

2021

LAPORAN TAHUNAN



LJM
LEMBAGA JURUTERA MALAYSIA

**ANNUAL
REPORT**



2021

LAPORAN ANNUAL
TAHUNAN REPORT

KANDUNGAN

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LEMBAGA PENGARANG LAPORAN TAHUNAN

Annual Report Editorial Board

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The background features a light gray geometric pattern of overlapping triangles. A central rectangular window reveals a photograph of modern skyscrapers. Large magenta triangles are positioned in the top right and bottom left corners. A red triangle is located on the left side, partially overlapping the city image. The text is placed on a light gray diagonal band.

PERUTUSAN YANG DIPERTUA

President's Message



PERUTUSAN YANG DIPERTUA 2021 PRESIDENT'S MESSAGE 2021

Pendaftaran menjadi fungsi utama Lembaga dengan statistik pendaftaran pada akhir tahun 2021 (dengan nombor masing-masing pada akhir tahun 2020 dalam kurungan) adalah:- Jurutera Profesional dengan Perakuan Amalan sebanyak 10,645 (10,645); Jurutera Profesional sebanyak 21,670 (21,247); Jurutera Siswazah sebanyak 162,454 (150,603); Teknologis Kejuruteraan sebanyak 11,589 (9,862); dan Pemeriksa Tapak sebanyak 8,018 (7,451).

Lembaga Jurutera Malaysia (LJM) secara berterusan mengkaji peperiksaan profesionalnya iaitu Peperiksaan Penilaian Profesional (PAE) dan Peperiksaan Kompetensi Profesional (PCE) agar selaras dengan standard antarabangsa. PAE bergerak menuju peperiksaan kompetensi berdasarkan hasil, sementara PCE sedang dikaji keberkesananannya dengan kemasukan tambahan cabang kejuruteraan.

Dalam proses memastikan profesionalisme Jurutera Profesional dalam memberikan perkhidmatan yang memuaskan kepada industri, LJM amat serius dan telah mengambil tindakan wajar apabila diperlukan. Mengenai aduan yang diterima, terdapat 41 kes baru di mana 18 daripadanya mempunyai prima facie. Pada tahun 2021, 18 kes disarankan untuk didengar dan 13 didapati bersalah oleh Jawatankuasa Tatatertib.

Registration being the main function of the Board, the registration statistics at the end of year 2021 (with the respective numbers at end of 2020 in brackets) is:- Professional Engineers with Practicing Certificate 10,645 (10,645); Professional Engineers was 21,670 (21,247); Graduate Engineers 162,454 (150,603); Engineering Technologists 11,589 (9,862); and Inspector of Works 8,018 (7,451).

Board of Engineers Malaysia (BEM) is continuously reviewing its Professional Examinations the Professional Assessment Examination (PAE) and the Professional Competency Examinations (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 has taken action when required. On the complaints received, there were 41 new cases out of which 18 had prima facie. In 2021, 18 cases were recommended for hearing and 13 were found guilty by the Disciplinary Committee.



Majlis Akreditasi Kejuruteraan (EAC) terus memantau dan memperakui ijazah kejuruteraan yang dianugerahkan oleh universiti tempatan mematuhi keperluan Washington Accord. Pada tahun 2021, EAC mengiktiraf 144 program ijazah kejuruteraan di 71 institusi pengajian tinggi (IHL). Manakala Majlis Akreditasi Teknologi Kejuruteraan (ETAC) pula mengiktiraf 44 program teknologi kejuruteraan dan 120 program diploma di 69 IHL pada tahun 2021, untuk memenuhi syarat-syarat Sydney Accord dan Dublin Accord.

The Engineering Accreditation Council (EAC) continues to monitor and accredit engineering degrees awarded by local universities to conform with the requirements of the Washington Accord. In 2021 the EAC accredited 144 engineering degree programs in 71 institutions of higher learning (IHLs). In addition the Engineering Technology Accreditation Council (ETAC) accredited 44 engineering technology programs and 120 diploma programs in 69 IHLs in 2021, to conform with the requirements of the Sydney Accord and the Dublin Accord respectively.

LJM telah menjalankan kajian kesetaraan mengenai Sijil Kompetensi Marin (COC) dengan kerjasama Jabatan Laut Malaysia (MMD). Hasilnya, pemegang COC Marin Kelas 4 layak untuk didaftarkan sebagai Pemeriksa Tapak, manakala pemegang COC Marin Kelas 2 layak berdaftar sebagai Teknologis Kejuruteraan dan pemegang COC Marin Kelas 1 sebagai Jurutera Siswazah. Satu majlis pengiktirafan kesetaraan telah dijalankan pada 6 September 2021 melalui kaedah dalam talian.

BEM has conducted an equivalency study on Marine Certificate of Competency (COC) in collaboration with Malaysian Marine Department (MMD). As a result, COC Marine Class 4 holder is eligible to be registered as Inspector of Works, whereas COC Marine Class 2 holder as Engineering Technologist and COC Class 1 holder as Graduate Engineer. A ceremony to acknowledge the equivalency was conducted on 6 September 2021 via online.

Malaysia mengambil bahagian secara aktif dalam mesyuarat antarabangsa. LJM menjadi tuan rumah Persidangan Rangkaian Badan Akreditasi untuk Pendidikan Kejuruteraan di Asia (NABEEA) Pertama pada 14 Jun 2021. Objektif persidangan adalah perkongsian pengalaman oleh penandatangan Washington Accord (WA) dari negara NABEEA.

Malaysia participated actively in international meetings. BEM hosted the 1st Network of Accreditation Bodies for Engineering Education in Asia (NABEEA) Conference on 14 June 2021. Its objective was the sharing of experience by Washington Accord (WA) signatories from NABEEA member countries.

LJM juga mempengerusikan Mesyuarat Perhimpunan Agung NABEEA pada 15 Jun 2021. Persidangan dan mesyuarat tersebut dilaksanakan secara maya disebabkan oleh sekatan Covid-19.

BEM also chaired the 17th NABEEA Council and 13th General Assembly Meetings on 15 June 2021. The conference and meetings were held virtually due to Covid-19 restrictions.

Malaysia turut mengambil bahagian dalam Mesyuarat Perikatan Kejuruteraan Antarabangsa (International Engineering Alliance [IEA]) secara dalam talian bermula dari 21 sehingga 26 Jun 2021.

Malaysia has also participated in the International Engineering Alliance (IEA) online meeting from 21 – 26 June 2021.

LJM sebagai badan yang mengawal selia profesion kejuruteraan di Malaysia telah mengambil bahagian dalam mesyuarat jawatankuasa penyelaras ASEAN mengenai perkhidmatan yang diadakan melalui persidangan video dalam talian dari 7 - 24 Jun 2021 dan 28 September – 21 Oktober 2021.

Bagi menjalankan fungsinya di bawah seksyen 4(1) (ec) Akta Pendaftaran Jurutera 1967, BEM telah menjalankan beberapa program promosi dan kesedaran di sepanjang tahun 2021.

Konvensyen Mini Hibrid LJM telah diadakan pada 16 – 17 November 2021 bertemakan “Integriti dalam Profesion Kejuruteraan” dengan aktiviti seperti forum, webinar, pertandingan video dan kuiz’.

BEM as the body regulating the engineering profession in Malaysia participated in the ASEAN coordinating committee meeting on services held by online video conference from 7 - 24 June 2021 and 28 September – 21 October 2021.

In order to carry out its function under section 4(1) (ec) of the Registration of Engineers Act 1967, BEM has carried out several promotional and awareness programmes throughout year 2021.

The BEM Mini Hybrid Convention was held on 16 – 17 November 2021 with theme “Integrity in the Engineering Profession” with activities such as forum, webinars, video competition and quizzes.



LJM telah turut serta sebagai Rakan Kongsi dalam Hari Profesional Teknikal Negara (HPTN) 2021 yang bertemakan "Moving Nation, Beyond Aspiration" anjuran Kementerian Kerja Raya pada 4 - 10 November 2021.

LJM juga telah mengadakan 14 webinar pada tahun 2021 bagi menggantikan siri Jerayawara LJM 2021 berikutan Perintah Kawalan Pergerakan (PKP). Objektif Webinar LJM 2021 adalah untuk mempromosikan pembelajaran dan pendidikan termasuk Program CPD bagi meningkatkan lagi pengetahuan Orang Berdaftar dalam perkembangan terkini berkaitan profesion kejuruteraan.

Selaras dengan perubahan pesat dalam industri kejuruteraan, LJM menggubal Pelan Strategik LJM 2021-2025 sulungnya dengan memetakan hala tuju dan matlamat masa depan LJM. Pelan Strategik terdiri daripada teras berikut:

- (i) menambah bilangan Orang Berdaftar; Jurutera, Teknologis Kejuruteraan serta Juruteknik Kejuruteraan.
- (ii) Memastikan semua program pendidikan kejuruteraan, teknologi kejuruteraan dan juruteknik kejuruteraan di Malaysia diakreditasi oleh LJM sekaligus mendapat pengiktirafan Washington Accord, Sydney Accord dan Dublin Accord
- (iii) Memastikan syarikat Amalan Perunding Kejuruteraan ditadbir urus yang baik.
- (iv) Orang Berdaftar mempunyai ketegasan dalam kepimpinan di dalam dan luar negara, serta
- (v) mendorong agenda penglibatan LJM dan melaksanakan fungsinya untuk mencapai tahap yang lebih tinggi.

Sebagai badan pengawalseliaan, LJM akan terus waspada dalam proses pendaftaran dan tingkah laku Orang Berdaftarnya yang memberikan perkhidmatan mereka kepada industri dan pelanggan dengan memberi perhatian terhadap keselamatan dan kualiti. LJM juga akan proaktif untuk menjangkau pihak berkepentingan serta akan turut serta dalam aktiviti badan-badan profesional yang berkaitan.

BEM had participated as strategic partner in Hari Profesional Teknikal Negara (HPTN) 2021 themed "Moving Nation, Beyond Aspiration" organised by Ministry of Works from 4 - 10 November 2021.

BEM had also conducted 14 webinar in 2021 as substitution to BEM Roadshow 2021 due to the Movement Control Order (MCO). The objective of BEM Webinar 2021 is to promote learning and education including CPD Programmes to further enhance registered Persons knowledge in the latest developments relating to engineering profession.

Taking cognisance of the rapid transformation in the engineering industry, BEM formulated its debut BEM Strategic Plan 2021-2025 to map out future direction and goals. The Strategic Plan consists of the following thrusts:

- (i) to increase significantly the number of registered Persons; engineers, engineering technologists and engineering technicians,*
- (ii) getting all engineering, engineering technology and engineering technician education programmes in Malaysia to be accredited by BEM and thus receiving the recognition of Washington, Sydney and Dublin Accords,*
- (iii) having Engineering Consultancy Practices with good governance,*
- (iv) registered Persons asserting leadership positions both nationally and internationally, and*
- (v) thrusting the BEM's engagement agenda and delivering of its functions to reach greater heights.*

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. BEM will also be proactive in reaching out to its stakeholders and participate in activities of related professional bodies.

DATO' SERI Ir. HAJI MOHAMAD ZULKEFLY BIN SULAIMAN
Yang Dipertua
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 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 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 pemasukan 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 Profesional untuk Orang Berdaftar bagi meningkatkan pengetahuan mereka dalam perkembangan terkini berkaitan dengan profesion;

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

- | | |
|---|--|
| <p>(i) untuk melantik suatu jawatankuasa yang terdiri daripada orang yang akan ditentukan oleh Lembaga –</p> | <p>(i) <i>to appoint a committee consisting of persons to be determined by the Board –</i></p> |
| <p>(ii) untuk menjalankan peperiksaan penilaian profesional untuk tujuan kemasukan sebagai Jurutera Profesional; atau</p> | <p>(i) <i>to conduct professional assessment examinations for the purpose of admission as a Professional Engineer; or</i></p> |
| <p>(iii) untuk menjalankan peperiksaan kompetensi profesional untuk tujuan mengeluarkan Perakuan Amalan kepada Jurutera Profesional;</p> | <p>(ii) <i>to conduct professional competency examinations for the purpose of issuing a Practising Certificate to the Professional Engineer;</i></p> |
| <p>(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;</p> | <p>(j) <i>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;</i></p> |
| <p>(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;</p> | <p>(k) <i>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;</i></p> |
| <p>(l) untuk menyebabkan peperiksaan dijalankan oleh sesebuah institusi yang diiktiraf oleh Lembaga bagi maksud kemasukan ke dalam profesion;</p> | <p>(l) <i>to cause examinations to be conducted by an institution recognized by the Board for the purpose of admission to the profession;</i></p> |
| <p>(m) untuk menentukan dan mengawal selia kelakuan dan etika profesion kejuruteraan; dan</p> | <p>(f) <i>to determine and regulate the conduct and ethics of the engineering profession; and</i></p> |
| <p>(n) Secara amnya, untuk melakukan segala tindakan, perkara dan benda yang perlu bagi melaksanakan peruntukan Akta ini.</p> | <p>(g) <i>Generally, to do all such acts, matters and things as are necessary to carry out the provisions of this Act.</i></p> |

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 daripada 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 lapan (8) kali pada tahun 2021 seperti berikut:

No.	Bil. Mesyuarat	Tarikh
1	344	01.04.2021
2	345	21.04.2021
3	346	06.07.2021
4	347	22.07.2021
5	348	29.09.2021
6	349	13.10.2021
7	350	22.11.2021
8	351	23.12.2021

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

MEETINGS OF THE BOARD 2020

The Board held eight (8) meetings in year 2021 as follows:

No.	Meeting No.	Date
1	344	01.04.2021
2	345	21.04.2021
3	346	06.07.2021
4	347	22.07.2021
5	348	29.09.2021
6	349	13.10.2021
7	350	22.11.2021
8	351	23.12.2021

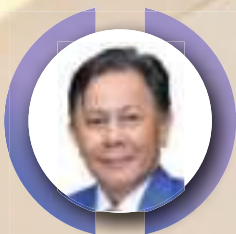
The Registration of Engineers Act 1967 requires the Board to convene meeting at least once a year.

AHLI LEMBAGA 2020-2021 BOARD MEMBERS 2020-2021

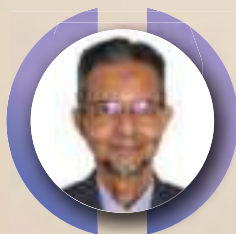


Yang Dipertua
President

Dato' Seri Ir. Haji Mohamad Zulkefly
bin Sulaiman



Datuk Ir. Mohd Adnan
bin Mohd Nor



Dato' Ir. Ahmad Redza
bin Ghulam Rasool



Dato' Ir. Nor Hisham
bin Mohd Ghazali



Dato' Prof. Ir. Dr. Mohd Hamdi
bin Abd Shukor



Datu Ir. Zuraimi bin Haji Sabki



Datuk Ir. Richard Jomiji Kinsil



Laksamana Pertama (B) Dato'
Ir. Ahmad Murad bin Omar



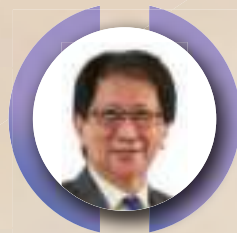
Ir. Megat Johari bin Megat
Mohd Noor



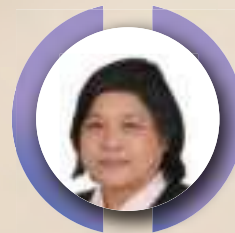
Ir. Zailee bin Dollah



Ir. Sundraraj a/l Krishnasamy



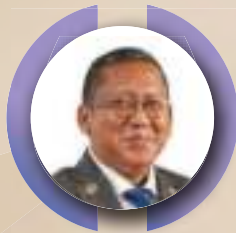
Ir. Ong Ching Loon



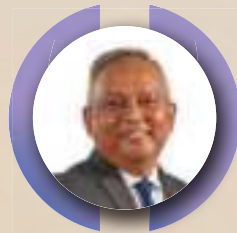
Prof. Ir. Dr. Norlida binti
Buniyamin



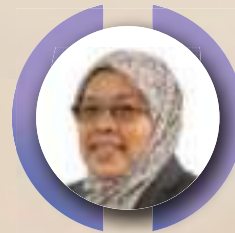
Ir. Mohd Aman bin Haji Idris



Ir. Mohd Khir bin Muhammad



Ar. Azman bin Md Hashim



Sr Rogayah binti Yunus

JAWATANKUASA PENGURUSAN 2020-2021 MANAGEMENT COMMITTEE 2020-2021



Pengerusi
Chairman

Dato' Seri Ir. Haji Mohamad Zulkefly
bin Sulaiman



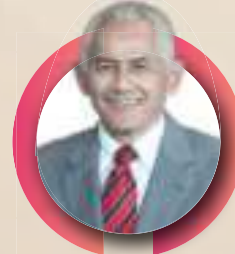
Ahli Jawatankuasa
Member

Dato' Paduka Ir. Hj. Keizrul
bin Abdullah



Ahli Jawatankuasa
Member

Datuk Wira Ir. Md Sidek
bin Ahmad



Ahli Jawatankuasa
Member

Datuk Ir. (Dr) Abdul Rahim
bin Hashim



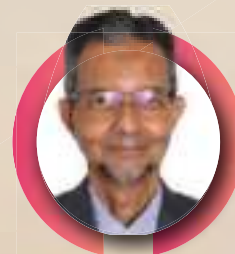
Ahli Jawatankuasa
Member

Datuk Ir. Ruslan bin Abdul Aziz



Ahli Jawatankuasa
Member

Datuk Ir. Mohd Adnan
bin Mohd Nor



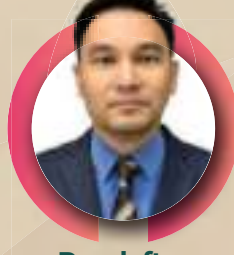
Ahli Jawatankuasa
Member

Dato' Ir. Ahmad Redza
bin Ghulam Rasool



Ahli Jawatankuasa
Member

Ir. Prem Kumar



Pendaftar
Registrar

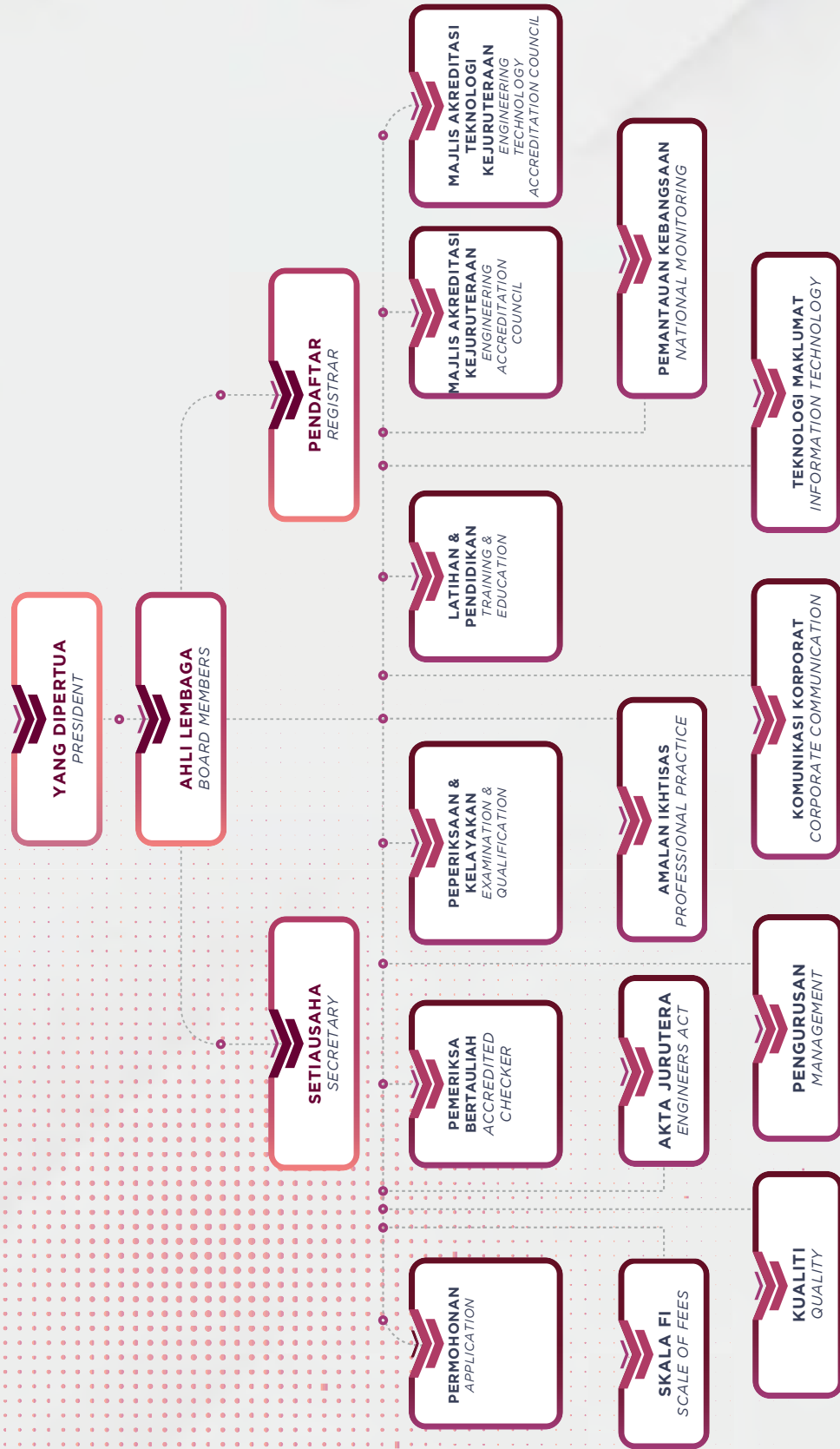
Ir. Dr. Megat Zuhairy
bin Megat Tajuddin



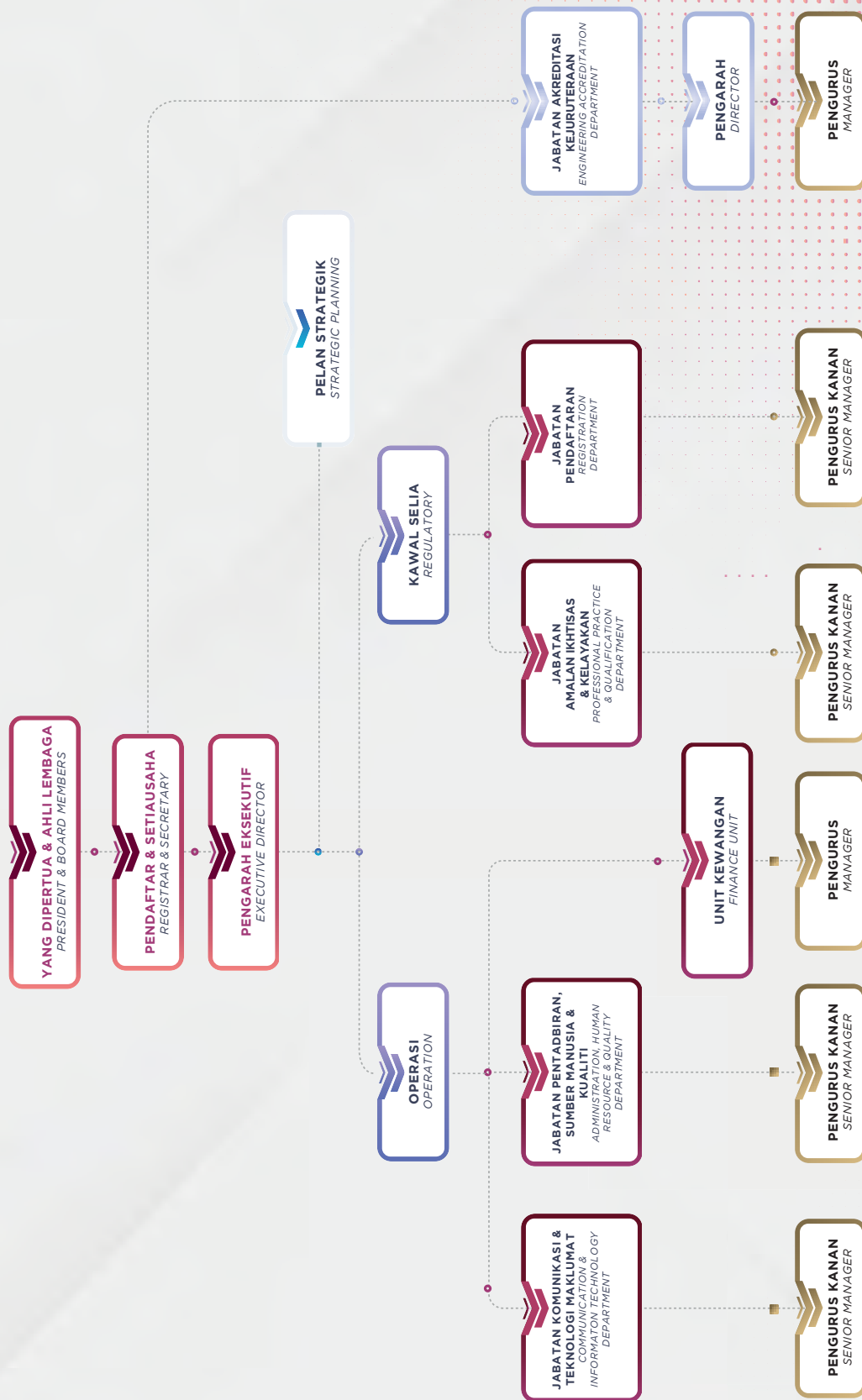
Setiausaha
Secretary

Ir. Hamzah bin Hashim

STRUKTUR ORGANISASI LIM 2021 BEM ORGANISATIONAL STRUCTURE 2021



CARTA OPERASI LJM 2021 BEM OPERATIONAL CHART 2021



The background features a complex geometric design with overlapping triangles in shades of pink, red, and white. A central window-like shape reveals a photograph of a modern city skyline with several tall skyscrapers. The text 'TADBIR URUS KORPORAT' is prominently displayed in a bold, sans-serif font, with 'Corporate Governance' written below it in a smaller, italicized font.

TADBIR URUS KORPORAT

Corporate Governance

TADBIR URUS KORPORAT

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

Pelbagai jawatankuasa tetap telah ditubuhkan bagi memantau dan mengukuhkan pelaksanaan REA 1967 dan RER 1990 seperti:

JAWATANKUASA PENGURUSAN

Ahli:

1. Dato' Seri Ir. Haji Mohamad Zulkefly bin Sulaiman (Awam) (Pengerusi)
2. Dato' Paduka Ir. (Dr) 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. Prem Kumar (Elektrikal)
8. Ir. Hizamul-din bin Ab Rahman (Elektrikal)

Terma Rujukan:

1. Menguruskan pentadbiran Lembaga.
2. Menyediakan dasar sokongan kewangan.
3. 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.
4. 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' Ir. Ahmad Redza bin Ghulam Rasool (Awam) (Pengerusi Gantian)
3. Dato' Paduka Ir. (Dr) Keizrul bin Abdullah (Awam)
4. Datuk Ir. Abdul Kadir bin Mohd Din (Awam)
5. Dato' Ir. Chew Swee Hock (Awam)
6. Dato' Ir. Prof. Ir. Dr. Hassan bin Basri (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)

CORPORATE GOVERNANCE

The Board is managed based on its Corporate Governance principle, the Registration of Engineers Act 1967 (REA 1967) and the Registration of Engineers Regulations (RER 1990), in line with its functions as in Section 4 of the REA 1967.

Numerous standing committees have been established to monitor and reinforce the implementation of the REA 1967 and RER 1990 such as:

MANAGEMENT COMMITTEE

Members:

1. Dato' Seri Ir. Haji Mohamad Zulkefly bin Sulaiman (Civil) (Pengerusi)
2. Dato' Paduka Ir. (Dr) 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. Prem Kumar (Electrical)
8. Ir. Hizamul-din bin Ab Rahman (Electrical)

Terms of Reference:

1. Managing the administration of the Board
2. Set up policy on financial support
3. 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
4. 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' Ir. Ahmad Redza bin Ghulam Rasool (Civil) (Alternate Chairman)
3. Dato' Paduka Ir. (Dr) Keizrul bin Abdullah (Civil)
4. Datuk Ir. Abdul Kadir bin Mohd Din (Civil)
5. Dato' Ir. Chew Swee Hock (Civil)
6. Dato' Ir. Prof. Ir. Dr. Hassan bin Basri (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 (Civil)

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 mengemaskini 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.

JAWATANKUASA SKALA YURAN**Ahli:**

1. Dato' Ir. Nor Hisham bin Mohd Ghazali (Awam) (Pengerusi)
2. Ir. Sundraraj a/l A. Krishnasamy (Awam) (Pengerusi Gantian)
3. Ir. Lai Sze Ching (Mekanikal)
4. Ir. Chen Thiam Leong (Mekanikal)
5. Ir. Yau Chau Fong (Elektrikal)
6. Ir. Dr. Tan Chee Fai (Mekanikal)
7. Ir. Bashir Ahamed bin Maideen (Awam)
8. Ir. Badioezaman bin Ab Khalik (Awam)
9. Ir. Hizamul-din bin Ab Rahman (Elektrikal)
10. Ir. Arul Hisham bin Abdul Rahim (Mekanikal)
11. Sr Rogayah binti Yunus (Juruukur Bahan)

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.

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.

SCALE OF FEES COMMITTEE**Members:**

1. Dato' Ir. Nor Hisham bin Mohd Ghazali (Civil) (Chairman)
2. Ir. Sundraraj a/l A. Krishnasamy (Civil) (Alternate Chairman)
3. Ir. Lai Sze Ching (Mechanical)
4. Ir. Chen Thiam Leong (Mechanical)
5. Ir. Yau Chau Fong (Electrical)
6. Ir. Dr. Tan Chee Fai (Mechanical)
7. Ir. Bashir Ahamed bin Maideen (Civil)
8. Ir. Badioezaman bin Ab Khalik (Civil)
9. Ir. Hizamul-din bin Ab Rahman (Electrical)
10. Ir. Arul Hisham bin Abdul Rahim (Mechanical)
11. Sr Rogayah binti Yunus (Quantity Surveyor)

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.



JAWATANKUASA PEMANTAUAN KEBANGSAAN
Ahli:

BEM

1. Datuk Ir. Haji Mohamad Zulkefly bin Sulaiman (Awam) (Pengerusi)
2. Datuk Ir. Mohd Adnan bin Mohd Nor (Awam) (Pengerusi Gantian)
3. Datuk Wira Ir. Md. Sidek bin Ahmad (Elektrikal)

JURUTERA PROFESIONAL DAN LAIN-LAIN

1. Datuk Ir. Ruslan bin Abdul Aziz (Awam)
2. Ir. Hizamul-din bin Ab Rahman (Elektrikal)
3. Ir. Megat Johari bin Megat Mohd Noor (Awam)
4. Datuk Ir. (Dr) Abdul Rahim bin Hashim (Elektrikal)

IEM

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

ACEM

1. Ir. Anuar bin Mohd Aris (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.
- 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.

