Ministry of Education, Culture, Research and Technology of Republic of Indonesia

Republic of Indonesia
Project for the Establishment of Indonesian Accreditation Board for Engineering Education (IABEE)

Project Completion Report

August 2023

Japan International Cooperation Agency
JABEE

HM
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23-033

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1. Project Completion Report

Project Completion Report

I. Basic Information of the Project

1. Country

Indonesia

2. Title of the Project

Project for the Establishment of Indonesian Accreditation Board for Engineering Education (IABEE)

3. Duration of the Project (Planned and Actual)

Planned: From November 2014 to September 2019

Actual: From November 2014 to August 2023

First Amendment: From November 2014 to August 2021

Date of Amendment: 10 July 2019

Reason: Amendment of Project Purpose due to the revision of the Rules and Procedures of the Washington Accord (WA) “from provisional member to signatory.” One of the nominators for a provisional member shall be appointed by the Accord as an Accord Mentor until the provisional member has become a signatory. JABEE was a nominator and was appointed by the WA as an Accord Mentor. Initially, the Project Purpose was to get IABEE’s provisional status in the WA. This goal was achieved in June 2019. IABEE needed continuous support from JABEE as an Accord Mentor until getting a signatory status in the WA. Accordingly, the final project goal needed to be modified to a signatory status in the WA.

Second Amendment: From November 2014 to August 2022

Date of Amendment: 10 October 2020

Reason: Due to COVID-19, all WA reviews in 2020 including the Verification Review to IABEE were postponed. The earliest scenario for IABEE becoming a signatory of the WA will be in June 2022.

Third Amendment: From November 2014 to August 2023

Date of Amendment: 17 November 2021

Reason: Due to COVID-19, the Washington Accord decided to divide the Verification Review to IABEE into two stages; Virtual review in 2021 and On-site review in 2022 (After

the COVID-19 convergence). Therefore, the Verification Review Team's visit to Indonesia would not take place in 2021 but in 2022. The earliest scenario for IABEE becoming a signatory with full privileges (right of vote and substantial equivalency under the WA of programs accredited by IABEE) would be in June 2023.

4. Background (from Record of Discussions(R/D))

4-1 Current situation of development of higher education in Indonesia and its issues

Although Indonesia's economy has been smoothly developed, its population and economic activities are too much concentrated in Java and Bali Islands. To have better balanced economic development within the country, the Government of Indonesia set up the Master plan for Acceleration and Expansion of Indonesia's Economic Development (MP3EI), in which the social infrastructure and economic connectivity among 6 economic corridors in the country have to be strengthened towards 2025 and for this goal the science and technology human resources development has been urged. In particular, both quantitative and qualitative increases of engineers, who will support diversified and high-level infrastructure, are urgently needed. MP3EI was, at a later stage of IABEE development, updated to National Medium Term Development Plan (RPJMN) 2020-2024. The number of professionally fostered graduates from engineering educational programs at bachelor level is required to be increased from 57,000 in 2015 to 163,500 in 2025 (reference: Persatuan Insinyur Indonesia (PII) - The Institution of Engineers Indonesia, Country Report at AEESEAP General Assembly in 2012)

4-2 Justification of the proposed project vis-à-vis the Indonesian higher education development policy

The Government of Indonesia targets an equal distribution of development in "Long Term National Development Plan (RPJP: 2005-2025)", and raised, as development issues, the necessity of leveling up science and technology human resources and of creating jobs in "Midterm National Development Plan (RPJM: 2010-2014). The "National Strategic Plan for Education (RENSTRA: 2010-2014)" of Ministry of Education and Culture (hereinafter referred to as "MOEC") targets, among others, high quality higher education without regional gaps but with competitiveness, and through providing higher education, the MOEC expects the improvement of quality of education and its access and as a result professional labors will be increased.

As regards a framework of national-wide quality assurance of higher education, the National Education System Act in 2003 made the accreditation by National Accreditation Agency for Higher Education (BAN-PT) of all higher education programs and institutions

compulsory. Presently, the system is functioning well, but is overburdened, largely due to its emphasis on the accreditation of programs. This has created an overwhelming volume of reviews that the agency must undertake each year across more than 3,600 public and private Higher Education Institutions. For program accreditation, BAN-PT employs a single strategy and instrument which is concentrated only to academic thus neglecting professional focus. An improvement of program accreditation needs to be made by active participation of professional associations. It is important that BAN-PT, Higher Education Institutions, and the professional associations participating in the accreditation process build the capacities necessary to ensure the development of a transparent, accountable, integrated and dynamic accreditation system. The Higher Education Act enforced in August 2012 separated the program accreditation from BAN-PT and the program accreditation shall be implemented by independent agencies (LAM-PS), which shall be set up in different fields of profession. The establishment of accreditation agencies, which shall be independent from the government, will be assessed by BAN-PT for approval by the Minister of MOEC. The guideline of the assessment will be published in August 2014.

Taking consideration of the above Indonesian plans and regulations, the proposed project aims at the establishment of an independent accreditation agency for engineering education. In the accreditation for engineering education, there exists an international framework named the Washington Accord, which recognizes the substantial equivalency of education programs accredited by the signatories of the Accord and promotes educational improvement to respond to the needs of the society. One of the paradigm shifts of education, which the Washington Accord aims, is the change from “input-based teaching” to “outcomes-based learning”.

The proposed project will establish the Indonesian Accreditation Board for Engineering Education (IABEE) and will assist IABEE in becoming a provisional member of the Washington Accord. The overall goal is through accreditation to level up engineering education throughout the country.

5. Overall Goal and Project Purpose (from Record of Discussions(R/D))

Overall Goal:

Engineering education at bachelor level provided by universities and institutes in Indonesia are changed from input-based teaching to outcomes-based learning, responding to the needs of the society. The level of the engineering education is recognized by the international society as substantially equivalent to that of the jurisdictions (countries and regions) of the Washington Accord signatories.

Project Purpose:

Initial Project Purpose: An accreditation system is established to change engineering education from input-based teaching to outcomes-based learning, and IABEE becomes a provisional member of the Washington Accord.

Amended Project Purpose: An accreditation system is established to change engineering education from input-based teaching to outcomes-based learning, and IABEE becomes a signatory of the Washington Accord.

Date of Amendment: 10 July 2019
Reason: Same as the reason for First Amendment of Project Duration

6. Implementing Agency

The Ministry of Education and Culture, Research and Technology (MOECRT)
(When the project started in 2014, the Implementing Agency was the Ministry of Education and Culture (MOEC) and from 2016 to 2020, the Implementing Agency was the Ministry of Research, Technology and Higher Education (MORTHE))

II. Results of the Project

1. Results of the Project

1-1 Input by the Japanese side

(1) Amount of input by the Japanese side
378 million Japanese Yen

(2) Experts dispatch
29 short-term experts from JABEE and 6 short-term experts from the Washington Accord signatories were dispatched to Indonesia.
Please see ANNEX 1 (1-1-a, b ~ 1-4-a, b).

(3) Short-time training in Japan and third countries
8 IABEE executives and 3 secretariat staff were trained in Japan by JABEE.
44 program evaluator candidates were trained in Japan by JABEE.
16 program evaluator candidates were trained in USA by ABET.
3 IABEE executives were trained in China by CAST.
3 program evaluator candidates were trained in Australia by EA.
Please see ANNEX 1 (4-1 List of training and 4-2 Evaluator Trainer Training in Japan 2015

and 2016).

(4) Equipment provision

One color copying machine (874,646 Japanese Yen)

3 PC laptops (455,874 Japanese Yen)

Please see ANNEX 1 (5 List of equipment)

Please see ANNEX 1 (6 List of Property Lending)

It is not equipment but there was software development of Website and Digital Evaluation System (22,614,000 Japanese Yen). The software was transferred to IABEE in October 2019. A Jakarta based Indonesian IT company, which has been involved in the development from the beginning, continues the maintenance and improvement under IABEE budget.

Please see

https://drive.google.com/drive/folders/1i3tFFMYX2faiNTOoVVGpcp8I6kxIStrq?usp=sharing

(5) Oversea activities

From 2015 to 2019, IABEE executives accompanied by the Chief Advisor attended IEA Meetings as follows.

The Chair of Steering Committee and the Chair of Evaluation and Accreditation Committee attended the Annual IEA Meeting held in Istanbul in June 2015.

The Chair of Steering Committee and the Chair of International Committee attended the IEA Interim Meeting held in Kuala Lumpur in June 2016.

The Deputy Chair of Executive Committee and the Chair of International Committee attended the IEA General Meeting held in Anchorage in USA in June 2017.

The Chair of International Committee and the Secretary-General attended the IEA General Meeting held in London in June 2018.

The Chair of Executive Committee, the Chair of International Committee and the Secretary-General attended the IEA General Meeting held in Hong Kong in June 2019.

Please see ANNEX 1 (7 International Engineering Alliance)

1-2 Input by the Indonesian side

(1) C/P assignment and IABEE experts

Director-General of Higher Education, Research and Technology of Ministry of Education and Culture, Research Technology (MOECRT) as C/P Director and his staff as C/P manager

Please see ANNEX 1 (2-1 List of Government Counterpart)

IABEE Executives members; Evaluation & Accreditation Committee members and program evaluators joined IABEE in a voluntary basis without honorarium.
Please see ANNEX 1 (2-2 List of IABEE Executives)

(2) Provision of office

From November 2014 to September 2019 and from May 2020 to September 2021, C/P provided IABEE with a free office space in DIKTI building.
Because of self-sustained financial situation of IABEE, IABEE could rent an office with IABEE budget and moved in January 2023 to a new building of PII (The Institution of Engineers Indonesia).

(3) C/P budget

C/P provided cost for holding IABEE Committees' meetings, cost for holding seminars and cost for holding evaluator trainings until certain time. C/P also provided IABEE Committees' members with internal travel costs to attend IABEE Committees meetings' seminars and evaluator training. When the submission of the application for the provisional status in the Washington Accord was approaching, IABEE declined to receive any government subsidies, as only NGOs not receiving any government subsidies are eligible to be signatories of the Washington Accord.

C/P provided study programs applying for IABEE accreditation with subsidies. The total amount of subsidies from 2016 to 2020 was Rp.1,668M and 77 study programs were beneficiaries.

1-3 Activities (Planned and Actual)

Planned activities	Achieved activities
1-1 Identifying IABEE General Assembly members and Board members. Involving engineering societies as major players of IABEE activities.	Executive Committee (EXC) is the highest decision-making committee in IABEE that is made up of high-level stakeholders and experts. The first Steering Committee for IABEE Preparation (SC), which was a predecessor of EXC, was held on 14 November 2013. SC members of 12th meeting of SC on 11 December 2014 were as follows. - Dr. Satryo Soemantri Brodjonegoro, JICA Advisor

	- Prof. Tresna Soemardi, Universitas Indonesia (UI) - Ir. Dwi Sutjipto, President & CEO of Pertamina - Prf. Danang Parikesit, Secretary-General of PII - Dr. Yasuyuki Aoshima, Chief Advisor of JICA IABEE Project In 2015, IABEE was established within PII as an autonomous institute. A MOU was signed by Director-General of Learning and Students Affairs (Belmawa) and PII President at PII Annual Conference on 11 October 2016. Please see ANNEX 2 (1-1 MoU PII Belmawa and 1-2 Signing Ceremony Belmawa-PII 2016) On 3 March 2018, JICA, IABEE, C/P co-organized IABEE Inauguration & International Seminar. Please see ANNEX 2 (2 IABEE Inauguration and International Seminar 2018)
1-2 Drawing up and reviewing midterm activity plan and financial plan of IABEE.	In 2017, IABEE set up the evaluation fee and the annual maintenance fee. In 2018, the evaluation fee was modified.
1-3 Drawing up the Charter of IABEE.	As IABEE does not have a regal entity but is an institute within PII, there is no need of having the Charter.
1-4 Recruiting secretariat staff	A Secretary-General, a secretary and 2 clerks were hired under project budget until October 2019. All secretariat staff has been hired under IABEE's budget since November 2019.
1-5 Inaugurating IABEE Office	IABEE secretariat had been provided its office space by DIKTI until September 2019 and from May 2020 to September 2021. In January 2023, IABEE secretariat moved to PII' new building.
1-6 Submitting to BAN-PT the document for establishment of IABEE.	As IABEE is not a LAM-PS*, there was no need to submit the document to BAN-PT. *LAM-PS= Lembaga Akreditasi Mandiri-Program Studi (Independent Accreditation Body-Program Study)
1-7 Training key	In 2015, 8 IABEE executives were trained in Japan.

personnel (executives and committee members) and secretariat staff in Japan and in Indonesia.	In 2016, 2 secretariat staff were trained in Japan. In 2017, Secretary-General was trained in Japan.
2-1 Establishing a homepage for publicizing the documents of accreditation criteria and of evaluation of education programs. Setting up a database for evaluation related dossiers.	Website and Digital Evaluation System were developed and transferred to IABEE in October 2019. IABEE continues the maintenance and further improvement. URL of IABEE's website is https://iabee.or.id/ In addition, operation manual for Website and Digital Evaluation System were also developed.
2-2 Drawing up accreditation criteria in English.	In 2015, the Criteria Committee drew up the Accreditation Criteria and the Criteria Guide in English.
2-3 Translating the accreditation criteria into Indonesian language and publicizing on homepage.	In 2015, accreditation criteria documents in English were published in IABEE Website. There is IABEE policy that the accreditation criteria documents in "English" are master documents. URL of IABEE's website is https://iabee.or.id/ Please see ANNEX 2 (4 Accreditation-Criteria-ENG-Version-2020) for English. For Indonesian texts can be seen in the template of Self-Evaluation Report, which programs applying for evaluation should submit to IABEE. Please see ANNEX 2 (3 LED-Engineering-siklus-2023-2024) for Indonesian.
2-4 Drawing up documents relating to evaluation (R&P, guideline) in English.	In 2016, the Evaluation & Accreditation Committee drew up the documents.
2-5 Translating the	In 2016, evaluation documents in English were published in IABEE

documents relating to evaluation into Indonesian language and publicizing on homepage.	Website. URL of IABEE's website is https://iabee.or.id/ As the evaluation documents are primarily used by program evaluators, who are strong in English. Therefore, IABEE has not translated the documents into Indonesian.
2-6 Organizing training courses for evaluator trainers in Japan.	In 2015, 2016 and 2017, 44 program evaluator candidates in total were trained in Japan by JABEE. In 2015, 2016 and 2017, 16 program evaluator candidates in total were trained in USA by ABET. In 2016, 3 executives were trained in China by CAST. In 2016, 3 program evaluator candidates were trained in Australia by EA. Please see ANNEX 1 (4-1 List of training).
2-7 Organizing training courses for evaluator in Indonesia.	The Evaluation & Accreditation Committee organized a series of evaluator training in Indonesia. Those who were trained in Japan, USA, China and Australia played a role of trainers. Evaluator training are organized for newly recruited program evaluators. Refresher training for those who participated in that year's evaluation are organized. 127 program evaluators were pooled. A special Working Group established within Evaluation & Accreditation Committee (EAC) has developed the protocols necessary to conduct virtual evaluation due to COVID-19. Online refresher trainings were conducted in August and September 2020 to disseminate the protocols for virtual evaluation. Online refresher trainings were conducted twice in 2021 for evaluators involved in virtual evaluations in 2021. Documents developed in activity 2-1, 2-2 and 2-4 were utilized in the training courses.
3-1 Organizing advocacy seminars for educational institutions on accreditation for engineering education based on outcome evaluation.	52 seminars were organized in different cities. Please see ANNEX 1 (3-1 Socialization Seminar).

3-2 Providing educational institutions with consulting services for preparation of accreditation.	26 consultation services were provided to educational institutions. Please see ANNEX 1 (3-2 Consultation Services to Educational Institutions)
3-3 Implementing some pilot evaluations to test the appropriateness of accreditation criteria and R&P of evaluation.	In 2014, 2015 and 2016, 4 pilot evaluations were conducted by JABEE Evaluation Teams. Appropriateness of accreditation criteria of evaluation was validated through the pilot evaluations.
3-4 Revising the documents relating to accreditation and evaluation if necessary.	IABEE observed the pilot evaluation and revised the documents relating to Accreditation and Evaluation.
3-5 Implementing evaluations for real accreditations.	As on 1 April 2023, 99 engineering programs in total were accredited. The breakdown by year is as follows: 2 programs in 2016 3 programs in 2017 27 programs in 2018 10 programs in 2019 14 programs in 2020 9 programs in 2021 32 programs in 2022 2 programs in 2023 (these were accredited in 2022 but the effective date of accreditation is on 1 April 2023) were accredited. Please see ANNEX 1 (5 IABEE Eng. general-accreditation 2016-2022) Please also see the list of accredited programs in IABEE website. https://evaluation.iabee.or.id/#/accreditation/summary/search
4-1 Attending IEA meetings for updating information and	From 2015 to 2019, IABEE executives accompanied by the Chief Advisor attended IEA Meetings as follows. The Chair of Steering Committee and the Chair of Evaluation and

lobbying towards provisional membership.	Accreditation Committee attended the Annual IEA Meeting held in Istanbul in June 2015. The Chair of Steering Committee and the Chair of International Committee attended the IEA Interim Meeting held in Kuala Lumpur in June 2016. The Deputy Chair of Executive Committee and the Chair of International Committee attended the IEA General Meeting held in Anchorage in USA in June 2017. The Chair of International Committee and the Secretary-General attended the IEA General Meeting held in London in June 2018. The Chair of Executive Committee, the Chair of International Committee and the Secretary-General attended the IEA General Meeting held in Hong Kong in June 2019.
4-2 Submitting to the Washington Accord a document requesting for the provisional status.	In 2018, PII/IABEE submitted the document. Please see ANNEX 2 (6-1 Application for WA provisional status) Washington Accord signatories unanimously approved the provisional status. Please see ANNEX 2 (6-2 PPT at the time of application for provisional status) PII/IABEE received a letter from WA that PII had been granted a provisional status. When IABEE executives started attending WA meetings, WA signatories recognized IABEE as a future applicant for provisional status. Later, IABEE became an institute within PII, which is a legal entity to be eligible to be a member of WA. To avoid misunderstanding and confusion, WA continued using the name of PII/IABEE and gradually use the name of PII. Please see ANNEX 2 (6-3 Group Photo of IABEE-JABEE-ABET Provisional Admission 2019). Please see ANNEX 2 (6-4 Letter to Indonesia (PII-IABEE) dated 20 June 2019). JABEE was appointed to an Accord mentor for PII/IABEE towards the signatory status.
5-1 Attending IEA meetings for updating	Due to COVID-19, IABEE executives could not physically attend the IEA meeting but attended virtually the online meetings of the

information and lobbying towards the signatory membership. *This activity was added by R/D amended on 10 July 2019.	Washington Accord Closed Session in 2020, 2021 and 2022.
5-2 Submitting to the Washington Accord a document requesting for the signatory status. *This activity was added by R/D amended on 10 July 2019.	In 2020, PII/IABEE submitted the document. Please see ANNEX 2 (7-1 Appl-1 Report analysis against R&Ps requirements for Schedule B2). JABEE submitted a mentor's report. Please see ANNEX 2 (7-2 JABEE Mentor's Report for PII-IABEE). In June 2020, Washington Accord signatories unanimously approved the formation of a Verification Review Team to PII/IABEE. Please see ANNEX 2 (7-3 PPT at the time of application for signatory status). However, due to COVID-19, all Accord reviews of 2020 were postponed to further years. In 2021, JABEE submitted the second mentor's report. Please see ANNEX 2 (7-4 Mentor's Report for IABEE 2021 by JABEE). IABEE submitted Self-Assessment Report (SAR) Please see ANNEX 2 (7-5 Self-Assessment Report (SAR) PII-IABEE). In 2021, the Verification Review Team conducted a virtual review to PII/IABEE. In July 2022, Washington Accord signatories unanimously approved the signatory status but with partial privileges. PII became the 23rd signatory. Please see ANNEX 2 (7-6 IEA Website WA page-screenshot 2022) In January 2023, one reviewer of the same Verification Review Team physically visited Indonesia to re-affirmed the outcomes of their virtual review of 2021.

	In June 2023, Washington Accord signatories unanimously re-affirmed the signatory status with full privileges (right of vote and substantial equivalency under the WA of programs accredited by IABEE). Please see ANNEX 2 (7-7 IEA Website WA page-screenshot 2023). Please see ANNEX 2 (7-8 Group Photo of IABEE-JABEE Signatory Admission 2023). Please see ANNEX 2 (7-9 Photo of Ceremony of 13 July 2023).

2. Achievements of the Project

2-1 Outputs and indicators

Output 1: IABEE is established. [Mostly achieved as planned]	
Indicators	Achievement
1-1. The establishment of IABEE is approved by the Ministry of Education and Culture.	As IABEE is not a LAM-PS, there was no need of the Ministry's approval for the establishment.
1-2. Human resources, infrastructure and financial resources required for the functioning of IABEE are provided.	[Achieved as planned] The Ministry has been continuously supporting IABEE. JICA and C/P provided IABEE with human resources, infrastructure and financial resources until the 3rd Phase. IABEE is now financially self-sustained.

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Output 2: The accreditation documents are developed, and evaluators are trained. [Mostly achieved as planned]

Indicators	Achievement
2-1. 4 documents relating to accreditation criteria are developed in English and Indonesian languages.	[Achieved as planned] All necessary documents have been developed and are published in IABEE Website both in Indonesian language and in English.
2-2. 8 documents relating to evaluation are developed in English and Indonesian languages.	[Mostly achieved as planned] All necessary documents have been developed and are published in IABEE Website in English.
2-3. 200 evaluators for evaluation of engineering education programs are trained.	[Partially achieved] 44 IABEE experts were trained as evaluator “trainers” from 2015 to 2017. IABEE program evaluations started in 2016. At the completion of the project, the number is 127, which is less than the targeted number of 200..

2-1. 4 documents relating to accreditation criteria are developed in English and Indonesian languages.

All necessary documents have been developed and are published in IABEE Website in English.

Please see ANNEX 2 (4 Accreditation-Criteria-ENG-Version-2020) for English.

There is IABEE policy that as it is an international level accreditation, IABEE considers the criteria documents in English are “Master documents” and publishes only English version in IABEE Website. Having said that, IABEE publish the Indonesian Version in the template of Self-Evaluation Report, which programs applying for accreditation should submit to IABEE.

Please see ANNEX 2 (3 LED-Engineering-siklus-2023-2024) for Indonesian.

2-2. 8 documents relating to evaluation are developed in English and Indonesian languages.

All necessary documents have been developed and are published in IABEE Website in English.

There is IABEE policy that as it is an international level accreditation, IABEE considers the documents relating to evaluation in English are “Master documents” and publishes only English version in IABEE Website. Additionally, IABEE program evaluators well understand English and they do not need Indonesian version.

2-3. 200 evaluators for evaluation of engineering education programs are trained.

Evaluator training were conducted step by step as following:

44 IABEE experts were trained in Japan by JABEE in 2015, 2016 and 2017, among whom 16 were trained in USA by ABET in 2015, 2016 and 2017, 3 in China by CAST in 2016 and 3 in Australia by EA in 2016 as evaluator “trainers”. The above experts completed IABEE evaluator training and were pooled in evaluator list. They trained other evaluator candidates at IABEE evaluator training.

IABEE program evaluations started in 2016. The following table shows the number of evaluators trained by years.

Year	No. of newly trained evaluators
2016	7
2017	24
2018	55
2019	31
2020	0
2021	10
2022	0
2023	0
Total	127

Due to COVID-19, IABEE could not conduct training for evaluator candidates as planned. IABEE has needed to focus on refresher trainings targeted at evaluators in charge of each year’s evaluation. This is because IABEE decided to conduct virtual evaluation due to COVID-19, and had to disseminated guideline for virtual on-site visit, which IABEE urgently developed.

The number of evaluations in 2022 was much bigger than IABEE’s expectation. To overcome the situation, the evaluators accepted the multiple assignments to more than 2 programs’ evaluations.

IABEE, however, decided not to recruit new evaluators in 2023 as the number of programs applying for new accreditation is estimated not as big as in 2022 and that 127 evaluators will be sufficient to conduct evaluations without multiple assignments in evaluations. IABEE also considers that too rushed recruitment may risk pooling of unqualified evaluators.

IABEE estimates that the number of evaluations in 2024 may increase and will resume

recruiting new evaluators from 2024.

Output 3: Some education programs are accredited. [Achieved beyond the plan]	
Indicators	Achievement
3-1. 50 education programs are accredited including pilot accreditations.	[Achieved beyond the plan] 99 education programs are accredited in addition to 4 pilot accreditations.

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99 education programs are accredited in addition to 4 pilot accreditations.

Please see list of accredited programs in IABEE website mentioned in 1-3 Activities (Planned and Actual), 3-5 Implementing evaluations for real accreditations.

Output 4: IABEE's request for provisional status is submitted to the Washington Accord. [Achieved as planned]	
Indicators	Achievement
4-1. The Washington Accord approves the provisional status of IABEE.	[Achieved as planned] In 2019, the Washington Accord approved the provisional status of PII, who is the mother organization of IABEE.

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In 2019, the Washington Accord approved the provisional status of PII, who is the mother organization of IABEE.

The reason why the indicator “IABEE” became “PII” is explained in 1-3 (4-2).

The following is a chronological explanation: When the project started in 2014, IABEE was aimed to being a provisional member of the Washington Accord. In 2018, an MOU was signed between C/P Director and PII President that IABEE would be established within PII. As only an NGO having a legal entity is eligible to be a member of the WA, the application document for the provisional status stated that Indonesia would be represented by PII. The WA admitted PII as a provisional member in 2019.

Output 5: IABEE's request for signatory status is submitted to the Washington Accord. [Achieved as planned]

*This output was added by R/D amended on 10th July 2019.	
Indicators	Achievement
5-1. The Washington Accord approves the signatory status of IABEE.	[Achieved as planned] In 2022, the Washington Accord approved the signatory status of PII with partial privileges.

5-1. The Washington Accord approves the signatory status of IABEE.

In 2022, the Washington Accord approved the signatory status of PII with partial privileges. Please see ANNEX 2 (7-6 IEA Website WA page-screenshot 2022).

In 2023 the Washington Accord re-affirmed the signatory status of PII with full privileges. Please see ANNEX 2 (7-7 IEA Website page-screenshot 2023)

2-2 Project Purpose and indicators

As mentioned in I. Basic Information of the Project, 5. Overall Goal and Project Purpose (from Record of Discussions(R/D)), Project Purpose was amended by R/D on 10 July 2019. Indicators of Project Purpose was also amended following the amendment of Project Purpose at the same time. Project Purpose, indicator and achievement at the end of the project completion is as follows.

Project Purpose: An accreditation system is established to change engineering education at bachelor level from input-based teaching to outcomes-based learning, and IABEE becomes a signatory of the Washington Accord. [Achieved as planned]	
Indicators	Achievement
1. Among 2,371 engineering education programs provided by public and private universities and institutes, 50 programs (2%) are accredited by IABEE.	[Achieved beyond the plan] 99 programs are accredited by IABEE at the time of the completion of the project.
2. IABEE is accepted as the signatory member of the Washington Accord.	[Achieved as planned] In 2022, the Washington Accord approved the signatory status of PII with partial privileges. In 2023 the Washington Accord re-affirmed the signatory status of PII with full

	privileges.

3. History of PDM Modification

3-1. First Amendment

Based on the approval at JCC held on 20 March 2019, the extension of the project duration and amendment of project purpose were decided. These modifications were reflected in PDM version 2. Amendment of R/D including PDM version 2 was singed on 10 July 2019.

The reason of the amendment is the revision of the Rules and Procedures of the WA on "from provisional member to signatory." One of the nominators for the provisional member shall be appointed by the Accord as a mentor until the provisional member has become a signatory. In case of IABEE, JABEE and ABET were the nominators. IABEE requested JABEE to be a mentor and the extension of the project until 2021 so that JABEE could continue mentoring IABEE towards signatory status. JICA welcomed the extension of the project.

Main points of amendment of PDM are as follows.

Project Purpose	
Version 1	Version 2
An accreditation system is established to change engineering education at bachelor level from input-based teaching to outcomes-based learning, and IABEE becomes a provisional member of the Washington Accord.	An accreditation system is established to change engineering education at bachelor level from input-based teaching to outcomes-based learning, and IABEE becomes <u>a signatory member</u> of the Washington Accord.

Outputs and Objectively Verifiable Indicators	
Version 1	Version 2
[Objectively Verifiable Indicators for Output 3] 25 education programs are accredited including pilot accreditations.	[Objectively Verifiable Indicators for Output 3] <u>50 education programs</u> are accredited including pilot accreditations.

	[Output 5] IABEE's Request for signatory status is submitted to the Washington Accord. [Objectively Verifiable Indicators of Output 5] The Washington Accord approves the signatory status of IABEE.

Activities	
Version 1	Version 2
	5-1 Attending IEA meetings for updating information and lobbying towards the signatory membership. 5-2 Submitting to the Washington Accord a document requesting for the signatory status.

Duration of the Project	
Version 1	Version 2
November 2014 to October 2019 (5 years)	November 2014 to August 2021 (6 years and 10 months)

3-2. Second Amendment

The extension of the project duration was decided and reflected in PDM version 3. Amendment of R/D including PDM version 3 was singed on 10 October 2020.

The reason of extension of the project duration is COVID-19 pandemic. The PII/IABEE's application documents for the signatory status in the WA and JABEE's mentor's report were reviewed at the Washington Accord Closed Session held in a form of videoconference on 22 June 2020. The signatories unanimously approved the formation of a Washington Accord Verification Review Team to IABEE. However, due to COVID-19, the Washington Accord decided to postpone all Accord Reviews (including the review to PII/IABEE) to 2021. Therefore, the Verification Review Team's visit to Indonesia will not take place in 2020 but in 2021. The earliest scenario for IABEE becoming the signatory will be in June 2022.

Main point of amendment of PDM is as follows.

Duration of the Project	
Version 2	Version 3
November 2014 to August 2021 (6 years and 10 months)	November 2014 to August 2022 (7 years and 10 months)

3-3. Third Amendment

The extension of the project duration was decided and reflected in PDM version 4. Amendment of R/D including PDM version 4 was singed on 17th November 2021.

The reason of extension of the project duration is COVID-19 pandemic. Due to COVID-19, the Washington Accord decided to divide the Verification Review into two stages; Virtual review in 2021 and On-site review in 2022 (After the COVID-19 convergence). Therefore, the Verification Review Team's visit to Indonesia will not take place in 2021 but in 2022. The earliest scenario for IABEE becoming the signatory will be in 2023.

Main point of amendment of PDM is as follows.

Duration of the Project	
Version 3	Version 4
November 2014 to August 2022 (7 years and 10 months)	November 2014 to August 2023 (8 years and 10 months)

All PDMs attached to monitoring sheet are included in ANNEX 3.

4. Others

4-1 Results of Environmental and Social Consideration

Not applicable for this project

4-2 Results of Considerations on Gender/Peace Building/Poverty Reduction, Disability, Disease infection, Social System, Human Wellbeing, Human Right, and Gender Equality.

Not applicable for this project

III. Results of Joint Review

1. Results of Review based on DAC Evaluation Criteria

1-1. Relevance

(1) Consistency with Development Policy

The Government of Indonesia set up the Master plan for Acceleration and Expansion of

Indonesia's Economic Development (MP3EI) in 2011, in which the social infrastructure and economic connectivity among 6 economic corridors in the country have to be strengthened towards 2025 and for this goal the science and technology human resources development has been urged.

As regards a framework of national-wide quality assurance of higher education, the Higher Education Act enforced in August 2012 separated the program accreditation from National Accreditation Agency for Higher Education (BAN-PT) and the program accreditation shall be implemented by independent agencies (LAM-PS), which shall be set up in different fields of profession. The establishment of accreditation agencies, which shall be independent from the government, will be assessed by BAN-PT for approval by the Minister of MOEC.

Taking consideration of the above Indonesian plans and regulations, this project aims at the establishment of an independent accreditation agency for engineering education. In the accreditation for engineering education, there exists an international framework named the Washington Accord, which recognizes the substantial equivalency of education programs accredited by the signatories of the Accord and promotes educational improvement to respond to the needs of the society. One of the paradigm shifts of education, which the Washington Accord aims, is the change from “input-based teaching” to “outcomes-based learning”

This project established the Indonesia Accreditation Board for Engineering Education (IABEE) and assisted IABEE in becoming a signatory member of the Washington Accord, which is highly relevant to development policy.

(2) Consistency with Development Needs

In the National Medium Term Development Plan (RPJMN) 2020-2024, the President established five main directives as a strategy carrying out the nine point development program and in achieving the objectives of Indonesia’s Vision 2045. The five directives include human resource development and infrastructure development. However, according to RPJMN 2020-2024, the number of science and technology human resources is still limited. The vast majority of university students and graduates study social sciences and humanities, while those majoring science and engineering remain limited. In addition, RPJMN 2020-2024 points out that study program offered by universities have not responded to the needs of market(s) and industry(ies). On the other hand, RPJMN 2020-2024 states that infrastructure development to support basic services, economic development, and cities is to be prioritized in the period of 2020-2024. Those descriptions indicates that Indonesia needs to increase the number of high-quality engineers.

1-2. Coherence

(1) Collaboration with JICA's other projects

In parallel with this technical cooperation project, Development of Bandung Institute of Technology (3) (ODA Loan Project), The Project for Research and Education Development on Information and Communication Technology in Surabaya Institute of Technology, Phase 2 (Technical Cooperation Project) implemented at the beginning of this project. In addition, ASEAN University Network / Southeast Asia Engineering Education Development Network（AUN/SEED-Net）Project has been targeted above educational institutions with University of Indonesia and Gadjah Mada University.

Bogor Agricultural University, Islamic University of Indonesia, Bandung Institute of Technology and University of Indonesia were selected for pilot evaluation under JICA project and accredited by JABEE. Professors and lecturers belonged to those universities have played important roles in this project such as members of EXC and EAC as well as program evaluators. Over half of engineering education programs accredited by IABEE are from those most competitive universities.

(2) Collaboration with other projects

During the period of preparation of the project in 2014, IABEE had a meeting with a project team for LAM-PS for Health Sector, which was sponsored by the World Bank. There were no further discussions between IABEE and this Health project.

(3) Consistency with global frameworks

The engineering education should match not only the country needs but also should be made in alignment with the international engineering framework. Programs accredited by IABEE should be recognized as equivalent to those in different countries. The Washington Accord is an ideal international framework for the recognition of substantial equivalency of accredited programs. The project was designed so that IABEE would be a member of the Washington Accord (Project Purpose and Output 4 and 5).

1-3. Effectiveness

(1) Degree of the achievement of the project purpose

As described in II. Results of the Project, 2-2 Project Purpose and indicators, two indicators of project purpose have been achieved. Accomplishment of the Project Purpose may have been caused by the produced outputs because IABEE was established through

the Project and its capacity have been built through the Project.

All the Outputs have been achieved except Output 2 as described in II. Results of the Project, 2-1 Outputs and indicators. There are three indicators of Output 2 “the accreditation documents are developed, and evaluators are trained”. While two indicators related to the accreditation documents have been achieved, another indicator “200 evaluators for evaluation of engineering education programs are trained” has not been fully achieved. 127 evaluators were pooled after evaluators training at the completion of the project.

1-4. Efficiency

The project period was from November 2014 to August 2023 (8 years and 10 months), compared to the original plan of November 2014 to October 2019 (5 years), resulting in 177% of the plan. The project cost was 378 million yen against the planned estimate of 390 million yen (based on the ex-ante evaluation paper), which is 97% of the plan.

The project period has been extended three times. First extension was due to amendment of the Project Purpose and add Output 5. The reason of the amendment is the revision of the Rules and Procedures of WA on “from provisional member to signatory.” One of the nominators for the provisional member shall be appointed by the Accord as a mentor until the provisional member has become a signatory. In case of IABEE, JABEE and ABET were the nominators. IABEE requested JABEE to be a mentor and the extension of the project until 2021 so that JABEE could continue mentoring IABEE towards signatory status. To secure the necessary period for the activities, the project period was extended for 1 year and 10 months.

Second extension was due to COVID-19 pandemic. The PII/IABEE’s application documents for the signatory status in the WA and JABEE’s mentor’s report were reviewed at the Washington Accord Closed Session held in a form of videoconference on 22 June 2020. The signatories unanimously approved the formation of a Washington Accord Verification Review Team to IABEE. However, due to COVID-19, the Washington Accord decided to postpone all Accord Reviews (including the review to IABEE) to 2021. Therefore, the Verification Review Team’s visit to Indonesia will not take place in 2020 but in 2021. The earliest scenario for IABEE becoming the signatory will be in June 2022. To secure the necessary period for the activities, the project period was extended for one year.

Third extension was due to COVID-19 pandemic as well. Due to COVID-19, the Washington Accord decided to divide the Verification Review into two stages; Virtual review in 2021 and On-site review in 2022 (After the COVID-19 convergence). Therefore,

the Verification Review Team's visit to Indonesia will not take place in 2021 but in 2022. The earliest scenario for IABEE becoming the signatory will be in 2023. To secure the necessary period for the activities, the project period was extended for one year.

Those extensions of the project period have allowed the project to provide IABEE with stronger mentoring and with advices for sustainability.

1-5. Impact

The project has given positive impact to universities and institutes towards international-level accreditation by IABEE. The speed in increase of the number of accredited programs is much higher than expected by the project, who targeted 25 accredited programs at the time of application for the provisional status in the WA in 2019 and 50 accredited programs at the time of application for signatory status in 2021.

The project also has given positive impact to the Government. The Ministry recognized the importance of Indonesia's signatory status in the Washington Accord. To encourage study programs to be accredited by IABEE, the Ministry provided study programs applying for IABEE accreditation with subsidies of Rp30M to 40M per program from 2016 to 2020, totaling Rp1,686M. After 2020. The subsidies continue with a similar but a slightly different mechanism. It is not the scope of the project but it is worthwhile mentioning that at the request of the Ministry, IABEE is preparing for a provisional status in the Sydney Accord (for Engineering Technologist Education).

The Ministry considers IABEE accreditation (International but optional) as equivalent to excellent rank of LAM-Teknik (national and mandatory).

Please see ANNEX 2 (8-1 MoECRT Regulation No.5 in 2020 (in Indonesian Language and translation to English in blue)).

LAM-Teknik exempts programs accredited by IABEE from the next LAM-Teknik accreditation.

Please see ANNEX 2 (8-2 LAM-Teknik Regulation N0.10 in 2022 (in Indonesian Language) and 8-3 Translation LAM Teknik Decision No. 10 of 2022).

In terms of change from input-based teaching to outcomes-based learning, engineering education in Indonesia made substantial progress because IABEE become a signatory of Washington Accord. To become a signatory, it is essential to accredit education programs which meet criteria of outcomes-based learning. Increase in the number of education program accredited by IABEE means spread of outcomes-based learning in engineering education in Indonesia. As mentioned above, the Ministry has supported application fee for IABEE's program accreditation and regarded IABEE accreditation (international but optional) as equivalent to excellent rank of LAM-Teknik (national and mandatory). It is

likely that the Ministry will continue such policy for the foreseeable future since there is no sign of policy change by the Ministry at the time of project completion. Therefore, it is likely that outcomes-based learning in engineering education in Indonesia will steadily spread after the project completion.

1-6. Sustainability

Policy and system: IABEE accreditation is spreading in whole country with the support of the Ministry. The Ministry recognized the importance of Indonesia's signatory status in the Washington Accord. The Ministry considers IABEE accreditation (International but optional) as equivalent to excellent rank of LAM-Teknik (national and mandatory). Please see ANNEX 2 (8-1 MoECRT Regulation No.5 in 2020 (in Indonesian Language and translation to English in blue)). LAM-Teknik exempts programs accredited by IABEE from the next LAM-Teknik accreditation. Please see ANNEX 2 (8-2 LAM-Teknik Regulation N0.10 in 2022 (in Indonesian Language) and 8-3 Translation LAM-Teknik Decision No. 10 of 2022).

The Ministry and LAM-Teknik are likely to continue current policy unless external conditions are changed.

Organizational aspects of the implementing agency: IABEE is established within PII as an autonomous institute. PII is the most prominent professional organization representing engineering society in Indonesia and as IABEE under the umbrella of PII could be protected against any risk of incidents or crisis, at which a small NGO may be infected. In half of the jurisdictions (countries and regions) of the WA signatories, Institution of Professional Engineers or Council of Engineers have an accreditation department.

As is the case of other WA signatories, the secretariat is relatively small. IABEE executives, Committee members and program evaluators are not employees of IABEE. They are all volunteers, who accept the roles without honorarium (this is the WA philosophy that the participation as a peer reviewer in the accreditation of education is the engineers' social responsibility).

5 secretariat staff of IABEE have been hired under IABEE's budget since November 2019.

Financial aspect: IABEE's incomes are from accreditation fee and annual maintenance fee. Price is as follows.

Currency: IDR

	General Accreditation	Provisional Accreditation
Accreditation fee *	75.000.000	25.000.000

Annual maintenance fee	5000.000	

* Excluding interim evaluation fees, if required.

IABEE does not disclose its income and expenditure although IABEE has a financial audit by PII. IABEE could present its financial report to Washington Accord Verification Team but would like to avoid disclosing it. When the Washington Accord Verification Review Team examined IABEE system, IABEE showed IABEE's 3-year consecutive financial reports to demonstrate IABEE financial sustainability. The Verification Team evaluated IABEE's financial sustainability was good enough for signatory status of the Washington Accord. In addition, IABEE has been trying to build a strong financial foundation.

Technical aspects of implementing agency: The quality of IABEE experts (IABEE executives, Committees' members and program evaluators) have gained a good reputation from universities and institutes. PII's signatory status in WA stems from good quality of accreditation by IABEE.

Such good reputation might stem from the following activities by the project.

- 44 IABEE experts who has developed as evaluator trainers has well-trained by several trainings provided by the project (Activity 2-6). Those experts have played key roles in IABEE.
- The project has carefully selected evaluator candidates in terms of expertise of engineering field (e.g. civil engineering, chemical engineering) and personality (e.g. decency, enthusiasm for involving in evaluation, integrity).
- The performance evaluation of program evaluators is conducted with 360 degrees assessment (from study programs, Chair of evaluation team and among evaluators of the same team).
- Evaluators, who have been assigned to the said year evaluations, shall participate in the refresher training to update their knowledge.

Social Environmental Aspect: Not applicable

Preventative Measures to risk: Not applicable

Status of Operation and Maintenance: A Digital Evaluation System was developed to enable the study program evaluation in a paperless form by the Project. The system enabled IABEE to conduct virtual program evaluations under COVID-19 and accept virtual verification review to Indonesia by Washington Accord. This system has been steadily

operating. In addition, IABEE will be able to maintain the system with support from Indonesian IT company which has been involved in development of the system.

In terms of policy, organizational, financial and technical aspects mentioned above, there might be no factor in preventing steady operation of IABEE at the time of project completion. Therefore, it is likely that IABEE will be steadily operate as an organization for engineering education accreditation after the project completion.

2. Key Factors Affecting Implementation and Outcomes

Logic tree of the project design might be appropriate for the project. Amendment of Project Purpose from becoming a provisional member of Washington Accord to a signatory of that due to the changes of Rules & Regulations of the Washington Accord might be a contributing factor for ensuring IABEE's signatory status of Washington Accord and strengthening spread of outcomes-based learning in engineering education in Indonesia.

Regarding the implementation process, the following two factors might contribute to the Outcomes of the project. One factor is the amendment of Project Purpose as mentioned above. Another factor is strong encouragement to the project activities by the Ministry, which JABEE has provided appropriate advice for.

3. Evaluation on the results of the Project Risk Management

Regarding plan of the project, the project was strongly affected by the revision of the Rules and Procedures of the WA on "from provisional member to signatory." As mentioned in 3. History of PDM Modification, one of the nominators for the provisional member shall be appointed by the Accord as a mentor until the provisional member has become a signatory. In case of IABEE, which is an organization provided Japanese experts to the project, JABEE and ABET were the nominators. Japanese experts had developed good relationship with IABEE and C/P Directors through attending almost all meetings of IABEE Executive Committee and regular face-to-face meeting with C/P Directors until that time. As a result of that, IABEE requested JABEE to be a mentor and the extension of the project until 2021. JICA welcomed the extension of the project. It enabled JABEE to continuously mentor IABEE towards signatory status. Moreover, amendment of Project Purpose might have positive impact to signatory status of IABEE. A provisional member of WA is not guaranteed becoming a signatory of WA. Some countries, which become a provisional member before IABEE, still remains at a provisional member.

Regarding the process of the project implementation, it was strongly affected by COVID-19. Under COVID-19, in 2020 the Washington Accord decided to postpone all Accord reviews including the verification review to PII/IABEE. In the second year of COVID-19, there was

a risk that the Washington Accord would decide once again to postpone all Accord reviews of 2021. Against the current R&P that verification reviews for new applicants for the signatory status should be “physically” conducted, JABEE made a motion at the Washington Accord Session to tentatively suspend the R&P and to conduct 2-step verification reviews (virtual and physical). The motion passed with just 2/3 majority. As a results, for the first time in the history of the Washington Accord, virtual verification reviews were conducted. C/P and JICA agreed to extend the project duration twice and thanking to those decisions, in 2022 PII was admitted as the 23rd signatory with partial privileges and in 2023 the signatory status was re-affirmed with full privileges. If the 4th term had not been launched, JABEE would not have made that motion and PII’s signatory status would have been delayed for more years. IABEE executives and the Chief Advisor appreciated the supportive decisions made by C/P and JICA.

4. Lessons Learnt

The project was not designed to just import (or copy) JABEE system to Indonesia. The project aimed at establishing the most advanced accreditation system. Other Washington Accord signatories, in particular, ABET of USA, assisted JABEE and IABEE.

For international developing project, the recipient country’s ownership is the most challenging issue. The success of this project owes to the strong ownership of IABEE people. The project thanks to key IABEE executives to have involved motivated (with high aspirations) people to IABEE.

5. Performance

The Chief Advisor attended all meetings of IABEE Executive Committee (86 meetings) either physically on mission basis or online during COVID-19. There were frank discussions and debates between IABEE executives and the Chief Advisor. There were mutual understanding, respect and trust.

IABEE executives, Committees’ members and program evaluators joined IABEE in a voluntary basis without honorarium. They have high aspiration to a national mission. They feel strong ownership to this project.

The Chief Advisor also regularly met C/P Directors, who have been supporting the project.

6. Additionality

All IABEE Committees’ meetings were held in a paperless form. Committees’ members can have access to meeting documents through the member page set in the Website. Thanking to this paperless arrangement, online meetings were easily held during COVID-19.

A Digital Evaluation System was developed to enable the study program evaluation in a paperless form. Thanking to this System, IABEE could smoothly conduct virtual program evaluations under COVID-19. When the Washington Accord conducted a virtual verification review to Indonesia (the first virtual review in the history of the Washington Accord), the Review Team could conduct virtual review without any problem. The Review Team congratulated IABEE for having such an advanced system.

The project was not designed to just import (or copy) JABEE system to Indonesia. The project aimed at establishing the most advanced accreditation system. Other Washington Accord signatories, in particular ABET, of USA, assisted JABEE and IABEE.

IV. For the Achievement of Overall Goals after the Project Completion

1. Prospects to achieve Overall Goal

Overall Goal: Engineering education provided by universities and institutions in Indonesia are changed from input-based teaching to outcomes-based learning, responding to the needs of society. The level of the engineering education is recognized by the international society as substantially equivalent to that of the countries of the Washington Accord signatories.	
Indicators	Prospect
1. Among 2,371 engineering education programs provided by public and private universities and institutes, 240 programs (10%) are accredited by IABEE.	Overall Goal including an indicator was set to be achieved in 10 years after completion of the project. 99 programs are accredited by IABEE at the time of the completion of the project. It is expected that 150~180 programs will be accredited by IABEE in 3 years after the completion of the project and more than 240 programs will be accredited by IABEE within 10 years after the completion of the project.

Overall Goal of the project including an indicator was set to be achieved in 10 years after completion of the project although Overall Goal is usually expected to be achieved in about 3 years after completion of the project.

There are two positive factors to be achieved Overall Goal in the future as follows.

The first factor is that 8% of engineering education programs provided by public and private universities and institutes (which is 190 programs) are accredited by BAN-PT or

LAM-Teknik with rank “Excellent”, among the half of which were accredited by IABEE at the completion of the project. “Excellent” rank accredited by BAN-PT or LAM-Teknik is the eligibility of programs’ application for IABEE accreditation. It means that the overall goal’s number of programs accredited by IABEE depends on the speed of national mandatory accreditations. As national mandatory accreditation is not fully outcomes-based, the programs even ranked as Excellent need time to change their education to fit IABEE outcomes-based accreditation criteria.

The second factor is that Acting Director-General of Higher Education, Research and Technology stated at the 5th JCC held on 14 July 2023 that soon a Ministerial Decree will be issued. There will be a message to study programs that LAM-PS（LAM-Teknik for engineering） accreditation provides a minimum performance indicator and all programs are encouraged to go beyond, which is the international-level accreditation. IABEE considers such a message will accelerate IABEE accreditations.

2. Plan of Operation and Implementation Structure of Indonesia side to achieve Overall Goal

The Indonesian Government is fully aware of the needs of the paradigm shift from Input-based teaching to outcomes-based learning and of the value of international-level accreditation for engineering education. Essential system to achieve Overall Goal has been developed through the project.

There might be no need to propose a plan of operation to achieve Overall Goal.

3. **Recommendations for Indonesia side**

It is expected that the Government of Indonesia particularly the Ministry of Culture and Education, Research Technology and The Institution of Engineers Indonesia (PII) for keep on continue support and effort on the following

1. PII/IABEE is expecting to improve the values of quality of engineering education for global recognition. It is an essential for the Government of Indonesia to continue the socialization of Outcome Base Education (OBE) learning method for Engineering Education, considering of the disparity/gap of quality of engineering education in the Indonesia regions and also within the developing countries.
2. PII/IABEE need to consider increasing activity for education forum to the public, government level (Central or Regional) in term of socialization of OBE and international accreditation. The scheme of socialization could be implemented through focus group discussion/symposium/seminar in national and international level.
3. PII/IABEE will conduct the IABEE Engineering Education Outlook Symposium on

July 13, 2023 at the first time. We are expecting this symposium could become one of agenda of PII/IABEE that could be continued in every year and get support from the Line Ministries and Industries.

4. PII/IABEE also can published newsletter about IABEE activity and program including the achievement of quality graduates of IABEE Accredited Program study as one of the Public Relations programs and also published in the media social such as Facebook and or Instagram to make people aware and recognize the importance of international accreditation of IABEE.

4. Monitoring Plan from the end of the Project to Ex-post Evaluation

An Ex-post evaluation will be conducted in 3 years after the end of project.

ANNEX 1: Results of the Project

(List of Dispatched Experts, List of Counterparts, List of Trainings, etc.)

ANNEX 2: List of Products (Report, Manuals, Handbooks, etc.) Produced by the Project

ANNEX 3: PDM (All versions of PDM)

ANNEX 4: R/D, M/M, Minutes of JCC (copy) (*)

ANNEX 5: Monitoring Sheet (copy) (*)

(Remarks: ANNEX 4 and 5 are internal reference only.)

