (Pengerusi)
2. Dato' Ir. Dr. Ahmad Anuar bin Othman (Awam) (Pengerusi Gantian)
3. Dato' Ir. Fong Tian Yong (Awam)
4. Dato' Ir. Ali Askar bin Sher Mohamad (Elektrikal)
5. Ir. Dr. Che Hassandi bin Abdullah (Awam)
6. Dato' Ir. Ahmad Redza bin Ghulam Rasool (Awam)
7. Datu Ir. Zuraimi bin Hj Sabki (Kimia)
8. Prof. Ir. Dr. Rozita binti Yusoff (Kimia)
9. Ir. Dr. Zuhairi bin Abdul Hamid (Awam)
10. Ir. Mohd Rasid bin Osman (Pembuatan)
11. Ir. Aziz bin Yahya (Mekanikal)

Terma Rujukan:

- Menentukan identiti dan falsafah korporat BEM
- Membina imej BEM di kalangan mereka yang berkepentingan.
- Mempublikitikan peranan dan aktiviti-aktiviti, maklumat serta keputusan yang dibuat oleh BEM kepada orang berdaftar, pihak berkepentingan lain dan media massa.
- Mengekalkan dan menggalakkan hubungan rapat dengan semua pihak berkepentingan.

5. Ir. Dr. David Chuah Joon Huang (Computer)
6. Ir. Lee Boon Chong (Electrical)
7. Ir. Kuah Kee Hong (Civil)
8. Dr. Yew Weng Kean (Electrical)
9. Dr. Shaiful Jahari Hashim (Electronic)
10. Puan Marlina binti Maharon
11. Dr. Rosida binti Ab Razak

Terms of Reference:

- Develop, maintain and continuously update and improve the IT facilities and systems in BEM.
- Responsible for monitoring and maintaining IT facilities and system in BEM.
- Advisory role to the Board and other committees.
- Represent the Board on matters relating to IT.
- Facilitate collation and receiving of information electronically

PUBLICATION COMMITTEE

Members:

1. Ir. David Lai Kong Phooi (Civil) (Chairman)
2. Dato' Ir. Dr. Ahmad Anuar bin Othman (Civil) (Alternate Chairman)
3. Dato' Ir. Fong Tian Yong (Civil)
4. Dato' Ir. Ali Askar bin Sher Mohamad (Electrical)
5. Ir. Dr. Che Hassandi bin Abdullah (Civil)
6. Dato' Ir. Ahmad Redza bin Ghulam Rasool (Civil)
7. Datu Ir. Zuraimi bin Hj Sabki (Chemical)
8. Prof. Ir. Dr. Rozita binti Yusoff (Chemical)
9. Ir. Dr. Zuhairi bin Abdul Hamid (Civil)
10. Ir. Mohd Rasid bin Osman (Manufacturing)
11. Ir. Aziz bin Yahya (Mechanical)

Terms of Reference:

- Define a corporate identity and philosophy for the BEM.
- Build up the image of the BEM among its stakeholders.
- Publicise the role and activities of, information about, and decisions made by the BEM to registered engineers, other stakeholder and mass media.
- Maintain and promote close liaison with all stakeholders.

- Menyediakan draf bahan publisiti, buku maklumat, siaran media dan ucapan-ucapan serta penerbitan lain yang berkaitan, yang akan menyokong peranan BEM.
- Mencapai kualiti yang tinggi dalam pengeluaran penerbitan BEM seperti *The Ingenieur*, buku kecil dan lain-lain.
- Berusaha membiayai kos pengeluaran *The Ingenieur* dengan aktiviti pengiklanan.
- Bertukar-tukar penerbitan dengan badan-badan profesional yang lain, institusi pengajian tinggi dan agensi-agensi kerajaan yang berkaitan termasuk badan-badan profesional antarabangsa.
- Mengekalkan dan mengemas kini perpustakaan BEM.
- Pusat Maklumat Depositori BEM.
- *Prepare drafts of publicity materials, information booklets, media releases and speeches and other related publication, which will support the role of BEM.*
- *Achieve high quality in the production of publications of BEM such as *The Ingenieur*, booklets etc.*
- *Strive towards making the production of *The Ingenieur* self-financing.*
- *Exchange publications with other professional bodies, institutions of higher learning and related government agencies including international professional bodies.*
- *Maintain and update the BEM library.*
- *Central Information Depository of the BEM.*

JAWATANKUASA KUALITI

Ahli:

1. Dato' Ir. Dr. Ahmad Anuar bin Othman (Awam) (Pengerusi)
2. Ir. Gopal Narian Kutty (Mekanikal) (Pengerusi Gantian)
3. Prof. Madya Ir. Dr. Abd Rahim bin Abu Talib (Aeronautik)
4. Ir. Mohd Rasid bin Osman (Pembuatan)
5. Ir. Gunasagaran a/l Kristnan (Awam)
6. Ir. Dr. Nor Azhar bin Mohd Arif (Elektronik)
7. Ir. Dr. Siti Fairus binti Hj Zakaria (Awam)
8. Ir. Derick Chia Chee Weng (Mekanikal)
9. Ir. Azizul bin Ariffin (Awam)

Terma Rujukan:

Jawatankuasa Kualiti dilantik oleh Lembaga untuk mengambil alih peranan Jawatankuasa Kajian Semula Pengurusan.

- Meningkatkan Sistem Pengurusan Kualiti (QMS) Lembaga melalui aktiviti penambahbaikan yang berterusan.
- Mengkaji semula dokumen QMS Lembaga sekurang-kurangnya sekali setahun.
- Memastikan QMS Lembaga difahami dan dilaksanakan mengikut Objektif Kualiti dalam Manual Kualiti.
- Mengkaji prestasi keseluruhan QMS Lembaga dan membuat cadangan kepada Lembaga ke arah peningkatan QMS yang berkesan.

QUALITY COMMITTEE

Members:

1. Dato' Ir. Dr. Ahmad Anuar bin Othman (Civil) (Chairman)
2. Ir. Gopal Narian Kutty (Mechanical) (Alternate Chairman)
3. Prof. Madya Ir. Dr. Abd Rahim bin Abu Talib (Aeronautical)
4. Ir. Mohd Rasid bin Osman (Manufacturing)
5. Ir. Gunasagaran a/l Kristnan (Civil)
6. Ir. Dr. Nor Azhar bin Mohd Arif (Electronic)
7. Ir. Dr. Siti Fairus binti Hj Zakaria (Civil)
8. Ir. Derick Chia Chee Weng (Mechanical)
9. Ir. Azizul bin Ariffin (Civil)

Terms of Reference:

Quality Committee is appointed by the Board to take over the role of Management Review Committee.

- *Enhance the Board's QMS through continual improvement activities.*
- *Review Board's QMS documents at least once a year.*
- *Ensure the Board's QMS is understood and implemented as per the quality objectives in the Quality Manual.*
- *Review the overall performance of the Board's QMS and make recommendations to the Board for effective enhancement of the QMS.*

MAJLIS AKREDITASI KEJURUTERAAN – Memastikan Pendidikan Kejuruteraan Berkualiti

ENGINEERING ACCREDITATION COUNCIL – Ensuring Quality Engineering Education

MAJLIS AKREDITASI KEJURUTERAAN

Majlis Akreditasi Kejuruteraan (EAC) merupakan badan yang ditugaskan oleh BEM untuk pengakreditasi ijazah kejuruteraan. EAC telah ditubuhkan pada tahun 2000, yang terdiri daripada wakil-wakil dari Lembaga Jurutera Malaysia (BEM), Institusi Jurutera Malaysia (IEM), Agensi Kelayakan Malaysia (MQA) (dahulu dikenali sebagai Lembaga Akreditasi Negara), dan Jabatan Perkhidmatan Awam (JPA). Sejak penubuhannya, EAC melalui Jabatan Akreditasi Kejuruteraan (EAD) yang ditubuhkan secara rasmi pada tahun 2006, telah memastikan bahawa melalui proses akreditasi, kualiti graduan dapat dipertingkatkan. Program yang diiktiraf ini diletakkan di dalam Daftar EAC dan MQA.

Salah satu pencapaian terbesar EAC adalah kejayaan penandatanganan status penandatanganan penuh Washington Accord (WA) untuk Malaysia (BEM) pada tahun 2009. BEM diberi lanjutan enam tahun, dengan 16 penandatanganan telah sebulat suara bersetuju menerima cadangan pasukan Kajian di Bengkel & Mesyuarat IEA 2016 yang diadakan dari 30 Mei hingga 3 Jun 2016, yang dihoskan oleh BEM dan IEM. Melalui pengiktirafan ini, program kejuruteraan terakreditasi EAC kini diiktiraf oleh 20 penandatanganan WA. Program kejuruteraan terakreditasi EAC kini ditandaaras kepada standard antarabangsa yang memberi penekanan kepada kualiti program dan lulusan yang dihasilkan. EAC bertekad terus memperkuat standard akreditasi tinggi untuk menjadi pemangkin utama bagi perubahan di Malaysia dan rantau ini.

Sumbangan secara langsung kepada kepentingan negara Malaysia ini, di mana melalui standard pendidikan yang dipertingkatkan, sistem pendidikan dan kualiti negara ini kini bertaraf dunia, setanding dengan banyak negara maju di dunia. Ini telah meyakinkan dan menarik banyak universiti asing untuk membuka kampus cawangan di Malaysia, dengan

ENGINEERING ACCREDITATION COUNCIL

Engineering Accreditation Council (EAC) is the body delegated by BEM for accreditation of engineering degrees. The EAC was established in 2000, comprising representatives from the Board of Engineers Malaysia (BEM), Institution of Engineers Malaysia (IEM), Malaysian Qualifications Agency (MQA) (formerly known as Lembaga Akreditasi Negara), and the Public Services Department (PSD). Since its establishment, the EAC through the Engineering Accreditation Department (EAD – established officially in 2006) has ensured that through the accreditation process, qualities of graduates of accredited programmes has been enhanced. Accredited programmes are placed in the EAC and MQA registers.

One of the greatest achievements of the EAC was the successful accomplishment of the full signatory status of the Washington Accord (WA) for Malaysia (BEM) in 2009. The BEM was given an extension of six years, with 16 signatories unanimously agreed to accept the recommendation of the Review team in the IEA Workshop & Meeting 2016 that was held from 30th May till 3rd June 2016, hosted by BEM and IEM. Through this recognition, EAC's accredited engineering programmes are now mutually recognised by the current 20 other signatories of WA. The EAC's accredited engineering programmes are now benchmarked to an international standard that emphasises much on the quality of the programmes and graduates produced. EAC is determined to uphold the high standard of accreditation processes to become the main catalyst for change in Malaysia and the region.

This contribution is direct to the national interest of Malaysia, where through enhanced education standard, this country's education system and quality is now at a world class standard, at par with many advanced countries in the world. This has attracted many foreign universities into opening up branch campuses in Malaysia with confidence, thus helping to expedite

secara tidak langsung, membantu mempercepat Malaysia menjadi hab pendidikan kejuruteraan antarabangsa.

Tahun 2020 adalah tahun pandemik COVID-19. Malaysia melaksanakan lock-down pertama dengan Perintah Kawalan Pergerakan (PCE) mulai 18 Mac 2020. Majlis Keselamatan Negara (MKN) mengurus dan menyelaraskan pelaksanaan dasar-dasar yang berkaitan dengan keselamatan Malaysia. Oleh kerana itu, semua sekolah dan Institusi Pengajian Tinggi (IPT) ditutup sepenuhnya. Pembelajaran dalam talian menjadi kebiasaan bagi semua. Oleh itu, LJM menghasilkan dokumen yang berikut untuk rujukan yang boleh didapati dalam talian di <http://eac.org.my/>

1. Guiding Principles on Teaching-Learning and Assessment Implementation During COVID-19 Pandemic, 31 Mac 2020
2. EAC and ETAC Procedure – MCO and Post MCO, 20 Mei 2020
3. EAC and ETAC Procedure on Conducting Virtual Accreditation Visit, 17 November 2020
4. EAC and ETAC Procedure – MCO and Post MCO from 1st January 2021 onwards, 17 November 2020

Pada 2020, sebanyak empat (4) kumpulan kerja (WG) telah terbentuk bagi menyelaraskan fungsi EAC secara lebih efektif. WG itu adalah:-

1. Working Group to Study of Impact of OBE after a decade
2. Working Group for Proposed Revision of IEA Graduate Attributes and Professional Competencies (By EAC & ETAC)
3. Working Group on EAC Standard
4. Working Group on 3PE Requirements

Secara keseluruhannya, 2 WG telah selesai, manakala yang berbaki dua (2) menunjukkan pencapaian yang baik dan tugas mereka akan disambung dalam tahun 2021.

Peranan BEM dalam IEA dan WA sangat penting. BEM telah mencapai pengiktirafan dan aktiviti berikut:

- LJM pada mesyuarat bertarikh 19 April 2020 telah meluluskan pindaan

Malaysia becoming an international hub of engineering education.

The year 2020 was the year of the pandemic COVID-19. Malaysia exercised the first lock-down with Movement Control Order (MCO) beginning 18th March 2020. The National Security Council (NSC) manage and coordinate the implementation of policies related to the security of Malaysia. Due to this, all schools and the Institutions of Higher Learning (IHL) were completely closed. Online learning became the norm to all. The repercussion made BEM produced the followings which are available online at <http://eac.org.my/>

1. Guiding Principles on Teaching-Learning and Assessment Implementation During COVID-19 Pandemic, 31st March 2020
2. EAC and ETAC Procedure – MCO and Post MCO, 20th May 2020
3. EAC and ETAC Procedure on Conducting Virtual Accreditation Visit, 17th November 2020
4. EAC and ETAC Procedure – MCO and Post MCO from 1st January 2021 onwards, 17th November 2020

In 2020, a total of four (4) working groups (WG) were formed to facilitate EAC functions effectively. The WGs are:-

1. Working Group to Study of Impact of OBE after a decade
2. Working Group for Proposed Revision of IEA Graduate Attributes and Professional Competencies (By EAC & ETAC)
3. Working Group on EAC Standard
4. Working Group on 3PE Requirements

In general, 2 WG has completed its task, whilst the remaining two (2) are progressing well and will continue carrying out their role into the year 2021.

BEM's role in the IEA and WA has been significant. BEM has achieved the following recognitions:

- BEM on the 19th April 2020 has approved the amendment made to the

terhadap EAC Manual 2017 dan membentuk penyeragaman penamaan ke Standard 2020 berkuatkuasa pada 1 Mei 2020.

- EAC pada 23 April 2020 telah dijemput hadir ke Sesi Libat Urus JPT Bersama MQA dan Badan Profesional bagi membincangkan isu-isu berkaitan Pengajaran dan Pembelajaran yang dijalankan semasa pandemic COVID-19.
- EAC telah terlibat sebagai Penceramah Jemputan pada Bengkel Alternative Assessments For Complex Engineering Problems yang dianjurkan secara dalam talian oleh Universiti Malaysia Sarawak (UNIMAS) pada 14 Mei 2020.
- EAC telah menjadi Penceramah Jemputan di dalam Bengkel Managing Quality In Higher Education In Times Of Crisis, yang dianjurkan secara dalam talian oleh Pertubuhan Akademi Profesor Malaysia (APM) dengan kerjasama Universiti Utara Malaysia (UUM) pada 15 Mei 2020.
- EAC telah berbicara sebagai Penceramah Jemputan pada sebuah bengkel dalam talian bertajuk EAC Guiding Principles & Alternative Assessment For Engineering Courses During COVID-19 Pandemic yang dikendalikan oleh Universiti Malaysia Sabah (UMS) pada 3 Jun 2020.
- EAC telah terlibat sebagai Penceramah Jemputan, Moderator dan Ahli Jawatankuasa pada Washington Accord (WA) TLA & Virtual Accreditation Workshop, yang dianjurkan bersama oleh The Institution of Engineers Singapore (IES) & Pakistan Engineering Council (PEC) pada 13 Jun 2020. Bengkel telah dijalankan dalam talian.
- EAC adalah Penceramah Jemputan dalam satu bengkel secara dalam talian tentang EAC Complex Problem Solving Workshop, dianjurkan oleh Monash University Malaysia pada 24 Jun 2020.
- EAC pada 25 Jun 2020 telah dilantik sebagai Ahli Jawatankuasa Mesyuarat Saringan Awal (MSA) 2020, yang dipengerusikan oleh Jabatan Pendidikan Tinggi, Kementerian Pengajian Tinggi Malaysia (KPT).

Engineering Programme Accreditation Manual 2017 and standardization of naming from Manual to Standard, with effect from 1st May 2020.

- *EAC on the 23rd April 2020 was invited to attend Sesi Libat Urus JPT Bersama MQA dan Badan Profesional to discuss issues related to Teaching and Learning conducted during the COVID-19 pandemic.*
- *EAC was involved as an Invited Speaker at Alternative Assessments For Complex Engineering Problems Workshop, conducted online and organised by Universiti Malaysia Sarawak (UNIMAS) on 14th May 2020.*
- *EAC became an Invited Speaker at a Workshop on Managing Quality in Higher Education in Times of Crisis, conducted online and organised by Pertubuhan Akademi Profesor Malaysia (APM) in collaboration with Universiti Utara Malaysia (UUM) on 15th May 2020.*
- *EAC was speaking as the Invited Speaker during an online workshop titled EAC Guiding Principles & Alternative Assessment for Engineering Courses during COVID-19 Pandemic, conducted by Universiti Malaysia Sabah (UMS) on 3rd June 2020.*
- *EAC was involved as Invited Speakers, Moderators and Organising Committee Member at the Washington Accord (WA) TLA & Virtual Accreditation Workshop, jointly hosted by The Institution of Engineers Singapore (IES) & Pakistan Engineering Council (PEC) on 13th June 2020. The workshop was conducted online.*
- *EAC was the Invited Speaker at an online Workshop on EAC Complex Problem Solving Workshop, organised by Monash University Malaysia on 24th June 2020.*
- *EAC on the 25th June 2020 has been appointed as Working Group member in Jawatankuasa Mesyuarat Saringan Awal (MSA) 2020, chaired by Department of Higher Education, Ministry of Higher Education Malaysia (MoHE).*

- EAC adalah Penceramah Jemputan dalam satu Webinar Series - Preparing Open Book Examination For Engineering Courses, dijalankan dalam talian oleh Universiti Teknologi Malaysia (UTM) pada 2 Julai 2020.
- EAC telah menjadi Penceramah Jemputan dalam satu Webinar Series: Acculturation of OBE Series 1: Alternative Assessment: Adherence To Complex Engineering Problem (WP) & Complex Engineering Activities (EA), anjuran oleh Universiti Teknologi MARA (UiTM) pada 6 Julai 2020. Webinar telah dijalankan secara dalam talian.
- EAC telah dijemput sebagai Penceramah di Bengkel Alternative Assessment and Complex Engineering Problems, dianjurkan secara dalam talian oleh Universiti Teknologi Petronas (UTP) pada 13 Ogos 2020.
- EAC telah terlibat sebagai Penceramah Jemputan dalam Bengkel tentang Delivery of Teaching and Setting Assessment Encompasses Complex Problem Solving Attributes. Bengkel telah dianjurkan secara dalam talian oleh University of Nottingham Malaysia pada 25 Ogos 2020.
- EAC telah menjadi Penceramah Jemputan di International Symposium of Quality Assurance in Engineering Education through Accreditation. Persidangan ini telah dianjurkan secara dalam talian oleh Board of Accreditation for Engineering and Technical Education (BAETE), Bangladesh pada 26 – 27 Ogos 2020.
- EAC telah dilantik sebagai Ahli Jawatankuasa Kerja 3 (Kualiti Pelajar, Program & Institusi) di bawah Pasukan Petugas Kebangsaan Pemudahcara IPTS Sebagai Industri (PEMUDAH IPTS) pada 28 Ogos 2020 oleh Kementerian Pengajian Tinggi (KPT) Malaysia.
- EAC terlibat sebagai Penceramah Jemputan pada Conference of Heads of Academic Departments (CHAD 2020): bertemakan "Transforming Higher Quality Education in the VUCA World", yang dianjurkan oleh Universiti Teknologi MARA (UiTM). Persidangan telah dijalankan pada 10 September 2020.
- *EAC was the Invited Speaker at a Webinar Series - Preparing Open Book Examination For Engineering Courses, conducted online by Universiti Teknologi Malaysia (UTM) on 2nd July 2020.*
- *EAC became the Invited Speaker at a Webinar Series: Acculturation of OBE Series 1: Alternative Assessment: Adherence To Complex Engineering Problem (WP) & Complex Engineering Activities (EA), organised by Universiti Teknologi MARA (UiTM) on 6th July 2020. The webinar was conducted online.*
- *EAC was invited as a Speaker at the Workshop on Alternative Assessment and Complex Engineering Problems, organised online by Universiti Teknologi Petronas (UTP) on the 13th August 2020.*
- *EAC was involved as an Invited Speaker at the Workshop on Delivery of Teaching and Setting Assessment Encompasses Complex Problem Solving Attributes. The workshop was conducted online by University of Nottingham Malaysia on the 25th August 2020.*
- *EAC became the Invited Speakers at The International Symposium of Quality Assurance in Engineering Education through Accreditation. The conference was organized online by Board of Accreditation for Engineering and Technical Education (BAETE), Bangladesh on the 26th – 27th August 2020.*
- *EAC was appointed as members of Jawatankuasa Kerja 3 (Kualiti Pelajar, Program & Institusi) di bawah Pasukan Petugas Kebangsaan Pemudahcara IPTS Sebagai Industri (PEMUDAH IPTS) on the 28th August 2020 by the Ministry of Higher Education (MoHE) Malaysia.*
- *EAC was involved as an Invited Speaker at the Conference of Heads of Academic Departments (CHAD 2020): Theme: "Transforming Higher Quality Education in the VUCA World", organised by Universiti Teknologi MARA (UiTM). The conference was held on the 10th September 2020.*

- EAC selaku Penceramah Jemputan di The 8th Regional Conference on Engineering Education and Research in Higher Education 2020 (RCEE & RHEd 2020). Persidangan secara dalam talian ini telah dianjurkan oleh Universiti Teknologi Malaysia (UTM) dan telah berlangsung dari 29 hingga 30 September 2020.
- EAC telah menjalankan sesi latihan 3-hari untuk panel penilai baru. Bengkel tentang EAC New Panel Evaluator Workshop telah dijalankan secara dalam talian dari 12 hingga 14 Oktober 2020.
- EAC menganjurkan satu sesi dialog bertajuk Dialogue on Challenges of Online Teaching-Learning & Assessment (TLA) Experiences by the IHL. Sesi telah dijalankan secara dalam talian pada 16 November 2020.
- EAC as Invited Speaker at The 8th Regional Conference on Engineering Education and Research in Higher Education 2020 (RCEE & RHEd 2020). The online conference was organised by Universiti Teknologi Malaysia (UTM) and held from the 29th to the 30th of September 2020.
- EAC conducted a 3-day training session for new panel of evaluators. The EAC New Panel Evaluator Workshop was conducted online from the 12th to the 14th of October 2020.
- EAC organised a dialogue session entitled Dialogue on Challenges of Online Teaching-Learning & Assessment (TLA) Experiences by the IHL. It was conducted online on the 16th November 2020.