NATIONAL MONITORING COMMITTEE
Members:

BEM

1. *Datuk Ir. Haji Mohamad Zulkefly bin Sulaiman (Civil) (Chairman)*
2. *Datuk Ir. Mohd Adnan bin Mohd Nor (Civil) (Alternate Chairman)*
3. *Datuk Wira Ir. Md. Sidek bin Ahmad (Electrical)*

IDENTIFIED PE AND OTHERS

1. *Datuk Ir. Ruslan bin Abdul Aziz (Civil)*
2. *Ir. Hizamul-din bin Ab Rahman (Electrical)*
3. *Ir. Megat Johari bin Megat Mohd Noor (Civil)*
4. *Datuk Ir. (Dr) Abdul Rahim bin Hashim (Electrical)*

IEM

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

ACEM

1. *Ir. Anuar bin Mohd Aris (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 (MC) as per Article of 4.2 of the ASEAN MRA on Engineering Services.*
- *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. Dato' Ir. Ahmad Redza bin Ghulam Rasool (Awam) (Pengerusi Gantian)
3. Dato' Ir. Dr. Khoo Ping Sen (Awam)
4. Dato' Prof. Ir. Dr. Othman bin A. Karim (Awam)
5. Prof. Emeritus Ir. Dr. K. S. Kannan (Mekanikal)
6. Ir. Magdalene Tan Lee (Elektrikal)
7. Ir. Razmahwata bin Mohamad Razalli (Kimia)
8. Ir. Ashari bin Mohd Yakub (Elektrikal)
9. Ir. Liew Shaw Shong (Geotechnik)
10. Ir. Dr. Chuah Joon Huang, David (Elektronik)
11. Ir. Dr. Muhammad Arkam bin Che Munaaim (Elektrikal)

Terma Rujukan:

- Proses, menaksir, menilai, melulus dan menolak permohonan untuk pendaftaran sebagai orang yang berdaftar di bawah REA 1967 seperti berikut:
 - Jurutera Profesional dengan Perakuan Amalan
 - Jurutera Profesional
 - Pemeriksa Bertauliah
 - Jurutera Siswazah
 - Teknologis Kejuruteraan
 - Pemeriksa Tapak
- Memproses, menaksir, menilai, dan menolak permohonan untuk pendaftaran sebagai amalan perundingan kejuruteraan di bawah REA 1967 seperti berikut:
 - Pertubuhan Perbadanan (Badan Korporat)
 - Perkongsian
 - Pemilik Tunggal
 - Amalan Pelbagai Disiplin
- Memaklumkan keputusan permohonan pendaftaran dalam tempoh empat (4) bulan dari tarikh permohonan lengkap diterima.

JAWATANKUASA PEMERIKSA BERTAULIAH

Ahli:

1. Dato' Ir. Ahmad Redza bin Ghulam Rasool (Awam) (Pengerusi)
2. Dato' Ir. Nor Hisham bin Mohd Ghazali (Awam) (Pengerusi Gantian)
3. Dato' Ir. Fong Tian Yong (Awam)
4. Ir. Dr. Tan Yean Chin (Awam)
5. Ir. Dr. Wong Chin Chaw (Awam)
6. Ir. Dr. Mohd Asbi bin Othman (Awam)

APPLICATION COMMITTEE

Members:

1. Ir. Ong Ching Loon (Mechanical) (Chairman)
2. Dato' Ir. Ahmad Redza bin Ghulam Rasool (Civil) (Alternate Chairman)
3. Dato' Ir. Dr. Khoo Ping Sen (Civil)
4. Dato' Prof. Ir. Dr. Othman bin A. Karim (Civil)
5. Prof. Emeritus Ir. Dr. K. S. Kannan (Mechanical)
6. Ir. Magdalene Tan Lee (Electrical)
7. Ir. Razmahwata bin Mohamad Razalli (Chemical)
8. Ir. Ashari bin Mohd Yakub (Electrical)
9. Ir. Liew Shaw Shong (Geotechnical)
10. Ir. Dr. Chuah Joon Huang, David (Electronic)
11. Ir. Dr. Muhammad Arkam bin Che Munaaim (Electrical)

Terms of Reference:

- Process, assess, evaluate, approve and reject application for registration as registered Person under the REA 1967 as follows:
 - Professional Engineer with Practising Certificate
 - Professional Engineer
 - Accredited Checker
 - Graduate Engineer
 - Engineering Technologist
 - Inspector of Works
- Process, assess, evaluate, approve and reject application for registration as engineering consultancy practices under the REA 1967 as follows:
 - Body Corporate
 - Partnership
 - Sole Proprietor
 - Multi-disciplinary Practice
- Inform the decision of application for registration within four (4) months for the date of receipt of complete application.

ACCREDITED CHECKERS COMMITTEE

Members:

1. Dato' Ir. Ahmad Redza bin Ghulam Rasool (Civil) (Chairman)
2. Dato' Ir. Nor Hisham bin Mohd Ghazali (Civil) (Alternate Chairman)
3. Dato' Ir. Fong Tian Yong (Civil)
4. Ir. Dr. Tan Yean Chin (Civil)
5. Ir. Dr. Wong Chin Chaw (Civil)
6. Ir. Dr. Mohd Asbi bin Othman (Civil)

7. Ir. Dr. Ooi Teik Aun (Awam)
8. Ir. Dr. Mohd Sabri bin Abdullah (Awam)
9. Ir. Dr. Lim Char Ching (Awam)
10. Ir. Wan Anuar bin Wan Endut (Awam)
11. Ir. Mohd Shahrom bin Ahmad Saman (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. 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)
5. Dato' Prof. Ir. Dr. Mohd Saleh bin Jaafar (Awam)
6. Dato' Ir. Habbali bin Ibrahim (Mekanikal)
7. Prof. Emeritus Ir. Dr. K.S. Kannan (Mekanikal)
8. Prof. Ir. Dr. Abdul Aziz bin Abd Raman (Kimia)
9. Prof. Ir. Dr. Abd Rahim bin Abu Talib (Aeronautikal)
10. Ir. Prem Kumar (Elektrikal)
11. Ir. Wong Shu Leong (Elektrikal)

Terma Rujukan:

- Menguruskan semua peperiksaan kejuruteraan yang diperlukan oleh Lembaga termasuk pentadbirannya, menjalankan peperiksaan, penyumberan luar dan pemantauan.
- Memastikan kualiti dan ketekalan peperiksaan dengan mengadakan latihan/bengkel dari semasa ke semasa.
- Melaporkan kepada Lembaga prestasi mana-mana organisasi penyumberan luar yang terlibat dalam menjalankan peperiksaan bagi pihak Lembaga dari semasa ke semasa.
- Penilaian kelayakan kejuruteraan yang tidak diiktiraf oleh Lembaga.
- Sebarang perkara lain yang dirujuk oleh Lembaga.

7. Ir. Dr. Ooi Teik Aun (Civil)
8. Ir. Dr. Mohd Sabri bin Abdullah (Civil)
9. Ir. Dr. Lim Char Ching (Civil)
10. Ir. Wan Anuar bin Wan Endut (Civil)
11. Ir. Mohd Shahrom bin Ahmad Saman (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 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. 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. Dato' Prof. Ir. Dr. Mohd Saleh bin Jaafar (Civil)
6. Dato' Ir. Habbali bin Ibrahim (Mechanical)
7. Prof. Emeritus Ir. Dr. K.S. Kannan (Mechanical)
8. Prof. Ir. Dr. Abdul Aziz bin Abd Raman (Chemical)
9. Prof. Ir. Dr. Abd Rahim bin Abu Talib (Aeronautical)
10. Ir. Prem Kumar (Electrical)
11. Ir. Wong Shu Leong (Electrical)

Terms of Reference:

- Manage all engineering examinations required by the Board including its administration, conducting examination, outsourcing and monitoring.
- Ensure the quality and consistency of examinations 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 of engineering qualification not accredited by the Board.
- Any matter referred by the Board.



JAWATANKUASA LATIHAN & PENDIDIKAN

Ahli:

1. Ir. Mohd Khir bin Muhammad (Aeronautikal) (Pengerusi)
2. Prof. Ir. Dr. Norlida binti Buniyamin (Elektrikal) (Pengerusi Gantian)
3. Dato' Ir. Dr. Che Hassandi bin Abdullah (Awam)
4. Prof. Ir. Dr. Rozita binti Yusoff (Kimia)
5. Ir. Dr. Muhamad Fuad bin Abdullah (Elektrikal)
6. Ir. Fam Yew Hin (Mekanikal)
7. Ir. Mohd Rasid bin Osman (Pembuatan)
8. Ir. Sundraraj a/l A. Krishnasamy (Awam)
9. Ir. Dr. Ng Soon Ching (Awam)
10. Ir. Abdul Razak bin Yakob (Petroleum)
11. Ir. Waznah binti Abdul Aziz (Awam)

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. Sundraraj a/l A. Krishnasamy (Awam) (Pengerusi)
2. Ir. Zailee bin Dollah (Mekanikal) (Pengerusi Gantian)
3. Datuk Ir. Mohammad Azman bin Jamrus (Awam)
4. Dato' Ir. Fong Tian Yong (Awam)
5. Dato' Ir. Mohd Fazli bin Osman (Elektrikal)
6. Ir. Wong Shu Leong (Elektrikal)
7. Ir. Anuar bin Mohd Aris (Awam)
8. Ir. Bashir Ahamed bin Maideen (Awam)
9. Ir. Mohamed Amin bin Kasim (Awam)
10. Ir. Gopal Narian Kutty (Mekanikal)
11. Ir. David Lai Kong Phooi (Awam)
12. Ir. Hj. Abd. Rahman bin Pandi (Awam) (wakil JKR)
13. Wakil daripada Polis Diraja Malaysia

TRAINING & EDUCATION COMMITTEE

Members:

1. Ir. Mohd Khir bin Muhammad (Aeronautical) (Chairman)
2. Prof. Ir. Dr. Norlida binti Buniyamin (Electrical) (Alternate Chairman)
3. Dato' Ir. Dr. Che Hassandi bin Abdullah (Civil)
4. Prof. Ir. Dr. Rozita binti Yusoff (Chemical)
5. Ir. Dr. Muhamad Fuad bin Abdullah (Electrical)
6. Ir. Fam Yew Hin (Mechanical)
7. Ir. Mohd Rasid bin Osman (Manufacturing)
8. Ir. Sundraraj a/l A. Krishnasamy (Civil)
9. Ir. Dr. Ng Soon Ching (Civil)
10. Ir. Abdul Razak bin Yakob (Petroleum)
11. Ir. Waznah binti Abdul Aziz (Civil)

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. Sundraraja/l A. Krishnasamy (Civil) (Chairman)
2. Ir. Zailee bin Dollah (Mechanical) (Alternate Chairman)
3. Datuk Ir. Mohammad Azman bin Jamrus (Civil)
4. Dato' Ir. Fong Tian Yong (Civil)
5. Dato' Ir. Mohd Fazli bin Osman (Electrical)
6. Ir. Wong Shu Leong (Electrical)
7. Ir. Anuar bin Mohd Aris (Civil)
8. Ir. Bashir Ahamed bin Maideen (Civil)
9. Ir. Mohamed Amin bin Kasim (Civil)
10. Ir. Gopal Narian Kutty (Mechanical)
11. Ir. David Lai Kong Phooi (Civil)
12. Ir. Hj. Abd. Rahman bin Pandi (Awam) (Rep. JKR)
13. Representative from 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 Penyiasatan 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 mengemaskini 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 mengemaskini 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 pelantikan kes Jawatankuasa Penyiasatan di mana Jawatankuasa Amalan Ikhtisas mendapati terdapat alasan prima facie untuk siasatan lanjut yang mendalam.
- Menasihati Lembaga mengenai skop dan tanggungjawab Amalan Profesional.

JAWATANKUASA TEKNOLOGI MAKLUMAT**Ahli:**

1. Ir. Mohd. Aman bin Haji Idris (Elektrikal) (Pengerusi)
2. Laksamana Pertama (B) Dato’ Ir. Ahmad Murad bin Omar (Mekanikal) (Pengerusi Gantian)
3. Dato’ Prof. Ir. Dr. Othman bin A. Karim (Awam)
4. Dato’ Ir. Abdullah bin Isnin (Awam)
5. Ir. Fam Yew Hin (Mekanikal)
6. Ir. Dr. Aidil bin Chee Tahir (Mekanikal)
7. Ir. Noor Hisham bin Yahaya (Mekanikal)
8. Ir. Muhammad Farris bin Khyasudeen (Telekomunikasi)
9. Dr. Shaiful Jahari Hashim (Pakar Bidang)
10. Puan Marlina binti Maharon (Pakar Bidang)
11. Dr. Rizal Mohd Nor (Pakar Bidang)

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 appointment of Investigating Committee cases where the Professional Practice Committee finds there are prima facie grounds for further in-depth investigation.
- Advise the Board on the scope of Professional Practice and responsibility.

INFORMATION TECHNOLOGY COMMITTEE**Members:**

1. Ir. Mohd. Aman bin Haji Idris (Electrical) (Chairman)
2. First Admiral (Rtd) Dato’ Ir. Ahmad Murad bin Omar (Mechanical) (Alternate Chairman)
3. Dato’ Prof. Ir. Dr. Othman bin A. Karim (Civil)
4. Dato’ Ir. Abdullah bin Isnin (Civil)
5. Ir. Fam Yew Hin (Mechanical)
6. Ir. Dr. Aidil bin Chee Tahir (Mechanical)
7. Ir. Noor Hisham bin Yahaya (Mechanical)
8. Ir. Muhammad Farris bin Khyasudeen (Telecommunication)
9. Dr. Shaiful Jahari Hashim (Subject Matter Expert)
10. Puan Marlina binti Maharon (Subject Matter Expert)
11. Dr. Rizal Mohd Nor (Subject Matter Expert)

Terma Rujukan:

- Membangun, menyelenggara, mengemaskini secara berterusan dan menambah baik kemudahan dan sistem IT di LJM.
- 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 KOMUNIKASI KORPORAT**Ahli:**

1. Laksamana Pertama (B) Dato' Ir. Ahmad Murad bin Omar (Mekanikal) (Pengerusi)
2. Ir. Mohd Khir bin Muhammad (Aeronautik) (Pengerusi Gantian)
3. Dato' Ir. Fong Tian Yong (Awam)
4. Dato' Ir. Ali Askar bin Sher Mohamad (Awam)
5. Dato' Ir. Dr. Che Hassandi bin Abdullah (Awam)
6. Datu Ir. Zuraimi bin Hj Sabki (Kimia)
7. Prof. Ir. Dr. Rozita binti Yusoff (Kimia)
8. Ir. Dr. Zuhairi bin Abdul Hamid (Awam)
9. Ir. Mohd Rasid bin Osman (Pembuatan)
10. Ir. Aziz bin Yahya (Mekanikal)
11. Ir. Dr. Sherliza binti Zaini Sooria (Awam)

Terma Rujukan:

- Menentukan identiti dan falsafah korporat LJM
- Membina imej LJM di kalangan mereka yang berkepentingan.
- Mempublikasikan peranan dan aktiviti-aktiviti, maklumat serta keputusan yang dibuat oleh LJM kepada Orang Berdaftar, pihak berkepentingan lain dan media massa.
- Mengekalkan dan menggalakkan hubungan rapat dengan semua pihak berkepentingan.
- Menyediakan draf bahan publisiti, buku maklumat, siaran media dan ucapan-ucapan serta penerbitan lain yang berkaitan, yang akan menyokong peranan LJM.
- Mencapai kualiti yang tinggi dalam pengeluaran penerbitan LJM 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 mengemaskini perpustakaan LJM.
- Pusat Maklumat Depositori LJM.

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

CORPORATE COMMUNICATION COMMITTEE**Members:**

1. First Admiral (Rtd) Dato' Ir. Ahmad Murad bin Omar (Mechanical) (Chairman)
2. Ir. Mohd Khir bin Muhammad (Aeronautical) (Alternate Chairman)
3. Dato' Ir. Fong Tian Yong (Civil)
4. Dato' Ir. Ali Askar bin Sher Mohamad (Civil)
5. Dato' Ir. Dr. Che Hassandi bin Abdullah (Civil)
6. Datu Ir. Zuraimi bin Hj Sabki (Chemical)
7. Prof. Ir. Dr. Rozita binti Yusoff (Chemical)
8. Ir. Dr. Zuhairi bin Abdul Hamid (Civil)
9. Ir. Mohd Rasid bin Osman (Manufacturing)
10. Ir. Aziz bin Yahya (Mechanical)
11. Ir. Dr. Sherliza binti Zaini Sooria (Civil)

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.
- 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. Ir. Zailee bin Dollah (Mekanikal) (Pengerusi)
2. Ir. Mohd Khir bin Muhammad (Aeronautikal) (Pengerusi Gantian)
3. Dato' Ir. Dr. Ahmad Anuar bin Othman (Awam)
4. Ir. Gopal Narian Kutty (Mekanikal)
5. Prof. Ir. Dr. Abd Rahim bin Abu Talib (Aeronautikal)
6. Ir. Mohd Rasid bin Osman (Pembuatan)
7. Ir. Gunasagaran a/l Kristnan (Awam)
8. Ir. Dr. Nor Azhar bin Mohd Arif (Elektronik)
9. Ir. Husin bin Mustafa (Elektrikal)
10. Ir. Anita binti Mohamed Shafie (Awam)
11. Ir. Tajul Ariffin bin Mohamed Nori (Mekanikal)

Terma Rujukan:

Jawatankuasa Kualiti dilantik oleh Lembaga untuk melaksanakan 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. Ir. Zailee bin Dollah (Mechanical) (Chairman)
2. Ir. Mohd Khir bin Muhammad (Aeronautical) (Alternate Chairman)
3. Dato' Ir. Dr. Ahmad Anuar bin Othman (Civil)
4. Ir. Gopal Narian Kutty (Mechanical)
5. Prof. Ir. Dr. Abd Rahim bin Abu Talib (Aeronautical)
6. Ir. Mohd Rasid bin Osman (Manufacturing)
7. Ir. Gunasagaran a/l Kristnan (Civil)
8. Ir. Dr. Nor Azhar bin Mohd Arif (Electronic)
9. Ir. Husin bin Mustafa (Electrical)
10. Ir. Anita binti Mohamed Shafie (Civil)
11. Ir. Tajul Ariffin bin Mohamed Nori (Mechanical)

Terms of Reference:

Quality Committee is appointed by the Board to assume 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.



PELAN STRATEGIK
2021-2025
BEM Strategic Plan 2021 - 2025

RINGKASAN EKSEKUTIF

Pelan Strategik 2021 – 2025 ini mula dirangka di Bukit Tinggi, Pahang dengan matlamat untuk memacu LJM menjadi badan kawal selia yang terkemuka dan berwibawa.

Pelan Strategik ini dibangunkan dengan penglibatan Ahli-ahli Lembaga dan wakil-wakil jawatankuasa LJM. Analisis SWOT digunakan dalam merencana dan menentukan lima (5) strategi tematik dan inisiatif masing-masing yang perlu dilaksanakan. Inisiatif-inisiatif yang telah dipersetujui merangkumi fungsi-fungsi LJM seperti yang digariskan oleh Akta Pendaftaran Jurutera 1967 (Pindaan 2015) yang di antaranya adalah bagi mengawal selia perkhidmatan kejuruteraan dalam memastikan keselamatan awam.

Pelan Strategik ini juga merangkumi inisiatif-inisiatif yang akan membantu LJM menjadi sebuah badan yang berempati dan mengutamakan kepimpinan fraterniti kejuruteraan.

Lima strategi tematik yang merangkumi inisiatif, langkah-langkah, aktiviti-aktiviti dan garis masa telah dirangka bagi:

- menambah bilangan Orang berdaftar; Jurutera, Teknologis Kejuruteraan serta Juruteknik Kejuruteraan.
- memastikan semua program pendidikan kejuruteraan, teknologi kejuruteraan dan juruteknik kejuruteraan di Malaysia diakreditasi oleh LJM sekaligus mendapat pengiktirafan Washington Accord, Sydney Accord dan Dublin Accord
- memastikan syarikat Amalan Perunding Kejuruteraan ditadbir urus yang baik.
- Orang berdaftar mempunyai ketegasan dalam kepimpinan di dalam dan luar negara, serta
- mendorong agenda penglibatan LJM dan melaksanakan fungsinya untuk mencapai tahap yang lebih tinggi.

Pelan Strategik ini diselias oleh Jawatankuasa Kualiti and disokong oleh Jawatankuasa Kerja Pelan Strategik dan Jawatankuasa Bersama lima strategi tematik .

Setiap strategi bertema ini diselaraskan oleh Jawatankuasa LJM dengan bilangan inisiatif yang signifikan yang berkaitan dengan terma rujukannya. Lembaga dalam mesyuaratnya pada 13.10.2022 telah meluluskan pelaksanaan Pelan Strategik ini dengan kajian semula suku tahunan. Perubahan kepada langkah-langkah boleh diambil semasa semakan tahunan perancangan.

EXECUTIVE SUMMARY

The Strategic Plan 2021 – 2025 was initiated at Bukit Tinggi, Pahang, with the aim to propel BEM to be a prominent and authoritative regulatory body.

Board members and representatives from all BEM's committees were involved in the development of the Strategic Plan. SWOT Analysis was conducted prior to ascertaining the five (5) thematic strategies and their respective initiatives to be undertaken. The initiatives agreed upon were mostly within the functions of the BEM, as outlined by the Registration of Engineers Act 1967 Amendment 2015 (REA), which are to regulate engineering services in ensuring public safety.

The Strategic Plan also included initiatives that would push for the BEM to be an empathised body and asserting the leadership of the engineering fraternity.

Five thematic strategies with initiatives, measures, activities, timelines were developed to deliver the following substantial outcomes:

- *to increase significantly the number of registered Persons; engineers, engineering technologists and engineering technicians,*
- *getting all engineering, engineering technology and engineering technician education programmes in Malaysia to be accredited by BEM and thus receiving the recognition of Washington, Sydney and Dublin Accords,*
- *having Engineering Consultancy Practices with good governance,*
- *registered Persons asserting leadership positions both nationally and internationally, and*
- *thrusting the BEM's engagement agenda and delivering of its functions to reach greater heights.*

The five-year Strategic Plan is overseen by the Quality Committee and supported by the Working Group on Strategic Plan and a Joint Committee of the five thematic strategies.

Each thematic strategy is coordinated by an appropriate BEM committee with significant number of initiatives related to its term of reference. The Board at its meeting on 13.10.2020 had approved the implementation of the Strategic Plan with a quarterly review to be undertaken. Changes to the measures may be undertaken at the annual review of the Plan.

TEMA 1 – MENINGKATKAN NILAI PROFESION KEJURUTERAAN

Strategi: Mempromosi penyampaian perkhidmatan kejuruteraan dalam Rantaian Nilai Global

Deskripsi: Meningkatkan nilai profesion kejuruteraan melalui strategi mempromosikan penyampaian perkhidmatan kejuruteraan dalam rantaian global. Strategi ini bermatlamat untuk mempertingkatkan tahap kualiti Orang berdaftar dan entiti kejuruteraan ke peringkat antarabangsa dan menjejaki prestasi mereka menggunakan pangkalan data dan pengurusan pengetahuan. Sehubungan itu, galakan promosi kepakaran kejuruteraan pada peringkat global adalah amat penting. Penglibatan Orang berdaftar di peringkat global dimanfaatkan apabila mereka memenuhi standard akreditasi EAC dan ETAC pada peringkat kemasukan dan mempunyai kelayakan profesional di peringkat antarabangsa.

Inisiatif

- T1.1 – Meningkatkan tahap pendidikan kejuruteraan, latihan dan pembangunan kemahiran bagi memenuhi harapan pemegang taruh.
- T1.2 – Membangunkan pangkalan data pakar kejuruteraan yang berperanan sebagai penyedia khidmat nasihat dan perunding di peringkat kebangsaan dan antarabangsa.
- T1.3 – Melaksanakan program outreach berkaitan peranan dan fungsi LJM bersama dengan pemegang taruh.
- T1.4 – Mempromosikan pendaftaran profesional bagi mencapai tahap negara maju.
- T1.5 – Mematuhi amalan terbaik dalam kalangan ahli profesional pada peringkat antarabangsa.

Hasil Jangkaan: Dikenali di platform antarabangsa secara individu dan organisasi.

THEME 1 – ENHANCE THE VALUE OF THE ENGINEERING PROFESSION

Strategy: Promote delivery of engineering services to tap into Global Value Chain

Description: Enhancing the value of engineering profession through a strategy; promoting delivery of engineering services to tap into Global Value, is aimed to enhance further the standard of registered Persons and engineering entities to international level and tracking their performance using database and knowledge management. Ramping up the promotion of engineering experts and the engineering entities at the global level is thus inevitable. The global involvement of registered Persons is leveraged through them meeting the EAC and ETAC accreditation standards at the entry level and having qualified professionally at the international level.

Initiatives

- T1.1 – Raise the standard of engineering education, training, and skill development to meet stakeholder expectations.
- T1.2 – Develop databases of engineering experts for the purpose of national and international advisory and consultancy services.
- T1.3 – Conduct outreach program with all stakeholders on the roles and function of BEM.
- T1.4 – Promote professional registration to meet develop nation status.
- T1.5 – Conform to international best practices among professionals.

Expected Outcome: Visible at international platform (individually and organisations).

TEMA 2 - MEMELIHARA KESELAMATAN, KESIHATAN DAN KEPENTINGAN AWAM

Strategi: Meningkatkan tahap integriti, kebertanggungjawaban dan ketelusan dalam fraterniti kejuruteraan

Deskripsi: Strategi untuk meningkatkan nilai teras, integriti, kebertanggungjawaban dan ketelusan LJM, dan menerapkannya ke dalam fraterniti kejuruteraan; satu langkah penting bagi memelihara keselamatan, kesihatan dan kepentingan awam. Matlamat ini dapat dicapai melalui kerjasama di antara organisasi berkaitan dengan keselamatan, kesihatan dan persekitaran, di samping melalui galakan amalan terbaik dan tadbir urus cemerlang dalam bidang ini.

Inisiatif

- T2.1 – Bekerjasama dengan pihak berkuasa dan agensi tempatan dan antarabangsa bagi membangunkan/mempromosikan amalan terbaik keselamatan, kesihatan dan kemampunan alam sekitar; serta menyebarkan garis panduan melalui saluran yang berkesan di Malaysia.
- T2.2 – Bekerjasama dengan Institut Integriti Malaysia atau mana-mana organisasi yang relevan bagi membangunkan garis panduan etika profesional dan integriti bagi profesion kejuruteraan dan menyebarkannya kepada fraterniti kejuruteraan melalui saluran yang berkesan di Malaysia.
- T2.3 – Membangunkan kriteria dan proses bagi menganugerahi mana-mana organisasi yang mengamalkan Keselamatan, Kesihatan dan Alam Sekitar (SHE) terbaik secara tahunan bagi mengukuhkan tingkah laku positif organisasi.

Hasil Jangkaan: Amalan integriti bagi memacu anjakan budaya Keselamatan, Kesihatan dan Alam Sekitar (SHE).

THEME 2 – SAFEGUARD PUBLIC SAFETY, HEALTH AND INTEREST

Strategy: Promote the highest level of integrity, responsibility and accountability within the engineering fraternity.

Description: A strategy to promote BEM's core values, integrity, responsibility and accountability, and internalising them within the engineering fraternity, is pivotal to safeguarding public safety health and interest. This would be undertaken through collaborative activities with organisations responsible directly on safety, health and environment and also through promoting industry best practices and good governance in these areas.

Initiatives

- T2.1 - Collaborate with relevant local and international authorities and agencies to develop/promote best practices for safety, health and environmental sustainability and disseminate the guidelines via effective channels within Malaysia.
- T2.2 - Collaborate with Malaysian Integrity Institute or other relevant bodies to develop/promote guidelines on professional ethics and integrity for Engineering Profession and disseminate them to all engineering fraternity via effective channels within Malaysia.
- T2.3 - Develop criteria and process for rewarding organizations that adopt best Safety, Health & Environment (SHE) practices for yearly reward to reinforce positive organizational behaviours.

Expected Outcome: Adoption integrity pledge to drive a shift in Safety, Health & Environment (SHE) culture.

TEMA 3 - PENEGASAN KEPIMPINAN KEJURUTERAAN DI PERINGKAT KEBANGSAAN DAN ANTARABANGSA

Strategi - Memperkasakan profesional kejuruteraan bagi mencapai peranan kepimpinan dalam industri.

Deskripsi: Penegasan kepimpinan profesion kejuruteraan melalui strategi pemerkasaan profesional kejuruteraan bagi memperoleh peranan kepimpinan dalam industri, memerlukan pendekatan proaktif bagi melonjakkan profesional kejuruteraan mencapai kedudukan pemimpin di peringkat peringkat tempatan dan antarabangsa. Orang berdaftar akan dipandu untuk melibatkan diri secara aktif dalam menetapkan polisi, hala tuju dan agenda kejuruteraan.

Inisiatif

- T3.1 – Mengukuhkan pendidikan, latihan bagi memastikan kecekapan (teknikal dan bukan teknikal) serta mengetuai perikatan kejuruteraan dan pengurusan bakat/kemahiran.
- T3.2 – Menyediakan platform bagi kerjasama industri untuk meningkatkan rangkaian dan mobiliti para jurutera profesional.
- T3.3 – Bekerjasama dengan kerajaan dan industri bagi meningkatkan kepimpinan dalam kalangan jurutera dengan penekanan dalam syarikat yang berkaitan dengan kejuruteraan.

Hasil Jangkaan: Peningkatan 10 kali ganda jurutera memegang jawatan kepimpinan di peringkat nasional dan antarabangsa.

TEMA 4 - MENINGKATKAN IMEJ DAN PENJENAMAAN

Strategi: Meningkatkan penglibatan dengan pemegang taruh bagi meningkatkan martabat profesion kejuruteraan.

Deskripsi: Meningkatkan imej dan jenama BEM melalui strategi; mengukuhkan penglibatan dengan pemegang taruh demi meningkatkan martabat profesion kejuruteraan sekaligus memantapkan LJM sebagai badan pengawalseliaan berprinsip dan berempati. Menguruskan persepsi menerusi komunikasi yang efektif dan menyediakan maklumat yang tepat dan tepat adalah asas penting.

THEME 3 – ASSERT LEADERSHIP OF ENGINEERING PROFESSION NATIONALLY AND INTERNATIONALLY

Strategy: Empower engineering professionals to gain industry leadership role.

Description: Asserting the leadership of the engineering profession through a strategy; empowering engineering professionals to gain industry leadership role, calls for a proactive approach to thrust engineering personnel to leadership positions at national and international levels. registered Persons would be ushered to be actively involved in determining policies, directions and engineering agendas.