Abbreviation list

ABET	Former name was Accreditation Board for Engineering and Technology in USA
AEESEAP	Association for Engineering Education in Southeast Asia and the Pacific
BAN-PT	National Accreditation Board
CAST	China Association for Science and Technology
DGHE	Directorate General of Higher Education
DIKTI	Directorate General of Higher Education, Research and Technology
EA	Engineers Australia
EAC	Evaluation & Accreditation Committee
EXC	Executive Committee
IABEE	Indonesian Accreditation Board for Engineering Education
IEA	International Engineering Alliance
JABEE	Japan Accreditation Board for Engineering Education
JICA	Japan International Cooperation Agency
LAM-PS	Lembaga Akreditasi Mandiri-Program Studi (Independent Accreditation Body-Program Study)
LAM-Teknik	Independent Accreditation Body for Engineering Program
MOEC	Ministry of Education and Culture
MOECRT	Ministry of Education, Culture, Research and Technology
MORTHE	Ministry of Research, Technology and Higher Education
MP3EI	Master plan for Acceleration and Expansion of Indonesia's Economic Development
OBA	Outcomes-based Assessment
OBE	Outcomes-based Education
PII	Persatuan Insinyur Indonesia (The Institution of Engineers Indonesia)
R&P	Rules and Procedures
RENSTRA	National Strategic Plan for Education
RPJMN	National Medium Term Development Plan
RPJP	Long Term National Development Plan
SC	Steering Committee for IABEE Preparation
WA	Washington Accord

2. Attachments

ANNEX 1: Results of the Project

様式１

業務従事者の従事計画／実績表

監督職員確認印：上田　大輔　印

契約件名：インドネシアエンジニアリング教育認定機構(IABEE)設立プロジェクト(第１年次)

１．現地業務

氏名	担当業務	格付		渡航回数	2014		2015									日数合計	人月合計
					11	12	1	2	3	4	5	6	7	8	9		
青島泰之	総括/組織運営１	２	計画	9	■ (5)	■ (12)	■ (6)	■ (9)	■ (9)	■ (9)	■ (9)	■ (7)	■ (9)	■ (4)		79	2.63
			実績	9	26-30 ■ 5	1-12 ■ 12	11-16 ■ 6	22-27 ■ 6	17-27 ■ 11	7-18 ■ 12 28-01 ■ 4		2-12 ■ 11 21-27 ■ 7	26-31 ■ 6	1-8 ■ 8		88	2.93
牧野光則	基準書類整備１/本邦研修資料作成１/審査書類整備２/ホームページ・データベース開発１	３	計画	6			■ (7)					■ (14)	■ (7)	■ (14)		42	1.40
			実績	5			12-16 ■ 5		25-27 ■ 3	28-01 ■ 4		9-12 ■ 4	26-31 ■ 6	1 ■ 1		23	0.77
佐藤之彦	審査書類整備１/試行審査１/本邦研修資料作成２/啓蒙セミナー２/	３	計画	4		■ (6)				■ (7)		■ (8)		■ (7)		28	0.93
			実績	2		1-6 ■ 6				12-18 ■ 7						13	0.43
本城勇介	審査員研修１/啓蒙セミナー１	３	計画	2						■ (7)	■ (7)					14	0.47
			実績	2						12-18 ■ 7	15-19 ■ 5					12	0.40
岸本喜久雄	本邦研修資料作成３	３	計画	0												0	0
			実績														
鈴木雅行	組織運営２	３	計画	1										■ (7)		7	0.23
			実績	1						12-18 ■ 7						7	0.23

様式 1

****	基準書類整備 2	3	計画	3			■ (7)					■ (7)		■ (7)		21	0.7
			実績														
高橋明子	基準書類整備 3/ 本邦研修資料作成 5	4	計画	3			■ (7)					■ (7)		■ (7)		21	0.7
			実績	2			12-16 ■ 5		25-27 ■ 3							8	0.27
****	審査書類整備 4	3	計画	2								■ (7)		■ (7)		14	0.47
			実績														
石井英志	試行審査 2	3	計画	1	■ (5)	■ (9)										14	0.47
			実績	1	26-30 ■ 5	1-6 ■ 6										11	0.37
藤井俊二	試行審査 3/ 審査員研修 2/ 審査書類整備 3	3	計画	4		■ (8)					■ (7)	■ (7)		■ (6)		28	0.93
			実績	3		1-6 ■ 6					29-31 1-2 ■ 5	8-11 ■ 4				15	0.50
田中忠治	試行審査 4	3	計画	1		■ (7)										7	0.23
			実績	1		1-5 ■ 5										5	0.17
清水浩	試行審査 5	3	計画	1		■ (7)										7	0.23
			実績	1		1-5 ■ 5										5	0.17
藤崎浩幸	試行審査 6	3	計画	1		■ (7)										7	0.23
			実績	1		1-5 ■ 5										5	0.17

様式 1

Michael Milligan	啓蒙セミナー3	3	計画	1						■ (7)						7	0.23
			実績	1						10-19 ■ 10						10	0.33
羽豆順子	ホームページ・データベース開発 2	3	計画	1								■ (7)				7	0.23
			実績	1									26-31 ■ 6	1 ■ 1		7	0.23
										現地業務小計				計画		303	10.08
														実績		209	6.97

2．国内業務

氏名	担当業務	格付			2014		2015									日数合計	人月合計
					11	12	1	2	3	4	5	6	7	8	9		
青島泰之	統括/組織運営 1	2	計画			■ (5)	■ (5)	■ (5)	■ (5)	■ (6)	■ (6)	■ (6)	■ (6)	■ (6)		50	2.50
			実績			15-17, 19, 22 ■ 5	7, 8, 19-21 ■ 5	5-7, 9, 18 ■ 5	6, 9-12 ■ 5	1, 2, 20, 21, 23, 24 ■ 6	7, 8 18, 19, 21, 22, 25, 27 ■ 8	16, 18, 29, 30 ■ 4	13-17, 22-24 ■ 8	11-14 ■ 4		50	2.50
牧野光則	基準書類整備 1/本邦研修資料作成/審査書類整備 2/ホームページ・データベース開発 1	3	計画				■ (9)				■ (5)	■ (2)	■ (5)			21	1.05
			実績				8-9, 19-21 26-29 ■ 9		6, 9-12 ■ 5	1, 2, 3, 20, 21 ■ 5	11, 12, 20-22 ■ 5	16, 17 ■ 2	21, 22 ■ 2	3, 4 ■ 2		30	1.50
佐藤之彦	審査書類整備 1/試行審査 1/本邦研修資料作成 2/啓蒙セミナー2/	3	計画				■ (4)				■ (5)		■ (5)			14	0.70
			実績				26-29 ■ 4			1, 2, 3, 20, 21 ■ 5						9	0.45

様式 1

岸本喜久雄	本邦研修資料作成 3	3	計画				■ (4)									4	0.20
			実績				26-29 ■ 4									4	0.20
三木哲也	本邦研修資料作成 4	3	計画				■ (4)									4	0.20
			実績				26-29 ■ 4									4	0.20
高橋明子	基準書類整備 3/ 本邦研修資料作成 5	4	計画				■ (4)									4	0.20
			実績				26-29 ■ 4									4	0.20
羽豆順子	ホームページ・データベース 2	3	計画							■ (5)	■ (5)	■ (3)		■ (5)		18	0.90
			実績								11, 12, 20-22 ■ 5	8, 9 17, 18 ■ 4	21-23 ■ 3	3, 4 ■ 2		14	0.70
										国内業務小計				計画		115	5.75
														実績		115	5.75

合計	計画	15.83
	実績	12.72

凡例：■ 業務従事実績　■ 業務従事計画　■ 自社負担

報告書等	△ IC/R							△ PR/R		△ F/R	

注 1）各業務従事者の現地、国内のそれぞれの人月は、現地業務期間は 30 日、国内業務期間は 20 日で除した数字の小数点以下第３位を四捨五入して算定すること。
注 2）現地業務と国内業務の振替えは人月単位で行うこととするため、日数に端数が出るが、この端数は国内業務の日数で調整することとし、合計人月は変更しないこと。
注 3）各業務従事者の各配置期間の下には、日数を括弧書きで記入すること。
注 4）実績については各配置期間の開始日、終了日を記載すること。計画については記入不要。
注 5）通訳についても記載すること。
注 6）コンサルタント業務従事月報の添付資料とするときは、月報提出月以降の「業務従事予定日程」を括弧書きで記載すること。

Dispatched Experts (1st Phase)

Name	Associated Task	Nubmer of travel	Task Contents	Affiliated Organization
Yasuyuki AOSHIMA	Management/ Project Operation1	9	Accompanied on-site missions of the experts (Indonesia). On-site missions for attending number of IABEE committees meetings such as, EXC, Criteria committee and EAC. Conducted arrangement and coordination with Indonesian counterpart. Attended IEAM 2015 for information collection and lobbying for IABEE to admit in the Washington Accord as a provisional member	JABEE
Mitsunori MAKINO	Accreditation Criteria Documents Preparation1/ Evaluation Document2/ Homepage & Database Development1/	5	On-site missions (Indonesia) for preparation of framework for the accreditation criteria and glossary. On-site mission (Indonesia)to design and build IABEE homepage and database. Studying and preparing documents for IABEE committee (domestic). Preparation for training materials for evaluator trainer training seminar held in Japan.	JABEE
Yukihiko SATO	Evaluation Documents Preparation1/ Pilot Accreditation1/ Socilization Seminar2	2	On-site missions (Indonesia) for attending EAC. On-site missions (Indonesia) for preparation of evaluation documents. Studying and preparing documents for IABEE committee and half a month of preparation work for designing the on-line module for training materials (domestic). Preparation for training materials for evaluator trainer training seminar held in Japan. Lecturer for IABEE evaluator training seminar and preparation of its training materials held in Indonesia.	JABEE
Yusuke HONJO	Evaluator Training1/ Socialization Seminar1	2	A month preparation work for designing the on-line module for training materials (domestic). On-site mission (Indonesia)for the pilot accreditation of the Indonesian program which requires prior examination of the program review report.	JABEE
Masayuki SUZUKI	Project Operation2	1	On-site mission for the IABEE secretariat Training (Indonesia). IABEE secretariat training held in Japan. Preparation for training materials for evaluator trainer training seminar held in Japan. On-site mission (Indonesia) for providing guidance on the program anticipated to apply for evaluation .	JABEE
Akiko TAKAHASHI	Accreditation Criteria Documents Preparation2	2	On-site missions (Indonesia) for preparation of framework for the accreditation criteria and glossary. Preparation for training materials for evaluator trainer training seminar held in Japan.	JABEE
Hideshi ISHII	Pilopt Accreditation2	1	On-site mission (Indonesia) for the pilot accreditation of the Indonesian program which requires prior examination of the program review report.	JABEE
Shunji FUJII	Pilot Accreditation2/ Evaluator Training2/ Evaluation Document3	3	Lecturer for IABEE evaluator training seminar and preparation of its training materials held in Indonesia. A month preparation work for designing the on-line module for training materials (domestic). On-site mission (Indonesia)for the pilot accreditation of the Indonesian program which requires prior examination of the program review report.	JABEE
Tadatsugu TANAKA	Pilot Accreditation4	1	On-site mission (Indonesia)for the pilot accreditation of the Indonesian program which requires prior examination of the program review report.	JABEE
Hiroshi FUJISAKI	Pilot Accreditation5	1	On-site mission (Indonesia)for the pilot accreditation of the Indonesian program which requires prior examination of the program review report.	JABEE
Hiroyuki SHIMIZU	Pilot Accreditation6	1	On-site mission (Indonesia)for the pilot accreditation of the Indonesian program which requires prior examination of the program review report.	JABEE
Michael Milligan	Sicialization Seminars3	1	A peaker at Socislization Seminars	ABET
Junko HAZU	Homepage & Database Development2	1	On-site mission (Indonesia)to design and build IABEE homepage and database.	JABEE

業務従事者の従事計画／実績表

監督職員確認印：梅宮　直樹　　印

契約件名：インドネシアエンジニアリング教育認定機構(IABEE)設立プロジェクト(第２年次)

１．現地業務

氏名	担当業務	格付		渡航回数	2015			2016											2017			日数合計	人月合計
					10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3		
青島泰之	総括/組織運営１	2	計画	17	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(12)	(10)	(10)	(10)	(10)	(5)		167	5.57
			実績	18	5-14 10	17-25 9	5-16 12	17-22 6	8-16 9	10-18 30,31 9, 2	1-8 8	2-8 16-22 30,31 7, 7, 2	1-5 5	14-22 9	21-31 11	1, 15-21 8	4-9 23-28 6, 6	27-30 4	1-14 14	16-21 6	7-15 9		159	5.30
高橋明子	組織運営２	4	計画	1																(7)			7	0.23
			実績	1				18-22 5															5	0.17
牧野光則	基準書類整備２	3	計画	1				(7)															7	0.23
			実績	1																16-21 6			6	0.20
石井英志	審査員研修2-3	3	計画	2								(7)			(7)					(7)			21	0.70
			実績	2											24-26 3					16-21 6			9	0.30
高橋明子	審査員研修2-1	4	計画	2								(7)								(7)			7	0.23
			実績	2								2-8 7								16-21 6			13	0.43

様式 1

佐藤之彦	審査員研修 2-2	3	計画	1													■ (7)							7	0.23
			実績	1													25-30 ■ 6	1, 2 ■ 2						8	0.27
高橋明子	審査員研修 3	4	計画	1													■ (7)							7	0.23
			実績	1													25-30 ■ 6	1, 2 ■ 2						8	0.27
杉山俊幸	審査員研修 4	3	計画	1								■ (7)												7	0.23
			実績	1							29-30 ■ 2	1-3 ■ 3												5	0.17
猪股宏	審査員研修 5	3	計画	1								■ (7)												7	0.23
			実績	1								13-17 ■ 5												5	0.17
福田敦	試行審査 1	3	計画	1			■ (7)																	7	0.23
			実績	1			5-11 ■ 7																	7	0.23
藤原章正	試行審査 2	3	計画	1			■ (7)																	7	0.23
			実績	1			5-11 ■ 7																	7	0.23
若井明彦	試行審査 3	3	計画	1			■ (7)																	7	0.23
			実績	1			5-11 ■ 7																	7	0.23
佐渡一広	試行審査 4	3	計画	1			■ (7)																	7	0.23
			実績	1			5-11 ■ 7																	7	0.23

様式 1

本間寛臣	試行審査 5	3	計画	1			■ (7)																7	0.23
			実績	2			6-11 ■ 6	18-21 ■ 4															10	0.33
本間寛臣	試行審査 6	3	計画	1														■ (7)					7	0.23
			実績	1														27-30 ■ 4	1 ■ 1				5	0.17
藤井俊二	試行審査 7	3	計画	1			■ (7)																7	0.23
			実績	1				18-22 ■ 5															5	0.17
長坂徹也	試行審査 8	3	計画	1														■ (7)					7	0.23
			実績	1														27-30 ■ 4	1, 2 ■ 2				6	0.20
神保至	試行審査 9	3	計画	1														■ (7)					7	0.23
			実績	1														27-30 ■ 4	1 ■ 1				5	0.17
小林憲正	試行審査 10	3	計画	1															■ (7)				7	0.23
			実績	1															4-9 ■ 6				6	0.20
猪股宏	試行審査 11	3	計画	1															■ (7)				7	0.23
			実績	1															4-9 ■ 6				6	0.20
高村岳樹	試行審査 12	3	計画	1															■ (7)				7	0.23
			実績	1															4-9 ■ 6				6	0.20

様式１

田名部 元成	試行審査 13	3	計画	1															■ (7)					7	0.23
			実績	1															27-30 ■ 4	1 ■ 1				5	0.17
笹口裕昭	試行審査 14	3	計画	1																■ (7)				7	0.23
			実績	1																4-9 ■ 6				6	0.20
本城勇介	試行審査 15	3	計画	1																■ (7)				7	0.23
			実績	1																6-11 ■ 6				6	0.20
杉山俊幸	試行審査 16	3	計画	1																■ (7)				7	0.23
			実績	1																6-11 ■ 6				6	0.20
本間寛臣	試行審査 17	3	計画	1																■ (7)				7	0.23
			実績	3														7, 8 23, 24 ■■ 2, 2		7-11 ■ 5				9	0.30
新田洋司	試行審査 18	3	計画	1																■ (7)				7	0.23
			実績	1																6-11 ■ 6				6	0.20
牧野光則	ホームページ・データベース１	3	計画	6	■ (7)					■ (7)				■ (7)	■ (7)	■ (7)				■ (7)				42	1.40
			実績	5		19-25 ■ 7				13-17 ■ 5				18-22 ■ 5	22-24 ■ 3	18-21 ■ 4								24	0.80

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羽豆順子	ホームページ・データベース２	3	計画	2	■(7)					■(7)													14	0.47
			実績	2		19-24 25（自社負担） ■ 7				13-17 ■ 5													11	0.37
木村雄二	プログラム指導２	3	計画	1						■(2)	■(3)												5	0.17
			実績	1						30, 31 ■ 2	1-3 ■ 3												5	0.17
小島博光	プログラム指導３	3	計画	1							■(5)												5	0.17
			実績	1							3-6 ■ 4												4	0.13
石井英志	プログラム指導４	3	計画	1						■(2)	■(3)												5	0.17
			実績	1						30, 31 ■ 2	1-3 ■ 3												5	0.17
鈴木雅行	プログラム指導５	3	計画	1							■(5)												5	0.17
			実績	1							3-6 ■ 4												4	0.13
																					現地業務小計	計画	439	14.57
																						実績	386	12.88

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２．国内業務

氏名	担当業務	格付			2015			2016											2017			日数合計	人月合計
					10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3		
青島泰之	総括 組織運営１ 国内研修	2	計画		■ (5)	■ (5)	■ (5)	■ (5)	■ (5)	■ (5)	■ (5)	■ (5)	■ (5)	■ (5)	■ (5)	■ (5)	■ (5)	■ (5)	■ (5)	■ (5)	■ (5)		85	4.25
			実績		1, 2, 25-27 ■ 5	4-6, 26-27 ■ 5	1-3, 17, 18 ■ 5	15, 25 26, 28 , 29 ■ 5	1, 4, 5 22, 23 ■ 5	1-3, 7, 8 ■ 5	14, 15 20-22 ■ 5	9-12 23 ■ 5	8-10, 20, 27 ■ 5	4, 5, 7 11, 13 ■ 5	1-3 9, 19 ■ 5	5-9 12-14 ■ 8	3 17-20 ■ 5	1, 2 6-8 ■ 5	15, 16 19, 20 22 ■ 5	13 25, 26 ■ 3	3, 6 ■ 2		83	4.15
牧野光則	基準書類 整備１	3	計画			■ (5)																	5	0.25
			実績																				0	0
佐藤之彦	審査書類 整備１	3	計画			■ (5)				■ (5)			■ (5)			■ (5)		■ (5)					25	1.25
			実績																				0	0
藤井俊二	審査員研 修１	3	計画			■ (10)							■ (10)										20	1.00
			実績			5-6 ■ 2							8-10 ■ 3										5	0.25
杉山俊幸	審査員研 修４	3	計画																				0	0
			実績										2, 3, 8-10 ■ 5										5	0.25
猪股宏	審査員研 修５	3	計画																				0	0
			実績									2, 6, 9-11 ■ 5											5	0.25

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本城勇介	審査員研修６	3	計画			■(10)							■(10)										20	1.00
			実績			5-6 ■ 2							8-10 ■ 3										5	0.25
佐藤之彦	審査員研修７	3	計画			■(10)																	10	0.50
			実績			5-6 ■ 2																	2	0.10
福田敦	試行審査１	3	計画			■(5)																	5	0.25
			実績			16-20 ■ 5																	5	0.25
藤原章正	試行審査２	3	計画			■(5)																	5	0.25
			実績			16-20 ■ 5																	5	0.25
若井明彦	試行審査３	3	計画			■(5)																	5	0.25
			実績			16-20 ■ 5																	5	0.25
佐渡一広	試行審査４	3	計画			■(5)																	5	0.25
			実績			16-20 ■ 5																	5	0.25
本間寛臣	試行審査５	3	計画			■(5)																	5	0.25
			実績			16-20 ■ 5																	5	0.25

様式１

本間寛臣	試行審査６	3	計画													(5)								5	0.25
			実績													15-19 ■ 5	12-16 ■ 5							10	0.50
長坂徹也	試行審査８	3	計画													(5)								5	0.25
			実績													15-19 ■ 5	12-16 ■ 5							10	0.50
神保至	試行審査９	3	計画													(5)								5	0.25
			実績													15-19 ■ 5	12-16 ■ 5							10	0.50
小林憲正	試行審査10	3	計画													(5)								5	0.25
			実績													22-26 ■ 5	12-16 ■ 5							10	0.50
猪股宏	試行審査11	3	計画													(5)								5	0.25
			実績													22-26 ■ 5	12-16 ■ 5							10	0.50
高村岳樹	試行審査12	3	計画													(5)								5	0.25
			実績													22-26 ■ 5	12-16 ■ 5							10	0.50
田名部元成	試行審査13	3	計画													(5)								5	0.25
			実績													15-19 ■ 5	12-16 ■ 5							10	0.50

様式１

笹口裕昭	試行審査14	3	計画													■(5)							5	0.25
			実績													22-26 ■ 5	12-16 ■ 5						10	0.50
本城勇介	試行審査15	3	計画																■(6)				6	0.30
			実績																1, 4, 5 22, 23 ■ 5				5	0.25
杉山俊幸	試行審査16	3	計画																■(6)				6	0.30
			実績																1, 4, 5 22, 23 ■ 5				5	0.25
本間寛臣	試行審査17	3	計画																■(7)				7	0.35
			実績															17-20 ■ 4					4	0.20
新田洋司	試行審査18	3	計画																■(6)				6	0.30
			実績																1, 4, 5 22, 23 ■ 5				5	0.25
牧野光則	審査員研修8	3	計画		■(5)													■(2.5)					7.5	0.38
			実績		1, 2, 8 21, 22 ■ 5													24-25 ■ 2					7	0.35

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佐藤之彦	審査員研修９	3	計画		■(5)																			5	0.25
			実績		1,2,8 21,22 ■ 5													24-26 ■ 3						8	0.40
鈴木雅行	審査員研修10	3	計画		■(5)																			5	0.25
			実績		1,2,8 21,22 ■ 5																			5	0.25
石井英志	審査員研修11（国内研修）	3	計画		■(5)																			5	0.25
			実績		1,2 25-27 ■ 5								9 16-19 ■ 5	2,3 8-10 ■ 5		1-3 9,18 ■ 5			6-8 ■ 3					23	1.15
高橋明子	審査員研修12(国内研修)	4	計画		■(5)													■(2 5)						7.5	0.38
			実績		1,2,8 21,22 ■ 5											22-26 ■ 5		24-26 ■ 3	6-8 ■ 3					16	0.80
高橋明子	組織運営２	4	計画														■(5)							5	0.25
			実績														5-8 ■ 4							4	0.20
鈴木雅行	組織運営３	3	計画														■(5)							5	0.25
			実績														5-8 ■ 4							4	0.20
牧野光則	ホームページ・データベース１	3	計画			■(5)			■(5)							■(5)								15	0.75
			実績		28-30 ■ 3	26-27 ■ 2			5 ■ 1	2 ■ 1					13-15 ■ 3				1 ■ 1					11	0.55

様式１

羽豆順子	ホームページ・データベース２	3	計画			■(5)					■(5)				■(5)								15	0.75
			実績		28-30 ■ 3	25-27 ■ 3			5 ■ 1	2 ■ 1					3 ■ 1								9	0.43
前田親男	ホームページ・データベース３	3	計画																				0	0
			実績						5 ■ 1	2 ■ 1	4-8 12-14 ■ 8												10	0.50
																国内業務小計				計画			325	16.26
																				実績			326	16.28

凡例：■ 業務従事実績　■ 業務従事計画　■ 自社負担

合計	計画	30.83
	実績	29.16

報告書等	△ IC/R							△ PR/R		△ F/R	

注１）各業務従事者の現地、国内のそれぞれの人月は、現地業務期間は 30 日、国内業務期間は 20 日で除した数字の小数点以下第３位を四捨五入して算定すること。
注２）現地業務と国内業務の振替えは人月単位で行うこととするため、日数に端数が出るが、この端数は国内業務の日数で調整することとし、合計人月は変更しないこと。
注３）各業務従事者の各配置期間の下には、日数を括弧書きで記入すること。
注４）実績については各配置期間の開始日、終了日を記載すること。計画については記入不要。
注５）通訳についても記載すること。
注６）コンサルタント業務従事月報の添付資料とするときは、月報提出月以降の「業務従事予定日程」を括弧書きで記載すること。

Dispatched Experts (2nd Phase)

Name	Associated Task	Number of travel	Task Contents	Affiliated Organization
Yasuyuki AOSHIMA	Management/ Project Operation1	18	Accompanied on-site missions of the experts (Indonesia). On-site missions for attending number of IABEE committees meetings such as, EXC, Criteria committee and EAC. Conducted arrangement and coordination with Indonesian counterpart. Attended IEAM 2016 for information collection and lobbying for IABEE to admit in the Washington Accord as a provisional member and also attended IEAM 2019 to witness IABEE's provisional application in the Washington Accord. Accompanied with IABEE candidates to observe CAST, China accreditation visit to the program and had lecture and meeting session with CAST executives. Engaged tasks in Japan 5 days per month including Evaluator Trainer Training seminar which requires on-site visit observation of JABEE program evaluation.	JABEE
Akiko TAKAHASHI	Project Operation2/ Evaluator Training12/ Evaluator Training3/ Evaluator Training2-1	4	On-site mission for the IABEE secretariat Training (Indonesia). IABEE secretariat training held in Japan. Preparation for training materials for evaluator trainer training seminar held in Japan. Accompanied with IABEE candidates to observe CAST, China accreditation visit to the program and had lecture and meeting session with CAST executives. Accompanied with IABEE candidates to observe Engineers Australia accreditation visit to the program and to visit Engineers Australia headquarter. On-site mission (Indonesia) for preparation of training materials for evaluator training.	JABEE
Mitsunori MAKINO	Accreditation Criteria Documents Preparation1/ Homepage & Database Development1/ Evaluator Training8/ Accreditation Criteria Documents Preparation2	7	On-site missions (Indonesia) for preparation of framework for the accreditation criteria and glossary. On-site mission (Indonesia)to design and build IABEE homepage and database. Studying and preparing documents for IABEE committee (domestic). Preparation for training materials for evaluator trainer training seminar held in Japan.	JABEE
Hideshi ISHII	Evaluator Training2-3 Evaluator Training11 Program Guidance4	2	Lecturer for IABEE evaluator training seminar and preparation of its training materials held in Indonesia. Preparation for training materials for evaluator trainer training seminar held in Japan. On-site mission (Indonesia) for providing guidance on the program anticipated to apply for evaluation.	JABEE
Yukihiko SATO	Evaluation Documents Preparation1/ Evaluator Training7/ Evaluator Training9/ Evaluator Training2-2	1	On-site missions (Indonesia) for attending EAC. On-site missions (Indonesia) for preparation of evaluation documents. Studying and preparing documents for IABEE committee and half a month of preparation work for designing the on-line module for training materials (domestic). Preparation for training materials for evaluator trainer training seminar held in Japan. Lecturer for IABEE evaluator training seminar and preparation of its training materials held in Indonesia. Accompanied with IABEE candidates to observe Engineers Australia accreditation visit to the program and to visit Engineers Australia headquarter.	JABEE
Toshiyuki SUGIYAMA	Evaluator Training4 Pilot Accreditation16	2	Accompanied with IABEE candidates for participating ABET Program Evaluator Training Seminar held in USA. On-site mission (Indonesia)for the pilot accreditation of the Indonesian program which requires prior examination of the program review report.	JABEE
Hiroshi INOMATA	Evaluator Training5 Pilot Accreditation11	2	Accompanied with IABEE candidates for participating ABET Program Evaluator Training Seminar held in USA. On-site mission (Indonesia)for the pilot accreditation of the Indonesian program which requires prior examination of the program review report.	JABEE
Atsushi FUKUDA	Pilot Accreditation1	1	On-site mission (Indonesia)for the pilot accreditation of the Indonesian program which requires prior examination of the program review report.	JABEE
Akimasa FUJIWARA	Pilot Accreditation2	1	On-site mission (Indonesia)for the pilot accreditation of the Indonesian program which requires prior examination of the program review report.	JABEE
Akihiko WAKAI	Pilot Accreditation3	1	On-site mission (Indonesia)for the pilot accreditation of the Indonesian program which requires prior examination of the program review report.	JABEE
Kazuhiro SADO	Pilot Accreditation4	1	On-site mission (Indonesia)for the pilot accreditation of the Indonesian program which requires prior examination of the program review report.	JABEE
Hiroomi HOMMA	Pilot Accreditation5 Pilot Accreditation6 Pilot Accreditation17	6	On-site missions (Indonesia)for the pilot accreditation of the Indonesian program which requires prior examination of the program review report.	JABEE
Shunji FUJII	Pilot Accreditation11	1	Lecturer for IABEE evaluator training seminar and preparation of its training materials held in Indonesia. A month preparation work for designing the on-line module for training materials (domestic). On-site mission (Indonesia)for the pilot accreditation of the Indonesian program which requires prior examination of the program review report.	JABEE
Tetsuya NAGASAKA	Pilot Accreditation8	1	On-site mission (Indonesia)for the pilot accreditation of the Indonesian program which requires prior examination of the program review report.	JABEE
Itaru JINBO	Pilot Accreditation9	1	On-site mission (Indonesia)for the pilot accreditation of the Indonesian program which requires prior examination of the program review report.	JABEE
Kensei KOBAYASHI	Pilot Accreditation10	1	On-site mission (Indonesia)for the pilot accreditation of the Indonesian program which requires prior examination of the program review report.	JABEE
Takeji TAKAMURA	Pilot Accreditation12	1	On-site mission (Indonesia)for the pilot accreditation of the Indonesian program which requires prior examination of the program review report.	JABEE
Motonari TANABU	Pilot Accreditation13	1	On-site mission (Indonesia)for the pilot accreditation of the Indonesian program which requires prior examination of the program review report.	JABEE
Hiroaki SASAGUCHI	Pilot Accreditation14	1	On-site mission (Indonesia)for the pilot accreditation of the Indonesian program which requires prior examination of the program review report.	JABEE
Yusuke HONJO	Evaluator Training6 Pilot Accreditation18	1	A month preparation work for designing the on-line module for training materials (domestic). On-site mission (Indonesia)for the pilot accreditation of the Indonesian program which requires prior examination of the program review report.	JABEE
Youji NITTA	Pilot Accreditation18	1	On-site mission (Indonesia)for the pilot accreditation of the Indonesian program which requires prior examination of the program review report.	JABEE
Junko HAZU	Homepage & Database Development2	2	On-site mission (Indonesia)to design and build IABEE homepage and database.	JABEE
Yuji KIMURA	Program Guidance2	1	On-site mission (Indonesia) for providing guidance on the program anticipated to apply for evaluation .	JABEE
Hiromitsu KOJIMA	Program Guidance 3	1	On-site mission (Indonesia) for providing guidance on the program anticipated to apply for evaluation .	JABEE
Masayuki SUZUKI	Project Operation3/ Evaluator Training10 Program Guidance5	1	On-site mission for the IABEE secretariat Training (Indonesia). IABEE secretariat training held in Japan. Preparation for training materials for evaluator trainer training seminar held in Japan. On-site mission (Indonesia) for providing guidance on the program anticipated to apply for evaluation .	JABEE

業務従事者の従事計画／実績表

契約件名：インドネシア国インドネシアエンジニアリング教育認定機構（IABEE）設立プロジェクト(第3年次)

監督職員確認印：【三浦　佳子】　印

第3期契約期間　2017年4月～2019年9月

区分	氏名	担当業務	格付		渡航回数	日数合計	人月合計
現地業務	青島泰之	総括/組織運営1	2	計画	30	195	6.50
				実績	25	204	6.80
	高橋明子	組織運営2	4	計画	13	63	2.10
				実績	13	65	2.17
	岸本喜久雄	組織運営3	3	計画	1	4	0.13
				実績	1	4	0.13
	Andrew Wo	組織運営4	3	計画	1	4	0.13
				実績	1	3	0.10
	Alex Chan	組織運営5	3	計画	1	4	0.13
				実績	1	3	0.10
	Kai Sang Lock	組織運営6	3	計画	1	4	0.13
				実績	1	3	0.10
	Lincoln Wood	組織運営7	3	計画	1	4	0.13
				実績	1	5	0.17
	牧野光則	審査員研修1	3	計画	1	6	0.20
				実績	1	6	0.20
	牧野光則	基準・審査書類整備1	3	計画	2	8	0.27
				実績	2	17	0.57
	牧野光則	ホームページ・データベース 1	3	計画	3	12	0.40
				実績	3	11	0.37
	佐渡一広	審査員研修2	3	計画	1	6	0.20
				実績	1	6	0.20
		審査員研修9	3	計画	2	8	0.27
				実績			
	Stuart H. Zweben	暫定加盟のための推薦人	3	計画			
				実績	1	9	0.30
	猪股宏	審査員研修10	3	計画	2	8	0.27
				実績	1	5	0.17
		本格審査	3	計画	8	40	1.33
				実績			
	牧野光則	本格審査1	3	計画			
				実績	1	4	0.13
	本間寛臣	本格審査2	3	計画			
				実績	1	4	0.13
	本間寛臣	本格審査3	3	計画			
				実績	1	3	0.10
	本城勇介	本格審査4	3	計画			
				実績	1	6	0.20
	藤井俊二	本格審査5	3	計画			
				実績	1	6	0.20
	本城勇介	本格審査6	3	計画			
				実績	1	10	0.33
	藤井俊二	本格審査7	3	計画			
				実績	1	7	0.23
	本間寛臣	本格審査8	3	計画			
				実績	1	21	0.70
	未定	プログラム指導4-9	3	計画	9	50	1.67
				実績			
	本間寛臣	プログラム指導1	3	計画			
				実績	1	3	0.10
	岸本喜久雄	プログラム指導2	3	計画			
				実績	1	6	0.20
	木村雄二	プログラム指導3	3	計画			
				実績	1	5	0.17
	現地業務小計			計画		416	13.86
				実績		416.00	13.87
国内業務	青島泰之	総括/組織運営1	2	計画		134	6.70
				実績		134	6.70
	高橋明子	審査員研修3	4	計画		25	1.25
				実績		28	1.40
	牧野光則	審査員研修5	3	計画		1	0.05
				実績		1	0.05
	佐藤之彦	審査員研修6	3	計画		1	0.05
				実績		1	0.05
	本城勇介	審査員研修7	3	計画		1	0.05
				実績		1	0.05
	藤井俊二	審査員研修8	3	計画		1	0.05
				実績		1	0.05
		審査員研修4	3	計画		3	0.15
				実績			
	国内業務小計			計画		166	8.30
				実績		166	8.30
	合計			計画			22.16
				実績			22.17

凡例：業務従事計画　業務従事実績　自社負担

報告書等	
2017年4月	事業計画書
2017年5月	Work Plan Monitoring 6
2017年10月	Monitoring 7
2018年4月	中間報告書 Monitoring 8
2018年10月	Monitoring 9
2019年4月	中間報告書 Monitoring 10
2019年8月	Monitoring
2019年9月	業務完了報告書

注１）各業務従事者の現地、国内のそれぞれの人月は、現地業務期間は30日、国内業務期間は20日で除した数字の小数点以下第３位を四捨五入して算定してください。
注２）現地業務と国内業務の振替えは人月単位で行うため、日数に端数が出ますが、端数は国内業務日数で調整してください。
注３）各業務従事者の各配置期間の下には、日数を括弧書きで記入してください。
注４）実績については各配置期間の開始日、終了日を記載してください（計画については記入不要です）。
注５）通訳についても記載してください。
注６）自社負担による業務従事期間が発生する場合、自社負担による業務従事期間を明確に区別できるよう表記してください。

Dispatched Experts (3rd Phase)

Name	Associated Task	Nubmer of travel	Task Contents	Affiliated Organization
Yasuyuki AOSHIMA	Management/ Project Operation 1	25	Accompanied on-site missions of the experts (Indonesia). On-site missions for attending number of IABEE committees meetings such as, EXC, EAC, finance committee, IC and Public Affairs Committee. Conducted arrangement and coordination with Indonesian counterpart. Attended IEAM 2017 and 2018 for information collection and lobbying for IABEE to admit in the Washington Accord as a provisional member and also attended IEAM 2019 to witness IABEE's provisional application in the Washington Accord. Lecturer for Evaluator Trainer Training seminar and accompanied with on-site visit observation of program evaluation held in Japan. Lecturer for IABEE secretariat training session held in Japan.	JABEE
Akiko TAKAHASHI	Project Operation 2/ Evaluator Training 3	13	On-site missions (Indonesia). On-site missions for attending number of IABEE committees meetings such as, EXC, EAC and IC. Preparation for Evaluator Trainer Training seminar and accompanied with on-site visit observation of program evaluation held in Japan. Facilitated IABEE secretariat training sessions both held in Japan and in Indonesia.	JABEE
Kikuo KISHIMOTO	Project Operation 3/ Program Guidance 2	2	Attended IABEE inauguration ceremony and provided keynote speech during seminar held in conjunction with ceremony as a representative from the Washington Accord signatory organization. Also attended meeting with Ministry executives, IABEE executives and PII executives. On-site mission (Indonesia) for providing consultation and guidance to the university/ program.	JABEE
Andrew Wo	Project Operation 4	1	Attended IABEE inauguration ceremony and provided keynote speech during seminar held in conjunction with ceremony as a representative from the Washington Accord signatory organization. Also attended meeting with PII executives.	Institute of Engineering Education Taiwan
Alex Chan	Project Operation 5	1	Attended IABEE inauguration ceremony and provided keynote speech during seminar held in conjunction with ceremony as a representative from the Washington Accord signatory organization. Also attended meeting with PII executives.	Hong Kong Institution of Engineers
Kai Sang Lock	Project Operation 6	1	Attended IABEE inauguration ceremony and provided keynote speech during seminar held in conjunction with ceremony as a representative from the Washington Accord signatory organization. Also attended meeting with PII executives.	Institution of Engineers, Singapore
Lincoln Wood	Project Operation 7	1	Attended IABEE inauguration ceremony and provided keynote speech during seminar held in conjunction with ceremony as a representative from the Washington Accord signatory organization. Also attended meeting with PII executives.	Engineers Australia
Mitsunori MAKINO	Evaluator Training 1/ Accreditation Criteria & Evaluation Documents Preparation 1/ Evaluator Training 5/ Homepage & Database 1	7	Accompanied with IABEE candidates for participating ABET Program Evaluator Training Seminar held in USA. On-site mission (Indonesia) for assisting preparation on glossary of Accreditation Criteria and Evaluation Documents. Lecturer for Evaluator Trainer Training seminar held in Japan. On-site missions (Indonesia) for the modification of Homepage and Database.	JABEE
Kazuhiro SADO	Evaluator Training 2	1	Accompanied with IABEE candidates for participating ABET Program Evaluator Training Seminar held in USA.	JABEE
Stuart H. Zweben	Nominator for Provisional Admission to the Washington Accord	1	Observation on System of IABEE including evaluation and accreditation through the on-site visit to the education. program for IABEE to satisfy meeting the Washington Accord applicant requirement of having 1 of 2 nominators.	ABET
Hiroshi INOMATA	Evaluator Training 10	1	On-site missions (Indonesia) for providing guidance on Evaluator Trainer Training Seminars.	JABEE
Hiroomi HOMMA	Program Guidance 1/ Evaluation 2/ Evaluation 3/ Evaluation 8	4	On-site mission (Indonesia) for providing consultation and guidance to the university/ program. Accompanies IABEE On-site Evaluations to provide advice on judgment.	JABEE
Yusuke HONJO	Evaluator Training 7/ Evaluation4 / Evaluation6	2	Facilitator for Evaluator Trainer Training seminar held in Japan. Accompanies IABEE On-site Evaluations to provide advice on judgment.	JABEE
Shunji FUJII	Evaluator Training 8/ Evaluation 5 / Evaluation7	2	Facilitator for Evaluator Trainer Training seminar held in Japan. Accompanies IABEE On-site Evaluations to provide advice on judgment.	JABEE
Yuji KIMURA	Program Guidance 3	1	On-site mission (Indonesia) for providing consultation and guidance to the university/ program.	JABEE

第4年次（2019.10-2023.8）
調達管理番号（18a00327）170138

様式－3

業務従事者の従事計画／実績表

契約件名：インドネシア国インドネシアエンジニアリング教育認定機構（IABEE）設立プロジェクト

監督職員確認印：【岩崎　昭宏】　印

	氏名	担当業務	格付		2019年度渡航回数	2020年度渡航回数	2021年度渡航回数	2022年度渡航回数	2023年度渡航回数	全渡航回数	日数合計	人月合計	備考
現地業務	青島泰之	業務主任者/組織運営1	2	計画	3		1	4	2	10	61	2.03	
				実績	3			5	2	10	70	2.33	
	高橋明子	組織運営2	4	計画	1		1	1	1	4	24	0.80	
				実績	1			2	1	4	31	1.03	
	本間寛臣	実地審査	3	計画	2					2	9	0.30	
				実績	2					2	9	0.30	
				計画									
				実績									
	現地業務小計			計画							94	3.13	
				実績							110	3.66	
国内業務	青島泰之	業務主任者/組織運営1	2	計画							34	1.70	
				実績							29	1.45	
	高橋明子	組織運営2	4	計画							22	1.10	
				実績							16	0.80	
	国内業務小計			計画							56	2.80	
				実績							45	2.25	

第4年次契約期間：2019年10月～2023年8月

合計		
合計	計画	5.93
	実績	5.91

凡例：　業務従事計画　業務従事実績　自社負担

報告書等	
2019年10月	△ 業務計画書 Work plan
2020年3月	△ Monitoring 12
2020年9月	△ Monitoring 13
2020年11月	△ 中間報告書
2021年3月	△ Monitoring 14
2021年9月	△ Monitoring 15
2022年2月	△ 中間報告書
2022年3月	△ Monitoring 16
2022年9月	△ Monitoring 17
2023年3月	△ Monitoring 18
2023年8月	△ 事業完了報告書

注１）各業務従事者の現地、国内のそれぞれの人月は、現地業務期間は30日、国内業務期間は20日で除した数字の小数点以下第３位を四捨五入して算定してください。
注２）現地業務と国内業務の振替えは人月単位で行うため、日数に端数が出ますが、端数は国内業務日数で調整してください。
注３）各業務従事者の各配置期間の下には、日数を括弧書きで記入してください。
注４）実績については各配置期間の開始日、終了日を記載してください（計画については記入不要です）。
注５）通訳についても記載してください。
注６）自社負担による業務従事期間が発生する場合、自社負担による業務従事期間を明確に区別できるよう表記してください。

D

Name	Associated Task	Number of travel
Yasuyuki AOSHIMA	Management/ Project Operation 1	10
Akiko TAKAHASHI	Project Operation 2	4
Hiroomi HOMMA	Evaluation	2

List of Government C/P

Period	Ministry	C/P Director	C/P Manager
2014-2016	Ministry of Education and Culture	Prof. Joko Santoso	Dr. Illah Sailah
2016-2018	Ministry of Research, Technology and Higher Education	Prof. Intan Ahmad	Prof. Aris Junaidi
2018-2020	Ministry of Research, Technology and Higher Education	Dr. Patdono Suwingnjo	Dr. Totok Prasetyo
2020- present	Ministry of Education, Culture, Research and Technology	Prof. Nizam	Dr. Ridwan/ Dr. Lukman

APPENDIX A – Short CV of IABEE Executive Committee Members

Misri Gozan

Chair of Executive Committee

Dr. Misri is a professor of chemical engineering. In August 2018, he's elected as the Chair of IABEE Executive Committee. He obtained his Dr.-Ing. degree from Technical University of Dresden, Germany in 2004, and M. Tech. degree from Massey University, New Zealand. Since 2007, he has been serving as assessor/evaluator for the National Accreditation Agency for Higher Education (BAN-PT). He was involved in the preparation of IABEE establishment in 2014, and the development of IABEE afterwards. He is a lecturer and researcher at Bioprocess Engineering Program, Chemical Engineering Department, Universitas Indonesia. He is also the Director of Research Centre for Biomedical Engineering, at Universitas Indonesia. He has research interests in the field of bioprocess engineering and biochemical products from biomass. He joined the Institution of Engineers Indonesia (PII) in 2004 and registered as IPU (Prominent Professional Engineer) in 2016.

Muhammad Romli

Chair of International Committee

Dr. Romli is an agro-industrial senior engineer and professor of the Faculty of Engineering and Technology, Bogor Agricultural University (IPB). He received his master's degree in biotechnology and Ph.D. in chemical engineering from The University of Queensland, Australia. Romli has been working for Bogor Agricultural University with more than 30 years lecturing experience in the areas of industrial pollution control and management, cleaner industrial production, and industrial ecology. He has served many positions in the university, including Head Division of Environmental Engineering and Management (1993-2000), Director of Center for Development of Safe Agro-industrial Processes (1997-2000), and Head Department of Agro-industrial Technology (2000-2008). He is also an active member of PII, serving as Chair of PII Chapter for Agroindustry in 2015. Romli has an extensive experience as auditor in quality assurance of education, quality and environmental management systems (ISO 9001 and 14001), and as assessor of National Committee of Accreditation for Research and Development Institution (KNAPPP).

Satryo Soemantri Brodjonegoro

Chair of Accreditation Council

Emeritus Professor in Mechanical Engineering, Institut Teknologi Bandung (ITB), Dr. Satryo is the President of the Indonesian Academy of Sciences. He has a long and distinguished academic and public service career. He was a faculty member of the Mechanical Engineering Department of ITB than 30 years since 1980. He has served many positions in ITB including Chairman of the Department (1992-1995) and Vice Dean of Academic Affairs (1995-1998). From 1999-2007 Satryo served as Director General of Higher Education of the Ministry of National Education, Indonesia. He obtained his Ph.D. in Mechanical Engineering from the University of California at Berkeley in 1985. His research areas include tribology, fracture mechanics, finite element analysis, mechanical design, and higher education development and policy. He is a Fellow of the Indonesian Academy of Sciences since 2008. He served also as visiting professor in mechanical engineering at Toyohashi University of Technology, Japan. In April 2018 he was appointed as Special Advisor to Coordinating Minister of Maritime Affairs, Republic of Indonesia. He was the former Chair of IABEE Steering Committee in 2015-2016.

Sudjarwadi

Chair of Appeal Board

Emeritus Professor Dr. Sudjarwadi was a civil engineer in construction industry in 1970 to 1972. In 1974 he returned to his alma mater, Gadjah Mada University (UGM), to become a lecturer. After 37 years conducting research and teaching, in 2012 he retired as professor emeritus of civil engineering. He currently teaches as part time professor in UGM and Islamic University of Indonesia (UII) at Yogyakarta. He has long and distinguished career, both in academic and public service. He was an assistant director for UGM's Inter University Center for Engineering in 1988-1991. In 1991 he served as Assistant Dean of Faculty of Engineering. In 1994 to 1999 he was appointed as Secretary of Directorate General of Higher Education. Returning to UGM he served as the Dean and subsequently the Vice Rector for Academic Affairs. In 2007 was appointed as the Rector of UGM. After retirement, in 2013 he supervises a board for Indonesian International Education Foundation and serves as Independent Commissioner in PT Sri Rejeki Isman Tbk, a textile company considered as the best integrated textile industry in Southeast Asia. He assisted the Ministry of Education and Culture as chair of Education Committee in 2019. He was a key member of Steering Committee that contributes to IABEE during the initial phase of establishment.

Tjipto Kusumo

Chair of Finance Committee

Engineer Tjipto graduated from ITB with a degree in Engineering Physics in 1974. He has an extensive professional experience, starting in Elnusa company where he served as Manager of Instrument & Control Division. He moved to Tripatra Engineering company and retired from it in 2005, after serving several positions, including Technical Development Director, Off-Shore Projects Marketing Director, and Operation Senior Director. Later he served as Advisor for EPC companies and presently he is a commissioner for Java Energy Semesta, a CNG operation company. He also has academic related activities, including 6 years as practitioner lecturer for Engineering Physics Department of ITB. He also a member of Advisory Board of ITB Engineering Physics Program and Environmental Engineering Program of Islamic University of Indonesia Yogyakarta. He is also an active member of PII, where he co-founded PII Chapter for Engineering Physics in 1997. He was also the Head of the Chapter and the Head of Certification Committee as well as Continual Professional Development Committee. His professional titles as engineer include PII's IPM (Professional Engineer), APEC Engineer, as well as ASEAN Engineer

Arief Syaichu Rohman

Chair of Evaluation and Accreditation Committee

Dr. Arief obtained his bachelor's degree in Electrical Engineering from Institut Teknologi Bandung (ITB). He received an M.Eng.Sc. degree in Systems & Control from the University of New South Wales. He finished his Ph.D. in the same field in 2005 from the University of Newcastle, Australia. He worked for the Research & Development Division at PT IPTN, the Indonesian aircraft industry, in 1990 to 1992. Since 1992 he joined ITB and has been teaching undergraduate and graduate courses in Electrical Engineering at the School of Electrical Engineering & Informatics. He was the Chair of the Undergraduate Program in 2011-2015 and is currently the Chair of Quality Control Circle in the school. He joined PII and awarded IPM (Professional Engineer) title in 2017. He is also an active member of FORTEI (Indonesia Higher Education Forum in Electrical Engineering) where he served as Vice Chair in 2012-2014 and Chair in 2014-2016). He attended program evaluator training in JABEE Japan in 2015 and both IDEAL and PEV training in ABET USA in 2017, respectively. He is a member Control System Society of IEEE. He joined IABEE in 2015 and presently serves as EAC Chair of IABEE.

Tjokorde Walmiki Samadhi

Chair of Criteria Committee

Dr. Samadhi is an associate professor in Chemical Engineering at the Faculty of Industrial Technology at Institut Teknologi Bandung (ITB). He served as the Chemical Engineering Undergraduate Program Chair in 2012-2015, Vice Dean of Academic Affairs in 2015-2020, and currently as the Chemical Engineering Graduate Program Chair. He presided as Undergraduate Curricular Section Coordinator of the Indonesian Association of Chemical Engineering Higher Education (APTEKIM) in 2012-2015, during which he coordinated the formulation of national core curriculum recommendations for undergraduate chemical engineering programs in Indonesia. He has been a member of the IABEE Evaluation and Accreditation Committee and Program Evaluator since 2015. Dr. Samadhi received his Bachelor's and Master degrees in Chemical Engineering from ITB, and PhD in Ceramic Science from Alfred University in New York State, USA in 2003. His academic interests include the development of oxide materials, utilization of inorganic waste materials, high-temperature thermochemical systems, and statistical experimental design and analysis. He received the distinction of 3rd Place in National Most Achieved Program Chairs in 2013 from the Ministry of Education and Culture for implementing outcome-based education and thorough improvements of the Chemical Engineering Program at ITB, which led to ABET accreditation in 2010.

Heru Dewanto

PII President, IABEE Executive Committee member

Dr. Heru is the current President of Indonesia Institute of Engineers (PII). He is a civil engineer by training. He received bachelor's degree in civil engineering from Gadjah Mada University (UGM), an M.Sc.Eng. degree in transport planning and engineering from the University of Leeds, and doctoral degree in strategic management from Graduate School of Economics of the University of Indonesia (UI). He also holds Senior Professional Engineer (IPU) title from PII. He has more than 21 years of experiences in infrastructure investment and business development, ranging from power, toll roads, railways, light rapid transit, wastewater treatment, clean water supply, terminals to housing in various global corporations and national enterprises. He is currently the President Director of PT. Cirebon Energi Prasarana, an independent power producer for 1x1000 MW ultra-supercritical clean coal technology to be firstly applied in Indonesia. Prior to serving PII as president, he was PII Vice President in 2015-2018.

Illah Sailah

Chair of Public Affairs Committee

Dr. Illah is associate professor in agroindustrial process technology at Bogor Agricultural University (IPB). She received bachelor's degree in prost-harvest technology from IPB (1981), master's in chemical engineering from ITB (1986), and doctoral degree in chemical engineering from University of Queensland (1994). Apart from academic career, she has served various managerial positions in the Ministry of Education and Culture (MoEC). She was a key person and one of the initiators of the establishment of IABEE during her tenure as Director of Learning and Student Affairs of the MoEC in 2011-2014. She was also the first IABEE Chair of Executive Committee from 2015 to 2018. In addition to engineering, Dr. Illah pays a considerable interest in higher education development and research. She played a significant role in the development of Competence-based National Curriculum for undergraduate programs; a national project of the MoEC in 2005.

Tresna Soemardi

Executive Committee member

Dr. Tresna is professor in mechanical-biomechanical, product innovation, design, prototyping and development at Universitas Indonesia (UI). Apart from his academic career, he also serves as a consultant for PLN, the state-owned electricity generating company, in 2009-2012. He was also a commissioner for Commission for Supervision of Business Competion in 2007-2011. Tresna holds two bachelor's degrees, i.e. in mechanical engineering from ITB and economics/financial management from UI. He also has a M.Sc. degree in environmental studies, environmental science–human ecology and environmental economic from UI. His Ph.D. is in the field of applied mechanics and advanced composite material. Tresna is also a member of several professional associations, including ASME, SAE, SME-CME, and SAMPE

Faizal Safa

PII Executive Director,
IABEE Executive Committee member

Engineer Faizal is the Chairman of Immara Infoglobal, a national management consultant company headquartered in Jakarta. He is an industrial engineer by training, a senior professional engineer (IPU), and active member of PII. He has been serving PII for various positions, including Vice Chair for Continuous Professional Development committee, member for Industrial Company Development task-force under the PII Chapter for Industrial Engineers, and the most recent appointment as PII Executive Director. He is also the chair of Industrial Management and Engineering Graduates Association.