Penglibatan dalam badan WA, NABEEA, Eropah dan lain-lain (seperti CTI Perancis), telah meningkatkan reputasi BEM ke arah pengukuhan pengiktirafan antarabangsanya

The Board's involvement in the WA, NABEEA, European and other bodies (such as CTI of France), had enhanced BEM's reputation towards strengthening its international recognition.

Cabaran-cabaran Malaysia seterusnya adalah bagi memenuhi standard antarabangsa. EAC telah menubuhkan pelan tindakan strategik dan sasaran untuk memastikan EAC memenuhi cabaran ini.

The challenges that remain ahead for Malaysia are to keep abreast with the international standards and expectations. EAC has established strategic, action plans and targets to ensure that EAC meets these challenges.

EAC kini beroperasi di bawah belanjawannya sendiri yang diperolehi daripada yuran akreditasi yang dibayar oleh institusi pengajian tinggi (IHL) dan sokongan berterusan BEM.

EAC is currently operating under its own budget obtained from accreditation fee paid by institution of higher learnings (IHLs) and continuous support of the BEM.

Operasi EAC disokong oleh cabang pentadbirannya, Jabatan Akreditasi (AD) yang terdiri daripada seorang Pengarah, enam Pengarah Bersekutu (mengikut disiplin kejuruteraan) dan sekretariat. Sebuah Panel Perundingan Akreditasi (ACP) telah ditubuhkan dengan peranan sebagai badan penasihat kepada AD dalam hal-hal yang berkaitan dengan arahan dan pelaksanaan visi, misi dan perancangan strategik EAC dan ETAC. Jabatan ini juga disokong oleh pasukan petugas dan jawatankuasa yang mengawasi pembangunan manual akreditasi, perubahan budaya berasaskan hasil di institusi pengajian tinggi, jaminan kualiti dan hal ehwal antarabangsa.

The operation of EAC is supported by its administrative arm, the Accreditation Department (AD). The set up includes a Director, six engineering clusters of Associate Directors and a secretariat. An Accreditation Consultative Panel (ACP) has been established with the role as an advisory body to AD in matters pertaining to the direction and execution of the EAC's and ETAC's vision, mission and strategic planning. The Department is also supported by a task force and its committees that oversee the development of accreditation manuals, the outcome-based culture change at institutions of higher learning, quality assurance and international affairs.

Jabatan Akreditasi Kejuruteraan (EAD) mempunyai ruang pejabat pada satu sayap (Sayap Utara) manakala satu sayap lagi menempatkan Bilik Mesyuarat Majlis dan bilik latihan (Sayap Selatan). Bilik latihan mempunyai jumlah kapasiti seramai 55 orang. Pada tahun 2020, semua latihan telah dijalankan secara dalam talian.

The Engineering Accreditation Department (EAD) has a wing for its office (North Wing) and another wing for the Council meeting room and training rooms (South wing). The training rooms fit a total capacity of 55 persons. For the year 2020, all training had been conducted online.

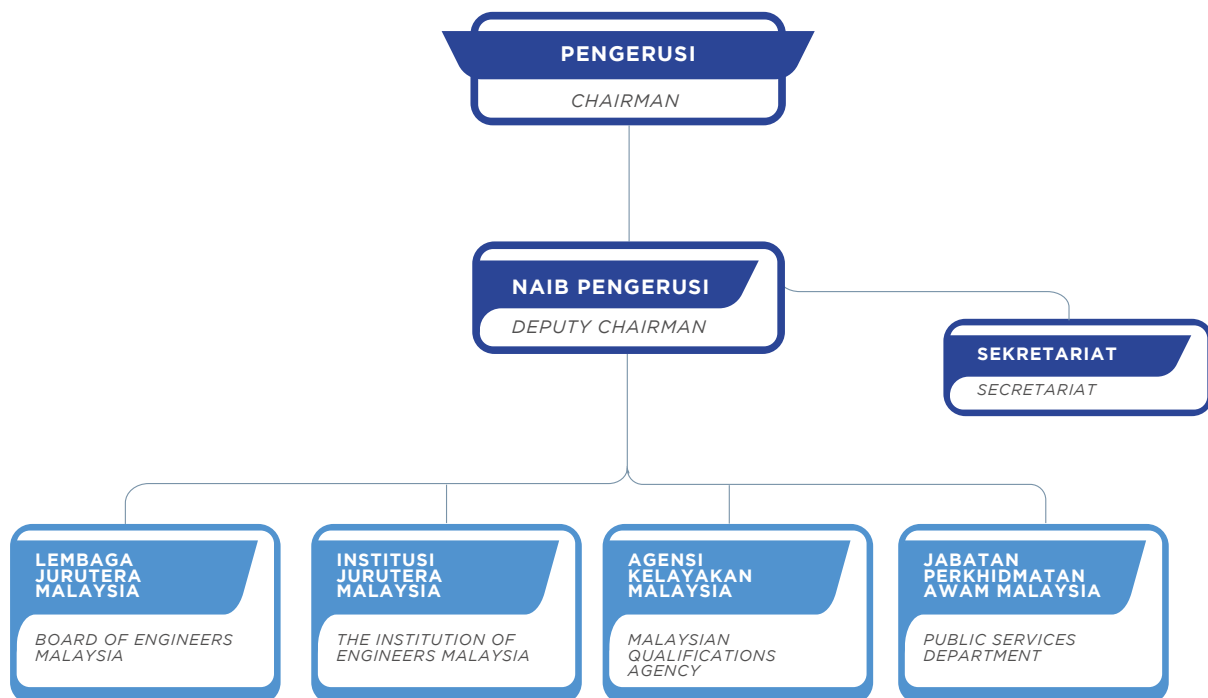
Tahun 2020 berakhir melalui satu tonggak sejarah bila mana LJM meluluskan gabungan pentadbiran antara EAD dan ETAD kepada sebuah entiti tunggal berkuat kuasa dari 1 Disember 2020. Jabatan kini dikenali sebagai Engineering Accreditation Department (EAD).

The year 2020 ended with a significant milestone when BEM approved the administrative consolidation of EAD and ETAD into a single entity with effect from the 1st of December 2020. The department is now known as Engineering Accreditation Department (EAD).

Menyelusuri ke hadapan pada tahun 2021, EAD akan terus menguasai pembudayaan OBE, mengekalkan sentiasa dikenali dengan reputasi yang cemerlang dan terus kekal relevan dalam piawaian dunia.

Charting ahead into 2021, EAD will continue to embrace acculturation of OBE, maintain to be recognised with excellent reputation and remain relevant with world standard.

CARTA ORGANISASI EAC EAC Organisation Chart



Ahli:**PENGERUSI**

1. Datuk Wira Ir. Md Sidek bin Ahmad (Elektrikal)

TIMBALAN PENERUSI

1. Ir. Prof. Dr. Norlida binti Bunyamin (Elektrikal)

LJM

1. Datuk (Dr) Ir. Abdul Rahim bin Hashim (Elektrikal)
2. Ir. Prof. Emeritus Dr. K.S. Kannan (Mekanikal)
3. Ir. Rocky Wong Hon Thang (Elektrikal)
4. Dato' Prof. Ir. Dr. Wan Hamidon bin Wan Badaruzzaman (BEM - Awam)
5. Dato' Prof. Ir. Dr. Kamal Nasharuddin Mustapha (BEM - Awam)

INDUSTRI

1. Tan Sri Dato' (Dr) Ir. Jamilus bin Hussein (Awam)
2. Ir. Dr. Shahrudin bin Muslimin (Elektrikal)

IEM

1. Tan Sri Dato' Ir. Prof. Emeritus Dr. Chuah Hean Teik (Elektrikal)
2. Ir. Prof. Dr. Zainal Abidin Ahmad (Elektronik)
3. Dato' Ir. Ahmad Murad bin Omar (Mekanikal)
4. Ir. Juares Rizal bin Abd Hamid (Kimia)
5. Ir. Chen Harn Shean (Awam)

JPA

1. En. Wan Muzani bin Wan Idris
2. Puan Nurafizah binti Abu Bakari (Wakil Ganti)

MQA

1. En. Abdul Saman bin Taip

Members:**CHAIRMAN**

1. Datuk Wira Ir. Md Sidek bin Ahmad (Electrical)

DEPUTY CHAIRMAN

1. Ir. Prof. Dr. Norlida binti Bunyamin (Electrical)

BEM

1. Datuk (Dr) Ir. Abdul Rahim bin Hashim (Electrical)
2. Ir. Prof. Emeritus Dr. K.S. Kannan (Mechanical)
3. Ir. Rocky Wong Hon Thang (Electrical)
4. Dato' Prof. Ir. Dr. Wan Hamidon bin Wan Badaruzzaman (BEM - Civil)
5. Dato' Prof. Ir. Dr. Kamal Nasharuddin Mustapha (BEM - Civil)

INDUSTRY

1. Tan Sri Dato' (Dr) Ir. Jamilus bin Hussein (Civil)
2. Ir. Dr. Shahrudin bin Muslimin (Electrical)

IEM

1. Tan Sri Dato' Ir. Prof. Emeritus Dr. Chuah Hean Teik (Electrical)
2. Ir. Prof. Dr. Zainal Abidin Ahmad (Electronic)
3. Dato' Ir. Ahmad Murad bin Omar (Mechanical)
4. Ir. Juares Rizal bin Abd Hamid (Chemical)
5. Ir. Chen Harn Shean (Civil)

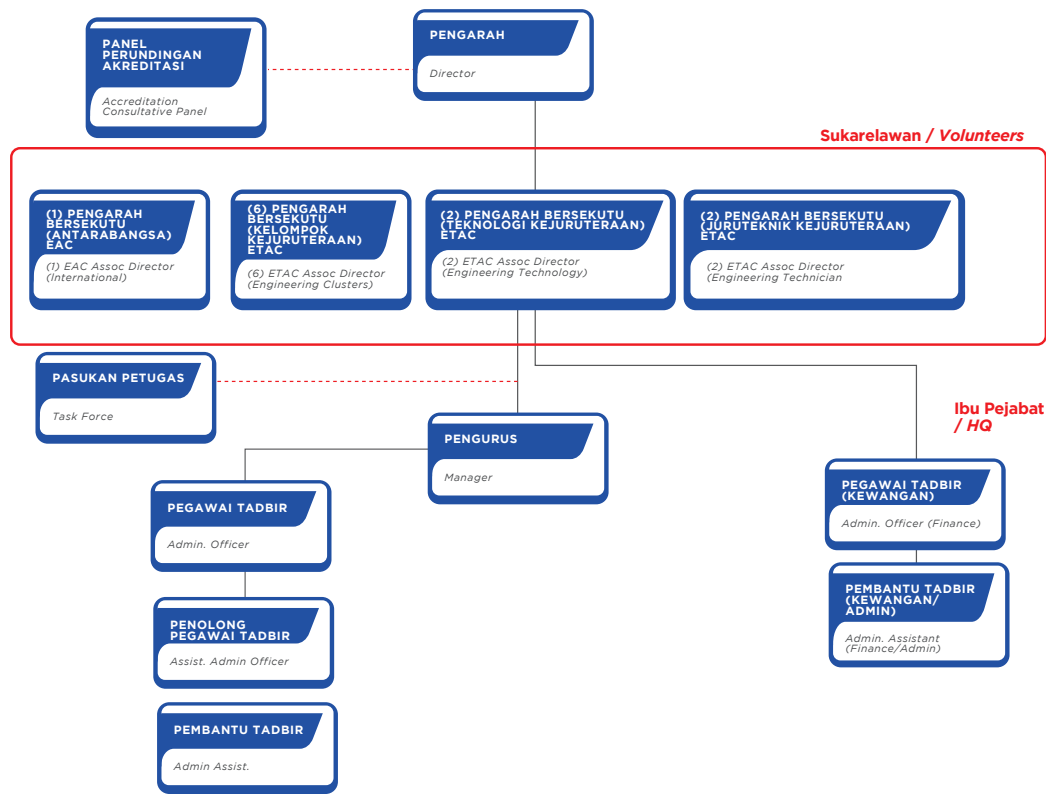
JPA

1. En. Wan Muzani bin Wan Idris
2. Puan Nurafizah binti Abu Bakari (Alternate Representative)

MQA

1. En. Abdul Saman bin Taip

CARTA ORGANISASI EAD EAD ORGANISATION CHART



Terma Rujukan:

1. Menggubal dan mengemaskini dasar dan kriteria akreditasi.
2. Meluluskan garis panduan terperinci dan prosedur operasi pengakreditasi.
3. Mengawasi semua urusan operasi, dan melantik ahli-ahli Panel Penilai.
4. Menerima laporan penilaian program-program kejuruteraan dan membuat keputusan sama ada akreditasi patut diberi atau sebaliknya.
5. Mewujudkan dan menyenggara senarai program kejuruteraan tempatan dan luar negara yang diiktiraf.
6. Memberi maklumbalas terhadap sebarang aduan atau rayuan mengenai proses akreditasi dan apa-apa cadangan untuk perubahan.
7. Menyelia pembangunan dan operasi akreditasi dan pengiktirafan bersama program dengan negara-negara lain.
8. Memastikan Ahli Lembaga sentiasa dimaklumkan mengenai aktiviti EAC dan jika perlu, membuat cadangan kepada Lembaga.

Terms of Reference:

1. Formulate and update the accreditation policies and criteria.
2. Approve detailed guidelines and operating procedures for accreditation.
3. Oversee all operational arrangements, and appoint members of the Evaluation Panel.
4. Receive evaluation report on engineering programmes, and decide whether accreditation should be granted or otherwise.
5. Establish and maintain a list of local and foreign accredited engineering programmes.
6. Respond to any complaints or appeals concerning the accreditation process and to any proposals for change.
7. Oversee the development and operation of accreditation and mutual recognition of programmes with other countries.
8. Keep the Board informed of the activities of EAC and where necessary, make recommendations to the Board.

9. Mengalakkan penyebaran perkembangan dan amalan terbaik dalam pendidikan kejuruteraan.
10. Menasihati Lembaga ke atas pernyataan awam atau representasi yang perlu dibuat berhubung dengan pendidikan kejuruteraan.
11. Mengadakan mesyuarat perundingan dengan IPT bila perlu.
12. Mengadakan mesyuarat sekurang-kurangnya enam kali setahun.

9. Foster the dissemination of developments and best practices in engineering education.
10. Advise the Board on public statements or representations that should be made in relation to engineering education.
11. Hold consultation meetings with IHLs as and when necessary.
12. Hold meetings at least 6 times per year.

OBJEKTIF AKREDITASI

Objektif akreditasi adalah untuk memastikan graduan daripada program kejuruteraan yang diiktiraf memenuhi keperluan akademik minimum untuk pendaftaran sebagai jurutera siswazah dengan BEM.

Di samping itu, objektif akreditasi adalah untuk memastikan bahawa Peningkatan Kualiti Berterusan (CQI) diamalkan oleh Institusi Pengajian Tinggi (IPT). Akreditasi juga boleh berfungsi sebagai alat penanda aras program kejuruteraan yang ditawarkan oleh IPT di Malaysia.

EAD menguruskan proses permohonan untuk kelulusan dan akreditasi program kejuruteraan. Pengakreditasi adalah secara sukarela; walau bagaimanapun program kejuruteraan perlu diiktiraf bagi membolehkan graduan program-program ini didaftarkan dengan BEM.

ACCREDITATION OBJECTIVE

The objective of accreditation is to ensure that graduates of the accredited engineering programmes satisfy the minimum academic requirements for registration as a graduate engineer with the BEM.

In addition, the objective of accreditation is to ensure that Continual Quality Improvement (CQI) is being practiced by IHLs. Accreditation may also serve as a tool to benchmark engineering programmes offered by IHLs in Malaysia.

The EAD manages the process of applications for approval and accreditation of engineering programmes. Accreditation is voluntary; however engineering programmes need to be accredited in order for the graduates of these programmes to be registered with the BEM.

STRATEGI

- Meningkatkan sistem pengurusan akreditasi
- Meningkatkan penglibatan antarabangsa.
- Menggalakkan jaringan dengan kakitangan pengurusan / utama.
- Mengekalkan panel penilai yang berpengalaman dalam bidang yang berkaitan.
- Mewujudkan panel penilai utama untuk penglibatan antarabangsa.
- Khidmat sokongan sekretariat.

STRATEGIES

- Enhance accreditation management system
- Enhance international involvement
- Promote networking with top management / key personnel
- Sustain experienced evaluators in relevant disciplines
- Establish panel of leading evaluators for international involvement
- Sustain the secretariat

MAJLIS AKREDITASI TEKNOLOGI KEJURUTERAAN ENGINEERING TECHNOLOGY ACCREDITATION COUNCIL

MAJLIS AKREDITASI TEKNOLOGI KEJURUTERAAN

Majlis Akreditasi Teknologi Kejuruteraan (ETAC) merupakan badan yang diwakili oleh Lembaga Jurutera Malaysia (LJM). ETAC bermula sebagai Majlis Protém pada tahun 2011 untuk menyediakan peralihan lancar pengakreditasi program pendidikan Teknologi Kejuruteraan dan Juruteknik Kejuruteraan. Protém ETAC memberi tumpuan kepada program pendidikan berasaskan Sydney Accord dan memperoleh kelulusan Manual Akreditasi Teknologi Kejuruteraan yang pertama pada tahun 2015.

Dengan pindaan kepada Akta Pendaftaran Jurutera 1967 pada tahun 2015, LJM telah menubuhkan ETAC dengan Ahli Jawatankuasa seramai 21 ahli majlis yang terdiri daripada tujuh kumpulan (wakil LJM, persatuan berasaskan pendidikan, industri / majikan, Jabatan Perkhidmatan Awam (JPA), Agensi Kelayakan Malaysia (MQA), Kementerian dan wakil awam) sebagai satu-satunya badan akreditasi yang diiktiraf untuk ijazah teknologi kejuruteraan, diploma kejuruteraan dan program diploma teknologi kejuruteraan yang ditawarkan di Malaysia.

Daripada 21 anggota ETAC, lebih daripada 50% daripada mereka adalah wakil dari pelbagai bidang industri kejuruteraan. LJM percaya bahawa gabungan ahli yang baik dari latar belakang yang berlainan; pengamal, ahli akademik, agensi kerajaan dan masyarakat terpelajar akan memberikan kekuatan dan keseimbangan kepada Majlis untuk melaksanakan peranan dan fungsi mereka.

Operasi ETAC disokong oleh cabang pentadbirannya, Jabatan Akreditasi (AD) yang terdiri daripada seorang Pengarah, empat kumpulan pengarah bersekutu dan sekretariat.