Initiatives

- T3.1 - Strengthen education, training, ensure competency (technical and non- technical) and take the lead in engineering alliances and talent management.
- T3.2 - Create platforms for industry collaboration to enhance networking and mobility of professional engineer.
- T3.3 - Engage with Government and industry to promote leadership of engineers is asserted in engineering related companies.

Expected Outcome: 10-fold increase in engineers take on leadership positions nationally and internationally.

THEME 4 - ENHANCE PUBLIC IMAGE AND BRANDING

Strategy: Enhance engagement with stakeholders to raise stature of engineering profession

Description: Enhancing BEM's public image and brand via a strategy; boosting engagement with stakeholders to raise the stature of engineering profession, would strengthen BEM as a principled and empathised regulatory body. Managing perceptions through effective communication and providing prompt and accurate information are thus fundamental.



Inisiatif

T4.1 – Meningkatkan jenama LJM

Hasil Jangkaan: Transformasi bagi menjadi pihak berkuasa yang berprinsip dan empati.

Initiative

T4.1 – Enhance BEM brand

Expected Outcome: Transformation to become principled and empathy authority.

TEMA 5 – MENINGKATKAN KEJURUTERAAN TVET

Strategi: Menerajui dalam mempromosikan teknologis kejuruteraan dan juruteknik kejuruteraan.

Deskripsi: Mengukuhkan teknologi kejuruteraan, satu domain baharu dalam fraterniti kejuruteraan, adalah penting bagi menggalakkan pembangunan teknologis kejuruteraan dan juruteknik kejuruteraan. Penglibatan secukupnya dengan pelbagai pemegang taruh adalah sangat penting bagi memberi pengiktirafan sewajarnya ke atas peranan melengkapkan teknologis kejuruteraan; di samping peranan sokongan penting juruteknik kejuruteraan seperti yang termaktub dalam REA.

THEME 5 – PROMOTE ENGINEERING TVET

Strategy: Lead in promoting engineering technologists and engineering technicians.

Description: Strengthening engineering technology, a new domain within the Engineering fraternity, is essential to promote the development of engineering technologists and engineering technicians. Considerable engagement is crucial with the various stakeholders in order to give due recognition to the complementary roles of engineering technologists and vital supporting roles of engineering technicians, as promulgated in the REA.

Inisiatif

T5.1– Melaksanakan aktiviti-aktiviti outreach terhadap penyedia TVET (institut), pemilik (kementerian) dan pemegang taruh lain.

T5.2 – Meningkatkan kerjasama dan perkongsian dengan pihak berkaitan lain melalui memorandum persefahaman dengan organisasi seperti MBOT, JPK-NOSS, MYSET, IEM, TAM dan COWAM.

T5.3 – Membangunkan standard kemahiran kejuruteraan TVET.

T5.4– Menjalankan penyelidikan dan kajian mengenai TVET berkaitan dengan kejuruteraan.

Hasil Jangkaan: 80% IHL mempunyai program yang diakreditasi oleh ETAC dan peningkatan pendaftaran lima (5) kali ganda teknologis kejuruteraan dan pemeriksa tapak.

Initiatives

T5.1 - Implement outreach activities to engineering TVET providers (institutes), owners (ministries) and other stakeholders

T5.2 - Enhance collaboration and partnership with other associated parties such as MoU with organizations like MBOT, JPK-NOSS, MYSET, IEM, TAM and COWAM.

T5.3 - Establish engineering TVET competency standard.

T5.4 - Conduct research and studies on engineering TVET, with respect to the engineering team.

Expected Outcome: 80% of IHL having accredited programs with ETAC and 5-fold increase registration of Engineering Technologist and Inspector of Works.

MAJLIS AKREDITASI KEJURUTERAAN
Memastikan Pendidikan Kejuruteraan Berkualiti
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LATARBELAKANG

Majlis Akreditasi Kejuruteraan (EAC) merupakan badan yang ditugaskan oleh Lembaga Jurutera Malaysia (LJM) untuk pengakreditasi program ijazah sarjana muda kejuruteraan. EAC yang terdiri daripada wakil-wakil dari LJM, Institusi Jurutera Malaysia (IEM), Agensi Kelayakan Malaysia (MQA) dan Jabatan Perkhidmatan Awam (JPA), ditubuhkan pada tahun 2000.

EAC memastikan kualiti graduan program kejuruteraan dapat dipertingkatkan melalui proses akreditasi. Setakat 31 Disember 2021, terdapat 269 program kejuruteraan yang diiktiraf oleh EAC dan tersenarai dalam Daftar EAC dan MQA.

PENGIKTIRAFAN ANTARABANGSA DAN IMPAK GLOBAL

Semua program kejuruteraan yang diakreditasi oleh EAC ditanda aras kepada standard antarabangsa. LJM telah menjadi ahli penuh Washington Accord (WA) di bawah naungan International Engineering Alliance (IEA) semenjak tahun 2009. Penilaian semula pada tahun 2015 telah melayakkan Malaysia untuk terus menjadi penandatangan WA selama enam (6) tahun lagi. Penilaian berkala yang kedua dijangka akan berlangsung pada tahun 2022. Melalui pengiktirafan ini, program kejuruteraan yang diakreditasi EAC kini diiktiraf oleh 21 penandatangan WA.

Kualiti pendidikan kejuruteraan dan sistem pendidikan negara adalah setaraf dan sejajar dengan negara-negara maju di dunia. Pelaksanaan proses akreditasi EAC dan penambahbaikan yang berterusan telah berjaya meyakinkan serta menarik pelaburan luar dalam pendidikan kejuruteraan di Malaysia. Kini banyak universiti antarabangsa membuka kampus cawangan di Malaysia. Ini merangsang pertumbuhan ekonomi Malaysia dan menjadikan negara ini sebagai hab pendidikan kejuruteraan antarabangsa yang mapan.

BACKGROUND

Engineering Accreditation Council (EAC) is the body delegated by Board of Engineers Malaysia (BEM) for accreditation of engineering bachelor degree programmes. The EAC was established in year 2000, comprising representatives from the BEM, Institution of Engineers Malaysia (IEM), Malaysian Qualifications Agency (MQA) and the Public Services Department (PSD).

The EAC assures quality of engineering degree graduates are enhanced through the accreditation process. As of December 31, 2021, the total number of engineering programmes accredited by the EAC is 269 and they are registered under the EAC and MQA Registers.

INTERNATIONALLY RECOGNISED AND GLOBAL IMPACT

All EAC accredited engineering programmes are benchmarked to international standards. BEM has been a full signatory to the Washington Accord (WA) under the administration of the International Engineering Alliance (IEA) since 2009. The first review which was conducted in 2015 has qualified Malaysia to maintain her full signatory to the WA status for another six (6) years. A second periodic review is expected to take place in 2022. Through this recognition, EAC accredited engineering programmes are now recognised by 21 WA signatory member countries.

This indicates that the quality of engineering education as well as our national education system in Malaysia is on a par with that of developed countries in the world. The effective implementation of the EAC accreditation and continuous quality improvement processes has indeed been successful in convincing external investors to invest into engineering education in Malaysia. This is evidenced by the setting up of branch campuses by many renowned international universities we now see in Malaysia. This does not only stimulate the national economic growth but it has also turned Malaysia into a sustainable global engineering education hub.

Peranan LJM dalam IEA dan WA adalah sangat penting sebagai pemangkin pembangunan kejuruteraan di Malaysia. LJM telah menerima pengiktirafan di peringkat antarabangsa dan sentiasa mengambil bahagian dengan penglibatan yang aktif dan terus menyumbang dalam aktiviti pendidikan dan keprofesionalan.

Malaysia sentiasa bertekad untuk memenuhi piawaian antarabangsa. EAC telah membangunkan pelan tindakan strategik dan sasaran untuk memastikan EAC memenuhi kehendak standard ini.

TABDIR URUS DAN STRUKTUR

Jabatan Akreditasi Kejuruteraan (EAD) mengendalikan semua operasi EAC. Pentadbiran EAD terdiri daripada seorang Pengarah, enam (6) Pengarah Bersekutu (AD) yang dilantik mengikut kluster kejuruteraan dan sekretariat. Rajah 1 menunjukkan carta organisasi EAC dan ETAC.

EAD juga disokong oleh jawatankuasa yang mengawasi pembangunan tahap akreditasi, perubahan budaya berasaskan hasil di IPT, jaminan kualiti dan hal ehwal peringkat antarabangsa.

Dalam menghadapi cabaran pandemik COVID-19, Kerajaan Malaysia telah menilai langkah-langkah pencegahan dan pelaksanaan Perintah Kawalan Pergerakan (PKP) secara berterusan. Oleh itu, EAC telah membuat semakan ke atas dokumen panduan dan protokol akreditasi, iaitu:

1. *Guiding Principles on Teaching-Learning and Assessment Implementation during COVID-19 Pandemic, Guideline No: 005, BEM (bertarikh 5.6.2021)* (Ini adalah semakan ke atas dokumen panduan yang bertarikh 30.3.2020). Semakan ini lebih menjelaskan pengisian seksyen 3.0, dengan beberapa contoh dan pengemaskinian ayat.
2. *EAC and ETAC Procedure on Conducting Virtual Accreditation Visit (VAV)*, (Diluluskan pada 16.07.2021). (Prosedur asal diluluskan oleh EAC pada 19.11.2020 dan oleh ETAC pada 17.11.2020). Semakan ini memberi lebih masa kepada pihak IPT dalam penyediaan dokumen dan video lawatan akreditasi dalam format digital, dari 7 hari kepada 14 hari.

The roles of BEM in IEA and WA are paramount important to serve as a catalyst for engineering development in Malaysia. BEM has received international recognition and always participates with active involvement with the aim to continuously contribute to educational and professional activities.

Malaysia is always determined to keep abreast with the international standards and expectations. EAC has established strategic action plans and targets to ensure that the EAC meets the standard requirements.

GOVERNANCE AND STRUCTURE

The operation of EAC is supported by its administrative arm, the Engineering Accreditation Department (EAD). The set up includes a Director, six (6) Associate Directors (AD) appointed according to engineering cluster and a secretariat. Figure 1 shows the EAC and ETAC organisation chart.

EAD is also supported by a task force and its committees that oversee the development of accreditation standards, the outcome-based culture changes at IHLs, quality assurance and international affairs.

In response to the COVID-19 pandemic, the Malaysian government continuously reviewed the preventive and implementation of the Movement Control Order (MCO). In view of the such situation, EAC and ETAC have revised the guiding documents and accreditation protocols, namely:

1. *Guiding Principles on Teaching-Learning and Assessment Implementation During COVID-19 Pandemic, Guideline No: 005, BEM (dated 5.06.2021)* (This is a revision to the guideline dated 30.3.2020). The revision elaborated the contents in Section 3.0, provided few examples and refined the sentences.
2. *EAC and ETAC Procedure on Conducting Virtual Accreditation Visit (VAV)*, (Approved on 16.7.2021). (This procedure is a revised version approved by EAC on 19.11.20 and ETAC on 17.11.20). The revision provides a longer duration, from 7 days to 14 days, for the IHL to provide digitised documents and videos for the accreditation visit.

3. *EAC and ETAC Procedure – MCO and Post MCO from 1st January 2021 onwards*, (Diluluskan pada 17.11.2020). Prosedur asal diluluskan oleh EAC pada 19.11.2020 dan oleh ETAC pada 17.11.2020. Semakan ini membenarkan semua lawatan akreditasi dijalankan secara dalam talian sehingga keadaan dalam negara kembali terkawal.

Penambahbaikan yang berterusan ke atas semua VAV bergantung pada komunikasi yang menyeluruh dan berkesan di antara IPT, pasukan EP dan pihak sekretariat di EAD. Melalui perancangan yang teliti, lawatan VAV boleh menjadi pengganti yang berkesan kepada lawatan akreditasi di tapak dan juga berjaya menghasilkan pengalaman yang berkualiti tinggi. Demi memastikan penilaian yang produktif, EAD telah menjalankan satu analisis ke atas post mortem VAV yang menghasilkan semakan seperti (1) hingga (3) di atas.

Terdapat dua (2) pekeliling baru yang telah diluluskan oleh EAC bagi meningkatkan kualiti pengajaran kurikulum pendidikan kejuruteraan, iaitu:

1. *Circular on Requirement on the Minimum Number of Professional Engineers for Engineering Programme* (bertarikh 25.08.2021). Pekeliling ini berkuatkuasa dari 1 Januari 2021. (Semakan kepada pekeliling asal bertarikh 16 Oktober 2017 yang tamat pada 31 Disember 2020)
2. *Circular on Teaching Related Engineering Courses by a Nonregistered Person and/or Scientist* (bertarikh 25.08.2021). Pekeliling ini berkuatkuasa dari 1 Julai 2021.

3. *EAC and ETAC Procedure – MCO and Post MCO from 1st January 2021 onwards*, (Approved on 17.11.2020). This procedure is a revised version approved by EAC on 19.11.20 and ETAC on 17.11.20. The revision allows all accreditation visits to be conducted on virtual platform until the situation in the country is under control.

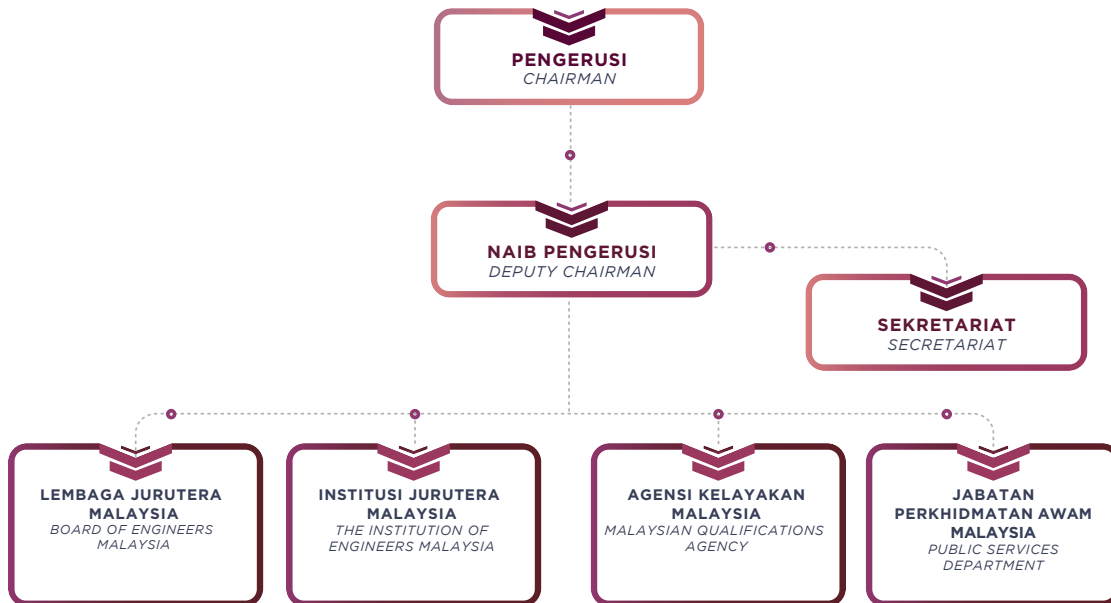
The continuous improvement to all VAV relies on extensive and effective communication between IHL, the Evaluation Panel (EP) team and the EAD secretariat. With careful preparation, a virtual accreditation visit can be an effective substitute for an on-site visit and result in a high-quality experience. To ensure a productive evaluation, EAD conducted a VAV post mortem analysis which resulted in the revisions of (1) to (3).

There are two (2) new circulars that have been approved by the EAC with the aim to improve the quality of teaching and curriculum of the engineering education, namely:

1. *Circular on Requirement on the Minimum Number of Professional Engineers for Engineering Programme* (dated 25.8.2021). The circular is effective from 1st January 2021. (This is a revision to the circular dated 16 October 2017 which ended on 31 December 2020)
2. *Circular on Teaching Related Engineering Courses by a Nonregistered Person and/or Scientist* (dated 25.8.2021). This circular is effective from 1st July 2021.

Rajah 1 (Figure 1)

CARTA ORGANISASI EAC EAC Organisation Chart



Ahli:

LJM

1. Dato' Prof. Ir. Dr. Mohd Hamdi bin Abd Shukor (Mekanikal)(Pengerusi)
2. Dato' Prof. Ir. Dr. Mohammed Rafiq bin Abdul Kadir (Mekanikal)
3. Dato' Prof. Ir. Dr. Kamal Nasharuddin bin Mustapha (Awam)
4. Prof. Emeritus Ir. Dr. K. S. Kannan (Mekanikal)
5. Ir. Dr. Shahrudin bin Muslimin (Elektrikal)
6. Ir. Hj Masri bin Baharuddin (Awam)

INDUSTRI

7. Dato' Hashimah bin Hashim (Awam)
8. Ir. Thayananthan a/l Balakrishnan (Kimia)
9. Ir. Azmi bin Osman (Mekanikal)

IEM

10. Ir. Mohd. Aman bin Haji Idris (Elektrikal) (Timbalan Pengerusi)
11. Tan Sri Dato' Ir. Prof. Emeritus Dr. Chuah Hean Teik (Elektrikal)
12. Ir. Prof. Dr. Zainal Abidin Ahmad (Elektronik)
13. Laksamana Pertama (Bersara) Dato' Ir. Ahmad Murad bin Omar (Mekanikal)
14. Ir. Juares Rizal bin Abd Hamid (Kimia)
15. Ir. Chen Harn Shean (Awam)

Members:

BEM

1. Dato' Prof. Ir. Dr. Mohd Hamdi bin Abd Shukor (Mechanical)(Chairman)
2. Dato' Prof. Ir. Dr. Mohammed Rafiq bin Abdul Kadir (Mechanical)
3. Dato' Prof. Ir. Dr. Kamal Nasharuddin bin Mustapha (Civil)
4. Prof. Emeritus Ir. Dr. K. S. Kannan (Mechanical)
5. Ir. Dr. Shahrudin bin Muslimin (Electrical)
6. Ir. Hj Masri bin Baharuddin (Civil)

INDUSTRY

7. Dato' Hashimah bin Hashim (Civil)
8. Ir. Thayananthan a/l Balakrishnan (Chemical)
9. Ir. Azmi bin Osman (Mechanical)

IEM

10. Ir. Mohd. Aman bin Haji Idris (Electrical) (Alternate Chairman)
11. Tan Sri Dato' Ir. Prof. Emeritus Dr. Chuah Hean Teik (Electrical)
12. Ir. Prof. Dr. Zainal Abidin Ahmad (Electronic)
13. First Admiral (Rtd) Dato' Ir. Ahmad Murad bin Omar (Mechanical)
14. Ir. Juares Rizal bin Abd Hamid (Chemical)
15. Ir. Chen Harn Shean (Civil)

JPA

16. En. Wan Muzani bin Wan Idris
- Puan Nurafizah binti Abu Bakari (Wakil Ganti)

MQA

17. En. Abdul Saman bin Taip
- Encik Mohd Ishak bin Mohd Hussaini (Wakil Ganti)

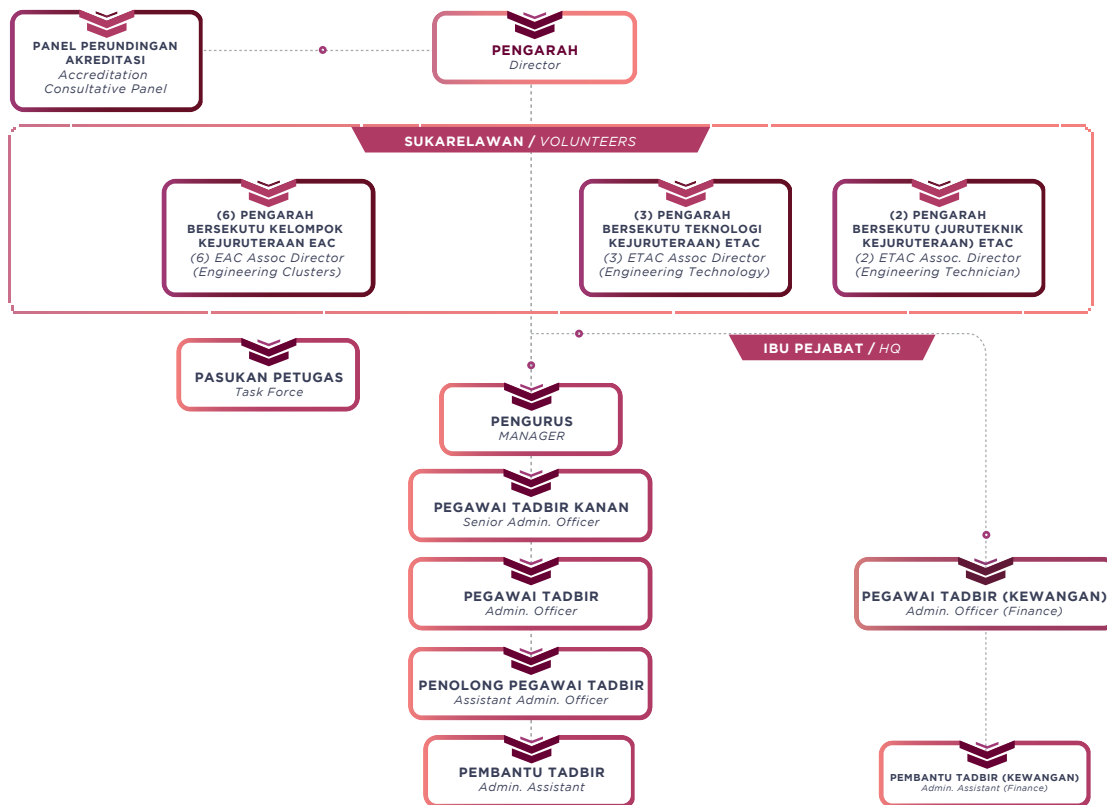
JPA

16. En. Wan Muzani bin Wan Idris
- Puan Nurafizah binti Abu Bakari (Alternate representative)

MQA

17. En. Abdul Saman bin Taip
- Encik Mohd Ishak bin Mohd Hussaini (Alternate Representative)

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.

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.

- | | |
|--|---|
| <p>4. Menerima laporan penilaian program-program kejuruteraan dan membuat keputusan sama ada akreditasi patut diberi atau sebaliknya.</p> <p>5. Mewujudkan dan menyenggara senarai program kejuruteraan tempatan dan luar negara yang diiktiraf.</p> <p>6. Memberi maklumbalas terhadap sebarang aduan atau rayuan mengenai proses akreditasi dan apa-apa cadangan untuk perubahan.</p> <p>7. Menyelia pembangunan dan operasi akreditasi dan pengiktirafan bersama program dengan negara-negara lain.</p> <p>8. Memastikan Ahli Lembaga sentiasa dimaklumkan mengenai aktiviti EAC dan jika perlu, membuat cadangan kepada Lembaga.</p> <p>9. Menggalakkan penyebaran perkembangan dan amalan terbaik dalam pendidikan kejuruteraan.</p> <p>10. Menasihati Lembaga ke atas pernyataan awam atau representasi yang perlu dibuat berhubung dengan pendidikan kejuruteraan.</p> <p>11. Menjalankan mesyuarat perundingan dengan IPT bila perlu.</p> <p>12. Menjalankan mesyuarat sekurang-kurangnya enam kali setahun.</p> | <p>4. <i>Receive evaluation report on engineering programmes, and decide whether accreditation should be granted or otherwise.</i></p> <p>5. <i>Establish and maintain a list of local and foreign accredited engineering programmes.</i></p> <p>6. <i>Respond to any complaints or appeals concerning the accreditation process and to any proposals for change.</i></p> <p>7. <i>Oversee the development and operation of accreditation and mutual recognition of programmes with other countries.</i></p> <p>8. <i>Keep the Board informed of the activities of EAC and where necessary, make recommendations to the Board.</i></p> <p>9. <i>Foster the dissemination of developments and best practices in engineering education.</i></p> <p>10. <i>Advice the Board on public statements or representations that should be made in relation to engineering education.</i></p> <p>11. <i>Hold consultation meetings with IHLs as and when necessary.</i></p> <p>12. <i>Hold meetings at least 6 times per year.</i></p> |
|--|---|

OBJEKTIF AKREDITASI

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

Di samping itu, objektif akreditasi adalah untuk memastikan bahawa Peningkatan Kualiti Berperingkat (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 LJM.

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

1. Meningkatkan sistem pengurusan akreditasi
2. Meningkatkan penglibatan antarabangsa.
3. Menggalakkan jaringan dengan pengurusan atasan / kakitangan utama.
4. Mengekalkan panel penilai yang berpengalaman dalam bidang yang berkaitan.
5. Mewujudkan panel penilai utama untuk penglibatan antarabangsa.
6. Khidmat sokongan sekretariat.

PANEL PENILAI

EAC mempunyai kumpulan Panel Penilai (EP) yang terlatih dari kalangan akademik dan industri.

Statistik terkini pada 31 Disember 2021 menunjukkan EAC mempunyai seramai 373 EP yang terlatih dan aktif, yang mana seramai 105 EP adalah dari industri. Buat masa ini EAC kekurangan EP sebanyak 30%. Jadual 1 menunjukkan statistik EP.

EAC memastikan EP dilengkapi dengan pengetahuan terkini dalam penilaian akreditasi sejajar dengan kehendak WA dan IEA. EP juga memelihara kualiti akreditasi dan menepati keperluan EAC Standard 2020. Bagi mengekalkan kualiti pendidikan kejuruteraan di Malaysia dan bagi melaksanakan CQI, sebanyak dua (2) bengkel EP baru telah dijalankan pada bulan Mac dan Oktober 2021. Selain itu, tiga (3) sesi latihan yang melibatkan IPT dan EP yang tertumpu pada proses akreditasi telah dijalankan di sepanjang tahun 2021. Semua sesi seperti dalam Jadual 2 telah dijalankan secara dalam talian.

STRATEGIES

1. Enhance accreditation management system
2. Enhance international involvement
3. Promote networking with top management / key personnel
4. Sustain experienced evaluators in relevant disciplines
5. Establish panel of leading evaluators for international involvement
6. Sustain the secretariat

PANEL EVALUATORS

The EAC has a group of trained Evaluation Panel (EP) from amongst the academia and industry.

The latest statistic as at 31 December 2021 showed that there is a total of 373 trained and active EPs for engineering programmes, of whom a total of 105 EPs are from the industry. Currently, the EAC is short of 30% EPs. Table 1 shows the EP statistics.

The EAC ensures EPs are equipped with the up to date knowledge in accreditation which is in line with WA and IEA requirements. EPs expected to also maintain the quality of accreditation and meet the requirements of EAC Standard 2020. To ensure the quality of engineering education in Malaysia is always maintained and to implement CQI, EAC had organised and conducted a total of two (2) new EP workshops in March and October 2021. In addition, three (3) training sessions involving IHLs and PEs focused on the accreditation process were conducted throughout 2021. All those sessions shown in Table 2 were conducted online.



JADUAL 1: STATISTIK PANEL PENILAI EAC BAGI TAHUN 2021

Table 1: Statistics of EAC Evaluation Panel For 2021

Bil	Bidang	Akademik	Industri	Jumlah Besar
No.	Branch	Academic	Industry	Grand Total
1	Awam / <i>Civil</i>	56	26	82
2	Kimia / <i>Chemical</i>	33	13	46
3	Elektrikal & Elektronik / <i>Electrical & Electronic</i>	66	31	97
4	Mekanikal / <i>Mechanical</i>	90	34	124
5	Lain-lain / <i>Others</i>	23	1	24
Jumlah / <i>Total</i>		268	105	373

JADUAL 2: LATIHAN UNTUK PANEL PENILAI DAN PEMEGANG TARUH BAGI TAHUN 2021

Table 2: Training for Evaluation Panel and Stakeholder for 2021

Bil.	Tajuk	Tarikh
No.	Title	Date
1	Dialogue- Virtual Accreditation Visit (VAV) with Evaluation Panel	1 Mac 2021
2	EAC New Panel Evaluator Workshop 1/2021	15 – 17 Mac 2021
3	Dialogue - EAC/ETAC Writing Appendix D: Do's & Don'ts	15 Jun 2021
4	JWG EAC & ETAC Standards: Sharing Session on Online Learning and Micro-Credentials for Engineering & Engineering Technology Programmes	16 Ogos 2021
5	EAC New Panel Evaluator Workshop (2/2021)	4-6 Okt 2021

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LATARBELAKANG

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

Dengan pindaan kepada Akta Pendaftaran Jurutera 1967 pada tahun 2015, LJM telah menubuhkan ETAC dengan 21 ahli majlis yang terdiri daripada tujuh (7) 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 pada 2015.

Daripada 21 ahli 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.

ETAC memastikan kualiti graduan program ijazah teknologi kejuruteraan, diploma kejuruteraan dan program diploma teknologi kejuruteraan dapat dipertingkatkan melalui proses akreditasi. Kini setakat 31 Disember 2021, terdapat 69 program ijazah teknologi kejuruteraan dan 200 program diploma kejuruteraan yang diiktiraf oleh ETAC dan tersenarai dalam Daftar ETAC dan MQA.

BACKGROUND

The Engineering Technology Accreditation Council (ETAC) is a delegated body by the Board of Engineers Malaysia (BEM). ETAC started as a Protem Council in 2011 to provide a smooth transition in the accreditation of Engineering Technology and Engineering Technician Education programmes. The Protem 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 (7) groupings (BEM, learned bodies, industry/ employer, Public Services Department (PSD), Malaysian Qualifications 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 the engineering industry. The BEM believes that a good mixture of members from different backgrounds; practitioners, academics, related government agencies and learned societies will provide strength and balance for the council to exercise its role and function.

The ETAC assures that the quality of engineering technology bachelor degree, engineering diploma and engineering technology diploma graduates may be enhanced through the accreditation process. As of December 31, 2021, there are 69 engineering technology degree programmes and 200 engineering diploma programmes accredited by the ETAC and listed on the ETAC and MQA Register.

PENGIKTIRAFAN ANTARABANGSA DAN IMPAK GLOBAL

Semua program ijazah teknologi kejuruteraan, diploma kejuruteraan dan program diploma teknologi kejuruteraan yang diakreditasi oleh ETAC kini ditanda aras kepada piawaian antarabangsa. LJM telah menjadi ahli penandatangan Sydney Accord (SA) dan Dublin Accord (DA) di bawah pentadbiran International Engineering Alliance (IEA) semenjak tahun 2018. Semakan berkala dijangka akan berlangsung pada tahun 2023. Melalui pengiktirafan ini, program teknologi kejuruteraan, diploma kejuruteraan dan diploma teknologi kejuruteraan yang diakreditasi ETAC kini diiktiraf oleh 11SA dan sembilan (9) DA negara-negara ahli penandatangan.

Ini menunjukkan, kualiti pendidikan Teknologi Kejuruteraan dan Pendidikan Juruteknik Kejuruteraan dan juga sistem pendidikan negara adalah sama taraf dan sejajar dengan negara maju di dunia. Pelaksanaan proses akreditasi ETAC yang berkesan dan penambahbaikan yang berperingkat telah berjaya menarik pelaburan luar dalam pendidikan Teknologi Kejuruteraan dan Pendidikan Juruteknik Kejuruteraan di Malaysia. Ini dapat dibuktikan dengan pembukaan kampus-kampus cawangan universiti antarabangsa di Malaysia. Ini bukan sahaja dapat merangsang pertumbuhan ekonomi Malaysia dan menjadikan negara ini sebagai hab pendidikan kejuruteraan antarabangsa yang mapan.