Sri Hartati

Executive Committee member

Dr. Sri Hartati is professor in computer science at Faculty of Mathematics and Natural Sciences, Gadjah Mada University (UGM). She received bachelor's degree in computer science from UGM in 1986. Her master's and doctoral degrees were obtained from University of New Brunswick, Canada, also in the field of computer science in 1990 and 1996, respectively. Her research interests cover the fields of intelligent systems including knowledge-based system, reasoning system, expert system, fuzzy system, pattern recognition, decision support system, medical computing, and software computation using ANN, fuzzy logic, and genetic algorithm. Besides teaching and conducting research, she is also active in several professional associations, including Computer Science, Electronics and Instrumentation Support Society, Indonesian Physics Society, Indonesian Mathematical Society, and APTIKOM, which is National Higher Education Association for Informatics and Computer Science. She represents APTIKOM in IABEE Executive Committee to pave the way for IABEE's future membership in Seoul Accord.

Berlian Kushari

Secretary-General

Engineer Berlian is a civil engineer by training and a registered professional engineer of PII. He received his bachelor's engineering degree from Gadjah Mada University in 2001 and master's degree (M. Eng.) from Chulalongkorn University, Thailand, in 2005. He served as a consultant to the Ministry of Public Works, Directorate General of Highway Administration for various road safety and pavement management projects in 2007-2017. He also contributed to the development of provincial and national transportation systems planning conducted by the Ministry of Transportation in 2011-2012. He has an academic position in the Faculty of Civil Engineering and Planning of the Islamic University of Indonesia in Yogyakarta and was appointed secretary of Undergraduate Civil Engineering Program in 2014-2018. In 2015, Berlian joined IABEE Evaluation and Accreditation Committee. He was appointed to serve as IABEE Secretary-General since 2019.

Socialization Seminars

14-15 August 2017, University of Surabaya (37名)
15-16 August 2017, Hasanuddin University (35名)
21-22 August 2017, Batam Politech (29名)
22-23 August 2017, Telkom University (44名)
23-24 August 2017, Jakarta周辺大学 (32名)
11 September 2017, UIN Sunan Kalijaga (74名)
28-29 September 2017, North Sumatra University (61名)
29 November 2018, Telkom University, Bandung (35名)
12 February 2019, Surabaya Institute of Technology、Surabaya (43名)
14 February 2019, Sriwijaya University, Palembang (37名)
14 February 2019, LLDIKTI 3 (KOPERTIS 3), Jakarta (66名)
18 February 2019, University of Udayana, Bali (42名)
22 February 2019, Brawijaya University, Malang (38名)
20 March 2019, Yogyakarta State University (36名)
30 April 2019, Gadjah Mada University, Yogyakarta (62名)
21 May 2019, PJ University, Tangerang (72名)
17 July 2019, Trisakti University, Jakarta (28名)
22 July 2019, Janabadra University, Yogyakarta (53名)
15 November 2019, Lampung University (25名)
21 November 2019, APTIKOM, Branch of West Jawa Province (50名)
23 November 2019, Brawijaya University (30名)
30-Nov to 1-Dec 19 2019, Jember University, Faculty of Agricultural (40名)
5 March 2020, Ciputra University (21名)
12 March 2020, Maranatha Christian University (30名)
30 April 2020, IABEE (267名) Online
6 May 2020, IABEE (129名) Online
19 June 2020, Hasanuddin University (20名) Online
25 June 2020, Lampung University (25名) Online
16 July 2020, Institute Technology of Bandung (30名) Online
1 August 2020, Jember University, Faculty of Engineering (22名) Online
5 August 2020, Electrical & Mechanical Eng. Programs (40名) Online
22 August 2020, Syiah Kuala University (25名) Online
27 August 2020, Universitas Indonesia (156名) Online
13 February 2021, APTEKIM (Teknik Kimia) (90名)
6 March 2021, BKSTI (Teknik Industri) (94名)
11 March 2021, Forum Program Studi Teknik Pertanian dan Biosistem (100名)
16 March 2021, BKSTM (Teknik Mesin) (157名)
18 March 2021, APTIKOM (67名)
20 March 2021, Badan Musyawarah Pendidikan Tinggi Teknik Sipil Indonesia (BMPTTSSI)
12 August 2021, Trunojoyo University, Madura (35名)
6 September 2021, Universitas Muhammadiyah Prof. Dr. HAMKA, Jakarta, Faculty of Engineering (15名)
14 September 2021, Universitas Yarsi, Jakarta (80名)

7-8 October 2021, Quality Assurance, University of Riau (30名)
5 October 2021, Politeknik Negeri Bengkalis (40名)
19 November 2021, Universitas Kristen Petra (25名)
20 November 2021, Universitas Andalas, Faculty of Engineering (35名)
25 November 2021, Quality Assurance, University of Riau (25名)
5 January 2022, Universitas Pembangunan Nasional "Veteran" Jawa Timur, Faculty of Computer Science (30名)
18 January 2022, Forum Direktur Politeknik Negeri Se-Indonesia/FDPNI (119名)
26 January 2022, Forum Studi Transportasi Antar Perguruan Tinggi/FSTPT (174名)
18 March 2022, IABEE Awareness Seminar (150名) Online
20 March 2023, Universitas Multimedia Nusantara, Tangerang, Bante (170名)

Consultation Services to Educational Institutions

19 March 2018, Sebelas Maret University (UNS), Surakarta
20 March 2018, University Atmajaya Yogyakarta
21 March 2018, University Diponegoro, Semarang
25 March 2018, Trisakti University
28 March 2018, Sumatera Utara University (USU), Medan
10 April 2018, Andalas University, Pad
19 April 2018, Surabaya University (UBAYA)
2 May 2018, University of Muhammadiyah Surakarta
27 August 2018, Muhammadiyah Yogyakarta University
21 November 2018, Brawijaya University, Malang
13 December 2018, Mercu Buana University, Jakarta
15 January 2019, Sebelas Maret University (UNS), Surakarta
13-16 March 2019, Petra University, Surabaya
23-25 March 2019, Tri Sakti University, Jakarta
25-28 March 2019, Syiah Kuala University, Banda Aceh
21-24 November 2019, Faculty of Engineering, Jember University (30名)
25-28 February 2020, Brawijaya University, Malang, East Java (30名)
14-17 April 2020, Faculty of Engineering, Diponegoro (30名)
23-26 June 2020, Different universities (17名)
26-29 August 2020, Jember University (for non-engineering (38名)
21-22 September 2020, Udayana University (32名)
9-12 November 2020, Quality Assurance Office, Lambung Mangkurat University, West Kalimantan (35名)
23-26 November 2020, Quality Assurance Office, Lambung Mangkurat University, West Kalimantan (35名)
7-9 and 12 April 2021, Quality Assurance Office, Sanata Dharma University, Yogyakarta (35名)
15-18 November 2021, Quality Assurance, Universitas Islam Negeri (UIN) Maulana Malik Ibrahim Malang, East Java (35名)
22-25 August 2022, Faculty of Engineering, Universitas Muhammadiyah (14名)

List of training

Beneficiaries	Number of beneficiaries	Year	Country and by whom
IABEE Executives	8	2015	In Japan by JABEE
IABEE Secretariat staff	3	2026 and 2017	In Japan by JABEE
Program evaluators candidates as trainer	44	2015, 2016 and 2017	In Japan by JABEE
	16	2015, 2016 and 2017	In USA by ABET
	3	2016	In China by CAST
	3	2016	In Australia by EA
Newly recruited program evaluators candidates		Every year	In Indonesia by IABEE
Refresher training of program evaluators		Every year	In Indonesia by IABEE

契約番号： 170138

貸与物品管理者：Mr.Berlian Kushari　IABEE事務局長

貸与物品リスト
List of Property Lending

業務名称 (Name of Project)：インドネシアエンジニアリング教育認定機構（IABEE)設立プロジェクト

対象国 (Country)：インドネシア国

（2022年11月現在）

事業担当部課 (Division in Charge)：人間開発部　高等教育・社会保障グループ　高等・技術教育チーム

(As of Nov., 2022)

物品名称 (Name of Property)	規格・品番 (Standard, Part Number)	個数 (Quantity)	取得価格 (Purchase Price)			検査合格日 (Date of Inspection Passed)	配置場所 (Location)	現況 (Current State)	備考 (Remarks)	事業終了後の取扱い (After Completion of Project: Handover/Return)
			取得価格 (Purchase Price)	通貨 (Currency)	日本円換算取得価格 (In Japanese Yen)					
ノートパソコン (Microsoft office含む)	TOSHIBA SATELLITE L50 B10 BX	1	18,400,000	IDR	151,064	2015/10/7	IABEE事務所	故障中	二年次購入、精算済み JICA事務所の許可を得て IABEE事務局が処分	
ノートパソコン (Microsoft office含む)	TOSHIBA SATELLITE L50 B10 6X	1	17,750,000	IDR	160,460	2016/12/14	IABEE事務所	故障中	二年次購入、精算済み JICA事務所の許可を得て IABEE事務局が処分	
プロジェクター	HITACHI PROJECTOR CP-EX301N	1	6,501,000	IDR	55,454	2016/3/7	IABEE事務所	故障中	二年次購入、精算済み JICA事務所の許可を得て IABEE事務局が処分	
カラーコピー複合機	Canon IR-ADVC3330	1	102,850,000	IDR	874,636	2016/4/4	IABEE事務所	稼動中	二年次購入、精算済み IABEE事務局が管理	IABEE
ノートパソコン (Microsoft office含む)	NOTEBOOK ASUS K550VX-KX275D	1	16,735,000	IDR	144,323	2017/2/9	IABEE事務所	故障中	二年次購入、精算済み JICA事務所の許可を得て IABEE事務局が処分	
【以下、JICAから貸与されている物品 (Property Lent by JICA)】										

契約番号： 170138

貸与物品管理者：Mr.Berlian Kushari　IABEE事務局長

貸与物品リスト
List of Property Lending

業務名称 (Name of Project)：インドネシアエンジニアリング教育認定機構（IABEE)設立プロジェクト

対象国 (Country)：インドネシア国

（2023年7月現在）

事業担当部課 (Division in Charge)：人間開発部　高等教育・社会保障グループ　高等・技術教育チーム

(As of July, 2023)

物品名称 (Name of Property)	規格・品番 (Standard, Part Number)	個数 (Quantity)	取得価格 (Purchase Price)			検査合格日 (Date of Inspection Passed)	配置場所 (Location)	現況 (Current State)	備考 (Remarks)	事業終了後の取扱い (After Completion of Project: Handover/Return)
			取得価格 (Purchase Price)	通貨 (Currency)	日本円換算取得価格 (In Japanese Yen)					
カラーコピー複合機	Canon　IR-ADVC3330	1	102,850,000	IDR	874,636	2016/4/4	IABEE事務所	稼動中	二年次購入、精算済み IABEE事務局が管理	IABEE
【以下、JICAから貸与されている物品 (Property Lent by JICA)】										

International Engineering Alliance

https://www.ieagreements.org/

Educational Accords			**Competence Recognition/ Mobility Agreements**			
Washington Accord	Sydney Accord	Dublin Accord	International Professional Engineers Agreement	International Engineering Technologist Agreement	Agreement for International Engineering Technicians	APEC Agreement
Professional Engineers	*Engineering Technologists*	*Engineering Technicians*	*Professional Engineers*	*Engineering Technologists*	*Engineering Technicians*	*Professional Engineers (Regional Agreement)*

Washington Accord membership

ABET (USA)
Engineers Canada
ECUK (UK)
EA (Australia),
EI (Ireland)
EngNZ (New Zealand)

Accreditation Bodies	Provisional Status	Signatory
6 Founding Members		1989
HKIE (Hong Kong)	No system at that time	1995
ECSA (South Africa)	1994	1999
JABEE (Japan)	2001	2005
IES (Singapore)	2003	2006
BEM (Malaysia)	2003	2009
ASIIN (Germany)	2003 but was removed in 2013	
ABEEK (RP Korea)	2005	2007
IEET (Chinese Taipei)	2005	2007
AEER (Russia)	2007	2012
NBA (India)	2007	2014
IESL (Sri Lanka)	2007	2014
MUDEK (Turkey)	2010	2011
PEC (Pakistan)	2010	2017
IEB (Bangladesh)	2011	
CAST (PR China)	2013	2016
PTC (The Philippines)	2013	
ICACIT (Peru)	2014	2018
CFIA (Costa Rica)	2015	2020
CACEI (Mexico)	2016	2022
ACREDITA CI (Chile)	2018	
PII (Indonesia)	2019	2022
COE (Thailand)	2019	
MEC (Myanmar)	2019	
ETEC (Saudi Arabia)	2022	
COREN (Nigeria)	2023	

ANNEX 2: List of Products (Report, Manuals, Handbooks, etc.) Produced by the Project

NOTA KESEPAHAMAN

ANTARA

DIREKTORAT JENDERAL PEMBELAJARAN DAN KEMAHASISWAAN

DENGAN

PERSATUAN INSINYUR INDONESIA

NOMOR : 153/B1/NK/2016

NOMOR : 67/PP-PII/X/2016

Pada hari ini selasa, tanggal sebelas bulan Oktober tahun dua ribu enam belas, bertempat di Jakarta, yang bertanda tangan di bawah ini:

INTAN AHMAD, Direktur Jenderal Pembelajaran dan Kemahasiswaan Kementerian Riset, Teknologi, dan Pendidikan Tinggi, dalam hal ini bertindak untuk dan atas nama Direktorat Jenderal Pembelajaran dan Kemahasiswaan Kementerian Riset, Teknologi, dan Pendidikan Tinggi, yang berkedudukan di Jalan Jenderal Sudirman, Pintu Satu, Senayan, Jakarta 10270, selanjutnya disebut sebagai PIHAK KESATU.

HERMANTO DARDAK, Ketua Umum Persatuan Insinyur Indonesia, berkedudukan di Jalan Bandung Nomor 1 Menteng Jakarta Pusat 10310, selanjutnya disebut PIHAK KEDUA.

PIHAK KESATU dan PIHAK KEDUA, secara bersama-sama selanjutnya disebut sebagai PARA PIHAK.

Bahwa PARA PIHAK terlebih dahulu menerangkan telah sepakat untuk menjalin kerja sama dalam rangka penguatan Lembaga Akreditasi Program Studi Teknik Indonesia (*Indonesian Accreditation Board for Engineering Education* disingkat IABEE dengan ketentuan sebagaimana diatur dengan ketentuan sebagai berikut:

Pasal 1

RUANG LINGKUP

Nota Kesepahaman adalah penguatan Lembaga Akreditasi Program Studi Teknik Indonesia, dengan ruang lingkup:

a. Pengembangan mutu pendidikan tinggi teknik yang diakui di tingkat internasional;
b. Memfasilitasi Persatuan Insinyur Indonesia sebagai Organisasi Profesi untuk berperan dalam akreditasi program studi teknik sesuai peraturan perundang-undangan;
c. Pelaksanaan persiapan pelaksanaan akreditasi program studi teknik yang memenuhi standar internasional yang akan dilaksanakan IABEE; dan
d. Penyempurnaan kelembagaan IABEE secara berkesinambungan.

Pasal 2

PELAKSANAAN NOTA KESEPAHAMAN

(1) Pelaksanaan Nota Kesepahaman ini ditindaklanjuti melalui perjanjian kerja sama.
(2) Masing-masing pihak dapat menunjuk wakil untuk membuat perjanjian kerjasama.

Pasal 3

JANGKA WAKTU

(1) Nota Kesepahaman ini berlaku sejak ditandatangani oleh PARA PIHAK sampai dengan IABEE diterima sebagai *Provisional Member of Washington Accord.*

(2) Masing-masing pihak berhak untuk menghentikan/mengakhiri atau mengubah isi Nota Kesepahaman sebelum berakhirnya jangka waktu sebagaimana dimaksud dalam ayat (1) dengan cara memberitahukan secara tertulis kepada PIHAK lainnya tentang maksud tersebut, dalam tenggang waktu sekurang-kurangnya 30 (tiga puluh) hari kalender sebelum penghentian/pengakhiran atau perubahan dimaksud.

Pasal 4

PENUTUP

Nota Kesepahaman ini dibuat sebanyak rangkap 2 (dua), dibubuhi meterai cukup, ditandatangani PARA PIHAK, dan mempunyai kekuatan hukum yang sama.

PIHAK PERTAMA,	PIHAK KEDUA,
	METERAI TEMPEL 10000 RIBU RUPIAH
INTAN AHMAD	HERMANTO DARDAK


PENERAPAN
2016


Dissemination of International
Accreditation, IABEE Inauguration
and International
Seminar on Quality of Engineers.


and International
inar on Quality of Engineers
JICA

PERHATIAN: Lembar kerja ini hanya digunakan untuk membantu Program mempelajari dan mempersiapkan pengisian Laporan Evaluasi Mandiri Program (LED). Template LED yang resmi, yang dapat diunggah kembali ke Sistem Evaluasi Online IABEE, hanya bisa diperoleh/diunduh dari Sistem tersebut dengan akun Wakil Program (Program Representative) setelah tahap Registrasi Program selesai dan proses Evaluasi Akreditasi dimulai. Isi kolom (5), (6), dan (7) hanya pada baris-baris yang berwarna putih. Baris-baris berwarna ungu dan kuning tidak perlu diisi.

Untuk digunakan mulai Siklus Akreditasi 2023/2024

Kriteria	Sub-Kriteria	Sub-sub Kriteria	Item Evaluasi	DESKRIPSI KRITERIA/ITEM EVALUASI (Program TEKNIK)	KLAIM PEMENUHAN	DESKRIPSI EVALUASI DIRI PROGRAM STUDI	REFERENSI
					Beri tanda "X" jika dianggap memenuhi dan "XX" jika dianggap melampaui Kriteria/Item Evaluasi	*Deskripsikan bagaimana Program Studi memenuhi tiap Item Evaluasi yang ditanyakan (pada sel tidak berwarna). Argumen yang disampaikan harus berdasarkan pada bukti-bukti faktual (evidence-based description). Tim Evaluasi IABEE akan memeriksa deskripsi ini dan bukti-bukti pendukungnya*	*Berikan daftar referensi/bukti-bukti yang mendukung argumentasi yang disampaikan pada kolom Evaluasi Mandiri Program Studi. Unggah referensi/bukti-bukti tersebut secara terpisah, sebagai file-file lampiran dari Laporan Evaluasi Diri ini*
(1)	(2)	(3)	(4)	(5)	(5)	(6)	(7)
1				**ORIENTASI KOMPETENSI LULUSAN** **[*ORIENTATION OF THE GRADUATE COMPETENCE*]**			
	1.1			**Program harus menetapkan profil lulusan yang digagaskan untuk menjadi para Profesional Mandiri, dengan mempertimbangkan potensi sumberdaya, budaya, kebutuhan maupun kepentingan Negara** **[*The Program shall define the profile of graduates to be envisaged as Autonomous Professionals by considering country's potential resources, cultures, needs and interests*]**			
				Paparkan Profil Profesional Mandiri Program yang ditetapkan sebagai sasaran-sasaran kependidikan Program, yang mempertimbangkan sumberdaya, kearifan, kebutuhan, serta kepentingan lokal dan/atau nasional, serta misi Institusi Pengelola Program (POI). [Describe the Program's Profile of Autonomous Professionals to be fostered as its educational objectives, which takes into account local and/or national resources, wisdoms, needs and interests, as well as vision and mission of the Program-Operating Institution (POI)]			<contoh> (1.1) Naskah Akademik Pengembangan Kurikulum XXXX hal. 13-18 (1.2) Laporan Workshop Pengembangan Kurkulum XXXX (1.3) Statuta Universitas XXXX pasal X Visi & Misi
				Paparkan proses yang diselenggarakan oleh Program untuk menyusun dan mengkaji ulang secara berkala Profil Profesional Mandiri, dengan melibatkan para pemangku kepentingan Program. [*Describe the process maintained by the Program for establishing and periodically reviewing the Profile of Autonomous Professionals, which includes the involvements of its stakeholders*]			<contoh> (1.4) Peraturan Universitas No. XX tahun XXXX tentang Peninjauan dan Pengembangan Kurikulum, pasal. X (1.2) Laporan Workshop Pengembangan Kurikulum XXXX (1.5) Laporan Tracer Studi tahun 2018 hal. 30-35
	1.2			**Program harus menginformasikan Profil Profesional Mandiri yang telah ditetapkan kepada mahasiswa, dosen, dan masyakat umum** **[*The Program shall inform its students and faculty of the envisaged Autonomous Professional Profile and widely publicize it*]**			

				Jelaskan bagaimana Program menyebarluaskan Profil Profesional Mandiri tersebut secara memadai kepada para mahasiswa, dosen, dan masyarakat umum [*Describe how the Program disseminates its Profile of Autonomous Professionals adequately to students, faculties, and the general public*]			<contoh> (1.6) website Program: https://www.abc.ac.id/tk/profilprof (1.7) Buku Panduan Akademik Mahasiswa tahun XXXX Halaman 5
	1.3			**Program harus menetapkan Capaian Pembelajaran Program yang terdiri dari kemampuan memanfaatkan pengetahuan, keterampilan, sumber daya dan sikap sebagaimana dimaksud dalam Kriteria Umum 1.3 pada butir (a) hingga (j) untuk dikuasai oleh para mahasiswa pada saat menyelesaikan studi.** **[*The Program shall establish its expected Learning Outcomes which consist of abilities to utilize knowledge, skills, resources and attitudes as described in the following (a) to (j) graduate competences to be acquired by students at the completion of their study]***			
		1.3.1		**Program harus menetapkan dan mengkomunikasikan Capaian Pembelajaran Program (dikenal juga dengan istilah Luaran Lulusan, Student Outcomes, atau sejenisnya), yang terdiri dari kemampuan memanfaatkan pengetahuan, kecakapan, sumberdaya, serta sikap seperti tercermin dalam kompetensi-kompetensi lulusan butir (a) hingga (j) berikut, yang harus dikuasai oleh para mahasiswa pada saat menyelesaikan studi.** ***[The Program shall establish and communicate its Program Learning Outcomes (known also as Graduate Outcomes, Student Outcomes, or the like), consists of the ability to utilize knowledge, skills, resources, and attitudes as reflected in the graduate competences from (a) to (j), which shall be acquired by the student at the time of completion of the study]***			
				Berdasarkan **Suplemen Tabel A1**, paparkan bagaimana Capaian Pembelajaran Program diturunkan berdasarkan pada pernyataan Profil Profesional Mandiri Program *[Based on* ***Supplementary Table A1*** *, describe how all Program Learning Outcomes are established to support Program's Autonomous Professional Profile statement]*			
				Berdasarkan **Tabel Suplemen A2**, jelaskan apakah seluruh standar kompetensi lulusan butir (a) hingga (j) telah dicakup di dalam Capaian Pembelajaran Program. *[Based on* ***Supplementary Table A2*** **,** explain whether all *graduate competency standards from items (a) to (j) have been covered in Program Learning Outcomes]*			
				(a) "Kemampuan menerapkan pengetahuan matematika, ilmu pengetahuan alam dan/atau material, teknologi informasi dan keteknikan untuk mendapatkan pemahaman menyeluruh tentang prinsip-prinsip keteknikan". Jelaskan Capaian Pembelajaran Program yang mencakup kompetensi butir (a) tersebut, dengan mengacu pada dokumen Penjelasan Kriteria Umum butir 1.3.a.1 dan 1.3.a.2. *[(a) "An ability to apply knowledge of mathematics, natural and/or materials sciences, information technology and engineering to acquire comprehensive understanding of engineering principles". Explain the Program Learning Outcome(s) that cover graduate competency item (a) by referring to Criteria Guide document, articles 1.3.a.1 and 1.3.a.2.]*			
				(b) "Kemampuan mendesain komponen, sistem dan/atau proses untuk memenuhi kebutuhan yang diharapkan di dalam batasan-batasan realistis, misalnya hukum, ekonomi, lingkungan, sosial, politik, kesehatan dan keselamatan, keberlanjutan serta untuk mengenali dan/atau memanfaatkan potensi sumber daya lokal dan nasional dengan wawasan global". Jelaskan Capaian Pembelajaran Program yang mencakup kompetensi butir (b) tersebut, dengan mengacu pada dokumen Penjelasan Kriteria Umum butir 1.3.b.1 dan 1.3.b.2. *[(b) "an ability to design components, systems, and/or processes to meet desired needs within realistic constraints in such aspects as law, economic, environment, social, politics, health and safety, sustainability as well as to recognize and/or utilize the potential of local and national resources with global perspective". Explain the Program Learning Outcome(s) that cover graduate competency item (b) by referring to Criteria Guide document, articles 1.3.b.1 and 1.3.b.2]*			

				(c) "Kemampuan mendesain dan melaksanakan eksperimen laboratorium dan/atau lapangan serta menganalisis dan mengartikan data untuk memperkuat penilaian teknik." Jelaskan Capaian Pembelajaran Program yang mencakup kompetensi butir (c) tersebut, dengan mengacu pada dokumen Penjelasan Kriteria Umum butir 1.3.c.1 dan 1.3.c.2. *[(c) "an ability to design and conduct laboratory and/or field experiments as well as to analyze and interpret data to strengthen the engineering judgment." Explain the Program Learning Outcome(s) that cover graduate competency item (c) by referring to Criteria Guide document, articles 1.3.c.1 and 1.3.c.2]*			
				(d) "Kemampuan mengidentifikasi, merumuskan, menganalisis dan menyelesaikan permasalahan teknik yang kompleks". Jelaskan Capaian Pembelajaran Program yang mencakup kompetensi lulusan butir (d) tersebut, dengan mengacu pada dokumen Penjelasan Kriteria Umum butir 1.3.d.1 dan 1.3.d.2. *[(d) "an ability to identify, formulate, analyze, and solve complex engineering problems". Explain the Program Learning Outcome(s) that cover graduate competency item (d) by referring to Criteria Guide document, articles 1.3.d.1 and 1.3.d.2]*			
				(e) "Kemampuan menerapkan metode, keterampilan dan piranti teknik yang modern yang diperlukan untuk praktek keteknikan". Jelaskan Capaian Pembelajaran Program yang mencakup kompetensi butir (e) tersebut, dengan mengacu pada dokumen Penjelasan Kriteria Umum butir 1.3.e.1. *[(e) "an ability to apply methods, skills and modern engineering tools necessary for engineering practices" Explain the Program Learning Outcome(s) that cover graduate competency item (e) by referring to Criteria Guide document, articles 1.3.e.1*]			
				(f) "Kemampuan berkomunikasi secara efektif baik lisan maupun tulisan". Jelaskan Capaian Pembelajaran Program yang mencakup kompetensi lulusan butir (f) tersebut, dengan mengacu pada dokumen Penjelasan Kriteria Umum butir 1.3.f.1, 1.3.f.2, dan 1.3.f.3. *[(f) "an ability to communicate effectively in oral and written manners". Explain the Program Learning Outcome(s) that cover graduate competency item (f) by referring to Criteria Guide document, articles related 1.3.f.1, 1.3.f.2, and 1.3.f.3]*			
				(g) "Kemampuan merencanakan, menyelesaikan dan mengevaluasi tugas didalam batasan-batasan yang ada". Jelaskan Capaian Pembelajaran Program yang mencakup kompetensi lulusan butir (g) tersebut, dengan mengacu pada dokumen Penjelasan Kriteria Umum butir 1.3.g.1 dan 1.3.g.2. *[(g) "an ability to plan, accomplish, and evaluate tasks under given constraints". Explain the Program Learning Outcome(s) that cover graduate competency item (g) by referring to Criteria Guide document, articles items 1.3.g.1 and 1.3.g.2]*			
				(h) "Kemampuan bekerja dalam tim lintas disiplin dan lintas budaya". Jelaskan Capaian Pembelajaran Program yang mencakup kompetensi lulusan butir (h) tersebut, dengan mengacu pada dokumen Penjelasan Kriteria Umum butir 1.3.h.1, 1.3.h.2, dan 1.3.h.3. *[(h) "an ability to work in multidisciplinary and multicultural team". Explain the Program Learning Outcome(s) that cover graduate competency item (h) by referring to Criteria Guide document, articles items 1.3.h.1, 1.3.h.2, and 1.3.h.3.]*			
				(i) "Kemampuan untuk bertanggung jawab kepada masyarakat dan mematuhi etika profesi dalam menyelesaikan permasalahan teknik". Jelaskan Capaian Pembelajaran Program yang mencakup kompetensi lulusan butir (i) tersebut, dengan mengacu pada dokumen Penjelasan Kriteria Umum butir 1.3.i.1. *[(i) "an ability to be accountable and responsible to the society and adhere to professional ethics in solving engineering problems". Explain the Program Learning Outcome(s) that cover graduate competency item (i) by referring to Criteria Guide document, article 1.3.i.1]*			

				(j) "Kemampuan memahami kebutuhan akan pembelajaran sepanjang hayat, termasuk akses terhadap pengetahuan terkait isu-isu kekinian yang relevan". Jelaskan Capaian Pembelajaran Program yang mencakup kompetensi lulusan butir (j) tersebut, dengan mengacu pada dokumen Penjelasan Kriteria Umum butir 1.3.j.1 dan 1.3.j.2. *[(j) "an ability to understand the need for life-long learning, including access to the relevant knowledge of contemporary issues". Explain the Program Learning Outcome(s) that cover graduate competency item (j) by referring to Criteria Guide document, articles 1.3.j.1 and 1.3.j.2]*			
				Apakah Capaian Pembelajaran Program juga telah mencakup capaian-capaian pembelajaran tambahan yang disyaratkan di dalam Kriteria Disiplin yang relevan (bila ada)? [Have the Program Learning Outcomes included additional learning outcomes stipulated in the relevant Discipline Criteria (if any)?]			
		1.3.2.		**Program harus menetapkan prosedur untuk melaksanakan kaji-ulang berkala terhadap Capaian Pembelajaran Program** **[*The Program shall establish procedures to conduct periodic review of the Learning Outcomes*]**			
				Paparkan proses yang diterapkan Program dalam prosedur kaji-ulang berkala terhadap Capaian Pembelajaran Program, dengan melibatkan para pemangku kepentingan Program. *[Describe the process maintained by the Program in its procedure of reviewing the Program Learning Outcomes periodically, which includes the involvements of its stakeholders]*			
				Paparkan bagaimana Program mengkomunikasikan secara memadai Capaian Pembelajaran Program kepada para mahasiswa dan dosen, serta masyarakat umum [Describe how the Program disseminates adequately the Program Learning Outcomes to students and faculty members, and how it discloses them to the general public].			
2				**IMPLEMENTASI PEMBELAJARAN** **[*LEARNING IMPLEMENTATION*]**			
	2.1			**KURIKULUM [*CURRICULUM*]**			
		2.1.1		**Kurikulum Program harus mencakup bidang-bidang kajian berikut:** **a) Matematika dan sains dasar yang sesuai dengan disiplin Program** **b) Ilmu kerekayasaan dan teknologi yang sesuai dengan disiplin Program** **c) Teknologi informasi dan komunikasi** **d) Rancangan kerekayasaan dan kajian eksperimental berbasis permasalahan** **e) Pendidikan umum, yang mencakup kajian moralitas, etika, sosial-budaya, lingkungan, dan manajemen** **[Curriculum of the Program shall include the following subject areas:** **a) Mathematics and discipline-specific natural sciences** **b) Discipline-specific engineering science and technology** **c) Information and communication technology** **d) Engineering design and problem-based experiments** **e) General education, which includes morality, ethics, socio-culture, environment and management]**			

				Berdasarkan **Tabel Suplemen B1**, paparkan bagaimana kurikulum Program dapat mencakup semua bidang kajian dalam Butir 2.1.1 di atas, terlepas dari nama matakuliahnya, dan bagaimana kurikulum memberikan penekanan dan alokasi beban pembelajaran yang memadai bagi setiap bidang kajian secara konsisten dengan Capaian Pembelajaran Program. Kurikulum tersebut harus mencakup (dinyatakan sebagai persentase terhadap beban SKS total selama masa studi) minimum 20% matematika level perguruan tinggi dan sains dasar dan/atau sains material yang sesuai dengan disiplin Program, minimum 40% topik-topik kerekayasaan yang mencakup sains rekayasa dan desain rekayasa yang sesuai dengan disiplin Program, serta maksimum 30% pendidikan umum yang melengkapi muatan keteknikan dari kurikulum. Pemenuhan alokasi bidang kajian di atas merujuk pada dokumen Penjelasan Kriteria Umum butir 2.1.1.1 hingga 2.1.1.6. *[Based on **Supplementary Table B1** , Describe how the Program curriculum covers the subject areas listed in 2.1.1., regardless of the titles of the courses, and how the curriculum devotes adequate attention and learning time to each component, consistent with the Program Learning Outcomes. The curriculum must include (expressed as percentage of total coursework load in semester credits (SKS)) a minimum of 20% of a combination of college level mathematics and basic sciences appropriate to the Program discipline, a minimum of 40% of engineering topics consisting of engineering sciences and design appropriate to the field of study, and a maximum of 30% of general education subjects that complement the technical content of the curriculum. Attainment of the subject area allocation above refers to articles 2.1.1.1 to 2.1.1.6 of the Criteria Guidelines document.]*			
		2.1.2.		**Pengembangan kurikulum hendaknya mempertimbangkan masukan dari para pemangku kepentingan Program** **[Curriculum development shall consider input from Program stakeholders]**			
				Paparkan bagaimana Program mengembangkan dan mengkaji-ulang kurikulumnya secara berkala melalui kebijakan dan prosedur yang terdokumentasikan, sistematik dan efektif, yang menjamin terpenuhinya kebutuhan masyarakat, industri dan profesi, dan bahwa kurikulum tersebut konsisten dengan misi Institusi, kebutuhan para pemangku kepentingan, dan kriteria akreditasi ini. *[Describe how the Program develops and periodically reviews its curriculum using documented, systematic, and effective policies and procedures which ensure that the requirements of the society, industry, and professional fields are met, and that the curriculum is consistent with the institutional mission, stakeholders' needs, and these accreditation criteria]*			
				Paparkan bagaimana kebijakan dan prosedur di atas melibatkan para pemangku kepentingan Program untuk mendiskusikan relevansi kurikulum. *[Describe how the abovementioned policies and procedures provide sufficient involvement for Program stakeholders to discuss curriculum relevance.]*			
		2.1.3.		**Kurikulum harus menunjukkan hubungan struktural dan kontribusi masing-masing matakuliah dalam membangun Capaian Pembelajaran Program. Dokumen kurikulum dengan silabus lengkap harus ditetapkan dan dilaksanakan untuk menjamin proses pembelajaran dapat diimplementasikan secara terkendali.** ***[The Curriculum must indicate the structural relationship and contributions of the subject courses to fulfill Learning Outcomes. Curriculum, including complete syllabus, shall be established and documented to ensure the expected learning process can be implemented in a controlled way].***			

				Berdasarkan **Tabel Suplemen B2** dan dokumen kurikulum program, paparkan bagaimana muatan dan struktur kurikulum yang ditetapkan diselaraskan untuk memungkinkan pembelajaran sistematis dan pemetaan asesmen untuk menjamin penguasaan Capaian Pembelajaran Program oleh para mahasiswa dalam masa studi yang diharapkan. Sertakan contoh salinan (scanned-copy) transkrip nilai dari 2 (dua) orang lulusan Program per angkatan selama 4 (empat) tahun terakhir untuk keperluan analisis. *[Based on **Supplementary Table B2** and Program's curriculum document, describe how the curricular content and structure are aligned to enable systematic learning and assessment mapping to ensure the attainment of Program Learning Outcomes by students within the intended period of study.*			
				Paparkan bagaimana persyaratan-persyaratan khusus di setiap bidang topik kurikuler dalam Kriteria Umum dan Kriteria Disiplin dapat dipenuhi, baik dalam hal beban dan kedalamannya. *[Describe how specific requirements of each curricular area in Common Criteria and Discipline Criteria are met, both in terms of load and depth.]*			
				Paparkan bagaimana dokumen silabus (identitas mata kuliah, beban SKS, CPMK dan hubungannya dengan CPP, konten/bahan kajian beserta metode pembelajaran dan alokasi waktu serta referensi) telah dipersiapkan untuk semua matakuliah yang dirancang untuk memenuhi persyaratan-persyaratan bidang kajian dalam kurikulum dan dipastikan kesesuaiannya. *[Describe how the syllabus (course identity, credits, course outcomes and its relationship with Program Learning Outcomes, content with its delivery method and time allocation as well as references) for all courses designed to satisfy curriculum area requirements are properly established.]*			
				Paparkan tentang portofolio matakuliah (atau dokumen sejenisnya) yang menjelaskan bagaimana Program melaksanakan kegiatan-kegiatan pendidikan bagi para mahasiswa untuk mencapai Capaian Pembelajaran Program. Portofolio matakuliah minimal mencakup silabus lengkap, soal-soal asesmen capaian pembelajaran mata kuliah dan jawaban yang diharapkan, termasuk contoh jawaban mahasiswa yang dinilai baik, cukup, maupun kurang baik. *[Present course portfolio that explains how the Program carries out educational activities for students to achieve Program Learning Outcomes. The course portfolio includes at least a complete syllabus, problem sets for assessing course learning outcomes and expected answers, including examples of student answers that are considered good, fair, or not good.]*			
				Paparkan bagaimana Program mengkomunikasikan kurikulum kepada para dosen dan mahasiswa secara memadai. *[Describe how the Program adequately inform the faculty members and students about the curriculum.]*			
		2.1.4.		**Kurikulum harus menjamin bahwa mahasiswa memperoleh pengalaman praktik kerekayasaan dan proyek rekayasa utama yang mencakup standar-standar teknik dan kendala-kendala majemuk yang realistis, berdasarkan pengetahuan dan kecakapan yang diperolehnya dalam perkuliahan sebelumnya.** **[*The Curriculum shall ensure that students are exposed to engineering practices and major design project experience which incorporates engineering standards and multiple realistic constraints based on knowledge and skills acquired in preceding coursework*].**			

				Paparkan bagaimana kurikulum memastikan para mahasiswa dapat memiliki kompetensi dalam aplikasi praktis kerekayasaan, yang menggabungkan teori dan pengalaman, serta penggunaan ilmu dan kecakapan-kecakapan lain yang relevan. Pelatihan dalam praktik kerekayasaan dapat didukung oleh beberapa matakuliah (atau topik bahasan), yang bermuara pada suatu proyek desain utama. Proyek utama ini berperan sebagai pemuncak (capstone) bagi Program, yang mengharuskan mahasiswa untuk mengintegrasikan pengetahuan dan kecakapan yang dihimpun dalam perkuliahan sebelumnya. *[Describe how the curriculum ensures the students to develop competence in practical application of engineering skills, which combines theory and experience along with the use of other relevant knowledge and skills. Training in engineering practices may be supported by several courses (subjects) but should culminate in a major design project. This major project serves as a capstone for the Program, which requires students to integrate knowledge and skills acquired in earlier coursework]*			
				Paparkan bagaimana kurikulum memastikan mahasiswa mendapatkan pengalaman praktik dalam penerapan topik kajian terkait di lingkungan kerja yang nyata. *[Describe how the curriculum ensure students acquire practical experience in implementing the subjects in an actual working environment]*			
	2.1			**DOSEN [*FACULTY*]**			
		2.2.1.		**Program harus menyediakan dosen dengan jumlah, kualifikasi dan kompetensi yang memadai untuk menyelenggarakan proses pembelajaran, yang mencakup perencanaan, pengajaran, evaluasi, dan perbaikan berkelanjutan terhadap efektivitas perkuliahan untuk menjamin penguasaan Capaian Pembelajaran oleh mahasiswa.** **[*The Program shall provide necessary number, qualification and competence of faculty members for performing learning process, including planning, delivering, evaluating, and continually improving its effectiveness in order to achieve the Learning Outcomes*]**			
				Berdasarkan informasi **Suplemen Tabel B3** dan **B4** serta riwayat dosen (**Suplemen B5**), paparkan kecukupan jumlah, kualifikasi, dan kompetensi para dosen untuk melayani semua bidang kajian kurikuler dan untuk memenuhi kriteria lainnya yang berlaku. Paparan ini hendaknya mencakup pula intensitas keterlibatan dosen dalam berinteraksi dengan mahasiswa, memberikan pembimbingan akademik, serta dalam penjaminan mutu Program. *[Based on **Supplementary Tables B3** and **B4** and faculty curriculum vitae (**Supplementary Table B5**), describe the adequacy of quantity, qualifications and competence of faculty members to cover all curricular areas and to meet any applicable criteria. This description shall include the extent and quality of faculty member involvement in interactions with students, student advising, and oversight of the Program]*			
				Paparkan bagaimana Program merencanakan dan memberi dukungan terhadap pengembangan profesi dosen . *[Describe how Program plans and supports professional development activities for faculty member]*			
		2.2.2		**Program harus menjamin bahwa para dosen sadar akan relevansi dan pentingnya peran serta kontribusi mereka terhadap Capaian Pembelajaran Program** **[*The Program shall ensure that faculty members are aware of the relevance and importance of their roles and contributions to the Learning Outcomes*]**			
				Paparkan peran dosen dalam penciptaan, perbaikan, dan evaluasi matakuliah, serta dalam penyusunan, revisi dan pemenuhan Capaian Pembelajaran Program. *[Describe the role of Program faculty members with respect to course creation, modification, and evaluation, and Learning Outcomes formulation, revision and attainment]*			
				Paparkan kebijakan dan prosedur yang digunakan Program untuk mengembangkan dan mengevaluasi secara institusional kegiatan akademik dosen, serta pelaksanaannya. *[Describe the policies and procedures by which the Program institutionally develops and evaluates faculty academic activities]*			

				Paparkan bagaimana Program memfasilitasi komunikasi antar dosen untuk mengembangkan kerjasama yang erat terkait penyelenggaraan perkuliahan, untuk meningkatkan penguasaan Capaian Pembelajaran Program. *[Describe how the Program facilitates communications among faculty members for close collaboration associated with courses in the curriculum to improve attainment of Learning Outcomes by students]*			
	2.3			**MAHASISWA DAN SUASANA AKADEMIK [*STUDENTS AND ACADEMIC ATMOSPHERE*]**			
		2.3.1		**Program harus menetapkan dan menjalankan standar seleksi untuk mahasiswa baru maupun pindahan, serta pengalihan atau pengakuan kredit.** **[The Program shall define and implement entry standards for both new and transfer students, as well as transfer of credits]**			
				Paparkan kebijakan dan prosedur yang dijalankan atau diikuti oleh Program dalam penerimaan mahasiswa, yang mencakup penetapan persyaratan dan proses seleksi mahasiswa baru. *[Describe the policies and procedures implemented or observed by the Program in student admission, which cover the requirements and the process for accepting new students into the Program]*			
				Paparkan bagaimana Program memastikan bahwa mahasiswa yang akan diterima memenuhi persyaratan, dan bagaimana menangani kasus-kasus ketika persyaratan tersebut tidak terpenuhi. [Describe how the Program ensures that incoming students are meeting prerequisites and how it handles cases where prerequisite are not met.]			
				Paparkan kebijakan dan proses yang dijalankan Program untuk menerima mahasiswa pindahan (transfer student) dan pengalihan atau pengakuan kredit. [Describe the Program's policy and process for accepting transfer students and transfer credits.]			
		2.3.2.		**Program harus menetapkan dan menjalankan pemantauan kemajuan studi dan evaluasi kinerja mahasiswa. Prosedur penjaminan mutu ditetapkan untuk memastikan bahwa kecukupan standar tercapai dalam semua asesmen.** **[Program shall define and implement ongoing monitoring of student progress and evaluation of student performance. Procedures of quality assurance shall be established to ensure that adequacy of standards is achieved in all assessments]**			
				Paparkan kebijakan dan prosedur yang diterapkan oleh Program untuk secara efektif memantau kemajuan akademik dan kinerja para mahasiswa. [Describe policies and procedures implemented by the Program to effectively monitor students' academic progress and performance]			
				Paparkan bagaimana Program mendokumentasikan proses pemantauan kinerja mahasiswa tersebut di atas. [Describe how the Program documents the process by which student performance is monitored.]			
		2.3.3.		**Program harus membangun dan memelihara suasana akademik yang kondusif bagi pembelajaran yang berhasil** **[The Program shall create and maintain good academic atmosphere conducive to successful learning]**			

				Paparkan bagaimana Program menyelenggarakan atau memfasilitasi kegiatan-kegiatan pendukung untuk mewujudkan dan memelihara suasana akademik yang kondusif untuk pembelajaran, seperti penyediaan layanan pembimbingan mahasiswa dan konseling untuk permasalahan akademik maupun non-akademik. [Describe how the Program provides supporting activities to create and maintain good academic atmosphere for learning, such as student guidance and counseling on academic as well as non-academic issues.]			
				Paparkan bagaimana Program menjalankan atau memfasilitasi kebijakan dan prosedur untuk pembimbingan/perwalian akademik dan karir bagi para mahasiswa; hal ini mencakup misalnya frekuensi pembimbingan mahasiswa, serta siapa yang melaksanakan pembimbingan tersebut. [Describe how the Program implements or facilitates policies and procedures for academic advising and career guidance for students; this includes, for example, how often students are advised, and who provides the advising.]			
		2.3.4		**Program harus mendorong kegiatan-kegiatan ko-kurikuler untuk membangun karakter dan meningkatkan kesadaran mahasiswa tentang kebutuhan negerinya.** **[The Program shall promote co-curricular activities for character building and enhancing the students' awareness on the country's needs]**			
				Paparkan bagaimana Program mewujudkan dan memelihara kegiatan-kegiatan ko-kurikuler untuk meningkatkan kecakapan non-teknis (soft-skills) mahasiswa, seperti kuliah umum/studium generale, pelibatan mahasiswa dalam penelitian dosen, partisipasi dalam forum ilmiah. [Describe how the Program creates and maintains co-curricular activities to improve the student soft skills, such as studium generale, involvement in faculty research projects, participation in scientific forums.]			
				Paparkan bagaimana Program berupaya menumbuhkan jiwa kewirausahaan mahasiswa yang dicirikan antara lain dengan kesadaran akan tujuan yang kuat, ketekunan, daya nalar, keterbukaan pemikiran, serta semangat untuk belajar. [Describe how the Program nurtures students' entrepreneurial spirit as characterized by a deep sense of purpose, perseverance, resourcefulness, open-mindedness, and eagerness to learn.]			
	2.4			**FASILITAS [*FACILITY*]**			
		2.4.1		**Program harus menjamin ketersediaan, aksesibilitas, dan keselamatan fasilitas demi berjalannya proses pembelajaran yang efektif dan pemenuhan Capaian Pembelajaran Program.** **[Program shall ensure the availability, accessibility, and safety of facilities for effective functioning of the learning process and attainment of the Learning Outcomes]**			

				Paparkan fasilitas-fasilitas fisik yang disediakan untuk mendukung penguasaan Capaian Pembelajaran Program oleh mahasiswa dan untuk menyediakan suasana akademik yang kondusif. Fasilitas-fasilitas ini mencakup, misalnya, perkantoran (misalnya kantor tata usaha, kantor dosen, sekretariat, dan asisten perkuliahan) dan perlengkapan terkait, ruang kelas dan perlengkapannya, laboratorium termasuk laboratorium lapangan (sepanjang diperlukan), perangkat keras dan lunak yang tersedia beserta piranti dan perlengkapan yang mendukung pengajaran, sumberdaya komputasi (workstation, server, penyimpan data, jaringan komputer termasuk perangkat lunak pendukung), layanan perpustakaan, dan sebagainya. Sertakan tabel daftar yang berisi semua peralatan utama, instrumen, piranti keras/lunak untuk menunjang kegiatan akademik di laboratorium pengajaran dan/atau studio *[Describe the physical facilities to support the attainment of the Learning Outcomes and to provide conducive academic atmosphere. These facilities include, for example, offices (such as administrative, faculty, clerical, and teaching assistants) and any associated equipment, classrooms and associated equipment, in house laboratory facilities including those containing computers (describe available hardware and software) and the associated tools and equipment that support instruction, field laboratory (whenever necessary), computing resources (workstations, servers, storage, networks including software), library services, etc.* *Provide also a table that lists all main equipment, instruments, hardware/software tools for educational activities that are kept in teaching laboratory and/or studio.*			
				Paparkan hasil asesmen Program mengenai kecukupan fasilitas tersebut untuk mendukung kegiatan akademik dan profesional mahasiswa dan dosen, dalam mendukung pemenuhan Capaian Pembelajaran Program . *[Provide the Program's assessment on the adequacy of these facilities to support the scholarly and professional activities of the students and faculty in supporting the attainment of Learning Outcomes by the students]*			
				Paparkan bagaimana Program menjalankan suatu manajemen keselamatan dan kesehatan kerja dan lingkungan (K3L) untuk memastikan keselamatan dan ketepatan pemanfaatan fasilitas pembelajaran seperti piranti, peralatan, sumberdaya komputer, laboratorium, serta fasilitas fisik lainnya. *[Describe how the Program manages safety, health, and environment to ensure safe and appropriate utilization of tools, equipment, computing resources, laboratories, and other physical facilities]*			
		2.4.2.		**Program harus menetapkan kebijakan dan prosedur untuk pemeliharaan dan pemutakhiran sarana dan prasarana.** ***[Program shall establish policy and procedure for maintaining and upgrading equiment and infrastructures]***			
				Paparkan kebijakan dan prosedur Program untuk memelihara dan memutakhirkan piranti, peralatan, sumberdaya komputer, laboratorium, perpustakaan, dan fasilitas-fasilitas lainnya yang digunakan oleh mahasiswa dan dosen. *[Describe the Program's policies and procedures for maintaining and upgrading the tools, equipment, computing resources, laboratories, library and other facilities used by students and faculty members.]*			
	2.5			**TANGGUNGJAWAB INSTITUSI [*INSTITUTIONAL RESPONSIBILITY*]**			
		2.5.1		**Program harus menetapkan dan mengelola proses penyediaan layanan pendidikan, mencakup perancangan pendidikan, pengembangan dan pelaksanaan kurikulum, serta asesmen pembelajaran.** **[*The Program shall define and manage the process for the provision of the educational service, including education design, curriculum development and delivery, and assessment of learning*]**			

				Paparkan tata kelola yang menjamin keterlibatan pimpinan secara efektif dalam pengambilan keputusan yang berdampak kepada mutu dan keberlanjutan Program. *[Describe the governance which ensures an effective involvement of the leadership in decisions affecting quality and continuity of the Program.]*			
				Paparkan bagaimana Institusi Pengelola Program menerapkan kebijakan dan prosedur anggaran yang menjamin keberlanjutan program dan layanan pendidikan termasuk penyediaan fasilitas. *[Describe how the Program Operating Institution (POI) implements budgetary policies and procedures which ensure the continuity of the Program and education services including provision of facility]*			
				Paparkan dukungan bagi kegiatan pengajaran oleh Institusi Pengelola Program, melalui penyediaan tenaga asisten penilai, asisten perkuliahan, lokakarya pengajaran, dan sebagainya. *[Describe the support for teaching activities by the POI by provision of graders, teaching assistants, teaching workshops, etc.]*			
				Paparkan bagaimana institusi pengelola program menyediakan tenaga kependidikan/staf pendukung (administratif, instruksional, maupun teknis) dan layanan kelembagaan yang memadai bagi Program. *[Describe how the POI provides adequate staffing (administrative, instructional, and technical) and institutional services for the Program.]*			
		2.5.2		**Institusi Pengelola Program harus melaksanakan upaya-upaya untuk mengalokasikan sumberdaya, layanan-layanan pendukung, dan kerjasama dengan para pemangku kepentingan dalam bidang pendidikan, penelitian, dan/atau pengabdian kepada masyarakat, dengan mempertimbangkan sumberdaya lokal.** **[*The Program Operating Institution (POI) shall make efforts to establish resources, supporting service and cooperation with stakeholders on research, education and/or service to community with due consideration to existing local resources*]**			
				Paparkan kemitraan dengan lembaga-lembaga eksternal (industri, pusat penelitian, lembaga masyarakat, dan sebagainya) yang difasilitasi oleh POI untuk mengembangkan aspek Tridharma Perguruan Tinggi. *[Describe partnership with external institutions (industry, research centers, community entities, etc.) facilitated by the POI to foster Tridharma Perguruan Tinggi (education, research, and community engagement)]*			
				Paparkan bagaimana POI memfasilitasi peningkatan proses pembelajaran mahasiswa melalui interaksi dengan kalangan akademik, dunia usaha, dan/atau pemerintahan dalam pengembangan daerah setempat, dengan memanfaatkan sumberdaya lokal. *[Describe how the POI facilitates the improvement of the students' learning process through the engagement of academia, business, and/or the government in the development of local region, and by the utilization of local resources]*			
3				**ASESMEN CAPAIAN PEMBELAJARAN** **[*ASSESSMENT OF THE LEARNING OUTCOMES*]**			
	3.1			**Program harus memastikan bahwa suatu proses asesmen Capaian Pembelajaran yang didasarkan pada indikator-indikator kinerja yang rinci dijalankan dan dipelihara pada interval waktu yang telah direncanakan, dengan menggunakan metode-metode yang tepat.** **[*The Program shall ensure that an effective assessment process of Learning Outcomes based on established performance indicators is implemented and maintained at planned intervals using appropriate methods*]**			