ETAC juga disokong oleh pasukan petugas dan jawatankuasa yang mengawasi pembangunan standard akreditasi, perubahan budaya berasaskan hasil di institusi pengajian tinggi, jaminan kualiti dan hal ehwal antarabangsa.

ENGINEERING TECHNOLOGY ACCREDITATION COUNCIL

The Engineering Technology Accreditation Council (ETAC) is a delegated body by the Board of Engineers Malaysia (BEM). ETAC started as a Protém Council in 2011 in order to provide a smooth transition in the accreditation of Engineering Technology and Engineering Technician education programmes. The Protém ETAC initially focused on the Sydney Accord based education programmes, and obtained the approval of its inaugural Engineering Technology Accreditation Manual by the BEM in 2015.

With the 2015 amendment to the Registration of Engineers Act 1967, the BEM established a 21-member-council ETAC, comprising the seven groupings (BEM, learned bodies, industry/employer, Public Services Department (PSD), Malaysian Qualification Agency (MQA), Ministry, and public representatives) in 2015 as the only recognized accrediting body for engineering technology bachelor degree, engineering diploma and engineering technology diploma programmes offered in Malaysia.

Out of the 21 members of the ETAC, more than 50% of them are representatives from various fields of engineering industry. The BEM believes that a good mixture of members from different background; practitioners, academics, related government agencies and learned societies will provide strength and balance for the council to exercise its role and function.

The operation of ETAC is supported by its administrative arm, the Accreditation Department (AD). The set up includes a director, four groups of associate directors and a secretariat.

ETAC is also supported by a task force and its committees that oversee the development of accreditation manuals standards, the outcome-based culture change at institutions of higher learning, quality assurance and international affairs.

ETAC memainkan peranan penting dalam memastikan program kejuruteraan teknologi kejuruteraan ETAC Malaysia, diploma kejuruteraan dan diploma teknologi kejuruteraan di Malaysia setara dengan kelayakan teknologi kejuruteraan penandatanganan Sydney Accord dan Dublin Accord.

ETAC memulakan pengakreditasiannya pada 2016. Tarikh akhir pemindahan kuasa dari MQA kepada LJM untuk menjalankan akreditasi program ijazah teknologi kejuruteraan adalah pada 1 Januari 2017, sementara untuk program teknik kejuruteraan bermula pada 1 Februari 2018.

Dalam Mesyuarat IEA yang diadakan pada bulan Jun 2018 London, BEM memperoleh satu lagi pencapaian penting apabila Malaysia diterima sebagai Penandatanganan Penuh Sydney Accord (SA) dan Dublin Accord (DA). Malaysia merupakan penandatanganan SA yang ke 11 dan DA yang ke 9 pada tahun itu.

Tahun 2020 adalah tahun pandemik COVID-19. Malaysia melaksanakan lock-down pertama dengan Perintah Kawalan Pergerakan (PCE) mulai 18 Mac 2020. Majlis Keselamatan Negara (MKN) mengurus dan menyelaraskan pelaksanaan dasar-dasar yang berkaitan dengan keselamatan Malaysia. Oleh kerana itu, semua sekolah dan Institusi Pengajian Tinggi (IPT) ditutup sepenuhnya. Pembelajaran dalam talian menjadi kebiasaan bagi semua. Oleh itu, LJM menghasilkan dokumen yang berikut untuk rujukan yang boleh didapati dalam talian di <http://etac.org.my/>

1. Guiding Principles on Teaching-Learning and Assessment Implementation During COVID-19 Pandemic, 31 Mac 2020
2. EAC and ETAC Procedure – MCO and Post MCO, 20 Mei 2020
3. EAC and ETAC Procedure on Conducting Virtual Accreditation Visit, 17 November 2020
4. EAC and ETAC Procedure – MCO and Post MCO from 1st January 2021 onwards, 17 November 2020

Pada 2020, sebanyak lima (5) kumpulan kerja (WG) telah terbentuk bagi menyelaras fungsi ETAC secara lebih efektif. WG itu adalah:-

The ETAC was instrumental in ensuring Malaysia's ETAC accredited engineering technology bachelors' degree, engineering diploma and engineering technology diploma programmes are substantially equivalent to the engineering technology qualifications degrees of the signatories of the Sydney Accord and Dublin Accord.

The ETAC began its accreditation in 2016. The cut-off dates for the transfer of authority from MQA to BEM to conduct accreditation of engineering technology degree programmes was 1st January 2017, while for engineering technician programmes beginning 1st February 2018.

In IEA Meeting held in June 2018 London, BEM marked another major milestone with Malaysia being admitted as Full Signatory in the Sydney Accord (SA) and Dublin Accord (DA). Malaysia was the 11th of SA and the 9th of DA full members of that year.

The year 2020 was the year of the pandemic COVID-19. Malaysia exercised the first lock-down with Movement Control Order (MCO) beginning 18th March 2020. The National Security Council (NSC) manage and coordinate the implementation of policies related to the security of Malaysia. Due to this, all schools and the Institutions of Higher Learning (IHL) were completely closed. Online learning became the norm to all. The repercussion made BEM produced the followings which are available online at <http://etac.org.my/>

1. Guiding Principles on Teaching-Learning and Assessment Implementation During COVID-19 Pandemic, 31st March 2020
2. EAC and ETAC Procedure – MCO and Post MCO, 20th May 2020
3. EAC and ETAC Procedure on Conducting Virtual Accreditation Visit, 17th November 2020
4. EAC and ETAC Procedure – MCO and Post MCO from 1st January 2021 onwards, 17th November 2020

In 2020, a total of five (5) working groups (WG) were formed to facilitate ETAC functions effectively. The WGs are:-

1. Working Group for Certificate of Competency on Marine Engineer Qualifications
2. Working Group for ETAC Research
3. Working Group on Strategic Plan (Theme 5)
4. Working Group on ETAC Finance
5. Working Group on ETAC Standards

Secara keseluruhannya, WG for Certificate of Competency on Marine Engineer Qualifications telah selesai, manakala yang berbaki empat (4) menunjukkan pencapaian yang baik dan tugas mereka akan disambung dalam tahun 2021.

Peranan LJM dalam IEA dan SA dan DA sangat penting. LJM telah mencapai pengiktirafan berikut:

- LJM pada mesyuarat bertarikh 19 April 2020 telah meluluskan pindaan terhadap Standard Akreditasi Program Teknologi Kejuruteraan 2019 dan Standard Akreditasi Program Pengajian Juruteknik Kejuruteraan 2019 berkuatkuasa pada 1 Mei 2020.
- ETAC terlibat sebagai Penceramah Jemputan pada FKE Webinar Series 1: Engineering TVET: Towards a World Class Workforce yang dianjurkan Universiti Teknologi MARA (UiTM) pada 22 Jun 2020.
- ETAC telah menjadi Penceramah Jemputan pada Briefing on ETAC Standards 2020 Workshop yang dianjurkan oleh Universiti Malaysia Perlis (UniMAP) pada 13 Julai 2020.
- ETAC telah terlibat dalam perbincangan bagi mesyuarat Laporan Akhir Kajian Hala Tuju Bidang Teknologi Kejuruteraan yang telah berlangsung pada 5 Ogos 2020. Mesyuarat telah dipengerusikan oleh Jabatan Pendidikan Tinggi, Kementerian Pengajian Tinggi Malaysia (KPT).
- ETAC telah menjadi Penceramah Jemputan di International Symposium of Quality Assurance in Engineering Education through Accreditation. Persidangan ini telah dianjurkan secara dalam talian oleh Board of Accreditation for Engineering and Technical Education (BAETE), Bangladesh pada 26 – 27 Ogos 2020.

1. Working Group for Certificate of Competency on Marine Engineer Qualifications
2. Working Group for ETAC Research
3. Working Group on Strategic Plan (Theme 5)
4. Working Group on ETAC Finance
5. Working Group on ETAC Standards

In general, WG for Certificate of Competency on Marine Engineer Qualifications has completed its task, whilst the remaining four (4) are progressing well and will continue carrying out their role into the year 2021.

BEM's role in the IEA and SA & DA have been significant. BEM has achieved the following recognitions:

- *BEM on 19th April 2020 had approved the amendment made to the Engineering Technology Programme Accreditation Standard 2019 and the Engineering Technician Education Programme Accreditation Standard 2019 with effect from 1st May 2020.*
- *ETAC was involved as an Invited Speaker at FKE Webinar Series 1: Engineering TVET: Towards a World Class Workforce, conducted by Universiti Teknologi MARA (UiTM) on the 22nd June 2020.*
- *ETAC became an Invited Speaker at Briefing on ETAC Standards 2020 Workshop conducted by Universiti Malaysia Perlis (UniMAP) on the 13th July 2020.*
- *ETAC was involved in a discussion meeting on Laporan Akhir Kajian Hala Tuju Bidang Teknologi Kejuruteraan, held on 5th August 2020. The meeting was chaired by the Department of Higher Education, Ministry of Higher Education Malaysia (MoHE).*
- *ETAC became the Invited Speakers at the International Symposium of Quality Assurance in Engineering Education through Accreditation. The conference was organized online by Board of Accreditation for Engineering and Technical Education (BAETE), Bangladesh on the 26th – 27th August 2020.*

- ETAC adalah Penceramah Jemputan pada Webinar QA in International Accreditation of Engineering Education: Present & Future yang telah dijalankan secara dalam talian. Webinar ini telah dianjurkan oleh Indonesian Accreditation Board for Engineering Education, The Institution of Engineers Indonesia (IABEE) pada 27 Ogos 2020.
- ETAC terlibat sebagai Penceramah Jemputan pada Conference on Transforming Higher Quality Education in the VUCA World (CHAD2020), yang dianjurkan oleh Universiti Teknologi MARA (UiTM). Persidangan telah dijalankan pada 10 September 2020.
- ETAC telah terlibat dalam perbincangan bagi mesyuarat Future Workforce Engagement Series (ForcES) 2020 yang telah berlangsung pada 24 September 2020. Mesyuarat telah dipengerusikan oleh Jabatan Pendidikan Tinggi, Kementerian Pengajian Tinggi Malaysia (KPT).
- ETAC telah terlibat dalam perincangan bagi mesyuarat Entry Requirement for Diploma Engineering Technology, pada 6 Oktober 2020. Mesyuarat telah dipengerusikan oleh Jabatan Pendidikan Tinggi, Kementerian Pengajian Tinggi Malaysia (KPT).
- ETAC was the Invited Speaker at the online Webinar QA in International Accreditation of Engineering Education: Present & Future. The webinar was organised by Indonesian Accreditation Board for Engineering Education, The Institution of Engineers Indonesia (IABEE) on the 27th August 2020.
- ETAC was involved as an Invited Speaker at the Conference on Transforming Higher Quality Education in the VUCA World (CHAD2020), organised by Universiti Teknologi MARA (UiTM). The conference was held on the 10th September 2020.
- ETAC was involved in a discussion meeting on Future Workforce Engagement Series (ForcES) 2020, held on the 24th September 2020. The meeting was chaired by the Department of Higher Education, Ministry of Higher Education Malaysia (MoHE).
- ETAC was involved in a discussion meeting on Entry Requirement for Diploma Engineering Technology, held on the 6th October 2020. The meeting was chaired by the Department of Higher Education, Ministry of Higher Education Malaysia (MoHE).

Operasi ETAC disokong oleh cabang pentadbirannya, Jabatan Akreditasi Teknologi Kejuruteraan (ETAD) yang terdiri daripada seorang Pengarah, lima (5) Pengarah Bersekutu dan sekretariat. Jabatan ini juga disokong oleh pasukan petugas dan jawatankuasa yang mengawasi pembangunan standard akreditasi, budaya berasaskan hasil di IPT, jaminan kualiti dan hal ehwal antarabangsa.

ETAD mempunyai ruang pejabat pada satu sayap (Sayap Utara) manakala satu sayap lagi menempatkan Bilik Mesyuarat Majlis dan bilik latihan (Sayap Selatan). Bilik latihan mempunyai jumlah kapasiti seramai 55 orang. Pada tahun 2020, semua latihan telah dijalankan secara dalam talian.

The operation of ETAC is supported by its administrative arm, the Engineering technology Accreditation Department (ETAD). The set up includes a Director, five (5) Associate Directors and secretariat. The Department is also supported by a task force and its committees that oversee the development of accreditation standard, the outcome-based culture at IHL, quality assurance and international affairs.

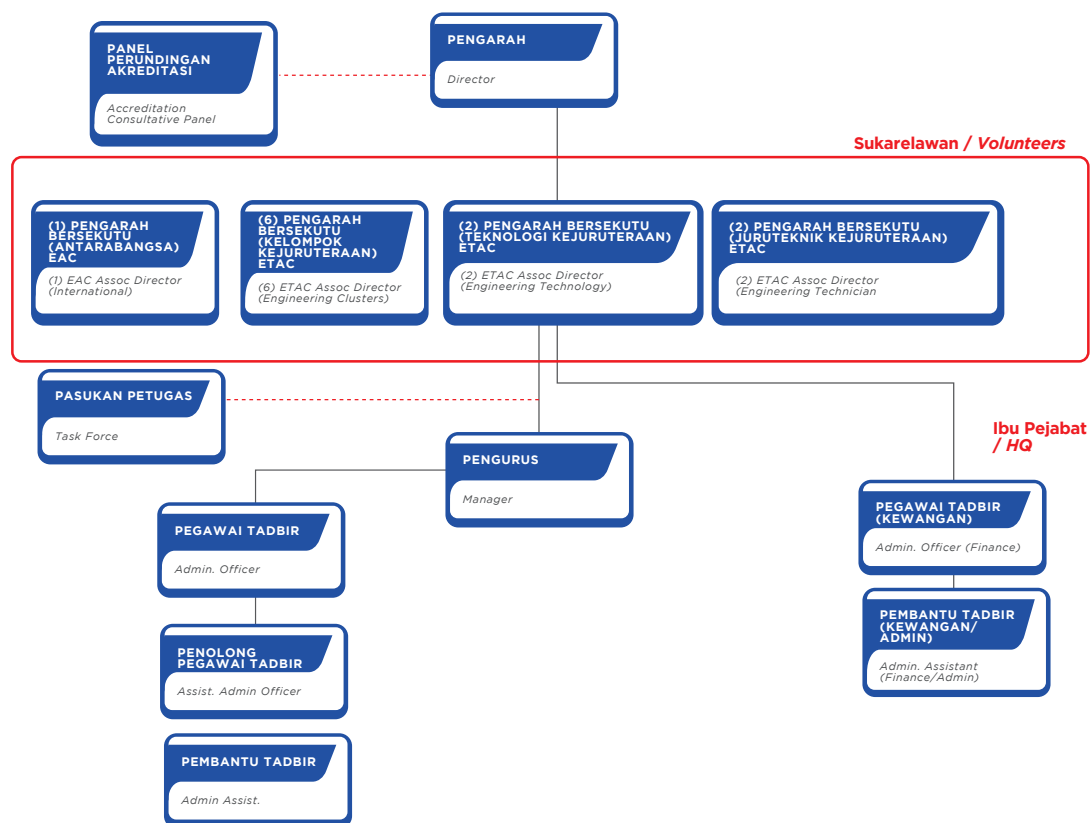
The ETAD has a wing for its office (North Wing) and another wing for the Council meeting room and training rooms (South wing). The training rooms fit a total capacity of 55 persons. For the year 2020, all training had been conducted online.

Tahun 2020 berakhir melalui satu tonggak sejarah bila mana LJM meluluskan gabungan pentadbiran antara EAD dan ETAD kepada sebuah entiti tunggal berkuat kuasa dari 1 Disember 2020. Jabatan kini dikenali sebagai Jabatan Akreditasi Kejuruteraan (EAD).

The year 2020 ended with a significant milestone when BEM approved the administrative consolidation of EAD and ETAD into a single entity with effect from the 1st of December 2020. The department is now known as Engineering Accreditation Department (EAD).

Menyelusuri ke hadapan pada tahun 2021, EAD akan terus menguasai pembudayaan OBE, mengekalkan sentiasa dikenali dengan reputasi yang cemerlang dan terus kekal relevan dalam pawiain dunia.

Charting ahead into 2021, EAD will continue to embrace acculturation of OBE, maintain to be recognised with excellent reputation and remain relevant with world standard.



**Ahli:
BEM**

1. Datuk Wira Ir. Md Sidek bin Ahmad (Elektrikal) – (Pengerusi)
2. Prof. Ir. Dr. Norlida binti Buniyamin (Timbalan Pengerusi)
3. Dato' Ir. Abdul Rashid bin Maidin
4. Prof. Ir. Megat Johari bin Megat Mohd Noor
5. YBhg. Dato' Prof. Ir. Dr. Hassan bin Basri
6. Prof. Dr. Wahid bin Razzaly
7. Puan Zainab binti Ahmad

PERSATUAN BERASASKAN PENDIDIKAN

1. Ir. Rocky Wong Hon Thang (MySET)
2. Dato' Prof. Dr. Ts. Abdul Hakim bin Juri (MySET)
3. Ir. Dr. Leong Wai Yie (IEM)
4. Ir. Yan Teong Sian (TAM)
5. En. Wan Hishamrudin bin Wan Ahmad Kaspi (COWAM)

KEMENTERIAN BERKAITAN

1. Dr. Mohd Rashid Buyong Hamzah (MOHR)
2. No nomination yet – Prof. Madya Dr. Wan Zuhainis Saad (Wakil ganti - MOHE)
3. Puan Durratul Ain binti Hj Yaacob (JPA)

AGENSI KERAJAAN BERKAITAN

1. En. Muhamad Amran Zainal Abidin (MQA)

INDUSTRI

1. Wan Nazmy bin Wan Mahmood (TNB)
2. Tuan Hj. Khairul Anuar bin Shukri (PETRONAS)
3. Ir. Kua Jit How (FMM)
4. En. Fairos bin Idrus (Telekom)

WAKIL AWAM

Dato' Hj. Imran bin Idris

Terma Rujukan:

- Merangka dan mengemaskini polisi dan kriteria akreditasi.
- Meluluskan garis panduan terperinci dan prosedur operasi untuk akreditasi.
- Mengawasi semua penyusunan operasi dan perlantikan ahli Panel Penilai.
- Menerima laporan penilaian program teknologi kejuruteraan dan juruteknik kejuruteraan dan memutuskan sama ada akreditasi perlu diberikan atau sebaliknya.

**Members:
BEM**

1. Datuk Wira Ir. Md Sidek bin Ahmad (Electrical) – (Chairman)
2. Prof. Ir. Dr. Norlida binti Buniyamin (Deputy Chairman)
3. Dato' Ir. Abdul Rashid bin Maidin
4. Prof. Ir. Megat Johari bin Megat Mohd Noor
5. YBhg. Dato' Prof. Ir. Dr. Hassan bin Basri
6. Prof. Dr. Wahid bin Razzaly
7. Puan Zainab binti Ahmad

LEARNED SOCIETY

1. Ir. Rocky Wong Hon Thang (MySET)
2. Dato' Prof. Dr. Ts. Abdul Hakim bin Juri (MySET)
3. Ir. Dr. Leong Wai Yie (IEM)
4. Ir. Yan Teong Sian (TAM)
5. En. Wan Hishamrudin bin Wan Ahmad Kaspi (COWAM)

RELATED MINISTRY

1. Dr. Mohd Rashid Buyong Hamzah (MOHR)
2. No nomination yet (MOHE) – Prof. Madya Dr. Wan Zuhainis Saad (Wakil ganti – MOHE)
3. Puan Durratul Ain binti Hj Yaacob (JPA)

RELATED GOVERNMENT AGENCY

1. En. Muhamad Amran Zainal Abidin (MQA)

INDUSTRY

1. Wan Nazmy bin Wan Mahmood (TNB)
2. Tuan Hj. Khairul Anuar bin Shukri (PETRONAS)
3. Ir. Kua Jit How (FMM)
4. En. Fairos bin Idrus (Telekom)

PUBLIC REPRESENTATIVE

Dato' Hj. Imran bin Idris

Terms of Reference:

- Formulate and update the accreditation policies and criteria.
- Approve detailed guidelines and operating procedures for accreditation.
- Oversee all operational arrangements, and appoint members of the Evaluation Panel.
- Receive evaluation report on engineering technology and engineering technician programmes, and decide whether accreditation should be granted or otherwise.