Peranan LJM dalam IEA, SA dan DA sangat penting sebagai pemangkin pembangunan kejuruteraan di Malaysia. LJM telah menerima pengiktirafan di peringkat antarabangsa dan sentiasa mengambil bahagian dengan penglibatan yang aktif dan terus menyumbang dalam aktiviti pendidikan dan profesional.

Malaysia sentiasa bertekad untuk memenuhi standard antarabangsa dan jangkaan. ETAC telah menubuhkan pelan tindakan strategik dan sasaran untuk memastikan ETAC memenuhi keperluan standard ini.

TABDIR URUS DAN STRUKTUR

Operasi ETAC disokong oleh cabang pentadbirannya, Jabatan Akreditasi Kejuruteraan (EAD) yang terdiri daripada seorang Pengarah, tujuh (7) Pengarah Bersekutu dan sekretariat. Rajah 1 menunjukkan carta organisasi EAC dan ETAC.

INTERNATIONALLY RECOGNISED AND GLOBAL IMPACT

All ETAC accredited engineering technology bachelor degree, engineering diploma and engineering technology diploma programmes are benchmarked to international standards. BEM has been a full signatory to the Sydney Accord (SA) and Dublin Accord (DA) under the administration of the International Engineering Alliance (IEA) since 2018. A first periodic review is expected to take place in 2023. Through this recognition, ETAC accredited Engineering Technology and Engineering Technician Education programmes are now recognised by 11SA and nine (9) DA signatory member countries.

This indicates that the quality of Engineering Technology and Engineering Technician Education as well as our national education system in Malaysia is on a par with that of developed countries in the world. The effective implementation of the ETAC accreditation and continual quality improvement processes has indeed been successful in attracting external investors to invest into Engineering Technology and Engineering Technician Education in Malaysia. This is evidenced by the setting up of branch campuses by many renowned international universities we now see in Malaysia. This does not only stimulate the national economic growth but has also turned Malaysia into a sustainable global engineering education hub.

The role of BEM in IEA, SA and DA is paramount important to serve as a catalyst for engineering development in Malaysia. BEM has received international recognition and always participates with active involvement to continuously contribute to educational and professional activities.

Malaysia is always determined to keep abreast with the international standards and expectations. ETAC has established strategic action plans and targets to ensure that the ETAC meets the standard requirements.

GOVERNANCE AND STRUCTURE

The operation of ETAC is supported by its administrative arm, the Engineering Accreditation Department (EAD) which consists of a director, seven (7) Associate Directors and a secretariat. Figure 1 shows the EAC and ETAC organisation charts.

EAD 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.

Dalam menghadapi cabaran pandemik COVID-19, Kerajaan Malaysia telah menilai dasar pencegahan dan pelaksanaan Perintah Kawalan Pergerakan (PKP) secara berterusan. Oleh kerana itu, EAC dan ETAC telah membuat semakan ke atas dokumen panduan dan protokol akreditasi, iaitu:

1. Guiding Principles on Teaching-Learning and Assessment Implementation During COVID-19 Pandemic, Guideline No: 005, BEM (bertarikh 05.06.2021) (Ini adalah semakan ke atas dokumen panduan yang bertarikh 30.3.2020). Semakan ini menjelaskan pengisian Seksyen 3.0, memberikan beberapa contoh dan kemaskini ayat.
2. EAC and ETAC Procedure on Conducting Virtual Accreditation Visit (VAV), (Diluluskan pada 16.07.2021). (Prosedur asal diluluskan oleh EAC pada 19.11.2020 dan oleh ETAC pada 17.11.2020). Semakan ini memberikan lebih masa kepada IPT, dari 7 hari kepada 14 hari, bagi menyediakan dokumen dan video lawatan akreditasi dalam format digital.
3. EAC and ETAC Procedure – MCO and Post MCO from 1st January 2021 onwards, (Diluluskan pada 17.11.2020). Prosedur asal diluluskan oleh EAC pada 19.11.2020 dan oleh ETAC pada 17.11.2020. Semakan ini membenarkan semua lawatan akreditasi dijalankan secara maya sehingga keadaan dalam negara adalah terkawal.

Penambahbaikan yang berterusan ke atas semua Lawatan Akreditasi Maya (VAV) bergantung pada komunikasi yang meluas dan berkesan antara IPT, pasukan Panel Penilai dan pihak sekretariat di EAD. Melalui perancangan yang teliti, lawatan akreditasi secara maya boleh menjadi pengganti yang berkesan kepada lawatan akreditasi di tapak dan juga berjaya menghasilkan pengalaman yang berkualiti tinggi. Demi memastikan penilaian yang produktif, EAD telah menjalankan analisis post mortem VAV yang menghasilkan semakan-semakan (1) hingga (3) di atas.

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

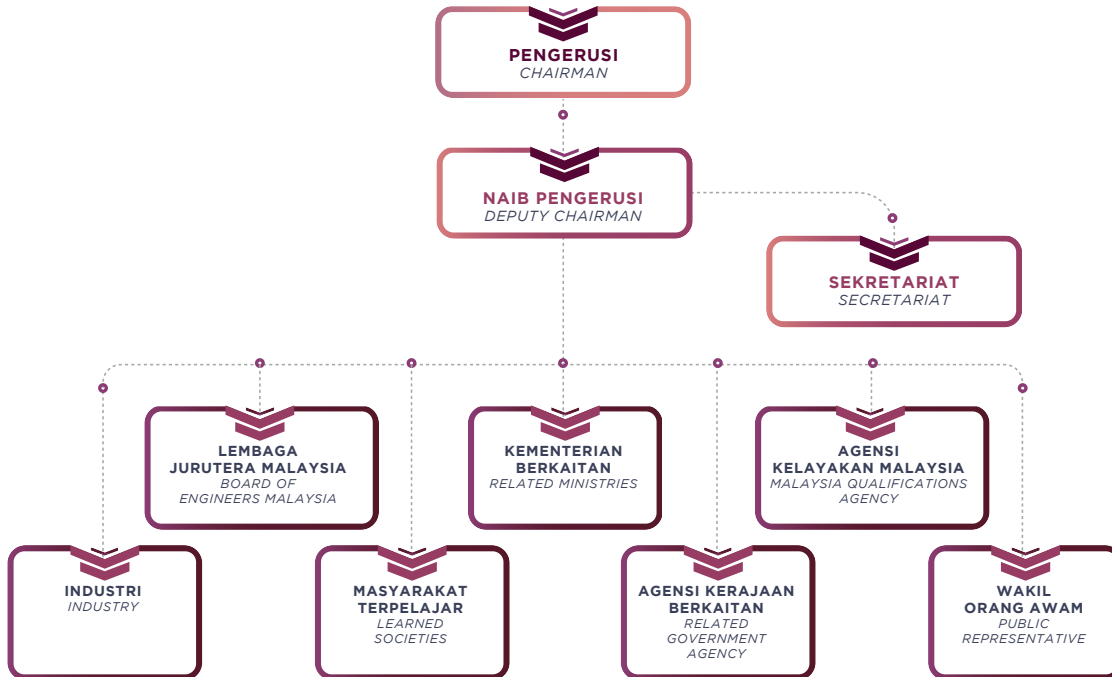
In response to the COVID-19 pandemic, the Malaysian government reviewed continuously the preventive and implementation of the Movement Control Order (MCO). In view of the such situation, EAC and ETAC have revised the guiding documents and accreditation protocols, namely:

1. *Guiding Principles on Teaching-Learning and Assessment Implementation During COVID-19 Pandemic, Guideline No: 005, BEM (dated 5.06.2021) (This is a revision to the guideline dated 30.3.2020).The revision elaborated the contents in Section 3.0, provided few examples and refined the sentences.*
2. *EAC and ETAC Procedure on Conducting Virtual Accreditation Visit (VAV), (Approved on 16.7.2021). (This procedure is a revised version approved by EAC on 19.11.20 and ETAC on 17.11.20).The revision provides a longer duration, from 7 days to 14 days, for the IHL to provide digitised documents and videos for the accreditation visit.*
3. *EAC and ETAC Procedure – MCO and Post MCO from 1st January 2021 onwards, (Approved on 17.11.2020). This procedure is a revised version approved by EAC on 19.11.20 and ETAC on 17.11.20). The revision allows all accreditation visits to be conducted on a virtual platform until the situation in the country is under control.*

The continuous improvement to all VAV relies on extensive and effective communication between IHL, the Evaluation Panel team and the EAD secretariat. With careful preparation, a virtual accreditation visit can be an effective substitute for an on-site visit and result in a high-quality experience. To ensure a productive evaluation, EAD conducted a VAV post mortem analysis which resulted in the revisions of (1) to (3).

Rajah 1 (Figure 1)

CARTA ORGANISASI ETAC ETAC ORGANISATION CHART



Ahli:

LJM

1. Prof. Ir. Dr. Norlida binti Bunyamin (Elektrikal) (Pengerusi)
2. Ir. Megat Johari bin Megat Mohd Noor (MySET) (Timbalan Pengerusi)
3. Tan Sri Dato' Prof. Ir. Dr. Chuah Hean Teik (UTAR)
4. Dato' Prof. Dr. Yuserrie bin Zainuddin (UMP)
5. Assoc. Prof. Ir. Dr. Mohd Khairil bin Rahmat (UniKL)
6. Ir. Mahzan bin Teh (MARA)
7. Ir. Dr. Ahmad Firdauz bin Abdul Mutalib (JKR)
8. Ir. Dr. Zarabizan bin Zakaria (JKR)

PERSATUAN BERASASKAN PENDIDIKAN

1. Dato' Prof. Dr. Abdul Hakim bin Juri (MySET)
2. Ir. Dr. Tan Chee Fai (IEM)
3. Ir. Yam Teong Sian (TAM)
4. Encik Hamdan bin Samah @ Othman (COWAM)

KEMENTERIAN BERKAITAN

1. Dr. Wan Nasarudin bin Wan Jalal (MOHR)
* Puan Nurhida binti Shaharuddin (MOHR) – Wakil ganti
2. Prof. Ir. Dr. Robiah binti Yunus (MOE)
*Prof. Madya Dr. Wan Zuhainis binti Saad (MOE) – Wakil ganti
3. Encik Wan Muzani bin Wan Idris (JPA)
* Puan Mimi Mazrah binti Majidi (JPA) – Wakil ganti

Members:

BEM

1. Prof. Ir. Dr. Norlida binti Bunyamin (Electrical) (Chairman)
2. Ir. Megat Johari bin Megat Mohd Noor (MySET) (Deputy Chairman)
3. Tan Sri Dato' Prof. Ir. Dr. Chuah Hean Teik (UTAR)
4. Dato' Prof. Dr. Yuserrie bin Zainuddin (UMP)
5. Assoc. Prof. Ir. Dr. Mohd Khairil bin Rahmat (UniKL)
6. Ir. Mahzan bin Teh (MARA)
7. Ir. Dr. Ahmad Firdauz bin Abdul Mutalib (JKR)
8. Ir. Dr. Zarabizan bin Zakaria (JKR)

LEARNED SOCIETY

1. Dato' Prof. Dr. Abdul Hakim bin Juri (MySET)
2. Ir. Dr. Tan Chee Fai (IEM)
3. Ir. Yam Teong Sian (TAM)
4. Encik Hamdan bin Samah @ Othman (COWAM)

RELATED MINISTRY

1. Dr. Wan Nasarudin bin Wan Jalal (MOHR)
* Puan Nurhida binti Shaharuddin (MOHR) – Alternate Representative
2. Prof. Ir. Dr. Robiah binti Yunus (MOE)
*Prof. Madya Dr. Wan Zuhainis binti Saad (MOE) – Alternate Representative
3. Encik Wan Muzani bin Wan Idris (JPA)
* Puan Mimi Mazrah binti Majidi (JPA) – Alternate Representative

AGENSI KERAJAAN BERKAITAN

1. Ir. Raslim bin Salleh (CIDB)
* Encik Rozaiman Hj Hassan (CIDB) – Wakil ganti
2. Prof. Ir. Dr. Khairul Salleh bin Mohamed Sahari (MQA)
* Encik Abdul Saman bin Taip (MQA) – Wakil ganti

INDUSTRI

1. Dr. Ahmad Jaafar bin Abdul Hamid (TNB)
2. Ir. Azizi bin Mohd Noor (TELEKOM)
3. Encik Ricky Liew Chee Leong (SR Aviation Sdn Bhd)

WAKIL AWAM

Encik Zulkifli bin Hj. Haron (Zul Design Autotronic)

RELATED GOVERNMENT AGENCY

1. Ir. Raslim bin Salleh (CIDB)
* Encik Rozaiman Hj Hassan (CIDB) – Alternate Representative
2. Prof. Ir. Dr. Khairul Salleh bin Mohamed Sahari (MQA)
* Encik Abdul Saman bin Taip (MQA) – Alternate Representatove

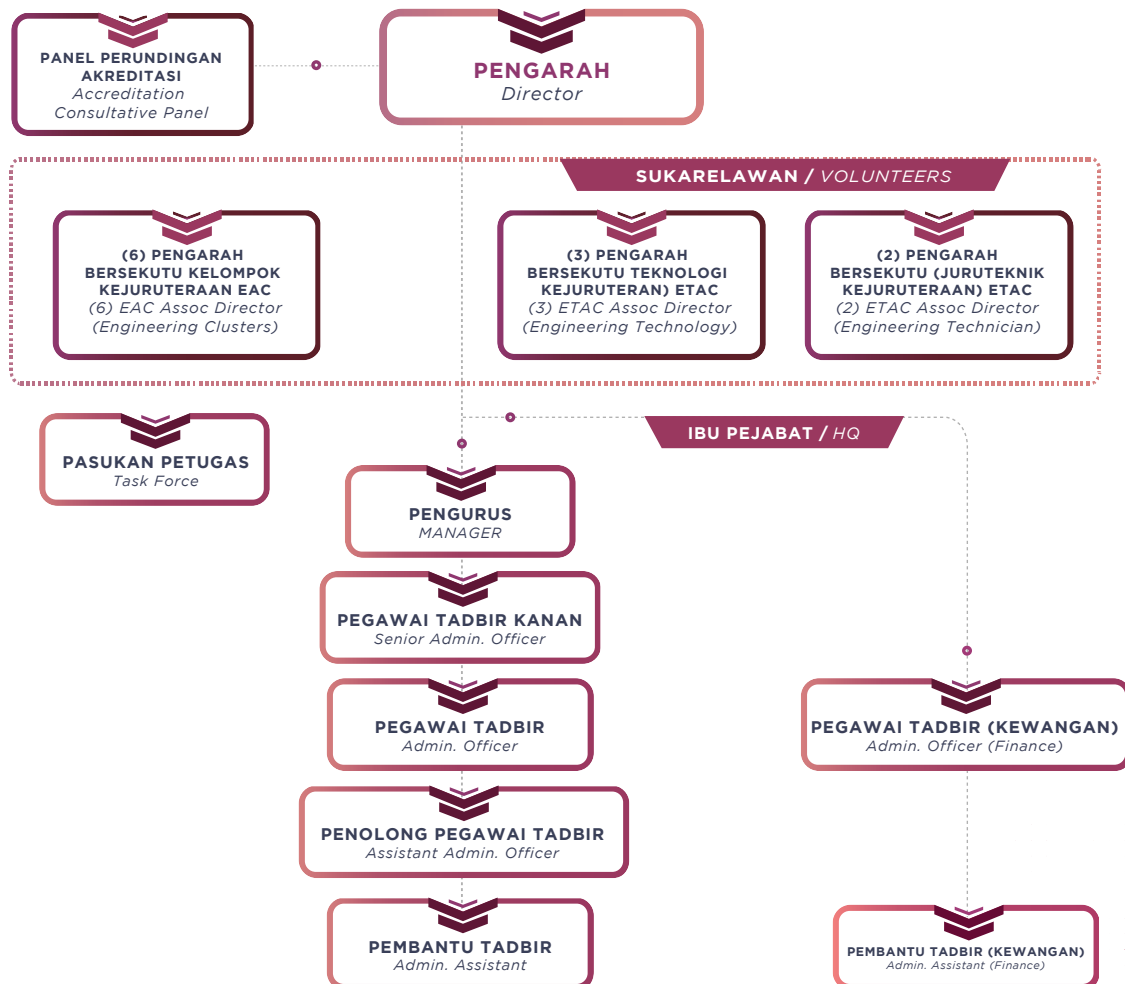
INDUSTRY

1. Dr. Ahmad Jaafar bin Abdul Hamid (TNB)
2. Ir. Azizi bin Mohd Noor (TELEKOM)
3. Mr. Ricky Liew Chee Leong (SR Aviation Sdn Bhd)

PUBLIC REPRESENTATIVE

Encik Zulkifli bin Hj. Haron (Zul Design Autotronic)

CARTA ORGANISASI EAD EAD ORGANISATION CHART



Terma Rujukan:

1. Merangka dan mengemaskini polisi dan kriteria akreditasi.
2. Meluluskan garis panduan terperinci dan prosedur operasi untuk akreditasi.
3. Mengawasi semua penyusunan operasi dan perlantikan ahli Panel Penilai.
4. Menerima laporan penilaian program teknologi kejuruteraan dan juruteknik kejuruteraan dan memutuskan sama ada akreditasi perlu diberikan atau sebaliknya.
5. Mewujudkan dan menyenggara senarai program teknologi kejuruteraan dan juruteknik kejuruteraan tempatan dan asing yang diiktiraf.
6. Memberi maklumbalas terhadap sebarang aduan atau rayuan mengenai proses akreditasi dan sebarang cadangan perubahan.
7. Mengawasi pembangunan dan operasi pengakreditasi serta pengiktirafan bersama program kejuruteraan dengan negara lain.
8. Memastikan Lembaga dimaklumkan mengenai aktiviti-aktiviti ETAC dan jika perlu, membuat cadangan kepada Ahli Lembaga.
9. Mengukuhkan penyebaran perkembangan dan amalan terbaik dalam bidang teknologi kejuruteraan dan pendidikan juruteknik kejuruteraan.
10. Menasihati Lembaga mengenai pernyataan awam atau representasi yang perlu dibuat berhubung pendidikan teknologi kejuruteraan.
11. Menjalankan mesyuarat perundingan dengan IPT bila perlu
12. Menjalankan mesyuarat sekurang-kurangnya 6 kali setahun.
13. Mencadangkan ahli ETAC tambahan jika perlu.

OBJEKTIF AKREDITASI

Objektif akreditasi adalah untuk memastikan graduan daripada program kejuruteraan yang diiktiraf memenuhi keperluan akademik minimum untuk pendaftaran sebagai Teknologis Kejuruteraan dan Pemeriksa Tapak dengan LJM.

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 technology and engineering technician programmes, and decide whether accreditation should be granted or otherwise.*
5. *Establish and maintain a list of local and foreign accredited engineering technology and engineering technician 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 ETAC and where necessary make recommendations to the Board.*
9. *Foster the dissemination of developments and best practices in engineering technology and engineering technician education.*
10. *Advise the Board on public statements or representations that should be made in relation to engineering technology education.*
11. *Hold consultation meetings with IHLs as and when necessary.*
12. *Hold meetings at least 6 times per year.*
13. *Propose additional ETAC members if necessary.*

ACCREDITATION OBJECTIVE

The objective of accreditation is to ensure that graduates of the accredited engineering programmes satisfy the minimum academic requirements for registration as an Engineering Technologist and Inspector of Works with the BEM.

Di samping itu, objektif akreditasi adalah untuk memastikan bahawa Peningkatan Kualiti Berterusan (CQI) diamalkan oleh 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. Pengakreditasian adalah secara sukarela; walau bagaimanapun program kejuruteraan perlu diiktiraf bagi membolehkan graduan daripada program-program ini berdaftar dengan LJM.

STRATEGI

1. Meningkatkan sistem pengurusan akreditasi
2. Meningkatkan penglibatan antarabangsa.
3. Menggalakkan jaringan dengan pengurusan atasan / kakitangan utama.
4. Mengekalkan panel penilai yang berpengalaman dalam bidang yang berkaitan.
5. Mewujudkan panel penilai utama untuk penglibatan antarabangsa.
6. Khidmat sokongan sekretariat.

PANEL PENILAI

ETAC mempunyai kumpulan Penilai Program (EP) yang terlatih dari kalangan akademik dan industry.

Statistik terkini pada 31 Disember 2021 menunjukkan ETAC mempunyai seramai 356 EP yang terlatih dan aktif, yang mana 37 EP adalah EP industri. Buat masa ini ETAC kekurangan EP sebanyak 35%. Jadual 1 menunjukkan statistik EP.

ETAC memastikan EP dilengkapi dengan pengetahuan terkini dalam penilaian akreditasi sejajar dengan keperluan SA, DA dan IEA. EP juga memelihara kualiti akreditasi dan menepati keperluan ETAC Standard 2020. Bagi memelihara kualiti pendidikan Teknologi Kejuruteraan dan Pendidikan Juruteknik Kejuruteraan di Malaysia dan kepentingan melaksanakan CQI, ETAC telah menyusun dan melaksanakan sebanyak dua (2) bengkel EP baru telah dijalankan pada bulan Mac dan Oktober 2021. Selain itu, tujuh (7) sesi latihan yang melibatkan IPT dan EP yang tertumpu pada proses akreditasi telah dijalankan di sepanjang tahun 2021. Semua sesi telah dijalankan secara dalam talian seperti di Jadual 2..

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.

STRATEGIES

1. Enhance accreditation management system
2. Enhance international involvement
3. Promote networking with top management / key personnel
4. Sustain experienced evaluators in relevant disciplines
5. Establish panel of leading evaluators for international involvement
6. Sustain the secretariat

PANEL EVALUATORS

The ETAC has a group of trained Panel of Evaluators (PE) from amongst the academia and industry.

The latest statistics as of 31 December 2021 showed that there is a total of 356 EP trained and active of whom a total of 37 EPs are from the industry. Currently, the ETAC is short of 35% EPs. Table 1 shows the EP statistics.

The ETAC ensures EPs are equipped with the up to date knowledge in accreditation which is in line with SA, DA and IEA requirements. EPs are expected to also maintain the quality of accreditation and meet the requirements of ETAC Standards 2020. To ensure the quality of Engineering Technology and Engineering Technician education in Malaysia is always maintained and the importance of CQI implementation, ETAC had organised and conducted a total of two (2) new EP workshops in March and October 2021. In addition, seven (7) training sessions involving IHLs and EPs focused on the accreditation process were conducted throughout 2021. All those sessions shown in Table 2 were conducted online.

Jadual 1: Statistik Panel Penilai ETAC Bagi Tahun 2021

Table 1: Statistics of ETAC Evaluation Panel For 2021

Bil	Bidang	Akademik	Industri	Jumlah Besar
No.	Branch	Academic	Industry	Grand Total
1.	Kimia / Chemical	29	0	29
2.	Awam / Civil	53	3	56
3.	Elektrikal / Electrical	48	12	60
4.	Elektronik / Electronic	66	4	70
5.	Mekanikal / Mechanical	82	11	93
6.	Lain – lain Keterangan / Others Details	41	7	48
	Agricultural	2		2
	Aerospace	2		2
	Aeronautical		1	1
	Aviation	1		1
	Biomedical	3		3
	Construction	1		1
	Computer	1	1	2
	Computer System	1		1
	Industrial	2	1	3
	Manufacturing	11	1	12
	Material	8		8
	Mechatronics	6		6
	Medical Electronics	1		1
	Mineral Resources	1		1
	Petroleum		1	1
	Polymer	1		1
	Jumlah / Total	319	37	356

Jadual 2: Latihan Untuk Panel Penilai Dan Pemegang Taruh Bagi Tahun 2021

Table 2: Training For Evaluation Panel And Stakeholder For 2021

Bil.	Tajuk	Tarikh
No.	Title	Date
1	Dialogue- Virtual Accreditation Visit (VAV) with Evaluation Panel	1 Mac 2021
2	ETAC New Panel Evaluator Workshop (1/2021)	22-24 Mac 2021
3	ETAC-IHL Dialogue on Challenges and Effectiveness of Simulated Experiments.	12 Apr 2021
4	<i>Bengkel Pemetaan DK, DP & NA – BKT Mara</i>	21-22 Apr 2021
5	Dialogue - EAC/ETAC Writing Appendix D: Do's & Don'ts	15 Jun 2021
6	BKT - ETAC Training for IHL	17 Jun 2021
7	ETAC-BKT MARA New Panel Evaluator Workshop	29 Jun – 1 Jul 2021
8	JWG EAC & ETAC Standards: Sharing Session on Online Learning and Micro-Credentials for Engineering & Engineering Technology Programmes	16 Ogos 2021
9	ETAC New Panel Evaluator Workshop (2/2021)	11 – 13 Okt 2021

MENGAWAL SELIA 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

(b) untuk menentukan dan mengawal selia tatakelakuan dan etika profesyen kejuruteraan

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

(b) to determine and regulate the conduct and ethic of the engineering profession

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

PENGENALAN

Akta Pendaftaran Jurutera 1967 (REA) telah dipinda pada tahun 2015 bagi memperkenalkan kategori baru iaitu Jurutera Profesional dengan Perakuan 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 mengeluarkan Perakuan Amalan kepada Jurutera Profesional.

Format Peperiksaan Kecekapan Profesional

Peperiksaan Kecekapan Profesional (PCE) menguji calon di dalam lingkungan perkhidmatan kejuruteraan profesional, sebagaimana ditafirikan 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

PROFESSIONAL COMPETENCY EXAMINATION (PCE)

INTRODUCTION

The Registration of Engineers Act 1967 has been amended in year 2015 to introduce a new category of registration i.e. 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 of Civil & Structural, Mechanical and Electrical.

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*

LJM telah menjalankan PCE semenjak tahun 2016 kecuali pada tahun 2020 disebabkan oleh langkah pencegahan Covid-19. Pada tahun 2021, PCE telah diadakan di tiga lokasi berbeza iaitu di Universiti Malaya, Kuala Lumpur, di Kuching, Sarawak dan di Kota Kinabalu, Sabah pada 13 dan 14 November 2021. Seramai 346 orang calon telah mendaftar bagi peperiksaan tersebut dengan jumlah seperti berikut:

- 166 calon (Awam)
- 106 calon (Elektrik)
- 61 calon (Mekanikal)
- 5 calon (Kimia)
- 2 calon (Geoteknik)
- 4 calon (Pelombongan)
- 2 calon (Alam Sekitar)

Keputusan Peperiksaan Kecekapan Profesional (PCE) yang dijalankan pada bulan November 2021 hanya diketahui pada awal suku tahun kedua, 2022.

Webinar PCE 2021

LJM telah berjaya mengendalikan webinar PCE menggunakan platform Zoom buat pertama kali pada 24.8.2021 bagi menerangkan peperiksaan PCE dan menjawab persoalan secara terus dari peserta webinar.

Antara kandungan webinar tersebut adalah seperti berikut:

- Penerangan keperluan PKP
- Silibus dan contoh-contoh soalan
- Sesi soal jawab bersama pemeriksa

BEM has conducted PCE since 2016 except in year 2020 due to Covid-19 restriction. In 2021, PCE was conducted on 13th and 14th November 2021 at three locations namely Kuala Lumpur, Kuching, Sarawak and Kota Kinabalu, Sabah. A total of 346 candidates enrolled for the examination in the following branch of engineering:

- 166 candidates (Civil)
- 106 candidates (Electrical)
- 61 candidates (Mechanical)
- 5 candidates (Chemical)
- 2 candidates (Geotechnical)
- 4 candidates (Mining)
- 2 candidates (Environmental)

Results for the Professional Competency Examination conducted in November 2021 will be released in early of second quarter, 2022.

Webinar PCE 2021

BEM for the first time has successfully conducted a webinar for PCE via Zoom on 24.8.2021. The webinar was held to give explanation on PCE and answering directly enquiry from the participants.

The contents of the webinar are as follows:

- *Explanation on requirements of PCE*
- *Syllabus and sample questions*
- *Q&A session with the Examiners*

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).

Section 10(2)(B) of the Registration of Engineers Act 1967 (Revised 2015) states that "any person who holds 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 (PE).

LJM pada 16hb 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).

BEM on 16th August 2018 has decided to impose 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).

Pada 1hb Ogos 2021, LJM telah melancarkan permohonan Penilaian Tata Kelakuan Profesional secara atas talian di portal MyBEM di www.engineer.org.my. Pemohon kini boleh menghantar permohonan secara atas talian di laman tersebut.

BEM on 1st August 2021 has launched online application for Code of Professional Conduct Assessment on MyBEM at www.engineer.org.my. Applicant now may submit online application via MyBEM.

Sejumlah 49 orang calon telah menduduki Penilaian Tata Kelakuan Profesional sepanjang tahun 2021.

A total of 49 applicants has sat for the assessment on 'Code of Professional Conduct' in 2021.

Keputusan Penilaian adalah seperti berikut:

The results for the assessment are as follows:

Tahun	Lulus	Gagal	Jumlah
Year	Pass	Fail	Total
2020	38	5	43
2021	41	8	49

Perbandingan Keputusan Penilaian Tata Kelakuan Profesional 2020 & 2021
Comparison of Code of Professional Conduct Assessment 2020 & 2021

PEPERIKSAAN PENILAIAN PROFESIONAL (PAE) *Professional Assessment Examination (PAE ROUTE A)*

Peperiksaan Penilaian Profesional Route A (PAE Route A) 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 ejen untuk mengendalikan PAE dan seterusnya melantik Malaysian Society for Engineering & Technology (MySET) pada tahun 2014.

Jurutera Siswazah yang berdaftar hanya layak menduduki PAE Route A 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):
 - Bahagian A : Berkaitan pengalaman dan latihan calon
 - Bahagian B : Kod Etika

Calon diberi masa 1½ jam untuk menjawab setiap Bahagian.

PAE Tahun 2021

Pada 1.8.2021, LJM telah melancarkan Modul Pengurusan Peperiksaan, MyBEM. Pemohon kini boleh menghantar permohonan PAE secara atas talian di portal MyBEM, www.engineer.org.my.

Permohonan PAE Route A menunjukkan peningkatan sebanyak 33% berbanding tahun 2020, walaupun negara dilanda pandemik COVID-19.

Professional Assessment Examination Route A (PAE Route A) was introduced in 1990 by the Board of Engineers 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 Route A 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 Route A 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):
 - Section A : Related to the candidate's training and experience
 - Section B : Code of Ethics

Candidate will be allocated 1½ hours for each Section.

PAE Year 2021

BEM has launched Examination Management Module in MyBEM on 1.8.2021. Applicant now may submit online application via MyBEM portal at www.engineer.org.my.