		3.1.1		**Program harus menetapkan indikator kinerja dan metode asesmen yang tepat untuk setiap Capaian Pembelajaran Program sebagai dasar untuk mengukur ketercapaian indikator tersebut.** ***[The Program shall define, for each of its Learning Outcomes, the relevant performance indicators and appropriate assessment method as the basis for measuring achievements of these indicators.]***			
				Berdasarkan **Tabel Suplemen C1**, paparkan indikator kinerja yang ditetapkan oleh Program untuk setiap butir Capaian Pembelajaran Program, dan metode asesmen yang tepat sebagai dasar untuk mengukur ketercapaian indikator-indikator kinerja tersebut. *[Based on **Supplementary Table C1,** describe the performance indicators established by the Program for each Program Learning Outcome, and appropriate assessment methods as the basis for measuring attainment of these indicators]*			
		3.1.2		**Metode dan prosedur untuk mengukur pemenuhan Capaian Pembelajaran Program yang terdokumentasi dengan lengkap dan jelas harus ditetapkan.** ***[A complete and clearly documented method and procedure for measuring the achievement of Learning Outcomes shall be established.]***			
				Lampirkan dokumen milik Program yang memuat metode dan prosedur pengukuran bagi pemenuhan setiap butir Capaian Pembelajaran Program *[Attach Program's own document which describes the method and procedures for measuring the achievement of each Program Learning Outcome]*			
		3.1.3		**Asesmen setiap Capaian Pembelajaran Program harus dilakukan secara berkala mengikuti rencana** ***[The assessment of each Program Learning Outcome shall be conducted at planned interval]***			
				Paparkan rencana asesmen secara berkala (menggunakan **Tabel Suplemen C2**) untuk mengukur pemenuhan Capaian Pembelajaran Program yang diterapkan oleh Program. *[Describe periodic assessment plan (based on **Supplementary Table C2**) to assess Program Learning Outcomes attainment implemented by the Program]*			
				Lampirkan dokumen Progam yang memuat hasil asesmen terhadap semua butir Capaian Pembelajaran Program. *[Attach Program's document which describes the results of assessment of all Program Learning Outcomes]*			
	3.2			**Program harus menjamin bahwa setiap lulusannya telah memenuhi seluruh Capaian Pembelajaran Program yang diharapkan** **[*The Program shall ensure that graduates of the program achieve all expected Learning Outcomes*]**			
		3.2.1		**Program harus menetapkan kebijakan dan prosedur yang efektif untuk menjamin setiap lulusan memenuhi setiap persyaratan kelulusan.** ***[The Program shall maintain effective policy and procedures to ensure that its graduates meet all graduation requirements.]***			
				Paparkan kebijakan dan prosedur yang diterapkan oleh Program untuk memastikan pemenuhan semua persyaratan kelulusan oleh para lulusannya. *[Describe effective policies and procedures maintained by the Program in confirming the attainment of all graduation requirements by its graduates]*			

		3.2.2		**Proses dan hasil dari kajian pemenuhan persyaratan kelulusan harus terdokumentasi dan terekam dengan baik sebagai bukti setiap lulusan telah dievaluasi dan seluruh Capaian Pembelajaran Program terpenuhi.** ***[The process and results of graduation requirement review shall be documented, and the records are maintained as evidence that all graduates have been evaluated and that all Program Learning Outcomes have been fulfilled.]***			
				Paparkan bagaimana Program memastikan bahwa semua Capaian Pembelajaran Program telah dicapai oleh semua lulusannya. Proses dan hasil dari kaji-ulang persyaratan kelulusan ini terdokumentasi secara resmi, dan disimpan sebagai rekaman tetap sebagai bukti. *[Describe how the Program ascertains that all Program Learning Outcomes are attained by all of its graduates. The process and results of this graduation requirement review shall be documented and the records are maintained permanently as evidence]*			
		3.2.3		**Program harus memiliki kebijakan dan prosedur untuk menangani mahasiswa berkinerja kurang baik dan memberhentikan mahasiswa yang tidak mampu menyelesaikan studinya.** ***[The Program shall have written policies and procedures on how to handle non-performing students and how to terminate students who are not able to complete their study.]***			
				Paparkan kebijakan dan prosedur untuk menangani mahasiswa berkinerja kurang dan untuk memberhentikan mahasiswa yang tidak mampu menyelesaikan studi mereka. *[Describe the policies and procedures implemented or observed by the Program to handle non-performing students, and to terminate students who are not able to complete their study]*			
4				**PERBAIKAN BERKELANJUTAN** **[*CONTINUAL IMPROVEMENT*]**			
	4.1			**Berdasarkan hasil-hasil asesmen Capaian Pembelajaran Program, Program harus melaksanakan evaluasi berkala dalam interval yang terencana, yang menghasilkan keputusan-keputusan untuk meningkatkan efektivitas proses dan sumberdaya pembelajaran.** **[*Based on Program Learning Outcomes assessment results, the Program shall perform an evaluation at planned intervals with output in the form of decisions to improve the effectiveness of the educational process and resources*]**			
		4.1.1		**Untuk menjamin perbaikan berkelanjutan, Program harus menjalankan aktivitas pendidikannya dengan mengimplementasikan sistem penjaminan kualitas yang mengikuti siklus P-D-C-A sebagaimana dijelaskan dalam Preambul/Pembukaan Kriteria Akreditasi** ***[To ensure the continual improvement, the Program should run its educational activities by implementing a quality assurance system follows the P-D-C-A cycle as described in the Preamble section of the Accreditation Criteria.]***			
				Paparkan sistem penjaminan mutu akademik berdasarkan siklus P-D-C-A (atau setara) yang dijalankan oleh Program untuk memastikan perbaikan berkelanjutan terhadap pemenuhan Capaian Pembelajaran Program. *[Describe the academic quality assurance system based on the P-D-C-A cycle (or equivalent) implemented by the Program to ensure the continual improvement of its educational processes]*			

		4.1.2		**Evaluasi harus berdasarkan pada asesmen pemenuhan Capaian Pembelajaran Program. Luaran evaluasi harus mencakup rekomendasi tentang perbaikan material pembelajaran, metode pembelajaran, proses pembelajaran, kesesuaian dan kecukupan Capaian Pembelajaran dengan memperhatikan kebutuhan Pemangku Kepentingan dan sumber daya.** ***[The evaluation shall be based on assessment of the Program Learning Outcomes attainment. The output of the evaluation shall contain recommendations on the improvement of learning materials, methods of delivery and other educational processes, suitability and adequacy of the Learning Outcomes with regards to the needs of stakeholders, and resources.]***			
				Lampirkan dokumen yang memuat analisis hasil asesmen terhadap semua Capaian Pembelajaran Program untuk mendapatkan akar permasalahan dan rekomendasi perbaikan yang diperlukan (misalnya terhadap materi ajar, metode pembelajaran, metode asesmen, sumberdaya, Capaian Pembelajaran Program, dan Profil Profesional Mandiri lulusan) *[Attach the document which describes the analysis of assessment results of all Program Learning Outcomes to obtain root causes of problems and improvement recommendation (such as learning materials, delivery methods, assessment method, resources, Program Learning Outcomes and Autonomous Professional Profile)]*			
		4.1.3		**Evaluasi harus dilakukan pada interval terencana mengikuti metode dan prosedur yang telah diberitahukan kepada dosen Program. Metode dan prosedur evaluasi harus dirancang agar dapat mengidentifikasi hambatan dan akar masalah dan karena itu menghasilkan peluang perbaikan.** ***[The evaluation shall be carried out at planned intervals following a method and procedure made well-known to the faculty. The evaluation method and procedure should be designed to enable the identification of constraints and root causes of problems, and therefore resulting in opportunities for improvement.]***			
				Jelaskan bagaimana evaluasi Program dilaksanakan menurut interval waktu yang terencana, dan mengikuti metode serta prosedur yang dikomunikasikan secara memadai kepada para dosen. *[Explain how the evaluation has been carried out at planned intervals following a method and procedure made well-known to the faculty members]*			
	4.2			**Program harus memelihara dokumen dan rekaman terkait dengan pelaksanaan evaluasi, hasil-hasil yang diperoleh, serta tindak lanjutnya.** **[*The Program shall maintain documents and records related to the implementation of evaluation, the results and their follow-up*]**			
		4.2.1		**Prosedur terdokumentasi untuk implementasi evaluasi Program harus ditetapkan.** ***[A documented procedure for the implementation of Program evaluation shall be established.]***			
				Paparkan kebijakan dan prosedur Program untuk mendokumentasikan proses penjaminan mutu/perbaikan mutu berkelanjutan terhadap Capaian Pembelajaran Program secara lengkap dan konsisten. *[Describe the Program's policies and procedures for the comprehensive and consistent documentation of its continuous quality assurance/quality improvement process]*			
		4.2.2		**Dokumentasi implementasi evaluasi, hasil dan tindaklanjutnya harus dipelihara dan dapat diakses oleh dosen. Rekaman tersebut merupakan bukti bahwa evaluasi telah dilaksanakan, hasilnya telah diimplementasikan, dan perbaikan berkala telah dilakukan yang menandakan terlaksananya siklus P-D-C-A.** ***[The documentation of evaluation implementation, its results and its follow-up shall be maintained and accessible to the faculty. These records provide evidence that evaluation has been conducted, the results have been implemented and periodic improvement has been achieved, thereby signifying the implementation of P-D-C-A cycle.]***			

				Paparkan bagaimana dokumentasi di atas dapat diakses oleh para dosen, sesuai dengan kebutuhan terhadap perbaikan mutu Program. [*Describe how the abovementioned documentation is made accessible to the faculty members as pertinent to their shared interests for the quality of the Program.*]			
				Jelaskan bagaimana dokumentasi di atas mengindikasikan bahwa evaluasi berkala Program yang dijalankan telah mencerminkan penerapan suatu siklus P-D-C-A (atau setara) secara utuh. *[Describe how the abovementioned documentation indicates that periodic Program evaluations have been conducted to signify the implementation of a complete P-D-C-A cycle?]*			

Accreditation Criteria for Engineering Programs

Developed according to the Graduate Attribute Exemplars of the Washington Accord

Version 2020

Common Criteria

Criteria Guide

Discipline Criteria

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Document Control

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This 2020 version document replaces the version published in 2015. Changes made in this version are as follows:

- Overall grammatical checks and revisions,
- Inclusion of definition of parallel Programs in accordance to the PSDKU (*Program Studi di Luar Kampus Utama*) scheme,
- Addition of the modifier 'complex engineering problem' in graduate competence criterion point (d),
- Simplification of Criteria Guide for sub-criterion 2.3.2.,
- Addition of facility safety aspect in the description of sub-criterion 2.4.,
- Editorial restructuring of Criteria Guide for sub-criterion 3.1., and
- Editorial restructuring of Criteria Guide for sub-criterion 3.2.

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Common Criteria

Preamble

The Indonesian Accreditation Board for Engineering Education (IABEE) builds this set of Criteria using outcome-based education approach. All engineering education programs seeking international accreditation from IABEE shall fulfill the following Criteria.

1. Orientation of the Graduate Competence

1.1. Program shall define the profile of graduates to be envisaged as autonomous professionals by considering country's potential resources, cultures, needs and interests.

1.2. Program shall inform its students and faculty with the envisaged autonomous professional profile and widely publicize it.

1.3. Program shall establish its expected Learning Outcomes which consist of abilities to utilize knowledge, skills, resources and attitudes as described in the following (a) to (j) items to be acquired by the student at the time of completion of the study:

(a) an ability to apply knowledge of mathematics, natural and/or materials sciences, information technology and engineering to acquire comprehensive understanding of engineering principles,

(b) an ability to design components, systems, and/or processes to meet desired needs within realistic constraints in such aspects as law, economic, environment, social, politics, health and safety, sustainability as well as to recognize and/or utilize the potential of local and national resources with global perspective,

(c) an ability to design and conduct laboratory and/or field experiments as well as to analyze and interpret data to strengthen the engineering judgment,

(d) an ability to identify, formulate, analyze, and solve complex engineering problems,

(e) an ability to apply methods, skills and modern engineering tools necessary for engineering practices,

(f) an ability to communicate effectively in oral and written manners,

(g) an ability to plan, accomplish, and evaluate tasks under given constraints,

(h) an ability to work in multidisciplinary and multicultural team,

(i) an ability to be accountable and responsible to the society and adhere to professional ethics in solving engineering problems, and

(j) an ability to understand the need for life-long learning, including access to the relevant knowledge of contemporary issues.

2. Learning Implementation

2.1. Curriculum

2.1.1. Curriculum shall include the following subject areas:

(a) Mathematics and discipline-specific natural sciences

(b) Discipline-specific engineering science and technology

(c) Information and communication technology

(d) Engineering design and problem based experiments

(e) General education, which includes morality, ethics, socio-culture, environment and management

2.1.2. Curriculum development shall consider input from Program stakeholders.

2.1.3. Curriculum shall indicate the structural relationship and contributions of the subject courses to fulfill Learning Outcomes. Procedures, including syllabus, shall be established and documented so that the expected learning process can be implemented in a controlled way.

2.1.4. Curriculum shall ensure that the students are exposed to engineering practices and major design project experience using engineering standards and multiple realistic constraints based on knowledge and skills acquired in preceding course work.

2.2. Faculty

2.2.1. The Program shall provide necessary number, qualification and competence of faculty members for performing learning process, including planning, delivering, evaluating, and continually improving its effectiveness in order to achieve the Learning Outcomes.

2.2.2. The Program shall ensure that faculty members are aware of the relevance and importance of their roles and contributions to the Learning Outcomes.

2.3. Students and Academic Atmosphere

2.3.1. The Program shall define and implement an entry standard for both new and transfer students, as well as transfer of credits.

2.3.2. Program shall define and implement ongoing monitoring of student progress and evaluation of student performance. Procedures of quality assurance shall be established to ensure that adequacy of standards is achieved in all assessments.

2.3.3. The Program shall create and maintain good academic atmosphere conducive to successful learning.

2.3.4. The Program shall promote co-curricular activities for character building and enhancing the students' awareness on the country's needs.

2.4. Facilities

Program shall ensure the availability, accessibility, and safety of facilities for effective functioning of the learning process and attainment of the Learning Outcomes.

2.5. Institutional Responsibility

2.5.1. The Program shall define and manage the process for the provision of the educational service, including education design, curriculum development and delivery, and assessment of learning.

2.5.2. The Program Operating Institution shall make efforts to establish resources, supporting service and cooperation with stakeholders on research, education and/or service to community with due consideration to existing local resources.

3. Assessment of the Learning Outcomes

3.1. The Program shall ensure that an effective assessment process of Learning Outcomes based on established performance indicators is implemented and maintained at planned intervals using appropriate methods.

3.2. The Program shall ensure that graduates of the program achieve all expected Learning Outcomes.

4. Continual Improvement

4.1. Based on Program Learning Outcomes assessment results, the Program shall perform an evaluation at planned intervals with output in the form of decisions to improve the effectiveness of the educational process and resources.

4.2. The Program shall maintain documents and records related to the implementation of evaluation, the results and their follow-up.

Criteria Guide

0. Preamble

The Indonesian Accreditation Board for Engineering Education (IABEE) establishes this set of Criteria using outcome-based education approach. All engineering education programs seeking international accreditation from IABEE shall fulfill the following Criteria.

0.1. IABEE Common Criteria (CC) are established as a framework to perform accreditation of higher education programs. These CC comprise of elements that must be fulfilled by the Study Program to be accredited.

0.2. Programs to be accredited are four-year engineering Bachelor Programs or other higher education programs which IABEE considers as equivalent.

0.3. The Program is not restricted to single Programs operated by a Department or Faculty. A Program may be formed and/or operated by multiple Departments / Faculties. Programs may include matriculated learning activities outside of its home campus, in conjunction with other higher education institutions.

0.4. In cases where a Program is offered as parallel classes, evaluation by IABEE shall encompass all parallel classes. In cases where multiple Programs of the same nomenclature are offered in multiple locations by the same Program-Operating Institution (such as Programs established according to the *Program Studi di Luar Kampus Utama* (PKSDU) scheme as defined by the Indonesian Ministerial Regulation of *Peraturan Menteri Riset, Teknologi, dan Pendidikan Tinggi* No. 1/ 2017), evaluation by IABEE shall treat the parallel Programs as separate entities.

0.5. The Program shall define the profile of autonomous professionals to be fostered, and define the knowledge, skills, and attitudes as Learning Outcomes that graduates are expected to master upon completion of their study.

0.6. The Program should promote self-reliance, welfare, advancement, fairness and justice for the national and global community in general, based on science, technology, culture and sustainable utilization of natural resources.

0.7. The Program is required to design the curriculum systematically to ascertain the achievement of Program Learning Outcomes. Student and faculty should be aware of these Learning Outcomes.

0.8. The Program must disclose its Learning Outcomes to the public. The Program is also required to engage in continual improvement and at the same time to consider the sustainability of operation.

0.9. Common Criteria consist of 4 elements, following the management approach of PDCA (Plan-Do-Check-Act) continual improvement cycle. Criterion 1 describes the orientation of the graduate competence, Criterion 2 explains the learning implementation, Criterion 3 explains the assessment of the expected Learning Outcomes, and Criterion 4 explains the continual improvements.

0.10. In addition to these Common Criteria, Program seeking for accreditation shall fulfill also the Category and Discipline Criteria, as well as eligibility requirements and accreditation policies stipulated in the Rules and Procedures of Evaluation and Accreditation (RPEA).

1. Orientation of the Graduate Competence

1.1. The Program shall define the profile of graduates to be envisaged as Autonomous Professionals by considering country's potential resources, cultures, needs and interests.

1.1.1. The Program is required to define the Profile of the Autonomous Professionals intended to foster as its educational objectives, by taking account of:

(1) Local and/or national resources, such as human and physical resources.
(2) Local and/or national wisdoms,
(3) Local and national needs and interests
(4) Traditions, vision and mission of the education institution

1.1.2. The Program should demonstrate the process of establishing and periodic reviewing of the Autonomous Professional Profiles, including the involvements of the stakeholders.

1.2. The Program shall inform its students and faculty of the envisaged Autonomous Professional Profile and widely publicize it.

1.2.1. The envisaged Autonomous Professional Profile shall be informed to students and faculty and made accessible to the general public.

1.3. The Program shall establish its expected Learning Outcomes which consist of abilities to utilize knowledge, skills, resources and attitudes as described in the following (a) to (j) graduate competences to be acquired by the student at the time of completion of the study.

1.3.1. The Program shall establish its own Program Learning Outcomes based on the Autonomous Professional Profile to be acquired. The Learning Outcomes shall cover all graduate competences from (a) to (j) as referred to in Common Criteria 1 (3), which are expressed in such a way to provide flexibility to Program. It is important to note that the Learning Outcomes shall also include Category and Discipline Criteria

1.3.2. The Program shall establish procedures to conduct periodic review of the Learning Outcomes.

1.3.a. Ability to apply knowledge of mathematics, natural and/or materials sciences, information technology and engineering to acquire comprehensive understanding of engineering principles.

1.3.a.1. Engineering Principles refers to ideas, rules and concepts to be considered when solving an engineering problem. The set of principles may vary among engineering disciplines depending on the uniqueness of systems, problems, ethical issues, and problem-solving methods of the discipline.

1.3.a.2. Attainment of comprehensive understanding of engineering principles is indicated by mastery of mathematics, basic sciences (such as physics, biology, chemistry) and information technology relevant to the discipline of the Program, and the ability to utilize the aforementioned knowledge.

1.3.b. Ability to design components, systems, and/or processes to meet desired needs within realistic constraints in such aspects as law, economic, environment, social, politics, health and safety, sustainability as well as to recognize and/or utilize the potential of local and national resources with global perspective.

1.3.b.1. The ability to design components, systems, and/or processes is the hallmark competence of engineering education. Design implies the ability to utilize multidimensional thinking with knowledge of global perspective to develop components, systems, and/or processes to achieve specific objectives. It is not limited to drawing a plan, but also refers to the synthesis of various academic disciplines and technologies to pursue practicable solutions to a problem that does not necessarily have one correct answer.

1.3.b.2. Design also involves a process of optimization which considers multiple realistic constraints, such as law, economic, environment, social, politics, health and safety, and sustainability as well as utilization of the knowledge of culture, society and available resources.

1.3.c. Ability to design and conduct laboratory and/or field experiments as well as to analyze and interpret data to strengthen the engineering judgment.

1.3.c.1. This competence refers to the design and application of laboratory and/or field experiments within the broad context of engineering practice such as problem identification, testing of potential solution ideas, solution implementation plan, and other design-related activities.

1.3.c.2. Experiments may include activities in physical laboratories, computer simulations, and field experiments.

1.3.d. Ability to identify, formulate, analyze, and solve complex engineering problems.

1.3.d.1. Engineering problem solving involves iterative activities incorporating the definition of the problem, development of solution alternatives, selection of best alternative, application of solution, evaluation and validation of solution against multiple problem constraints, and revision of solution.

1.3.d.2. This competence should include the ability to:

- utilize techniques and methods for performing engineering works comprising survey, data analysis, planning, design, operation and maintenance.
- apply the engineering logical thinking for handling both of the design and troubleshooting context.
- utilize creative/innovative thinking and knowledge creation/co-creation skills.

1.3.e. Ability to apply methods, skills and modern engineering tools necessary for engineering practices

1.3.e.1. The Program shall have a clear definition of the methods, skills, and modern engineering tools appropriate for its level of study and engineering discipline, and how these are learnt throughout the curriculum. This definition shall include:

- ability to select a method and tools with their strength and limitation characteristics for a given problem
- ability to utilize and adjust the method and tools to suit specific problems

1.3.f. Ability to communicate effectively in oral and written manners

1.3.f.1. This competence indicates the need of active and effective communication skills; socio-cultural perspective should be considered for the acceptability and workability of the implementation of engineering works.

1.3.f.2. These oral and written communications should include the use of engineering standards.

1.3.f.3. The Program shall ensure that a measurable portion of the oral and/or written communications involve the use of internationally recognized languages.

1.3.g. Ability to plan, accomplish, and evaluate tasks under given constraints

1.3.g.1. This competence refers to the ability to plan, accomplish, and evaluate tasks associated with any curricular activity deemed appropriate by Program for its assessment and evaluation. The assessment should focus more on the students' task management skills rather than the substantial outcome of the task itself.

1.3.h. Ability to work in multidisciplinary and multicultural teams

1.3.h.1. This competence refers to the ability to work collaboratively with people from different technical disciplines, fields and cultural backgrounds.

1.3.h.2. Multicultural concerns such as tolerance, mutual understanding, appreciation on differences in building a synergy, are important considerations for the success of a teamwork.

1.3.h.3. Multidiscipline circumstances may cover disciplines within engineering and non-engineering disciplines.

1.3.i. Ability to be accountable and responsible to the society and adhere to professional ethics in solving engineering problems

1.3.i.1. This competence refers to the understanding on the following issues and the ability to elaborate, discuss, present argument, and/or respond accordingly:

- the impact of technology of related engineering fields on public welfare, environmental safety and sustainable development
- the engineering ethics and regulations
- the engineering history and standard & code philosophy in design.

1.3.j. Ability to understand the need for life-long learning, including access to the relevant knowledge of contemporary issues

1.3.j.1. The Program is required to assist students to become accustomed to independent and continuous learning through lectures, research, experiments, practical training, exercises and assignment.

1.3.j.2. This competence refers to understanding the necessity of continuous professional development, an ability to acquire updated information and knowledge, and an awareness of the importance of sharing knowledge.

2. Learning Implementation

2.1. Curriculum

2.1.1. Curriculum of the Program shall include the following subject areas:

a) Mathematics and discipline-specific natural sciences

b) Discipline-specific engineering science and technology

c) Information and communication technology

d) Engineering design and problem-based experiments

e) General education, which includes morality, ethics, socio-culture, environment and management

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2.1.1.1. The Program shall ensure that the curriculum meets the abovementioned subject areas appropriate to engineering regardless of the subject/course names. The Program must ensure that the curriculum devotes adequate attention and time to each component, consistent with the Program Learning Outcomes, which include (expressed as percentage of total coursework load in semester credits (SKS)):

- A minimum of 20% of a combination of college level mathematics and basic sciences (some with experimental experience) appropriate to the discipline. Basic sciences are defined as courses such as biological, chemical, or physical sciences.
- A minimum of 40% of engineering topics, consisting of engineering sciences and engineering design appropriate to the student's field of study. The engineering sciences have their roots in mathematics and basic sciences but carry knowledge further toward creative application. These studies provide a bridge between mathematics and basic sciences on the one hand and engineering practices on the other. Engineering design is the process of devising a system, component, or process to meet desired needs. It is a decision-making process, in which the basic sciences, mathematics, and the engineering sciences are applied to convert resources optimally to meet the stated needs.
- A maximum of 30% general education components that complement the technical content of the curriculum and are consistent with the Learning Outcomes.

2.1.2. Curriculum development shall consider input from Program stakeholders.

2.1.2.1. The Program should demonstrate on how to develop the curriculum and to assure the requirement of the society, industry and professional fields.

2.1.2.2. There must be a documented, systematically utilized, and effective procedure describing the way to meet the need of stakeholders and to review the curriculum periodically to ensure its consistency with the institutional mission, the stakeholders needs, and these criteria.

2.1.2.3. The Program should provide sufficient opportunity for the stakeholders to discuss Program educational objectives/Profile of Autonomous Professionals, and to foster closer collaboration.

2.1.3. The Curriculum must indicate the structural relationship and contributions of the subject courses to fulfill Learning Outcomes. Procedures, including syllabus, shall be established and documented so that the expected learning process can be implemented in a controlled way.

2.1.3.1. The Program shall describe how the curriculum content and structure are aligned to enable the attainment of Program Learning Outcomes by students.

2.1.3.2. The Program should describe how specific requirements of each curricular area in Common Criteria or Discipline Criteria can be met, both in terms of load and depth of the curricular content.

2.1.3.3. The Program shall establish syllabi for all courses designed to satisfy mathematics, science, and discipline-specific requirements or any applicable criteria.

2.1.3.4. The Program is required to implement educational activities for students to achieve its Program Learning Outcomes.

2.1.3.5. The Program is required to systematically design curriculum to enable students to achieve the expected Program Learning Outcomes within the intended period of study.

2.1.3.6. The Program is required to adequately inform the faculty and students through various means such as guidebooks, orientation programs etc. about the curriculum, and how the Program Learning Outcomes will be attained through the learning process.

2.1.4. The Curriculum shall ensure that students are exposed to engineering practices and major design project experience which incorporates engineering standards and multiple realistic constraints based on knowledge and skills acquired in preceding coursework.

2.1.4.1. The Program must provide opportunity to students to develop competence in practical application of engineering skills, combining theory and experience along with the use of other relevant knowledge and skills. Training in engineering practices may be supported by several courses (subjects) but should culminate in a major design project. This major project serves as a capstone for the program which requires students to integrate knowledge and skills acquired in earlier coursework.

2.1.4.2. The Program shall define curriculum subjects to optimally support mainstream discipline specific requirements and to provide opportunity for students to acquire practical experience in implementing the subjects in an actual working environment.

2.2. *Faculty*

2.2.1. The Program shall provide necessary number, qualification and competence of faculty members for performing learning process, including planning, delivering, evaluating, and continually improving its effectiveness in order to achieve the Learning Outcomes.

2.2.1.1. The Program shall describe qualifications of the faculty and their adequacy to cover all curricular areas and to meet any applicable criteria.

2.2.1.2. This description should include the composition, size, experience and the extent and quality of faculty member involvement in interactions with students, student advising, and oversight of the Program.

2.2.1.3. The Program shall provide detailed descriptions of professional development activities for each faculty member and how activities such as sabbaticals, travel, workshops, seminars, etc., are planned and supported.

2.2.2. The Program shall ensure that faculty members are aware of the relevance and importance of their roles and contributions to the Learning Outcomes.

2.2.2.1. The Program shall describe the role played by the faculty with respect to the course creation, modification, and evaluation, and with respect to the definition, revision and attainment of the Learning Outcomes.

2.2.2.2. The Program shall have a method to institutionally develop and evaluate faculty educational activities.

2.2.2.3. The Program shall define and set up communication network among faculty members for close collaboration among the courses set in the curriculum to obtain better educational results.

2.3. Students and Academic Atmosphere

2.3.1. The Program shall define and implement an entry standard for both new and transfer students, as well as transfer of credits.

2.3.1.1. The Program shall establish written policies on student admission, covering the requirements and the process for accepting new students into Program, including information on how Program ensures and documents that students are meeting prerequisites and how it handles cases where prerequisite have not been met.

2.3.1.2. The Program shall describe the requirements and process for accepting transfer students and transfer credits.

2.3.2. Program shall define and implement ongoing monitoring of student progress and evaluation of student performance. Procedures of quality assurance shall be established to ensure that adequacy of standards is achieved in all assessments.

2.3.2.1. The Program shall establish policies and procedures to monitor students' progress and performance

2.3.2.2. The Program shall document the process by which student performance is monitored.

2.3.3. The Program shall create and maintain good academic atmosphere conducive to successful learning.

2.3.3.1. The Program shall develop supporting activities to create and maintain good academic atmosphere for learning, such as by providing student guidance and counseling on academic as well as non-academic aspects and career guidance.

2.3.3.2. The Program shall describe the process for advising and providing career guidance to students, how often students are advised, and who provides the advising.

2.3.4. The Program shall promote co-curricular activities for character building and enhancing the students' awareness on the country's needs.

2.3.4.1. The Program shall create and maintain various co-curricular activities particularly to improve the student soft skills, such as conducting *studium generale*, involving student in faculty research projects, and participating in scientific forums.

2.3.4.2. An entrepreneurial spirit as characterized by a deep sense of purpose, perseverance, resourcefulness, open-mindedness, and eagerness to learn should be emphasized in the learning process.

2.4. Facilities

2.4.1. Program shall ensure the availability, accessibility, and safety of facilities for effective functioning of the learning process and attainment of the Learning Outcomes.

2.4.1.1. The Program shall describe the facilities in terms of their ability to support the attainment of the Learning Outcomes and to provide an atmosphere conducive to learning, such as:

- offices (such as administrative, faculty, clerical, and teaching assistants) and any associated equipment,
- classrooms and associated equipment,
- in house laboratory facilities including those containing computers (describe available hardware and software) and the associated tools and equipment that support instruction, and field laboratory whenever necessary
- computing resources (workstations, servers, storage, networks including software)
- library services.

2.4.1.2. The Program shall describe and assess the adequacy of these facilities to support the scholarly and professional activities of the students and faculty.

2.4.1.3. The Program shall describe how students are provided with appropriate guidance regarding the use of tools, equipment, computing resources, laboratories, and other physical facilities to enable the utilization of these facilities in a safe and appropriate manner.

2.4.1.4. The Program shall also describe the policies and procedures for maintaining and upgrading the tools, equipment, computing resources, laboratories, library and other facilities used by students and faculty.

2.5. Institutional Responsibility

2.5.1. The Program shall define and manage the process for the provision of the educational service, including education design, curriculum development and delivery, and assessment of learning.

2.5.1.1. The Program shall describe the governance of the program and its adequacy to ensure the quality and continuity of the program and how the leadership is involved in decisions that affect the Program.

2.5.1.2. The Program shall describe the process used to establish the program's budget and provide evidence of continuity of institutional support for the program, including the sources of financial support for both permanent (recurring) and temporary (one-time) funds.

2.5.1.3. The Program shall describe how teaching is supported by the institution in terms of graders, teaching assistants, teaching workshops, etc.

2.5.1.4. The Program shall describe the adequacy of the staff (administrative, instructional, and technical) and institutional services provided to the Program.

2.5.2. The Program Operating Institution (POI) shall make efforts to establish resources, supporting service and cooperation with stakeholders on research, education and/or service to community with due consideration to existing local resources.

2.5.2.1. The POI shall make efforts to develop partnership with external institutions such as industry, research centers, and community units to foster the *Tridharma* (learning, research, and community engagement).The institution hosting the Program shall demonstrate the support to these efforts.

2.5.2.2. The improvement of the students' learning process through the engagement of academia, business, and/or the government in the development of local region through the use of local resources is viewed as a particular advantage of the Program.

3. Assessment of the Learning Outcomes

3.1. The Program shall ensure that an effective assessment process of Learning Outcomes based on established performance indicators is implemented and maintained at planned intervals using appropriate methods.

3.1.1. The Program shall define for each Learning Outcome the relevant performance indicators and appropriate assessment method as the basis for measuring achievements of these indicators.

3.1.2. A complete and clearly documented method and procedure for measuring the achievement of Learning Outcomes shall be established.

3.1.3. The assessment of each learning outcome shall be conducted at planned interval.

3.2. The Program shall ensure that graduates of the program achieve all expected Learning Outcomes.

3.2.1. The Program shall maintain effective policy and procedures to ensure that its graduates meet all graduation requirements.

3.2.2. The process and results of graduation requirement review shall be documented and the records are maintained as evidence that all graduates have been evaluated and that all Program Learning Outcomes have been fulfilled.

3.2.3. The Program shall have written policies and procedures on how handle non-performing students and how to terminate students who are not able to complete their study.

4. Continual Improvement

4.1. Based on Program Learning Outcomes assessment results, the Program shall perform an evaluation at planned intervals with output in the form of decisions to improve the effectiveness of the educational process and resources.

4.1.1. To ensure the continual improvement, the Program should run its educational activities by implementing a quality assurance system follows the P-D-C-A cycle as described in the preamble.

4.1.2. The evaluation shall be based on assessment of the Program Learning Outcomes attainment. The output of the evaluation shall contain recommendations on the improvement of learning materials, methods of delivery and other educational processes, suitability and adequacy of the Learning Outcomes with regards to the needs of stakeholders, and resources.

4.1.3. The evaluation shall be carried out at planned intervals following a method and procedure made well-known to the faculty. The evaluation method and procedure should be designed to enable the identification of constraints and root causes of problems, and therefore resulting in opportunities for improvement.

4.2. The Program shall maintain documents and records related to the implementation of evaluation, the results and their follow-up.

4.2.1. A documented procedure for the implementation of Program evaluation shall be established.

4.2.2. The documentation of evaluation implementation, its results and its follow-up shall be maintained and accessible to the faculty. These records provide evidence that evaluation has been conducted, the results have been implemented and periodic improvement has been achieved, thereby signifying the implementation of P-D-C-A cycle.

Discipline Criteria

Discipline Criteria for Agricultural and/or Bio-Systems Engineering in Bachelor Programs

Lead Society(ies):

- *Badan Kejuruan Teknik Pertanian Persatuan Insinyur Indonesia* (BKTP PII) – PII Chapter for Agricultural Engineers

These Discipline Criteria apply to bachelor programs that include “agricultural engineering”, “bio-system engineering,” “bio-production engineering”, and similar modifiers in their titles.

Curriculum

The curriculum shall provide fundamental knowledge of engineering principles, agriculture and/or biosystem related sciences and ability to apply them to analyze, interpret, identify alternative solutions, and implement experiments for enhancing the performance agricultural systems or solution of common problems in agriculture and/or biosystem.

The learning and educational process articulating in the curriculum must be conducted in such away to ensure that the graduates have sufficient knowledge, skill and attitude in the process to identify, analyze, formulate, design, use and control of machinery, structure and systems to solve engineering problems as required in the production of plant and animal, processing and handling the agricultural and/or biological materials.

The curriculum content that be considered as “educational components of mathematics, natural sciences and technologies” appropriate to the field shall include systematic subject clusters related with mathematics and natural sciences (focusing on multiple subjects such as, physics, chemistry, biology, or geography), and area of agricultural meteorology, irrigation, drainage and reclamation engineering (agricultural civil and environmental engineering), and/or area of agricultural machinery & automation, and/or area of agricultural work system and safety, and/or area of agricultural/biological production system, and/or area of agriculture/biological and environment information.

To conduct the learning and educational process the program shall be considered as “to provide a sufficient number of faculty members able to realize the curriculum with applicable educational methods and to improve the educational result of the program, and shall provide the faculty with institutional support.”

Discipline Criteria for Agro-Industrial and Similarly-named Engineering Programs

Lead Society(ies):
o *Badan Kejuruan Industri Pertanian Persatuan Insinyur Indonesia* (BKIP PII) – PII Chapter for Agro-Industrial Engineers
o *Forum Komunikasi Program Studi Industri Pertanian Indonesia* (FKPSIP) -

These Discipline Criteria apply to engineering programs that include “agro-industrial” and similar modifiers in their titles

Curriculum

The curriculum prepares graduates with ability to design, develop, implement, control, evaluate, and improve the system performance of sustainable agroindustry, through an integrated approach of transformation process, system engineering, industrial management, and environmental aspects to increase the added value of agricultural/bio-based resources and their derivatives.

Faculty

Faculty members are required to have a combined expertise in the aspects of transformation, systems engineering, industrial management, and environment for developing sustainable and integrated agro-industrial system.

Discipline Criteria for Chemical, Biochemical, and Similarly-named Engineering Programs

Lead Society(ies):
o *Asosiasi Pendidikan Tinggi Teknik Kimia Indonesia* (APTEKINDO) – Association of Indonesian Higher Education Programs in Chemical Engineering
o *Badan Kejuruan Kimia Persatuan Insinyur Indonesia* (BKK PII) – PII Chapter for Chemical Engineers

These Discipline Criteria apply to engineering programs that include “chemical”, “biochemical”, “bioprocess“, “bioenergy”, and similar modifiers in their titles.

Curriculum

The curriculum shall provide a firm grasp in basic sciences which include chemistry and chemistry-related sciences, physics, and/or biology with some reference to local context as appropriate to the objectives of the Program. The curriculum must include the engineering application of these basic sciences to the design, analysis, and control of chemical, physical, and/or biological processes and the design and development of products, including the economics and hazards associated with these processes and products.

The learning process articulating this curriculum must be conducted in such a way to ensure that the graduates have sufficient knowledge, skills, and attitude in the process design, analysis, and control, and product design and development. The learning process must also enable students to apply research-based knowledge and research methods to identify, formulate, and solve engineering problems.

Discipline Criteria for Civil and Similarly-named Engineering Programs

Lead Society(ies):

- *Badan Kejuruan Teknik Sipil Persatuan Insinyur Indonesia* (BKTS PII) – PII Chapter for Civil Engineers

These Discipline Criteria apply to bachelor programs that include "civil engineering" and similar modifiers in their titles.

Curriculum

The program shall prepare graduates to be proficient in applied mathematics and natural sciences relevant to civil engineering, in a minimum of three recognized major civil engineering areas (namely structural, project management, geotechnical, water resources, environmental, and transportation), in conducting civil engineering experiments and analyzing and interpreting the resulting data, and in designing and integrating all professional components of the curriculum. The program shall also prepare graduates to explain basic concepts in management, business, public policy, and leadership, and explain the importance of ethics and professional licensure.

Faculty

Faculty members teaching courses on design should have either certification of professional engineer or qualification through experience in engineering design and practices.

Discipline Criteria for Earth and Energy Engineering Programs

Lead Society(ies):
o *Badan Kejuruan Teknik Kebumian dan Energi* PII – PII Chapter for Earth and Energy Engineers
o *Ikatan Ahli Geologi Indonesia* – Association of Geological Experts Indonesia
o Himpunan Ahli Geofisika Indonesia – Association of Geophysical Experts Indonesia

Curriculum

The program shall prepare graduates to be proficient in applied mathematics and natural sciences relevant to earth and energy engineering, such as geological engineering, geophysical engineering, or other scope related to earth and energy engineering mapping, in conducting earth and energy engineering data acquisition, data processing and interpretation for experiments and research toward design and planning of engineering or exploration purpose, in which it integrates all professional components in the curriculum. The program shall also prepare graduates to explain basic concepts in management, business, public policy, and leadership, and explain the importance of ethics and professional licensure.

Faculty

Faculty members teaching courses should have either certification in related earth and energy engineering profession, or professional engineer or qualification through experience in engineering practice.

Discipline Criteria for Electrical, Computer, Communications, Telecommunication and Similarly-named Engineering Programs

Lead Society(ies):
o *Forum Pendidikan Tinggi Teknik Elektro Indonesia* (FORTEI) – Indonesian Forum for Higher Education in Electrical Engineering
o *Badan Kejuruan Elektro Persatuan Insinyur Indonesia* (BKE PII) – PII Chapter for Electrical Engineers

These Discipline Criteria apply to engineering programs that include "electrical", "electronic(s)," "computer," "communication(s)," "telecommunication(s)," or similar modifiers in their titles.

Curriculum

The curriculum specifies subject areas appropriate to engineering and must include:

a. one year of a combination of university level mathematics and basic sciences (one with experimental experience) appropriate to the discipline.

b. one and one-half years of engineering topics, i.e. engineering sciences and engineering design, appropriate to the title of the program.

Students must be prepared for engineering practice through a curriculum culminating in a major design experience based on the knowledge and skills acquired in earlier course work to meet desired needs within realistic constraints.

The structure of the curriculum must provide both breadth and depth across the range of engineering topics implied by the title of the program.

The curriculum must include probability and statistics, with applications appropriate to the program name; mathematics through differential and integral calculus; basic sciences and engineering topics (including computing science) necessary to analyze and design complex electrical/electronic devices or systems containing hardware and/or software components.

The curriculum for programs containing the modifier "electrical," "electronic(s)," "communication(s)," or "telecommunication(s)" in the title must include advanced mathematics, such as differential equations, linear algebra, and complex variables.

The curriculum for programs containing the modifier "computer" in the title must include discrete mathematics.

The curriculum for programs containing the modifier "communication(s)" or "telecommunication(s)" in the title must include topics in communication systems.

The curriculum for programs containing the modifier "telecommunication(s)" must include design and operation of telecommunication networks for services such as but not limited to voice, data, image, and video transport.

Discipline Criteria for Engineering Physics and Similarly-named Engineering Programs

Lead Society(ies):

- *Badan Kejuruan Teknik Fisika Persatuan Insinyur Indonesia (BKTF PII)* – PII Chapter for Engineering Physics

These Discipline Criteria apply to bachelor programs that include “engineering physics” and similar modifiers in their titles.

Curriculum

The program must prepare graduates to engage in the development of the forefront of technology, such as and not limited to, instrumentation & control, built environment and energy systems, material design and processing, renewable energy

The curriculum must provide strong fundamentals on mathematics, physics, engineering sciences and engineering design. The curriculum should cover the capability to thrive in professional and industry sectors, such as engineering economics, project management and core competences of the forefront technology.

Faculty

The program shall demonstrate that those faculty members teaching courses that are primarily design in content are qualified to teach the subject matter by virtue of education and experience or professional licensure.

Discipline Criteria for Environmental and Similarly-named Engineering Programs

Lead Society(ies):
o *Badan Kejuruan Teknik Lingkungan Persatuan Insinyur Indonesia* (BKTL PII) – PII Chapter for Environmental Engineers
o *Ikatan Ahli Teknik Penyehatan dan Lingkungan Indonesia* (IATPI) – Indonesian Association of Experts in Sanitation and Environmental Engineering
o *Badan Kerja Sama Perguruan Penyelenggara Pendidikan Tinggi Teknik Lingkungan* (BAKERMA-TL) – Association of Higher Education Programs in Environmental Engineering

These Discipline Criteria apply to engineering programs that include "environmental" and similar modifiers in their titles.

Curriculum

The curriculum must prepare graduates to apply knowledge of mathematics and basic sciences; introductory level knowledge of environmental issues associated with air, land, and water systems and associated environmental health impacts; conduct laboratory experiments and analyze and interpret the resulting data in more than one major environmental engineering focus area, (e.g., air, water, land, environmental health); performing design of environmental engineering systems; understanding in advanced principles and practice relevant to the program objectives. The curriculum must prepare graduates to understand concepts of professional practice, project management, and the roles and responsibilities of public institutions and private organizations pertaining to environmental policy and regulations.

Faculty

The program must demonstrate that a majority of those faculty teaching courses that are primarily design in content are qualified to teach the subject matter by virtue of professional licensure, board certification in environmental engineering, or by education and equivalent design experience.

Discipline Criteria for Geodetics, Geomatics, and Similarly-named Engineering Programs

Lead Society(ies):

- *Forum Ketua Jurusan dan Program Studi Teknik Geodesi-Geomatika se-Indonesia* – Indonesian Forum for Higher Education in Geodetic-Geomatics Engineering

These Discipline Criteria apply to engineering programs that include "surveying," "geodetic," "geomatics", and similar modifiers in their titles.

Curriculum

The curriculum must prepare graduates to apply knowledge of mathematics, natural sciences and statistics in Geodetics/Geomatics engineering field, complete task related to spatial data acquisition using modern measurement tools, perform geospatial data processing using industry-standard software, and also perform standard analysis and design in at least one of the recognized technical specialties within surveying/geodetics/geomatics technology, include boundary and/or land surveying, geographic and/or land information systems, engineering project surveying, photogrammetry, remote sensing, mapping and geodesy, and other related areas.

Faculty

The program must demonstrate that a majority of those faculty members are qualified to teach engineering courses by education, equivalent design experience or board certification of a surveyor professional/geomatics engineering.

Discipline Criteria for Industrial and Similarly-named Engineering Programs

Lead Society(ies):
o *Badan Kerja Sama Penyelenggara Pendidikan Tinggi Teknik Industri Indonesia (BKSTI)* – Indonesian Association of Higher Education in Industrial Engineering
o *Badan Kejuruan Teknik Industri Persatuan Insinyur Indonesia* (BKTI PII) – PII Chapter for Industrial Engineers

Curriculum

The program shall prepare graduates to be proficient in design, improve, and implement integrated systems that include people, materials, equipment, energy and information. To meet these needs, the curriculum must provide adequate knowledge about the application of mathematics, statistics and probabilistic theory as well as analysis and design engineering as well as knowledge with regard to social sciences. The education program should ensure the provision of an integrated system design experiences to students. The curriculum must include in depth instruction to accomplish the integration of systems using appropriate analytical, computational and experimental practices.

Faculty

Faculty members must understand the professional practice and maintain currency in their respective professional areas. Faculty members must be responsible and able to make the definition, evaluation, implementation and improvement on the achievement of Learning Outcomes in the framework of an continuous improvement of the study program.

Discipline Criteria for Materials, Metallurgical and Similarly-named Engineering Programs

Lead Society(ies):
o *Badan Kejuruan Teknik Material Persatuan Insinyur Indonesia* – PII Chapter for Material Engineers
o *Badan Kejuruan Teknik Metalurgi Persatuan Insinyur Indonesia* – PII Chapter for Metallurgical Engineers

These Discipline Criteria apply to engineering programs including “materials,” “metallurgical,” “ceramics,” “glass”, “polymer,” “biomaterials,” and similar modifiers in their titles.

Curriculum

The curriculum must prepare graduates to apply advanced science (such as chemistry, biology and physics), computational techniques and engineering principles to materials systems implied by the program modifier, e.g., ceramics, metals, polymers, biomaterials, composite materials; to integrate the understanding of the scientific and engineering principles underlying the four major elements of the field: structure, properties, processing, and performance related to material systems appropriate to the field; to apply and integrate knowledge from each of the above four elements of the field using experimental, computational and statistical methods to solve materials problems including selection and design consistent with the program educational objectives.

Faculty

The faculty expertise for the professional area must encompass the four major elements of the field.

Discipline Criteria for Mechanical and Similarly-named Engineering Programs

Lead Society(ies):
o *Badan Kerjasama Teknik Mesin Seluruh Indonesia* (BKSTM) – Indonesian Association of Higher Education in Mechanical Engineering
o *Badan Kejuruan Mesin Persatuan Insinyur Indonesia* (BKM PII) – PII Chapter for Mechanical Engineers

These Discipline Criteria apply to all engineering programs that include “mechanical” or similar modifiers in their titles.

Curriculum

The curriculum must require students to apply basic sciences, mathematics (including multivariate calculus and differential equations) and principles of engineering sciences; to model, analyze, design, and apply physical systems, components or processes; and prepare students to work professionally in either thermal or mechanical systems.

Faculty

Faculty members teaching courses on design should have either certification of professional engineer or qualification through experience in engineering design and practices.

Discipline Criteria for Nuclear and Similarly-named Engineering Programs

Lead Society(ies):
o *Himpunan Masyarakat Nuklir Indonesia* (HIMNI) – Indonesian Association for Nuclear Society

These Discipline Criteria apply to engineering program that include “nuclear”, “radiological”, “radiation”, or similar modifiers in their titles.

Curriculum

The curriculum shall provide strong fundamentals on advanced mathematics, science, engineering science and engineering design related to the objectives of the program. The curriculum must include the application of atomic and nuclear physics, and the transport of radiation and its interaction with matter, for nuclear power generation, medical, industrial, and agricultural areas; to perform nuclear engineering design; to measure nuclear and radiation processes. The program shall ensure that the curriculum must comply with international and national nuclear regulations by emphasizing the requirements for nuclear safety, non-destructive inspection, security and safeguards.

Faculty

The program must demonstrate that faculty members are qualified to teach nuclear engineering courses by education, equivalent design experience or board certification of a professional engineer depending on the program needs.

Discipline Criteria for Ocean and Similarly-named Engineering Programs

Lead Society(ies):
o *Himpunan Ahli Pengelola Pesisir Indonesia* (HAPPI) – Indonesian Association of Experts in Coastal Management
o *Himpunan Ahli Teknik Hidraulik Indonesia* (HATHI) – Indonesian Association of Experts in Hydraulics Engineering

These Discipline Criteria apply to engineering programs that include “coastal”, “ocean”, “marine”, “naval architecture”, or similar modifiers in their titles.

Curriculum

The curriculum must prepare graduates to have the knowledge and the skills to apply the principles of fluid and solid mechanics, dynamics, hydrostatics, hydrodynamics, probability and applied statistics, oceanography, and water waves, to engineering problems and to work in groups to perform engineering design at the system level, integrating multiple technical areas and addressing design optimization.

Faculty

Program faculty must have responsibility and sufficient authority to define, revised, implement, and achieve the program objectives

Discipline Criteria for General Engineering Programs

Lead Society(ies):

- *Persatuan Insinyur Indonesia (PII)* – The Institute of Engineers Indonesia

These criteria is applicable only for programs having no available Discipline Criteria and wish to be evaluated solely by the Common Criteria.

Curriculum

No additional requirement beyond those required by the Common Criteria

Faculty

No additional requirement beyond those required by the Common Criteria

List of programs accredited by PII/IABEE in the evaluation category of **Engineer S1** under the accreditation type of **General Accreditation**. This list may be a non-exhustive list, depending on the filters activated for the downloading purpose.