- Mewujudkan dan menyenggara senarai program teknologi kejuruteraan dan juruteknik kejuruteraan tempatan dan asing yang diiktiraf.
- Memberi maklumbalas terhadap sebarang aduan atau rayuan mengenai proses akreditasi dan sebarang cadangan perubahan.
- Mengawasi pembangunan dan operasi pengakreditasi serta pengiktirafan bersama program kejuruteraan dengan negara lain.
- Memastikan Lembaga dimaklumkan mengenai aktiviti-aktiviti ETAC dan jika perlu, membuat cadangan kepada Ahli Lembaga.
- Mengukuhkan penyebaran perkembangan dan amalan terbaik dalam bidang teknologi kejuruteraan dan pendidikan juruteknik kejuruteraan.
- Menasihati Lembaga mengenai pernyataan awam atau representasi yang perlu dibuat berhubung pendidikan teknologi kejuruteraan.
- Mengadakan mesyuarat perundingan dengan IPT bila perlu.
- Mengadakan mesyuarat sekurang-kurangnya 6 kali setahun.
- Memperluas Manual ETAC sedia ada untuk meliputi program diploma juruteknik kejuruteraan.
- Mencadangkan ahli ETAC tambahan jika perlu.
- *Establish and maintain a list of local and foreign accredited engineering technology and engineering technician programmes.*
- *Respond to any complaints or appeals concerning the accreditation process and to any proposals for change.*
- *Oversee the development and operation of accreditation and mutual recognition of programmes with other countries.*
- *Keep the Board informed of the activities of ETAC and where necessary make recommendations to the Board.*
- *Foster the dissemination of developments and best practices in engineering technology and engineering technician education.*
- *Advise the Board on public statements or representations that should be made in relation to engineering technology education.*
- *Hold consultation meetings with IHLs as and when necessary.*
- *Hold meetings at least 6 times per year.*
- *Expand the existing ETAC Manual so as to cover diploma programmes for engineering technician.*
- *Propose additional ETAC members if necessary.*

MENGAWALSELIA TATA KELAKUAN JURUTERA BERDAFTAR

REGULATING CODE OF CONDUCT FOR REGISTERED ENGINEERS

Fungsi-fungsi Lembaga di bawah Seksyen 4 Akta Pendaftaran Jurutera (REA) 1967 antara lain adalah:

- (a) untuk mendengar dan menentukan pertikaian yang berkaitan dengan tata kelakuan profesional atau etika orang berdaftar atau melantik suatu jawatankuasa atau penimbang tara atau penimbang tara-penimbang tara untuk mendengar dan menentukan pertikaian tersebut.

Di bawah kuasa itu, Lembaga telah menubuhkan:

- (i) Jawatankuasa Penyiasatan (IC) di bawah Seksyen 24B,
- (ii) Jawatankuasa Tatatertib (DC) di bawah Seksyen 14A dan
- (iii) Sebuah Lembaga Rayuan di bawah Seksyen 20, REA.

Jawatankuasa Penyiasatan (IC)

Bagi setiap kes aduan Prima Facie yang diterima oleh Lembaga, sebuah IC akan ditubuhkan terdiri daripada seorang Pengerusi yang merupakan seorang Jurutera Profesional dengan Perakuan Amalan (PEPC) dan dua orang ahli, seorang daripadanya hendaklah merupakan seorang PEPC.

Setelah selesai penyiasatan, Jawatankuasa Penyiasatan hendaklah mengemukakan suatu laporan bersama-sama dengan cadangan, jika ada, kepada Lembaga atau Jawatankuasa Tatatertib untuk pertimbangan.

Jawatankuasa Tatatertib (DC)

Jawatankuasa Tatatertib hendaklah terdiri daripada anggota yang berikut.

- (a) seorang Pengerusi yang hendaklah merupakan seorang Jurutera Profesional dengan Perakuan Amalan;
- (b) seorang Jurutera Profesional yang berdaftar; dan
- (c) seorang Jurutera Profesional dengan Perakuan Amalan.

The functions of the Board under Section 4 of the Registration of Engineers Act (REA) 1967 among others are :

- (a) to hear and determine disputes relating to professional conduct or ethics of registered Persons or to appoint a committee or arbitrator or arbitrators to hear and determine such disputes,*

Under such power, the Board has set up:

- (i) Investigating Committee (IC) under Section 24B,*
- (ii) Disciplinary Committee (DC) under Section 14A and*
- (iii) an Appeal Board under Section 20 of the REA.*

The Investigating Committee (IC)

For each Prima Facie complaint received by the Board, an IC shall be formed comprising of a Chairman who shall be a registered Professional Engineer with Practising Certificate (PEPC) and two members, one of whom shall be a PEPC.

Upon completion of its investigation, the Investigating Committee shall submit a report together with its recommendations, if any, to the Board or Disciplinary Committee for its consideration.

The Disciplinary Committee (DC)

The Disciplinary Committee shall consist of the following members:

- (a) a Chairman who shall be a registered Professional Engineer with Practising Certificate;*
- (b) a registered Professional Engineer; and*
- (c) a registered Professional Engineer with Practising Certificate.*

Terma Rujukan

- (a) hendaklah mengadakan perbicaraan terhadap mana-mana salah laku atau aduan terhadap mana-mana Orang berdaftar yang dirujuk kepadanya oleh Jawatankuasa Penyiasatan;
- (b) boleh membuat mana-mana atau apa-apa kombinasi perintah yang dinyatakan dalam seksyen 15 terhadap Orang berdaftar di bawah apa-apa keadaan yang dinyatakan dalam seksyen itu.

Lembaga Rayuan

Mana-mana jurutera yang tidak berpuas hati dengan perintah Jawatankuasa Tata tertib atau Lembaga yang dibuat di bawah subseksyen 15 (1A) atau 7A (5), boleh dalam masa 21 hari selepas diberitahu berkenaan penolakan, syarat, sekatan, pemotongan atau perintah, merayu kepada Lembaga Rayuan yang ditubuhkan di bawah seksyen 20 dan Lembaga Rayuan sesudah itu boleh membuat apa-apa perintah yang difikirkannya adil atau patut.

Lembaga Rayuan hendaklah terdiri daripada seorang Hakim Mahkamah Tinggi sebagai Pengerusi dan dua orang lain yang dilantik oleh Yang di-Pertuan Agong.

Selepas mendengar rayuan itu Lembaga Rayuan boleh mengesahkan atau mengubah keputusan Lembaga atau Jawatankuasa Tata tertib. Keputusan Lembaga Rayuan adalah muktamad.

Terms of Reference

- (a) shall conduct hearings of any misconduct or complaint against any registered Person referred to it by the Investigating Committee;
- (b) may make any or any combination of the orders specified in section 15 against a registered Person under such circumstances as set out in that section.

Appeal Board

Any engineer who is not satisfied with an order of the Disciplinary Committee or Board made under subsection 15(1 A) or 7 A (5), may within twenty-one days of being notified of the refusal, conditions, restrictions, removal or order, appeal to the Appeal Board constituted under section 20 and the Appeal Board may thereupon make such orders as it may deem just or proper.

The Appeal Board shall consist of a Judge of the High Court as Chairman and two other persons appointed by the Yang di-Pertuan Agong.

The Appeal Board after hearing the appeal may confirm or vary the decision of the Board or Disciplinary Committee. The decision of the Appeal Board shall be final.

MEMASTIKAN KOMPETENSI JURUTERA PROFESIONAL

ENSURING THE COMPETENCY OF PROFESSIONAL ENGINEERS

PEPERIKSAAN PROFESSIONAL (PCE)

KECEKAPAN

PROFESSIONAL COMPETENCY EX- AMINATION (PCE)

PENGENALAN

Pindaan Akta Pendaftaran Jurutera 1967 pada 2015 "Akta" memperkenalkan kategori baru iaitu Jurutera Profesional dengan Sijil Amalan untuk jurutera yang terlibat dengan pengemukaan pelan kepada Majlis Berkuasa Tempatan. Oleh yang demikian tahap kecekapan mereka perlu diuji sebagai orang yang mengemukakan.

Seksyen 4(1)(ed)(ii) Akta memberi kuasa kepada Lembaga untuk menjalankan peperiksaan kecekapan profesional untuk tujuan mengisru Sijil Amalan kepada Jurutera Profesional.

Format Peperiksaan Kecekapan Profesional

Peperiksaan Kecekapan Profesional (PCE) menguji calon di dalam lingkungan perkhidmatan kejuruteraan profesional, sebagaimana ditafrikkan oleh Akta, dalam disiplin kejuruteraan Awam & Struktur, Mekanikal dan Elektrikal serta bidang kejuruteraan yang lain.

Peperiksaan itu juga akan menguji pengetahuan, pengalaman dan aplikasi calon dalam :

- (a) amalan kejuruteraan di Malaysia;
- (b) Kod berkanun, peraturan-peraturan; dan
- (c) standard profesionalisme dan tata kelakuan profesional

Peperiksaan Kecekapan Profesional terbahagi kepada dua bahagian seperti berikut:

- (a) Bahagian 1 – Kertas Am
- (b) Bahagian 2 – Kertas Teknikal

LJM telah menjalankan PCE dalam tahun 2016, 2017, 2018 dan 2019. Pada tahun 2019, PCE telah diadakan pada 25 dan 26

INTRODUCTION

The Amendment to Registration of Engineers Act 1967 in 2015 "the Act" had introduced a new category of registration ie. Professional Engineer with Practising Certificate for those involved with submission of plan to Local Authority. Hence they would need to be examined on their competency to be a submitting engineer.

Section 4(1)(ed)(ii) of the Act empowers the Board to conduct a professional competency examination for the purpose of issuing a Practising Certificate to the Professional Engineer.

Format of Professional Competency Examinations

The Professional Competency Examinations (PCE) will tests candidates within the limits of "professional engineering services" defined by the Act which will be in the engineering disciplines.

The examination will test the candidate's knowledge, experience and application of:

- (a) engineering practice in Malaysia;
- (b) Statutory codes, regulations; and
- (c) standards of professionalism and ethical behaviour.

The Professional Competency Examinations shall be in two (2) parts as follows:

- (a) Part 1 – Common Paper
- (b) Part 2 - Technical paper

BEM has conducted PCE in 2016, 2017, 2018 and 2019. In 2019, PCE was conducted on 25th and 26th November 2019 at three locations namely Kuala Lumpur, Kuching, Sar-

November 2019 di tiga lokasi berbeza iaitu Kuala Lumpur, Kuching, Sarawak dan Kota Kinabalu, Sabah. Seramai 292 orang calon telah mendaftar untuk peperiksaan tersebut dalam pecahan bidang kejuruteraan sebagaimana berikut:

- o 133 calon (Awam)
- o 86 calon (Elektrik)
- o 65 calon (Mekanikal)
- o 3 calon (Kimia)
- o 1 calon (Geoteknik)
- o 3 calon (Pelombongan)
- o 1 calon (Alam Sekitar)

PCE 2020

PCE 2020 telah dijadualkan pada 24 dan 25 November 2020 di Kuala Lumpur, Sabah dan Sarawak.

Seramai 268 calon telah mendaftar untuk peperiksaan tersebut seperti berikut:

- o 134 calon (Awam)
- o 81 calon (Elektrik)
- o 48 calon (Mekanikal)
- o 2 calon (Kimia)
- o 1 calon (Geoteknik)
- o 1 calon (Pelombongan)
- o 1 calon (Alam Sekitar)

Walau bagaimanapun, memandangkan situasi pandemik COVID-19, PCE 2020 telah ditangguhkan ke satu tarikh yang akan ditetapkan oleh LJM bergantung kepada pengumuman kerajaan berkaitan langkah pencegahan COVID-19.

Webinar PCE 2020

Satu sesi webinar telah diadakan pada 13.10.2020 untuk menerangkan perkara berkaitan keperluan dan silibus PCE. Seramai 531 peserta telah menghadiri webinar ini.

awak and Kota Kinabalu, Sabah. A total of 292 candidates enrolled for the examination in the following branch of engineering:

- o 133 candidates (Civil)
- o 86 candidates (Electrical)
- o 65 candidates (Mechanical)
- o 3 candidates (Chemical)
- o 1 candidate (Geotechnical)
- o 3 candidates (Mining)
- o 1 candidate (Environmental)

PCE 2020

PCE 2020 was scheduled on 24th & 25th November 2020 in Kuala Lumpur, Sabah and Sarawak.

A total of 268 candidates have registered for the examination as follows:

- o 134 candidates (Civil)
- o 81 candidates (Electrical)
- o 48 candidates (Mechanical)
- o 2 candidates (Chemical)
- o 1 candidate (Geotechnical)
- o 1 candidate (Mining)
- o 1 candidate (Environmental)

However, in view of COVID-19 pandemic situation, PCE was postponed to a later date, which to be determined by the Board subject to announcement made by the Government on COVID-19 restriction.

Webinar on PCE

A webinar on PCE was held on 13.10.2020 to give explanation on matters relating to PCE requirements and syllabus. A total of 531 participants attended the webinar.

PENILAIAN TATA KELAKUAN PROFESIONAL UNTUK JURUTERA DENGAN KELAYAKAN PROFESIONAL DARI LUAR NEGARA

Code of Professional Conduct Assessment for Engineers with Overseas Professional Qualification

Seksyen 10(2)(B) Akta Pendaftaran Jurutera 1967 (Pindaan 2015) menyatakan bahawa seseorang yang "mempunyai kelayakan profesional yang dianggap oleh Lembaga setaraf dengan peperiksaan penilaian profesional yang dijalankan oleh Lembaga" dan "yang telah mematuhi kehendak sebagaimana yang ditentukan oleh Lembaga" boleh mengemukakan permohonan untuk didaftarkan sebagai Jurutera Profesional (PE).

Lembaga Jurutera Malaysia pada 16 Ogos 2018 telah memutuskan bahawa semua pemohon yang berkelayakan wajib menduduki Penilaian Tata Kelakuan Profesional seperti termaktub di bawah seksyen 10(2)(B) Akta Pendaftaran Jurutera 1967 (Pindaan 2015).

Sejumlah 154 orang calon telah menduduki Penilaian Tata Kelakuan Profesional sepanjang tahun 2019 dan 2020.

Keputusan Penilaian adalah seperti berikut. Penurunan jumlah calon dalam tahun 2020 adalah disebabkan Pandemic Covid-19.

Section 10(2)(B) of the Registration of Engineers Act 1967 (Revised 2015) states that any person who "hold a professional qualification which the Board considers to be equivalent to the professional assessment examination conducted by the Board" and "who has complied with the requirements as determined by the Board" shall be entitled on application to be registered as Professional Engineers.

The Board on 16.8.2018 decided to impose an assessment on 'Code of Professional Conduct' for all eligible applicants in accordance to section (10)(2)(B) of the Registration of Engineers Act 1967 (Revised 2015).

A total of 154 applicants have sat for the assessment on 'Code of Professional Conduct' in 2019 and 2020.

The results for the assessment is as follows:: The decreasing numbers of participants in 2020 are due to Covid- 19 Pandemic

Tahun Year	Lulus Pass	Gagal Fail	Jumlah Total
2019	93	18	111
2020	38	5	43

PEPERIKSAAN PENILAIAN PROFESIONAL (PAE) Professional Assessment Examination (PAE)

Peperiksaan Penilaian Profesional (PAE) mula diperkenalkan oleh Lembaga Jurutera Malaysia (LJM) pada tahun 1990 berdasarkan Kajian Semula Profesional Institution of Civil Engineers (ICE), Engineering Council United Kingdom (ECUK). Pada peringkat awal, LJM melantik sendiri panel untuk menjalankan penilaian tersebut. Walau bagaimanapun, pada tahun 2001, LJM telah melantik Institusi Jurutera Malaysia (IEM) sebagai agen untuk mengendalikan PAE dan seterusnya melantik Malaysian Society for Engineering & Technology (MySET) pada tahun 2014.

Jurutera Siswazah yang berdaftar hanya layak menduduki PAE setelah memenuhi keperluan Peraturan 22, Peraturan Pendaftaran Jurutera 1990 (Pindaan 2015) dan memperoleh tiga (3) tahun pengalaman praktikal.

Format PAE

1. Temuduga Penilaian Profesional
2. Dua (2) esei bertulis (jawab satu dari dua soalan setiap Bahagian):
 - i. Bahagian A : Berkaitan pengalaman dan latihan calon
 - ii. Bahagian B : Kod Etika

Calon diberi masa 1½ jam untuk menjawab setiap Bahagian.

PAE Tahun 2020

Permohonan PAE pada tahun 2020 menunjukkan peningkatan sebanyak 25% berbanding tahun 2019, walaupun negara dilanda pandemik COVID-19.

Jadual 1 / Table 1:

PAE dikendalikan oleh MySET & IEM tahun 2019 dan 2020
PAE conducted by MySET & IEM in year 2019 & 2020)

Agen (Agent) \ Tahun (Year)	2019	2020
MySET	83	103
IEM	85	107
Jumlah (Total)	168	210

Professional Assessment Examination (PAE) was introduced in 1990 by the Board of Engineer of Malaysia (BEM) based on Professional Review of Institution of Civil Engineers (ICE) of Engineering Council United Kingdom (ECUK). Initially BEM appoints its own panel to conduct the assessment. However in 2001, BEM outsourced the assessment to conduct PAE to The Institution of Engineers, Malaysia (IEM) and subsequently, in 2014, to Malaysian Society for Engineering & Technology (MySET).

A registered Graduate Engineer is only eligible to sit for PAE after he/she has fulfilled the requirements of Regulation 22 of the Registration of Engineers Regulations 1990 (Revised 2015) and has obtained three (3) years of practical experience

Format of PAE

1. Professional Assessment interview.
2. Two (2) Written Essays (answer one out of two questions per Section):
 - i. Section A : Related to the candidate's training and experience
 - ii. Section B : Code of Ethics

Candidate will be allocated 1½ hours for each Section.

PAE Year 2020

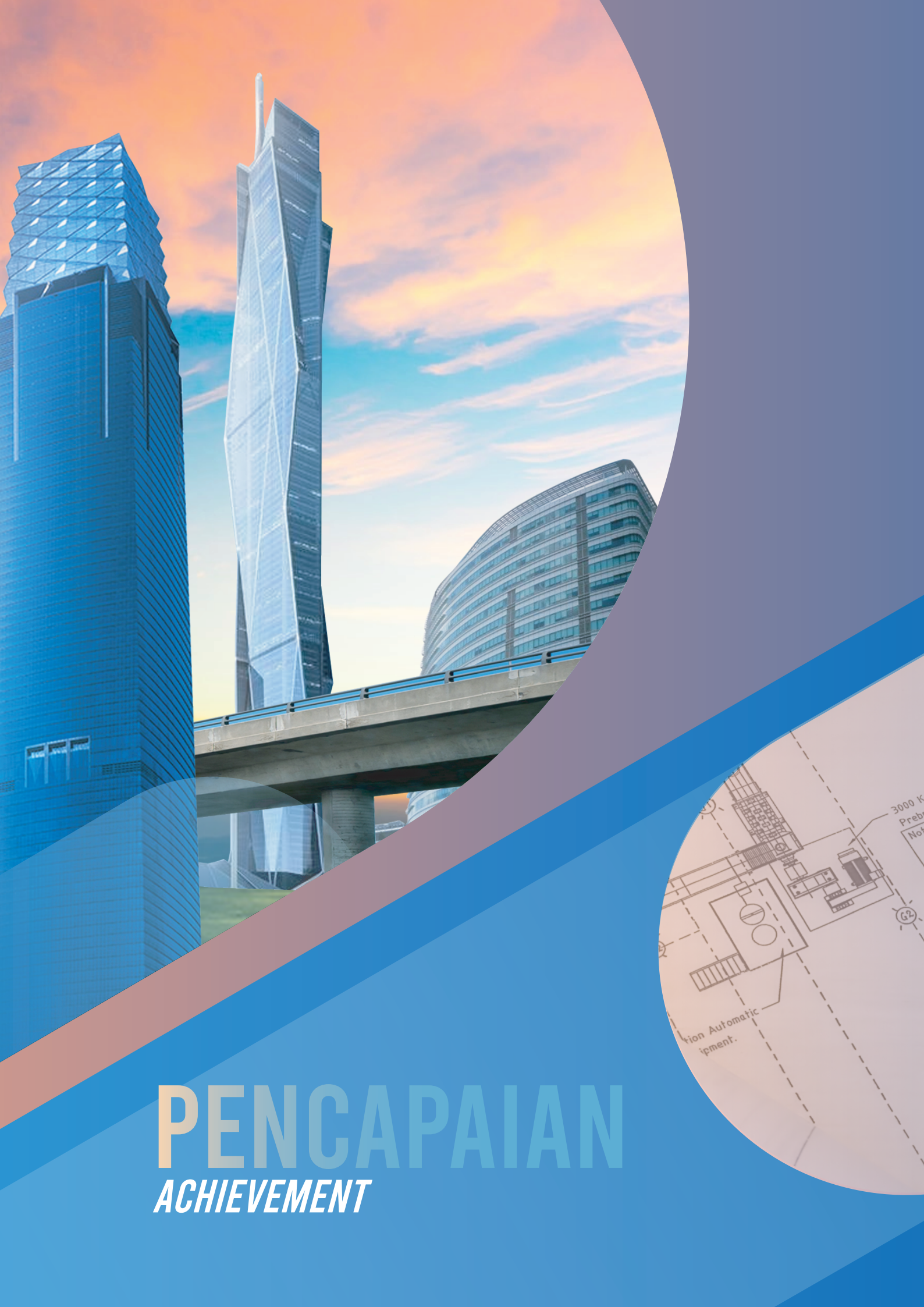
Application of PAE in 2020 has shown an increment of 25%, compared to 2019, even though the country was in situation of pandemic COVID-19.