Application of PAE in 2021 has shown an increment of 33%, compared to 2020, even though the country was in situation of pandemic COVID-19.

Jadual 1 / Table 1:
Permohonan PAE Route A dikendalikan oleh MySET & IEM dari tahun 2020 hingga 2021
PAE conducted by MySET & IEM in year 2020 & 2021

Ejen (Agent)	Tahun (Year)	2020	2021
MySET		103	146
IEM		107	134
Jumlah / Total		210	280

Jadual 2 / Table 2:
Keputusan PAE Route A dari tahun 2020 dan 2021
PAE Results for year 2020 & 2021

Tahun (Year)	Keputusan (Result)	Lulus (Pass)	Gagal (Fail)
2021		108 (90%)	12 (10%)
2020		127 (94%)	9 (6%)
Jumlah / Total		235 (92%)	21 (8%)

Kadar lulus PAE menunjukkan penurunan sebanyak 4% pada tahun 2021 berbanding tahun 2020.
The passing rate of PAE for year 2021 shown a decrement of 4% compared to 2020.



The background features a complex geometric design with overlapping triangles in shades of pink, red, and white. A central window-like shape reveals a photograph of a modern city skyline with several tall skyscrapers. The overall aesthetic is clean and professional.

PENCAPAIAN 2021

Achievements 2021

STATISTIK UTAMA MAIN STATISTICS

Jumlah Pendaftaran Mengikut Kategori sehingga 31.12.2021 Total Registration by Category as at 31.12.2021

Pendaftaran Individu Registered Persons

Kategori / Category	2020	2021
Jurutera Profesional dengan Perakuan Amalan (Professional Engineer with Practising Certificate)	10,645	10,645
Jurutera Profesional Professional Engineer	21,247	21,670
Pemeriksa Bertauliah Accredited Checker	40	41
Jurutera Siswazah Graduate Engineer	150,603	162,454
Teknologis Kejuruteraan Engineering Technologist	9,862	11,589
Pemeriksa Tapak Inspector of Works	7,451	8,018

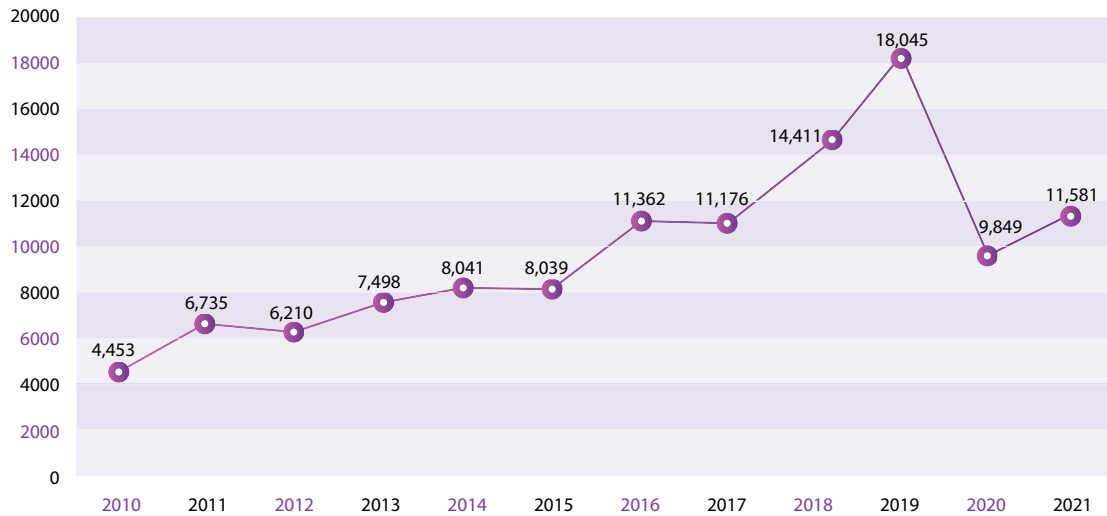
Nota: Tiada Peperiksaan Kecekapan Profesional (PCE) dijalankan pada tahun 2020 disebabkan langkah pencegahan Covid-19.

Note: There is no Professional Competency Examination (PCE) conducted in 2020 due to restriction on pandemic Covid-19.

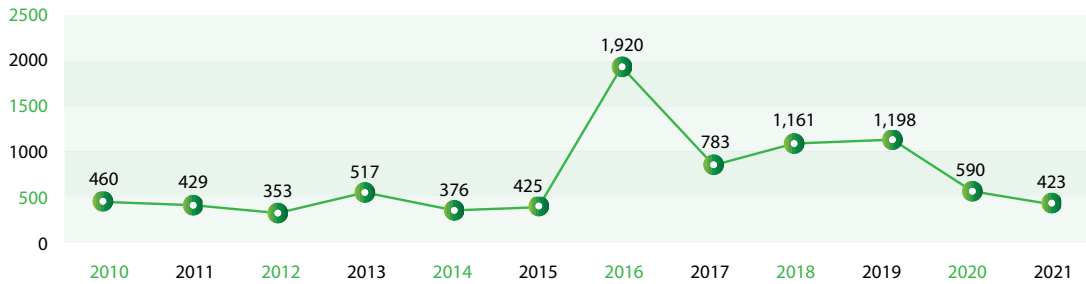
Syarikat Amalan Perunding Kejuruteraan Engineering Consultancy Practices

Kategori / Category	2020	2021
Pertubuhan Perbadanan (Seksyen 7A) Body Corporate	1,622	1,679
Pertubuhan Perbadanan - Amalan Multi Disiplin (seksyen 7B) [Kejuruteraan sahaja] Body Corporate – Multi Disciplinary Practice (section 7B) [Engineering only]	69	71
Perkongsian Partnership	357	358
Pemilik Tunggal Sole Proprietorship	1,764	1,805

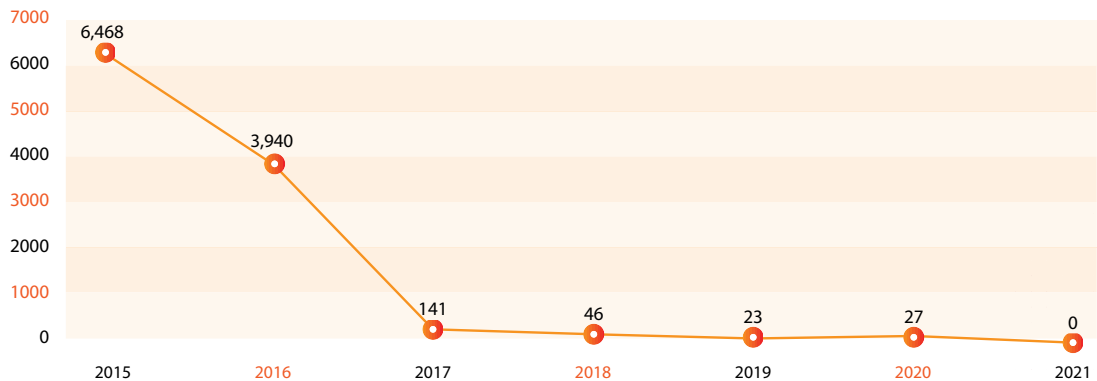
Bilangan Jurutera Siswazah Berdaftar Mengikut Tahun (Tahun 2010-2021)
Number of Registered Graduate Engineer by Year (for the year 2010-2021)



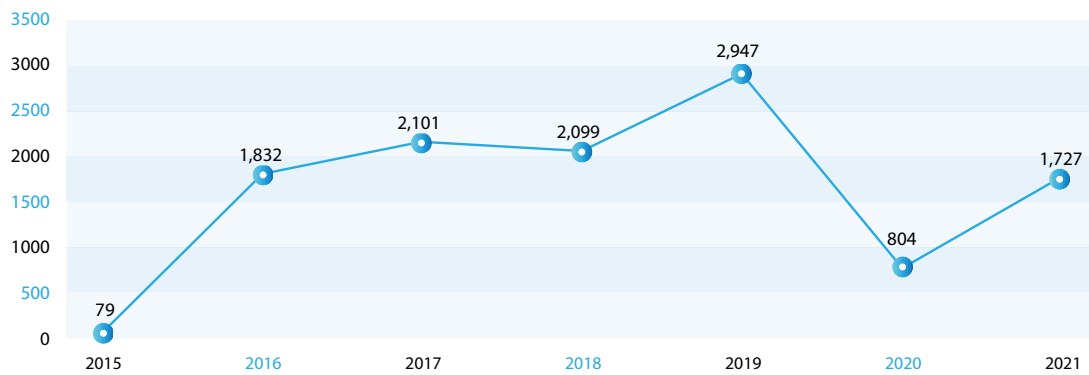
Bilangan Jurutera Profesional Berdaftar Mengikut Tahun (Tahun 2010-2021)
Number of Registered Professional Engineer by Year (for the year 2010-2021)



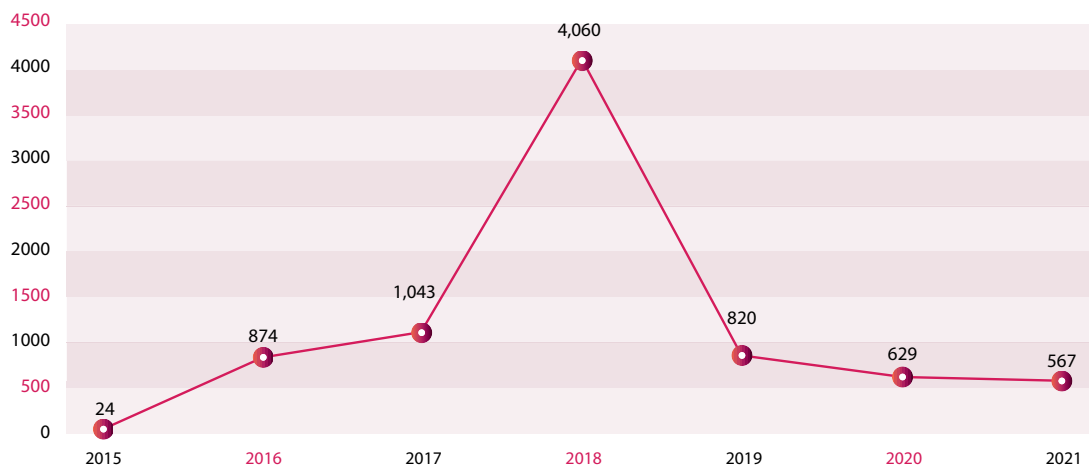
Bilangan Jurutera Profesional dengan Perakuan Amalan Berdaftar Mengikut Tahun (Tahun 2010-2021)
Number of Registered Professional Engineer with Practising Certificate by Year (for the year 2010-2021)



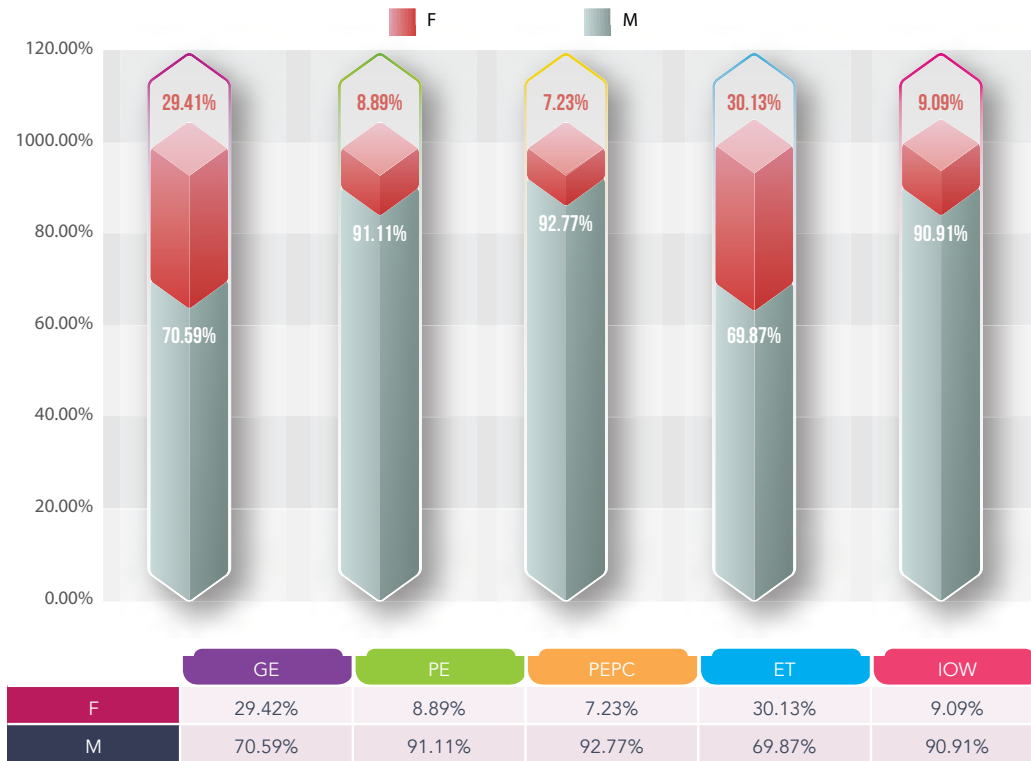
Bilangan Teknologis Kejuruteraan Berdaftar Mengikut Tahun (Tahun 2015-2021)
Number of Registered Engineering Technologist by Year (for the year 2015-2021)



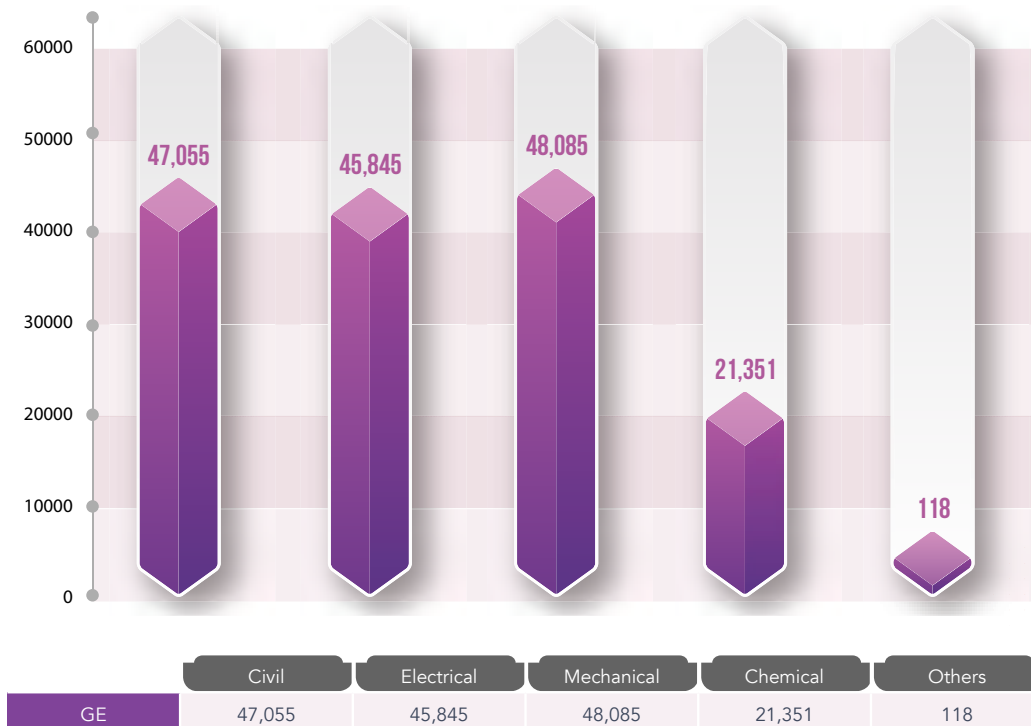
Bilangan Pemeriksa Tapak Berdaftar Mengikut Tahun (Tahun 2015-2021)
Number of Registered Inspector of Works by Year (for the year 2010-2021)



Peratusan Orang Berdaftar Mengikut Jantina Sehingga 31.12.2021
Percentage of Registered Person by Gender as at 31.12.2021



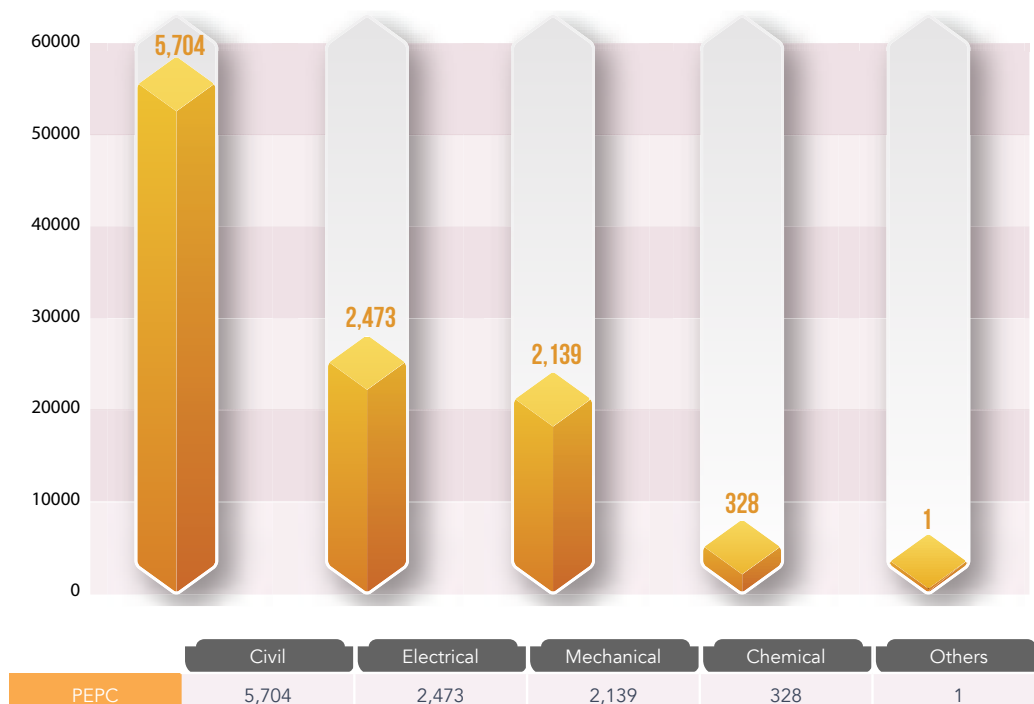
Bilangan Jurutera Siswazah Berdaftar Mengikut Disiplin Sehingga 31.12.2021
Number of Registered Graduate Engineer by Discipline as at 31.12.2021



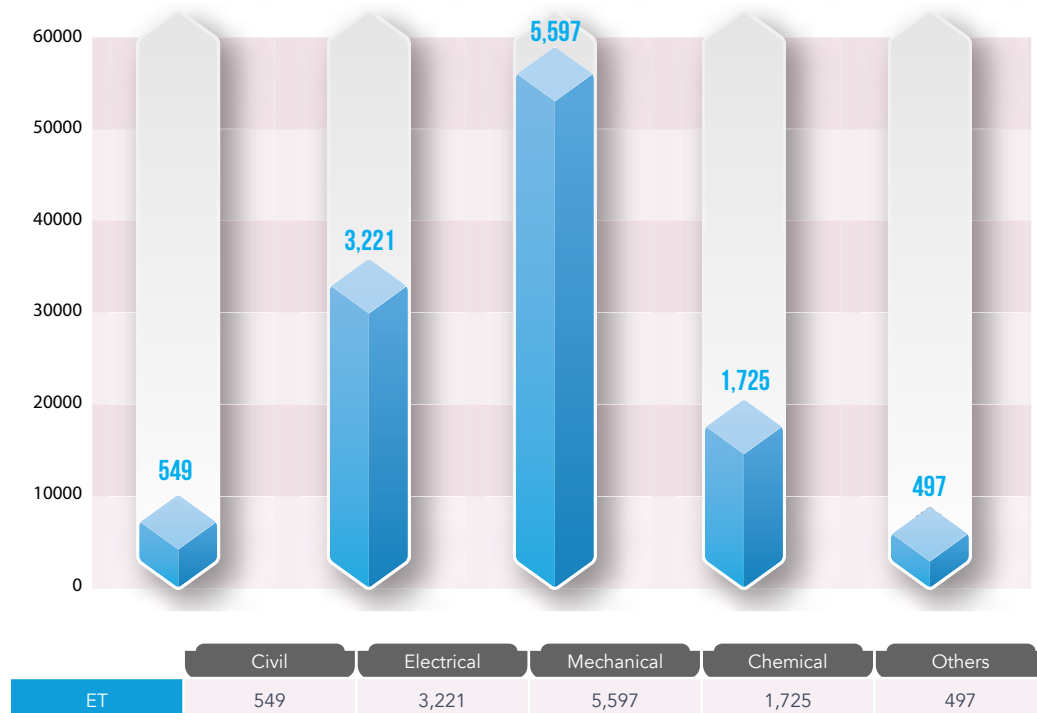
Bilangan Jurutera Profesional Berdaftar Mengikut Disiplin Sehingga 31.12.2021
Number of Registered Professional Engineer by Discipline as at 31.12.2021



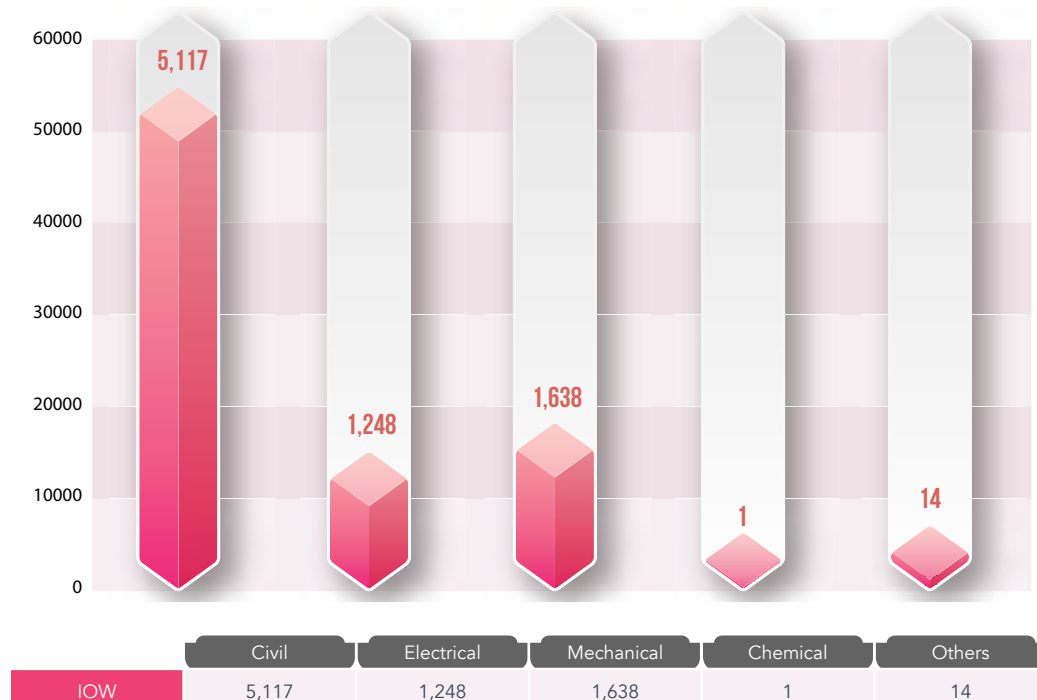
Bilangan Jurutera Profesional dengan Perakuan Amalan Berdaftar Mengikut Disiplin Sehingga 31.12.2021
Number of Registered Professional Engineer with Practising Certificate by Discipline as at 31.12.2021



Bilangan Teknologis Kejuruteraan Berdaftar Mengikut Disiplin Sehingga 31.12.2021
Number of Registered Engineering Technologist by Discipline as at 31.12.2021

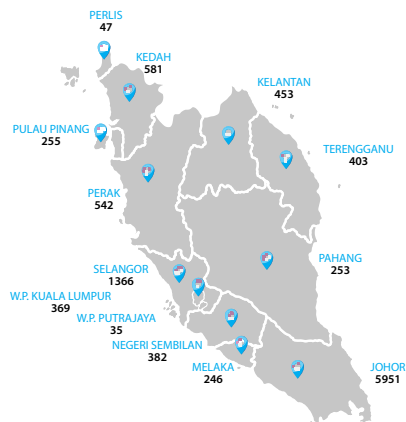


Bilangan Pemeriksa Tapak Berdaftar Mengikut Disiplin Sehingga 31.12.2021
Number of Registered Inspector of Works by Discipline as at 31.12.2021

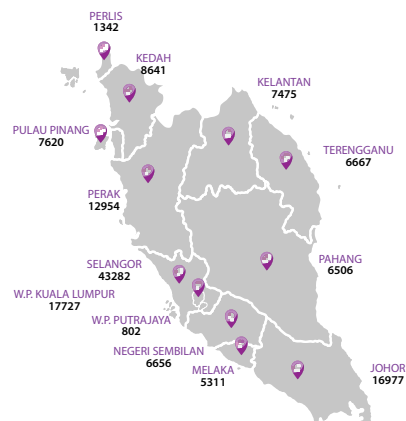
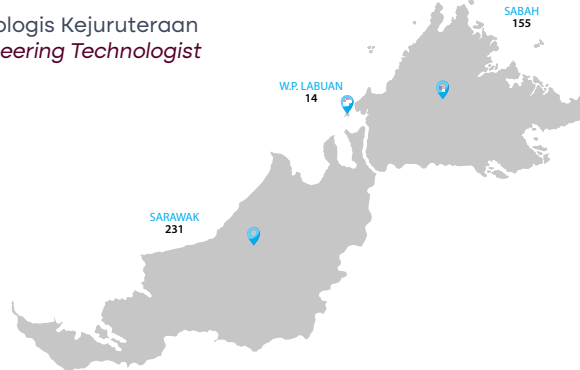


BILANGAN ORANG BERDAFTAR MENGIKUT NEGERI SEHINGGA 31.12.2021

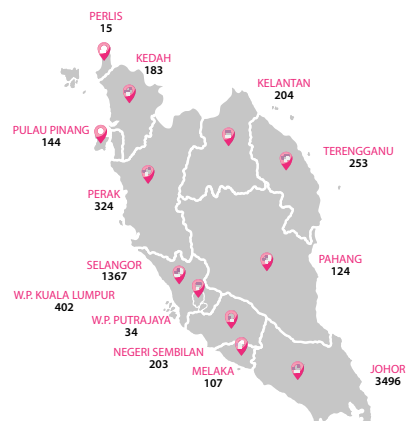
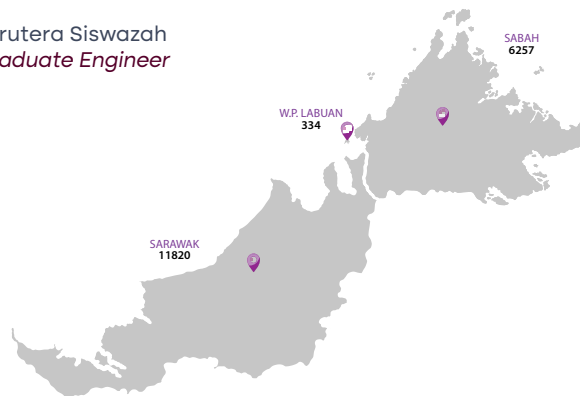
NUMBER OF REGISTERED PERSON BY STATES AS AT 31.12.2021



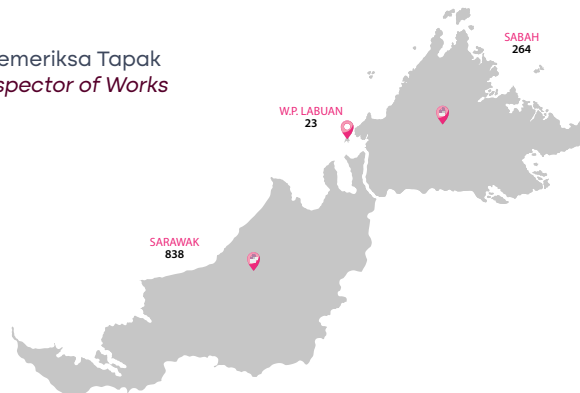
Teknologis Kejuruteraan
Engineering Technologist



Jurutera Siswazah
Graduate Engineer

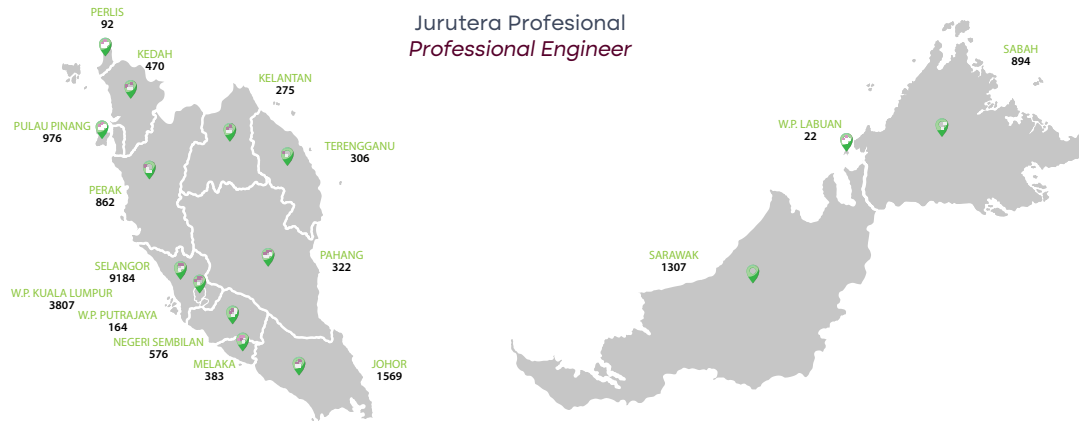


Pemeriksa Tapak
Inspector of Works



BILANGAN ORANG BERDAFTAR MENGIKUT NEGERI SEHINGGA 31.12.2021

NUMBER OF REGISTERED PERSON BY STATES AS AT 31.12.2021



ADUAN (TATA KELAKUAN) TERHADAP ORANG BERDAFTAR YANG DITERIMA DALAM TAHUN 2021

COMPLAINT (CODE OF CONDUCT) AGAINST REGISTERED PERSON RECEIVED IN YEAR 2021

KES TATALAKU CODE OF CONDUCT CASES

Kes Baru / New Cases	Prima / Facts		Dalam Process / (In process)
	Tidak / No	Ya / Yes	
46	18	18	10

Status/Keputusan Jawatankuasa Penyasatan Tahun 2021			Perbicaraan oleh Jawatankuasa Disiplin Tahun 2021		Rayuan kepada Lembaga Rayuan Tahun 2021	
Status/Decision of Investigating Committee in 2021			Hearing by Disciplinary Committee in 2021		Appeal to Appeal Board in 2021	
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
14	18	3	13	2	0	0

Angka tersebut merangkumi kes yang dibawa ke hadapan dari tahun-tahun sebelumnya dan tidak semestinya termasuk semua kes prima facie yang dimuktamadkan oleh Jawatankuasa Amalan Ikhtisas tetapi tidak disahkan oleh Lembaga pada tahun berakhir.