Institution	Study Program	Discipline	Status	Start Year	Next Evaluation	Exit Year
Institut Pertanian Bogor (Bogor Agricultural University)	Teknik Pertanian dan Biosistem (Agriculture and Biosystem Engineering)	Agricultural Engineering	Accredited	2016	2027	
Universitas Islam Indonesia (Islamic University of Indonesia)	Teknik Sipil (Civil Engineering)	Civil Engineering	Accredited	2016	2027	
Universitas Islam Indonesia (Islamic University of Indonesia)	Teknik Lingkungan (Environmental Engineering)	Environmental Engineering	Accredited	2017	2025	
Universitas Indonesia (Universitas Indonesia)	Teknik Bioproses (Bioprocess Engineering)	Chemical Engineering	Accredited	2017	2022	
Universitas Indonesia (Universitas Indonesia)	Teknik Kimia (Chemical Engineering)	Chemical Engineering	Accredited	2017	2022	
Universitas Bina Nusantara (Binus University)	Teknik Sipil (Civil Engineering)	Civil Engineering	Accredited	2018	2025	
Universitas Gadjah Mada (Universitas Gadjah Mada)	Teknik Industri (Industrial Engineering)	Industrial Engineering	Accredited	2018	2027	
Universitas Bina Nusantara (Binus University)	Teknik Industri (Industrial Engineering)	Industrial Engineering	Accredited	2018	2023	
Universitas Gadjah Mada (Universitas Gadjah Mada)	Teknik Elektro (Electrical Engineering)	Electrical, Computer, Communications, Telecommunication Engineering	Accredited	2018	2027	
Universitas Gadjah Mada (Universitas Gadjah Mada)	Teknologi Informasi (Information Engineering)	Electrical, Computer, Communications, Telecommunication Engineering	Accredited	2018	2027	
Universitas Gadjah Mada (Universitas Gadjah Mada)	Teknik Geologi (Geology Engineering)	Earth and Energy Engineering	Accredited	2018	2027	
Universitas Diponegoro (Diponegoro University)	Teknik Kimia (Chemical Engineering)	Chemical Engineering	Accredited	2018	2027	

Source: https://evaluation.iabee.or.id/#/accreditation/summary/search
Date of download: 07-06-2023 09:51:50

Institut Teknologi Sepuluh Nopember (Institut Teknologi Sepuluh Nopember)	Teknik Material (Material Engineering)	Material and Metallurgical Engineering	Accredited	2018	2025	
Universitas Gadjah Mada (Universitas Gadjah Mada)	Teknik Nuklir (Nuclear Engineering)	Nuclear Engineering	Accredited	2018	2025	
Universitas Diponegoro (Diponegoro University)	Teknik Mesin (Mechanical Engineering)	Mechanical Engineering	Accredited	2018	2025	
Institut Teknologi Sepuluh Nopember (Institut Teknologi Sepuluh Nopember)	Teknik Kimia (Chemical Engineering)	Chemical Engineering	Accredited	2018	2027	
Universitas Gadjah Mada (Universitas Gadjah Mada)	Teknik Sipil (Civil Engineering)	Civil Engineering	Accredited	2018	2027	
Institut Teknologi Sepuluh Nopember (Institut Teknologi Sepuluh Nopember)	Teknik Fisika (Engineering Physics)	Engineering Physics	Accredited	2018	2027	
Universitas Gadjah Mada (Universitas Gadjah Mada)	Teknik Fisika (Engineering Physics)	Engineering Physics	Accredited	2018	2027	
Universitas Diponegoro (Diponegoro University)	Teknik Industri (Industrial Engineering)	Industrial Engineering	Accredited	2018	2023	
Universitas Gadjah Mada (Universitas Gadjah Mada)	Teknik Geodesi (Geodetic Engineering)	Geodetics and Geomatics Engineering	Accredited	2018	2023	
Universitas Gadjah Mada (Universitas Gadjah Mada)	Teknik Mesin (Mechanical Engineering)	Mechanical Engineering	Accredited	2018	2023	
Institut Teknologi Sepuluh Nopember (Institut Teknologi Sepuluh Nopember)	Teknik Perkapalan (Naval Architecture)	Ocean Engineering	Accredited	2018	2023	
Universitas Indonesia (Universitas Indonesia)	Teknik Mesin (Mechanical Engineering)	Mechanical Engineering	Accredited	2018	2023	
Universitas Sebelas Maret (Sebelas Maret University)	Teknik Industri (Industrial Engineering)	Industrial Engineering	Accredited	2018	2023	

Universitas Gadjah Mada (Universitas GadjahMada)	Teknik Kimia (Chemical Engineering)	Chemical Engineering	Accredited	2018	2023	
Institut Teknologi Bandung (Institut Teknologi Bandung)	Rekayasa Hayati (Bio Engineering)	Chemical Engineering	Accredited	2018	2027	
Institut Teknologi Sepuluh Nopember (Institut Teknologi Sepuluh Nopember)	Teknik Mesin (Mechanical Engineering)	Mechanical Engineering	Accredited	2018	2025	
Universitas Tarumanagara (Universitas Tarumanagara)	Teknik Mesin (Mechanical Engineering)	Mechanical Engineering	Accredited	2018	2023	
Universitas Diponegoro (Diponegoro University)	Teknik Sipil (Civil Engineering)	Civil Engineering	Accredited	2018	2023	
Institut Teknologi Sepuluh Nopember (Institut Teknologi Sepuluh Nopember)	Teknik Lingkungan (Environmental Engineering)	Environmental Engineering	Accredited	2018	2025	
Universitas Diponegoro (Diponegoro University)	Teknik Lingkungan (Environmental Engineering)	Environmental Engineering	Accredited	2018	2023	
Universitas Indonesia (Universitas Indonesia)	Teknik Sipil (Civil Engineering)	Civil Engineering	Accredited	2019	2023	
Universitas Indonesia (Universitas Indonesia)	Teknik Komputer (Computer Engineering)	Electrical, Computer, Communications, Telecommunication Engineering	Accredited	2019	2023	
Universitas Brawijaya (University of Brawijaya)	Teknik Elektro (Electrical Engineering)	Electrical, Computer, Communications, Telecommunication Engineering	Accredited	2019	2023	
Universitas Bina Nusantara (Binus University)	Sistem Komputer (Computer Engineering)	Electrical, Computer, Communications, Telecommunication Engineering	Accredited	2019	2023	
Institut Teknologi Sepuluh Nopember (Institut Teknologi Sepuluh Nopember)	Teknik Sistem Perkapalan (Marine Engineering)	Ocean Engineering	Accredited	2019	2023	
Universitas Indonesia (Universitas Indonesia)	Teknik Lingkungan (Environmental Engineering)	Environmental Engineering	Accredited	2019	2022	

Institut Teknologi Sepuluh Nopember (Institut Teknologi Sepuluh Nopember)	Teknik Kelautan (Ocean Engineering)	Ocean Engineering	Accredited	2019	2023	
Institut Teknologi Sepuluh Nopember (Institut Teknologi Sepuluh Nopember)	Teknik Transportasi Laut (Marine Transportation Engineering)	Ocean Engineering	Accredited	2019	2023	
Universitas Sebelas Maret (Sebelas Maret University)	Teknik Kimia (Chemical Engineering)	Chemical Engineering	Accredited	2019	2023	
Universitas Indonesia (Universitas Indonesia)	Teknik Metalurgi dan Material (Metallurgy and Materials Engineering)	Material and Metallurgical Engineering	Accredited	2019	2023	
Institut Teknologi Sepuluh Nopember (Institut Teknologi Sepuluh Nopember)	Teknik Geofisika (Geophysical Engineering)	Earth and Energy Engineering	Accredited	2020	2023	
Universitas Andalas (Andalas University)	Teknik Elektro (Electrical Engineering)	Electrical, Computer, Communications, Telecommunication Engineering	Accredited	2020	2025	
Universitas Hasanuddin	Teknik Lingkungan (Environmental Engineering)	Environmental Engineering	Accredited	2020	2023	
Institut Teknologi Bandung (Institut Teknologi Bandung)	Rekayasa Pertanian (Agricultural Engineering)	Agricultural Engineering	Accredited	2020	2025	
Universitas Hasanuddin	Teknik Elektro (Electrical Engineering)	Electrical, Computer, Communications, Telecommunication Engineering	Accredited	2020	2023	
Universitas Hasanuddin	Teknik Sipil (Civil Engineering)	Civil Engineering	Accredited	2020	2023	
Universitas Andalas (Andalas University)	Teknik Lingkungan (Environmental Engineering)	Environmental Engineering	Accredited	2020	2025	
Universitas Surabaya (University of Surabaya)	Teknik Kimia (Chemical Engineering)	Chemical Engineering	Accredited	2020	2023	
Universitas Trisakti (Trisakti University)	Teknik Industri (Industrial Engineering)	Industrial Engineering	Accredited	2020	2023	

Universitas Brawijaya (University of Brawijaya)	Teknik Lingkungan (EnvironmentalEngineering)	Environmental Engineering	Accredited	2020	2023	
Universitas Surabaya (University of Surabaya)	Teknik Industri (Industrial Engineering)	Industrial Engineering	Accredited	2020	2023	
Universitas Trisakti (Trisakti University)	Teknik Lingkungan (Environmental Engineering)	Environmental Engineering	Accredited	2020	2023	
Universitas Diponegoro (Diponegoro University)	Teknik Elektro (Electrical Engineering)	Electrical, Computer, Communications, Telecommunication Engineering	Accredited	2020	2023	
Universitas Mercu Buana	Teknik Sipil (Civil Engineering)	Civil Engineering	Accredited	2020	2022	
Universitas Atma Jaya Yogyakarta (Universitas Atma Jaya Yogyakarta)	Teknik Sipil (Civil Engineering)	Civil Engineering	Accredited	2021	2024	
Universitas Islam Indonesia (Islamic University of Indonesia)	Teknik Elektro (Electrical Engineering)	Electrical, Computer, Communications, Telecommunication Engineering	Accredited	2021	2024	
Universitas Atma Jaya Yogyakarta (Universitas Atma Jaya Yogyakarta)	Teknik Industri (Industrial Engineering)	Industrial Engineering	Accredited	2021	2024	
Institut Teknologi Bandung (Institut Teknologi Bandung)	Teknik Metalurgi (Metalurgical Engineering)	Material and Metallurgical Engineering	Accredited	2021	2024	
Universitas Islam Indonesia (Islamic University of Indonesia)	Teknik Mesin (Mechanical Engineering)	Mechanical Engineering	Accredited	2021	2024	
Universitas Indonesia (Universitas Indonesia)	Teknik Perkapalan (Naval Architecture)	Ocean Engineering	Accredited	2021	2024	
Universitas Telkom (Telkom University)	Teknik Elektro (Electrical Engineering)	Electrical, Computer, Communications, Telecommunication Engineering	Accredited	2021	2024	
Universitas Telkom (Telkom University)	Teknik Fisika (Engineering Physics)	Engineering Physics	Accredited	2021	2024	
Universitas Indonesia (Universitas Indonesia)	Teknik Industri (Industrial Engineering)	Industrial Engineering	Accredited	2021	2023	

Institut Teknologi Bandung (Institut Teknologi Bandung)	Teknik Telekomunikasi (Telecomunication Engineering)	Electrical, Computer, Communications, Telecommunication Engineering	Accredited	2022	2027	
Universitas Syiah Kuala	Teknik Elektro (Electrical Engineering)	Electrical, Computer, Communications, Telecommunication Engineering	Accredited	2022	2025	
Universitas Udayana	Teknik Sipil (Civil Engineering)	Civil Engineering	Accredited	2022	2027	
Universitas Indonesia (Universitas Indonesia)	Teknik Elektro (Electrical Engineering)	Electrical, Computer, Communications, Telecommunication Engineering	Accredited	2022	2024	
Universitas Telkom (Telkom University)	Teknik Industri (Industrial Engineering)	Industrial Engineering	Accredited	2022	2024	
Institut Teknologi Bandung (Institut Teknologi Bandung)	Teknik Biomedis (Biomedical Engineering)	Biomedical Engineering	Accredited	2022	2025	
Institut Teknologi Bandung (Institut Teknologi Bandung)	Teknik Tenaga Listrik (Electrical Power Engineering)	Electrical, Computer, Communications, Telecommunication Engineering	Accredited	2022	2025	
Universitas Sumatera Utara (University of Sumatera Utara)	Teknik Kimia (Chemical Engineering)	Chemical Engineering	Accredited	2022	2025	
Universitas Katolik Parahyangan (Parahyangan Catholic University)	Teknik Kimia (Chemical Engineering)	Chemical Engineering	Accredited	2022	2027	
Institut Teknologi Bandung (Institut Teknologi Bandung)	Teknik Kimia (Chemical Engineering)	Chemical Engineering	Accredited	2022	2027	
Universitas Tarumanagara (Universitas Tarumanagara)	Teknik Sipil (Civil Engineering)	Civil Engineering	Accredited	2022	2024	
Institut Teknologi Bandung (Institut Teknologi Bandung)	Rekayasa Kehutanan (Forestry Engineering)	Agricultural Engineering	Accredited	2022	2025	
Institut Teknologi Bandung (Institut Teknologi Bandung)	Teknik Industri (Industrial Engineering)	Industrial Engineering	Accredited	2022	2025	

Institut Teknologi Bandung (Institut Teknologi Bandung)	Teknik Lingkungan (EnvironmentalEngineering)	Environmental Engineering	Accredited	2022	2027	
Universitas Diponegoro (Diponegoro University)	Teknik Geodesi (Geodetic Engineering)	Geodetics and Geomatics Engineering	Accredited	2022	2024	
Universitas Sebelas Maret (Sebelas Maret University)	Teknik Mesin (Mechanical Engineering)	Mechanical Engineering	Accredited	2022	2024	
Institut Teknologi Bandung (Institut Teknologi Bandung)	Teknik Kelautan (Ocean Engineering)	Ocean Engineering	Accredited	2022	2027	
Universitas Sebelas Maret (Sebelas Maret University)	Teknik Sipil (Civil Engineering)	Civil Engineering	Accredited	2022	2024	
Institut Teknologi Bandung (Institut Teknologi Bandung)	Teknik Elektro (Electrical Engineering)	Electrical, Computer, Communications, Telecommunication Engineering	Accredited	2022	2027	
Institut Teknologi Bandung (Institut Teknologi Bandung)	Teknik Sipil (Civil Engineering)	Civil Engineering	Accredited	2022	2027	
Universitas Muhammadiyah Surakarta (Universitas Muhammadiyah Surakarta)	Teknik Industri (Industrial Engineering)	Industrial Engineering	Accredited	2022	2024	
Universitas Kristen Petra (Petra Christian University)	Teknik Elektro (Electrical Engineering)	Electrical, Computer, Communications, Telecommunication Engineering	Accredited	2022	2025	
Universitas Udayana	Teknik Mesin (Mechanical Engineering)	Mechanical Engineering	Accredited	2022	2027	
Institut Pertanian Bogor (Bogor Agricultural University)	Teknik Industri Pertanian (Agricultural Industrial Engineering)	Agroindustrial Engineering	Accredited	2022	2027	
Universitas Udayana	Teknik Elektro (Electrical Engineering)	Electrical, Computer, Communications, Telecommunication Engineering	Accredited	2022	2025	
Institut Teknologi Sepuluh Nopember (Institut Teknologi Sepuluh Nopember)	Teknik Sipil (Civil Engineering)	Civil Engineering	Accredited	2022	2025	

Institut Teknologi Bandung (Institut Teknologi Bandung)	Teknik Fisika (Engineering Physics)	Engineering Physics	Accredited	2022	2025	
Universitas Syiah Kuala	Teknik Kimia (Chemical Engineering)	Chemical Engineering	Accredited	2022	2025	
Institut Teknologi Sepuluh Nopember (Institut Teknologi Sepuluh Nopember)	Teknik Geomatika (Geomatics Engineering)	Geodetics and Geomatics Engineering	Accredited	2022	2025	
Institut Teknologi Bandung (Institut Teknologi Bandung)	Manajemen Rekayasa (Engineering Management)	Industrial Engineering	Accredited	2022	2025	
Universitas Diponegoro (Diponegoro University)	Teknik Perkapalan (Naval Architecture)	Ocean Engineering	Accredited	2022	2024	
Universitas Kristen Petra (Petra Christian University)	Teknik Sipil (Civil Engineering)	Civil Engineering	Accredited	2023	2025	
Universitas Jenderal Soedirman (Universitas Jenderal Soedirman)	Teknik Sipil (Civil Engineering)	Civil Engineering	Accredited	2023	2025	

IEA MEETINGS, KOWLOON EAST, HONG KONG

Washington Accord - Closed Session

Application for Provisional Status - Indonesia (IABEE)

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PERSATUAN INSINYUR INDONESIA
The Institution of Engineers Indonesia

Indonesian Accreditation Board for Engineering Education

APPLICATION FOR

PROVISIONAL MEMBERSHIP OF THE WASHINGTON ACCORD

submitted to

IEA SECRETARIAT
WASHINGTON ACCORD
International Engineering Alliance
IPENZ, Engineers New Zealand
Ground Floor, 158 The Terrace
PO Box 12 241, Wellington 6144

by

THE INSTITUTION OF ENGINEERS INDONESIA/
INDONESIAN ACCREDITATION BOARD FOR
ENGINEERING EDUCATION – PII/IABEE
Jl. Bandung No.1 Menteng
Jakarta Pusat 10310, Indonesia

February 08, 2018

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EXECUTIVE SUMMARY

Indonesian Accreditation Board for Engineering Education (IABEE) is an accreditation agency for higher education programs in engineering. IABEE is established as an autonomous department of the Institution of Engineers Indonesia (PII), a non-governmental organization of multi-disciplinary engineering professionals in engineering and technology. The main mission of IABEE is to promote continual quality improvement of engineering higher education through voluntary program accreditation to produce autonomous professionals appropriate to the needs of stakeholders.

In the preparation phase, IABEE is assisted technically by JABEE through a 5-year project from 2014-2019 by forming the necessary committees, including Steering Committee, Criteria Committee, and Evaluation and Accreditation Committee. IABEE's Accreditation Criteria are formulated after studying most of the accreditation criteria of the Washington Accord (WA) signatories. The Evaluation and Accreditation Committee then prepared accreditation rules and procedures, developed the evaluation system and instruments and prepared the program evaluators. After going through several trials, at the end of 2016 IABEE has successfully implemented 2 program accreditation activities using IABEE's own accreditation criteria and rules and procedures. In the accreditation cycles of 2017 and 2018, IABEE has accredited 3 programs and 27 programs in a row.

One of the preparatory steps to becoming a part of WA, since 2014 IABEE has actively sent its delegation at the annual International Engineering Alliance Meeting (IEAM) to get to know its members and to study various aspects of WA, including rules and procedures for becoming a WA member. In 2017 at the IEAM meeting in Alaska, IABEE through the Global Reach Initiative forum, officially expressed its intention to join WA and expected support from the members. At the 2018 IEAM meeting in London, IABEE has followed up with more concrete steps, by asking the IEA Secretariat about all the requirements that must be prepared to become provisional members of WA.

This document is prepared as an application for provisional signatory membership of IABEE to the Washington Accord. It provides information about IABEE, Indonesia and the context of engineering, national education system and particularly various aspects of higher engineering education, IABEE relationship with the engineering community and practices, role of accreditation, as well as IABEE accreditation system and operation. To fulfill one of the application requirements, IABEE has proposed JABEE and ABET to be its nominators. We are very grateful that both respected organizations have accepted our request.

On behalf of PII/IABEE,

Prof. Dr-Ing. Misri Gozan,
Chair of IABEE Executive Committee

1. INTRODUCTION

1.1. Indonesia at a Glance

The Republic of Indonesia is the largest archipelago in the world comprising 17,500 large and small islands, situated between the continents of Asia and Australia and between the Pacific and the Indian Oceans. It lies across the equator and spans a distance equivalent to one-eighth of earth's circumference. Its islands can be grouped into Sumatera, Java, Kalimantan, and Sulawesi; Bali, Nusa Tenggara and a chain of islands that runs eastward through Timor; and Maluku islands and Papua (Figure 1).

Indonesia is a tropical country with a wet, hot, and humid climate the entire year. The temperature is fairly constant, averaging 28°C in the coastal plains and between 23-26°C in the inland and mountain regions. There are two major seasons, hot dry season from March to September and rainy monsoon season from September to March. It is blessed with the most diverse landscape, from fertile ricelands on Java and Bali to the luxuriant rainforests of Sumatra, Kalimantan and Sulawesi, to the savannah grasslands of the Nusa Tenggara islands to snow-capped peaks of West Papua. It is the habitat of wildlife ranges from Komodo to Orang Utan and Java Rhino, to the Sulawesi Anoa, to birds like Cockatoo and the Bird of Paradise. Also, it is the habitat of Rafflesia, the world's largest flower, wild orchids, an amazing variety of spices, aromatic hardwood, a large variety of tropical fruit trees, as well as thousands of species of colorful coral and tropical fish.

The capital, Jakarta, is located near the northwestern coast of Java with local time UTC+7. Currently, Indonesia has a total population of more than 267 million people from more than 300 ethnic groups, making it the most populous country in Southeast Asia and the fourth in the world. Nearly 90% of the Indonesian population professes Islam, and the rests are Christian, Buddhism, and Hinduism. The national motto, "Bhinneka Tunggal Ika" ("Unity in Diversity"), makes reference to the extraordinary diversity of Indonesian peoples, languages and cultures. The national language is Indonesian (Bahasa Indonesia). Indonesia has 34 provinces, the largest subdivisions of the country and the highest tier of the local government.

Indonesia has the largest economy in Southeast Asia and is one of the emerging market economies of the world. It is the seventh largest in terms of GDP (PPP) after China, USA, India, Japan, Germany and Russia. It is contributed by agricultural sector (13.9%), industry (40.3%) and services (45.9%). Indonesia is a member of G-20 major economies and classified as a newly industrialized country. Indonesia's important agricultural commodities are palm oil, natural rubber, cocoa, coffee, tea, cassava, rice and tropical spices. Palm oil production is important to the economy as Indonesia is the world's biggest producer and consumer of the commodity, providing about half of the world's supply. Indonesia is the world's largest tin market. Although mineral production traditionally centered on bauxite, silver, and tin, Indonesia is expanding its copper, nickel, gold, and coal output for export markets.

Figure 1. Indonesian map showing the position and size relative to neighboring countries

Since independence the government has placed great emphasis on primary, secondary, and higher education for all people and by the early 21st century the great majority of Indonesians were literate. Responsibility for education is centered in the Ministry of National Education, but other government bodies also administer extensive educational programs. The national educational system involves six years of primary education, beginning at age seven, followed by six years of secondary education, which are divided into two three-year blocks. Since the early 1990s the first nine years have been compulsory. Higher education includes dozens of public institutions and thousands of private postsecondary schools. Enrollment is about evenly distributed between men and women. While a number of universities offer postgraduate education, many students go abroad, especially to North America, Europe, Japan and Australia to pursue master and doctoral degrees.

1.2. The Need for Internationally Recognized Accreditation Body

As described before, Indonesia has a variety of unique natural resources that provide great opportunities to be managed for the welfare of society. To do this innovation becomes a very important requirement. Innovation requires people with certain skills and specialties that are combined with the ability to work together across disciplines. Engineers play dominant roles in enhancing economic values of resources. Higher engineering education, therefore, has a strategic and central role to carry out this agenda. It is the main producer of skilled and talented human resources that generate new ideas and practices. With various complexities in utilizing natural resources for equitable and environmentally friendly economic development, and with the challenges of tight global competition, engineering education is required to produce adequate quality human resources.

Quality assurance systems of an education program play a pivotal role to ascertain education quality. The systems can be developed internally or externally. External quality

assurance usually carried out through accreditation. So far, the accreditation of higher education is carried out by the National Accreditation Board of Higher Education Institution (BAN-PT), which is mandatory. The accreditation criteria used are input-based and are generally applicable to all fields of education. With the issuance of Law No. 12/2012 on Higher Education, BAN-PT will only be given the mandate to carry out institution accreditation, while program accreditation will be carried out by an independent accreditation institution in accordance with its educational field of study.

After studying various models of accreditation systems in the world today, it is concluded that Indonesia needs to have an accreditation body for engineering higher education that can ensure its graduates are in accordance with what is needed by users, internationally recognized, and which supports the mobility of professionals. Moreover, since accreditation is a means for quality improvement, the accreditation should be conducted on a voluntary basis. Therefore, the mutual recognition agreement of the Washington Accord (WA) is viewed as the most appropriate framework for Indonesia to join, and for this reason, an independent accreditation body called the Indonesian Accreditation Board for Engineering Education (IABEE) is established.

The importance to have a good accreditation system is also justified by the need for significant numbers of engineering graduates towards the year of 2045, a century after Indonesian independence. In fact, with the current economic growth rate, towards 2025, Indonesia is estimated to have a shortage of engineering graduates reaching 10,000 graduates/year. Therefore, it is necessary to ensure that the fulfillment of the needs of the number of engineering graduates is also balanced with adequate graduate quality.

1.3. Proposal Objectives

Based on the description above, this Proposal is prepared to provide background, context and justification about IABEE's intention to join and become part of the Washington Accord (WA) membership. After briefly introducing the country, the education system and the existing accreditation system, the following chapters will explain in more detail about the IABEE organization and management, the engineering higher education system and international accreditation experience, IABEE relations with the engineering professional community, and more specifically about IABEE accreditation system and implementation. In writing this Proposal, we refer to the Accord Rules and Procedures (1st July 2017 version), especially The Criteria for Admission to Provisional Signatory Status of Schedule B1 and the Guidelines of Section C.2, so that the important aspects requested in the Rule and Procedure have been addressed as far as possible.

2. ABOUT IABEE

Indonesian Accreditation Board for Engineering Education (IABEE) is an accreditation agency for higher education programs in engineering. IABEE is established as an autonomous department of the Institution of Engineers Indonesia (PII), a non-governmental organization of multi-disciplinary engineering professionals in engineering and technology. PII was founded in 1952 in Bandung and currently headquartered in Jakarta. It has more than 50,000 members in 23 engineering disciplines (chapters). PII has a mission to make engineers who are competitive and who give high added values to the welfare and prosperity of the nation. PII is currently a member of WFEO (World Federation of Engineering Organizations), AFEO (ASEAN Federation of Engineering Organizations), FEISEAP (Federation of Engineering Institute South East Asia and Pacific), AEESEAP (Association of Engineering Education South East Asia and Pacific), as well as APEC Engineer Agreement.

The first step in establishing IABEE was the formation of a Steering Committee in November 2013 as a realization of the Indonesian government's request to the Japanese government to assist Indonesia in establishing an internationally recognized accreditation institution for engineering education. After signing cooperation between the Directorate General of Higher Education (DGHE) of the Ministry of Education and Culture (MoEC)[1] and Japan International Cooperation Agency (JICA) in 2014, JICA made a contract with JABEE to prepare and implement a 5-year technical cooperation project from 2014 to 2019. One of the targets set out for the project is for IABEE to obtain a provisional status in the Washington Accord in 2019.

The Steering Committee formed the organizational organs needed to implement the project, including the Criteria Committee and the Evaluation and Accreditation Committee, and drafted an MoU so that IABEE could become part of the PII. IABEE was then established as an autonomous department within PII on October 11, 2016 and inaugurated on March 13, 2018. MoU of IABEE Establishment is provided in Annex H.

2.1. IABEE Vision, Mission, and Purpose

The followings are IABEE vision, missions, and purposes.

Vision

As a reformer and stimulator for accelerating the progress of engineering higher education in Indonesia to produce innovative human resources and engineering innovation for improving human welfare.

[1] In 2015, new Presidential Administration of Indonesia took out higher education affairs from the Ministry of Education and Culture (MoEC) and tasked it to a newly formed Ministry of Research, Technology, and Higher Education (MoRTHE).

Mission

(1) Promote quality improvement of engineering higher education through accreditation to produce autonomous professionals appropriate to the needs of stakeholders,

(2) Facilitate development of engineering higher education systems that emphasizes on continual quality improvement towards global quality standards,

(3) Encourage communication and partnerships between engineering higher education institutions and stakeholders to effectively utilize local resources and wisdom for the welfare of the community, and

(4) Support dissemination of innovations on advancement of engineering higher education.

Purpose

(1) IABEE accreditation is a tool for programs to ensure the implementation of outcome-based education that meets international standards and qualifications through continual quality improvement.

(2) IABEE contributes in preparing Indonesian workers who are able to develop synergies in line with the global mobility of engineering practitioners.

2.2. Organizational Structure

As described before, IABEE is an autonomous department within PII. The position of IABEE within PII organization is considered appropriate and in line with Engineering Law No. 11/2014 that gives a mandate and strategic role to PII to ensure good quality of engineer services. This mandate can be implemented by PII, among others through the role of IABEE, which ensures that engineering higher education graduates have been equipped with adequate knowledge, skills and attitudes as provisions to become qualified professional engineers. The organization structure of IABEE is depicted in Figure 2.

The followings are concise explanation on the roles and responsibilities of IABEE committees depicted in Figure 2.

Executive Committee is the highest decision-making board in IABEE that is made up of high-level stakeholders and experts. This board sets up the directions and guidance on key issues such as IABEE's policy and objectives, resource allocation, budgetary control and decision, and marketing strategy. The main role of this board is to ensure successful mission and purpose of IABEE. The executive committee is chaired by a Chair of Executive Committee with members including representatives PII, academics, industry, and observers from government. The Executive Committee nominates the members of the Criteria Committee, Evaluation & Accreditation Committee, Finance Committee, International Committee, Public Affairs Committee, Accreditation Council, as well as the Appeal Board. Important decisions made by these committees are to be

reported for approval of the Executive Committee. The Chair of the Executive Committee shall be accountable to the Board of PII.

Secretariat is chaired by a Secretary General, who is the official entrusted with administrative duties, maintaining records, and performing other secretarial duties.

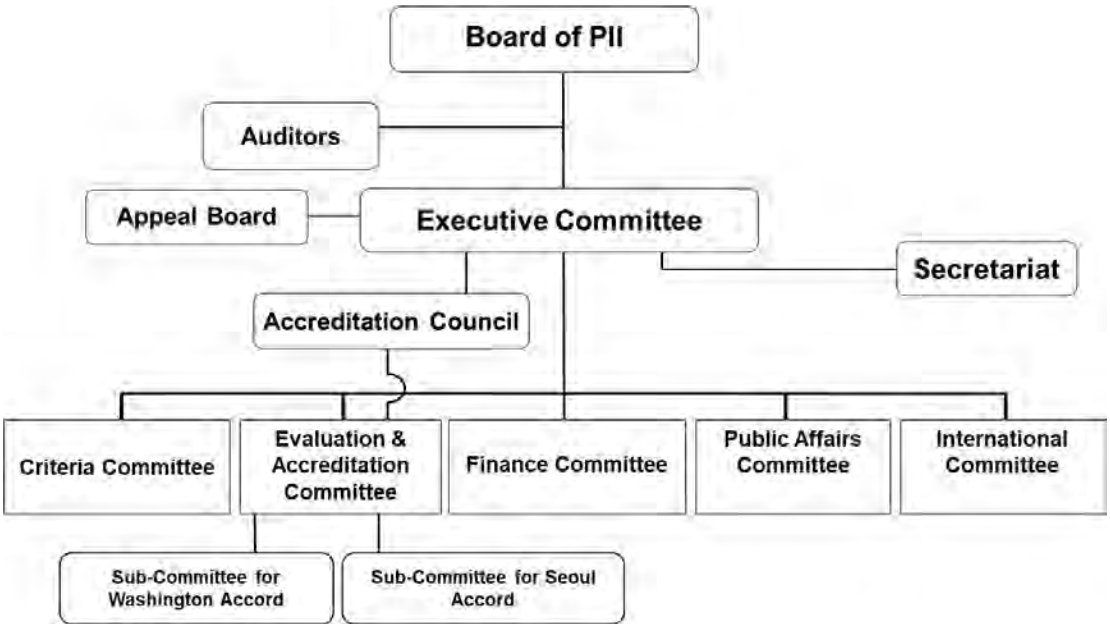

Figure 2. IABEE organizational chart

Accreditation Council is a board of officials in charge of validating the results of accreditation. They work to ensure that the accreditation evaluation process has been carried out according to established rules and procedures.

Appeal Board is a board of officials that are appointed to hear appeals. They judge whether an evaluation/accreditation decision was right or wrong, when the party (program, education institution) affected by it thinks that it was wrong.

Criteria Committee is a committee consists of academics from leading universities, professional organizations and industry practitioners, who are responsible to establish the White Paper, the Accreditation Criteria, namely Common Criteria and Criteria Guide, and approve the Discipline Criteria proposed by the professional societies. These criteria form the basis for the program evaluation. The committee is also in charge of conducting periodic reviews and revisions of the Accreditation Criteria based on the input from stakeholders and the existence of circumstances that require the criteria to be revised.

Evaluation and Accreditation Committee is responsible for developing IABEE's Rules and Procedures for Evaluation and Accreditation (RPEA), evaluation instruments, and IABEE's Online Evaluation System (OES). This committee is also responsible to plan, conduct and monitor the program accreditation processes in an accreditation cycle, including appointment of the evaluation team, monitoring the online review and on-site evaluation, and post evaluation activities, such as harmonization and reporting. The

committee shall recommend accreditation status to the Accreditation Council. In addition to that, the committee also develops training programs and materials and conducts a series of training for program evaluators.

Finance Committee has the main duty to maintain a continuing review of the financial affairs and make appropriate recommendations to the Executive Committee regarding financial matters for the annual budget and the business plan. The committee also authorizes investment policy, accounting and disbursement procedures for all funds under the authority of IABEE.

International Affairs Committee is responsible for managing IABEE's international activity, such as developing partnerships and collaborations, building international profile through presence at international events, meetings and forums, hosting visits by delegations from international bodies, preparing documents for application of WA membership and international agreements.

Public Affairs Committee has responsibility to build, develop and manage a good relationship between IABEE and its stakeholders, by providing factual information and lobby on issues that could impact upon IABEE's ability to operate successfully.

The list and short CV of the Executive Committee members as well as other key persons of IABEE is given in Annex B. Further explanation for some committees directly related to evaluation and accreditation actions is given in the Rules and Procedures for Accreditation-Related Committees (RPARC) in Annex E.

3. EDUCATION SYSTEM IN INDONESIA

3.1. Overview

According to the Law No. 20/2003 on the National Education System, national education functions to develop capabilities and form a dignified character and national civilization in order to educate the nation's life, aiming at the development of people's potency to become human beings who believe and fear God Almighty, noble, healthy, knowledgeable, competent, creative, independent, and a democratic and responsible citizen.

The path of education consists of formal, non-formal, and informal education that can complement and enrich each other. The level of formal education consists of primary education, secondary education, and tertiary/higher education. The types of education include general, vocational, academic, professional, religious and special education. The path, level and type of education can be realized in the form of educational units organized by the government, regional government, and/or the community.

The implementation of national education adheres to the following principles:

(1) is carried out in a democratic, fair and non-discriminatory manner by upholding human rights, religious values, cultural values, and national pluralism;

(2) is held as a systemic unit with an open and multi-meaning system;

(3) is held as a process of civilizing and empowering students that lasts a lifetime;

(4) is held by giving exemplary, building willingness, and developing students' creativity in the learning process;

(5) is held by developing a culture of reading, writing and calculating for all citizens; and

(6) is organized by empowering all components of society through participation in the implementation and quality control of education services

To ensure quality national education, the government establishes National Education Standards, i.e. the minimum criteria for the education system in the entire jurisdiction of the country. These standards serve as the basis for education planning, implementation and supervision. The standards consist of standards of content, process, competency of graduates, education staff, facilities and infrastructure, management, financing, and assessment of education. The development of standards and monitoring and reporting of their achievements nationally is carried out by a body of standardization (BSNP). The standards are refined in a planned, directed and sustainable manner in accordance with the demands of changes in local, national and global life.

The curriculum at all levels and types of education is developed with the principle of diversification in accordance with educational units, regional potential, and students. The curriculum is prepared in accordance with the level of education within the framework of the Unitary State of the Republic of Indonesia by taking into account:

(1) increased faith and piety;
(2) increase in noble character;
(3) increase the potency, intelligence, and interests of students;
(4) diversity of regional and environmental potency;
(5) demands for regional and national development;
(6) labor market demands;
(7) the development of science, technology and art; religion; dynamics of global development; and
(8) national unity and national values

Accreditation is carried out to determine the feasibility of programs and educational units in the formal and non-formal education paths at every level and type of education. The accreditation is carried out by the Government and/or independent institutions in authority as a form of public accountability. The accreditation is based on open criteria.

Figure 3 shows a schematic diagram of the national education system that covers education levels (primary, secondary and tertiary/higher education), length of study, type of education, and its relation to the national qualification framework.

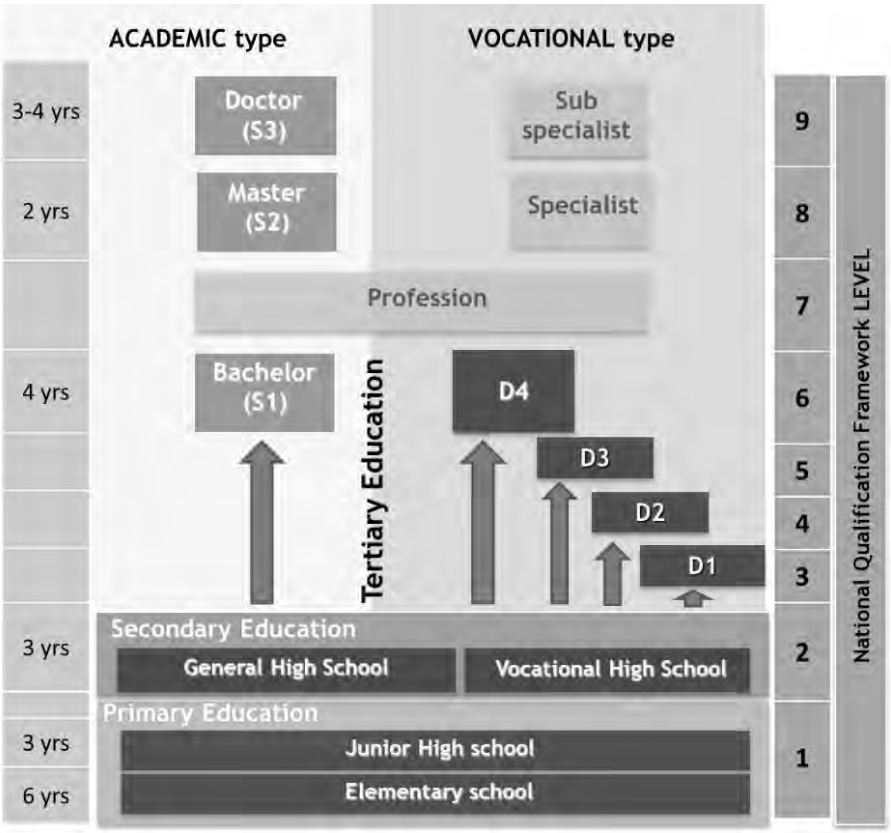

Figure 3. National Education System showing Primary, Secondary, and Tertiary Levels and their corresponding National Qualification Framework

3.2. Primary and Secondary Education

Early childhood (pre-school) education is a coaching effort aimed at children from birth to the age of six years which is carried out through giving educational stimuli to help growth and physical and spiritual development so that children have readiness in entering the primary education level. This education can be organized through formal, non-formal, and/or informal education paths. Early childhood education in formal education paths is carried out in the form of kindergarten or other forms of equal. That in the non-formal education is carried out in the form of playgroups, child care centers, or other forms of equal. Early childhood education in the informal education paths take the form of family education or education organized by the environment.

Primary education is in the form of elementary school (6 years) and junior high school (3 years). Every citizen aged seven to fifteen years, according to the Law, is obliged to attend primary education. Meanwhile, secondary education is in the form of high school (3 years) which can be either general high school or vocational high school.

Primary and secondary education curriculum must contain: religious education, civic education, language, mathematics, natural sciences, social sciences, art and culture, physical education and sports, skills/vocational, and local contents.

The fundamental framework and structure of the primary and secondary education curriculum is determined by the government, whereas the curriculum is developed according to its relevance by each group or education unit and school committee.

Public education institutions dominate the education system, particularly at primary and junior secondary levels. However, the private sector also plays a significant role, accounting for around 48% of all schools, 31% of all students, and 38% of all teachers.

Government administration for managing primary and secondary education is carried out by the Ministry of Education and Culture (MoEC).

3.3. Tertiary/Higher Education

Tertiary/higher education is a level of education after secondary education which includes diploma (D) education programs, bachelor (S1), master (S2), specialist, and doctoral degrees (S3) held by higher education institution.

In the implementation of education and scientific development in higher education institutions, academic freedom and freedom of academic forum and scientific autonomy apply. Higher education institutions have the autonomy to manage the institution themselves as the center for organizing higher education, scientific research, and community service. They can obtain funding from the community whose management is based on the principle of public accountability.

The basic framework and structure of the higher education curriculum as well as the curriculum are developed by the higher education institutions concerned with reference

to the national education standards for each study program. The higher education curriculum must include religious education, civic education, and language.

Higher education institution can take the form of academies, polytechnics, colleges, institutes, or universities (Table 1). A higher education institution is obliged to organize education, research, and community service, and can hold academic, professional and/or vocational programs. The first two are specialize in vocational type of education, while the last three are more comprehensive and allowed to offer all type of education.

Table 1. Types of Higher Education Institutions

Type of Institution	Type of Program
Universitas (university)	University provides education at the bachelor's level (called *Sarjana-1,* or S1, in Indonesian language). This type of program has a nominal length of 4 years. University also provides education service at post-graduate levels: master's (S2) and doctoral (S3) levels.
Politeknik (polytechnics)	*Politeknik* mainly provides *Diploma* (vocational) programs, ranging from D1 to D3, and very rarely D4 programs. This type of education provides a vocational qualification. However, their graduates can also continue on to higher-level education with some requirements. The curriculum is very practical in nature, with a minimum of 45% of the program being devoted to practices (including simulations) and training.
Akademi (academies)	It is relatively small institution offering a single specialization up to D2 and D3 levels.
Sekolah Tinggi (colleges)	This institution usually comprises of a single faculty with only a few hundred students and provide both Diploma (D1 to D4) and S1 levels.
Institut (institutes)	Institute usually provides education in a single specialization, at both Diploma and S1 level. Some institutes also provide education at post-graduate levels (S2 and S3).

Unlike the 12-year basic education which is decentralized to district and provincial governments under the coordination of the Ministry of Education and Culture (MoEC), the higher education system is centrally managed by the Ministry of Research, Technology, and Higher Education (MoRTHE). Public universities also have to comply with the prevailing regulations applied for all governmental units, including regulations on financial management issued by the Ministry of Finance and regulations on personnel management issued by the National Civil Service Agency (BKN).

3.4. Accreditation of Higher Education

Higher education accreditation in Indonesia is not new. The Higher Education Law No. 12/2012 emphasizes the implementation of the national quality assurance system for higher education which includes external (accreditation) and internal systems to be implemented by individual institutions. Systematic effort aims to implement quality assurance should basically be an internally driven initiative. Therefore, all institutions are to establish their own quality assurance unit.

Prior to the Law No. 12/2012, government regulations stipulate that every higher education program and institution shall conduct accreditation. This compulsory

accreditation has been carried out by the National Accreditation Board for Higher Education (BAN-PT), which has begun to accredit programs in 1996, starting with S1 programs, then S2 and S3. In academic year of 2001/2002, BAN-PT accreditation was extended to Diploma programs. The first accreditation results were published in 1998. BAN-PT is a non-structural, non-profit, and independent agency under the MoRTHE with the main functions to assist and support the ministry in assessing the adequacy of higher education institutions to the national standard of education. BAN-PT adopts two accreditation models, namely program accreditation and education institution accreditation. BAN-PT website (banpt.or.id) contains an overview of all higher education programs, with their current accreditation status (categories A-D); A is very good, B is good, C is satisfactory, and D is unsatisfactory (not accredited).

The government continues to improve policies and regulations in higher education. With the issuance of the Higher Education Law No. 12/2012, BAN-PT is now given the mandate to carry out only accreditation at institutional level, while program accreditation is to be carried out by an Independent Accreditation Agency (LAM-PS) for each field of education, using accreditation criteria in accordance with the field of education. LAM-PS can be formed by the government or by the community. Once a LAM-PS for a field of study has been established, BAN-PT would cease to accredit the programs in that field and let the LAM-PS conduct it.

In the context of Indonesia, the national compulsory accreditation of a program is directly related to its legal status, to its registration in the Higher Education Database (PDDIKTI) maintained by the MoRTHE, and to its operational permit as required by law. IABEE is not the LAM-PS in engineering field as viewed from lens of the Law No. 12/2012, because its accreditation is voluntary. IABEE, however, is recognized by the MoRTHE as an institution responsible for the accreditation of selected engineering programs seeking international recognition. Accreditation by IABEE is optional for programs that have been accredited nationally at a certain (i.e. the highest) rank. IABEE accreditation is, therefore, a complement to the national accreditation as an excellent tool for high quality engineering programs to seek international recognition.

As LAM-PS in engineering is still in absence, IABEE has recently been asked by MoRTHE through its offices of Directorate General of Institution Affairs and Directorate of Quality Assurance to play role in its establishment. Due to the nature of a compulsory accreditation system, future LAM-PS in engineering shall accredit a very large number of engineering programs with wide range of quality. IABEE, in this case, will still maintain its policy of accrediting only the top-tier programs who voluntarily seek for international recognition.

3.5. Engineering Programs

Engineering programs admit prospective students who have completed their secondary education in a General or Vocational High School and passed the National Examination for secondary education. Higher education institutions, especially those offering engineering programs, would conduct a student admission system to recruit new

students. This admission system normally applies certain passing criteria in mathematics, natural sciences, and language proficiency to assess potential candidates.

The number of nationally accredited engineering programs at bachelor's level is currently 2500 programs. Of this figure, 23% are carried out by public higher education institutions, while the other 77% by the private institutions.

3.6. Experience of International Accreditation

In addition to the application of compulsory accreditation as mentioned above, some higher education institutions have been very active in encouraging their respective high-quality programs to seek international recognition by applying regionally or internationally recognized certification or accreditation systems. Some program operating institutions, for example, have adopted a regional quality assurance system that is recognized by the ASEAN University Network – Quality Assurance framework (AUN-QA), while others have applied for international accreditation from ABET, JABEE, and others. Table 2 enlists some programs accredited by various foreign accreditation agencies. This indicates that offering internationally recognized programs has been perceived as a growing need, especially for the top-tier higher education institutions in Indonesia.

Table 2. Some Programs accredited by various international accreditation agencies in the fields of engineering and technology

HE Institution	Program	Accredited by
Institut Teknologi Bandung (ITB)	Chemical Engineering	ABET
	Civil Engineering	ABET
	Electrical Engineering	ABET
	Engineering Management	ABET
	Engineering Physics	ABET
	Environmental Engineering	ABET
	Industrial Engineering	ABET
	Informatics and Computer Science	ABET
	Metallurgical Engineering	JABEE
	Mining Engineering	ABET
	Ocean Engineering	ABET
	Petroleum Engineering	ABET
Institut Pertanian Bogor (IPB)	Agro-Industrial Technology	ABET
	Mechanical and Biosystem Engineering	JABEE
Universitas Gadjah Mada (UGM)	Chemical Engineering	IchemE
	Civil Engineering	ABET
	Geodetic Engineering	ABET
Universitas Indonesia (UI)	Chemical Engineering	JABEE
Bina Nusantara University (Binus)	Civil Engineering	ABET
	Industrial Engineering	ABET
Universitas Islam Indonesia (UII)	Civil Engineering	JABEE
	Environmental Engineering	ABET
	Chemistry	RSC

This trend of acquiring international accreditation or recognition is, in fact, not only limited to engineering field of study, but is also seen in several other fields such as accounting, business and economics, public health, and natural sciences. In support of this trend, the government has an “internationalization policy” through its mandatory institutional accreditation system. The system has incorporated a special performance indicator which measures the degree of international recognition of an institution by, among others, considering number of internationally recognized programs it operates.

4. ENGINEERING COMMUNITY

4.1. Engineering Practice in Indonesia

According to Engineering Law No. 11/2014, the scope of engineering practices in Indonesia covers seven bodies of knowledge and seven fields of work. These bodies of knowledge include: earth and energy, civil and built environment, industry, conservation and natural resource management, agriculture and agricultural products, marine and naval technology, and aeronautics and astronautics. The fields of work include: education & training; research & development and commercialization; consulting, design, and construction; industrial engineering and management, manufacturing, and processing; mineral resources exploration and exploitation, natural resources extraction, plantation, and breeding; as well as asset development, operation, and maintenance.

To ensure the competence and professionalism in engineering services, 3 standards of engineering profession need to be established. These consist of: (1) standards of engineer's services, (2) standards for engineer's competence, (3) standards for engineer's profession program. The Law mandates the Institution of Engineers Indonesia (PII) to develop these standards to be established by the government.

Engineering societies through PII Chapters play role in developing standards of engineer's services and competence, A chapter is an organic part of PII which unifies people and societies working in the same engineering discipline. Currently PII has 23 Engineering Chapters including, among others, Civil, Electrical, Chemical, Mechanical, Physics, Industrial, Geodetic, Environment, Earth and Energy, Agriculture, Agroindustry, Forestry, Mining, Aeronautics, Marine, Materials, Metallurgical, Earth and Energy, and Petroleum.

A graduate of a Bachelor Engineering Program who wants to be licensed as professional engineer should first join an enrichment program, namely engineer profession program, organized in collaboration between PII, mandated higher education institutions, and the industry. The enrichment program encompasses knowledge of engineering ethics, professionalism, occupational health, safety and environment, as well as experience of industrial internship, which may be fulfilled through portfolio assessment (recognition of participant's prior learning). Successful accomplishment of the program will award the participant with an Engineer title. The engineer who will perform engineering practices must obtain a certificate of engineer registration (STRI) from PII based on his/her level of competence. PII recognizes 3 levels of competence of a professional engineer, i.e. Junior Professional Engineer (or in Indonesian language: *Insinyur Profesional Pratama* – IPP), Professional Engineer (*Insinyur Profesional Madya* – IPM), and Senior Professional Engineer (*Insinyur Profesional Utama* – IPU).

Graduates of bachelor's program in science and in engineering education may also join the engineering profession program to become an engineer after passing equivalency requirements, i.e. 3 years of experience in supervised engineering practices.

In order to obtain a work permit in Indonesia, a foreign engineer must have the certificate of engineer registration from PII. The certificate is obtainable either through PII's recognition of registration certificate from his/her respective country of origin, or through PII standard mechanism for obtaining STRI.

As an exceptional case, a foreign engineer who provides engineering services in disaster management or incidental consultation matters does not require a work permit, however notification to the relevant ministries must be provided.

For a foreign engineer who does not have an engineer registration certificate or competency certificate in accordance with the law of his/her country, the foreign engineer must have an Engineer Competency Certificate issued by PII, after passing the Competency Test carried out by professional certification institutions in accordance with the stipulations of legislation.

4.2. Role of Accreditation in Registration

As described above, PII is mandated by the Law to conduct engineer's registration as a requirement for practice licensing recognized in Indonesia. As mobility in engineering profession continues to become a critical issue, there is a growing need for international recognition of registered engineers. To foster engineer's mobility in Indonesia, since 2004, PII has joined APEC Agreement that recognizes the substantial equivalence of competence standards for professional engineers within the APEC Economies. To become an APEC Engineer, a graduate from Indonesian bachelor's engineering program must fulfill the following three conditions:

(1) graduated from accredited programs,
(2) has a sufficient working experience, and
(3) maintains Continual Professional Development (CPD).

In the absence of an accrediting body in Indonesia that has signatory membership in the Washington Accord, currently, under special agreement, APEC recognizes engineering programs accredited by BAN-PT ranked "A" or "B" as a fulfillment of the first condition. By becoming a Washington Accord member, IABEE accreditation can fulfill the above requirement. Furthermore, as IABEE is a part of PII, membership in WA will be an important enabling factor for PII to enter into larger mobility agreements of professional engineers. In this regard, IABEE accreditation will play a major role for strengthening Indonesian engineers' mobility across world economies.

In national context, after IABEE has been accepted as a Washington Accord signatory, PII is expected to modify the conditions of becoming a registered engineer by giving special considerations for candidates graduated from IABEE accredited programs as well as programs accredited by other signatory members of the Washington Accord.

4.3. Degree of Participation in Accreditation

In only 3 accreditation cycles conducted by IABEE since 2016, there have been 33 programs voluntarily applied to be evaluated for accreditation[2]. In addition, institutions whose programs have been accredited by international or foreign agencies, and still holding validity, have also shown their interests of applying IABEE accreditation after the validity becomes expired. This shows a high degree of participation in voluntary accreditation offered by IABEE, aside of the compulsory national accreditation.

[2] IABEE offers General and Provisional Accreditations (see further Section 5.3). In 2016, 2017, and 2018 accreditation cycles, 33 programs in total have been ~~evaluted~~evaluated for General Accreditation. In 2017 and 2018 cycles, 24 programs in total have been evaluated for Provisional Accreditation.