Jadual 2 / Table 2:

Keputusan PAE tahun 2019 dan 2020
PAE Results for year 2019 & 2020)

Tahun (Year) \ Keputusan (RESULT)	Lulus (Pass)	Gagal (Fail)
2020	127 (94%)	9 (6%)
2019	132 (89%)	16 (11%)
Jumlah (Total)	259 (90%)	25 (10%)

Kadar lulus PAE menunjukkan peningkatan sebanyak 5% pada tahun 2020 berbanding tahun 2019.
The passing rate of PAE for year 2020 shown an increment of 5% compared to 2019.



PENCAPAIAN

ACHIEVEMENT

PENCAPAIAN 2020 ACHIEVEMENT 2020

Statistik Utama Main Statistics

Jumlah Pendaftaran Mengikut Kategori sehingga 31.12.2020 Total Registration by Category as at 31.12.2020

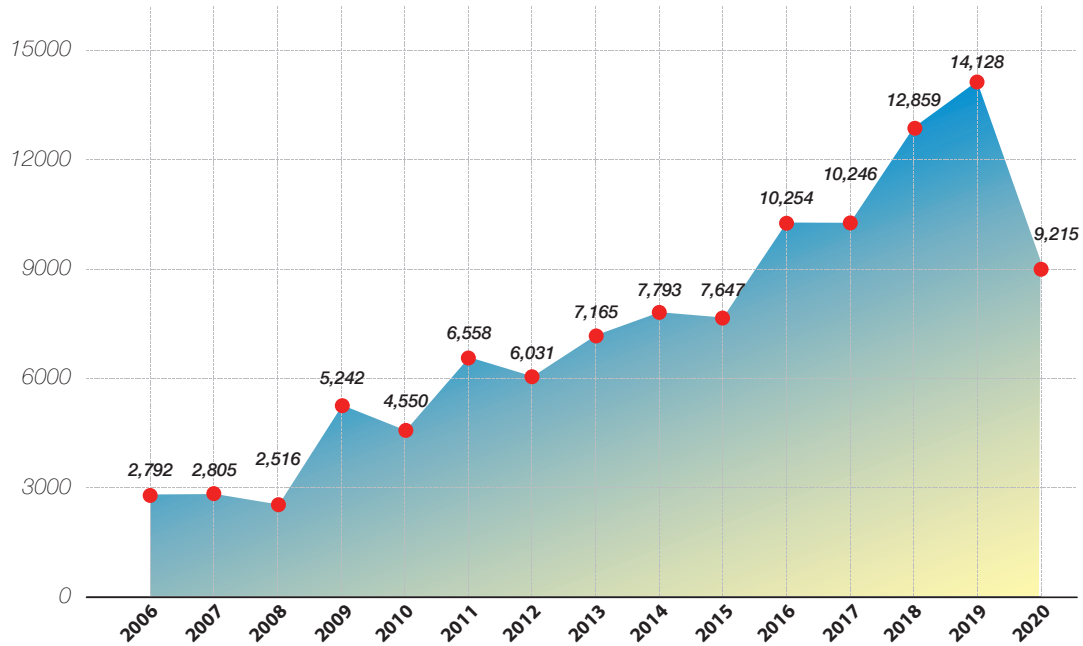
Pendaftaran Individu Registered Persons

Kategori	2019	2020
Jurutera Profesional dengan Perakuan Amalan (Professional Engineer with Practising Certificate)	10,484	10,511
Jurutera Profesional Professional Engineer	9,917	10,505
Pemeriksa Bertauliah Accredited Checkers	35	38
Jurutera Siswazah Graduate Engineer	132,580	141,795
Teknologis Kejuruteraan Engineering Technologist	8,740	9,398
Pemeriksa Tapak Inspector of Works	6,844	7,472

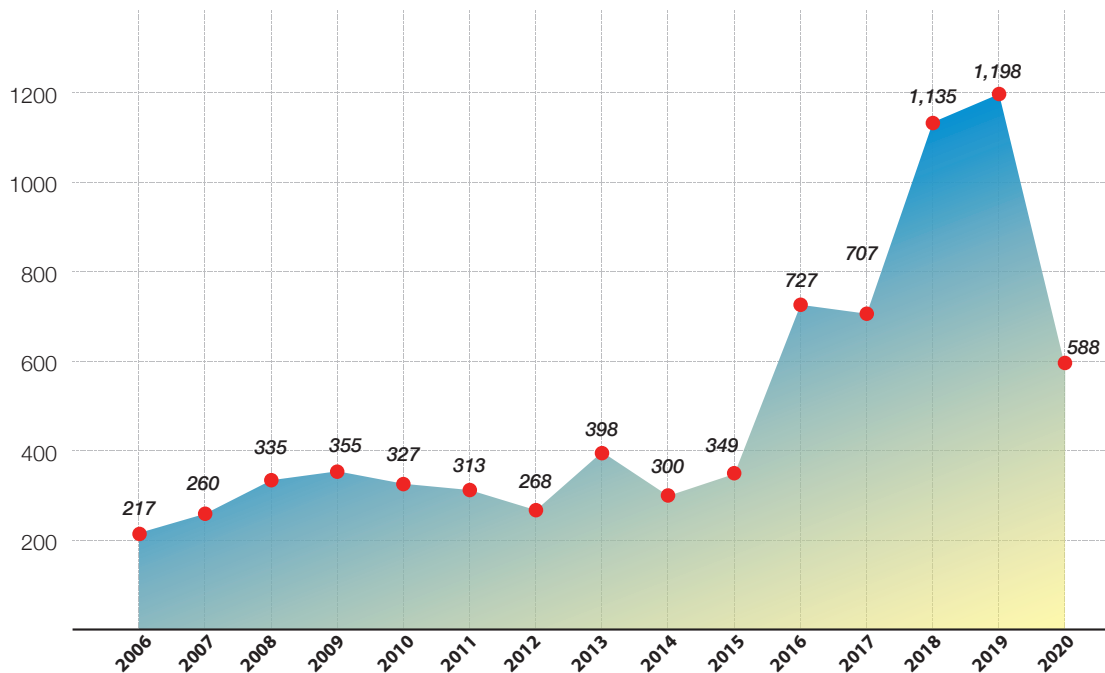
Syarikat Amalan Perunding Kejuruteraan Engineering Consultancy Practices

Kategori	2019	2020
Pertubuhan Perbadanan (Seksyen 7A) Body Corporate	1,588	1,621
Pertubuhan Perbadanan - Amalan Multi Disiplin (seksyen 7B) [Kejuruteraan sahaja] Body Corporate - Multi Disciplinary Practice (section 7B) [Engineering only]	67	69
Perkongsian Partnership	352	356
Pemilik Tunggal Sole Proprietorship	1,840	1,884

Bilangan Jurutera Siswazah Berdaftar Mengikut Tahun (Tahun 2006 - 2020)
Number of Registered Graduate Engineer by Year (for the Year 2006 - 2020)

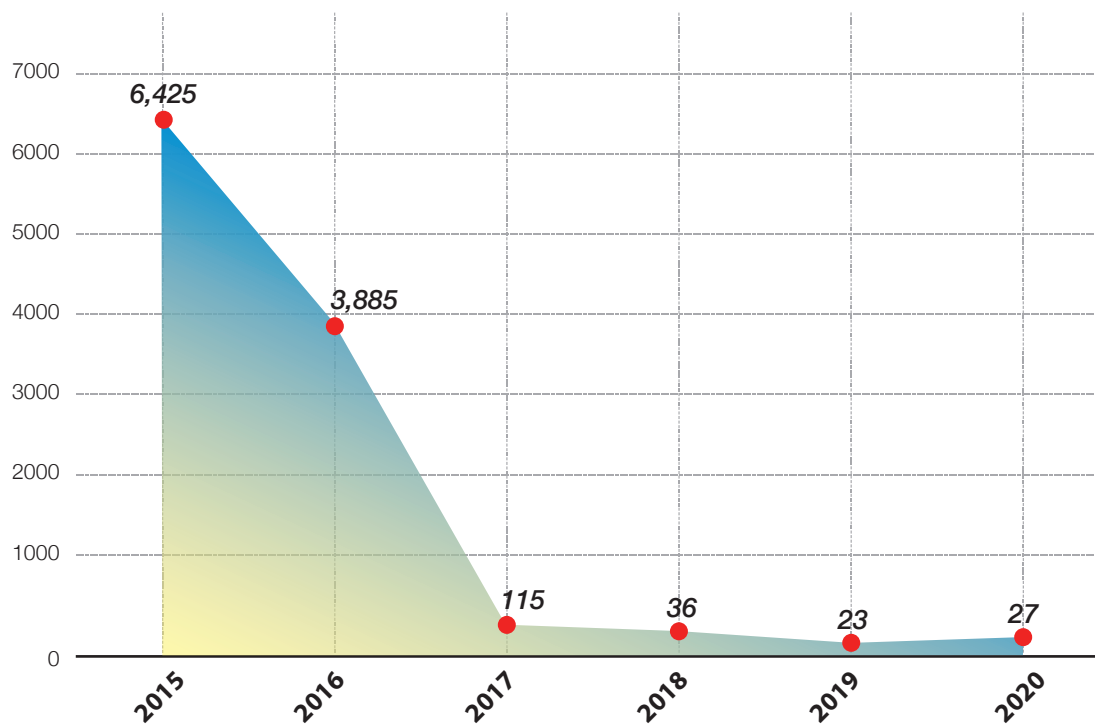


Bilangan Jurutera Profesional Berdaftar Mengikut Tahun (tahun 2006 - 2020)
Number of Registered Professional Engineer by Year (for the Year 2006 - 2020)

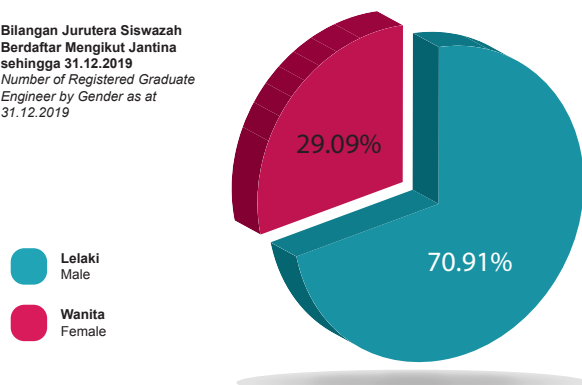


Bilangan Jurutera Profesional Dengan Perakuan Amalan Berdaftar Mengikut Tahun (Tahun 2015 - 2020)

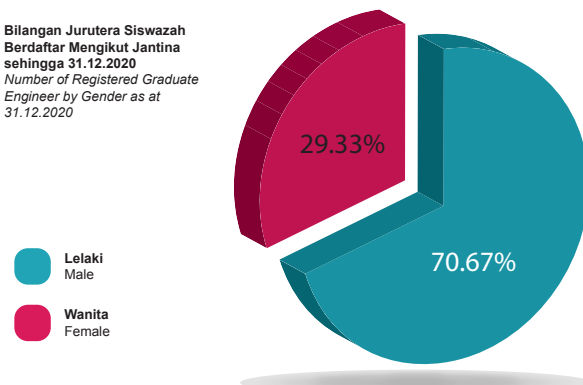
*Number of Registered Professional Engineer with Practising Certificate
by Year (for the Year 2015 - 2020)*



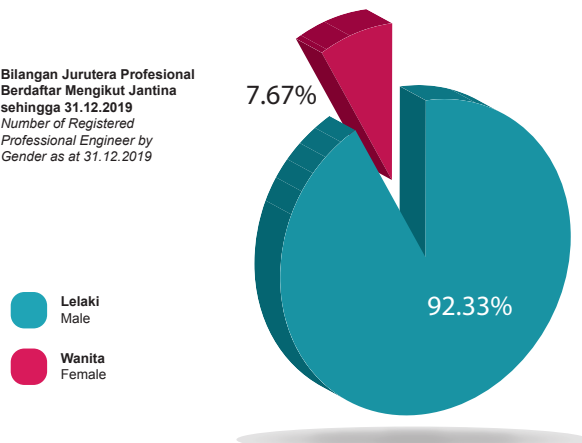
Bilangan Jurutera Siswazah Berdaftar Mengikut Jantina sehingga 31.12.2019
Number of Registered Graduate Engineer by Gender as at 31.12.2019



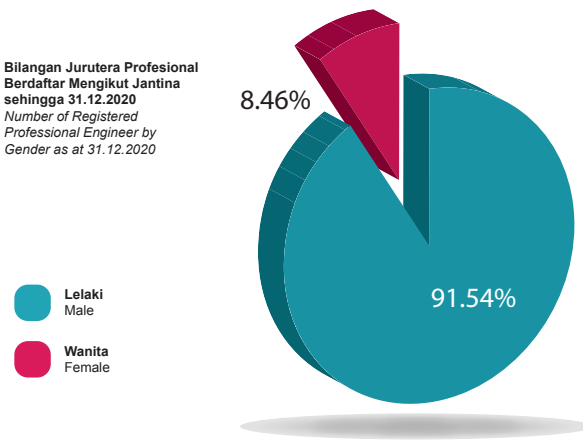
Bilangan Jurutera Siswazah Berdaftar Mengikut Jantina sehingga 31.12.2020
Number of Registered Graduate Engineer by Gender as at 31.12.2020



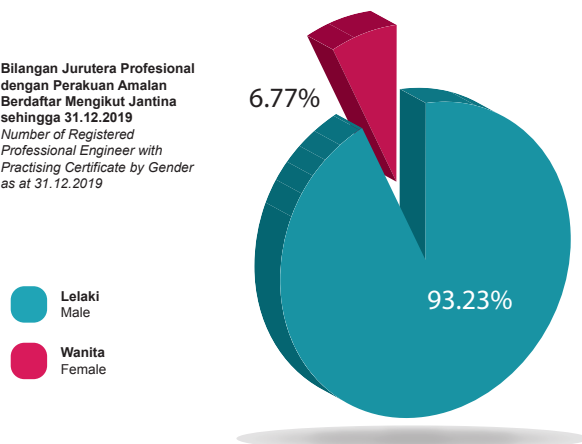
Bilangan Jurutera Profesional Berdaftar Mengikut Jantina sehingga 31.12.2019
Number of Registered Professional Engineer by Gender as at 31.12.2019



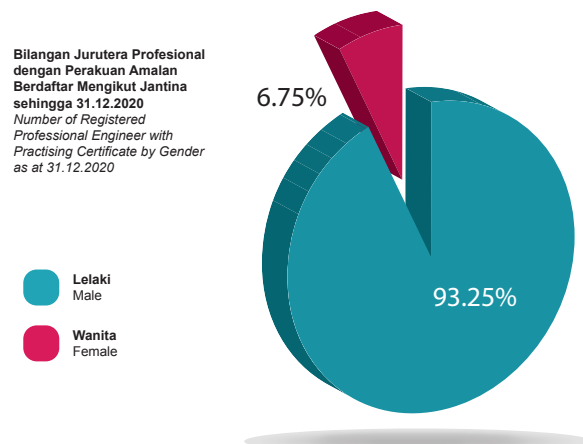
Bilangan Jurutera Profesional Berdaftar Mengikut Jantina sehingga 31.12.2020
Number of Registered Professional Engineer by Gender as at 31.12.2020



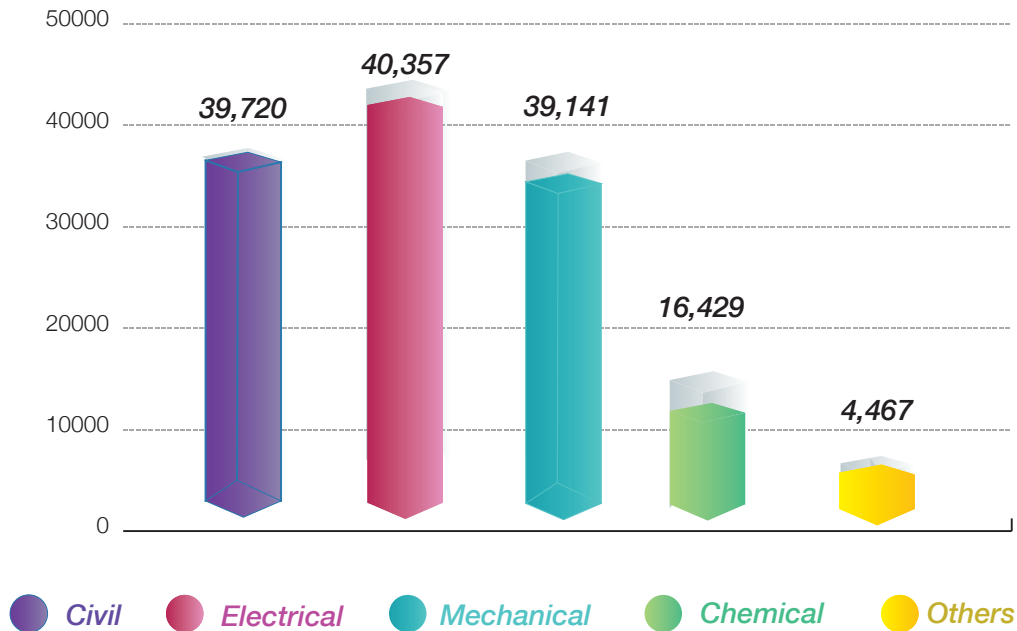
Bilangan Jurutera Profesional dengan Perakuan Amalan Berdaftar Mengikut Jantina sehingga 31.12.2019
Number of Registered Professional Engineer with Practising Certificate by Gender as at 31.12.2019



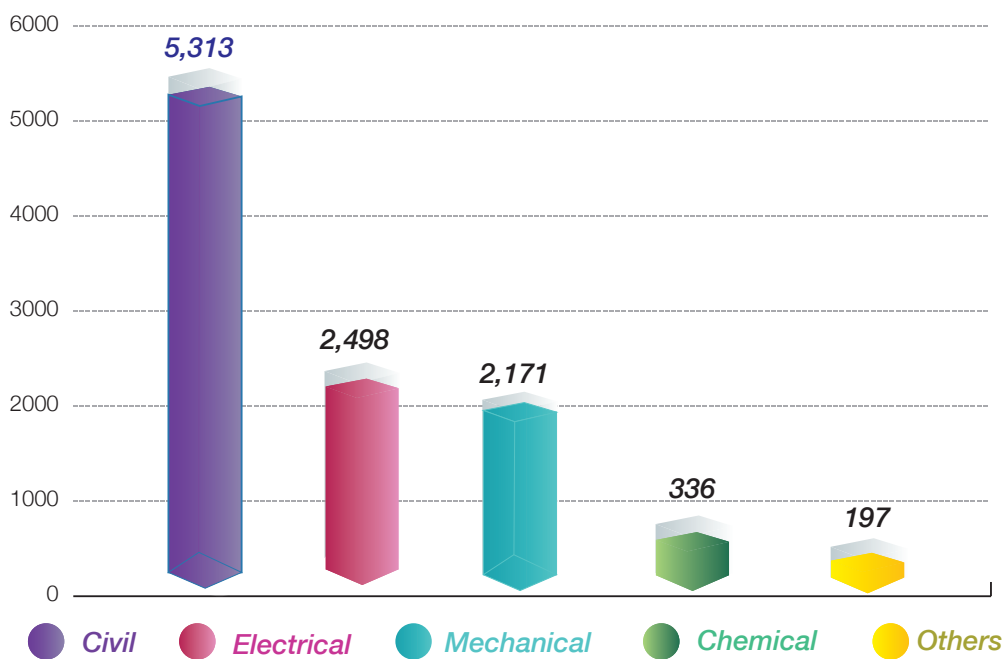
Bilangan Jurutera Profesional dengan Perakuan Amalan Berdaftar Mengikut Jantina sehingga 31.12.2020
Number of Registered Professional Engineer with Practising Certificate by Gender as at 31.12.2020



Bilangan Jurutera Siswazah Berdaftar Mengikut Disiplin sehingga 31.12.2020
Number of Registered Graduate Engineer by Discipline as at 31.12.2020