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

PENGIKTIRAFAN PROGRAM KEJURUTERAAN

ACCREDITATION OF ENGINEERING PROGRAMMES

Terdapat 269 program kejuruteraan yang aktif sehingga 31 Disember 2021 seperti yang tertera dalam Jadual 1. Program ini adalah setara dengan semua program kejuruteraan di peringkat WA.

There is a total of 269 active engineering programmes as at 31st December 2021 as shown in Table 1. These programmes have met the equivalent engineering standards at the WA level.

Pada tahun 2021, EAC telah mengadakan penilaian akreditasi di 71 buah IPT, melibatkan sebanyak 144 program kejuruteraan. Semua penilaian telah dijalankan secara Lawatan Akreditasi Maya (VAV) dan desktop.

In 2021, EAC has conducted accreditation to 71 IHLs involving 144 engineering programmes. All reviews were conducted in Virtual Accreditation Visit (VAV) and desktop modes.

Jadual 1: Program Kejuruteraan Yang Aktif Pada 31 Disember 2021

Table 1: Active Engineering Programmes as at 31 December 2021

Bil.	Universiti Awam	Bil Program
No.	Public University	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)	24
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
22.	Heriot-Watt University Malaysia Campus	5

Bil.	Universiti Awam	Bil Program
No.	Public University	No of Programme
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	5
31.	NILAI University	2
32.	SEGi University	4
33.	Southern University College	1
34.	Swinburne University of Technology	5
35.	Tunku Abdul Rahman University College (TARC)	5
36.	Taylor's University	3
37.	UCSI University	7
38.	University of Technology Sarawak (UTS)	3
39.	University of Nottingham (UNM)	6
40.	Universiti Selangor (UNISEL)	3
41.	Universiti Tenaga Nasional (UNITEN)	5
42.	Universiti Tunku Abdul Rahman (UTAR), Sg. Long	9
43.	Universiti Tunku Abdul Rahman (UTAR), Kampar, Perak	4
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.	Universiti Kuala Lumpur - Malaysia Spanish Institute (UNIKL MSI)	1
49.	Quest International University (QIU)	1
50.	Limkokwing University of Creative Technology (LUCT)	2
51.	Xiamen University	2
52.	University Malaysia of Computer Science & Engineering (UNIMY)	1
53.	City University	2
54.	First City University College (FCUC)	1
Jumlah Besar (Grand Total)		269

PENGIKTIRAFAN PROGRAM TEKNOLOGI KEJURUTERAAN & JURUTEKNIK KEJURUTERAAN

ACCREDITATION OF ENGINEERING TECHNOLOGY PROGRAMMES & ENGINEERING TECHNICIAN PROGRAMMES

Terdapat sebanyak 69 program ijazah teknologi kejuruteraan dan 200 program diploma kejuruteraan yang aktif sehingga 31 Disember 2021 seperti yang tertera dalam Jadual 1. Program ini adalah setara dengan semua program kejuruteraan di peringkat SA dan DA.

There is a total of 69 engineering technology degree programmes and 200 engineering diploma programmes as of 31 December 2021 as shown in Table 1. These programmes have met the equivalent engineering standards at the SA and DA level.

Pada tahun 2021, ETAC telah mengadakan penilaian akreditasi di 69 buah institusi pengajian tinggi yang melibatkan 44 program ijazah teknologi kejuruteraan dan 130 program diploma kejuruteraan. Semua penilaian akreditasi dilakukan secara lawatan fizikal, penilaian desktop dan persidangan video dalam talian.

In 2021, ETAC has conducted the accreditation assessment to 69 IHLs involving 44 engineering technology degree programmes and 130 engineering diploma programmes. All accreditation assessment was conducted physically, using desktop review and online video conference.

PROGRAM IJAZAH TEKNOLOGI KEJURUTERAAN

ENGINEERING TECHNOLOGY DEGREE PROGRAMMES

Jadual 1: Program Kejuruteraan Yang Aktif Sehingga 31 Disember 2021
Table 1: Active Engineering Programmes as at 31 December 2021

Bil.	Institusi Pengajian Tinggi	Bil. Program
No.	Institution of Higher Learning	No. of Programme
1.	Lincoln University College (LUC)	4
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)	2
6.	Universiti Tun Hussein Onn Malaysia (UTHM)	12
7.	Universiti Teknikal Malaysia Melaka (UTeM)	14
8.	Universiti Kuala Lumpur Kampus Cawangan Malaysia France Institute (UniKL MFI)	7
9.	Universiti Kuala Lumpur Kampus Cawangan Malaysian Spanish Institute (UniKL MSI)	5
10.	Universiti Kuala Lumpur Kampus Cawangan Malaysian Institute of Marine Engineering Technology (UniKL MIMET)	3
11.	Universiti Kuala Lumpur Malaysian Institute of Information Technology (UniKL MIIT)	2
12.	Universiti Kuala Lumpur Kampus Cawangan Malaysian Institute of Industrial Technology (UniKL MITEC)	1
13.	Universiti Kuala Lumpur Kampus Cawangan British Malaysian Institute (UniKL BMI)	4
14.	Universiti Kuala Lumpur Kampus Cawangan Malaysia Italy Design Institute (UniKL MIDI)	4
15.	Universiti Kuala Lumpur Kampus Cawangan Malaysian Institute of Chemical and Bioengineering Technology (UniKL MICET)	6
16.	Universiti Kuala Lumpur Kampus Cawangan Malaysian Institute of Aviation Technology (UniKL MIAT)	1
Jumlah Besar Grand Total		69

Jadual 1: Program Diploma Kejuruteraan yang Aktif pada 31 Disember 2021
 Table 1: Active Engineering Diploma Programmes as at 31 December 2021

Bil.	Institusi Pengajian Tinggi/	Bil. Program
No.	Institution of Higher Learning	No. of Programme
1.	Institut Kemahiran Mara (IKM) Bintulu	3
2.	Institut Kemahiran Mara (IKM) Johor Bahru	3
3.	Kolej Yayasan Pelajaran Johor (KYPJ)	1
4.	Kolej Kemahiran Tinggi Mara (KKTm) Sri Gading	7
5.	Kolej Kemahiran Tinggi Mara (KKTm) Kemaman	2
6.	Kolej Kemahiran Tinggi Mara (KKTm) Lenggong	1
7.	Kolej Kemahiran Tinggi Mara (KKTm) Balik Pulau	5
8.	Kolej Kemahiran Tinggi Mara (KKTm) Masjid Tanah	4
9.	Kolej Kemahiran Tinggi Mara (KKTm) Pasir Mas	5
10.	Politeknik Banting Selangor (PBS)	3
11.	Politeknik Kota Kinabalu (PKK)	7
12.	Politeknik Kuala Terengganu (PKT)	1
13.	Politeknik Muadzam Shah (PMS)	4
14.	Politeknik Port Dickson (PPD)	9
15.	Politeknik Sultan Salahuddin Abdul Aziz Shah (PSA)	7
16.	Politeknik Sultan Azlan Shah (PSAS)	9
17.	Politeknik Ungku Omar (PUO)	8
18.	Politeknik Melaka (PMK)	3
19.	Politeknik Tuanku Sultanah Bahiyah (PTSB)	7
20.	Politeknik Sseberang Perai (PSP)	7
21.	Politeknik Sultan Abdul Halim Mu'adzam Shah (POLIMAS)	8
22.	Politeknik Sultan Idris Shah (PSIS)	4
23.	Politeknik Tuanku Syed Sirajuddin (PTSS)	4
24.	Politeknik Sultan Mizan Zainal Abidin (PSMZA)	7
25.	Politeknik Kota Bharu (PKB)	8
26.	Politeknik Merlimau (PMM)	7
27.	Politeknik Sultan Haji Ahmad Shah (POLISAS)	5
28.	Politeknik Mukah (PMU)	3
29.	Politeknik Kuching Sarawak (PKS)	8
30.	Politeknik Ibrahim Sultan (PIS)	7

Bil.	Institusi Pengajian Tinggi/	Bil. Program
No.	Institution of Higher Learning	No. of Programme
31.	Politeknik Nilai (PNS)	1
32.	Politeknik Tun Syed Nasir Syed Ismail (PTSN)	3
33.	Universiti Tun Hussein Onn Malaysia (UTHM)	3
34.	City University (City U)	1
35.	Disted College	1
36.	INTI International College Penang (IICP)	2
37.	INTI International College Subang (IICS)	1
38.	INTI International University (INTI IU)	2
39.	MAHSA University	2
40.	Manipal International University (MIU)	2
41.	Multimedia University (MMU) Malacca	1
42.	Quest International University (QIU)	1
43.	Southern University College (SUC)	1
44.	Universiti Malaysia Sabah (UMS)	1
45.	Universiti Teknikal Malaysia Melaka (UTeM)	4
46.	Global Institute of Studies (GIS)	1
47.	Universiti Kuala Lumpur Kampus Cawangan Malaysian Spanish Institute (UniKL MSI)	3
48.	Universiti Kuala Lumpur Kampus Cawangan British Malaysian Institute (UniKL BMI)	2
49.	Universiti Kuala Lumpur Kampus Cawangan Malaysian Institute of Industrial Technology (UniKL MITEC)	1
50.	Universiti Kuala Lumpur Kampus Cawangan Malaysian Institute of Chemical and Bioengineering Technology (UniKL MICET)	1
51.	Universiti Kuala Lumpur Kampus Cawangan Malaysian Institute of Aviation Technology (UniKL MIAT)	1
52.	Universiti Kuala Lumpur Kampus Cawangan Malaysia France Institute (UniKL MFI)	3
53.	Universiti Teknologi MARA (UiTM) Pasir Gudang	1
54.	Universiti Teknologi MARA (UiTM) Permatang Pauh	1
55.	Universiti Teknologi MARA (UiTM) Jengka	1
56.	Universiti Teknologi MARA (UiTM) Samarahan 2	1
57.	UOW Malaysia KDU University College (UOWKDU)	1
Jumlah Besar Grand Total		200

The background features a complex geometric design with overlapping triangles in shades of pink, red, and white. A central window-like shape reveals a photograph of a modern city skyline with several tall skyscrapers under a clear blue sky. The text is positioned diagonally across the lower half of the page.

PERISTIWA PENTING 2021

Highlights of 2021

PERISTIWA PENTING 2021 HIGHLIGHTS OF 2021

MESYUARAT PERIKATAN KEJURUTERAAN ANTARABANGSA 21 – 26 Jun 2021 Online Video Conference

Mesyuarat Perikatan Kejuruteraan Antarabangsa (IEA) menjadi penanggung kepada empat (4) Perjanjian dan tiga (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 2021 telah diadakan melalui persidangan video dalam talian dari 21 – 26 Jun 2021. Dalam mesyuarat kali ini Malaysia telah menghantar 11 orang wakil termasuk seorang (1) dari IEM untuk menghadiri mesyuarat tersebut.

Sebagai anggota penuh penandatangan, Malaysia telah menyertai semua mesyuarat-mesyuarat berkaitan iaitu Mesyuarat Permuafakatan Washington, Permuafakatan Sydney dan Permuafakatan Dublin.

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 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 (2022) dijadualkan berlangsung secara atas talian pada bulan Jun 2022 bergantung kepada situasi Covid - 19 dan tempat mesyuarat tahun berikutnya (2023) akan disahkan kemudian.

INTERNATIONAL ENGINEERING ALLIANCE MEETING 21 – 26 June 2021 Online Video Conference

Under the auspices of International Engineering Alliance (IEA) Meeting there are four (4) Agreements and three (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.

IEA 2021 was held through online video conferencing from 21 – 26 June 2021. In this meeting, Malaysia sent 11 representatives including one (1) from Institution of Engineers Malaysia (IEM) to the meeting.

As full signatory, Malaysia has participated in Washington Accord, Sydney Accord and Dublin Accord Meetings.

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

The next IEAM 2022 will be held virtually in June 2022 depending on Covid – 19 situation and to be followed by IEAM 2023 in which the meeting venue is to be confirmed later.

Mesuarat Perikatan Antarabangsa 2021
International Engineering Alliance Meeting 2021



MESYUARAT JAWATANKUASA PENYELARAS PERKHIDMATAN ASEAN

1. Mesyuarat ke-98, Mesyuarat Video atas talian, 7 – 24 Jun 2021
2. Mesyuarat ke-99, Mesyuarat Video atas talian, 28 September – 21 Oktober 2021

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, Juruukur, Akauntan 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 Brunei. 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. 98th Meeting, Online Video Conference, 7 – 24 June 2021
2. 99th Meeting, Online Video Conference, 28 September – 21 October 2021

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, Accountancy and others.

For engineering services, Malaysia (Board of Engineers Malaysia) attended the ASEAN Chartered Professional Engineer Coordinating Committee Meeting which comprises of all 10 ASEAN Countries. The meeting is currently chaired by Brunei. The Chairman is appointed by rotation in 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	Cumulative 44 th ACPECC		44 th ACPECC		Cumulative 45 th ACPECC			ACPEs Balance
	Approved Application	Deregistered & Deceased	Applications Received	Approved Application	Applications Received	Approved Application	Deregistered & Deceased	
Brunei Darussalam	32	0				32	0	32
Cambodia	84	3	4	4		88	3	85
Indonesia	1,230	14	38	38		1,268	14	1,254
Lao PDR	17	0				17	0	17
Malaysia	1,578	10	198	198		1,776	10	1,766
Myanmar	618	5				618	5	613
Philippines	609	0	74	74		683	0	683
Singapore	310	0	1	1		311	0	311
Thailand	230	0	1	1		231	0	231
Viet Nam	302	0				302	0	302
Total	5,010	32	316	316		5,326	32	5,294

Jadual 2
Table 2

Professional Regulatory Authority (PRA)											
RFPE	BN	CA	ID	LA	MY	MM	PH	SG	TH	VN	Total
BN - Brunei	-				1						1
Cambodia		-									0
Indonesia			-		1						1
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	9	10	0	1	0	0	34

Sekitar Mesyuarat ACPECC ke-45 *45th ACPECC Meeting in progress*

7 Oktober 2021



RANGKAIAN BADAN-BADAN AKREDITASI UNTUK PENDIDIKAN KEJURUTERAAN DI ASIA (NABEEA)

15 Jun 2021

Atas Talian

Malaysia adalah Anggota Majlis Rangkaian Badan-Badan Akreditasi untuk Pendidikan Kejuruteraan di Asia (NABEEA). NABEEA ditubuhkan pada 2006 di Tokyo sempena symposium JABEE (Lembaga Pentauliah Pendidikan Kejuruteraan Jepun). NABEEA adalah satu rangkaian badan akreditasi untuk pendidikan kejuruteraan antara negara-negara Asian.

Tahun ini Perhimpunan Agung NABEEA telah diadakan pada 15.6.2021 secara dalam talian disebabkan kekangan Covid 19. Ia kebiasaannya diadakan bersekali Mesyuarat Perikatan Kejuruteraan Antarabangsa.

Malaysia telah diberi kepercayaan untuk menguruskan NABEEA untuk tempoh empat (4) tahun (2018-2022). Malaysia melalui BEM juga telah mencalonkan Singapura untuk mengambil alih tugas sebagai Sekretariat NABEEA selama dua (2) tahun bermula (sesi 2021-2023) dan pencalonan ini telah disokong oleh mesyuarat.

Dalam mesyuarat ini, Institusi Jurutera Hong Kong (HKIE) telah diterima masuk sebagai Anggota Majlis NABEEA memandangkan HKIE telah diterima masuk sebagai Anggota Penuh Permuafakatan Washington pada 2017.

NETWORK OF ACCREDITATION BODIES FOR ENGINEERING EDUCATION IN ASIA (NABEEA)

15 June 2021

Virtual

Malaysia is a Council Member of the Network of Accreditation Bodies for Engineering Education in Asia (NABEEA). NABEEA was formed in 2006 during Japan Accreditation Board for Engineering Education (JABEE) Symposium. NABEEA should be a loose network of accreditation bodies for engineering education among the ASIAN Countries.

This year NABEEA General Assembly was conducted on 15.6.2021 virtually due to Covid-19 restrictions. It is usually held back to back with the International Engineering Alliance Meeting.

Malaysia was entrusted as Chairman to NABEEA for a period of four (4) years (2018 – 2022). Malaysia through BEM has also nominated Singapore to replace BEM as the Secretariat to NABEEA post for the next two (2) years (session 2022-2024) and was approved by the meeting.

In this meeting Hong Kong Institution of Engineers (HKIE) was accepted as the Council Member since she has been admitted as Full Member of the Washington Accord in 2017.

Mesyuarat Rangkaian Badan-Badan Akreditasi Untuk
Pendidikan Kejuruteraan Di Asia (NABEEA) 2021

Network of Accreditation Bodies for Engineering Education in Asia (NABEEA) Meeting 2021



PERSIDANGAN DAN BENGKEL NABEEA PERTAMA
14 Jun 2021
Atas Talian

LJM telah menganjurkan Persidangan dan Bengkel NABEEA pertama secara dalam talian pada 14 Jun 2021. Objektifnya adalah bagi berkongsi pengalaman penandatanganan Washington Accord (WA) dari NABEEA dengan para peserta terutamanya wakil dari ahli-ahli NABEEA.

Wakil daripada LJM, Singapura, Bangladesh, Indonesia, Myanmar, Filipina, Thailand, Arab Saudi dan Pakistan telah dijemput untuk berkongsi pengalaman mereka.

Persidangan dan Bengkel NABEEA pertama telah dirasmikan oleh Dato' Ir. Haji Mohamad Zulkefly bin Sulaiman, Pengerusi NABEEA yang juga Dipertua LJM dan disertai oleh 75 orang peserta.

Prof. Ir. Dr. Norlida binti Bunyamin mengendali bengkel yang berkaitan dengan isu dan solusi ahli WA. Isi kandungannya adalah mengenai sesi perkongsian iseu dan solusi yang dihadapi negara-negara yang telah melalui proses permohonan untuk menjadi penandatanganan penuh WA.

1ST NABEEA CONFERENCE AND WORKSHOP
14 June 2021
Online

BEM organised the 1st NABEEA Conference and Workshop virtually on 14 June 2021. Its objective was the sharing of experience by Washington Accord (WA) signatories from NABEEA with the participants mainly representatives NABEEA member countries.

Representatives from BEM, Singapore, Bangladesh, Indonesia, Myanmar, Philippines, Thailand, Saudi Arabia and Pakistan were invited to share their experiences. There were approximately 75 participants.

The 1st NABEEA Conference and Workshop was officiated by Dato' Ir. Haji Mohamad Zulkefly bin Sulaiman, Chairman of NABEEA and President of BEM and attended by 75 participants.

Prof. Ir. Dr. Norlida binti Bunyamin moderated the workshop which was on the issues and solutions of signatories of WA. The content was basically a sharing session from countries on their issues and solutions on their application to become full signatories of the WA.

Persidangan Dan Bengkel NABEEA Pertama 2021
1st NABEEA Conference And Workshop 2021



MAJLIS PENGIKTIRAFAN SIJIL KEKOMPETENAN MARIN

6 September 2021 (Isnin)
Secara Dalam Talian

LJM telah menjalankan Kajian Kesetaraan Sijil Kekompetenan Marin dengan Jabatan Laut Malaysia (JLM). Hasil kajian tersebut, pemegang Sijil Kekompetenan Marin Kelas 4 layak berdaftar sebagai Pemeriksa Tapak, manakala pemegang Sijil Kekompetenan Marin Kelas 2 layak berdaftar sebagai Teknologis Kejuruteraan dan pemegang Sijil Kekompetenan Marin Kelas 1 layak berdaftar sebagai Jurutera Siswazah.

Majlis Pengiktirafan Sijil Kekompetenan Marin telah diadakan pada 6 September 2021 secara dalam talian dengan dihadiri oleh:

- i. YBhg Datuk Ir. Hj Mohamad Zulkefly bin Sulaiman, Presiden LJM
- ii. YBhg Dato' Hj. Baharin bin Dato' Abdul Hamid, Ketua Pengarah JLM
- iii. Ir. Megat Johari bin Megat Mohd Noor, Pengerusi Jawatankuasa Peperiksaan dan Kelayakan LJM
- iv. Ahli-ahli Lembaga, LJM dan Ex Officio
- v. Jawatankuasa Kerja Kajian Kesetaraan Sijil Kekompetenan Marin
- vi. Pegawai-pegawai kanan JLM

SUMBANGAN EAC DI PERINGKAT ANTARABANGSA

Pada tahun 2021, sebanyak 28 sesi penglibatan bersama pemegang taruh dan pihak yang berkepentingan telah dilaksanakan, yang mana 10 sesi adalah dengan pihak luar negara. LJM telah memainkan peranan yang penting dalam kesemua penglibatannya di peringkat antarabangsa.

Pencapaian EAC 2021 yang berimpak besar ialah sumbangan yang dibuat oleh Malaysia dalam menyemak pembaharuan keanggotaan Penandatanganan WA. Dua (2) orang wakil EAC telah dilantik oleh IEA sebagai Panel Penilai WA untuk ABET (USA) dan HKIE (Hong Kong). Ini merupakan tugas semakan berkala keanggotaan ABET dan HKIE dalam WA.

MARINE CERTIFICATE OF COMPETENCY CEREMONY

6 September 2021 (Monday)
Online Video Conference

BEM has conducted an equivalency study on Marine Certificate of Competency (COC) in collaboration with Malaysian Marine Department (MMD). As a result, COC Marine Class 4 holder is eligible to be registered as Inspector of Works, whereas COC Marine Class 2 holder as Engineering Technologist and COC Class 1 holder as Graduate Engineer.

A ceremony to acknowledge the equivalency has been conducted on 6 September 2021 via online. The event was attended by:

- i. YBhg Datuk Ir. Hj Mohamad Zulkefly bin Sulaiman, BEM President*
- ii. YBhg Dato' Hj Baharin bin Dato' Abdul Hamid, Director General of MMD*
- iii. Ir. Megat Johari bin Megat Mohd Noor, Chairman of BEM Examination & Qualification Committee*
- iv. Board Members of BEM and Ex-Officio*
- v. Working Group on Equivalency Study of Marine Certificate of Competency*
- vi. Senior Officers of MMD*

EAC CONTRIBUTION AT INTERNATIONAL ARENA

In 2021, a total of 28 stakeholder engagement sessions was conducted, of which 10 of them involved foreign parties. BEM has demonstrated and played its role well in the international scenes.

The EAC achievement in 2021 that had made a huge impact was the contribution made by Malaysia in reviewing the membership renewal of WA signatory. Two (2) EAC representatives were appointed by the IEA as the WA Panel of Assessors for ABET (USA) and HKIE (Hong Kong). This is part of the periodic review exercises to renew membership in WA for ABET and HKIE.

Seterusnya, seorang wakil EAC yang lain telah dilantik sebagai Pemerhati WA untuk IABEE (Indonesia) dalam penilaian keanggotaan penuh WA. Pelantikan dari IEA membuktikan pengiktirafan dan keyakinan badan antarabangsa itu terhadap keupayaan wakil LJM. Penilaian terhadap ABET, HKIE dan IABEE berjalan antara bulan September hingga November 2021.

Tugasan sebagai mentor IEA masih berjalan kepada penandatanganan sementara WA seperti BAETE-IEB Bangladesh (semenjak 2016), COREN Nigeria (semenjak 2018) dan yang terkini ialah EBK Kenya (semenjak 2020) di sepanjang tahun 2021. Ketika ini, Bangladesh, sedang menjalani penilaian keanggotaan penuh WA, dari bulan Disember 2021 dan dijangka berakhir pada bulan Januari 2022.

Wakil EAC juga telah hadir sebagai pemerhati dalam Mesyuarat Lembaga Akreditasi yang diadakan oleh Lembaga Akreditasi Kejuruteraan Kanada pada 5 - 6 Jun 2021. Ini merupakan satu perkongsian yang baik dalam kalangan anggota WA.

Wakil EAC telah dijemput dan dilantik sebagai penceramah jemputan dan ucapnama pada sesi perkongsian di dalam dan di luar negara. Sebahagian daripada sesi tersebut disenaraikan di bawah:

1. Quality Engineering Education towards Sustainable Development, International Conference on Engineering Education Accreditation (ICEEA2021), Yangon, Myanmar, 14-16 Januari 2021.
2. Engineering Accreditation Principles and Requirements – Compliance to EAC Standard 2020, Curtin University, Sarawak, 3 Mac 2021.
3. Online TLA Challenges and Opportunities, 3rd PEC Deans' International Conference, Islamabad, Pakistan, 7-8 April 2021.
4. Addressing WP and EA in the TLA of Engineering Programme, 4th International Conference on Engineering Professional Ethics and Education 2021 (ICEPEE'21), Universiti Islam Antarabangsa Malaysia, Kuala Lumpur, 22 Jun 2021.
5. Road to WA Periodic Review 2022, Annual Programme Review Event for College of Engineering, Universiti Tenaga Nasional, Kuala Lumpur, 13 Julai 2021.

In addition, another EAC representative was appointed as the WA Observer for IABEE (Indonesia) in the assessment of WA's full membership. The appointment by the IEA demonstrates the international body's recognition and confidence in the ability of BEM's representatives. ABET, HKIE, and IABEE assessments was held from September to November 2021.

IEA mentoring assignments are ongoing for Provisional WA members such as BAETE-IEB Bangladesh (since 2016), COREN Nigeria (since 2018) and most recently, EBK Kenya (since 2020) throughout 2021. Currently, Bangladesh is undergoing the verification assessment towards full WA signatory status, from December 2021 and expected to complete in January 2022.

EAC representatives were also present as observers at the Accreditation Board Meeting held by the Canadian Engineering Accreditation Board on June 5-6, 2021. This was a good sharing among WA members.

EAC representatives were invited and appointed as guest speakers and keynote speakers at sharing sessions at home and abroad. Some of the sessions are listed below:

1. Quality Engineering Education towards Sustainable Development, International Conference on Engineering Education Accreditation (ICEEA2021), Yangon, Myanmar, 14-16 January 2021.
2. Engineering Accreditation Principles and Requirements – Compliance to EAC Standard 2020, Curtin University, Sarawak, 3 March 2021.
3. Online TLA Challenges and Opportunities, 3rd PEC Deans' International Conference, Islamabad, Pakistan, 7-8 April 2021.
4. Addressing WP and EA in the TLA of Engineering Programme, 4th International Conference on Engineering Professional Ethics and Education 2021 (ICEPEE'21), Universiti Islam Antarabangsa Malaysia, Kuala Lumpur, 22 June 2021.
5. Road to WA Periodic Review 2022, Annual Programme Review Event For College of Engineering, Universiti Tenaga Nasional, Kuala Lumpur, 13 July 2021.



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|---|---|
| <ol style="list-style-type: none"> 6. Teaching & Learning Virtual Kopitiam, Society of Engineering Education Malaysia (SEEM), Kuala Lumpur, 14 Julai 2021. 7. Complex Problem Solving and Engineering Activities in Engineering Education, Universiti Malaysia Sabah, Kota Kinabalu, 23 Julai 2021. 8. Acculturation of OBE 2020-2030, 25th Global Engineering Education, 2nd Asia Pacific IEO, Jakarta, Indonesia, 14 September, 2021. 9. Acculturation of OBE and Quality Graduates, SEEM Distinguished Lecture, Kuala Lumpur, 29 September 2021. 10. GAPC2021 for Engineering Programmes – Addressing Sustainable Development Goals, Universiti Teknologi MARA, Shah Alam, 14 Oktober 2021. 11. WP and EA According To GAPC2021 – Addressing Sustainable Development Goals, Universiti Malaysia Sabah, Kota Kinabalu, 18 Oktober 2021. 12. Effective Authentic Assessment – Accreditation, Special Session at RCEE & RHEd 2021, Kuala Lumpur, 30 November 2021. 13. Current Efforts to Raise the Quality of Engineering Education, Plenary Forum at RCEE & RHEd 2021, 1 Disember 2021. 14. Professional Bodies and Learned Society, Seminar Kejuruteraan, Universiti Putra Malaysia, 20 Disember 2021. 15. UTHM Coffee Talk – Professional Development Towards Academic Resilience, Universiti Tun Hussein Onn Malaysia, 21 Disember 2021. | <ol style="list-style-type: none"> 6. <i>Teaching & Learning Virtual Kopitiam, Society of Engineering Education Malaysia (SEEM), Kuala Lumpur, 14 July 2021.</i> 7. <i>Complex Problem Solving and Engineering Activities in Engineering Education, Universiti Malaysia Sabah, Kota Kinabalu, 23 July 2021.</i> 8. <i>Acculturation of OBE 2020-2030, 25th Global Engineering Education, 2nd Asia Pacific IEO, Jakarta, Indonesia, 14 September, 2021.</i> 9. <i>Acculturation of OBE and Quality Graduates, SEEM Distinguished Lecture, Kuala Lumpur, 29 September 2021.</i> 10. <i>GAPC2021 for Engineering Programmes – Addressing Sustainable Development Goals, Universiti Teknologi MARA, Shah Alam, 14 October 2021.</i> 11. <i>WP and EA According To GAPC2021 – Addressing Sustainable Development Goals, Universiti Malaysia Sabah, Kota Kinabalu, 18 October 2021.</i> 12. <i>Effective Authentic Assessment – Accreditation, Special Session at RCEE & RHEd 2021, Kuala Lumpur, 30 November 2021.</i> 13. <i>Current Efforts to Raise the Quality of Engineering Education, Plenary Forum at RCEE & RHEd 2021, 1 December 2021.</i> 14. <i>Professional Bodies and Learned Society, Seminar Kejuruteraan, Universiti Putra Malaysia, 20 December 2021.</i> 15. <i>UTHM Coffee Talk – Professional Development Towards Academic Resilience, Universiti Tun Hussein Onn Malaysia, 21 December 2021.</i> |
|---|---|

Pada tahun 2021, EAC telah mengendalikan sesi perkongsian ilmu dan maklumat bersama IPT dan panel penilai EAC. Perbincangan telah berjaya melahirkan beberapa penyelesaian kepada masalah yang merupakan asas dalam proses akreditasi dan pendidikan kejuruteraan. Sesi perkongsian tersebut adalah seperti berikut:

In 2021, the EAC conducted knowledge and information sharing sessions with IHLs as well as the EAC evaluation panel members. Discussions have resulted in numerous solutions to issues that are fundamental to the accreditation and engineering education processes. The sharing sessions are as follows:

- | | |
|--|---|
| <ol style="list-style-type: none"> 1. Dialogue- Virtual Accreditation Visit (VAV) with Evaluation Panel, 01.03.2021 2. Dialogue - EAC/ETAC Writing Appendix D: Do's & Don'ts, 15.06.2021 3. Sharing Session on Online Learning and Micro-Credentials for Engineering & Engineering Technology Programmes, 16.8.2021 | <ol style="list-style-type: none"> 1. <i>Dialogue- Virtual Accreditation Visit (VAV) with Evaluation Panel, 01.03.2021</i> 2. <i>Dialogue - EAC/ETAC Writing Appendix D: Do's & Don'ts, 15.06.2021</i> 3. <i>Sharing Session on Online Learning and Micro-Credentials for Engineering & Engineering Technology Programmes, 16.8.2021</i> |
|--|---|

EAC bersama pemegang taruh utama dalam negara telah menghasilkan keputusan keperluan bertindak untuk menentukan hala tuju pendidikan kejuruteraan dan kualiti graduan. Keahlian dan jawatankuasa yang berkaitan adalah seperti berikut:

1. Mesyuarat IEA 2021 pada 21-26 Jun 2021
2. Ahli Jawatankuasa Tetap Mesyuarat Saringan Awal (MSA) dan Jawatankuasa Pendidikan Tinggi (JKPT), Jabatan Pendidikan Tinggi, Sesi 2021-2022.
3. Bengkel Strategik Meningkatkan Daya Saing Negara: Pencapaian Pendidikan Rakyat Malaysia, Perbadanan Produktiviti Malaysia (MPC), 10 - 11 Mac 2021

The EAC, in collaboration with key stakeholders in the country, has reached a conclusion that there is a need to act and determine the direction of engineering education and the way forward to produce quality graduates. The following are the membership in relevant committees:

1. *Mesyuarat IEA 2021 pada 21-26 Jun 2021*
2. *Ahli Jawatankuasa Tetap Mesyuarat Saringan Awal (MSA) dan Jawatankuasa Pendidikan Tinggi (JKPT), Jabatan Pendidikan Tinggi, Sesi 2021-2022.*
3. *Bengkel Strategik Meningkatkan Daya Saing Negara: Pencapaian Pendidikan Rakyat Malaysia, Perbadanan Produktiviti Malaysia (MPC), 10-11 Mac 2021.*

SUMBANGAN ETAC DI PERINGKAT ANTARABANGSA

Pada tahun 2021, sebanyak 15 sesi penglibatan bersama pemegang taruh dan pihak yang berkepentingan telah dilaksanakan, yang mana terdapat 3 sesi yang melibatkan pihak luar negara. LJM telah menjalankan peranan yang penting dalam kesemua penglibatannya di peringkat antarabangsa. Pencapaian ETAC 2021 yang memberi impak besar kepada ETAC ialah melalui pelantikan Ir. Megat Johari Megat Mohd Noor selaku Timbalan Pengerusi Dublin Accord (DA) selama dua (2) tahun, dari 2021 sehingga 2023. Ini adalah satu sejarah buat Malaysia dan LJM khususnya, yang mana anggota DA di IEA menerima baik pencalonan dari ETAC.