5. IABEE ACCREDITATION SYSTEM

5.1. Development of Accreditation System and its Maturity

Development of IABEE accreditation system took place in 2013 to 2016. The system consists of three main parts, namely: accreditation criteria, rules and procedures for program evaluation and accreditation, as well as an online evaluation system.

At the end of 2013, IABEE Criteria Committee (CC) was formed by the Steering Committee[3] and tasked to formulate the Accreditation Criteria, especially the Common Criteria and Criteria Guide. In doing so, Criteria Committee studied accreditation criteria used of Washington Accord signatories then. Indonesian national values and interests were also considered in the criteria formulation. In the later process, the committee involved representatives of various Chapters (Engineering Disciplines) of PII in developing the Discipline Criteria of accreditation.

The first draft of IABEE Common Criteria was completed in mid-2014 and subsequently tested by the committee members (who acted as shadow evaluators) during JABEE evaluation visits in late 2014 and 2015 to Bogor Agriculture University (IPB) and Islamic University of Indonesia (UII), respectively. Following the tests, the draft criteria were discussed among the committee and JABEE experts and got improved. An accompanying document called the Criteria Guide was developed, among others, as a result. Common Criteria of accreditation were approved by the Executive Committee in August 2015 and firstly published in the following October through the websites of PII and MoRTHE (at that time IABEE website was still under development).

In March 2015, Evaluation and Accreditation Committee (EAC) was formed and tasked to develop a set of rules and procedures based on the criteria formulated previously by the CC, as well as to develop an online evaluation platform to enable the implementation of accreditation system. EAC also assisted CC and PII Chapters in development of Discipline Criteria for various engineering disciplines, and in finalizing Criteria Guide.

Members of EAC were professionals in engineering teaching and practice recruited from reputable Indonesian universities, professional associations, as well as from PII. About one-fourth out of 31 newly recruited EAC members were professors whose programs are already accredited by ABET and JABEE. To strengthen the awareness and knowledge among EAC members regarding outcome-based accreditation and matters related to the Washington Accord, all members were sent, in 3 batches, to join the Training of Trainers and Knowledge Co-Creation Program conducted in Japan under JABEE system environment. In total, 44 EAC members and recruited evaluator-candidates participated this training. In addition, 16 selected EAC members in total were also sent to join ABET PEV Training as practicing observers. Also 3 members (EAC and

[3] IABEE Steering Committee is transformed as the Executive Committee in a later development

CC combined) were sent to observe CAST accreditation system in China, and other 3 members to Engineers Australia.

EAC members were then divided into 8 Working Groups that worked in parallel to develop IABEE public website and online evaluation website, documents of rules and procedures of evaluation and accreditation, instruments of evaluation, evaluator recruitment and training program, ethics and code of conduct, as well as advocacy and supporting services. A second type of accreditation, namely Provisional Accreditation was also introduced and developed by EAC. This type was considered necessary in enabling gradual shifting from input-based to outcome-based education for the majority of Indonesian engineering study programs. In mid-2016, the final draft of rules and procedures, as well as instruments of evaluation were ready to implement.

End of 2016 marked two evaluation teams set out to conduct pilot accreditation for Mechanical and Biosystems Engineering Program of IPB and Civil Engineering Program of UII, who volunteered after they were successfully accredited by JABEE. Each team consists of 3 evaluators (with 1 being the team chair) and observers. JABEE experts observed the on-site visit to both programs closely as well as subsequent EAC meetings discussing the results of evaluation. Both programs were eventually granted accreditation status by IABEE Accreditation Council for 6 years[4].

In 2017, IABEE run another accreditation cycle. This time, Environmental Engineering Program of UII, which was granted a 6-year accreditation status from ABET in 2016, volunteered to be evaluated by IABEE. Eventually the program was also accredited by IABEE for 6 years. Year of 2017 also witnessed 3 other programs accredited in General Accreditation and 6 programs accredited in Provisional Accreditation. As IABEE gets more recognition in the country, more institutions show interest for their respective programs to be accredited by IABEE. This results in 28 programs evaluated for General Accreditation and the other 18 for Provisional Accreditation. For a complete list of programs accredited by IABEE until the end of 2018 accreditation cycle, please see Section 6.

To implement program evaluation, IABEE recruited and trained new evaluators in addition to existing EAC members. In 2016 and 2017 IABEE managed to send evaluator candidates to join JABEE training in Japan as well as ABET PEV training in USA. In 2017 and 2018, EAC conducted in-house trainings for evaluators. New evaluators as well as evaluators who have participated JABEE and ABET trainings joined these in-house trainings, in which IABEE's own set of criteria were taught. Three in-house evaluator trainings were conducted in three different Indonesian major cities during the period. Until mid-2018 IABEE has already had a pool of 86 evaluators, coming from 12 engineering disciplines, representing both professionals in engineering practice and engineering teaching.

[4] In the first 3 accreditation cycles, IABEE granted accredited status with 6-year validity. Since 2019 cycle, the validity is changed to 5 years.

IABEE is fully aware of the importance of having good quality and sufficient number of evaluators. As degree of participation in accreditation is growing, IABEE plans to conduct a series of evaluator recruitment and training in 2019 and years to come.

To create and foster a wide public awareness about IABEE and its mission and purposes, a series of awareness seminars were conducted in 2015 to 2017 period in several Indonesian major cities, including Jakarta, Batam, Bandung, Surabaya, Yogyakarta, and Makassar. The seminars were attended by representatives of various public and private universities which offer engineering programs and featured national (IABEE key persons) as well as international speakers from Japan (JABEE), USA (ABET), and other countries. The series of seminars were culminated in the Inauguration of IABEE in Jakarta, which took place on March 13, 2018, supported by PII, JABEE, the Ministry of Research, Technology, and Higher Education, as well as the Ministry of Industry. The inauguration ceremony witnessed the handover of accreditation certificates for programs successfully accredited by IABEE in 2017 accreditation evaluation cycle.

As explained previously, one of the targets set out in the IABEE Establishment project is to apply and obtain a provisional membership in the Washington Accord in 2019. To realize the target, IABEE has requested JABEE and ABET to become its two nominators to meet the requirement of Schedule C.2.1.7. Two nomination letters are attached to this proposal in Annex A.

5.2. Accreditation Criteria

Accreditation Criteria adopted by IABEE follow an outcome-based accreditation model which ensures the students achieve certain learning outcomes (knowledge, skill, and attitudes) needed to the practice of engineering profession upon graduation.

The criteria applicable for a bachelor-level engineering program are classified into two categories, namely Common Criteria and Discipline Criteria. The Common Criteria are elaborated further in the Criteria Guide and are composed with the intention of assuring the quality of engineering education and to foster a systematic continual quality improvement that satisfies the need of its constituencies in a dynamic and competitive environment.

Common Criteria and Criteria Guide are applicable for all engineering disciplines. The Discipline Criteria, on the other hand, provide specific requirements in the area of curricular topics and faculty qualifications for the interpretation of the baccalaureate level as applicable to a given engineering discipline. An engineering study program seeking accreditation from IABEE shall clearly demonstrate the fulfillment of all applicable criteria. Common Criteria, Criteria Guide, and Discipline Criteria are referred to as the Accreditation Criteria. The Accreditation Criteria document of IABEE can be seen in Annex C.

The Common Criteria consists of 4 elements, following the management approach of P-D-C-A (Plan-Do-Check-Act). The Common Criteria are:

Criterion 1. Orientation of the Graduate Competence

- Profile of Graduates as Autonomous Professionals
- Program Learning Outcomes

Criterion 2. Learning Implementation

- Curriculum
- Faculty
- Students and Academic Atmosphere
- Facility
- Institutional Responsibility

Criterion 3. Assessment of the Expected Learning Outcomes

Criterion 4. Continual Improvement

In addition to the Common Criteria, currently there are 12 Discipline Criteria for the following programs:

- Chemical, biochemical, biomolecular engineering and similarly named engineering programs
- Environmental engineering and similarly named engineering programs
- Ocean engineering and similarly named engineering programs
- Agricultural and/or biosystem engineering
- Civil engineering and similarly named engineering programs
- Electrical, computer, communications, telecommunication engineering and similarly named engineering programs
- Engineering physics and similarly named engineering programs
- Geodetic, geomatics engineering
- Industrial engineering and similarly named engineering programs
- Materials, metallurgical engineering and similarly named engineering programs
- Mechanical engineering
- Nuclear engineering and similarly named engineering programs

5.3. Accreditation Types and Eligibility

IABEE offers two types of accreditation, i.e. Provisional Accreditation (PA) and General Accreditation (GA). PA is particularly intended for programs newly adopting an outcome-based education system and have not produced graduates under the system. A program which applies for evaluation of PA will be evaluated to observe its potentials of meeting the Accreditation Criteria within a foreseeable future (2-4 years). General Accreditation (GA), on the other hand, is applicable for a program seeking to be accredited by IABEE and get international recognition.

Table 3 enlists eligibility requirements for programs wishing to be evaluated in Provisional and General Accreditation according to IABEE Rules and Procedures for Evaluation and Accreditation.

Table 3. Eligibility requirements for programs applying evaluation of Provisional and General Accreditation

General Accreditation	Provisional Accreditation
(1) The associated Program Operating Institution (POI) has obtained National Accreditation for Institution status with a minimum rank of "B". (2) The Program has obtained National Accreditation status ranked "A". (3) The Program is a bachelor-level program in an engineering discipline with a curricular study period of four years, and with a total course-load of a minimum of 144 credit units. (4) The Program is at least in the 4th year of continuous Outcome-Based Education (OBE) implementation. (5) The OBE shall include assessment and evaluation of the Learning Outcomes of the students. (6) By the time of the on-site visit evaluation, the Program has produced at least one graduate under its OBE system. (7) The Program has established and publicized the Autonomous Professional Profile statement formulated as its educational objectives. (8) The Program has established and publicized its Learning Outcomes as the basis for developing its curriculum and learning methods.	(1) The associated Program Operating Institution has obtained National Accreditation for Institution status with a minimum rank of 'B'. (2) The Program has obtained National Accreditation status at least ranked "B". (3) The Program is a bachelor-level program in an engineering discipline with a curricular study period of four years, and with a total credit of a minimum of 144 credit units. (4) The Program has implemented Outcome-Based Education (OBE) at least for one year before applying for the evaluation. (5) The Program has established and publicized the Autonomous Professional Profile statement formulated as its educational objectives. (6) The Program has established and publicized its Learning Outcomes as the basis for developing its curriculum and learning methods

5.4. Evaluation Process for Accreditation

As IABEE offers two types of accreditation, consequently it also carries out two different evaluation processes, i.e. evaluation process for General Accreditation (GA) and that for Provisional Accreditation (PA). The main difference between the two lies in number of steps they undergo, and number of program evaluators involved in each process. Evaluation process for GA involves 3 program evaluators for each program, with one being the team chair, meanwhile only one evaluator is involved in PA evaluation. In terms of number of steps, evaluation for GA involves 30 steps, while PA only has 22 steps.

Despite the above difference, both types of evaluation start and finish at the same date in an accreditation cycle and share almost the same sequences. Sequences of an evaluation for accreditation include the following:

- Account registration for Program Representative (PR) and Program Operating Institution Representative (POIR) in the IABEE Online Evaluation System.
- Request for evaluation (or re-evaluation in the case where a GA status is nearly expired; re-evaluation is not applicable for PA).
- Submit Program Profile and Self-Evaluation Report
- Review and on-site visit planning
- On-site visit
- Draft evaluation report
- 30-day response (not applicable in PA)
- Final evaluation report
- Accreditation decision
- Appeal and reconsideration (not applicable in PA)

Detailed steps of evaluation for accreditation are provided in the Rules and Procedures for Evaluation and Accreditation (RPEA) in Annex D.

The entire evaluation process for accreditation from application, payment, document submissions, review and reporting, as well as announcement of accreditation decision is undertaken solely through the IABEE Online Evaluation System. The system also provides and records all communications between representative of a program being evaluated and its evaluation team chair, as well as between team chair and members of evaluation team. IABEE Online Evaluation System at a glance is provided in Annex G.

5.5. Evaluation Team

Evaluation of accreditation application is conducted by an evaluation team, which usually consists of 2 academics and 1 practitioner. The team is responsible to review all documents submitted by an applying program, including its Program Profile, Self-Evaluation Report, and the accompanying evidences. It also conducts on-site visit and produces evaluation report in which program's compliance level against all items required by the Accreditation Criteria and RPEA is measured.

Discipline Chair of the Evaluation and Accreditation Committee (EAC) appoints three members for an evaluation team, with one of them being the team chair. Selection of the members shall be based on academic competence, training qualifications, and absence of potential conflict of interest with the program to be evaluated.

During on-site visit, evaluation team may be accompanied by observers. Observers may be IABEE evaluators-in-training, IABEE staff members, or other persons approved by IABEE to observe the visit. Before official designation, applying program will have an opportunity to express conformity to all appointed evaluation team members, including the evaluators and observers, in accordance with IABEE policy on conflict of interest.

All IABEE evaluation team members accept and sign the IABEE code of conduct. Requirements to become program evaluator and evaluation team chair, as well as

evaluator's ethic and code of conduct is described in Rules and Procedures for Accreditation-Related Committees (RPARC) document in Annex E.

IABEE Secretariat conducts feedback surveys to evaluate the performance of evaluation team and other aspects related to IABEE accreditation system and its implementation.

5.6. Program Profile and Self-Evaluation Report

Program evaluation for accreditation is conducted based, in part, on the two documents submitted to IABEE Online Evaluation System. These documents are Program Profile and Program Self-Evaluation Report (SER).

Program Profile template is available for download from IABEE website. Meanwhile, SER template is coded in the Online Evaluation System in a spreadsheet form and can be downloaded through Program Representative's registered account, worked on, and uploaded back to the online system.

SER template is structured in a way that expects the program to deliberate how it complies to each criterion and review item, and to enclose, or to provide links to, proofs of the compliance. The proofs or evidences of the compliance are to be gathered systematically in PDF format and uploaded as attachments to the SER. IABEE Online Evaluation System allows a program to attach 6 files sizing 30 Mbytes each to accompany Program Profile and SER submission.

Annex F provides the template of Program Profile and Self-Evaluation Report worksheet.

5.7. Ethics and Code of Conduct

IABEE demands that all personnel involved in carrying out the mission of IABEE demonstrate the highest standards of professionalism, honesty and integrity. The services provided by IABEE demand impartiality, justice and equality, so that every person must carry out their duties with the highest standards of ethical behavior.

The types of services provided by IABEE are vulnerable to conflicts of interest that can affect the objectivity of the accreditation process, and thus the credibility of IABEE. Therefore, IABEE expects that all personnel involved in IABEE activities to hold strong ethical principles and professionalism to avoid potential conflicts of interest as much as possible so as to guarantee objectivity of services.

IABEE upholds ethics in conducting all activities of its members and organizing staff, and requires that they exhibit highest standards in professionalism, fairness, and integrity. Information disclosed by programs undergoing evaluation, and information generated by review and discussion activities during the evaluation process shall be treated with confidentiality and shall not be divulged without specific written authorization by IABEE and the program being evaluated.

For more information regarding the ethics and code of conduct, please refer to Annex E.

5.8. Accreditation Decisions

In evaluation for General Accreditation, the degree of program compliance to specific Accreditation Criteria item is determined from evaluation results as follows:

- *Acceptable* (abbreviated as 'A'), which means that the evaluated item complies with the associated Accreditation Criteria item.
- *Concern* (abbreviated as 'C'), which means that the evaluated item complies to the associated Accreditation Criteria item, but with a possibility of changes in pertinent conditions in the future which may compromise the compliance.
- *Weakness* (abbreviated as 'W'), which means that the evaluated item indicates an insufficiently strong compliance to the associated Accreditation Criteria item. This shortcoming requires corrective actions to strengthen the compliance of the specific evaluation item to the appropriate Accreditation Criteria item.
- *Deficiency* (abbreviated as 'D'), which means that the Program is unable to comply with the particular Accreditation Criteria item.

The final "A-C-W-D" scores shall determine the accreditation status given to the program applying General Accreditation evaluation, as follows:

- *Accredited*. This status implies that the Program meets all criteria and rules as outlined in the Accreditation Criteria and the RPEA. This accreditation status is valid for a period of five years[5].
- *Accredited with Interim Evaluation without Visit*. This status implies that the Program indicates unresolved shortcomings of the 'Weakness' category ("W" score). These shortcomings are such that visit is not deemed necessary to assess future corrective actions. Validity of the status is two years, after which the Program must undergo an Interim Evaluation based on desk study.
- *Accredited with Interim Evaluation with Visit*. This status implies that the Program indicates unresolved shortcomings of the 'Weakness' ("W" score) category. These shortcomings are such that a visit is deemed necessary to assess future corrective actions. Validity of the status is also two years, after which the Program must undergo an Interim Evaluation which includes desk study and on-site visit.
- *Not Accredited*. This status implies that the Program fails to substantially comply to IABEE Accreditation Criteria as indicated by unresolved shortcomings in the 'Deficiency' category ("D" score) and Rules and Procedures for Accreditation and Evaluation (RPEA).

[5] As previously mentioned, in 2016 to 2018 cycles IABEE gave 6-year validity period. Starting from 2019 cycle validity period is shorten to 5-year. Also, from 2019 Accredited with Interim Evaluation (either with or without visit) is valid only for two years, whereas previously may worth for 3 years.

Subsequent decision for accreditation status requiring Interim Evaluation, either with or without On-Site Visit, shall be taken based on the results of the Interim Evaluation as follows:

- If the *Interim Evaluation* results indicate program shortcomings of the previous *'Weakness' category* ("W" score) remain unresolved, then the Program receives the "Not Accredited" final status. The Program may apply for new evaluation for General Accreditation after one evaluation cycle has passed since the last Interim Evaluation.

- If the *Interim Evaluation* results indicate that the Program has managed to rectify Accreditation Criteria and RPEA compliance shortcomings in a satisfactory manner such that all the criteria and RPEA items are met, then the Accredited with Interim Evaluation status from the last Evaluation for General Accreditation (EGA) is changed to Accredited status, with a validity period of five years from the submission of Program Profile and Self-Evaluation Report documents in the last EGA process.

Accreditation decision is decided by the Accreditation Council (AC) after reviewing the recommendation made by Evaluation and Accreditation Committee. In the case where the decision made by IABEE AC is "Not Accredited", a program may submit an appeal if it thinks that the decision is inappropriate. More on this can be found in the RPEA.

In the first 2 years of operation, the government was represented in AC membership only to make sure that none of the national policies related to evaluation and accreditation of a program is violated and IABEE process is in line with the policies. From 2018 onwards, no government representative is given membership in the Accreditation Council. Further explanation related to AC membership is to be found in the RPARC in Annex E.

5.9. Evaluator Trainings

As previously discussed, evaluator training is very critical in the implementation of IABEE accreditation system. IABEE understands that evaluators are IABEE's face seen directly by programs and institutions. A number of trainings have been conducted since early establishment phase of IABEE to ensure that sufficient high-quality evaluators are available to undertake program evaluation in various engineering discipline. Table 4 below enlists several trainings that have been conducted by IABEE.

Anticipating growing awareness, more recruitment and training series will be conducted in 2019 onwards. The target is to have 200 evaluators by the time IABEE propose a signatory membership to the Washington Accord.

The design of IABEE candidate evaluator training follows the conceptual diagram as depicted in Figure 4. A person interested to become program evaluator must first make an application through IABEE Online Training Center website. After a successful application, he/she is invited to learn about IABEE Accreditation Criteria, RPEA and evaluation process for accreditation through the online training module. Completing the module, he/she shall subsequently attend the face-to-face training session. EAC shall

conduct performance evaluation of the candidate and consider him/her to be assigned as observer (evaluator-in-training) in the evaluation process. Only upon a satisfying performance as observer, he/she can be appointed as an evaluator in the subsequent accreditation cycles.

Table 4. Evaluator trainings conducted in 2016 to 2018

No.	Activity	Place	Year	Trainer	No. of participants
1.	Training of Trainers	Japan	2015 to 2017	JABEE	44
2.	Program Evaluator Training	USA	2015 to 2017	ABET	16
3.	Training of Trainers	China	2015	CAST	3
4.	Training of Trainers	Australia	2015	EA	3
5.	In-house Evaluator Training	Jakarta, Indonesia	2017	IABEE	11
6.	In-house Evaluator Training	Yogyakarta, Indonesia	2018	IABEE	35
7.	In-house Evaluator Training	Bandung, Indonesia	2018	IABEE	25

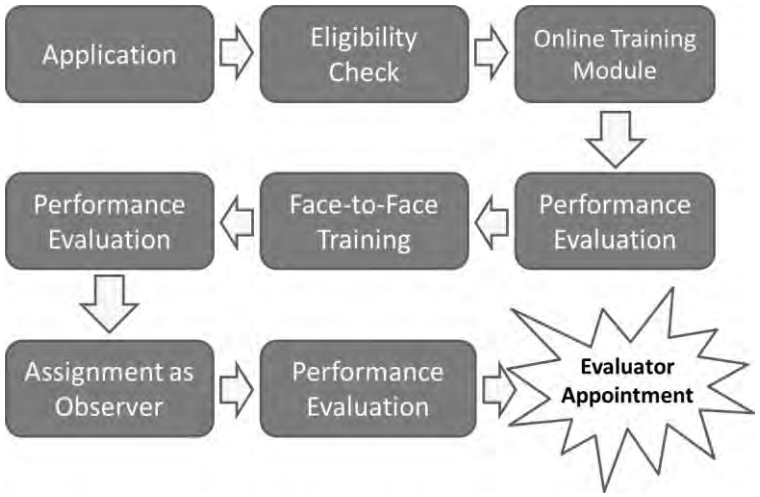

Figure 4. Diagram of candidate evaluator training process

The face-to-face training session is conducted in 2 days, covering simulation of evaluation process including self-evaluation report review, on-site visit and its planning, interview with program stakeholders, compliance assessment against the Accreditation Criteria (scoring and writing comments), as well as drafting exit statement. The session also introduces to the candidate the IABEE Online Evaluation System and how to work with it throughout the evaluation process. For more information on the training please refer to the Rules and Procedures for Accreditation-Related Committees (RPARC) in Annex E.

6. CURRENT STATE OF ACCREDITATION

6.1. List of Accredited Programs

IABEE has thus far conducted three accreditation cycles, starting from 2016 with pilot evaluation. Evaluation for General Accreditation in the first 2 cycles was conducted on 5 programs, resulting in accredited status for all of them. In 2018 cycle, 28 programs were evaluated for General Accreditation (GA), resulting in 10 programs accredited, 7 programs accredited with interim evaluation without on-site visit, 10 programs accredited with interim evaluation with on-site visit, and 1 program not accredited. Validity period of accreditation status for 2018 cycle was still decided according to the previous RPEA, i.e. 6 years for accredited and 2-3 years for accredited with interim evaluation, either with or without on-site visit.

Table 5 shows the distribution of accredited programs evaluated in 2016, 2017, and 2018 across fields of discipline. The table also include numbers of programs accredited in Provisional Accreditation (PA). The 24 programs currently provisionally accredited are expected to apply for General Accreditation evaluation from 2020 onwards.

Table 5. Distribution of accredited programs by fields of discipline

Fields of Discipline	Type of Accreditation	
	GA	PA
Chemical, biochemical, biomolecular engineering and similarly named engineering programs	6	2
Environmental engineering and similarly named engineering programs	4	2
Ocean engineering and similarly named engineering programs	1	1
Agricultural and/or biosystem engineering	1	1
Civil engineering and similarly named engineering programs	4	2
Electrical, computer, communications, telecommunication engineering and similarly named engineering programs	2	7
Engineering physics and similarly named engineering programs	2	1
Geodetic, geomatics engineering	1	-
Industrial engineering and similarly named engineering programs	4	5
Materials, metallurgical engineering and similarly named engineering programs	1	2
Mechanical engineering	5	1
Nuclear engineering and similarly named engineering programs	1	-
Total	**32**	**24**

Remarks: GA is General Accreditation, while PA is Provisional Accreditation

Table 6 below reports the identity of the accredited programs under General Accreditation evaluation. All accredited programs are also listed in the IABEE public website at https://iabee.or.id/.

Table 6. List of Accredited Program in 2016, 2017, and 2018 accreditation cycles under General Accreditation

No.	Institution Name	Program Name	Program Website	Discipline Criteria	Accredited in
1.	Institut Pertanian Bogor (Bogor Agricultural University)	*Teknik Mesin dan Biosistem* (Mechanical and Biosystem Engineering)	tmb.ipb.ac.id	Agricultural Engineering	2016
2.	Universitas Islam Indonesia	*Teknik Sipil* (Civil Engineering)	civil.uii.ac.id	Civil Engineering	2016
3.	Universitas Indonesia	*Teknologi Bioproses* (Bioprocess Engineering)	che.ui.ac.id	Chemical Engineering	2017
4.	Universitas Indonesia	*Teknik Kimia* (Chemical Engineering)	che.ui.ac.id	Chemical Engineering	2017
5.	Universitas Islam Indonesia	*Teknik Lingkungan* (Environmental Engineering)	environment.uii.ac.id	Environmental Engineering	2017
6.	Universitas Diponegoro	*Teknik Kimia* (Chemical Engineering)	tekim.undip.ac.id	Chemical Engineering	2018
7	Universitas Gadjah Mada	*Teknik Kimia* (Chemical Engineering)	chemeng.ugm.ac.id	Chemical Engineering	2018
8	Institut Teknologi Sepuluh Nopember	*Teknik Kimia* (Chemical Engineering)	www.its.ac.id/tkimia/	Chemical Engineering	2018
9	Institut Teknologi Bandung	*Rekayasa Hayati* (Bioengineering)	rh.sith.itb.ac.id	Chemical Engineering	2018
10	Universitas Gadjah Mada	*Teknik Sipil* (Civil Engineering)	tsipil.ugm.ac.id	Civil Engineering	2018
11	Universitas Diponegoro	*Teknik Sipil* (Civil Engineering)	sipil.undip.ac.id	Civil Engineering	2018
12	Institut Teknologi Sepuluh Nopember	*Teknik Fisika* (Engineering Physics)	www.its.ac.id/tfisika	Engineering Physics	2018
13	Universitas Gadjah Mada	*Teknik Fisika* (Engineering Physics)	tf.ugm.ac.id	Engineering Physics	2018
14	Universitas Gadjah Mada	Teknik Geologi *(Geological Engineering)*	geologi.ugm.ac.id	Environmental Engineering	2018
15	Institut Teknologi Sepuluh Nopember	*Teknik Lingkungan* (Environmental Engineering)	www.its.ac.id/ tlingkungan	Environmental Engineering	2018
16	Universitas Diponegoro	*Teknik Lingkungan* (Environmental Engineering)	lingkungan.ft.undip. ac.id	Environmental Engineering	2018
17	Universitas Gadjah Mada	*Teknik Geodesi* (Geodetic Engineering)	geodesi.ugm.ac.id	Geodetics and Geomatics Engineering	2018

No.	Institution Name	Program Name	Program Website	Discipline Criteria	Accredited in
18	Universitas Diponegoro	*Teknik Industri* (Industrial Engineering)	industri.undip.ac.id	Industrial Engineering	2018
19	Universitas Sebelas Maret	*Teknik Industri* (Industrial Engineering)	industri.ft.uns.ac.id	Industrial Engineering	2018
20	Institut Teknologi Sepuluh Nopember	*Teknik Material dan Metalurgi* (Material and Metallurgical Engineering)	www.its.ac.id/ tmaterial	Material and Metallurgical Engineering	2018
21	Universitas Diponegoro	*Teknik Mesin* (Mechanical Engineering)	mesin.undip.ac.id	Mechanical Engineering	2018
22	Institut Teknologi Sepuluh Nopember	*Teknik Mesin* (Mechanical Engineering)	www.its.ac.id/tmesin	Mechanical Engineering	2018
23	Universitas Gadjah Mada	*Teknik Mesin* (Mechanical Engineering)	dtmi.ft.ugm.ac.id	Mechanical Engineering	2018
24	Universitas Tarumanagara	*Teknik Mesin* (Mechanical Engineering)	ft.untar.ac.id	Mechanical Engineering	2018
25	Universitas Indonesia	*Teknik Mesin* (Mechanical Engineering)	mech.eng.ui.ac.id	Mechanical Engineering	2018
26	Universitas Gadjah Mada	*Teknik Nuklir* (Nuclear Engineering)	tf.ugm.ac.id	Nuclear Engineering	2018
27	Institut Teknologi Sepuluh Nopember	*Teknik Perkapalan* (Naval Architecture)	www.its.ac.id/tkapal	Ocean Engineering	2018
28	Universitas Gadjah Mada	*Teknologi Informasi* (Information Technology)	www.te.ugm.ac.id	Electrical Engineering	2018
29	Universitas Gadjah Mada	*Teknik Elektro* (Electrical Engineering)	www.te.ugm.ac.id	Electrical Engineering	2018
30	Universitas Gadjah Mada	*Teknik Industri* (Industrial Engineering)	dtmi.ft.ugm.ac.id	Industrial Engineering	2018
31	Universitas Bina Nusantara	*Teknik Industri* (Industrial Engineering)	ie.binus.ac.id	Industrial Engineering	2018
32	Universitas Bina Nusantara	*Teknik Sipil* (Civil Engineering)	civil-eng.binus.ac.id	Civil Engineering	2018

6.2. Schedule of Upcoming Evaluations

Evaluation for accreditation in 2019 has been planned by the EAC (see Table 7 for the planned timetable). An evaluation for accreditation cycle normally covers a period of twelve calendar months, starting on 1 April of the current year and ending on 31 March

of the following year. Evaluation process for General Accreditation (EGA) and Provisional Accreditation (EPA) commences and ends at the same date, although detailed steps of the process are different. In 2019 there will be no Interim Evaluation conducted since all accredited programs in 2016 and 2017 hold 6-year validity of their respective accreditation status.

Table 7 Planned schedule of upcoming 2019 Accreditation Cycle

Step no.	Activity	Evaluation Type*)	Period or Completion Deadline
1	Program Representative (PR) & Program Operating Institution Representative (POIR) registration	EGA, EPA	1-15 April
2	PR & POIR registration verification	EGA, EPA	1-15 April
3	Application for Program evaluation	EGA, EPA	1-15 April
4	Program eligibility verification	EGA, EPA	1-15 April
5	Evaluation scheduling	EGA, EPA	20 April
6	Notice of evaluation kickoff & invoicing	EGA, EPA	21 April
7	EAC Discipline assignment	EGA, EPA	15-20 April
8	Evaluation Team members selection	EGA, EPA	15-20 April
9	Evaluation Team Chair assignment	EGA only	15-20 April
10	Approval of evaluation observers	EGA only	15-20 April
11	Evaluation Team acceptance	EGA, EPA	8 May
12	Final Evaluation Team confirmation	EGA, EPA	8 May
13	Completed Program Profile & SER submission	EGA, EPA	30 June
14	Full payment reception	EGA, EPA	1 May
15	Program First Review	EGA, EPA	31 July
16	Program Second Review	EGA only	15 August
17	Program First Response	EGA, EPA	15 September
18	Program Third Review	EGA Only	30 September
19	On-Site Visit Planning	EGA, EPA	7 October
20	On-Site Visit	EGA, EPA	7 November
21	Exit Meeting	EGA, EPA	7 November
22	Program First Evaluation	EGA	7-14 November
23	Program Second Response	EGA	14 November
24	Program Second Evaluation	EGA	28 November
25	Program Final Response	EGA	28 December
26	Program Final Report	EGA, EPA	15 January
27	EAC Discipline Harmonization	EGA, EPA	31 January
28	EAC Plenary Meeting	EGA, EPA	1 February
29	Accreditation Decision	EGA, EPA	15 March
30	Accreditation Announcement	EGA, EPA	31 March

6.3. Accreditation Target

As mentioned earlier, IABEE accreditation is eligible only to those programs having accredited with the highest rank (i.e. rank “A”) in the national compulsory accreditation. As of 2018, MoRTHE notes that there are 2,500 accredited bachelor’s engineering

programs in Indonesia. Among these programs, only 222 programs (9%) have achieved rank “A” and, therefore, are eligible to apply for IABEE accreditation. Of these programs, 139 are offered by 24 public institutions while the other 83 by private institutions. Considering the current and future resources projected to be available, IABEE puts forward the figures shown in Table 8 as accreditation target. These figures are used in the mid-term financial plan for 2016 to 2026 period. Figures of 2019 onwards (in italics) are projections.

Table 8. Accreditation target as part of IABEE Mid-term financial projection 2016-2026

Type of Accreditation Evaluation	Number of Program in each Accreditation Cycle										
	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
New evaluation for General Accreditation	2	3	28	*22*	*24*	*24*	*24*	*24*	*22*	*22*	*22*
Re-evaluation for General Accreditation							*2*	*3*	*49*	*23*	*23*
Accumulated Program in General Accreditation	2	5	32	*54*	*78*	*102*	*126*	*150*	*172*	*194*	*216*
Evaluation for Provisional Accreditation		6	18	*17*	*17*	*17*	*17*	*15*	*15*	*15*	*15*

Schedule B1: Criteria for Admission to Provisional Signatory Status in an Accord (also required for Admission to Full Signatory)		**Report analysis against Rules and Procedures requirements**	
		Meets Criteria? Yes/No	*Evidence provided/Comments*
1	The accrediting agency has the following characteristics:		
	a) Is non-governmental;	Yes	IABEE is an autonomous, not-for-profit organization under The Institution of Engineers Indonesia (PII), which is a NGO of multi-disciplinary engineering professionals association in Indonesia.
	b) Is legally incorporated in its home jurisdiction;	Yes	The Memorandum of Understanding between the Directorate General for Student and Learning Affairs of the Ministry of Education and the Institution of Engineers Indonesia (PII) to establish IABEE as an autonomous department within PII provides the legal basis for IABEE (**Annex H**).
	c) Is the uncontested accreditation agency of the engineering community in the jurisdiction; or, if circumstances in the jurisdiction allows multiple accreditation agencies, the applicant must be the prominent authority in accreditation of programmes;	Yes	Being part of PII, which is given the authority by the Engineering Law No. 11/2014 as a representative of the engineering profession, IABEE is the uncontested agency for voluntary program accreditation in engineering in Indonesia.
	d) Is a statutory or professionally recognised authority to accredit programs satisfying academic requirements for admission to practicing status (e.g. licensing, registration) in a jurisdiction;	Yes	PII is the institution that administers the registration and licensing for practicing engineers. Graduate of any national compulsory accredited engineering program is so far eligible to attend the exam to become a professional engineer, as one of the requirements to get registered. Since only programs with A-rank (the highest rank) of national compulsory accreditation are eligible for IABEE General Accreditation, the academic requirements of IABEE's accredited program are accordingly satisfied.
	e) Accredits programmes at institutions that have legal authority to confer higher education degrees qualifications;	Yes	With the enactment of B-rank status from national compulsory institutional accreditation (by BAN-PT) as the minimum eligibility criterion for program implementing institutions to be accredited by IABEE, this ensures the legal authority of the institutions that provide higher education degree qualifications (**Annex D**, Section 2.3.1 Eligibility Requirements for General Accreditation point (1)).
	f) Has policies to set, approve, evaluate and execute accreditation criteria and procedures;	Yes	As stated in RPEA (**Annex D** Section 2.4), Criteria Committee has produced the Accreditation Criteria, comprising the Common Criteria and the Discipline Criteria. Common Criteria are further elaborated by the Criteria Guide. The Accreditation Criteria together with the RPEA provide the basis for program evaluation. As mentioned in the document of **Application for Provisional Membership of The Washington Accord**, Section 2.2 on Organizational Structure, the Criteria Committee is also responsible of conducting periodic reviews and revisions of the Accreditation Criteria based on the input from stakeholders and the existence of circumstances that require the criteria to be revised.
	g) Is independent of the educational providers delivering accredited programmes in its jurisdiction;	Yes	The organizational structure of IABEE within the PII (document of **Application for Provisional Membership of The Washington Accord,** page 9**)** indicates its independence of the educational providers. Also, evaluators involved in the process of evaluation must adhere to the ethical principles stated in Sections 7.1 and 7.2 and policy and

			procedure to avoid conflict of interest of Section 8.1 and 8.2 of RPARC (**Annex E**).
	h) Has autonomy to make accreditation decisions independent of stakeholder influence.	Yes	Accreditation decisions are fully the autonomy of the Evaluation and Accreditation Committee (EAC) and the Accreditation Council (AC). The independence of EAC is ascertained by applying the policy and procedure regarding the evaluator code of ethics and the conflict of interest. The AC on the other hand, although consists of representatives from academics, professionals and industry, has a specific role namely ensuring that the accreditation process has been carried out consistently in accordance with the established rules and procedures, code of ethics, the principle of confidentiality and avoidance of conflicts of interest. The council does not conduct a technical review so that it repeats what has been done by the EAC (Sections 4.1 and 4.2 of RPARC, **Annex E)**
2.	The accrediting agency has an operational accreditation system with documented procedures and practices conforming to the following principles:		
	a) The accreditation criteria and procedures are documented, publicized, and applied in accordance with set policies;	Yes	The IABEE Accreditation Criteria **(Annex C)** have been documented and publicized on the website (iabee.or.id). Policy and procedures to apply the criteria have been explained in the Rules and Procedures for Evaluation and Accreditation (RPEA) document **(Annex D)**. RPEA is also available for download from the website.
	b) The system accredits programmes or coordinated groups of individually identified programmes;	Yes	IABEE accredits programs, not institution. This is made clear in the statement written in the Preamble of IABEE Common Criteria and Criteria Guide (**Annex C**).
	c) Programme assessors are academic and industry peer reviewers;	Yes	The Rules and Procedures for Accreditation-related Committees (RPARC) document (**Annex E**) explains in Section 3 on Pool of Program Evaluators that the evaluation team consists of academic and industrial practitioner. It further details the requirements for program evaluator candidates.
	d) There are mechanisms and documentation for training the programme assessors;	Yes	The document of Rules and Procedures for Accreditation-related Committees (RPARC) (**Annex E**) explains the mechanism of evaluator (assessor) training (Section 6), which includes Awareness Training, Modular Online Training, Face-to-Face Training, and Observation in Actual On-Site Visit.
	e) Programme evaluation requires a self-evaluation and site visit;	Yes	The Rules and Procedures for Evaluation and Accreditation (RPEA) document (**Annex D**) explains the requirement for Program to submit Self-Evaluation Report (Section 2.5.2) and when such a document is to be submitted (Section 2.5.4, Table 1, Activity 14). Section 2.5.4 in Table 1 also explains about On-Site Visit Planning and On-Site Visit (Activity 19 and 20), which is further explained in EGA-19 and EGA-20 (pp. 15 to 16). Policies on conducting On-Site Visit are explained in section 2.9 (pp. 29-30).
	f) Periodic re-evaluation is required to maintain accreditation;	Yes	The RPEA document (**Annex D**) explains the validity period of “Accredited” status of General Accreditation, which is 5 years, and “Accredited with Interim Evaluation” either with or without visit, which is 2 years (Section 2.6.1 Decisions in Evaluation for General Accreditation). To maintain accreditation, Program shall submit re-evaluation with respect to the above validity periods.

	g) Individual program evaluation is conducted in confidence;	Yes	The Rules and Procedures for Accreditation-related Committees (RPARC) document (**Annex E**) in Section 9 explains the confidentiality policies and procedures to ensure that individual program evaluation is conducted in confidence.
	h) Mechanisms for addressing conflict of interest at all stages of the process exist;	Yes	The Rules and Procedures for Accreditation-related Committees (RPARC) document (**Annex E**) in Section 8 explains the conflict-of-interest (COI) policies and procedures to ensure that evaluation process at all stages is free of COI.
	i) A list of accredited programmes is published;	Yes	All programs accredited by IABEE are listed and published in IABEE website (**iabee.or.id**).
	j) An appeal process exists.	Yes	The RPEA document (**Annex D**) explains about appeal procedure against "Not-Accredited" decision (Section 2.8.2). Further, the RPARC document (Annex E) explains about Appeal Board and Appeal Committee (Section 5).
3.	The accreditation agency's criteria for accreditation include requirements for:		References for this section forward are the **IABEE Accreditation Criteria (Annex C)** which consist of Common Criteria, Criteria Guide, and Discipline Criteria.
	a) Programme outcomes that are consistent with the purpose of the programme. Note: Programme outcomes in item 3a are not expected to conform fully to the Graduate Attribute exemplars at this stage.	Yes	**Criterion 1 on Orientation of the Graduate Competence** states that Program shall define the profile of graduates to be envisaged as autonomous professionals by considering country's potential resources, cultures, needs and interests. Further, it states that Program shall establish its own expected learning outcomes which consist of abilities to utilize knowledge, skills, resources and attitudes as described in the (a) to (j) items and any additional requirement in its Discipline Criteria (if any) to be acquired by the student at the time of completion of the study. The (a) to (j) items are learning outcomes criteria developed by IABEE referring to the Graduate Attribute exemplars.
	b) A curriculum providing a broad basis for engineering practice;	Yes	**Criterion 2.1 on Curriculum** asks Program to ensure that the curriculum includes proportionally subject areas of mathematics and discipline-specific natural sciences, discipline-specific engineering science and technology, information and communication technology, engineering design and problem-based experiments, as well as general education [**Article (1)**]. It also asks Program to consider inputs from Program's stakeholders in the process of curriculum development [**Article (2)**]. It further asks Program that the curriculum shall indicate the structural relationship and contributions of the subject courses to fulfill learning outcomes. Procedures, including syllabus, shall be established and documented so that the expected learning process can be implemented in a controlled way [**(Article (3)**]. Lastly, the criterion on curriculum asks the provision of exposure for the students to engineering practices and major design project experience using engineering standards and multiple realistic constraints based on knowledge and skills acquired in preceding course work [**(Article (4)**].
	c) A suitable environment to deliver the programme;	Yes	**Criterion 2.3 on Students and Academic Atmosphere, in article (3)** asks Program to create and maintain good academic atmosphere conducive to successful learning. Further in **Criterion 2.3.4 on Facility**, Program is asked to ensure the availability and accessibility of facilities for effective functioning of the learning process and attainment of the learning outcomes.

	d) Adequate leadership for the programme;	Yes	**Criterion 2.5 on Institutional Responsibility** asks Program to define and manage the process for the provision of the educational service, including education design, curriculum development and delivery, and assessment of learning. **Criteria Guide of this article** further asks Program to describe its governance and its adequacy to ensure the quality and continuity of the program and how the leadership is involved in decisions that affect the program.
	e) Suitably qualified engineering practitioners teaching in the programme;	Yes	**Criterion 2.2 on Faculty** demands Program to provide necessary number, qualification and competence of faculty members for performing learning process, including planning, delivering, evaluating, and continually improving its effectiveness in order to achieve the learning outcomes. Further, each **Discipline Criteria** would normally address more specific requirements on the qualification of faculty teaching in the Program.
	f) Appropriate entry and progression standards; a*nd*	Yes	**Criterion 2.3 on Students and Academic Atmosphere** asks Program to define and implement an entry standard for both new and transfer students, as well as transfer of credits. Also, the criterion asks Program to define and implement ongoing monitoring of student progress and evaluation of student performance. Procedures of quality assurance shall be established to ensure that adequacy of standards is achieved in all assessments.
	g) Adequate human, physical and financial resources for the programme.	Yes	Adequacy of physical resources is addressed in **Criterion 2.4 on Facility**. Meanwhile, human resources adequacy is addressed in **Criterion 2.2 on Faculty**. Financial resource adequacy is addressed in **Criterion 2.5 on Institutional Responsibility**.

PERSATUAN INSINYUR INDONESIA
The Institution of Engineers Indonesia

Indonesian Accreditation Board for Engineering Education

ANNEX A

NOMINATION LETTERS

APPLICATION FOR
PROVISIONAL MEMBERSHIP
OF THE WASHINGTON ACCORD
2019

THE INSTITUTION OF ENGINEERS INDONESIA / INDONESIAN ACCREDITATION BOARD FOR ENGINEERING EDUCATION – PII / IABEE

JABEE
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5-26-20 Shiba, Minato-ku, TOKYO 108-0014 JAPAN
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30 January 2019

Charles Willmot
Secretariat of International Engineering Alliance
C/O Engineering New Zealand
L3, 50 Customhouse Quay
Wellington 6011
NEW ZEALAND

Dear Mr. Charles Willmot,

Further to PII/IABEE letter dated 11 December 2018 requesting JABEE to be a nominator for PII/IABEE application for the provisional membership in the Washington Accord, JABEE is pleased to be the nominator.

JABEE has been assisting Indonesia to establish an international level accreditation agency for engineering education under JICA technical cooperation project since 2014 followed by one-year preparation phase.

Through the project, JABEE has had opportunities to assist IABEE in developing the accreditation system including accreditation criteria and evaluation instruments. JABEE experts witnessed the development of IABEE by attending as advisors to the various committee meetings, seminars/workshops, on-site evaluations and accreditation decision meetings for years. IABEE experts joined JABEE evaluator trainer training in Japan including observation of JABEE on-site evaluations.

Along with the maturity of IABEE achievements gained from experiences described above, JABEE considers that the IABEE accreditation / recognition system meets the requirements for provisional status by providing evidence from site observations of a range of accreditation activities and through the mentoring corresponding to items stated in Schedule B1 Criteria for Admission to Provisional Signatory Status in an Accord.

In addition, once IABEE has successfully joined the Washington Accord as a provisional member, JABEE will be more than happy to take the role of mentor towards the signatory status if PII/IABEE requests JABEE to do so.

Sincerely yours,

Y. Aoshima

Yasuyuki AOSHIMA
Executive Managing Director

Cc:

- Executive Director of PII
- Secretary-General of IABEE

ABET

Michael K.J. Milligan PhD, PE, CAE
Executive Director, Chief Executive Officer

February 7, 2019

Charles Willmot
IEA Secretariat
Engineers New Zealand
PO Box 12241
Wellington 6144
New Zealand

Dear Charles,

ABET is pleased to nominate the Indonesia Accreditation Board for Engineering Education (IABEE) for provisional status to the Washington Accord.

Dr. Stuart Zweben, a senior ABET expert, had the opportunity to visit IABEE and observe an accreditation visit to Gadjah Mada Univerity (UGM) in Yogyakarta, Indonesia. Our nomination is based on his observation of this visit and review of relevant documentation.

Enclosed is Dr. Zweben's report to ABET. This report addresses the criteria specified in Schedule B1 of the Accord Rules of Procedure and includes recommendations for improvement and clarification. IABEE's responses to these recommendations are reflected in their application.

We believe that IABEE is a good candidate for provisional membership to the Washington Accord and we support their application.

Should you have any questions, please do not hesitate to contact me.

Sincerely,

Michael K.J. Milligan

Report to ABET on
Readiness for Provisional Status in the Washington Accord of the
Indonesia Accreditation Board for Engineering Education (IABEE)

Submitted by Stu Zweben
October 23, 2018

Introduction

The Indonesia Accreditation Board for Engineering Education (IABEE) has requested that ABET nominate them for provisional status to the Washington Accord. I was asked to assess IABEE's readiness for provisional status. This report is a summary of that assessment. It is based on materials obtained from IABEE's website (https://iabee.or.id/en/) and from the IABEE secretariat, and on a visit to Indonesia that involved meeting in Jakarta with IABEE executives and observing an IABEE evaluation visit to Gadjah Mada University (UGM) in Yogyakarta. The meetings in Indonesia also were attended by experts from the Japan Accreditation Board for Engineering Education (JABEE), who is mentoring IABEE and is being asked to be the other nominator of IABEE's provisional status. JABEE provided logistics support for travel and other administrative functions to facilitate my visit.

Assessment

The assessment is organized in accordance with the International Engineering Alliance's Criteria for Admission to Provisional Signatory Status in an Accord, as outlined in Schedule B1 of the Accord Rules of Procedure.

1. The accrediting agency has the following characteristics:

a) Is non-governmental;

There is a Memorandum of Understanding among IABEE, the Indonesian Ministry of Education Directorate General for Student and Learning Affairs (DIKTI) and the Indonesian Engineers Institution (PII) that made IABEE an autonomous, not-for-profit organization under PII. PII functions as an umbrella professional organization for engineers in Indonesia.

b) Is legally incorporated in its home jurisdiction;

It appears that the above-mentioned MOU provides this legal basis.

c) Is the uncontested accreditation agency of the engineering community in the jurisdiction; or, if circumstances in the jurisdiction allows multiple accreditation agencies, the applicant must be the prominent authority in accreditation of programmes;

The PII is mandated by Indonesian law as the country's engineering professional association. This law assigned to PII the task of providing standards for engineering education programs, in collaboration with universities, as well as other activities such as continuing professional education, registration of engineers, and implementation of a code of ethics. PII members come from both academia and industry. It has a variety of chapters, each covering a particular engineering discipline. Since PII and the Indonesian government (through DIKTI) are signatories to the MOU referenced above, which established IABEE as an autonomous entity under PII, IABEE appears to have authority as the accreditation agency of the engineering community.

Indonesia also has a national compulsory accreditation agency known as the Board of National Accreditation for Higher Education (BAN-PT) that accredits both institutions and programs, and provides ratings A, B and C (Very Good, Good, Fair, respectively) for the accreditation. As its name suggests, BAN-PT does accreditation in virtually all disciplines offered at universities.

IABEE only accepts for eligibility programs from institutions that have received A or B ratings from BAN-PT. Furthermore, programs applying for general accreditation from IABEE (see below) must have had A rating for their program accreditation from BAN-PT in order to be eligible to apply for IABEE evaluation. According to IABEE, out of 2,727 total engineering programs in the country, only 220 have BAN-PT rank A.

IABEE also mentioned that there are plans for the BAN-PT evaluations of engineering programs to cease to exist and to be replaced by a different compulsory accreditation organization called LAM-PS. A similar situation apparently already exists in the health area. The plan is for LAM-PS to be a separate accrediting body within PII that will do compulsory engineering accreditation. IABEE would continue to do the voluntary accreditation using the high standards of eligibility based on the compulsory accreditation.

Those programs that will be candidates for the Washington Accord mutual recognition will be only those that are accredited by the IABEE process that is the basis for the Washington Accord application. They would not include other programs accredited by BAN-PT or LAM-PS. Thus, even in future years, the accreditation by IABEE is expected to carry prominence with respect to engineering programs in Indonesia.

Since IABEE accreditation is voluntary, its defined scope of accreditation is limited to engineering, technology and computing, it only accepts as applicants for its accreditation those programs that have high BAN-PT ratings, and its processes and standards were designed with the intention of being recognized as substantially equivalent to those in the broad international community, it is possible to conclude that IABEE accreditation carries prominence with respect to the accreditation of engineering programs in Indonesia. IABEE's application for provisional membership in the Washington Accord should clarify its standing as the prominent authority in the face of the compulsory program-level accreditation required in Indonesia.

d) Is a statutory or professionally recognised authority to accredit programs satisfying academic requirements for admission to practicing status (e.g.licensing, registration) in a jurisdiction;

All persons who carry out engineering practices in Indonesia must have an Engineering Registration Certificate. One of the requirements for that certificate is to be a Professional Engineer. Professional Engineer status is administered through PII. The academic requirements for being allowed to sit for the first exam on the path to Professional Engineer are just graduation from an engineering program. It does not matter what quality rating the program has from BAN-PT. Thus, the accreditation from IABEE exceeds the academic requirements of PII for admission to practicing status.

e) Accredits programmes at institutions that have legal authority to confer higher education degrees qualifications;

All institutions whose programs are eligible to apply for IABEE accreditation must have at least a B-accreditation rating (i.e., Good or Very Good) from Indonesia's compulsory institutional accrediting agency BAN-PT. Re-evaluations of an institution's accreditation take place every 5 years.

f) Has policies to set, approve, evaluate and execute accreditation criteria and procedures;

IABEE's Evaluation and Accreditation Committee (EAC) was responsible for developing its Rules and Procedures for Evaluation and Accreditation (RPEA), evaluation instruments, and an online evaluation system. The EAC also developed and conducts training programs for the program evaluators. The Common Criteria are developed by IABEE's Criteria Committee. Discipline Criteria are developed by Chapters of the PII and other leading engineering societies (e.g., there is such a society in electrical engineering). Evaluations provide the degree of compliance with each criterion, rated as Acceptable, Concern, Weakness or Deficiency. The definitions of these terms is similar to the like terms used by ABET.

g) Is independent of the educational providers delivering accredited programmes in its jurisdiction;

The autonomy of IABEE through the above-referenced MOU, and its organizational structure within the Indonesian Engineers Institution (PII) appears to give IABEE independence of the educational providers. Evaluators represent IABEE in their evaluations; they don't represent their educational institutions.

h) Has autonomy to make accreditation decisions independent of stakeholder influence.