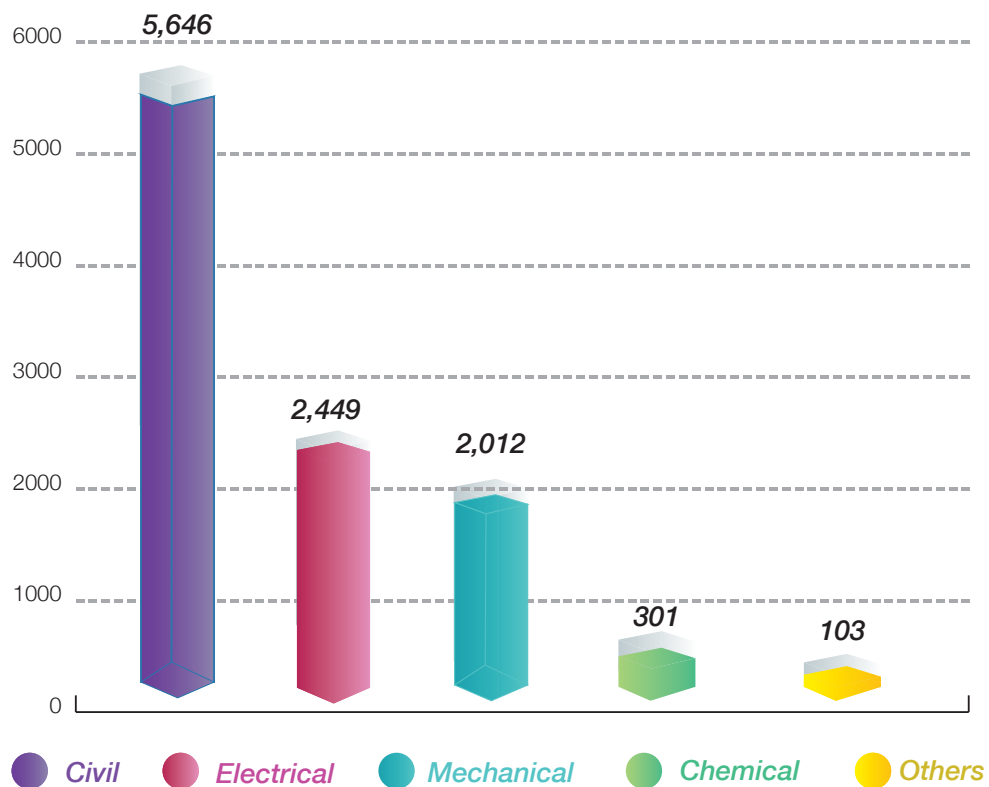


Bilangan Jurutera Profesional Berdaftar Mengikut Disiplin Sehingga 31.12.2020
Number of Registered Professional Engineer by Discipline as at 31.12.2020

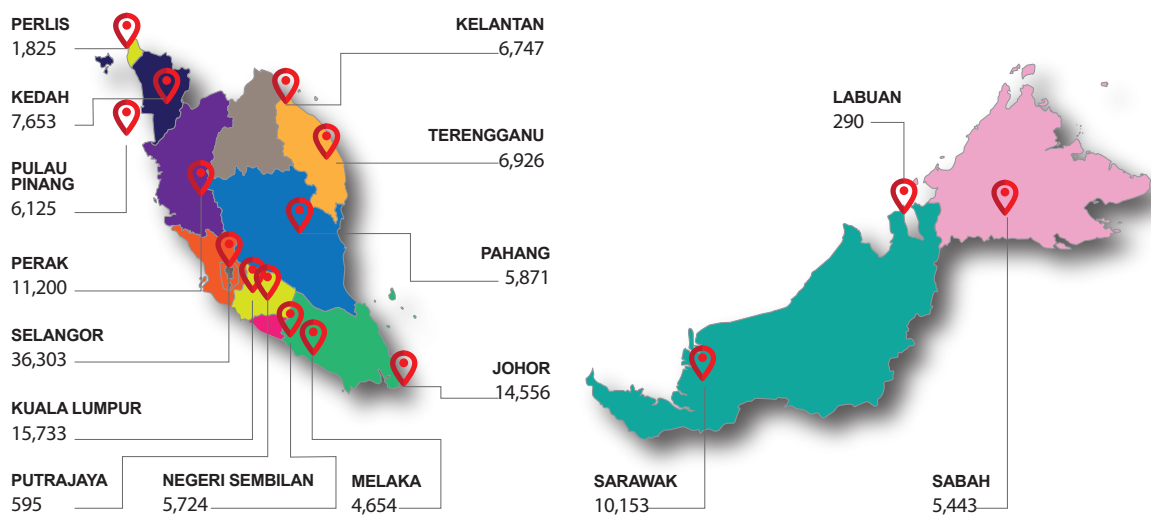


**Bilangan Jurutera Profesional Dengan Perakuan Amalan Berdaftar
Mengikut Disiplin Sehingga 31.12.2020**

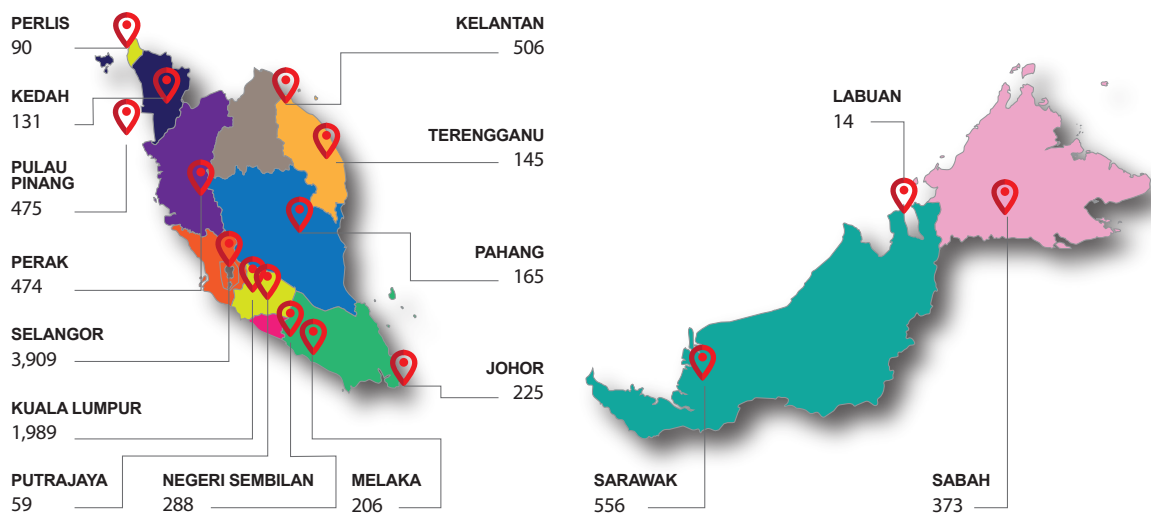
*Number of Registered Professional Engineer with Practicing Certificate
by Discipline as at 31.12.2020*



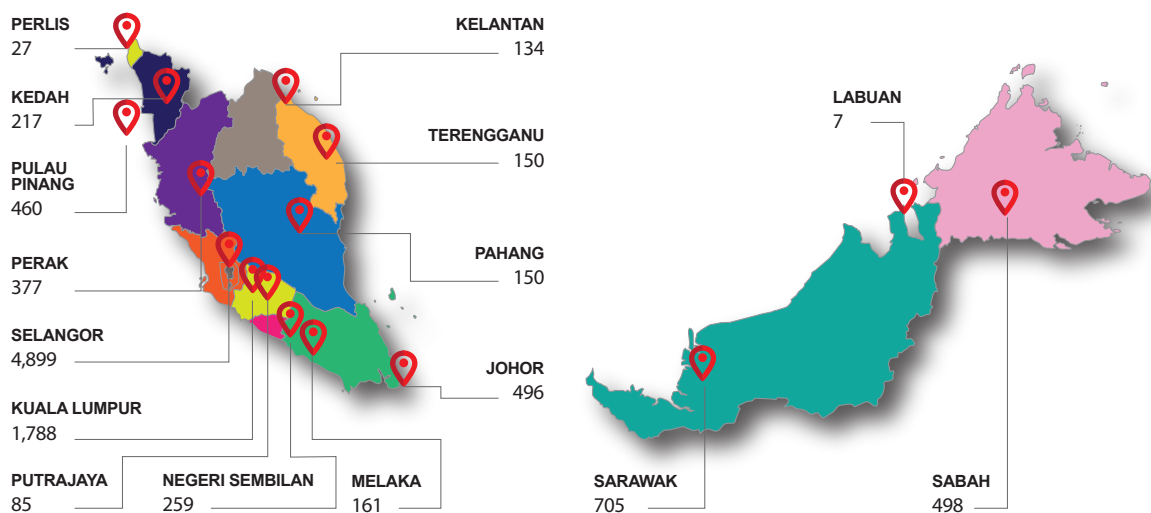
Bilangan Jurutera Siswazah Berdaftar Mengikut Negeri sehingga 31.12.2020
Number of Registered Graduate Engineer by States as at 31.12.2020



Bilangan Jurutera Professional Berdaftar Mengikut Negeri sehingga 31.12.2020
Number of Registered Professional Engineer by States as at 31.12.2020



Bilangan Jurutera Professional dengan Perakuan Amalan Berdaftar Mengikut Negeri sehingga 31.12.2020
Number of Registered Professional Engineer with Practising Certificate by States as at 31.12.2020



KES TATALAKU CODE OF CONDUCT CASES

PERBANDINGAN ADUAN DITERIMA DALAM TAHUN 2019 & 2020 COMPARISON OF COMPLAINTS RECEIVED IN YEAR 2019 & 2020

Tahun Year	Kes Baru New Cases	Prima Facts		Dalam Process (In process)
		Tidak No	Ya Yes	
2019	59	21	38	-
2020	38	14	9	15

Status/Keputusan Jawatankuasa Penyiasatan Tahun 2020 Status/Decision of Investigating Committee in 2020			Perbicaraan oleh Jawatankuasa Disiplin Tahun 2020 Hearing by Disciplinary Committee in 2020		Rayuan kepada Lembaga Rayuan Tahun 2020 Appeal to Appeal Board in 2020	
Tiada Kes No Case	Dicadangkan untuk Perbicaraan Recommend for Hearing	Dalam Proses Under Process	Bersalah Guilty	Tidak Bersalah Not Guilty	Keputusan Disahkan Decision Confirmed	Keputusan Dipinda Decision Varied
13	19	13	15	4	2	2

Angka di atas termasuk kes yang dibawa ke hadapan dari tahun-tahun sebelumnya dan tidak semestinya termasuk semua kes prima facie yang disimpulkan oleh PPC tetapi tidak disahkan oleh Lembaga pada tahun berakhir.

The above figure includes cases brought forward from previous years and may not necessarily include all prima facie cases concluded by PPC but not endorsed by the Board by year end.

PENGIKTIRAFAN PROGRAM KEJURUTERAAN ACCREDITATION OF ENGINEERING PROGRAMMES

Untuk rekod, BEM / EAC telah mengakreditasi 356 program kejuruteraan yang dikendalikan oleh 57 buah IPT di Malaysia. Statistik terkini menunjukkan jumlah bilangan program kejuruteraan yang aktif adalah sebanyak 261 prgoram dari 57 IPT. Pengurangan ini disebabkan oleh penutupan program dan pengstrukturkan fakulti kejuruteraan di IPT dalam negara.

On record, the BEM/EAC has since awarded accreditation to 356 engineering programmes conducted by 57 institutions of higher learning in Malaysia. Most recent statistics showed the total number of active engineering programme stood at 261 programmes from 50 IHLs. The reduction was due to closures of programmes and restructuring of the engineering faculties at IHLs in the country.

Bil. No.	Universiti Awam Public University	Bil Program No of Programme
1	University Islam Antarabangsa Malaysia (UIAM - IIUM)	9
2	Universiti Teknologi MARA (UiTM), Penang	4
3	Universiti Teknologi MARA (UiTM), Shah Alam	11
4	Universiti Kebangsaan Malaysia (UKM)	7
5	Universiti Malaya (UM)	11
6	Universiti Malaysia Pahang (UMP)	11
7	Universiti Malaysia Sabah (UMS)	5
8	Universiti Malaysia Perlis (UNiMAP)	19
9	Universiti Malaysia Sarawak (UNIMAS)	6
10	Universiti Putra Malaysia (UPM)	8
11	Universiti Pertahanan Nasional Malaysia (UPNM)	4
12	Univesiti Sains Malaysia (USM, Penang)	11
13	Universiti Sains Islam Malaysia (USIM)	1
14	Universiti Teknikal Malaysia Melaka (UTEM)	5
15	Universiti Tun Hussein Onn Malaysia (UTHM)	4
16	Universiti Teknologi Malaysia (UTM)	23
17	Malaysia-Japan International Institute of Technology (MJIIIT) – UTM	3
18	AIMST University	1
19	Al-Madinah International University (MEDIU)	2
20	Asia Pacific University of Technology & Innovation (APU)	5
21	Curtin University Malaysia	7

Bil. No.	Universiti Awam Public University	Bil Program No of Programme
22	Heriot-Watt University Malaysia Campus	5
23	INTI International University	2
24	Infrastructure University Kuala Lumpur	3
25	UOW Malaysia KDU University College, Utropolis Glenmarie	2
26	MAHSA University	1
27	Manipal International University (MIU)	6
28	Multimedia University (MMU), Cyberjaya	8
29	Multimedia University (MMU), Melaka	3
30	Monash University Malaysia	2
31	NILAI University	4
32	SEGi University	1
33	Southern University College	5
34	Swinburne University of Technology	5
35	Tunku Abdul Rahman University College (TARC)	3
36	Taylor's University	7
37	UCSI University	3
38	University College of Technology Sarawak (UCTS)	6
39	University of Nottingham Malaysia (UNMC)	3
40	Universiti Selangor (UNISEL)	5
41	Universiti Tenaga Nasional (UNITEN)	9
42	Universiti Tunku Abdul Rahman (UTAR), Sg. Long	4
43	Universiti Tunku Abdul Rahman (UTAR), Kampar, Perak	
44	Universiti Teknologi Petronas (UTP)	6
45	Universiti Kuala Lumpur British Malaysian Institute (UNIKL- BMI)	1
46	Universiti Kuala Lumpur Malaysian Institute of Chemical and Bio-Engineering Technology- (UNIKL MICET	1
47	Universiti Kuala Lumpur Malaysia France Institute (UNIKL MFI)	1
48	Quest International University Perak (QIUP)	1
49	LIMKOKWING University of Creative Technology (LUCT)	1
50	Xiamen University Malaysia	1
Jumlah Besar (Grand Total)		261

Pada tahun 2020, EAC telah menjalankan penilaian akreditasi pada 40 buah IPT yang melibatkan 88 program WA. Secara keseluruhannya, ada 6 Program Baru (NP), 3 Kitaran Baru (NC), 20 Lanjutan (C), 31 Interim (I), dan 1 program yang mana keputusannya ditangguhkan (D). Sebanyak 27 buah program lagi yang telah diiktiraf serta layak telah diberikan lanjutan akreditasi satu (1) tahun untuk tahun 2020/2021, yang mana program tersebut telah tidak dapat dinilai kerana pandemik COVID-19. Semua penilaian akreditasi NP dilakukan melalui lawatan fizikal. C dan I dijalankan secara penilaian desktop dan persidangan video dalam talian.

Selain daripada sokongan sekretariat, EAC mempunyai kumpulan Panel Penilai (PE) yang terlatih dari kalangan akademik dan industri.

Statistik terkini menunjukkan terdapat sejumlah 433 PE yang telah dilatih untuk program Washington Accord (WA).

EAC juga memastikan para penilai adalah dilengkapi dengan pengetahuan yang betul dalam mengendalikan penilaian akreditasi dan untuk mempamerkan kualiti yang terbaik dalam menjalankan tugas penilaian.

Bertekad untuk meningkatkan kualiti pendidikan kejuruteraan di Malaysia dan memastikan para penilai dilengkapi dengan pengetahuan yang betul, EAC telah menjalankan tiga (3) bengkel dan latihan secara dalam talian pada tahun 2020 untuk pihak berkepentingan yang relevan.

Mulai April 2020, semua Mesyuarat Akreditasi (ADM) dan mesyuarat lain yang berkaitan dilakukan melalui platform dalam talian. EAC membuka jalan dengan mengadakan Webinar pertama dalam talian mengenai EAC/ETAC Standards 2020. Selepas itu, EAC mengadakan Bengkel pertama dalam talian mengenai Panel Penilai Baru (PE). Mesyuarat dan bengkel dalam talian ini akan berterusan hingga tahun 2021.

Pertama, webinar bertajuk EAC Webinar on EAC Standard 2020. Objektif webinar adalah untuk memudahkan pemahaman dan membuat perbandingan antara EAC Standard 2020 dengan EAC Manual 2017. Edisi EAC Standard 2020 yang telah disemak

During 2020, EAC had conducted evaluation to 40 IHLs involving 88 WA programmes. In total, there were 6 New Programme (NP), 3 New Cycle (NC), 20 Continuing (C), 31 Interim (I), and 1 Deferred (D) accreditation visits conducted. Another 27 programmes were given a blanket one (1) year extension for 2020/2021 to all eligible accredited programme in which evaluation was halted due to COVID-19 pandemic. All NP accreditation visits were done through the physical review. The C and I were conducted using desktop review and online video conference.

Apart from the support of the secretariat, the EAC has a group of trained Panel of Evaluators (PE) from amongst the academia and industry.

The latest statistic showed that there is a total of 433 PE trained for Washington Accord (WA) programmes.

The EAC also ensure that the evaluators are equipped with the right knowledge in conducting the accreditation evaluation and to exhibit excellent qualities when delivering their evaluation.

Committed to enhancing the quality of engineering education in Malaysia and in ensuring the evaluators are well equipped with the right knowledge, EAC have conducted three (3) online training and workshop in 2020 for relevant stakeholders.

Beginning April 2020, all Accreditation Decision Meeting (ADM) and other related meetings were conducted via online platforms. EAC paved the way by conducting its inaugural online Webinar on EAC/ETAC Standards 2020. Subsequently, EAC conducted the first online Workshop on New Panel of Evaluators (PE). These conducts will continue into the year 2021.

Firstly, the EAC Webinar on EAC Standard 2020. The objective was to facilitate common understanding and comparison between EAC Standard 2020 to the previous EAC Manual 2017. The revised edition of EAC Standards 2020 have been endorsed and

semula ini telah disahkan dan dilancarkan oleh LJM pada 19 April 2020. Kedua, New PE Workshop yang mana latihan dijalankan kepada panel penilai berdaftar yang layak dari kalangan kategori Akademik, Industri, Conversion dan Panel Senior. Akhirnya, mengadakan Dialogue on Challenges of Online Teaching-Learning & Assessment (TLA) Experiences by the IHL. IPT berkongsi masalah dan penyelesaian berhubung dengan PAE secara dalam talian.

EAC menitikberatkan maklum balas yang diterima oleh EAD dari pihak yang berkepentingan. Semua sesi bersama dilengkapi dengan borang maklum balas dalam talian. Analisa memuktamadkan bahawa lawatan akreditasi dinilai baik dan cemerlang dan latihan dinilai secara keseluruhannya baik.

launched by BEM on the 19th April 2020. Secondly, the New PE Workshop in which the training was conducted to qualified registered person which comprise Academic, Industry, Conversion and Senior Panel realignment category. Lastly, the Dialogue on Challenges of Online Teaching-Learning & Assessment (TLA) Experiences by the IHL. The IHLs shared the problems and solutions associated to online TLA.

EAC upholds feedbacks that EAD received from the stakeholders. All engagement sessions were equipped with online feedback form. The analysis conclude that the accreditation visits services were rated good and excellent and the trainings were overall rated as good.

Bil. No.	Tajuk (Title)	Tarikh (Date)	Jumlah Peserta (Total Participants)
1.	EAC Standard 2020 Webinar (Zoom & Facebook Live)	17.06.2020	738
2.	EAC New Panel Evaluators Workshop (Online - Zoom)	12.10.2020 13.10.2020 14.10.2020	80
3.	Dialogue on Challenges of Online Teaching-Learning & Assessment (TLA) Experiences by the IHL (Online - Zoom)	16.11.2020	82

STATISTICS OF EAC EVALUATION PANEL MEMBERS FOR 2020 STATISTIK AHLI PANEL PENILAI EAC BAGI TAHUN 2020

Bil No.	Bidang (Branch)	Akademik (Academic)	Industri (Industry)	Grand Total (Jumlah Besar)
1	Awam (Civil)	61	25	86
2	Kimia (Chemical)	47	13	60
3	Elektrikal & Elektronik (Electrical & Electronic)	95	26	121
4	Mekanikal (Mechanical)	102	34	136
6	Lain - lain (Others)	27	3	30
	Jumlah (Total)	332	101	433

PENGIKTIRAFAN PROGRAM TEKNOLOGI KEJURUTERAAN & JURUTEKNIK KEJURUTERAAN **ACCREDITATION OF ENGINEERING TECHNOLOGY PROGRAMMES & ENGINEERING TECHNICIAN PROGRAMMES**

Untuk rekod, sehingga Disember 2020, ETAC telah menganugerahkan akreditasi kepada 50 program ijazah teknologi kejuruteraan dan 158 program diploma kejuruteraan yang dijalankan oleh 14 dan 43 buah IPT di Malaysia masing-masing.