Pada tahun ini juga, seorang ahli ETAC telah dilantik oleh IEA sebagai Panel Penilai Sydney Accord (SA) untuk Engineering Council UK (ECUK). Ini merupakan tugas semakan berkala keanggotaan ECUK dalam SA.

Seterusnya, seorang ahli ETAC yang lain telah dilantik sebagai Pemerhati SA untuk ECUK dalam semakan penilaian berkala. Pelantikan dari IEA membuktikan pengiktirafan dan keyakinan badan antarabangsa itu terhadap keupayaan wakil LJM. Penilaian ke ECUK berjalan antara bulan Oktober hingga November 2021.

Wakil ETAC juga telah hadir sebagai pemerhati dalam Mesyuarat Lembaga Akreditasi yang diadakan oleh Lembaga Akreditasi Kejuruteraan Kanada pada 5 - 6 Jun 2021. Ini merupakan satu perkongsian yang baik dalam kalangan anggota SA.

Wakil ETAC telah dijemput dan dilantik sebagai penceramah jemputan dan ucapnama pada sesi perkongsian di dalam dan di luar negara. Sebahagian dari sesi tersebut disenaraikan seperti di bawah:

1. ETAC Dialogue on Accreditation, BKT MARA, 2 Februari 2021.
2. ETAC Dialogue with JPPKK-12PT, 4 Februari 2021.
3. Bengkel pelaksanaan Outcome-based Education di Politeknik Ungku Omar, 18 Februari 2021.
4. Bengkel Strategik Meningkatkan Daya Saing Negara: Pencapaian Pendidikan Rakyat Malaysia yang dikendalikan oleh Perbadanan Produktiviti Malaysia (MPC) pada 10 – 11 Mac 2021.
5. UNIMAP Webinar on ETAC Qualifying Requirement, 15 April 2021.

ETAC CONTRIBUTION AT INTERNATIONAL ARENA

In 2021, a total of 15 stakeholder engagement sessions were organised, of which 3 were with overseas parties. BEM has played an important role in all its involvement internationally. The ETAC achievement in 2021 that had made an impact was the nomination of Ir. Megat Johari Megat Mohd Noor as the Deputy Chairman of Dublin Accord (DA) for two (2) years, from 2021 to 2023. This is a milestone in Malaysian history, particularly for the BEM, for which the nomination from ETAC was well received by the DA members in the IEA.

During the year, an ETAC member was also appointed by the IEA as the Sydney Accord (SA) Panel of Evaluator for the Engineering Council UK (ECUK). This is a periodic evaluation assignment for ECUK membership in SA.

In addition, another ETAC Council was appointed as the SA Observer for ECUK in the periodic review assessment. The appointment by the IEA demonstrates the international body's recognition and confidence in the ability of BEM's representatives. ECUK assessments were held from October to November 2021.

ETAC representative was also present as an observer at the Accreditation Board Meeting held by the Canadian Engineering Accreditation Board on 5th – 6th June 2021. This was a good sharing among SA members.

ETAC representatives were invited and appointed as guest speakers and keynote speakers at sharing sessions at home and abroad. Some of the sessions are listed below:

1. ETAC Dialogue on Accreditation, BKT MARA, 2 February 2021.
2. ETAC Dialogue with JPPKK-12PT, 4 Februari 2021.
3. Workshop on Pelaksanaan Outcome-based Education di Politeknik Ungku Omar, 18 February 2021.
4. Workshop 'Strategik Meningkatkan Daya Saing Negara: Pencapaian Pendidikan Rakyat Malaysia', Malaysia Productivity Corporation (MPC), 10 – 11 March 2021.
5. Workshop on UNIMAP Webinar on ETAC Qualifying Requirement, 15 April 2021.

6. BKT Mara - Bengkel Pemetaan Dublin Accord (DK, DP & NA) Untuk Program Diploma Kejuruteraan dan Diploma Teknologi Kejuruteraan bagi KKTm, MJII Dan IKM Secara Dalam Talian, 21 – 22 April 2021.
7. Dialogue ETAC- UTM Dual Degree UTM-Indonesia, 27 Mei 2021.
8. Bengkel Pemetaan Learning Taxonomy kepada Course Learning Outcome (CLO) bagi Program Ijazah Sarjana Muda Teknologi Kejuruteraan Awam di Politeknik Ungku Omar, 26 – 27 Ogos 2021.
9. WBL in Engineering Education, Webinar on WBL Best Practices di JPPKK, 23 November 2021.
6. *BKT Mara - Bengkel Pemetaan Dublin Accord (DK, DP & NA) Untuk Program Diploma Kejuruteraan dan Diploma Teknologi Kejuruteraan bagi KKTm, MJII Dan IKM, 21 – 22 April 2021.*
7. *ETAC representative has been appointed as a moderator at Dialogue ETAC- UTM Dual Degree UTM-Indonesia, 27 May 2021.*
8. *Workshop on Pemetaan Learning Taxonomy kepada Course Learning Outcome (CLO) bagi Program Ijazah Sarjana Muda Teknologi Kejuruteraan Awam di Politeknik Ungku Omar, 26 – 27 August 2021.*
9. *WBL in Engineering Education, Webinar on WBL Best Practices di JPPKK, 23 November 2021.*

Pada tahun 2021, ETAC telah mengendalikan sesi perkongsian ilmu dan maklumat bersama IPT dan panel penilai EAC. Perbincangan telah berjaya melahirkan beberapa penyelesaian kepada masalah yang merupakan asas dalam proses akreditasi dan pendidikan kejuruteraan. Sesi perkongsian tersebut adalah seperti berikut:

1. Dialogue- Virtual Accreditation Visit (VAV) with Evaluation Panel, 01.03.2021
2. Dialogue - EAC/ETAC Writing Appendix D: Do's & Don'ts, 15.06.2021
3. Sharing Session on Online Learning and Micro-Credentials for Engineering & Engineering Technology Programmes, 16.8.2021

ETAC bersama pemegang taruh utama dalam negara telah menghasilkan keputusan keperluan bertindak untuk menentukan hala tuju pendidikan kejuruteraan dan kualiti graduan. Keahlian dan jawatankuasa yang berkaitan adalah seperti berikut:

1. Mesyuarat IEA 2021 pada 21-26 Jun 2021
2. Ahli Jawatankuasa Tetap Mesyuarat Saringan Awal (MSA) and Jawatankuasa Pendidikan Tinggi (JKPT), Jabatan Pendidikan Tinggi bagi sesi 2021-2022
3. Ahli Kumpulan Fokus Majlis TVET Negara ditubuhkan oleh Kementerian Pengajian Tinggi pada 27 Januari 2021.
4. Ahli Program Future Workforce Engagement Series (ForcES) Tahun 2021 yang dikendalikan oleh Jabatan Pendidikan Tinggi 15 Disember 2021.

In 2021, the ETAC conducted knowledge and information sharing sessions with IHLs as well as the ETAC evaluation panel members. Discussions have resulted in numerous solutions to issues that are fundamental to the accreditation and engineering education processes. The sharing sessions are as follows:

1. *Dialogue- Virtual Accreditation Visit (VAV) with Evaluation Panel, 01.03.2021*
2. *Dialogue - EAC/ETAC Writing Appendix D: Do's & Don'ts, 15.06.2021*
3. *Sharing Session on Online Learning and Micro-Credentials for Engineering & Engineering Technology Programmes, 16.8.2021*

The ETAC, in collaboration with key stakeholders in the nation, has reached a conclusion on the necessity to act on the direction of engineering education and the quality of graduates. The following are the members of the membership and relevant committees:

1. *IEA Meeting 2021 held on 21-26 Jun 2021*
2. *Permanent committee members in Mesyuarat Saringan Awal (MSA) and Jawatankuasa Pendidikan Tinggi (JKPT), Ministry of Education, Malaysia for 2021-2022 session.*
3. *Focus Group members the National TVET Council established by the Ministry of Higher Education on 27 January 2021.*
4. *Member in Program Future Workforce Engagement Series (ForcES) 2021 hosted by Department of Higher Education on 15 December 2021.*



MAJLIS MENANDATANGANI MEMORANDUM PERSEFAHAMAN PENDAFTARAN GRADUAN SECARA PUKAL DI ANTARA LEMBAGA JURUTERA MALAYSIA (LJM) DAN NILAI UNIVERSITY

Majlis Menandatangani Memorandum Persefahaman Pendaftaran Graduan Kejuruteraan Secara Pukal di antara Lembaga Jurutera Malaysia (LJM) dan Nilai University telah diadakan pada 1 April 2021 di Zenith Putrajaya. Memorandum Persefahaman (MoU) ini ditandatangani oleh YBhg. Dato. Ir. Haji Mohamad Zulkefly bin Sulaiman, Yang Dipertua LJM dan YBhg. Dato' Dr. Azhar bin Ismail, Naib Canselor Nilai University dengan disaksikan oleh Ir. Dr. Megat Zuhairy bin Megat Tajuddin, Pendaftar LJM dan Ts. Harlina binti Harun, Memangku Dekan dari Nilai University. Sesi menandatangani memorandum ini melibatkan pertukaran dokumen MoU, penyerahan mock-cheque dan cenderahati. Majlis diakhiri dengan sesi penyampaian hadiah pertandingan "1 Minute Video Challenge" sempena Konvensyen Mini secara hybrid 2021.

MAJLIS MENANDATANGANI MEMORANDUM PERSEFAHAMAN PENDAFTARAN GRADUAN KEJURUTERAAN SECARA PUKAL DI ANTARA LEMBAGA JURUTERA MALAYSIA (LJM) DAN UNIVERSITI MALAYSIA PERLIS, UNIVERSITI MALAYSIA PAHANG, MONASH UNIVERSITY MALAYSIA DAN UNIVERSITY OF NOTTINGHAM MALAYSIA

Majlis Menandatangani Memorandum Persefahaman Pendaftaran Graduan Kejuruteraan Secara Pukal di antara Lembaga Jurutera Malaysia (LJM) dan Universiti Malaysia Perlis, Universiti Malaysia Pahang, Monash University Malaysia dan University of Nottingham Malaysia telah diadakan pada 25 Oktober 2021 secara dalam talian. Memorandum ini dimeterai di antara Dato' Ir. Haji Mohamad Zulkefly bin Sulaiman, Yang Dipertua LJM dan Professor Ts. Dr. Dr. Zaliman bin Sauli, Naib Canselor Universiti Malaysia Perlis; Professor Dato' Ts. Dr. Yuserrie bin Zainuddin, Pemangku Naib Canselor Universiti Malaysia Pahang; Professor Andrew Walker, Presiden dan Pro-Naib Canselor Universiti Monash Malaysia; dan Professor Sarah Matcalfe, Ketua Pengawai Eksekutif dan Provos Universiti Nottingham Malaysia. Majlis ini dimulakan dengan persembahan video korporat LJM dan setiap universiti, sesi menandatangani memorandum persefahaman, pertukaran dokumen dan penyerahan cek contoh kepada kesemua institusi pengajian tinggi tersebut.

MEMORANDUM OF UNDERSTANDING SIGNING CEREMONY ON BULK REGISTRATION FOR ENGINEERING GRADUATES BETWEEN BOARD OF ENGINEERS MALAYSIA AND NILAI UNIVERSITY

The Memorandum of Understanding Signing Ceremony on Bulk Registration between the Board of Engineers Malaysia (BEM) and Nilai University was held on 1st April 2021 at Zenith Putrajaya. This memorandum of understanding (MoU) was signed by YBhg. Dato. Ir. Haji Mohamad Zulkefly bin Sulaiman, President of BEM and YBhg. Dato' Dr. Azhar bin Ismail, Vice Chancellor of Nilai University witnessed by Ir. Dr. Megat Zuhairy bin Megat Tajuddin, Registrar of BEM and Ts. Harlina binti Harun, Acting Dean from Nilai University. This session involved exchanging of MoU documents, presentation of mock-cheques and souvenirs. The ceremony ended with the "1 Minute Video Challenge", BEM Mini Hybrid Convention's prize giving session.

MEMORANDUM OF UNDERSTANDING SIGNING CEREMONY ON BULK REGISTRATION FOR ENGINEERING GRADUATES BETWEEN BOARD OF ENGINEERS MALAYSIA AND UNIVERSITI MALAYSIA PERLIS, UNIVERSITI MALAYSIA PAHANG, MONASH UNIVERSITY MALAYSIA AND UNIVERSITY OF NOTTINGHAM MALAYSIA

The Memorandum of Understanding Signing Ceremony on engineering graduates bulk graduate registration between the Board of Engineers Malaysia (BEM) and Universiti Malaysia Perlis (UniMAP), Universiti Malaysia Pahang (UMP), Monash University Malaysia (MONASH) and University of Nottingham Malaysia (UNM) was held on 25th October 2021 via Zoom. The memorandum was signed by Dato' Ir. Haji Mohamad Zulkefly bin Sulaiman, BEM President and Professor Ts. Dr. Dr. Zaliman bin Sauli, Vice Chancellor of UniMAP; Professor Dato' Ts. Dr. Yuserrie bin Zainuddin, Acting Vice-Chancellor of UMP; Professor Andrew Walker, President and Pro-Vice Chancellor of Monash University; and Professor Sarah Matcalfe, Chief Executive Officer and Provost of the UNM. The ceremony began with corporate video presentation from BEM and each university, signing of MoU, exchanging documents and handing over mock-cheques to all institutions.

*Sekitar Majlis Menandatangani Memorandum Persefahaman; Pendaftaran Graduan Secara Pukal
Di Antara Lembaga Jurutera Malaysia (LJM) Dan Nilai University
An Overview of Memorandum of Understanding Signing Ceremony on Bulk Registration for
Engineering Graduates between Board of Engineers Malaysia and Nilai University*



Sekitar Majlis Menandatangani Memorandum Persefahaman; Pendaftaran Graduan Kejuruteraan Secara Pukal di Antara Lembaga Jurutera Malaysia (LJM) dan Universiti Malaysia Perlis, Universiti Malaysia Pahang, Monash University Malaysia dan University of Nottingham Malaysia
An Overview of Memorandum of Understanding Signing Ceremony on Bulk Registration for Engineering Graduates between Board of Engineers Malaysia and Universiti Malaysia Perlis, Universiti Malaysia Pahang, Monash University Malaysia and University of Nottingham Malaysia



WEBINAR LJM 2021

Bagi menjalankan fungsi Lembaga di bawah Seksyen 4(1)(ec) Akta Pendaftaran Jurutera 1967 (Pindaan 2015);

“untuk menyediakan kemudahan bagi menggalakkan pembelajaran dan pendidikan dan mengadakan atau menyebabkan diadakan program pembangunan profesional, termasuk meneruskan program pembangunan profesional, untuk Orang berdaftar untuk meningkatkan lagi pengetahuan mereka dengan perkembangan terkini berkaitan profesion”,

Webinar LJM telah dijalankan pada tahun 2021 sebagai ganti kepada siri Jerayawara BEM 2021 berikutan Perintah Kawalan Pergerakan (PKP).

Objektif Webinar LJM 2021 adalah untuk mempromosikan pembelajaran dan pendidikan termasuk Program CPD bagi meningkatkan lagi pengetahuan Orang Berdaftar dalam perkembangan terkini berkaitan profesion kejuruteraan.

Senarai Webinar

1. The Role & Responsibility of Professional Engineers for Temporary Works during Construction Works
Tarikh : 26.1.2021
Penceramah: Ir. Dr. Tan Yean Chin
Moderator : Ir. K. Sundraraj
Ahli Panel : Datuk Ir. Fong Tian Yong
Peserta : 420 pax
2. BEM Registration & Renewal of Inspector of Works (IOW)
Tarikh : 3.2.2021
Penceramah: Ir. K. Sundraraj
Moderator : Ir. Ong Ching Loon
Ahli Panel : Ir. Mohd Noramil bin Mohd Daril
Peserta : 391 pax
3. An Overview of the Registration of Engineers Act 1967 & Registration of Engineers Regulation 1990
Tarikh : 17.3.2021
Moderator : YBhg. Datuk Ir. Mohd Adnan bin Mohd Noor
Penceramah: 1) YBhg. Datuk Paduka Ir. (Dr.) Hj. Keizrul bin Abdullah
2) Ir. Ashari bin Mohd Yakub
Peserta : 399 pax

BEM WEBINAR 2021

In order to carry out Board function as per Section 4(1)(ec) of Registration of Engineers Act 1967 (Revised 2015);

“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”

BEM Webinar was conducted in 2021 as substitution to BEM Roadshow 2021 due to the Movement Control Order (MCO).

The objective of BEM Webinar 2021 is to promote learning and education including CPD Programmes to further enhance Registered Person's knowledge in the latest developments relating to engineering profession.

List of Webinars

1. The Role & Responsibility of Professional Engineers for Temporary Works during Construction Works
Date : 26.1.2021
Speaker : Ir. Dr. Tan Yean Chin
Moderator : Ir. K. Sundraraj
Panellist : Datuk Ir. Fong Tian Yong
Participants : 420 pax
2. BEM Registration & Renewal of Inspector of Works (IOW)
Date : 3.2.2021
Speaker : Ir. K. Sundraraj
Moderator : Ir. Ong Ching Loon
Panellist : Ir. Mohd Noramil bin Mohd Daril
Participants : 391 pax
3. An Overview of the Registration of Engineers Act 1967 & Registration of Engineers Regulation 1990
Date : 17.3.2021
Moderator : YBhg. Datuk Ir. Mohd Adnan bin Mohd Noor
Speakers : 1) YBhg. Datuk Paduka Ir. (Dr.) Hj. Keizrul bin Abdullah
2) Ir. Ashari bin Mohd Yakub
Participants : 399 pax



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| <p>4. An Overview of MyBEM Online System (Registered Person)
 Tarikh : 30.3.2021
 Moderator : Dato' Prof. Ir. Dr. Othman bin A. Karim
 Penceramah: Ir. Dr. Megat Zuhairy bin Megat Tajuddin
 Ahli Panel : Ir. Mohd Noramil bin Mohd Daril
 Peserta : 384 pax</p> | <p>4. <i>An Overview of MyBEM Online System (Registered Person)</i>
 <i>Date : 30.3.2021</i>
 <i>Moderator : Dato' Prof. Ir. Dr. Othman bin A. Karim</i>
 <i>Speaker : Ir. Dr. Megat Zuhairy bin Megat Tajuddin</i>
 <i>Panellist : Ir. Mohd Noramil bin Mohd Daril</i>
 <i>Participants : 384 pax</i></p> |
| <p>5. Regulating Engineering Profession
 Tarikh : 18.5.2021
 Moderator : Ir. Mohd Khir bin Muhammad
 Penceramah: Ir. Mohd Noramil bin Mohd Daril
 Ahli Panel : Ir. Dr. Megat Zuhairy bin Megat Tajuddin
 Peserta : 436 pax (Reached 5,700 people via FBLive)</p> | <p>5. <i>Regulating Engineering Profession</i>
 <i>Date : 18.5.2021</i>
 <i>Moderator : Ir. Mohd Khir bin Muhammad</i>
 <i>Speaker : Ir. Mohd Noramil bin Mohd Daril</i>
 <i>Panellist : Ir. Dr. Megat Zuhairy bin Megat Tajuddin</i>
 <i>Participants : 436 pax (Reached 5,700 people via FBLive)</i></p> |
| <p>6. Registration as BEM Accredited Checker in Geotechnical and Structural
 Tarikh : 25.5.2021
 Moderator : Ir. Dr. Tan Yean Chin
 Penceramah: Ir. Dr. Mohd Asbi bin Othman
 Ahli Panel : Ir. Dr. Wong Chin Chaw
 Peserta : 200 pax</p> | <p>6. <i>Registration as BEM Accredited Checker in Geotechnical and Structural</i>
 <i>Date : 25.5.2021</i>
 <i>Moderator : Ir. Dr. Tan Yean Chin</i>
 <i>Speaker : Ir. Dr. Mohd Asbi bin Othman</i>
 <i>Panellist : Ir. Dr. Wong Chin Chaw</i>
 <i>Participants : 200 pax</i></p> |
| <p>7. Taklimat Kesedaran mengenai Pelan Anti-Rasuah Nasional & ISO 37001 - Sistem Pengurusan Anti-Rasuah
 Tarikh : 22.6.2021 (Tuesday)
 Moderator : Ir. Hj. Anuar Mohd Aris
 Penceramah: Pn. Farah Idayu binti Jaafar
 Ahli Panel : Ir. Mohd Noramil bin Mohd Daril
 Peserta : 394 pax</p> | <p>7. <i>Taklimat Kesedaran mengenai Pelan Anti-Rasuah Nasional & ISO 37001 - Sistem Pengurusan Anti-Rasuah</i>
 <i>Date : 22.6.2021</i>
 <i>Moderator : Ir. Hj. Anuar Mohd Aris</i>
 <i>Speaker : Pn. Farah Idayu binti Jaafar</i>
 <i>Panellist : Ir. Mohd Noramil bin Mohd Daril</i>
 <i>Participants : 394 pax</i></p> |
| <p>8. An Overview of Engineering Technologist and Engineering Technicians in Malaysia
 Tarikh : 27.7.2021
 Moderator : Ir. Fam Yew Hin
 Penceramah: Prof. Ir. Dr. Norlida binti Bunyamin
 Ahli Panel : Ir. Mohd Noramil bin Mohd Daril
 Peserta : 488 pax</p> | <p>8. <i>An Overview of Engineering Technologist and Engineering Technicians in Malaysia</i>
 <i>Date : 27.7.2021</i>
 <i>Moderator : Ir. Fam Yew Hin</i>
 <i>Speaker : Prof. Ir. Dr. Norlida binti Bunyamin</i>
 <i>Panellist : Ir. Mohd Noramil bin Mohd Daril (ED)</i>
 <i>Participants : 488 pax</i></p> |

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| <p>9. Entitlements of Registered Persons and Engineering Consultancy Practices under the Registration of Engineers Act 1967 (REA)
 Tarikh : 11.8.2021
 Moderator : Datuk Ir. Mohd Adnan bin Mohd Nor
 Penceramah: 1) Datuk Paduka Ir. Hj. Keizrul bin Abdullah
 2) Ir. Ashari bin Mohd Yakub
 Peserta : 566 pax</p> | <p>9. Entitlements of Registered Persons and Engineering Consultancy Practices under the Registration of Engineers Act 1967 (REA)
 Date : 11.8.2021
 Moderator : Datuk Ir. Mohd Adnan bin Mohd Nor
 Speakers : 1) Datuk Paduka Ir. Hj. Keizrul bin Abdullah
 2) Ir. Ashari bin Mohd Yakub
 Participants : 566 pax</p> |
| <p>10. Professional Competency Examination (PCE)
 Tarikh : 24.8.2021
 Moderator : Ir. Prem Kumar M Vasudevan
 Penceramah: 1) Ir. Chen Thiam Leong
 2) Ir. Wong Shu Leong
 3) Ir. Wong See Foong
 4) Ir. Wong Loo Min
 Peserta : 834 pax</p> | <p>10. Professional Competency Examination (PCE)
 Date : 24.8.2021
 Moderator : Ir. Prem Kumar M Vasudevan
 Speakers : 1) Ir. Chen Thiam Leong
 2) Ir. Wong Shu Leong
 3) Ir. Wong See Foong
 4) Ir. Wong Loo Min
 Participants : 834 pax</p> |
| <p>11. Revised BEM Scale of Fees 1998
 Tarikh : 9.9.2021
 Moderator : Ir. Prem Kumar M Vasudevan
 Penceramah: Ir. Chen Thiam Leong
 Ahli Panel : Datuk Paduka Ir. Hj. Keizrul bin Abdullah
 Peserta : 790 Pax</p> | <p>11. Revised BEM Scale of Fees 1998
 Date : 9.9.2021
 Moderator : Ir. Prem Kumar M Vasudevan
 Speaker : Ir. Chen Thiam Leong
 Panellist : Datuk Paduka Ir. Hj. Keizrul bin Abdullah
 Participants : 790 Pax</p> |
| <p>12. Choosing the Right Qualification for Your Engineering Career
 Tarikh : 15.9.2021
 Moderator : Ir. K. Sundraraj
 Penceramah: 1) Dato' Prof. Dr. Ir. Hassan bin Basri
 2) Em. Prof. Ir. Dr. K S Kannan
 Ahli Panel : Ir. Mohd Noramil bin Mohd Daril
 Peserta : 528 Pax</p> | <p>12. Choosing the Right Qualification for Your Engineering Career
 Date : 15.9.2021
 Moderator : Ir. K. Sundraraj
 Speakers : 1) Dato' Prof. Dr. Ir. Hassan bin Basri
 2) Em. Prof. Ir. Dr. K S Kannan
 Panellist : Ir. Mohd Noramil bin Mohd Daril
 Participants : 528 Pax</p> |
| <p>13. Promotion of best practices of Regulations, Circular and Guidelines on safety and health of CIDB and DOSH
 Tarikh : 12.10.2021
 Moderator : Ir. K. Sundraraj
 Penceramah: 1) Ir. Dr. Mohd Fairuz bin Abdul Rahman (DOSH)
 2) Ir. M. Ramuseran (CIDB)
 Peserta : 530 pax</p> | <p>13. Promotion of best practices of Regulations, Circular and Guidelines on safety and health of CIDB and DOSH
 Date : 12.10.2021
 Moderator : Ir. K. Sundraraj
 Speakers : 1) Ir. Dr. Mohd Fairuz bin Abdul Rahman (DOSH)
 2) Ir. M. Ramuseran (CIDB)
 Participants : 530 pax</p> |
| <p>14. Occupational Safety and Health Management
 Tarikh : 21.10.2021
 Moderator : Ir. Gopal Narian Kutty
 Penceramah: Ts. Dr. Mohammad Lui bin Juhairi (DOSH)
 Peserta : 593 pax</p> | <p>14. Occupational Safety and Health Management
 Date : 21.10.2021
 Moderator : Ir. Gopal Narian Kutty
 Speaker : Ts. Dr. Mohammad Lui bin Juhairi (DOSH)
 Participants : 593 pax</p> |



Sekitar Webinar the Registration of Engineers Act 1967 &
Registration of Engineers Regulations 1990
*An Overview of the Registration of Engineers Act 1967 &
Registration of Engineers Regulations 1990*



PERSIDANGAN SECARA HYBRID LJM 2021 16 - 17 November 2021

Tema Jerayawara Latihan & Pendidikan BEM 2021 ialah "Integriti dalam Profesion Kejuruteraan", dengan tujuan untuk memenuhi objektif berikut:

- 1) Penglibatan dan penyebaran maklumat kepada Orang Berdaftar (dan pihak berkepentingan).
- 2) Proses pendaftaran jurutera, teknologis kejuruteraan dan juruteknik.
- 3) Mempromosikan profesion Kejuruteraan dan rangkaian.
- 4) Mempamerkan pendidikan kejuruteraan, akreditasi program dan kerjaya kejuruteraan.

Kaedah: Hybrid

- i. Aktiviti LJM dalam talian selama 2 hari
- ii. Hab fizikal di Sabah iaitu Kota Kinabalu dan Sarawak iaitu Kuching (LIVE Streaming), yang akan dianjurkan selama 1 hari

Aktiviti

(i) Forum

Moderator : Ir. Mohd Khir bin Muhammad
 Panel 1 : Ir. Prem Kumar (BEM)
 Panel 2 : Ar. Dr. Tan Loke Mun (BAM)
 Panel 3 : Sr. Nik Hasbi Fathi (BQSM)
 Panel 4 : Ir. M Ramuseren (CIDB)
 Panel 5 : Ir. Dr. Fairuz bin Ab Rahman (DOSH)

(ii) Webinar

Kertas 1 : Section 17A of the Malaysian Anti-Corruption Commission (Amendment) Act 2018

Penceramah : Mr. Rekhraj Singh a/l Jaswant Singh
 Jawatan : Penguasa Kanan, Suruhanjaya Pencegahan Rasuah Malaysia (SPRM) Sabah

Kertas 2 : General Guidelines on Integrity Management System for Engineering Consultancy Practices

Penceramah : Pn Norafizah Saim
 Jawatan : Ketua Pegawai Eksekutif, Institut Integriti Malaysia (IIM)

Kertas 3 : Roles & Functions of BEM

Penceramah : Ir. Dr. Megat Zuhairy bin Megat Tajuddin
 Jawatan : Pendaftar LJM

BEM MINI HYBRID CONVENTION 2021 16 - 17 November 2021

The theme for BEM Training & Education Roadshow 2021 is "Integrity in the Engineering Profession", with the purpose of fulfilling the following objectives:

- 1) Engagement and disseminate information to Registered Persons (and stakeholders).
- 2) Registration process of engineers, technologist and technicians.
- 3) Promote Engineering profession and networking.
- 4) Showcase engineering education, program accreditation and engineering career.