Although persons involved in evaluations and decision making come from industry and academic institutions, program evaluators are required to behave ethically and professionally by upholding a Code of Ethics (sometimes called Code of Conduct) for Evaluators and avoiding conflicts of interest. The RPEA indicates that the Code of Ethics is available on the IABEE website; however, it was not available on the website, but was provided in the form of a powerpoint document that included the roles of evaluators, conflict of interest policy and code of ethics. This material should be posted publicly so that it is consistent with the reference in the RPEA, and the name of the Code should be consistently used in references.

IABEE receives fees for its accreditation services from the programs applying for accreditation, as well as annual maintenance fees from those programs that are accredited.

During startup, IABEE's offices are housed in space provided in Ministry building, but a new building is being built for PII that is expected to provide space in about 2 years. The Ministry apparently also currently provides some incentive funding to programs, on a competitive basis, for seeking accreditation by IABEE, although no funding goes to IABEE. Not all programs that apply for IABEE accreditation receive this funding; only half did in 2018. It is not known how long this funding opportunity is likely to continue.

Japan's International Cooperation Agency (JICA) has been providing startup assistance to IABEE since its inception, and this support continues through 2019.

This includes the international accreditation expertise of key personnel from JABEE and administrative support for this mentorship.

All accreditation evaluations and accreditation decisions are made by IABEE. Initial accreditation actions are recommended by the evaluation teams and final actions are recommended by the EAC after the review and a harmonization process to help ensure consistency of application of the criteria. The EAC's recommended actions are then given to IABEE's Accreditation Council for ratification. The Accreditation Council's role appears to be one of process review to ensure that appropriate processes were followed in the conduct of the evaluation. There does not appear to be any undue influence on the process of evaluation and recommendation of final action. The most recent Accreditation Council membership, however, included the Director General of Institution, Science, Technology and Higher Education, the Chairman of BAN-PT, and the JICA Advisor, as well as one person from PII.

The application for provisional membership in the Washington Accord should clarify any support it receives from the Indonesian Ministry of Education and any influence the Ministry has on its accreditation decisions given the constituency of the Accreditation Council. The application also should delineate the plan for independence from any continued support from JICA/JABEE, so that IABEE can function as a financially independent entity.

2. The accrediting agency has an operational accreditation system with documented procedures and practices conforming to the following principles:

a) The accreditation criteria and procedures are documented, publicized, and applied in accordance with set policies;

The IABEE website contains its Rules and Procedures for Evaluation and Accreditation (RPEA) as well as the accreditation criteria. There are Common Criteria that apply to all engineering programs, which are further elaborated in a Criteria Guide also published on the website. Discipline Criteria address requirements specific an engineering discipline, and also are published on the website. The applicable criteria in a program's evaluation are those in the Common Criteria as elaborated in the Criteria Guide, and the appropriate Discipline Criteria (if any).

b) The system accredits programmes or coordinated groups of individually identified programmes;

IABEE's scope is accreditation of individual undergraduate engineering, technology and computing programs at the four-year Bachelor's level that have a minimum of 144 semester credit units. To date IABEE has focused only on accreditation of engineering programs, although accreditation in computing is beginning in 2018.

Two categories of accreditation are offered: General Accreditation and Provisional Accreditation. General Accreditation requires that the program has implemented an outcome-based education system and has produced graduates by the time of the evaluation process. Provisional Accreditation also requires that the program has implemented an outcomes-based education system and that at least the first year students have completed learning within that system. Only programs accredited under General Accreditation would be relevant to the

Washington Accord. The IABEE website clearly distinguishes the two sets of programs.

To date, IABEE has accredited five engineering programs at three institutions for General Accreditation and six programs at three institutions for Provisional Accreditation. No re-evaluations have yet taken place, and all of the programs accredited under General Accreditation previously had been accredited by other international accreditors based on criteria related to outcomes-based education. IABEE's goal is to have 25 accredited programs by the time it applies for provisional membership in the Washington Accord, which is anticipated in 2019. There are 28 programs undergoing evaluation for General Accreditation, and 17 for Provisional Accreditation, in 2018.

c) Programme assessors are academic and industry peer reviewers;

All PEVs must be members of PII, and must be certified as either professional educators or professional engineers. IABEE reports a pool of 86 program evaluators, 12 of whom are from industry. Each evaluation team for the General Evaluation of a program consists of a team chair and two program evaluators. There also often are observers to the program evaluation, especially since new PEVs must observe an on-site evaluation as part of their training. The team chair and observers are appointed by the EAC Chair, while the appropriate EAC Discipline Chair assigns PEVs. A single overall Team Chair is assigned when multiple programs are being evaluated at the same institution. A Provisional Evaluation of a program is done by a single EAC-assigned program evaluator.

d) There are mechanisms and documentation for training the programme assessors;

IABEE reports organizing 3 training seminars from 2017-2018 at which 70 evaluators were trained. A total of 66 trainers were themselves trained by JABEE (44), ABET PEVC Training (16), CAST (3) or Engineering Australia (3). All PEV candidates undergo a modular online training (which includes tests for understanding), facilitated 2-day face-to-face training, and observe an on-site visit. Observers are asked to provide judgment to the team and may conduct some interviews if the team chair approves. Refresher training (one-half day) also is given to evaluators who are selected for assignments during a given year. Each PEV is evaluated according to competency criteria after training and after each assigned evaluation. At present, there does not appear to be any special training for team chairs other than experience as evaluators and positive feedback from evaluations.

e) Programme evaluation requires a self-evaluation and site visit;

All candidate programs must complete a Program Profile and Self Evaluation Report. This report is reviewed and is used in an on-site visit by the IABEE evaluation team. Each of the criteria is examined by the team and is evaluated using the A, C, W, D ratings mentioned earlier. An on-line system supports the evaluation process broadly, including the submittal of the self-evaluation, its review by the team, interaction among team members prior to the on-site visit and interaction between the team chair and the program to clarify information in the self-evaluation, the on-site evaluation of each criterion, and production of the exit statement read to the program and the institution leadership. There is a 30-day due process period during which the program can provide information on additional actions taken to satisfy shortcomings reported at the on-site evaluation. This also is supported by the on-line system. Finally, there is "harmonization" of application of the criteria over all of the programs evaluated in

a given cycle prior to final action recommended by the EAC for ratification by the Accreditation Council. The harmonization of the Common Criteria takes place by the EAC and the harmonization of the Discipline Criteria is done by each Discipline Chair.

The implementation of the process on-site was similar to that done by ABET. There is an initial get-together the evening before the team goes to campus, at which each team is briefed by the overall team chair on the logistics and expectations (such as confidentiality) of the teams. The individual teams then had brief conversations about their particular programs so that everyone on the team had an understanding of those elements of the criteria that were in question going into the next day's evaluation (the teams already had on-line interaction about their preliminary evaluation prior to coming to campus). There were two full days on campus for information gathering, beginning with the Dean of the Faculty of Engineering providing an overview of the institution and the Faculty of Engineering to the entire group of evaluation teams, and followed by the individual teams interviewing the program's faculty, students, support staff, and some alumni and employers and touring the program's facilities. One of the senior evaluators from the group was assigned to interview members of various offices that provide institution-level support for students, assessment, etc. Each evening, the teams re-combined in a joint session to report on findings, The evening meeting between the first two days also included a report from the evaluator who interviewed administrative offices that provided support to all programs, and included discussion to help harmonize interpretation of similar observations by different programs, as well as providing advice for what additional information might help solidify the evaluation of criteria that appeared to have shortcomings. The final evening meeting included further discussion to harmonize interpretation of the criteria, and a read-out of the draft statements that would be read to the program and institution the following morning.

Until this year, the programs evaluated by IABEE for General Accreditation did not appear to have any significant shortcomings. All were accredited for the maximum period of six years (this maximum period is to be reduced to five years effective in 2019 to better dovetail with the five-year re-evaluation required for BAN-PT accreditations). This likely is related to their having been evaluated and accredited previously by other international accrediting bodies. This year, however, the situation is different. The six programs collectively had shortcomings at all levels. An impending deficiency in one of the programs was followed up with the Vice Dean of the Faculty of Engineering the next morning, to provide an opportunity for the team to get additional information and perspective that would enable a fair evaluation of the issue prior to the team having to make its final decision. The matter was handled sensitively by the team during that meeting, which I observed.

Some of the team chairs had responsibilities for more than one program, which meant that they could not be present for all interviews in either of the programs. Many evaluators also were doing multiple visits during the year's cycles (the 28 evaluations were split into two evaluation cycles, each of which has a due process and EAC overall evaluation meeting). This increased workload on the volunteers likely is a consequence of the rapid ramp-up in the number of programs being evaluated from the previous years, and the fact that the training

of new PEV candidates requires observing an on-site evaluation. The on-line system afforded communication to keep the team chairs up to speed, and all of the interviews that I observed were performed competently, but this doesn't appear to be an ideal situation. With many new PEV candidates observing visits this year, the pool of evaluators available to be PEVs on future cycle visits should be increased and hopefully will preclude the necessity of this demanding schedule in future years. It would be helpful if the application commented on the availability of a sufficient pool of evaluators to accommodate growth.

f) Periodic re-evaluation is required to maintain accreditation;

The maximum period of General Accreditation before a re-evaluation is required is stated as 5 years in the RPEA (as noted earlier, the accreditation periods for General Accreditation were 6 years for those accredited prior to 2018, but this is being modified to conform with the 5-year period of institutional accreditation by BAN-PT). The maximum period of accreditation is granted when the program has no deficiencies or weaknesses. The re-evaluation is a General Accreditation evaluation that examines all elements of the criteria. When a General Evaluation results in a weakness but no deficiency, accreditation is granted for a shorter period, after which an Interim Evaluation (through either a report review or an on-site evaluation) is required. The RPEA says that this shorter period is "not exceeding three years". It is not clear on what basis the possibly varying number of years is decided. This should be be clarified in IABEE documents, taking into account the implication on an institution's evaluation schedules of giving different programs at the same institution differing number of years of accreditation when each of them has only weaknesses but no deficiencies.

An Interim Evaluation is focused on the shortcomings reported during the General Accreditation Evaluation. If suitable actions have been taken to address the shortcomings, accreditation is extended to the next General Evaluation. If the interim evaluation fails to meet criteria requirements, the accreditation status is terminated, according to the RPEA. This can be because there is a deficiency or a weakness observed, whether or not these are associated with the previously identified weaknesses. The program must then apply for a new General Evaluation, after at least two cycles have passed since the interim evaluation.

The description of the Interim Evaluation in the RPEA was at odds with a flow diagram presented by IABEE that purported to capture the possible outcomes of an accreditation evaluation. The flow diagram suggested that only a weakness that was present at two consecutive reviews resulted in a not-accredited decision in the Interim Evaluation. The flow diagram also suggested that a not-accredited action required more than one deficiency when a currently accredited program undergoes a subsequent General Evaluation, while a single deficiency results in an Interim Evaluation. Such possibilities are not present in the RPEA.

These inconsistencies need to be corrected. The possible decisions should apply the concepts of weakness and deficiency in a consistent, defensible manner.

Provisional Accreditation is granted when an evaluation determines the POTENTIAL of the program to meet all of the requirements of the accreditation criteria. Provisional Accreditation is available only to new applicants, and is granted for a period of 4 years (based on the IABEE website statement on the "accreditation evaluation and decision" page) after which the program must

demonstrate that it meets all requirements for General Accreditation (through the normal General Accreditation Process) or else the accreditation is terminated. The RPEA states that a program granted Provisional Accreditation is "deemed potentially capable of meeting all criteria within a period of not exceeding three years." The apparent discrepancy between this RPEA statement and the four year validity period on the website's "accreditation evaluation and decision" page should be clarified and corrected as necessary.

A program is given only one opportunity to apply for Provisional Accreditation. Though feedback is given to the program on the extent to which each element of the criteria used in a General Evaluation are met, the decision on Provisional Accreditation appears to be based largely on whether or not the program has a functioning outcomes-based education and assessment system, even if it is only in place for one year.

g) Individual program evaluation is conducted in confidence;

The RPEA has a statement of confidentiality concerning the information generated and discussed as part of an evaluation. All evaluators are expected to adhere to this. IABEE does not disclose programs that receive a not-accredited action.

h) Mechanisms for addressing conflict of interest at all stages of the process exist;

The RPEA has a statement about avoiding conflicts of interest. The RPEA indicates that PEVs are assigned to avoid potential COI situations, and the program reviews and approves the assigned team; if there is a COI identified, the program is not expected to approve the person in question.

There is some detail about COI policies in the IABEE Code of Ethics. As mentioned earlier in this report, the material in the Code of Ethics needs to be put into a suitable publicly available document posted on the IABEE website. The document would be strengthened if it further delineated situations that can cause COIs, and contained a procedure to be followed if there is an allegation that someone has violated the Code of Ethics.

i) A list of accredited programmes is published;

The IABEE website contains the list of programs that have been accredited either by General Accreditation or Provisional Accreditation. The length of accreditation is not published.

j) An appeal process exists.

Only not-accredited actions may be appealed. The organizational structure of IABEE provides for an Appeal Board under the IABEE Executive Committee (the group that sets overall direction for IABEE). However, the RPEA indicates that the appeal is made to the EAC (the body that previously made the accreditation action recommendation), and that it is reviewed by the Accreditation Council (the body that took the final action on that recommendation). The RPEA doesn't explicitly state who makes the final decision about the appeal.

This process description should be strengthened. The process should maintain appropriate independence of those involved in the appeal decision from those who were involved in the original accreditation action decision, while providing those involved in the appeal decision with the necessary information from both the program and those involved in the original decision.

3. The accreditation agency's criteria for accreditation include requirements for:

a) Programme outcomes that are consistent with the purpose of the programme

Programs eligible for General Accreditation must have implemented an outcome-based curriculum for at least three years, and programs eligible for Provisional Accreditation must have done so for at least one year. Programs must define and publish an "autonomous professional profile" that appears to be akin to ABET's PEOs. Programs also must establish Learning Outcomes based on this profile, which are the basis for the preparation of its curriculum and learning methods. The Learning Outcomes must cover all competencies expected of graduates of the program that are part of the "Common Criteria" (those applicable to programs from all engineering disciplines). These consist of abilities generally consistent with the IEA Graduate Attributes WA1-12. IABEE has offered a mapping of the outcomes in its criteria to these IEA Graduate Attributes. Discipline-specific criteria may further refine the methods, skills and modern engineering tools appropriate for practice in that discipline. Discipline-specific criteria exist for 13 engineering disciplines.

The Learning Outcomes are expected to be assessed periodically based on "established performance indicators" using "appropriate methods". The program is expected to ensure that "graduates of the program achieve all of the expected learning outcomes." The assessment results are expected to be used "to improve the effectiveness of the educational process, the suitability of the learning outcomes related to the needs of stakeholders, and resources." Documentation of the assessment and follow-up implementation also is expected.

b) A curriculum providing a broad basis for engineering practice;

The Common Criteria require a "structural relationship" of the courses to the outcomes. They require students to be "exposed to engineering practices" and have a "major design experience using engineering standards and multiple realistic constraints based on knowledge and skills acquired in preceding course work". Discipline-specific criteria may refine the engineering science and technology requirements appropriate for that discipline. The curriculum is required to include mathematics and discipline-specific natural sciences, discipline-specific engineering design and technology, information and communication technology, engineering design and problem based experiments, and general education.

c) A suitable environment to deliver the programme;

The Common Criteria require creation and maintenance of a "good academic atmosphere conducive to successful learning" and also require "availability and accessibility of facilities for effective functioning of the learning process and attainment of the learning outcomes." This includes academic counseling and advising, and effective facilities including classrooms, labs and associated equipment.

d) Adequate leadership for the programme;

The Common Criteria require that the program shall "define and manage the process for the provision of the educational service, including education design, curriculum development and delivery, and assessment of learning." The Criteria Guide further elaborates on this to say that the program "shall describe the governance of the program and its adequacy to ensure the quality and continuity of the program and how the leadership is involved in decisions that affect the program."

e) Suitably qualified engineering practitioners teaching in the programme;

The Common Criteria require that the program have the "necessary number, qualification, and competence of faculty members for performing learning process, including planning, delivering, evaluating, and continually improving its effectiveness in order to achieve the learning outcomes". Discipline-specific criteria may refine this as appropriate.

f) Appropriate entry and progression standards;

The Common Criteria require that the program "implement an entry standard for both new and transfer students, as well as the transfer of credits", that it "define and implement an ongoing monitoring of student performance, and progress and evaluation of student performance", that "an effective assessment process of learning outcomes based on established performance indicators is implemented and maintained at planned intervals using appropriate methods", and that appropriate procedures are established "to ensure that adequacy of standards is achieved in all assessments." The Common Criteria also require that the program "ensure that graduates of the program achieve all expected learning outcomes."

g) Adequate human, physical and financial resources for the programme.

In addition to the aforementioned criteria about faculty and facilities, the Common Criteria require that the institution "make efforts to establish resource, supporting service and cooperation with stakeholders on research, education and/or service to community with due consideration to existing local resources."

Summary

For an organization that was formed in 2015 and for which initial planning only began in 2013, IABEE has progressed well. The basic elements appear to be in place and functioning. It is clear that JABEE was very hands-on in its mentorship of IABEE, and they have provided a very good foundation for IABEE's success as a potential signatory of the Washington Accord.

The following elements appear to need attention and/or careful explanation to ensure success of the application for Provisional Membership in the Accord.

- Clarify IABEE's standing as the "prominent authority on accreditation of engineering programs in Indonesia in the face of compulsory program-level accreditation of engineering programs by another organization.
- Ensure that the Conflict of Interest policy and Code of Ethics for Evaluators is publicly available on the IABEE website, and its title and location are consistent with the references in the RPEA and elsewhere on the website. Consider strengthening this material by further delineating situations that can cause conflicts of interest, and by including a procedure to be followed when there is an allegation of a violation of the Code of Ethics.
- Clarify any support IABEE receives from the Indonesian Ministry of Education and any influence the Ministry may appear to have on accreditation decisions given the constituency of IABEE's Accreditation Council.
- Delineate the plan for independence from continued support by JICA/JABEE so that IABEE can function as a financially independent entity.
- Comment on how IABEE will ensure the availability of an adequate pool of evaluators in the face of rapid growth.

- Clarify the basis for possible differing lengths of accreditation (i.e., “not exceeding three years”) when there are one or more weaknesses but no deficiency in the evaluation. The decision-making process should consider the effect on an institution’s accreditation schedules if different programs at the institution receive different number of years of accreditation before their Interim Evaluation.
- Correct inconsistencies between the RPEA and flow diagram in the explanation of the decisions that can be made in an Interim Evaluation when deficiencies and/or weaknesses are present, particularly as they affect possible termination of accreditation. Ensure that these decisions consistently apply the concepts of weakness and deficiency as defined by IABEE.
- Further describe the process of appealing “not-accredited” decisions, ensuring that there is appropriate independence of those involved in the appeal decision from those involved in the original accreditation action decision.
- Clarify the apparent discrepancy relative to the period of Provisional Accreditation between the “not exceeding three years” language used in the RPEA and the “four years” validity period used in the IABEE website. This may not be as important to the Washington Accord application, as provisionally accredited programs would not be part of the mutual recognition, but it would be helpful if this timetable was expressed consistently in the IABEE documents.

Most of these issues were discussed at one time or another during the visit with IABEE and/or JABEE officials, and each appears solvable. The JABEE officials in fact received a copy of the bullets above prior to my sending this report to ABET. They should be of particular interest when ABET reviews the draft application for Provisional Membership.

Acknowledgements

The author is grateful to all personnel associated with the visit to Indonesia, from IABEE, JABEE, and UGM. Everyone was helpful and welcoming. Special thanks to Ms. Akiko Takahashi, Manager of International Affairs at JABEE, who saw to all of the travel arrangements for me, and was incredibly responsive to any questions I had. She also was present in Indonesia during my visit. Also special thanks to Dr. Yasuyuki Aoshima of JABEE, Prof. Mizri Gozan and Dr. Berlian Kushari of IABEE, who collectively provided me with significant knowledge of the two organizations and their work together. Dr. Kushari also acted as my interpreter during the evaluation of UGM, and Dr. Gozan was the team chair for the Chemical Engineering program evaluation that I observed closely and for the overall IABEE evaluation team doing the UGM on-site visit.

APPENDIX

List of Key Personnel

IABEE

Dr. B. Kushari, Acting General Secretary, also served as interpreter
Prof. M. Gozan, Chair, Executive Committee and TC of UGM evaluation
Prof. M. Romli, Member, Criteria Committee
Dr. A.S. Rochman, Chair, Evaluation and Accreditation Committee

JABEE

Dr. Y. Aoshima, Executive Managing Director
Ms. A. Takahashi, Manager of International Affairs
Prof. K. Kishimoto, Observer to UGM visit

UGM

Prof. Ir. Nizam, Dean, Faculty of Engineering

PERSATUAN INSINYUR INDONESIA
The Institution of Engineers Indonesia

Indonesian Accreditation Board for Engineering Education

ANNEX B

CV OF IABEE COMMITTEE MEMBERS

APPLICATION FOR
PROVISIONAL MEMBERSHIP
OF THE WASHINGTON ACCORD
2019

THE INSTITUTION OF ENGINEERS INDONESIA / INDONESIAN ACCREDITATION BOARD FOR ENGINEERING EDUCATION – PII / IABEE

SHORT CV OF IABEE EXECUTIVE COMMITTEE MEMBERS

MISRI GOZAN

Chair of Executive Commitee

Misri is a professor of chemical engineering. In August 2018, he's selected as the Chair of IABEE Executive Committee. He obtained his Dr.-Ing. degree from Technical University of Dresden, Germany in 2004, and M. Tech. degree from Massey University, New Zealand. Since 2007, he has been serving as assessor for the National Accreditation Agency for Higher Education (BAN-PT). He was involved in the preparation of IABEE establishment in 2014, and the development of IABEE afterwards. He is a lecturer and researcher at Bioprocess Engineering Program, Chemical Engineering Department, Universitas Indonesia. He is also the Director of Research Centre for Biomedical Engineering, at Universitas Indonesia. He has research interests in the field of bioprocess engineering and biochemical products from biomass. He joined the Institution of Engineers Indonesia (PII) in 2004 and awarded IPM (Professional Engineer) title in 2014.

MUHAMMAD ROMLI

Executive Committee member and
Chair of International Committee

Romli is an agroindustrial engineer and professor of the Faculty of Engineering and Technology, Bogor Agricultural University (IPB). He received his master's degree in biotechnology and Ph.D. in chemical engineering from The University of Queensland, Australia. Romli has been working for Bogor Agricultural University with more than 30 years lecturing experience in the areas of industrial pollution control and management, cleaner industrial production, and industrial ecology. He has served many positions in the university, including Head Division of Environmental Engineering and Management (1993-2000), Director of Center for Development of Safe Agroindustrial Processes (1997-2000), and Head Department of Agroindustrial Technology (2000-2008). He is also an active member of PII, serving as Chair of PII Chapter for Agroindustry from 2015 to date. Romli has an extensive experience as auditor in quality assurance of education, quality and environmental management systems (ISO 9001 and 14001), and as assessor of National Committee of Accreditation for Research and Development Institution (KNAPPP).

SATRYO SOEMANTRI BRODJONEGORO

Executive Committee member

Emeritus Professor in Mechanical Engineering, Institut Teknologi Bandung (ITB), Satryo is also the President of the Indonesian Academy of Sciences. He has a long and distinguished academic and public service career. He was a faculty member of the Mechanical Engineering Department of ITB than 30 years since 1980. He has served many positions in ITB including Chairman of the Department (1992-1995) and Vice Dean of Academic Affairs (1995-1998). From 1999-2007 Satryo served as Director General of Higher Education of the Ministry of National Education, Indonesia. He obtained his Ph.D. in Mechanical Engineering from the University of California at Berkeley in 1985. His research areas include tribology, fracture mechanics, finite element analysis, mechanical design, and higher education development and policy. He is a Fellow of the Indonesian Academy of Sciences since 2008. Currently he serves also as visiting professor in mechanical engineering at Toyohashi University of Technology, Japan. In April 2018 he was appointed as Special Advisor to Coordinating Minister of Maritime Affairs, Republic of Indonesia. He was the former Chair of IABEE Steering Committee in 2015-2016.

SUDJARWADI

Executive Committee member
Chair of Criteria Committee

Sudjarwadi was a civil engineer in construction company in 1970 to 1972. In 1974 he returned to his alma mater, Gadjah Mada University (UGM), to become a lecturer. After 37 years conducting research and teaching, in 2012 he retired as professor emeritus of civil engineering. He currently teaches as part time professor in UGM and Islamic University of Indonesia (UII) at Yogyakarta. He was long and distinguished career, both in academic and public service. He was an assistant director for UGM's Inter University Center for Engineering in 1988-1991. In 1991 he served as Assistant Dean of Faculty of Engineering. In 1994 to 1999 he was appointed as Secretary of Directorate General of Higher Education. Returning to UGM he served as the Dean and subsequently the Vice Rector for Academic Affairs. In 2007 was appointed as the Rector of UGM. After retirement, in 2013 he supervises a board for Indonesian International Education Foundation and serves as Independent Commissioner in PT Sri Rejeki Isman Tbk, a textile company considered as the best integrated textile industry in South East Asia. He also still assists the Ministry of Research, Technology and Higher Education as chair of Education Committee.

TJIPTO KUSUMO

Executive Committee member
Chair of Finance Committee
Member of Evaluation and Accreditation Committee

Tjipto graduated from ITB with a degree in Engineering Physics in 1974. He has an extensive professional experience, starting in Elnusa company where he served as Manager of Instrument & Control Division. He moved to Tripatra Engineering company and retired from it in 2005, after taking several positions, including Technical Development Director, Off Shore Projects Marketing Director, and Operation Senior Director. Later he served as Advisor for EPC companies and presently he is a commissioner for Java Energy Semesta, a CNG operation company. He also has academic related activities, including 6 years as practitioner lecturer for Engineering Physics Department of ITB. He also a member of Advisory Board of ITB Engineering Physics Program and Environmental Engineering Program of Islamic University of Indonesia Yogyakarta. He is also an active member of PII, where he co-founded PII Chapter for Engineering Physics in 1997. He was also the Head of the Chapter and the Head of Certification Committee as well as Continual Professional Development Committee. His professional titles as engineer include PII's IPM (Professional Engineer), APEC Engineer, as well as ASEAN Engineer

ARIEF SAICHU ROHMAN

Executive Committee member
Chair of Evaluation and Accreditation Committee

Arief obtained his bachelor's degree in Electrical Engineering from Institut Teknologi Bandung (ITB). He received M.Eng.Sc. degree in Systems & Control from the University of New South Wales. He finished his Ph.D. in the same field in 2005 from the University of Newcastle, Australia. He worked for the Research & Development Division at PT IPTN, the Indonesian aircraft industry, in 1990 to 1992. Since 1992 he joined ITB and has been teaching undergraduate and graduate courses in Electrical Engineering at the School of Electrical Engineering & Informatics. He was the Chair of the Undergraduate Program in 2011-2015 and is currently the Chair of Quality Control Circle in the school. He joined PII and awarded IPM (Professional Engineer) title in 2017. He is also an active member of FORTEI (Indonesia Higher Education Forum in Electrical Engineering) where he served as Vice Chair in 2012-2014 and Chair in 2014-2016). He attended program evaluator training in JABEE Japan in 2015 and both IDEAL and PEV training in ABET USA in 2017, respectively. He is a member Control System Society of IEEE. He joined IABEE in 2015 and recently serves as EAC Chair of IABEE in 2018.

BERLIAN KUSHARI

Secretary General
International Affairs Committee member
Evaluation and Accreditation Criteria Committee member

Berlian is a civil engineer by training. He received bachelor's engineering degree from Gadjah Mada University in 2001 and master's degree (M. Eng.) from Chulalongkorn University, Thailand, in 2005. He has been serving as a consultant to Ministry of Public Works, Directorate General of Highway Administration in various road safety and pavement management projects. He was also involved in the development of recent provincial and national transportation systems planning conducted by the Ministry of Transportation. He serves as associate professor for the Faculty of Civil Engineering and Planning of the Islamic University of Indonesia. He is an active member of the Indonesian Inter-University Transportation Studies Forum, where he served as its First Secretary in 2016-2018. He is also a member of Indonesian Transportation Society (MTI) and Eastern Asia Society for Transportation Studies (EASTS). In 2015, Berlian joined IABEE as a member of its Evaluation and Accreditation Committee. He received training as a program evaluator in Japan (by JABEE) and in the USA (by ABET) in 2015 and 2017, respectively. In November 2018, he was appointed to serve as IABEE Secretary-General after 3 months serving the position as acting-official.

NANANG UNTUNG

Executive Committee member

Nanang graduated from the Institut Teknologi Bandung (ITB) with a degree in Chemical Engineering in 1982. He has an extensive experience in LNG and gas business, including in Arun LNG, Natuna Project, Badak LNG, Donggi Senoro Project and Pertamina as professional engineer and serving managerial positions. He has experience of serving several executive positions, including COO of PT Badak LNG, SVP of Gas Pertamina, CEO of PT Badak LNG, CEO of Badak Arun Solusi and currently works as Fellow Consultant at PT Rinder Energia. His is also an active member of PII, where he served as Chairman of Chemical Engineering Chapter in 2010 to 2017. Also, he is a member of Engineering Ethical Council of PII. In engineering education, he becomes a member of the advisory board for ITB Chemical Engineering Department. He is currently a member of IABEE Executive Committee.

HERU DEWANTO

Executive Committee member

Heru is the current President of Indonesia Institute of Engineers (PII). He is a civil engineer by training. He received bachelor's degree in civil engineering from Gadjah Mada University (UGM), M.Sc.Eng. degree in transport planning and engineering from the University of Leeds, and doctoral degree in strategic management from Graduate School of Economics of the University of Indonesia (UI). He also holds Senior Professional Engineer (IPU) title from PII. He has more than 21 years of experiences in infrastructure investment and business development, ranging from power, toll roads, railways, light rapid transit, waste water treatment, clean water supply, terminals to housing in various global corporations and national enterprises. He is currently the President Director of PT. Cirebon Energi Prasarana, an independent power producer for 1x1000 MW ultra-supercritical clean coal taechnology to be firstly applied in Indonesia. Prior to serving PII as president, he was PII Vice President in 2015-2018.

FAIZAL SAFA

Executive Committee member

Faizal is the Chairman of Immara Infoglobal, a national management consultant company headquatered in Jakarta. He is an industrial engineer by training, a professional engineer, and active member of PII. He has been serving PII in various positions, including Vice Chair for Continuous Professional Development committee, member for Industrial Company Development task-force under the PII Chapter for Industrial Engineers, and the most recent appointment as PII Executive Director. He is also the chair of Industrial Management and Engineering Graduates Association.

TRESNA P. SOEMARDI

Executive Committee member

Tresna is professor in mechanical/biomechanical, product innovation, design, prototyping and development at University of Indonesia (UI). Apart from his academic career, he also serves as a consultant for PLN, the state-owned electricity generating company, in 2009-2012. He was also a commissioner for Commission for Supervision of Business Competion in 2007-2011. Tresna holds two bachelor's degree, i.e. in mechanical engineering from ITB and economics/financial management from UI. He has a M.Sc. degree in environmental studies, environmental science–human ecology and environmental economic from UI. His Ph.D. is in the field of applied mechanics and advanced composite material. Tresna is also a member of several professional associations, including ASME, SAE, SME-CME, and SAMPE.

SRI HARTATI

Executive Committee member

Sri Hartati is professor in computer science at Faculty of Mathematics and Natural Sciences, Gadjah Mada University (UGM). She received bachelor's degree in computer science from UGM in 1986. Her master's and doctoral degrees were obtained from University of New Brunswick, Canada, also in the field of computer science in 1990 and 1996, respectively. Her research interests cover the fields of intelligent systems including knowledge-based system, reasoning system, expert system, fuzzy system., pattern recognition, decision support system, medical computing, and software computation using ANN, fuzzy logic, and genetic algorithm. Besides teaching and conducting research, she is also active in several professional associations, including Computer Science, Electronics and Instrumentation Support Society, Indonesian Physics Society, Indonesian Mathematical Society, and APTIKOM, which is National Higher Education Association for Informatics and Computer Science. She represents APTIKOM in IABEE Executive Committee to pave the way for IABEE's future membership in Seoul Accord.

PERSATUAN INSINYUR INDONESIA
The Institution of Engineers Indonesia

Indonesian Accreditation Board for Engineering Education
IABEE

ANNEX C

THE ACCREDITATION CRITERIA

COMMON CRITERIA & CRITERIA GUIDE

DISCIPLINE CRITERIA for

- Chemical, biochemical, biomolecular engineering and similarly named engineering programs,
- Environmental engineering and similarly named engineering programs,
- Ocean engineering and similarly named engineering programs,
- Agricultural and/or biosystem engineering,
- Civil engineering and similarly named engineering programs,
- Electrical, computer, communications, telecommunication engineering and similarly named engineering programs,
- Engineering physics and similarly named engineering programs,
- Geodetic, geomatics engineering,
- Industrial engineering and similarly named engineering programs,
- Materials, metallurgical engineering and similarly named engineering programs,
- Mechanical engineering, and
- Nuclear engineering and similarly named engineering programs.

APPLICATION FOR
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THE INSTITUTION OF ENGINEERS INDONESIA / INDONESIAN ACCREDITATION BOARD FOR ENGINEERING EDUCATION – PII / IABEE

IABEE International Common Criteria

Preamble

The Indonesian Accreditation Board for Engineering Education (IABEE) builds this set of Criteria using outcome-based education approach. All engineering education programs seeking international accreditation from IABEE shall fulfill the following Criteria.

Criterion 1: Orientation of the Graduate Competence

1. Program shall define the profile of graduates to be envisaged as autonomous professionals by considering country's potential resources, cultures, needs and interests.
2. Program shall inform its students and faculty with the envisaged autonomous professional profile and widely publicize it.
3. Program shall establish its expected learning outcomes which consist of abilities to utilize knowledge, skills, resources and attitudes as described in the following (a) to (j) items to be acquired by the student at the time of completion of the study:
   (a) an ability to apply knowledge of mathematics, natural and/or materials sciences, information technology and engineering to acquire comprehensive understanding of engineering principles.
   (b) an ability to design components, systems, and/or processes to meet desired needs within realistic constraints in such aspects as law, economic, environment, social, politics, health and safety, sustainability as well as to recognize and/or utilize the potential of local and national resources with global perspective.
   (c) an ability to design and conduct laboratory and/or field experiments as well as to analyze and interpret data to strengthen the engineering judgment.
   (d) an ability to identify, formulate, analyze, and solve engineering problems.
   (e) an ability to apply methods, skills and modern engineering tools necessary for engineering practices.
   (f) an ability to communicate effectively in oral and written manners.
   (g) an ability to plan, accomplish, and evaluate tasks under given constraints.,
   (h) an ability to work in multidisciplinary and multicultural team.
   (i) an ability to be accountable and responsible to the society and adhere to professional ethics in solving engineering problems.
   (j) an ability to understand the need for life-long learning, including access to the relevant knowledge of contemporary issues.

Criterion 2: Learning Implementation

2.1 Curriculum

(1) Curriculum shall include the following subject areas:
   (a) Mathematics and discipline-specific natural sciences
   (b) Discipline-specific engineering science and technology
   (c) Information and communication technology
   (d) Engineering design and problem based experiments
   (e) General education, which includes morality, ethics, socio-culture, environment and management

(2) Curriculum development shall consider input from Program stakeholders.

(3) Curriculum shall indicate the structural relationship and contributions of the subject courses to fulfill learning outcomes. Procedures, including syllabus, shall be established and documented so that the expected learning process can be implemented in a controlled way.

(4) Curriculum shall ensure that the students are exposed to engineering practices and major design project experience using engineering standards and multiple realistic constraints based on knowledge and skills acquired in preceding course work.

2.2 Faculty

(1) Program shall provide necessary number, qualification and competence of faculty members for performing learning process, including planning, delivering, evaluating, and continually improving its effectiveness in order to achieve the learning outcomes.

(2) Program shall ensure that the faculty members are aware of the relevance and importance of their roles and contributions to the learning outcomes.

2.3 Students and Academic Atmosphere

(1) Program shall define and implement an entry standard for both new and transfer students, as well as transfer of credits.

(2) Program shall define and implement an ongoing monitoring of student progress and evaluation of student performance. Procedures of quality assurance shall be established to ensure that adequacy of standards is achieved in all assessments.

(3) Program shall create and maintain good academic atmosphere conducive to successful learning.

(4) Program shall promote co-curricular activities for character building and enhancing the students' awareness on the country's needs.

2.4 **Facility**

Program shall ensure the availability and accessibility of facilities for effective functioning of the learning process and attainment of the learning outcomes.

2.5 **Institutional Responsibility**

(1) Program shall define and manage the process for the provision of the educational service, including education design, curriculum development and delivery, and assessment of learning.

(2) Institution shall make efforts to establish resource, supporting service and cooperation with stakeholders on research, education and/or service to community with due consideration to existing local resources.

Criterion 3: Assessment of the Expected Learning Outcomes

3.1 Program shall ensure that an effective assessment process of learning outcomes based on established performance indicators is implemented and maintained at planned intervals using appropriate methods.

3.2 Program shall ensure that graduates of the program achieve all expected learning outcomes.

Criterion 4: Continual Improvement

4.1 Based on the assessment results, Program shall perform an evaluation at planned intervals with output in the form of decisions to improve the effectiveness of the educational process, the suitability of the learning outcomes related to the needs of stakeholders, and resources.

4.2 Program shall maintain documents and records related to the implementation of evaluation, the results and their follow-up.

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International Common Criteria and Criteria Guide

Preamble

The Indonesian Accreditation Board for Engineering Education (IABEE) builds this set of Criteria using outcome-based education approach. All engineering education programs seeking international accreditation from IABEE shall fulfill the following Criteria.

- IABEE Common Criteria (CC) are established as a framework to perform accreditation of higher education programs. These CC comprise of elements that shall be fulfilled by the Program.
- Program shall define the profile of autonomous professionals to be fostered and define the abilities and knowledge as learning outcomes that the graduates are expected to acquire at the time of completion of the study.
- Program should promote self-reliance, welfare, advancement, fairness and justice for the national and global community in general, based on science, technology, culture and sustainable utilization of natural resources.
- Programs to be accredited are four-year bachelor of engineering programs or other higher education programs which IABEE considered as equivalent.
- Program is required to design the curriculum systematically to ascertain the achievement of the learning outcomes. Student and faculty should be aware of the learning outcomes.
- It is important for Program to broadly publicize the learning outcomes to the society. Program is also required to engage in continual improvement and at the same time to consider the sustainability of operation.
- Program is not necessarily limited to the case where a department offers a single program. It is allowed for multiple departments to jointlyform a program, and for a department to operate multiple programs as long as the program has a well-defined body of knowledge. Program may include some subjects to be learnt off home campus in cooperation with other higher education institutions.
- The Common Criteria consist of 4 elements, following the management approach of PDCA (Plan Do Check Act). Criterion 1 deals with the orientation of the graduate competence, Criterion 2 explains the learning implementation, Criterion 3 explains the assessment of the expected learning outcomes, and Criterion 4 explains the continual improvements.
- In addition to these Common Criteria, Program seeking for accreditation shall fulfill also the Category and Discipline Criteria.

Criterion 1: Orientation of the Graduate Competence

- Program shall define the profile of graduates to be envisaged as autonomous professionals by considering country's potential resources, cultures, needs and interests.

- Program is required to define the profile of the autonomous professionals intended to foster as its educational objectives, by taking account of :
  (1) Local and/or national resources, such as human and physical resources.
  (2) Local and/or national wisdoms,
  (3) Local and national needs and interests, and
  (4) Traditions, vision and mission of the education institution.
- Program should demonstrate the process of establishing and periodic reviewing of the autonomous professional profiles, including the involvements of the stakeholders.

- Program shall inform its students and faculty with the envisaged autonomous professional profile and widely publicize it.

- The envisaged autonomous professional profile shall be informed to students and faculty and made accessible to the general public.

- Program shall establish its expected learning outcomes which consist of abilities to utilize knowledge, skills, resources and attitudes as described in the following (a) to (j) items to be acquired by the student at the time of completion of the study:

- Utilization of resources such as rich and unique biodiversity as a comparative advantage should be equipped with human resources with necessary knowledge, skill and attitude to achieve competitive advantage.
- Program shall establish its own learning outcomes based on the autonomous professional profile to be acquired. The learning outcomes shall cover all graduate competences from (a) to (j) as mentioned in Common Criteria 1 (3), which are expressed in such a way to give flexibility to Program. It is important to note that the learning outcomes shall take into account also the Category and Discipline Criteria.
- Program shall define appropriate performance indicators and associated assessment method for each learning outcome.

(a) an ability to apply knowledge of mathematics, natural and/or materials sciences, information technology and engineering to acquire comprehensive understanding of engineering principles.

- Engineering Principles refers to ideas, rules and concepts to be considered when solving an engineering problem. The set of principles may vary among engineering disciplines depending on the uniqueness of systems, problems, ethical issues, and problem solving methods of the discipline.
- Attaining comprehensive understanding of engineering principles is indicated by acquisition of :
  1) Mathematics, basic sciences (such as physics, biology, chemistry) and information technology in the engineering field of Program.
  2) An ability to utilize the aforementioned knowledge.

(b) an ability to design components, systems, and/or processes to meet desired needs within realistic constraints in such aspects as law, economic, environment, social, politics, health and safety, sustainability as well as to recognize and/or utilize the potential of local and national resources with global perspective.

- The ability to design components, systems, and/or processes is the hallmark competence of engineering education. Design implies the ability to utilize multidimensional thinking with knowledge of global perspective to develop components, systems, and/or processes to achieve specific objectives. It is not limited to drawing a plan, but also refers to the synthesis of various academic disciplines and technologies to pursue practicable solutions to a problem that does not necessarily have one correct answer.
- It involves also a process of optimization by taking into account some realistic constraints, such as law, economic, environment, social, politics, health and safety, and sustainability as well as utilization of the knowledge of culture, society and available resources.

(c) an ability to design and conduct laboratory and/or field experiments as well as to analyze and interpret data to strengthen the engineering judgment.

- This competence refers to the design and application of laboratory and/or field experiments within the broad context of engineering practice such as problem identification, testing of potential solution ideas, solution implementation plan, and other design-related activities.
- Experiments may include activities in physical laboratories, computer simulations, and field experiments.

(d) an ability to identify, formulate, analyze, and solve engineering problems.

- Engineering problem solving involves iterative activities incorporating the definition of the problem, development of solution alternatives, selection of best alternative, application of solution, evaluation and validation of solution against problem constraints, and revision of solution.

- This competence may include the ability to
  - ✓ utilize techniques and methods for performing engineering works comprising survey, data analysis, planning, design, operation and maintenance.
  - ✓ apply the engineering logical thinking for handling both of the design and trouble shooting context.

(e) an ability to apply methods, skills and modern engineering tools necessary for engineering practices.

- Program shall have a clear definition of the methods, skills, and modern engineering tools appropriate for its level of study and engineering discipline, and how these are learnt throughout the curriculum.
- An ability to select a method and tools with their strength and limitation characteristics for a given problem.
- An ability to utilize and adjust the method and tools to suit specific problems.

(f) an ability to communicate effectively in oral and written manners.

- This competence indicates the need of active and effective communication skills; socio-cultural perspective should be considered for the acceptability and workability of the implementation of engineering works.
- These oral and written communications should include the use of engineering standards.
- Program shall ensure that a measureable portion of the oral and/or written communications involve the use of internationally recognized languages.

(g) an ability to plan, accomplish, and evaluate tasks under given constraints.

- This competence refers to the ability to plan, accomplish, and evaluate tasks associated with any curricular activity deemed appropriate by Program for its assessment and evaluation. The assessment should focus more on the students' task management skills rather than the substantial outcome of the task itself.

(h) an ability to work in multidisciplinary and multicultural team.

- This competence refers to the ability to work collaboratively with people from different technical disciplines, fields and cultural backgrounds.
- Multicultural concerns such as tolerance, mutual understanding, appreciation on differences in building a synergy, are important considerations for the success of a team work.
- Multidiscipline circumstances may cover disciplines within engineering and non-engineering

disciplines.

(i) An ability to be accountable and responsible to the society and adhere to professional ethics in solving engineering problems.

- This competence refers to the understanding on the following issues and the ability to take action accordingly.
  - ✓ the impact of technology of related engineering fields on public welfare, environmental safety and sustainable development
  - ✓ the engineering ethics and regulations
  - ✓ the engineering history and standard & code philosophy in design.

(j) an ability to understand the need for life-long learning, including access to the relevant knowledge of contemporary issues.

- Program is required to assist students to get accustomed to independent and continuous learning through lectures, research, experiments, practical training, exercises and assignment.
- This competence refers to
  - ✓ Understanding the necessity of continuous professional development.
  - ✓ an ability to acquire updated information and knowledge.
  - ✓ an awareness of the importance of sharing knowledge.

Criterion 2: Learning Implementation

2.1 **Curriculum**

(1) Curriculum shall include the following subject areas:

(a) Mathematics and discipline-specific natural sciences

(b) Discipline-specific engineering science and technology

(c) Information and communication technology

(d) Engineering design and problem based experiments

(e) General education, which includes morality, ethics, socio-culture, environment and management

- Program shall ensure that the curriculum meets the above mentioned subject areas appropriate to engineering regardless the subject/course names. The program must ensure that the curriculum devotes adequate attention and time to each component, consistent with the learning outcomes, which include:
  - ✓ A minimum of 20% of a combination of college level mathematics and basic sciences (some with experimental experience) appropriate to the discipline. Basic sciences are defined as courses such as biological, chemical, or physical sciences.

- ✓ A minimum of 40% of engineering topics, consisting of engineering sciences and engineering design appropriate to the student's field of study. The engineering sciences have their roots in mathematics and basic sciences but carry knowledge further toward creative application. These studies provide a bridge between mathematics and basic sciences on the one hand and engineering practices on the other. Engineering design is the process of devising a system, component, or process to meet desired needs. It is a decision-making process, in which the basic sciences, mathematics, and the engineering sciences are applied to convert resources optimally to meet the stated needs.
- ✓ A maximum of 30% general education components that complement the technical content of the curriculum and are consistent with the learning outcomes.

(2). Curriculum development shall consider inputs from Program stakeholders.

- Program should demonstrate on how to develop the curriculum and to assure the requirement of the society, industry and professional fields.
- There must be a documented, systematically utilized, and effective procedure describing the way to meet the need of stakeholders and to review the curriculum periodically to ensure its consistency with the institutional mission, the stakeholders needs, and these criteria.
- Program should provide sufficient opportunity for the stakeholders to discuss Program educational objectives and to foster closer collaboration.

(3) Curriculum shall indicate the structural relationship and contributions of the subject courses to fulfill learning outcomes. Procedures, including syllabus, shall be established and documented so that the expected learning process can be implemented in a controlled way.

- Program shall describe how the curriculum content and structure are aligned to attain the learning outcomes.
- Program should explain how the specific requirements of each curricular area addressed in the Common Criteria or Discipline Criteria can be met, both in terms of load and depth of the material.
- Program shall establish a syllabus for each course used to satisfy the mathematics, science, and discipline-specific requirements or any applicable criteria.
- Program is required to implement educational activities for students to achieve its learning outcomes.
- Program is required to systematically design curriculum to enable students to achieve the learning outcomes within the allocated academic years.
- Program is required to adequately inform the faculty and the students through various means such as guidebooks, orientation programs etc. about the curriculum and how the

learning outcomes will be realized through the learning process.

(4) Curriculum shall ensure that the students are exposed to engineering practices and major design project experience using engineering standards and multiple realistic constraints based on knowledge and skills acquired in preceding course work.

- Program must provide opportunity to students to develop competence in practical application of engineering skills, combining theory and experience along with the use of other relevant knowledge and skills. Training in engineering practices may be supported by several courses (subjects) but should culminate in a major design project. This major project serves as a capstone for the program which requires students to integrate knowledge and skills acquired in earlier coursework.
- Program shall define curriculum subjects to optimally support main stream of discipline specific requirements and to provide opportunity for students to acquire practical experience in implementing the subjects in an actual working environment.

2.2 **Faculty**

(1) Program shall provide necessary number, qualification and competence of faculty members for performing learning process, including planning, delivering, evaluating, and continually improving its effectiveness in order to achieve the learning outcomes.

- Program shall describe the qualifications of the faculty and their adequacy to cover all curricular areas and also to meet any criteria apply.
- This description should include the composition, size, experience and the extent and quality of faculty member involvement in interactions with students, student advising, and oversight of Program.
- Program shall provide detailed descriptions of professional development activities for each faculty member and how activities such as sabbaticals, travel, workshops, seminars, etc., are planned and supported.

(2) Program shall ensure that the faculty members are aware of the relevance and importance of their roles and contributions to the learning outcomes.

- Program shall describe the role played by the faculty with respect to the course creation, modification, and evaluation, and with respect to the definition, revision and attainment of the learning outcomes.
- Program shall have a method to institutionally develop and evaluate faculty educational activities.
- Program shall define and set up communication network among faculty members for close

collaboration among the courses set in the curriculum to obtain better educational results.

2.3 **Students and Academic Atmosphere**

(1) Program shall define and implement an entry standard for both new and transfer students, as well as transfer of credits.

- Program shall establish written policies on student admission, covering the requirements and the process for accepting new students into Program, including information on how Program ensures and documents that students are meeting prerequisites and how it handles the situation when a prerequisite has not been met.
- Program shall describe the requirements and process for accepting transfer students and transfer credits.

(2) Program shall define and implement ongoing monitoring of student progress and evaluation of student performance. Procedures of quality assurance shall be established to ensure that adequacy of standards is achieved in all assessments.

- Program shall describe the process by which student performance is evaluated and student progress is monitored.
- Program shall document the processes for regularly assessing and evaluating the extent to which the learning outcomes are being attained. It should also describe how the results of these processes are being utilized to perform continual improvement of the program.
- Assessment is defined as one or more processes that identify, collect, and prepare the data necessary for evaluation.
- Evaluation is defined as one or more processes for interpreting the data acquired through the assessment processes in order to determine how well the learning outcomes are being attained.
- The process should include
  - ✓ a listing and description of the assessment processes used to gather the data upon which the evaluation of each learning outcome is based, for example specific exam questions, student portfolios, project presentations, oral exams, focus groups, industrial advisory committee meetings, or other processes that are relevant and appropriate to the program,
  - ✓ the frequency with which these assessment processes are carried out,
  - ✓ the expected level of attainment for each of the learning outcomes,
  - ✓ summaries of the results of the evaluation process and an analysis illustrating the extent to which each of the learning outcomes is being attained, and
  - ✓ how the results are documented and maintained.

(3) Program shall create and maintain good academic atmosphere conducive to successful learning.

- Program shall develop supporting activities to create and maintain good academic atmosphere for learning, such as by providing student guidance and counseling on academic as well as non-academic aspects and career guidance.
- Program shall describe the process for advising and providing career guidance to students, how often students are advised, and who provides the advising.

(4) Program shall promote co-curricular activities for character building and enhancing the students' awareness on the country's needs.

- Program shall create and maintain various co-curricular activities particularly to improve the student soft skill, such as conducting studium generale, involving student in faculty research projects, and participating in scientific meeting and competition.
- Spirit of entrepreneurship as characterized by a deep sense of purpose, perseverance, resourcefulness, open-mindedness, and eagerness to learn should be emphasized in the learning process.

2.4 **Facility**

Program shall ensure the availability and accessibility of facilities for effective functioning of the learning process and attainment of the learning outcomes.

- Program shall describe the facilities in terms of their ability to support the attainment of the learning outcomes and to provide an atmosphere conducive to learning, such as
  - ✓ offices (such as administrative, faculty, clerical, and teaching assistants) and any associated equipment,
  - ✓ classrooms and associated equipment,
  - ✓ in house laboratory facilities including those containing computers (describe available hardware and software) and the associated tools and equipment that support instruction, and field laboratory whenever necessary
  - ✓ computing resources (workstations, servers, storage, networks including software)
  - ✓ library services.
- Program shall describe and assess the adequacy of these facilities to support the scholarly and professional activities of the students and faculty.
- Program shall describe how students are provided with appropriate guidance regarding the use of tools, equipment, computing resources, laboratories, and other physical facilities so as to enable the utilization of these facilities in a safe and appropriate manner.
- Program shall also describe the policies and procedures for maintaining and upgrading the

tools, equipment, computing resources, laboratories, library and other facilities used by students and faculty.