On record, as of December 2020, the ETAC has awarded accreditation to 50 engineering technology degree programmes and 159 engineering diploma programmes which were conducted by 14 and 44 IHLs in Malaysia respectively

PROGRAM IJAZAH TEKNOLOGI KEJURUTERAAN ENGINEERING TECHNOLOGY DEGREE PROGRAMMES

Bil. No.	Institusi Pengajian Tinggi/ <i>Institution of Higher Learning</i>	Bil. Program No. of Programme
1.	Lincoln University College (LUC)	3
2.	Politeknik Sultan Salahuddin Abdul Aziz Shah (PSA)	1
3.	Politeknik Sultan Azlan Shah (PSAS)	1
4.	Politeknik Ungku Omar (PUO)	2
5.	Universiti Malaysia Perlis (UniMAP)	1
6.	University Tun Hussein Onn Malaysia (UTHM)	12
7.	Universiti Kuala Lumpur Kampus Cawangan Malaysia France Institute (UniKL MFI)	6
8.	Universiti Kuala Lumpur Kampus Cawangan Malaysian Spanish Institute (UniKL MSI)	5
9.	Universiti Kuala Lumpur Kampus Cawangan Malaysian Institute of Marine Engineering Technology (UniKL MIMET)	3
10.	Universiti Kuala Lumpur Malaysian Institute of Information Technology (UniKL MIIT)	2
11.	Universiti Kuala Lumpur Kampus Cawangan Malaysian Institute of Industrial Technology (UniKL MITEC)	1
12.	Universiti Kuala Lumpur Kampus Cawangan British Malaysian Institute (UniKL BMI)	4
13.	Universiti Kuala Lumpur Kampus Cawangan Malaysia Italy Design Institute (UniKL MIDI)	3
14.	Universiti Kuala Lumpur Kampus Cawangan Malaysian Institute of Chemical and Bioengineering Technology (UniKL MICET)	6
Jumlah Besar Grand Total		50

PROGRAM DIPLOMA KEJURUTERAAN ENGINEERING DIPLOMA PROGRAMMES

Bil. No.	Institusi Pengajian Tinggi/ <i>Institution of Higher Learning</i>	Bil. Program No. of Programme
1.	Institut Kemahiran Mara (IKM) Bintulu	2
2.	Institut Kemahiran Mara (IKM) Johor Bahru	1
3.	Kolej Yayasan Pelajaran Johor (KYPJ)	1
4.	Kolej Kemahiran Tinggi Mara (KKTM) Sri Gading	2
5.	Kolej Kemahiran Tinggi Mara (KKTM) Kemaman	2
6.	Kolej Kemahiran Tinggi Mara (KKTM) Lenggong	1
7.	Politeknik Banting Selangor (PBS)	3
8.	Politeknik Kota Kinabalu (PKK)	7
9.	Politeknik Kuala Terengganu (PKT)	1
10.	Politeknik Muadzam Shah (PMS)	4
11.	Politeknik Port Dickson (PPD)	9
12.	Politeknik Sultan Salahuddin Abdul Aziz Shah (PSA)	7
13.	Politeknik Sultan Azlan Shah (PSAS)	9
14.	Politeknik Ungku Omar (PUO)	8
15.	Politeknik Melaka (PMK)	3
16.	Politeknik Tuanku Sultanah Bahiyah (PTSB)	7
17.	Politeknik Sseberang Perai (PSP)	7
18.	Politeknik Sultan Abdul Halim Mu'adzam Shah (POLIMAS)	8
19.	Politeknik Sultan Idris Shah (PSIS)	4
20.	Politeknik Tuanku Syed Sirajuddin (PTSS)	4
21.	Politeknik Sultan Mizan Zainal Abidin (PSMZA)	7
22.	Politeknik Kota Bharu (PKB)	8
23.	Politeknik Merlimau (PMM)	7
24.	Politeknik Sultan Haji Ahmad Shah (POLISAS)	5
25.	Politeknik Mukah (PMU)	3
26.	Politeknik Kuching Sarawak (PKS)	8
27.	Politeknik Ibrahim Sultan (PIS)	7
28.	Politeknik Nilai (PNS)	1
29.	Universiti Tun Hussein Onn Malaysia (UTHM)	2
30.	City University (City U)	1
31.	Disted College	1
32.	INTI International College Penang (IICP)	1
33.	INTI International University (INTI IU)	2
34.	MAHSA University	2
35.	Manipal International University (MIU)	2
36.	Multimedia University (MMU) Malacca	1
37.	Quest International University Perak (QIUP)	1
38.	Universiti Kuala Lumpur Kampus Cawangan Malaysian Spanish Institute (UniKL MSI)	3
39.	Universiti Kuala Lumpur Kampus Cawangan British Malaysian Institute (UniKL BMI)	2

40.	Universiti Kuala Lumpur Kampus Cawangan Malaysian Institute of Industrial Technology (UniKL MITEC)	1
41.	Universiti Teknologi MARA (UiTM) Pasir Gudang	1
42.	Universiti Teknologi MARA (UiTM) Permatang Pauh	1
43.	Universiti Teknologi MARA (UiTM) Jengka	1
44.	Universiti Teknologi MARA (UiTM) Samarahan 2	1
Jumlah Besar Grand Total		159

Sepanjang tahun 2020, ETAC telah menjalankan lawatan penilaian terhadap 27 program SA dan 26 DA. Secara keseluruhan ada 26 Program Baru (NP), 4 Lanjutan (C), 22 Interim (I), dan 1 lawatan keputusan ditangguhkan (D). Semua lawatan akreditasi NP dilakukan melalui lawatan fizikal. C dan I dijalankan menggunakan desktop dan secara video dalam talian. Hanya ada satu (1) program yang dijalankan sepenuhnya secara mod dalam talian, iaitu Diploma in Electrical Installation Engineering Technology, IKM Bintulu, Sarawak.

Selain daripada sokongan sekretariat, ETAC mempunyai kumpulan Penilai Program (PE) yang terlatih dari kalangan akademik dan industri

Statistik terkini menunjukkan bahawa terdapat sejumlah 356 PE yang dilatih untuk program Sydney Accord (SA) and Dublin Accord (DA).

Bertekad untuk meningkatkan kualiti pendidikan kejuruteraan di Malaysia dan memastikan para penilai dilengkapi dengan pengetahuan yang betul, ETAC telah menjalankan tiga (3) bengkel dan latihan secara dalam talian pada tahun 2020 untuk pihak berkepentingan yang relevan.

Mulai April 2020, semua Mesyuarat Akreditasi (ADM) dan mesyuarat lain yang berkaitan dilakukan melalui platform dalam talian. ETAC membuka jalan dengan mengadakan Webinar pertama dalam talian mengenai EAC / ETAC Standards 2020. Selepas itu, ETAC mengadakan Bengkel pertama dalam talian mengenai Panel Penilai Baru (PE). Mesyuarat dan bengkel dalam talian ini akan berterusan hingga tahun 2021.

During 2020, ETAC had conducted evaluation to 27 SA and 26 DA programmes respectively. In total there were 26 New Programme (NP), 4 Continuing (C), 22 Interim (I), and 1 Deferred (D) accreditation visits conducted. All NP accreditation visits were done through the physical review. The C and I were conducted using desktop review and online video conference. There was only one (1) programme that was conducted in a full virtual mode, i.e. Diploma in Electrical Installation Engineering Technology, IKM Bintulu, Sarawak.

Apart from the support of the secretariat, the ETAC has a group of trained Panel of Evaluators (PE) from amongst the academia and industry.

The latest statistic showed that there is a total of 356 PE trained for Sydney Accord (SA) and Dublin Accord (DA) programmes.

Committed to enhancing the quality of engineering education in Malaysia and in ensuring the evaluators are well equipped with the right knowledge, ETAC three (3) online training and workshop in 2020 for relevant stakeholders.

Beginning April 2020, all Accreditation Decision Meeting (ADM) and other related meetings were conducted via online platforms. ETAC paved the way by conducting it's inaugural online Webinar on EAC/ETAC Standards 2020. Subsequently, ETAC conducted the first online Workshop on New Panel of Evaluators (PE). These conducts will continue into the year 2021.

Pertama, webinar bertajuk ETAC Webinar on ETAC Standards 2020. Objektif webinar adalah untuk memudahkan pemahaman dan membuat perbandingan antara ETAC Standards 2020 dengan ETAC Standards 2019. Edisi ETAC Standards 2020 yang telah disemak semula ini telah disahkan dan dilancarkan oleh LJM pada 19 April 2020. Kedua, New PE Workshop yang mana latihan dijalankan kepada panel penilai berdaftar yang layak dari kalangan kategori Akademik, Industri, Conversion dan Panel Senior. Pada tahun ini sebanyak dua (2) bengkel Panel Penilai Baru telah dijalankan.

Prestasi PE ETAC dinilai secara berterusan sebagai sebahagian dari penilaian dan pemantauan prestasi aktiviti luar yang menurut ISO 9001-2015. ETAC menitikberatkan maklum balas yang diterima oleh ETAD dari pihak yang berkepentingan. Semua sesi bersama dilengkapi dengan borang maklum balas dalam talian. Analisa memuktamadkan bahawa lawatan akreditasi dinilai baik dan cemerlang dan latihan dinilai secara keseluruhannya baik.

Firstly, the ETAC Webinar on ETAC Standards 2020. The objective was to facilitate common understanding and comparison between ETAC Standards 2020 to the previous ETAC Standards 2019. The revised edition of ETAC Standards 2020 have been endorsed and launched by BEM on the 19th April 2020. Secondly, the New PE Workshop in which the training was conducted to qualified registered person which comprise Academic, Industry, Conversion and Senior Panel realignment category. There were two (2) New PE Workshops conducted this year.

ETAC PE performance is continually evaluated as part of the evaluation and monitoring of external provider's performance for the outsourced activities, as per ISO 9001-2015. ETAC upholds feedbacks that ETAD received from the stakeholders. All engagement sessions were equipped with online feedback form. The analysis conclude that the accreditation visits services were rated good and excellent and the trainings were overall rated as good.



Bil. No.	Tajuk/ Title	Tarikh/ Date
1.	ETAC Standards 2020 Webinar (Zoom & Facebook Live)	16.06.2020
2.	ETAC-JPPKK New Panel Evaluators Workshop	30.09.2020 01.10.2020 02.10.2020
3.	ETAC New Panel Evaluators Workshop (Online -Zoom)	19.10.2020 20.10.2020 21.10.2020

STATISTIK PANEL PENILAI ETAC BAGI TAHUN 2020

STATISTICS OF ETAC EVALUATION PANEL FOR 2020

Bil No.	Bidang Branch	Akademik Academic	Industri Industry	Jumlah Besar Grand Total
1	Kimia (Chemical)	29	0	29
2	Awam (Civil)	68	4	72
3	Elektrikal (Electrical)	57	6	63
4	Elektronik (Electronic)	54	4	58
5	Mekanikal (Mechanical)	84	10	94
6	Lain – lain (Others) Details –	36	4	40
	• Building	1	-	1
	• Communication	-	1	1
	• Manufacturing	5	1	6
	• Material	4	-	4
	• Petroleum	1	-	1
	• Telecommunication	1	1	2
	Jumlah Total	328	28	356



PERISTIWA
PENTING
HIGHLIGHT OF 2020

PERISTIWA PENTING 2020 *HIGHLIGHTS OF 2020*

MESYUARAT PERIKATAN KEJURUTERAAN ANTARABANGSA 21 – 9 Jun 2020 Online Video Conference

Mesyuarat Perikatan Kejuruteraan Antarabangsa (IEA) menjadi penampung kepada 4 Perjanjian dan 3 Persefahaman sebagaimana berikut:

- Perjanjian Jurutera APEC
- Perjanjian Jurutera Professional Antarabangsa
- Perjanjian Teknologis Kejuruteraan Antarabangsa
- Perjanjian Juruteknik Kejuruteraan Antarabangsa
- Permuafakatan Washington
- Permuafakatan Sydney
- Permuafakatan Dublin

Malaysia telah melibatkan diri dalam Mesyuarat Perikatan Kejuruteraan Antarabangsa sejak tahun 1999 dengan menandatangani Perjanjian Jurutera Professional Antarabangsa pada tahun tersebut, Jurutera APEC pada tahun 2000 dan Permuafakatan Washington (Washington Accord) pada 2009.

Mesyuarat Perikatan Kejuruteraan Antarabangsa 2020 telah diadakan melalui persidangan video dalam talian dari 21 – 9 Jun 2020. Dalam mesyuarat kali ini Malaysia telah menghantar 10 orang wakil termasuk 2 dari IEM untuk menghadiri mesyuarat tersebut.

Sebagai anggota penuh penandatanganan, Malaysia telah menyertai semua mesyuarat-mesyuarat berkaitan iaitu Mesyuarat Permuafakatan Washington, Permuafakatan Sydney dan Permuafakatan Dublin. Malaysia juga telah turut serta dalam mesyuarat Permuafakatan Seoul sebagai Pemerhati.

Untuk rekod, Permuafakatan Washington adalah perjanjian antarabangsa antara badan-badan yang bertanggungjawab untuk menilai program akademik Kejuruteraan, Permuafakatan Sydney adalah perjanjian antarabangsa antara badan-badan

INTERNATIONAL ENGINEERING ALLIANCE MEETING 21 – 9 June 2020 Online Video Conference

Under the auspices of International Engineering Alliance (IEA) Meeting there are 4 Agreements and 3 Accords as follows:

- *APEC Engineer Agreement*
- *International Professional Engineer Agreement*
- *International Engineering Technologist Agreement (IETA)*
- *Agreement for International Engineering technicians (AIET)*
- *Washington Accord*
- *Sydney Accord*
- *Dublin Accord*

Malaysia has been involved in the International Engineering Alliance Meeting since 1999 by signing the International Professional Engineer Agreement, APEC Engineer Agreement in year 2000 and be a signatory of Washington Accords in the year 2009.

International Engineering Alliance Meeting 2020 was held through online video conferencing from 21 – 9 June 2020. In this meeting, Malaysia sent 10 representatives including 2 from Institution of Engineers Malaysia (IEM) to the meeting.

As full signatory, Malaysia has participated in Washington Accord, Sydney Accord and Dublin Accord Meetings. Malaysia also participated in Seoul Accord Meeting as Observer.

For the record, Washington Accord is an international agreement between bodies responsible for accrediting engineering academic programmes, Sydney Accord is an international agreement between bodies responsible for accrediting engineering

yang bertanggungjawab untuk menilai program akademik kejuruteraan teknologi dan Permuafakatan Dublin pula adalah Perjanjian Antarabangsa yang mewujudkan dasar pendidikan yang dikehendaki untuk juruteknik Kejuruteraan.

Mesyuarat IEA tahun hadapan (2021) dijadualkan berlangsung di Ireland pada June 2021 bergantung kepada situasi Covid - 19 dan tempat mesyuarat tahun berikutnya (2022) akan disahkan kemudian.

technology academic programmes and Dublin Accord is an international agreement establishing the required educational base for engineering technicians

The next IEAM 2021 will be held in Ireland in June 2021 depending on Covid – 19 situation and to be followed by IEAM 2022 in which the meeting venue is to be confirmed later.

Perwakilan BEM menghadiri Mesyuarat Permuafakatan Antarabangsa 2020
BEM Representatives attending the International Engineering Alliance Meeting 2020



MESYUARAT JAWATANKUASA PENYELARAS PERKHIDMATAN ASEAN

1. Mesyuarat ke-95, Nha Trang, Vietnam, 2 – 6 Mac 2020
2. Mesyuarat ke-96, Mesyuarat Video atas talian, 12 November – 9 Disember 2020

LJM selaku badan yang mengawal selia profesion kejuruteraan di Malaysia telah menghantar wakil menghadiri mesyuarat di atas dan mesyuarat-mesyuarat lain yang diadakan sempena Mesyuarat Jawatankuasa Penyelaras Perkhidmatan. Di bawah naungan Jawatankuasa Penyelaras Perkhidmatan, terdapat beberapa mesyuarat berdasarkan Perkhidmatan contohnya Perkhidmatan Kejuruteraan, Arkitek, Surveying dan lain-lain.

Untuk bidang perkhidmatan kejuruteraan, Malaysia (melalui LJM) menghadiri Mesyuarat Jawatankuasa Penyelaras Jurutera Profesional ASEAN yang dianggotai oleh kesemua 10 Negara ASEAN. Mesyuarat ini dipengerusikan oleh Thailand. Pengerusi dilantik secara giliran setiap 2 tahun.

Sepanjang tahun 2020 mesyuarat tersebut telah meluluskan Jurutera Profesional ASEAN seperti di Jadual 1 dan telah mendaftarkan 10 orang Jurutera Profesional Asing Berdaftar sebagaimana Jadual 2:

ASEAN COORDINATING COMMITTEE MEETING ON SERVICES:

1. 95th Meeting, Nha Trang, Vietnam, 2 – 6 Mac 2020
2. 96th Meeting, Online Video Conference, 12 – 9 December 2020

BEM as the body regulating engineering profession in Malaysia has sent representatives to attend all meetings of the above. Under the auspices of the CCS Meeting, there are a number of meeting based services such as Engineering services, Architectural, Surveying and others.

For engineering services, Malaysia (BEM) attended the ASEAN Chartered Professional Engineer Coordinating Committee Meeting which comprises of all 10 ASEAN Countries. The meeting is currently chaired by Thailand. The Chairman is appointed by rotation every 2 years.

Throughout 2020, the meeting has approved ASEAN Chartered Professional Engineer as in Table 1 and has registered 10 Registered Foreign Professional Engineer as in Table 2:

Jadual 1
Table 1

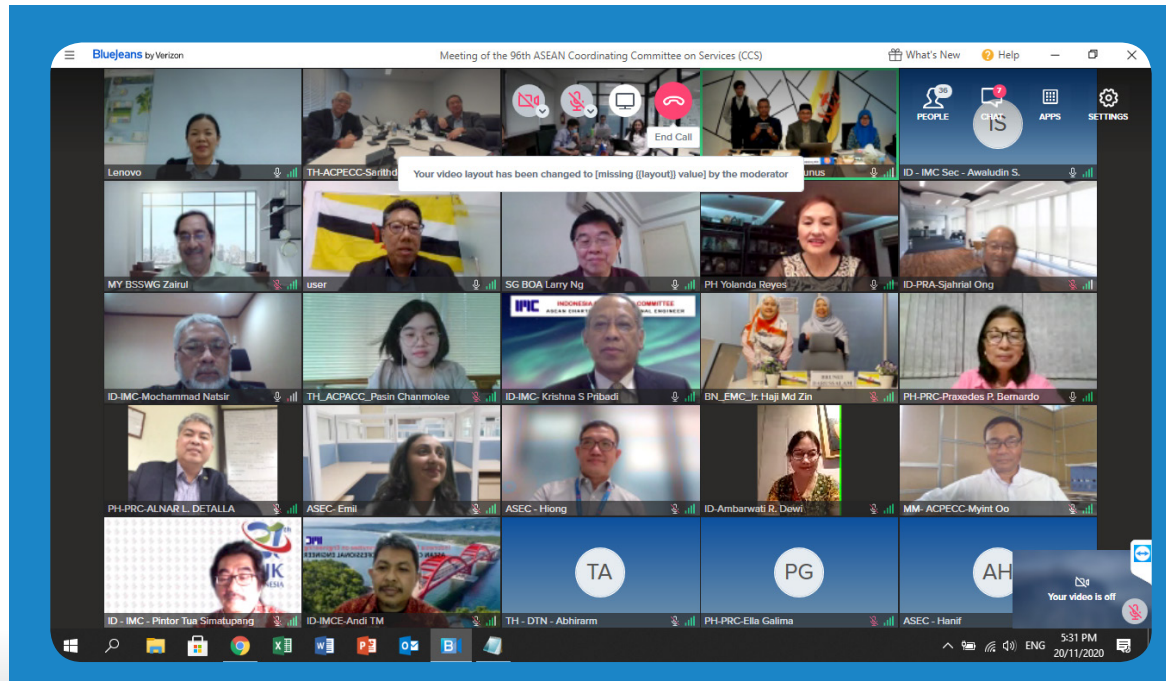
AMS	42 nd ACPECC	43 rd ACPECC		Cumulative Approved Application	Cumulative De- registered and Deceased ACPEs	ACPEs Balance
	Cumulative Approved Application	Applications Received	Approved Application			
Brunei Darussalam	30	2	2	32	-	32
Cambodia	81	4	4	85	1	84
Indonesia	1153	39	39	1192	17	1175
Lao PDR	15	2	2	17	-	17
Malaysia	797	124	124	921	-	921
Myanmar	616	-	-	616	5	611
Philippines	594	15	15	609	-	609
Singapore	295	8	8	303	-	303
Thailand	226	3	3	229	1	228
Viet Nam	270	32	32	302	-	302
Total	4,077	229	229	4306	34	4,272

Jadual 2
Table 2

Professional Regulatory Authority (PRA)											
	BN	CA	ID	LA	MY	MM	PH	SG	TH	VN	Total
BN - Brunei	-										0
Cambodia		-									0
Indonesia			-								0
Lao PDR				-							0
Malaysia		6			-	4	0	0			10
Myanmar					0	-		1	0		1
Philippines			1		2		-				3
Singapore		1			4	2		-			7
Thailand		6			1	4			-		11
Viet Nam										-	0
Total	0	13	1	0	7	10	0	1	0	0	32

Sekitar Mesyuarat BSSWG *BSSWG Meeting in progress*

20 November 2020





*Assessment on Code of Professional Conduct
for Graduate Engineers holding a Professional Qualification
Equivalent to Professional Assessment Examination
30.9.2020*



SIRI WEBINAR LJM 2020

LJM telah mengadakan Webinar LJM 2020 untuk menggantikan Siri Jerayawara Pendidikan & Latihan LJM disebabkan pandemik Covid-19, merangkumi pembentangan topik-topik berikut;

Webinar LJM 2020 ini telah dijalankan dengan jayanya seperti di bawah:

BEM WEBINAR SERIES 2020

Due to the COVID-19 pandemic, BEM conducted BEM Webinar 2020 to replace BEM Roadshow 2020 to keep engineers abreast with the latest knowledge.