Mode: Hybrid

- i. Online BEM's Activities for 2 days
- ii. Physical hub in Sabah i.e. Kota Kinabalu and Sarawak i.e. Kuching (LIVE Streaming), which to be organized for 1 day

Activities

(i) Forum

Moderator : Ir. Mohd Khir bin Muhammad
 Panellist 1 : Ir. Prem Kumar (BEM)
 Panellist 2 : Ar. Dr. Tan Loke Mun (BAM)
 Panellist 3 : Sr. Nik Hasbi Fathi (BQSM)
 Panellist 4 : Ir. M Ramuseren (CIDB)
 Panellist 5 : Ir. Dr. Fairuz bin Ab Rahman (DOSH)

(ii) Webinar

Paper 1 : Section 17A of the Malaysian Anti-Corruption Commission (Amendment) Act 2018

Speaker : Mr. Rekhraj Singh a/l Jaswant Singh
 Position : Senior Superintendent, Malaysia Anti-Corruption Commission (MACC) Sabah

Paper 2 : General Guidelines on Integrity Management System for Engineering Consultancy Practices

Speaker : Pn Norafizah Saim
 Position : Chief Executive Officer, Malaysian Institute of Integrity (IIM)

Paper 3 : Roles & Functions of BEM

Speaker : Ir. Dr. Megat Zuhairy bin Megat Tajuddin
 Position : BEM Registrar

Kertas 4 : Best Practices Criteria for SHE Practices

Penceramah : Ir. Dr. Norhalim Hassan
Jawatan : Pengarah, Jabatan Keselamatan dan Kesihatan (DOSH) Sarawak

Kertas 5 : Continuing Professional Development (CPD) Update

Penceramah : Ir. Mohd Khir bin Muhammad
Jawatan : Pengerusi, Jawatankuasa Latihan dan Pendidikan LJM

Kertas 6 : MyBEM Online Registration System

Penceramah : Ir. Dr. Megat Zuhairy bin Megat Tajuddin
Jawatan : Pendaftar LJM

Kertas 7 : Code of Conduct & Ethic

Penceramah : Datuk Paduka Ir. Hj. Keizrul bin Abdullah
Jawatan : Ahli, Jawatankuasa Disiplin LJM

Kertas 8 : 3S Safety in Site Supervision

Penceramah : Ir. K. Sundraraj
Jawatan : Pengerusi, Jawatankuasa Amalan Ikhtisas LJM

Kertas 9 : Guidelines on ACPE Online Application

Penceramah : Datuk Ir. Mohd Adnan bin Mohd Noor
Jawatan : Pengerusi, Jawatankuasa Pemantauan Kebangsaan LJM

Kertas 10 : Scale of Fee (SOF)

Penceramah : Ir. Chen Thiam Leong
Jawatan : Ahli, Jawatankuasa Skala Fi LJM

Kertas 11 : Introduction to Engineering Technologist, Engineering Technician and Inspector of Works

Penceramah : Prof. Ir. Dr. Norlida binti Buniyamin
Jawatan : Pengerusi, Majlis Akreditasi Teknologi Kejuruteraan (ETAC)

Kertas 12 : The Challenges & Opportunities in Sabah

Penceramah : Ir. Tan Kok Jyh, JP
Jawatan : Setiausaha Kehormat, Institusi Jurutera Malaysia (Sabah)

Paper 4 : Best Practices Criteria for SHE Practices

Speaker : Ir. Dr. Norhalim Hassan
Position : Director, Department of Occupational Safety and Health (DOSH) Sarawak

Paper 5 : Continuing Professional Development (CPD) Update

Speaker : Ir. Mohd Khir bin Muhammad
Position : Chairman, BEM Training & Education Committee

Paper 6 : MyBEM Online Registration System

Speaker : Ir. Dr. Megat Zuhairy bin Megat Tajuddin
Position : BEM Registrar

Paper 7 : Code of Conduct & Ethic

Speaker : Datuk Paduka Ir. Hj. Keizrul bin Abdullah
Position : Member, BEM Disciplinary Committee

Paper 8 : 3S Safety in Site Supervision

Speaker : Ir. K. Sundraraj
Position : Chairman, BEM Professional Practices Committee

Paper 9 : Guidelines on ACPE Online Application

Speaker : Datuk Ir. Mohd Adnan bin Mohd Noor
Position : Chairman, BEM National Monitoring Committee

Paper 10 : Scale of Fee (SOF)

Speaker : Ir. Chen Thiam Leong
Position : Member, BEM Scale of Fee Committee

Paper 11 : Introduction to Engineering Technologist, Engineering Technician and Inspector of Works

Speaker : Prof. Ir. Dr. Norlida binti Buniyamin
Position : Chairman, Engineering Technology Accreditation Council (ETAC)

Paper 12 : The Challenges & Opportunities in Sabah

Speaker : Ir. Tan Kok Jyh, JP
Position : Hon. Secretary, IEM Sabah Branch

Kertas 13 : Integrity of Engineering Consultancy

Penceramah : Ir. Wong Kheng Chew
Jawatan : Mantan Pengerusi, ACEM Cawangan Sabah

Kertas 14 : The Challenges and Opportunities in the Construction industry in Sarawak

Penceramah : Ir Dr Ting Sim Nee
Jawatan : Pensyarah Kanan (Pengurusan dan Reka Bentuk Binaan) Universiti Malaysia Sarawak (UNIMAS)

Kertas 15 : International Professional and Competency Recognition (IEM)

Speaker : Ir. Fam Yew Hin
Jawatan : Setiausaha Kehormat, Institut Jurutera Malaysia (IEM)

Paper 13 : Integrity of Engineering Consultancy

Speaker : Ir. Wong Kheng Chew
Position : Past Chairman, ACEM Sabah Branch

Paper 14 : The Challenges and Opportunities in the Construction industry in Sarawak

Speaker : Ir Dr Ting Sim Nee
Position : Senior Lecturer (Project and Construction Management), University Malaysia Sarawak (UNIMAS)

Paper 15 : International Professional and Competency Recognition (IEM)

Speaker : Ir. Fam Yew Hin
Position : Honorary Secretary, The Institution of Engineers Malaysia (IEM)

(iii) Gerai Pameran Maya

1. Meja Bantuan LJM
 - Akreditasi
 - Pendaftaran
 - Pembaharuan
 - Amalan Ikhtisas & Kelayakan
 - Khidmat Pelanggan
2. Rakan Strategik
 - JKR Sabah
 - JKR Sarawak
 - IEM Sabah
 - IEM Sarawak
 - ACEM Sabah
 - ACEM Sarawak
3. Institusi Pengajian Tinggi
 - University Malaysia Sarawak (UNIMAS)
 - Curtin University
 - Swinburne University of Technology (Sarawak Campus)
4. Amalan Perunding Kejuruteraan (ECP)
 - Oriental Sheet Piling Sdn. Bhd
 - PCSS Consultancy
 - Pumpfield Sdn Bhd
 - Topcon Positioning Asis Malaysia Sdn. Bhd.
 - Engineering Laboratory Electronics (M) Sdn Bhd
 - Kinaroof Industries (Sabah) Sdn. Bhd.

(iii) Virtual Exhibition Booth

1. BEM's Help Desk
 - Accreditation
 - Registration
 - Renewal
 - Professional Practice & Qualification
 - Customer Services
2. Strategic Partner
 - JKR Sabah
 - JKR Sarawak
 - IEM Sabah
 - IEM Sarawak
 - ACEM Sabah
 - ACEM Sarawak
3. IHLs
 - University Malaysia Sarawak (UNIMAS)
 - Curtin University
 - Swinburne University of Technology (Sarawak Campus)
4. Engineering Consultancy Practices (ECP)
 - Oriental Sheet Piling Sdn. Bhd
 - PCSS Consultancy
 - Pumpfield Sdn Bhd
 - opcon Positioning Asis Malaysia Sdn. Bhd.
 - Engineering Laboratory Electronics (M) Sdn Bhd
 - Kinaroof Industries (Sabah) Sdn. Bhd.

(iv) Lawatan Teknikal Maya

Objective : Untuk mempamerkan Projek Berkaitan dan Kejayaan.
Tajuk : 1) Pan Borneo Highway in Sabah by JKR Sabah
2) Pan Borneo Highway and Mega Projects in Sarawak by JKR Sarawak
Penceramah: 1) Ir. Liaw Vui Phing
2) Ir. Chiew Chee Yau

(v) Pertandingan

- a) 3 Minutes Video Pitch
- b) Pengumpul Setem (Exhibition Booth)
- c) Kuiz

(iv) Virtual Technical Visit

Objective : To showcase relevant engineering project or achievement.
Title : 1) Pan Borneo Highway in Sabah by JKR Sabah
2) Pan Borneo Highway and Mega Projects in Sarawak by JKR Sarawak
Presenter : 1) Ir. Liaw Vui Phing
2) Ir. Chiew Chee Yau

(v) Competition

- a) 3 Minutes Video Pitch
- b) Stamp Collector (Exhibition Booth)
- c) Quiz



Sekitar Webinar Mini Konvensyen Hybrid
An Overview of Mini Hybrid Convention



HARI PROFESIONAL TEKNIKAL NEGARA 2021

Hari Profesional Teknikal Negara (HPTN) 2021 telah dianjurkan pada 4 - 10 Disember 2021 oleh Kementerian Kerja Raya (KKR). Tema yang dipilih untuk HPTN 2021 ialah "Moving Nation, Beyond Aspiration". Pengibatan LJM adalah sebagai rakan strategic program HPTN 2021. Ianya merupakan platform untuk menghargai Profesion Teknikal, atas sumbangan mereka ke arah pembangunan infrastruktur dan pemodenan negara termasuk kepelbagaian bidang teknikal seperti kejuruteraan, astronomi, sains, teknologi, pembinaan, seni bina, juruukur dan lain-lain. Program diadakan secara online. LJM telah mengadakan lima (5) webinar seperti berikut:

Topik

1. Introduction to Malaysian Engineering Fraternity
2. Roles & Function of BEM
3. Choosing the Right Engineering Program
4. Professional Pathway with BEM (Towards Professional Competency)
5. Professional Recognition in ASEAN

HARI LIBAT URUS LJM 2021

Objektif Hari Libat Urus LJM 2021 adalah untuk menangani isu "Jurutera Miskin".

Tarikh	: 8.12. 2021
Masa	: 9.00AM – 5.00PM
Kaedah	: Hybrid
	- Siaran langsung FB Live dengan hub fizikal dari Dewan Tan Sri Mahfuz Khalid, KKR)
Peserta	: 150 orang termasuk 42 NGOs (persatuan/pertubuhan berkaitan kejuruteraan)

Antara aktiviti yang berlangsung:

- (i) Majlis Penghargaan kepada Mantan Presiden, Ahli Lembaga, Ahli Jawatankuasa, Pendaftar dan Setiausaha.
- (ii) Majlis Penyampaian sijil ASEAN Chartered Professional Engineer
- (iii) Kad Laporan LJM
- (iv) Forum

Antara perkara perbincangan yang telah diketengahkan sepanjang penglibatan pihak berkepentingan dan sesi forum semasa program adalah:

HARI PROFESIONAL TEKNIKAL NEGARA 2021

Hari Profesional Teknikal Negara (HPTN) 2021 was organised on 4 - 10 Disember 2021 by Ministry of Works (KKR). The theme selected for HPTN 2021 was "Moving Nation, Beyond Aspiration". BEM participate as Strategic Partner of HPTN 2021. HPTN 2021 is a platform to appreciate Technical Profession, for their contribution towards infrastructure development and modernization of the country including variety of technical field such as engineering, astronomy, science, technology, construction, architecture, surveyor etc. Programme is organised via Virtual Conference. BEM organised 5 webinar as follows:

Topik

1. Introduction to Malaysian Engineering Fraternity
2. Roles & Function of BEM
3. Choosing the Right Engineering Program
4. Professional Pathway with BEM (Towards Professional Competency)
5. Professional Recognition in ASEAN

BEM ENGAGEMENT DAY 2021

The objective of BEM Engagement Day 2021 is to address issue on "Jurutera Miskin"

Date	: 8.12. 2021
Time	: 9.00AM – 5.00PM
Mode	: Hybrid
	- Live Streaming via FB Live with physical hub at Dewan Tan Sri Mahfuz Khalid, KKR)
Participants	: 150 pax
	- Including 42 NGOs (Societies/Associations related to engineering)

Some of the activities:

- (i) Awards ceremony to the past president, board members, Committee members, Secretary and Registrar of the BEM.
- (ii) ACPE Certificate Ceremony.
- (iii) BEM Report Card
- (iv) Forum

Amongst discussion points which were highlighted throughout the stakeholder engagement and forum session during the program are:

- 1) Gaji Siswazah untuk Profesion Kejuruteraan (Merentas Sektor)
- 2) Kesianaan Graduan Baharu memasuki Industri dari Pandangan Majikan
- 3) Kerja Kejuruteraan oleh Orang Tidak Berdaftar

Tajuk : Engineering Fraternity Current Issues
 Moderator : Ir. Dr. Megat Zuhairy bin Megat Tajuddin
 Panel 1 : Prof. Ir. Megat Johari bin Megat Mohd Noor (BEM)
 Panel 2 : Datuk Haji Shamsuddin bin Bardin (MEF)
 Panel 3 : Dato' Ir. Haji Masri bin Baharuddin (JKR)

(v) **Libat Urus bersama Pemegang taruh**

Objectif: Mendapat maklumat / maklumbalas / pandangan / cadangan daripada pemegang taruh dan orang awam.

Sessi 1 : BEM Engagement Session (REA & Registered Person)

Moderator : Ir. Mohd Noramil bin Mohd Daril (ED)
 Panel 1 : Datuk Paduka Ir. (Dr.) Hj. Keizrul bin Abdullah
 Panel 2 : Ir. Megat Johari bin Megat Mohd Noor
 Panel 3: Ir. Chen Thiam Leong
 Panel 4: Ir. Hizamul-din bin Abd. Rahman
 Panel 5: Ir. Dr. Megat Zuhairy bin Megat Tajuddin

Sessi 2 : BEM Engagement Session (Inspector of Works, Engineering Technologists, and Engineering Technician)

Moderator : Ir. Mohd Khir bin Muhammad
 Panel 1 : Ir. Megat Johari bin Megat Mohd Noor
 Panel 2 : Prof. Ir. Dr. Norlida bin Buniyamin
 Panel 3 : Ir. Fam Yew Hin

- 1) Graduate Salary for Engineering Profession (Across Sector)
- 2) Readiness of Fresh Graduate entering the Industry from Employer's View
- 3) Engineering Work by Non-Registered Person

Title : Engineering Fraternity Current Issues
 Moderator : Ir. Dr. Megat Zuhairy bin Megat Tajuddin
 Panelist 1 : Prof. Ir. Megat Johari bin Megat Mohd Noor (BEM)
 Panelist 2 : Datuk Haji Shamsuddin bin Bardin (MEF)
 Panelist 3 : Dato' Ir. Haji Masri bin Baharuddin (JKR)

(v) **Stakeholder Engagement**

Objective to get information / feedback / opinion / suggestion from public/stakeholders

Session 1 : BEM Engagement Session (REA & Registered Person)

Moderator : Ir. Mohd Noramil bin Mohd Daril (ED)
 Panelist 1 : Datuk Paduka Ir. (Dr.) Hj. Keizrul bin Abdullah
 Panelist 2 : Ir. Megat Johari bin Megat Mohd Noor
 Panelist 3 : Ir. Chen Thiam Leong
 Panelist 4 : Ir. Hizamul-din bin Abd. Rahman
 Panelist 5 : Ir. Dr. Megat Zuhairy bin Megat Tajuddin

Session 2 : BEM Engagement Session (Inspector of Works, Engineering Technologists, and Engineering Technician)

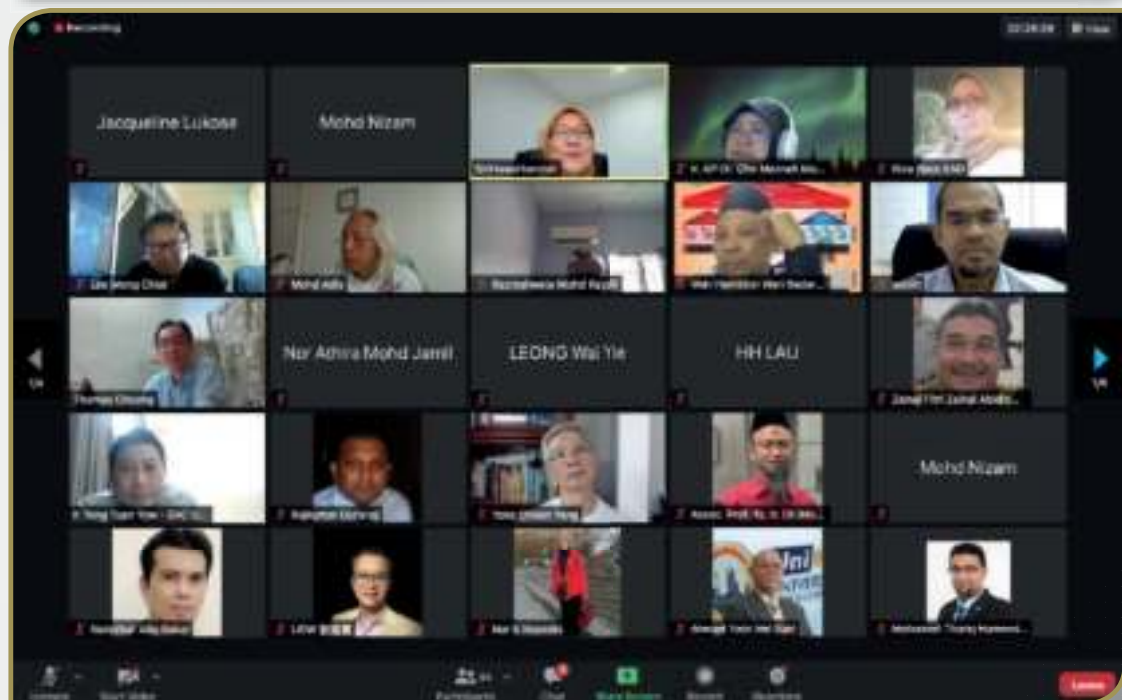
Moderator: Ir. Mohd Khir bin Muhammad
 Panelist 1 : Ir. Megat Johari bin Megat Mohd Noor
 Panelist 2 : Prof. Ir. Dr. Norlida bin Buniyamin
 Panelist 3 : Ir. Fam Yew Hin



HARI LIBAT URUS LJM 2021
BEM ENGAGEMENT DAY 2021



SEKITAR AKTIVITI EAC & ETAC (EAD) *AROUND THE EVENT EAC & ETAC (EAD)*



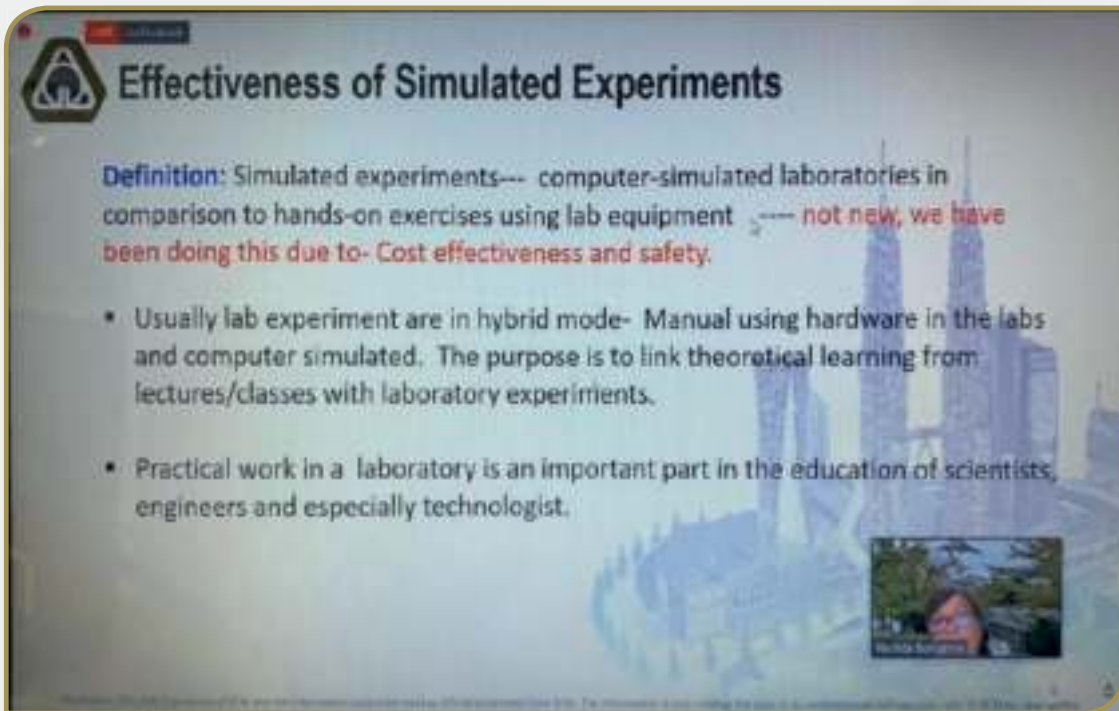
Rajah 1: Dialog VAV bersama Panel Penilai, Mac 2021
Figure 1: VAV Dialogue with Evaluation Panel, March 2021



Rajah 2: Bengkel Panel Penilai Baru EAC 1/2021, Mac 2021
 Figure 2: EAC New Panel Evaluator Workshop 1/2021, March 2021



Rajah 3: Bengkel Panel Penilai Baru ETAC 1/2021, Mac 2021
 Figure 3: ETAC New Panel Evaluator Workshop 1/2021, March 2021



Effectiveness of Simulated Experiments

Definition: Simulated experiments--- computer-simulated laboratories in comparison to hands-on exercises using lab equipment --- **not new, we have been doing this due to- Cost effectiveness and safety.**

- Usually lab experiment are in hybrid mode- Manual using hardware in the labs and computer simulated. The purpose is to link theoretical learning from lectures/classes with laboratory experiments.
- Practical work in a laboratory is an important part in the education of scientists, engineers and especially technologist.



Rajah 4: ETAC-IHL Dialogue on Challenges and Effectiveness of Simulated Experiments, April 2021



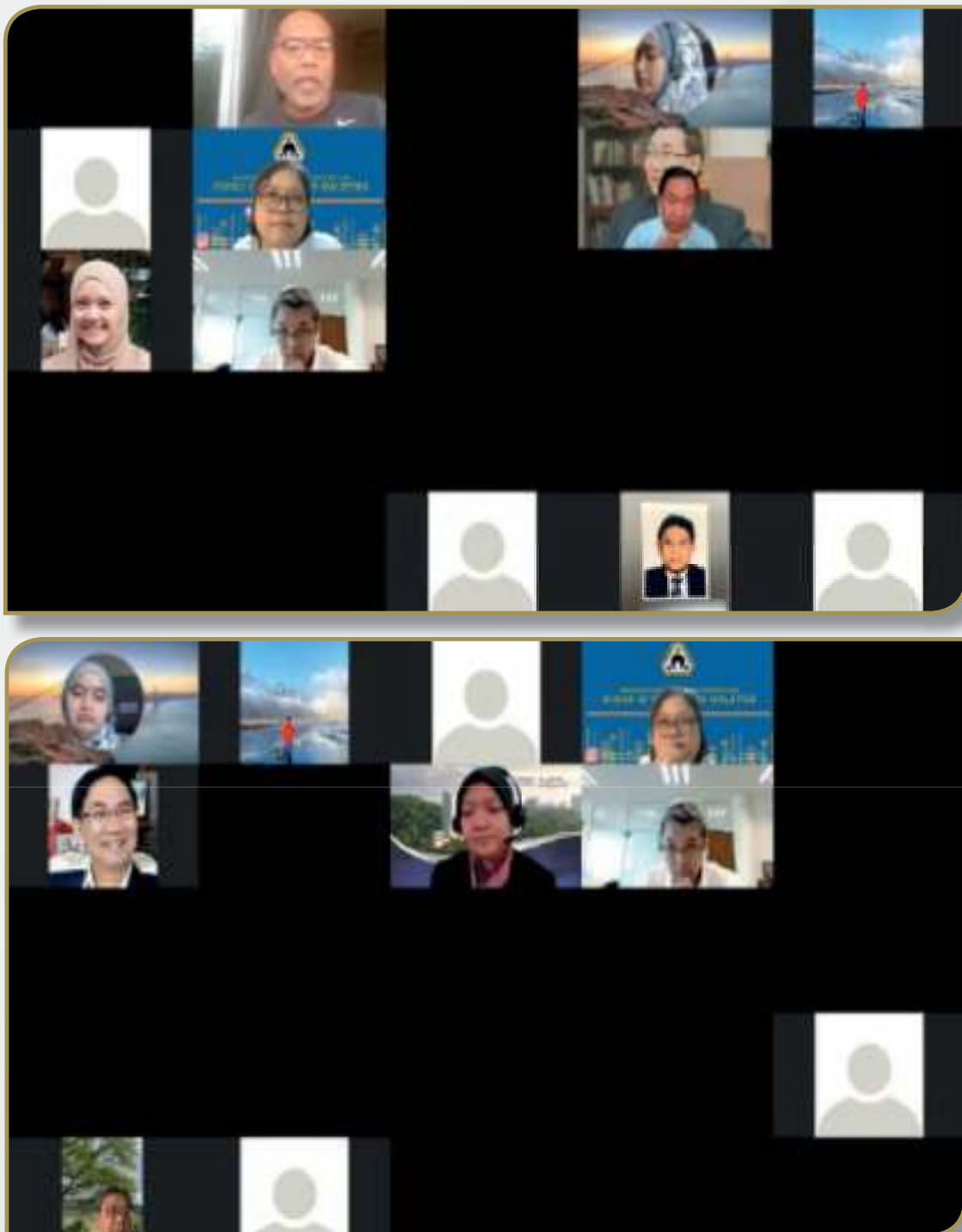
Rajah 5: Bengkel Pemetaan DK, DP & NA – BKT Mara, April 2021



Rajah 6: EAC/ETAC Writing Appendix D: Do's & Don'ts, June 2021



Rajah 7: BKT - ETAC Training for IHL, June 2021



Rajah 8: EAC & ETAC Standards: Sharing Session on Online Learning and Micro-Credentials for Engineering & Engineering Technology Programmes, August 2021



Rajah 9: ETAC-BKT MARA New Panel Evaluator Workshop, August 2021

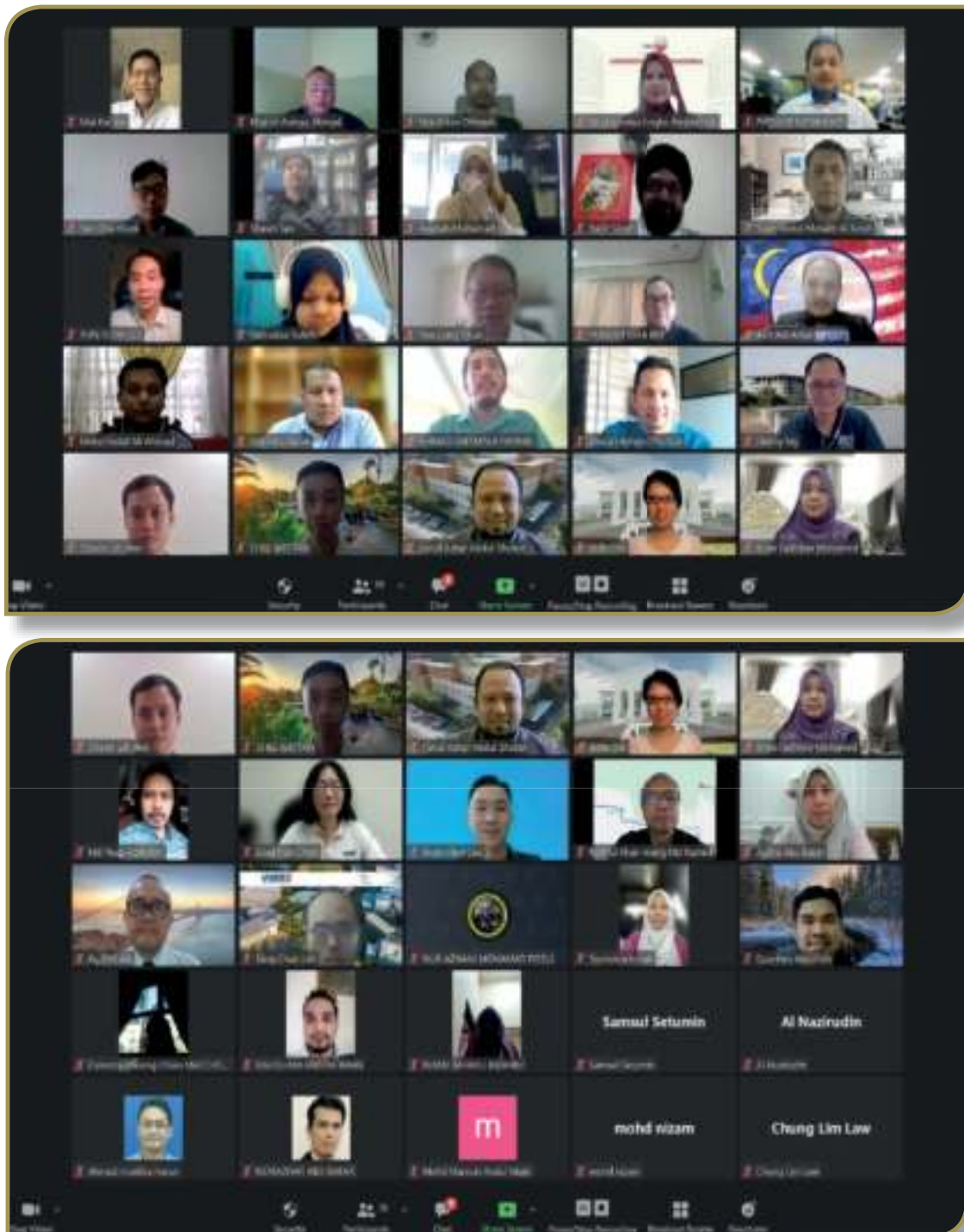




Rajah 10: Bengkel Panel Penilai Baru ETAC 2/2021, Oktober 2021
 Figure 10: ETAC New Panel Evaluator Workshop 2/2021, October 2021



Rajah 11: Bengkel Panel Penilai Baru EAC 2/2021, Oktober 2021
Figure 11: EAC New Panel Evaluator Workshop 2/2021, October 2021



Rajah 12: Bengkel Panel Penilai Baru ETAC 2/2021, Oktober 2021
 Figure 12: ETAC New Panel Evaluator Workshop 2/2021, October 2021



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