BEM has successfully conducted the following webinars:

Bil. No.	Tarikh (Date)	Topik (Topic)	Peserta* (Participants)
1	24/8/2020	BEM CPD Requirement	332
2	4/9/2020	Route to Professional Engineer	272
3	22/9/2020	Introduction to MyBEM – Registered Person	343
4	6/10/2020	Roles & Functions of BEM	340
5	13/10/2020	Professional Competency Examination	531
6	20/10/2020	An Overview of New MyBEM Online Registration System (MyBEM): Engineering Consultancy Practices & Introduction to ASEAN Chartered Professional Engineer (ACPE): The Requirements and How to Make Online Application	377
7	18/11/2020	CCC Online Submission & Issues	408

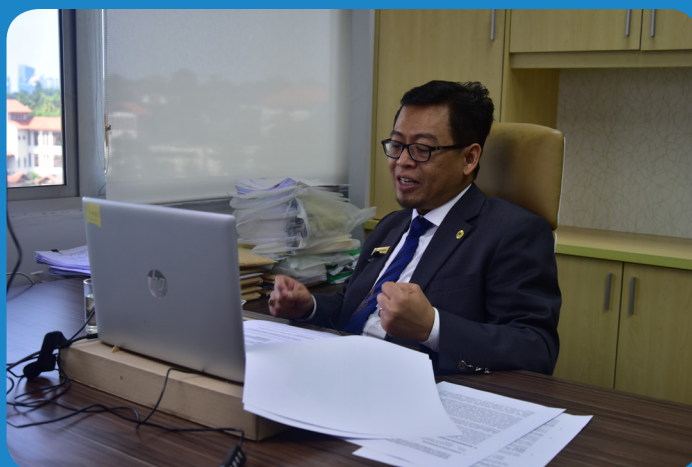
CCC Online Submission & Issues

18 November 2020



Roles & Functions of BEM

16 October 2020



PROGRAM PENDEKATAN LJM 2020

LJM telah mengadakan program pendekatan untuk menimbulkan kesedaran di dalam kalangan perhimpunan kejuruteraan terutamanya tentang peranan dan fungsi LJM, pendaftaran wajib bersama LJM dan juga laluan ke Jurutera Professional.

LJM telah mengadakan program pendekatan dengan jayanya di beberapa buah organisasi seperti di bawah:

BEM OUTREACH PROGRAMMES 2020

BEM conducted BEM Outreach program to create awareness amongst engineering fraternity; especially on the Roles & Functions of BEM, Mandatory Registration with BEM and Route to Professional Engineer.

BEM has successfully conducted the following outreach programmes:

Bil. No.	Organisasi (Organisation)	Tarikh (Date)	Tajuk (Title)
1	JKR CREaTE	17/2/2020	Route to PE : Route A
2	JPS	25/2/2020	Route to PE : Route A
3	JKR CREaTE	26/2/2020	Lawatan Muhibah JKR CREaTE
4	PETRONAS	27/2/2020	Launching ADaPT Ceremony
5	UCSI	28/2/2020	Route to PE : Route A
6	Politeknik Sultan Azlan Shah	10/3/2020	Route to PE : Route A
7	UiTM Shah Alam (Fakulti Kejuruteraan Kimia)	20/6/2020	Route to PE : Route A
8	UTM KL	25/6/2020	Route to PE : Route A
9	Kolej MARA Banting	12/8/2020	Industry Expert Talk : Future Jobs In Engineering
10	UPM	28/9/2020	Route to PE : Route A
11	UIAM	30/9/2020	Route to PE : Route A
12	UTP	24/11/2020	Route to PE : Route B

HARI PROFESION TEKNIKAL NEGARA 2020 (HPTN 2020)

LJM telah mengambil bahagian di dalam Hari Profesion Teknikal Negara 2020 (HPTN 2020) atas talian yang pertama. Majlis ini telah dirasmikan oleh Perdana Menteri, YAB Tan Sri Muhyiddin bin Muhammad Yassin pada 5hb Disember 2020 juga melalui atas talian.

Tema yang telah dipilih untuk tahun ini adalah **Masa Depan Adalah Kita**. HPTN 2020 adalah merupakan wadah untuk semua pekerja profesion teknikal untuk berkongsi pengetahuan, kepakaran dan pengalaman serta memberi pencerahan tentang profesion teknikal kepada orang awam yang hadir.

LJM telah menganjurkan webinar yang telah dihadiri oleh Orang Berdaftar (Jurutera Professional dengan Perakuan Amalan, Jurutera Professional, Jurutera Siswazah, Jurutera Teknologis dan Pemeriksa Tapak) dan orang awam (pelajar dan ibu-bapa) sepanjang HPTN 2020. LJM telah mengambil peluang ini untuk menaja hadiah untuk pertandingan video satu minit tentang pekerjaan kejuruteraan dengan kerjasama IEM, untuk orang berdaftar yang telah mengambil bahagian dalam pertandingan ini.

Kesimpulannya, penyertaan LJM dalam HPTN 2020 telah membantu dalam mempromosikan dan mewujudkan kesedaran di kalangan Orang Berdaftar dan orang awam tentang fungsi dan peranan LJM. Hal ini juga memberi peluang kepada Orang Berdaftar untuk mengetengahkan masalah dan isu yang dihadapi mereka dan pada masa yang sama, menyuarakan pendapat mereka dan mendapat nasihat.

LJM telah menerima respons yang memberangsangkan semasa HPTN 2020 dan dicadangkan supaya majlis ini dianjurkan setiap tahun untuk kebaikan Orang Berdaftar dan orang awam.

Tarikh	Tajuk
9/12/2020	Roles & Functions of BEM
16/12/2020	Requirements for Mandatory Registration with BEM
23/12/2020	Common Public Complaints against Professional Engineers

HARI PROFESION TEKNIKAL NEGARA 2020 (HPTN 2020)

BEM participated in the first virtual 'Hari Profesion Teknikal Negara 2020 (HPTN 2020)'. The event was officiated by Prime Minister, YAB Tan Sri Muhyiddin bin Muhammad Yassin, on 5th December 2020 also via online.

*The theme selected for the year was **Masa Depan Adalah Kita**. HPTN 2020 was a platform for all technical profession personnel to share their knowledge, expertise and experience and to give exposure on technical profession to public in general.*

BEM had conducted webinars which were attended by Registered Persons (i.e Professional Engineers with Practicing Certificate, Professional Engineers, Graduate Engineers, Engineering Technologist and Inspector of Works), and public in general (i.e students and parents) throughout HPTN 2020. BEM took this opportunity to sponsor prizes for the one-minute video challenge; on engineering profession, in collaboration with IEM, for registered persons who participated in this challenge.

In conclusion, participation of BEM during HPTN 2020 helps in promoting and creating awareness amongst Registered Persons and public in general on the roles and functions of BEM. It also provides opportunity for the Registered Persons to highlight their problems and issues and at the same time, voice out their opinions and get advices.

BEM received a lot of good response during HPTN 2020 and it is proposed that this event to be organized annually for benefit of Registered Persons and public.

Date	Topic
9/12/2020	Roles & Functions of BEM
16/12/2020	Requirements for Mandatory Registration with BEM
23/12/2020	Common Public Complaints against Professional Engineers

Sekitar Aktiviti EAC & ETAC (EAD) *Around the Event EAC & ETAC (EAD)*

Pengarah Bersekutu EAC dan ETAC 2020-2022 dan Pasukan EAD
EAC and ETAC Associate Directors 2020-2022 and EAD Team



Pasukan EAD
EAD Team



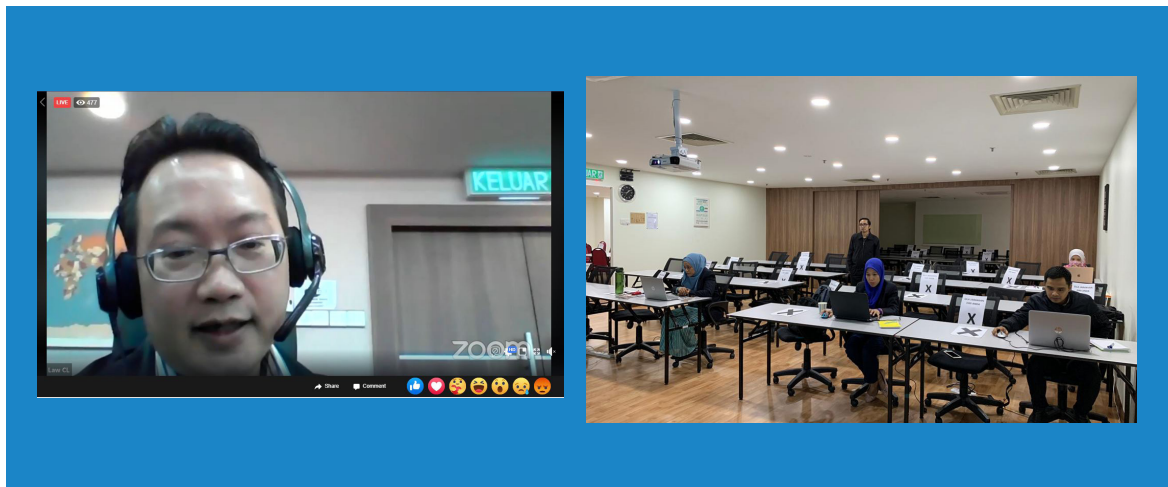
Webinar ETAC Standard 2020 yang telah diadakan pada 17 Jun 2020
 ETAC Standard 2020 Webinar held on 17 June 2020



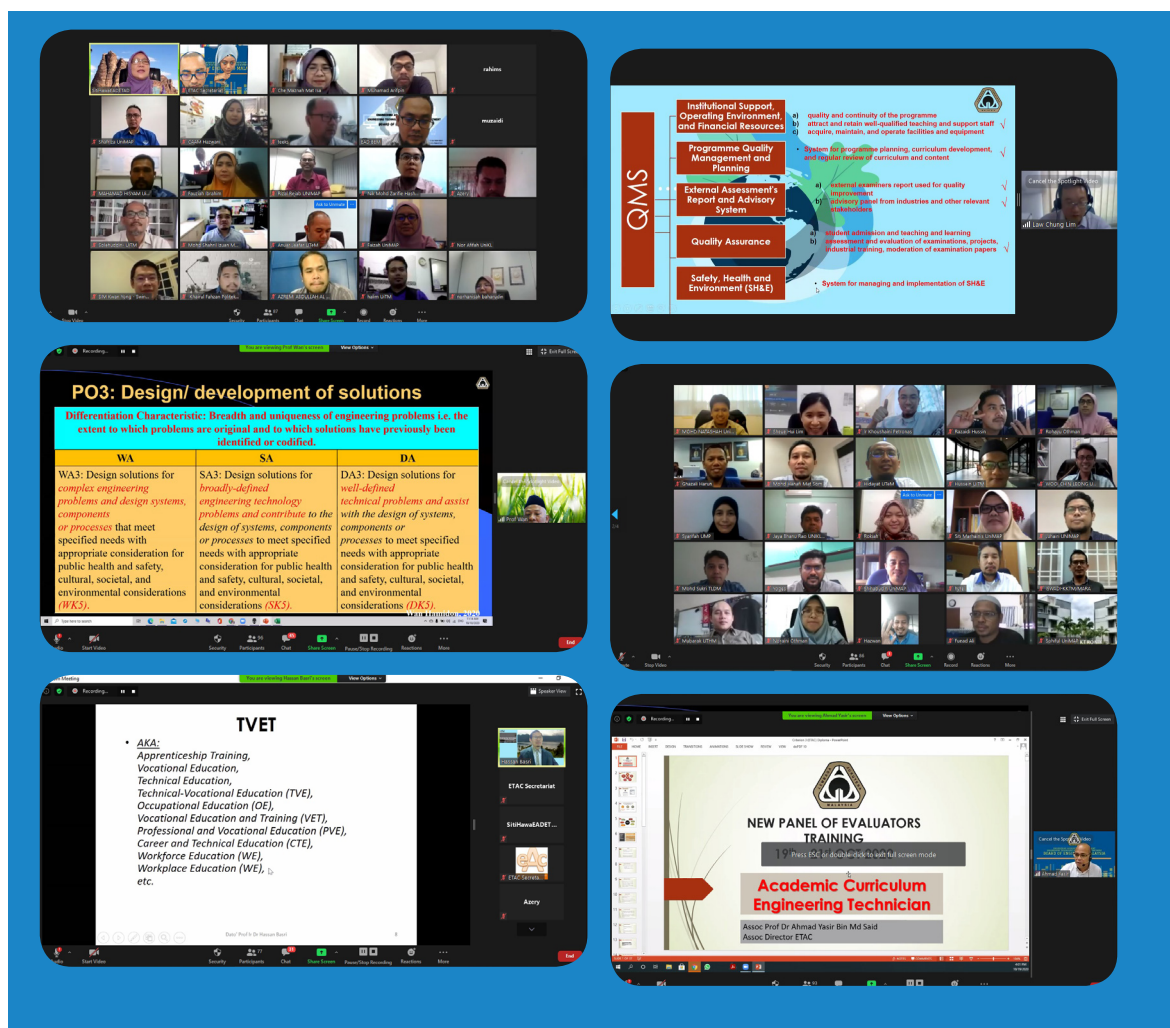
Bengkel JPPKK Panel Penilai Baru ETAC, 30 September – 2 Oktober 2020
 JPPKK New Panel Evaluators ETAC Workshop, 30th September – 2nd October 2020



Kerjasama berpasukan. Prof Law membuat pembentangan dan Sekretariat mentadbir,
 Webinar EAC Standard 2020 yang telah diadakan pada 16 Jun 2020
*Team in action. Prof Law presenting and Sekretariat administering, EAC Standard
 2020 Webinar held on 16 June 2020*



Bengkel Panel Penilai Baru ETAC, 19 – 21 Oktober 2020
ETAC New Panel Evaluators Workshop , 19th – 21st October 2020



Pengumuman Bengkel Panel Penilai Baru EAC, 12–14 Oktober 2020
Announcement on EAC New Panel Evaluators Workshop, 12th -14th October 2020



Online Training: EAC / ETAC New Panel Evaluators Workshop

EAC 12, 13 & 14 October 2020 ETAC 19, 20 & 21 October 2020



Prof. Dr. Wong Hs. Yung



Prof. Dr. Lee Chong Lin



Assoc. Prof. Dr. Chai Mui Hui



Prof. Dr. Ho Yee Hui



Prof. Dr. Lim Chong Lin



Assoc. Prof. Dr. Poon



Mr. Noor Azlan



Dr. Lee Chai Pui



Assoc. Prof. Dr. Anwar Yus



Dr. Ngai Kuan



Dr. Prof. Dr. Niaz Harisson

After attending this workshop, participants will achieve the following outcomes:-

- Become the EAC/ETAC Evaluation Panels
- Have the insight into overall EAC/ETAC accreditation processes.
- Able to conduct accreditation exercise in a professional manner.
- Able to plan and develop strategies as EAC/ETAC Evaluation Panels.

Limit 60 Participants for Academic
 30 Participants for Industry
 Fee: RM500.00 (Academic)

Visit: <http://bit.ly/10newpanel> or SCAN here




#acculturationofOBE

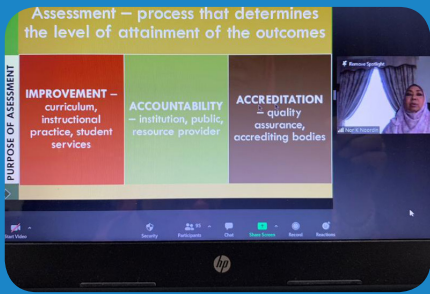
@accreditationdepartmentbem

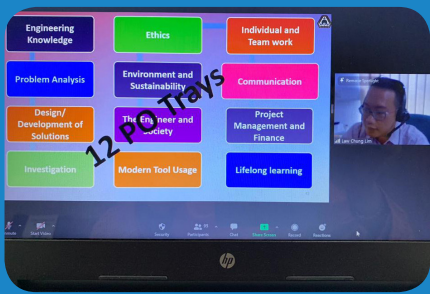
Organized by:
Engineering Accreditation Department (EAD) & Engineering Technology Accreditation Department (ETAD)
www.eac.org.my/my | www.etac.org.my

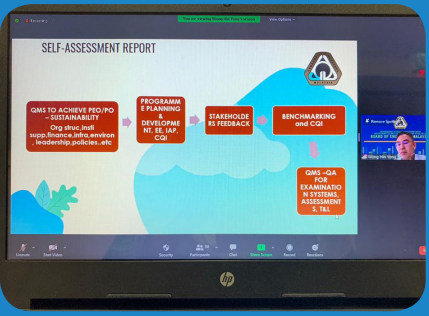
Bengkel Panel Penilai Baru EAC, 12-14 Oktober 2020
EAC New Panel Evaluators Workshop, 12th – 14th October 2020



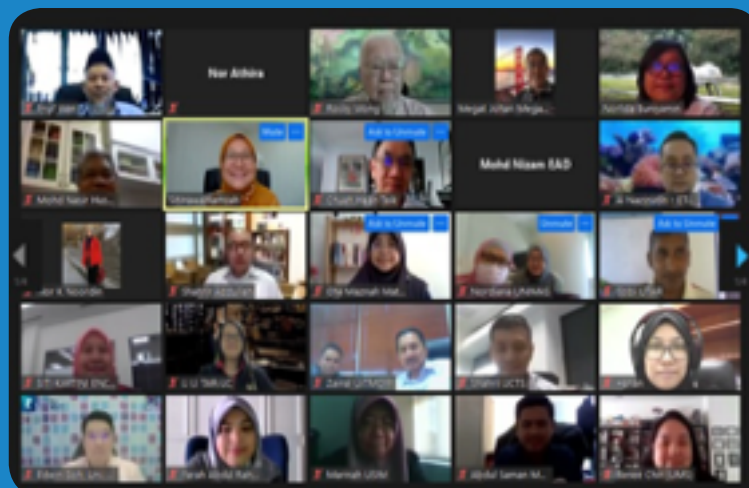
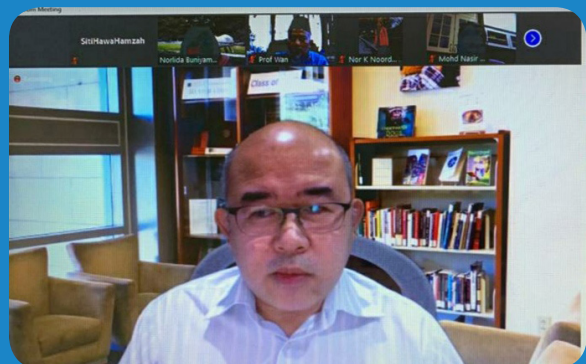
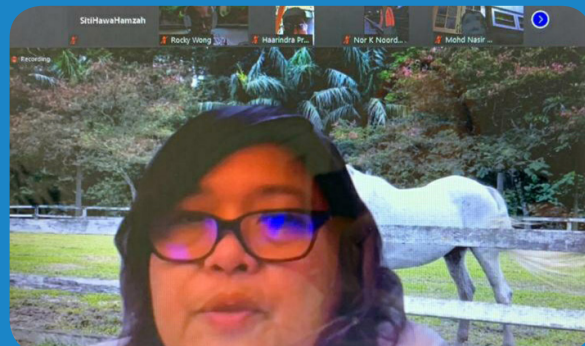
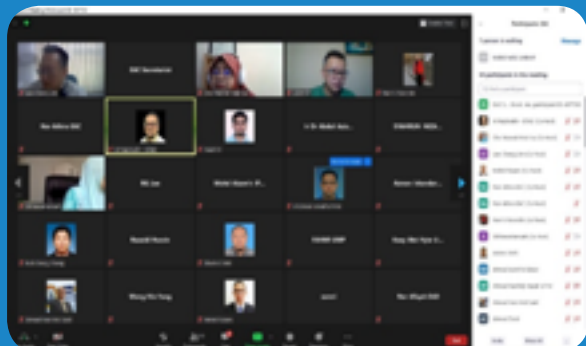








Dialog mengenai Cabaran Pengalaman TLA dalam talian oleh IHL, 16 November 2020
Dialogue on Challenges of Online TLA Experiences by the IHL, 16th November 2020





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