2.5 **Institutional Responsibility**

(1) Program shall define and manage the process for the provision of the educational service, including education design, curriculum development and delivery, and assessment of learning.

- Program shall describe the governance of the program and its adequacy to ensure the quality and continuity of the program and how the leadership is involved in decisions that affect the program.
- Program shall describe the process used to establish the program's budget and provide evidence of continuity of institutional support for the program, including the sources of financial support for both permanent (recurring) and temporary (one-time) funds.
- Program shall describe how teaching is supported by the institution in terms of graders, teaching assistants, teaching workshops, etc.
- Program shall describe the adequacy of the staff (administrative, instructional, and technical) and institutional services provided to the program.

(2) Institution shall make efforts to establish resources, supporting service and cooperation with stakeholders on research, education and/or service to community with due consideration to existing local resources.

- Program shall make efforts to develop partnership with external institutions such as industry, research centers, and community units to foster the Tridharma (learning, research, and community engagement).The institution hosting the Program shall demonstrate the support to these efforts.
- The improvement of the students' learning process through the engagement of academia, business, and/or the government in the development of local region through the use of local resources is viewed as a particular advantage of the Program.

Criterion 3: Assessment of the Expected Learning Outcomes

3.1 Program shall ensure that an effective assessment process of learning outcomes based on established performance indicators is implemented and maintained at planned intervals using appropriate methods.

- This criterion is an explanation of the key word of Check in the PDCA cycle. A complete and clearly documentedmethod and procedure for monitoring student progress and measuring the achievement of learning outcomes shall be established.
- Program shall develop relevant performance indicators for each learning outcome so as to

enable an effective measurement of the achievability.

- Program shall establish the method and procedure of student assessment that show the way to collect valid data using the established performance indicators.
- The assessment of each learning outcome shall be conducted at planned interval.

3.2 Program shall ensure that graduates of the program achieve all expected learning outcomes.

- Program shall state the level of learning outcomes as graduation requirements and explain how to measure the achievement.
- The process and results of assessment shall be documented and the records are maintained. The document should contain explanation on resources, source of learning, delivery methods and procedures of examination in particular andof assessment in generaland therefore can be used as evidence that all graduates have been directly or indirectly evaluated and that all-sets of learning outcomes have been fulfilled.
- Programs shall have written policies and procedures on how to deal with non-performing students and how to terminate students who are not able to complete their study.

Criterion 4: Continual Improvement
4.1 Based on the assessment results, Program shall perform an evaluation at planned intervals without put in the form of decisions to improve the effectiveness of the educational process, the suitability of the learning outcomes related to the needs of stakeholders, and resources.

- To ensure the continual improvement, Program should run its educational activities by implementing a quality assurance system follows the PDCA cycle as described in the preamble.
- The evaluation shall be based on assessment of the learning outcomes attainment. The output of the evaluation shall contain recommendations on the improvement of learning materials, methods of delivery and other educational processes, suitability and adequacy of the learning outcomes with regards to the needs of stakeholders, and resources.
- The evaluation shall be carried out at planned intervals following a method and procedure made well-known to the faculty. The evaluation method and procedure should be designed so as to enable of identifying constraints, root cause of obstacles, and therefore resulting in opportunities for improvement.

4.2 Program shall maintain documents and records related to the implementation of evaluation, the results and their follow-up.

- A documented procedure for the implementation of Program evaluation shall be established.
- The records of evaluation implementation, its results and its follow-up shall be maintained and accessible to the faculty. These records provide evidence that evaluation has been conducted, the results have been implemented and periodic improvement has been effected and therefore signifying implementation of PDCA.

Disicpline Criteria for Chemical, Biochemical, and Similarly Named Engineering Programs

Leading Society:

- Asosiasi Pendidikan Tinggi Teknik Kimia Indonesia (APTEKINDO) – *Association of Indonesian Higher Education in Chemical Engineering*
- Badan Kejuruan Kimia Persatuan Insinyur Indonesia (BKK PII) – *PII Chapter for Chemical Engineers*

These Discipline Criteria apply to engineering programs that include “chemical”, “biochemical”, “bioprocess“, “bioenergy”, and similar modifiers in their titles.

Currriculum

The curriculum shall provide a firm grasp in basic sciences which include chemistry and chemistry-related sciences, physics, and/or biology with some reference to local context as appropriate to the objectives of the Program. The curriculum must include the engineering application of these basic sciences to the design, analysis, and control of chemical, physical, and/or biological processes and the design and development of products, including the economics and hazards associated with these processes and products.

The learning process articulating this curriculum must be conducted in such a way to ensure that the graduates have sufficient knowledge, skills, and attitude in the process design, analysis, and control, and product design and development. The learning process must also enable students to apply research-based knowledge and research methods to identify, formulate, and solve engineering problems.

Disicpline Criteria for Environmental Engineering and Similarly Named Engineering Programs

Leading society:

- Badan Kejuruan Teknik Lingkungan Persatuan Insinyur Indonesia (BKTL PII) – *PII Chapter for Environmental Engineers*
- Ikatan Ahli Teknik Penyehatan dan Lingkungan Indonesia (IATPI) – *Indonesian Association of Experts in Sanitation and Environmental Engineering*

These Discipline Criteria apply to engineering programs that include "environmental" and similar modifiers in their titles.

Curriculum

The curriculum must prepare graduates to apply knowledge of mathematics and basic sciences; introductory level knowledge of environmental issues associated with air, land, and water systems and associated environmental health impacts; conduct laboratory experiments and analyze and interpret the resulting data in more than one major environmental engineering focus area, (e.g., air, water, land, environmental health); performing design of environmental engineering systems; understanding in advanced principles and practice relevant to the program objectives. The curriculum must prepare graduates to understand concepts of professional practice, project management, and the roles and responsibilities of public institutions and private organizations pertaining to environmental policy and regulations.

Faculty

The program must demonstrate that a majority of those faculty teaching courses that are primarily design in content are qualified to teach the subject matter by virtue of professional licensure, board certification in environmental engineering, or by education and equivalent design experience.

Discipline Criteria for Ocean and Similarly Named Engineering Programs

Leading Society:

- Himpunan Ahli Pengelola Pesisir Indonesia (HAPPI) – *Indonesian Association of Experts in Coastal Management*
- Himpunan Ahli Teknik Hidraulik Indonesia (HATHI) – *Indonesian Association of Experts in Hydraulics Engineering*

These Discipline Criteria apply to engineering programs that include “coastal”, “ocean”,“marine”, “naval architecture”, or similar modifiers in their titles.

Curriculum

The curriculum must prepare graduates to have the knowledge and the skills to apply the principles of fluid and solid mechanics, dynamics, hydrostatics, hydrodynamics, probability and applied statistics, oceanography, and water waves, to engineering problems and to work in groups to perform engineering design at the system level, integrating multiple technical areas and addressing design optimization.

Faculty

Program faculty must have responsibility and sufficient authority to define, revised, implement, and achieve the program objectives

Discipline Criteria for Agricultural and/or Bio-system Engineering in Bachelor Programs

Leading Society:
Badan Kejuruan Teknik Pertanian Persatuan Insiyur Indonesia (BKTP PII) – *PII Chapter for Agricultural Engineers*

These Discipline Criteria apply to bachelor programs that include “agricultural engineering”, “bio-system engineering,” “bio-production engineering”, and similar modifiers in their titles.

Curriculum

The curriculum shall provide fundamental knowledge of engineering principles, agriculture and/or biosystem related sciences and ability to apply them to analyze, interpret, identify alternative solutions, and implement experiments for enhancing the performance agricultural systems or solution of common problems in agriculture and/or biosystem.

The learning and educational process articulating in the curriculum must be conducted in such away to ensure that the graduates have sufficient knowledge, skill and attitude in the process to identify, analyze, formulate, design,use and control of machinery, structure and systems to solve ngineering problems as required in the production of plant and animal, processing and handling the agricultural and/or biological materials.

The curriculum content that be considered as “educational components of mathematics, natural sciences and technologies” appropriate to the field shall include systematic subject clusters related with mathematics and natural sciences (focusing on multiple subjects such as, physics, chemistry, biology, or geography), and area of agricultural meteorology, irrigation, drainage and reclamation engineering (agricultural civil and environmental engineering), and/or area of agricultural machinery & automation, and/or area of agricultural work system and safety, and/or area of agricultural/biological production system, and/or area of agriculture/biological and environment information.

To conduct the learning and educational process the program shall be considered as “to provide a sufficient number of faculty members able to realize the curriculum with applicable educational methods and to improve the educational result of the program, and shall provide the faculty with institutional support.”

Disicpline Criteria for Civil and Similarly Named Engineering Programs

Leading Society:
Badan Kejuruan Teknik Sipil Persatuan Insiyur Indonesia (BKTS PII) – *PII Chapter for Civil Engineers*

These Discipline Criteria apply to bachelor programs that include “civil engineering” and similar modifiers in their titles.

Currriculum
The program shall prepare graduates to be proficient in applied mathematics and natural sciences relevant to civil engineering, in a minimumof three recognized major civil engineering areas (namely structural, project management, geotechnical, water resources, environmental, and transportation), in conducting civil engineering experiments and analyzing and interpreting the resulting data, and in designing and integrating all professional components of the curriculum. The program shall also prepare graduates to explain basic concepts in management, business, public policy, and leadership, and explain the importance of ethics and professional licensure.

Faculty
Faculty members teaching courses on design should have either certification of professional engineer or qualification through experience in engineering design and practices.

Discipline Criteria for Electrical, Computer, Communications, Telecommunication and Similarly Named Engineering Programs

Leading society:

- Forum Pendidikan Tinggi Teknik Elektro Indonesia (FORTEI) – *Indonesian Forum for Higher Education in Electrical Engineering*
- Badan Kejuruan Elektro Persatuan Insinyur Indonesia (BKE PII) – *PII Chapter for Electrical Engineers*

These Discipline Criteria apply to engineering programs that include "electrical", "electronic(s)," "computer," "communication(s)," "telecommunication(s)," or similar modifiers in their titles.

Curriculum

The curriculum specifies subject areas appropriate to engineering and must include:

a. one year of a combination of university level mathematics and basic sciences (one with experimental experience) appropriate to the discipline.

b. one and one-half years of engineering topics, i.e engineering sciences and engineering design, appropriate to the title of the program.

Students must be prepared for engineering practice through a curriculum culminating in a major design experience based on the knowledge and skills acquired in earlier course work to meet desired needs within realistic constraints.

The structure of the curriculum must provide both breadth and depth across the range of engineering topics implied by the title of the program.

The curriculum must include probability and statistics, with applications appropriate to the program name; mathematics through differential and integral calculus; basic sciences and engineering topics (including computing science) necessary to analyze and design complex electrical/electronic devices or systems containing hardware and/or software components.

The curriculum for programs containing the modifier "electrical," "electronic(s)," "communication(s)," or "telecommunication(s)" in the title must include advanced mathematics, such as differential equations, linear algebra, and complex variables.

The curriculum for programs containing the modifier "computer" in the title must include discrete mathematics.

The curriculum for programs containing the modifier "communication(s)" or "telecommunication(s)" in the title must include topics in communication systems.

The curriculum for programs containing the modifier "telecommunication(s)" must include design and operation of telecommunication networks for services such as but not limited to voice, data, image, and video transport.

Discipline Criteria for Engineering Physics and Similarly Named Engineering Programs

Leading society:
Badan Kejuruan Teknik Fisika Persatuan Insinyur Indonesia (BKTF PII) – *PII Chapter for Engineering Physics*

Curriculum

The program must prepare graduates to engage in the development of the forefront of technology, such as and not limited to, instrumentation & control, built environment and energy systems, material design and processing, renewable energy

The curriculum must provide strong fundamentals on mathematics, physics, engineering sciences and engineering design. The curriculum should cover the capability to thrive in professional and industry sectors, such as engineering economics, project management and core competences of the forefront technology.

Faculty

The program shall demonstrate that those faculty members teaching courses that are primarily design in content are qualified to teach the subject matter by virtue of education and experience or professional licensure.

Discipline Criteria for Geodetics-Geomatics Engineering

Leading society:
Forum Ketua Jurusan dan Program Studi Teknik Geodesi-Geomatika se-Indonesia – *Indonesian Forum for Higher Education in Geodetic-Geomatics Engineering*

These Discipline Criteria apply to engineering programs that include “surveying,” “geodetic,” “geomatics”, and similar modifiers in their titles.

Curriculum

The curriculum must prepare graduates to apply knowledge of mathematics, natural sciences and statistics in Geodetics/Geomatics egineering field, complete task related to spatial data acquisition using modern measurement tools, perform geospatial data processing using industry-standard software, and also perform standard analysis and design in at least one of the recognized technical specialities within surveying/geodetics/geomatics technology, include boundary and/or land surveying, geographic and/or land information systems, engineering project surveying, photogrammetry, remote sensing, mapping and geodesy, and other related areas.

Faculty

The program must demonstrate that a majority of those faculty members are qualified to teach engineering courses by education, equivalent design experience orboard certification of a surveyor professional/geomatics engineering.

Disicpline Criteria for Industrial and Similarly Named Engineering Programs

Leading society:

- Badan Kerja Sama Penyelenggara Pendidikan Tinggi Teknik Industri Indonesia (BKSTI) – *Indonesian Association of Higher Education in Industrial Engineering*
- Badan Kejuruan Teknik Industri Persatuan Insinyur Indonesia (BKTI PII) – *PII Chapter for Industrial Engineers*

Currriculum

The program shall prepare graduates to be proficient in design, improve, and implement integrated systems that include people, materials, equipment, energy and information. To meet these needs, the curriculum must provide adequate knowledge about the application of mathematics, statistics and probabilistic theory as well as analysis and design engineering as well as knowledge with regard to social sciences. The education program should ensure the provision of an integrated system design experiences to students. The curriculum must include in depth instruction to accomplish the integration of systems using appropriate analytical, computational and experimental practices.

Faculty

Faculty members must understand the professional practice and maintain currency in their respective professional areas. Faculty members must be responsible and able to make the definition, evaluation, implementation and improvement on the achievement of learning outcomes in the framework of an continuous improvement ofthe study program.

Discipline Criteria for Materials, Metallurgical Engineering and Similarly Names

Leading society:

- Badan Kejuruan Teknik Material Persatuan Insinyur Indonesia – *PII Chapter for Material Engineers*
- Badan Kejuruan Teknik Metalurgi Persatuan Insinyur Indonesia – *PII Chapter for Metallurgical Engineers*

These Discipline Criteria apply to engineering programs including “materials,” “metallurgical,” “ceramics,” “glass”, “polymer,” “biomaterials,” and similar modifiers in their titles.

Curriculum

The curriculum must prepare graduates to apply advanced science (such as chemistry, biology and physics), computational techniques and engineering principles to materials systems implied by the program modifier, e.g., ceramics, metals, polymers, biomaterials, composite materials; to integrate the understanding of the scientific and engineering principles underlying the four major elements of the field: structure, properties, processing, and performance related to material systems appropriate to the field; to apply and integrate knowledge from each of the above four elements of the field using experimental, computational and statistical methods to solve materials problems including selection and design consistent with the program educational objectives.

Faculty

The faculty expertise for the professional area must encompass the four major elements of the field.

Discipline Criteria for Mechanical Engineering Programs

Leading society:

- Badan Kerjasama Teknik Mesin Seluruh Indonesia (BKSTM) – *Indonesian Association of Higher Education in Mechanical Engineering*
- Badan Kejuruan Mesin Persatuan Insinyur Indonesia (BKM PII) – *PII Chapter for Mechanical Engineers*

These Discipline Criteria apply to all engineering programs that include "mechanical" or similar modifiers in their titles.

Curriculum

The curriculum must require students to apply basic sciences, mathematics (including multivariate calculus and differential equations) and principles of engineering sciences; to model, analyze, design, and apply physical systems, components or processes; and prepare students to work professionally in either thermal or mechanical systems.

Faculty

Faculty members teaching courses on design should have either certification of professional engineer or qualification through experience in engineering design and practices.

Discipline Criteria for Nuclear Engineering and Similarly Named Engineering Programs

Leading society:
Himpunan Masyarakat Nuklir Indonesia (HIMNI) – *Indonesian Association for Nuclear Society*

These Discipline Criteria apply to engineering program that include “nuclear”, “radiological”, “radiation”, or similar modifiers in their titles.

Curriculum

The curriculum shall provide strong fundamentals on advanced mathematics, science, engineering science and engineering design related to the objectives of the program. The curriculum must include the application of atomic and nuclear physics, and the transport of radiation and its interaction with matter, for nuclear power generation, medical, industrial, and agricultural areas; to perform nuclear engineering design; to measure nuclear and radiation processes. The program shall ensure that the curriculum must comply with international and national nuclear regulations by emphasizing the requirements for nuclear safety, non-destructive inspection, security and safeguards.

Faculty

The program must demonstrate that faculty members are qualified to teach nuclear engineering courses by education, equivalent design experience or board certification of a professional engineer depending on the program needs.

PERSATUAN INSINYUR INDONESIA
The Institution of Engineers Indonesia

Indonesian Accreditation Board for Engineering Education

ANNEX D

RULES AND PROCEDURES FOR EVALUATION AND ACCREDITATION (RPEA)

APPLICATION FOR
PROVISIONAL MEMBERSHIP
OF THE WASHINGTON ACCORD
2019

THE INSTITUTION OF ENGINEERS INDONESIA / INDONESIAN ACCREDITATION BOARD FOR ENGINEERING EDUCATION – PII / IABEE

INDONESIAN ACCREDITATION BOARD
FOR ENGINEERING EDUCATION (IABEE)

RULES AND PROCEDURES FOR EVALUATION AND ACCREDITATION (RPEA)

VERSION 2018-

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1. BACKGROUND, VISION, AND MISSION

1.1. BACKGROUND

The ever-evolving challenges faced by the engineering profession in the globalization era highlight the absolute necessity of managing the quality of engineering higher education outcomes within the framework of an internationally recognized quality standards and practices. Another key paradigm in engineering higher education is the relevance of academic programs operated by higher education institutions to the needs of the profession and the industry.

Quality and relevance issues are paramount to the effectiveness and competitiveness of engineering higher education institutions in the future, and as such should form the framework of a higher education quality management system in Indonesia.

The aim of this education quality management system is to improve the quality of engineering education in a sustainable manner. Essential to the achievement of this aim are the principle of autonomy of higher education institutions as a driving force for a more dynamic and accountable system, and an accreditation system to ensure the quality of graduates and the implementation of an effective continuous engineering learning process improvement system which in turn ensures that improvement decisions are based on real, accountable information.

1.2. VISION

The Indonesian Accreditation Board for Engineering Education (IABEE) is a reformer and stimulator for accelerating the progress of engineering higher education in Indonesia to produce innovative human resources and engineering innovation for improving human welfare.

1.3. MISSION

To attain the above vision, IABEE upholds the following missions:

(1) to promote quality improvement of engineering higher education through accreditation to produce autonomous professionals appropriate to the needs of stakeholders,
(2) to facilitate development of engineering higher education systems that emphasizes on continual quality improvement towards global quality standards,
(3) to encourage communication and partnerships between engineering higher education institutions and stakeholders to effectively utilize local resources and wisdom for the welfare of the community, and
(4) to support dissemination of innovations on advancement of engineering higher education.

1.4. IDENTITY & RECOGNITION

IABEE is an independent, non-profit organization founded as a part of the Institution of Engineers Indonesia (PII), to develop and foster quality culture in the management of engineering higher education. This is achieved by assurance that the Study Programs (or referred as Programs henceforth) are operated in compliance to minimum standards, and by encouraging continuous quality improvement in engineering higher education institutions.

The IABEE Headquarters is located at the following postal address:

Indonesian Accreditation Board for Engineering Education (IABEE)
c/o Persatuan Insinyur Indonesia (The Institution of Engineers Indonesia)
Jalan Bandung No. 1, RT 13/RW 5, Menteng, Jakarta 10310
Phone: (+62) 0811 939 0909
e-mail: info@iabee.or.id

The address of IABEE public website is https://iabee.or.id/

The official logo of IABEE is presented in Figure 1.

Figure 1. Official logo of IABEE

IABEE is recognized in Indonesia by the Ministry of Research, Technology and Higher Education (MoRTHE) as an institution responsible for the accreditation of Programs that grant academic degrees in engineering disciplines. Program accreditation by IABEE applies substantially equivalent and internationally recognized accreditation criteria. It is voluntary and optional for undergraduate (bachelor-level) programs that have been accredited nationally at a certain (i.e. the highest) rank. In the context of Indonesia, accreditation of a program at national level is compulsory and directly related to its legal status, registration in the Higher Education Database (PDDIKTI) maintained by the MoRTHE, and to its operational permit as required by law. National accreditation is currently conducted by National Accreditation Agency for Higher Education (BAN-PT). In this regards, IABEE accreditation complements the national accreditation by providing an excellent tool and opportunity for high quality programs to seek international recognition.

2. ACCREDITATION POLICIES AND PROCEDURES

2.1. CONFIDENTIALITY & CONFLICT OF INTEREST

2.1.1. CONFIDENTIALITY OF INFORMATION

IABEE upholds ethics in conducting all activities of its members and organizing staff and requires that each Member and Organizing Staff exhibits highest standards in professionalism, fairness, and integrity. Information disclosed by Programs undergoing evaluation, and information generated by review and discussion activities during the evaluation process shall be treated with confidentiality and shall not be divulged without specific written authorization by IABEE and the Program being evaluated.

2.1.2. CODE OF ETHICS

Code of ethics upheld by all members and organizing staff is stipulated in detail in document called Rules and Procedures for Accreditation-Related Committees (RPARC).

2.1.3. CONFLICT OF INTEREST

Service as IABEE committee members and organizing staff presents the possibility of various situations that may result in conflict of interest, or doubt with regard to the objectivity, fairness, and credibility of the accreditation process. IABEE requires all of its personnel to act in a professional and ethical manner, and to inform of any real or perceived conflict of interest in their activities. Further details of IABEE policies on conflict of interest are described in Rules and Procedures for Accreditation-Related Committee (RPARC) document.

2.2. SCOPE OF ACCREDITATION

The Indonesian Higher Education Act No. 12/2012 defines a Program as an educational and learning unit which implements a specific curriculum and learning methods, in the context of a type of academic, professional, and/or vocational education. Evaluation and accreditation by IABEE are aimed at bachelor-level academic Programs in engineering disciplines. These Programs grant Bachelor of Engineering degrees (*Sarjana Teknik* in Indonesian terminology) by implementing curricula which stipulates a study period of four academic years, with a minimum total course-load of 144 semester-credit units (SKS in Indonesian terminology).

Programs are operated by Program Operating Institutions (POI). POIs are academic institutions operating at range of organizational level from Faculty, School, or equivalent units and up to

University, Institute, or equivalent units. POIs are accredited by National Accreditation Agency for Higher Education (BAN-PT). IABEE does not accredit POIs.

IABEE offers two types of accreditation, i.e. General Accreditation (GA) and Provisional Accreditation (PA).

(1) **General Accreditation (GA)** is intended for programs seeking international recognition through IABEE accreditation. Program wishing to apply for evaluation of GA must comply with eligibility requirements stipulated in Section 2.3.1. of this document.

(2) **Provisional Accreditation (PA)** is intended for programs newly adopting an outcome-based education system and have not yet produced graduates under the system. A program applying for PA will be evaluated to measure its potentials of meeting the Accreditation Criteria within a foreseeable future (2-4 years). Eligibility requirements for a program applying PA evaluation is specified in Section 2.3.2. of this document.

2.3. ELIGIBILITY FOR EVALUATION

The followings are eligibility requirements for Programs seeking to be evaluated according to the types of accreditation offered by IABEE (See Section 2.2). Eligibility status must be proven by the Program by making a self-claim and providing a set of documents supporting the claim during the application process. Application procedures are further explained in Section. 2.5.

2.3.1. ELIGIBILITY REQUIREMENTS FOR GENERAL ACCREDITATION

Programs eligible to apply evaluation for General Accreditation (GA) are those which meet the following requirements.

(1) The associated Program Operating Institution (POI) has obtained National Accreditation for Institution status with a minimum rank of “B”.
(2) The Program has obtained National Accreditation status ranked “A”.
(3) The Program is a bachelor-level program in an engineering discipline with a curricular study period of four years, and with a total course-load of a minimum of 144 credit units (or SKS).
(4) The Program is at least in the 4^{th} year of continuous Outcome-Based Education (OBE) implementation.
(5) The OBE shall include assessment and evaluation of the Learning Outcomes of the students.
(6) By the time of the on-site visit evaluation, the Program has produced at least one graduate under its OBE system.
(7) The Program has established and publicized the Autonomous Professional Profile statement formulated as its educational objectives.
(8) The Program has established and publicized its Learning Outcomes as the basis for developing its curriculum and learning methods.

2.3.2. ELIGIBILITY REQUIREMENTS FOR PROVISIONAL ACCREDITATION

Programs wishing to apply evaluation for Provisional Accreditation (PA) must fulfill the following requirements.

(1) The associated Program Operating Institution has obtained National Accreditation for Institution status with a minimum rank of 'B'.
(2) The Program has obtained National Accreditation status at least ranked "B".
(3) The Program is a bachelor-level program in an engineering discipline with a curricular study period of four years, and with a total credit of a minimum of 144 credit units (or SKS).
(4) The Program has implemented Outcome-Based Education (OBE) at least for one year before applying for the evaluation.
(5) The Program has established and publicized the Autonomous Professional Profile statement formulated as its educational objectives.
(6) The Program has established and publicized its Learning Outcomes as the basis for developing its curriculum and learning methods.

2.4. ACCREDITATION CRITERIA

IABEE Criteria Committee has produced a number of criteria categories for conducting accreditation evaluation, comprising the Common Criteria and the Discipline Criteria. Common Criteria are further elaborated by the Criteria Guide. The Common Criteria, the Criteria Guide, and the Discipline Criteria are referred to as the Accreditation Criteria.

2.4.1. COMMON CRITERIA AND CRITERIA GUIDE

The Common Criteria are intended to assure the quality of engineering education conducted by Program and to foster a systematic continual quality improvement that satisfies the need of its stakeholders in a dynamic and competitive environment. The Common Criteria and their elaboration in the Criteria Guide address requirements for all disciplines of engineering Programs to be accredited by IABEE. The Common Criteria and the Criteria Guide are available for download at the IABEE website at https://iabee.or.id.

2.4.2. DISCIPLINE CRITERIA

Discipline Criteria address program-specific requirements within engineering areas of specialization. These criteria have been developed by Chapters of the Institution of Engineers Indonesia (PII) and other supporting professional societies, coordinated by IABEE Criteria Committee. The Discipline Criteria are available for download at IABEE website https://iabee.or.id. For application of evaluation, a Program is required to select one engineering discipline which best describe its body of knowledge.

2.5. PROGRAM EVALUATION PROCESS

The entire process of application, payment, document submission, evaluation for accreditation, and announcement of accreditation decision is undertaken solely through the IABEE Online Evaluation System. Therefore, individuals representing a Program and its Institution must first become registered member of the system. This section explains recognition of individuals representing a Program and its Institution, general principles of evaluation against accreditation criteria, and evaluation process for General Accreditation and Provisional Accreditation.

2.5.1. PROGRAM AND INSTITUTION REPRESENTATIVES

IABEE acknowledges two officials per Program to represent and be in communication with IABEE Secretariat and Program Evaluation Team Chair throughout application and evaluation process through IABEE Online Evaluation System. One of these is assigned as Program Representative (PR), while the other as Program Operating Institution Representative (POIR). Official recognized by IABEE to become a PR is normally the Program Chair (*Ketua Program Studi*) or other appointed by the Program Operating Institution, while a POIR is normally the Dean of the Faculty or other official ranked above Program Chair. PR and POIR should have a good understanding of the general requirements and processes of Program outcome-based evaluation and accreditation. In a case where more than one Programs within an Institution apply for evaluation, all those Programs may share the same POIR, but each shall have its own PR.

2.5.2. PROGRAM PROFILE AND SELF-EVALUATION REPORT

The Program evaluation process is conducted based, in part, on the two documents submitted to IABEE Online Evaluation System. Program can only submit the documents to the system through its PR account. These documents are Program Profile and Program Self-Evaluation Report (SER).

Program Profile (*Ikhtisar Program Studi* in Indonesian terminology) template is available for download from IABEE website at https://iabee.or.id. Meanwhile, SER (*Laporan Evaluasi Diri* in Indonesian terminology) template is coded in the Online Evaluation System in a spreadsheet form and can be downloaded through PR's registered e-mail account, worked on, and uploaded back to the online system.

The SER template is structured in a way that expects the Program to deliberate how it complies with each criterion and review item, and to enclose, or to provide links to, proofs of the compliance. The proofs or evidences of the compliance are to be gathered systematically in a file(s) (in PDF format) and uploaded as attachment(s) to the SER. To assist the Program in completing the Program Profile and SER, IABEE openly publishes a Program Profile and Self-

Evaluation Report Preparation Guidelines as can be found under the section of Obtaining Accreditation in IABEE website, https://iabee.or.id.

2.5.3. GENERAL DESCRIPTION OF THE EVALUATION PROCESS

The Program evaluation process is in general undertaken by a thorough desk study of Program Profile, Self Evaluation Report (SER) including its evidences submitted to IABEE Online Evaluation System, as well as through on-site visit.

Depending on the accreditation categories (Section 2.2) and the accreditation decisions (Section 2.6), IABEE implements four types of Program evaluation, namely:

(1) Evaluation for General Accreditation,
(2) Interim Evaluation for General Accreditation with On-Site Visit,
(3) Interim Evaluation for General Accreditation without On-Site Visit, and
(4) Evaluation for Provisional Accreditation.

Evaluation for General Accreditation evaluates the compliance of the Program to RPEA and all evaluation items contained in the Accreditation Criteria for the accreditation cycle. Interim Evaluation measures the compliance to a portion of the evaluation items in the Accreditation Criteria, which may be undertaken with or without on-site visit. An Interim Evaluation (No. 2 or 3) is an evaluation to be conducted following a certain accreditation decision in General Accreditation (see further Section 2.6). Lastly, Evaluation for Provisional Accreditation measures the potential for compliance of the Program to the Accreditation Criteria.

Programs applying for their initial evaluation may select either Evaluation for General Accreditation or for Provisional Accreditation, in accordance to the eligibility requirements explained in Section 2.3. The type of evaluation for Programs applying for re-evaluation shall be based on their previous accreditation status. Evaluation for Provisional Accreditation is not allowed for Programs applying for re-evaluation.

In the case of Evaluation for General Accreditation, the degree of Program compliance to specific Accreditation Criteria item is determined from evaluation results documented in the IABEE Online Evaluation System. The terminology used to declare the degree of compliance to each item is as follows:

- *Acceptable* (abbreviated as ‘A’), which means that the evaluated item complies with the associated Accreditation Criteria item.
- *Concern* (abbreviated as ‘C’), which means that the evaluated item complies with the associated Accreditation Criteria item, but with a possibility of changes in pertinent conditions in the future which may compromise the compliance.
- *Weakness* (abbreviated as ‘W’), which means that the evaluated item indicates an insufficiently strong compliance to the associated Accreditation Criteria item. This

shortcoming requires corrective actions to strengthen the compliance of the specific evaluation item to the appropriate Accreditation Criteria item.

- *Deficiency* (abbreviated as 'D'), which means that the Program is unable to comply with the particular Accreditation Criteria item.

In addition, evaluation may also provide an Observation, i.e. comments that are not directly related to accreditation criteria and actions but are offered to assist the program in conducting continual quality improvement; and the Statement of Strength, which is a very effective and prominent condition or practice that is above the norm and has a positive effect on the Program.

The final "A-C-W-D" judgement shall determine the accreditation status given to the Program in the case of General Accreditation (see further Section 2.6 for explanation on accreditation decision).

Meanwhile, in Evaluation for Provisional Accreditation, the degree of Program compliance to specific Accreditation Criteria item is determined from evaluation results documented in the IABEE Online Evaluation System. Based on the evidences studied by assigned Program Evaluator, a score either "Yes" or "No" would be used to mark each Criteria item as a conclusion whether or not, from the Evaluator's viewpoint, the Program has a solid potential to meet the item within a foreseeable future (4 years or less). See further Section 2.6 for explanation on accreditation decision

2.5.4. EVALUATION FOR GENERAL ACCREDITATION

Table 1 presents the activity diagram of the Evaluation for General Accreditation process. All documentation resulting from these activities are recorded in the IABEE Online Evaluation System.

Table 1. Steps in the Evaluation for General Accreditation

EGA Step no.	Activity	Actor(s)						
		IABEE						Program
		Secretariat	Accred. Council	EAC Chair	EAC Discipl. Chair	Team Chair	Program Evaluator	Program Rep.
1	Registration of Program Representative (PR) & Program Operating Institution Representative (POIR)	✓						✓
2	PR & POIR registration verification	✓						
3	Application for Program evaluation							✓
4	Program eligibility verification	✓		✓				
5	Evaluation scheduling	✓		✓				
6	Notice of evaluation kickoff & invoicing	✓						
7	Full payment reception	✓						✓
8	EAC Discipline assignment			✓				
9	Evaluation Team members selection				✓			

EGA Step no.	Activity	Actor(s)						
		IABEE						Program
		Secreta-riat	Accred. Council	EAC Chair	EAC Discipl. Chair	Team Chair	Program Evaluator	Program Rep.
10	Evaluation Team Chair assignment			✓				
11	Approval of evaluation observers			✓				
12	Evaluation Team acceptance							✓
13	Final Evaluation Team confirmation	✓		✓				
14	Completed Program Profile and Self-Evaluation Report (SER) submission							✓
15	Program First Review						✓	
16	Program Second Review					✓		
17	Program First Response							✓
18	Program Third Review					✓		
19	On-Site Visit Planning					✓		✓
20	On-Site Visit					✓	✓	✓
21	Exit Meeting					✓	✓	✓
22	Program First Evaluation					✓		
23	Program Second Response							✓
24	Program Second Evaluation					✓		
25	Program Final Response							✓
26	Program Final Report					✓		
27	EAC Discipline Harmonization				✓			
28	EAC Plenary Meeting			✓				
29	Accreditation Decision		✓					
30	Accreditation Status Announcement	✓						

The following is a concise description of each step of Evaluation for General Accreditation (EGA) outlined in Table 1.

Step EGA-1. PR & POIR Registration

Officials appointed by Program Operating Institution as PR and POIR are required to register as members of IABEE Online Evaluation System in advance. Registration is made through the IABEE website at https://iabee.or.id by choosing the Menu “IABEE ku – login” (in Bahasa Indonesia version) or “My IABEE – login” (in English version) and creating a free user account. Uploading appropriate proof of authority is required as attachment to account registration.

Step EGA-2. PR & POIR Registration Verification

The IABEE Secretariat examines the credentials of the PR and POIR upon their registration through the IABEE website. Upon confirmation of the validity of the PR and POIR, a notification e-mail shall be sent to the officials.

Step EGA-3. Application for Program Evaluation

The Program Representative or POI Representative applies for Program evaluation by submitting proofs of eligibility requirements. In the case of Evaluation for General Accreditation, these requirements include a copy of documents indicating:

(1) the national accreditation status of the Program and the Program Operating Institution,
(2) when the program was firstly established,
(3) when OBE was implemented for the first time,
(4) the statement of Program's Autonomous Professional Profile as its educational objective,
(5) the statement of Program's Learning Outcomes,
(6) number of graduates produced since OBE was adopted, or expected number of graduates under OBE system by October of the evaluation year, and
(7) a sample of Learning Outcomes assessment results.

Step EGA-4. Program Eligibility Verification

The Secretariat and EAC Chair examine the data entered in the Program Eligibility Form and check it against the eligibility criteria listed in Section 2.3.

Step EGA-5. Evaluation Scheduling

The EAC Chair compiles the results of Program eligibility verification for the Accreditation Cycle. An evaluation schedule plan for the cycle is then defined based on the list of eligible Programs, and availability of appropriate Program Evaluators (PEVs). The schedule for each Program shall include deadlines for all evaluation steps. If there are more than one Program of the same discipline are deemed eligible for evaluation, then the schedule shall be defined on a first come first served basis.

Step EGA-6. Notice of Evaluation Kick-off & Invoicing

Upon the confirmation of Program eligibility and the evaluation schedule of each Program, the Secretariat through IABEE Online Evaluation System sends a notification e-mail to each Program Representative, which contains notice of initiation of the evaluation process and important deadlines throughout the evaluation process. The Secretariat will also upload onto the online system an invoice for all evaluation fees, including information on payment method and deadline. The system will notify Program Representative regarding the invoice.

Step EGA-7. Full Payment Reception

No later than the payment deadline stipulated in the invoice, the Program must complete the full payment of evaluation fees in accordance to the invoice. Outstanding payment may cause suspension of evaluation process.

Step EGA-8. EAC Discipline Chair Assignment

Upon the definitive of the annual evaluation schedule, the EAC Chair examines the list of Programs to be evaluated and assigns the appropriate Discipline Chair for each engineering discipline involved in the accreditation cycle.

Step EGA-9. Evaluation Team Members Selection

The assigned Discipline Chair selects the member for the Program Evaluation Team, based on available PEVs. The selection of the members shall be based on academic competence, training qualifications, and potential conflict of interest with the Program to be evaluated. Requirements to become program evaluator is described in Rules and Procedures for Accreditation-Related Committees (RPARC) document.

Step EGA-10. Evaluation Team Chair Assignment

The EAC Chair assigns one Team Chair for each Evaluation Team. In the case where more than one Program in an Institution are to be evaluated simultaneously, some or all Evaluation Teams involved may share the same Team Chair.

Step EGA-11. Approval of Evaluation Observers

As part of the requirements to become a program evaluator, IABEE may assign candidates of program evaluator to observe a real program evaluation as evaluator-in-training. Also, IABEE welcomes non-IABEE members to become observer of the evaluation process. As the entire evaluation process in conducted through IABEE Online Evaluation System, before becoming an observer one must register a personal user account in the system. The EAC Chair assigns and attaches observer(s) to the appropriate Evaluation Team based on best match to his/her academic background or engineering discipline. The involvement of observer(s) shall be approved by the Program.

Step EGA-12. Evaluation Team Acceptance

The Program is expected to examine the acceptability of the Evaluation Team initially proposed by IABEE, and to send their approval through IABEE Online Evaluation System. If the Program does not approve the Evaluation Team members due to a valid reason (e.g. a conflict of interest), the EAC Chair shall re-assign a new Evaluation Team.

Step EGA-13. Final Evaluation Team Confirmation

Upon acceptance of the Evaluation Team by the Program, the EAC Chair confirms the Team Chair and Evaluation Team members through notification to the Program via the IABEE Online Evaluation System, issuance of an official Letter of Assignment, and provision of access to the Online System as Evaluation Team members.

Step EGA-14. Completed Program Profile and SER Submission

No later than the deadline shown on the related step in IABEE Online Evaluation System, the Program is expected to complete and submit the Program Profile and the Self-Evaluation Report (SER) including its necessary attachments to system. IABEE Online Evaluation System provides upload and submit procedure separately. It is to be noted that upload button is used only to store all the document files in the IABEE server. To send it as a submission, Program Representative must click the submit button. The Program can no longer amend the Program Profile and SER online documents after submit button has been used.

A Program may submit a total of six files, sizing 30 Mbytes each, to contain Program Profile and all SER attachment files (e.g. compendium of proofs/evidences), in addition to the SER itself. The SER itself is written separately in a dedicated spreadsheet template and uploaded onto the system by letting the system read and copy the data prepared in the template (see also Section 2.5.2).

Step EGA-15. Program First Evaluation

In the Program First Evaluation, Evaluation Team members review the submitted Program Profile, Self-Evaluation Report, and all additional documents. Each member independently assigns the 'A-C-W-D' score and provide comments for each evaluation item in the Program Evaluator worksheet template downloaded from the IABEE Online Evaluation System. An observer (evaluator-in-training) may also review the documents submitted by the Program, but his/her judgment is not accounted for in the evaluation (only for training purposes). At this step, only Team Chair can see all evaluation results (i.e. A-C-W-D scores and comments on each criteria item). Evaluation results are not yet accessible by Program Representative.

Evaluation Team members are also expected to notify the Team Chair on the need for any additional information, data, or explanation from the Program to ensure accurate evaluation. IABEE Online Evaluation System provides internal message board facility to allow communication among Evaluation Team members and its chair.

Step EGA-16. Program Second Evaluation

The Team Chair collects the Program First Evaluation results from the Evaluation Team members. Subsequently, he/she prepares the Program Second Evaluation by assigning the 'A-C-W-D' score and provide comments for each evaluation item in the Team Chair worksheet based on the results collected from his/her team member, his/her own judgement, and considering any different opinion between the individual Evaluation Team members. The Team Chair also compiles the list of required additional information, data, or explanation from the Program. The Program Second Evaluation results are then uploaded and submitted to the IABEE Online Evaluation System.

Step EGA-17. Program First Response

Upon submission of the Program Second Evaluation results to the IABEE Online Evaluation System by the Team Chair, the Program Representative will get a notification e-mail from the system. The Program is expected to respond to the request for any additional information, data, or explanation. The additional information is to be submitted through IABEE Online Evaluation System. At this step, Program Representative can only see the Team Chair's comments on each evaluation or criteria item. No "A-C-W-D" score is accessible to the Program.

The system again provides a space to upload three attachment files sizing 30 Mb at maximum for each file, in addition to SER improvement.

To facilitate smooth communication, IABEE Online Evaluation System provides external message board facility that can be used only by Program Representative and the Evaluation Team Chair. The deadline for this Program First Response is made known to the PR/POIR by the system.

Step EGA-18. Program Third Evaluation

The Team Chair collects the additional information provided by the Program in the Program First Response. Together with the results of the Program Second Evaluation, this information is then used to formulate the Program Third Evaluation, which contains the tentative 'A-C-W-D' scores of each evaluation item. This report shall also contain a list of items to be further elaborated during the On-Site Visit. At this step, Program Representative can only see the Team Chair's comments on each evaluation or criteria item. No "A-C-W-D" score is accessible to the Program.

Step EGA-19. On-Site Visit Planning

Upon the completion of the Program Third Evaluation, the Team Chair prepares an On-Site Visit Plan via the IABEE Online Evaluation System. This plan contains the visit dates, a detailed list of daily activities to be undertaken by the Evaluation Team during the visit, including groups of people from Program stakeholders they wish to meet, as well as logistical matters related to the visit. Team Chair shall propose the visit dates to the Program and shall discuss further with Program Representative which of the options is the most suitable one to undertake the visit.

Step EGA-20. On-Site Visit

The On-Site Visit will be undertaken by the Evaluation Team on the agreed-upon dates. The visit shall include the following activities:

- Interview of faculty members, students, support staff, as well as alumnae and other stakeholders to obtain a comprehension on the compliance of the Program to RPEA and Accreditation Criteria items, and to identify specific issues arising from the review of Program Profile and Self-Evaluation Report, as well as from the On-Site Visit activities.
- Examination on the following specific aspects:

- Physical facilities: The Evaluation Team shall verify whether the learning atmosphere provided by the Program through the utilization of various facilities is sufficient, and that the facilities may be utilized in a safe manner for their intended purposes.
- Learning materials: The Evaluation Team shall examine examples of course materials including course description and syllabi, textbooks, assignments and tests, and examples of student works which include works receiving borderline to very high marks.
- Proof that the Autonomous Professional Profile envisaged by Program's educational objectives and the Learning Outcomes declared by the Program has considered vision and mission of the POIR as well as the needs of Program Stakeholders.
- Proof of the implementation of a process that is documented and effectively utilized, with involvement of Program Stakeholders, for the periodic review of the Autonomous Professional Profile.
- Proof of the undertaking of learning assessment, evaluation, and attainment of Program Learning Outcomes.
- Proof of the undertaking of actions to continually improve the quality of the Program. Support functions for the students, to ensure the adequacy of student services in accordance to the mission of the Institution, the Autonomous Professional Profile, and Program Learning Outcomes.
- The process for monitoring the completion of study and conferral of academic degree for each student.

Throughout the On-Site Visit, Program Evaluators are expected to re-evaluate the level of compliance of the Program to each evaluation item as temporarily scored during the desk study of its Program Profile and Self-Evaluation Report and to take note of Observations.

IABEE upholds certain codes of conduct in undertaking an On-Site Visit to make sure the activity achieves its intended objectives effectively and to prevent any conflict of interest. Please see Section 2.9. for the related Codes of Conduct.

Step EGA-21. Exit Meeting

An Exit Meeting shall be held at the end of the On-Site Visit, in which the Evaluation Team Chair shall verbally communicate findings observed by the Evaluation Team to the Program Operating Institution's highest executive officer of his/her representative, and other official(s) that the highest executive officer wishes to include in the meeting. The meeting concludes the On-Site Visit by reading out the Exit Statement. Prior to Exit Meeting, the Evaluation Team shall normally communicate the findings to the Program Representative and his/her team in a debrief session. This session is conducted to reach common understanding between the Evaluation Team and the Program about the findings and their consequences.

Exit Meeting is essentially a one-way communication. No discussion of the results shall be entertained during the meeting. The Evaluation Team shall not leave any written copy of Exit Statement document with the Program and Program Operating Institution since the statement

shall be made available at the IABEE Online Evaluation System. The Program may inspect these findings in the IABEE Online Evaluation System after the conclusion of the Exit Meeting at the Program First Evaluation step.

Step EGA-22. Program First Evaluation

Program First Evaluation is produced by the Evaluation Team and sent by the Team Chair to IABEE Online Evaluation System. It consists of evaluation results and findings read out during the Exit Meeting.

A definite deadline is set for the Team Chair to complete the Program First Evaluation, which is approximately two weeks after the Exit Meeting date. The Program First Evaluation is accessible by the Program Representative and Program Operating Institution Representative. At this step, Program Representative can see the Team Chair's comments on each evaluation or criteria item and a draft Exit Statement. No "A-C-W-D" judgement is accessible to the Program.

Step EGA-23. Program Second Response

Upon the disclosure of the findings in the IABEE Online Evaluation System, the Program is given 7 days to submit amendments only to factual errors or omissions, if such errors or omissions are identified in the online system entries. The period is initiated in the system right after Team Chair submits Program First Evaluation. Example of factual errors include errors in quoting names, identities, figures, locations, etc. related to the Program and its Institution. If the Program finds no factual error in the Program First Evaluation, its Program Representative may notify the Team Chair and let the 7-day period pass automatically.

Step EGA-24. Program Second Evaluation

Upon the expiration period of Program Second Response, the Team Chair thoroughly examines the evaluation results documented in the IABEE Online Evaluation System to amend factual errors pointed out by the Program, if any. The Team Chair then proceeds to prepare the Program Second Evaluation report in the IABEE Online Evaluation System. After submission of Program Second Evaluation by the Team Chair, Program Representative can see the "A-C-W-D" judgements, the Team Chair's comments on each evaluation or criteria item and a final Exit Statement.

Step EGA-25. Program Final Response

Upon the completion of the Program Second Evaluation by the Team Chair, the Program Final Response is triggered to commence in the IABEE Online System. In this period, the Program is given 30 days to follow up on shortcomings identified in the evaluation process to date. The Program is encouraged to upload report and proofs of corrective actions and/or improvements undertaken to address the shortcomings, until the 30-day deadline.

Step EGA-26. Program Final Report

After the deadline of the 30-day response period has passed, the Team Chair prepares the Program Final Evaluation document in the IABEE Online Evaluation System, by considering corrective actions and/or improvements reported by the Program to date. The report shall include a description of the Program, its areas of strength, identified shortcomings, and constructive Observations, and a summary of its compliance to the Accreditation Criteria as indicated by the 'A-C-W-D' judgements of evaluation items. The report is submitted through the online system to the respective EAC Discipline Chair and EAC Chair.

Step EGA-27. EAC Discipline Harmonization

The EAC Discipline Chair receives the Program Final Report from the Team Chair and holds an EAC Discipline Harmonization meeting to discuss and harmonize any inconsistency between the respective Evaluation Teams within the same discipline, and inconsistencies with past evaluation results of similar Programs. Results of the Discipline Harmonization are documented in the IABEE Online Evaluation System.

Step EGA-28. EAC Plenary Meeting

After the Discipline Harmonization is completed, the EAC Chair organizes an EAC Plenary Meeting to discuss and harmonize any inconsistency with past and current evaluation results of Programs operated under different institutions. EAC Plenary Meeting then recommend the final accreditation decision to the IABEE Accreditation Council.

Step EGA-29. Accreditation Decision

Final decision of the accreditation status of a Program is taken by the IABEE Accreditation Council, with due consideration to the recommendation from the EAC Plenary Meeting. The decision shall be kept in IABEE's permanent records.

Step EGA-30. Accreditation Announcement

After the final decision has been reached, the IABEE Secretariat conducts the public announcement of the decision. The Not-Accredited status shall not be publicly declared, but directly communicated to the corresponding Program Representative (PR) and Program Operating Institution Representative (POIR). Other status shall be declared in the IABEE Website and communicated to the PR and POIR. Program Accreditation Evaluation Report and accreditation decision shall be saved in the IABEE Online Evaluation System and shall be accessible by the Program.

2.5.5. INTERIM EVALUATION FOR GENERAL ACCREDITATION

The Interim Evaluation is implemented if unresolved shortcomings of the 'Weakness' category are identified at the conclusion of a preceding Evaluation for General Accreditation. The Interim Evaluation shall focus on evaluation items exhibiting the shortcomings in the preceding evaluation, although other evaluation items may also be included. As outlined in Section 2.5.3, there are two types of Interim Evaluation for General Accreditation, namely Interim Evaluation with On-Site Visit and Interim Evaluation without On-Site Visit. The appropriate type of Interim Evaluation is determined in the final decision of the preceding evaluation. Both types of Interim Evaluation require the Program to submit a Self-Evaluation Report.

New *Concern, Weakness,* and *Deficiency* shortcomings that arise during the Interim Evaluation may be reported. Evaluation process steps in an Interim Evaluation are identical to those implemented in the Evaluation for General Accreditation (see Section 2.5.2), except that in Interim Evaluation only one Program Evaluator shall be assigned by IABEE.

Decision of accreditation status upon the completion of an Interim Evaluation is explained in Section 2.6 on Accreditation Decision.

2.5.6. EVALUATION FOR PROVISIONAL ACCREDITATION

Evaluation for Provisional Accreditation is provided as an option for Programs that have never been evaluated and have yet to commit to apply for evaluation for General Accreditation. A Program is only allowed to undergo this evaluation once. The evaluation reviews all parts of the Accreditation Criteria, except for those related to continual improvements based on learning outcomes assessment. This evaluation and is conducted by one Program Evaluator.

Table 2 presents the activity diagram of the evaluation process. All documentation resulting from these activities are recorded in the IABEE Online Evaluation System. Following Table 2 is a concise explanation of each Evaluation for Provisional Accreditation (EPA) step outlined in the table.

Table 2. Steps in the Evaluation for Provisional Accreditation (EPA)

EPA Step No.	Activity	Primary Actor(s)					
		IABEE					Program
		Secretari-at	Accred. Council	EAC Chair	EAC Discip. Chair	Program Evaluator	Program Rep.
1	Registration of Program Representative (PR) & Program Operating Institution Representative (POIR)	✓					✓
2	PR & POIR registration verification	✓					
3	Application for Program evaluation						✓
4	Program eligibility verification			✓			
5	Evaluation scheduling			✓			
6	Notice of evaluation kickoff & invoicing	✓					

EPA Step No.	Activity	Primary Actor(s)					
		IABEE					Program
		Secretari-at	Accred. Council	EAC Chair	EAC Discip. Chair	Program Evaluator	Program Rep.
7	Full payment reception	✓					✓
8	EAC Discipline assignment			✓			
9	Program Evaluator (PEV) selection				✓		
10	PEV acceptance						✓
11	Final PEV confirmation	✓		✓			
12	Completed Program Profile and Self-Evaluation Report (SER) submission						✓
13	Program First Evaluation					✓	
14	Program Response						✓
15	Program Second Evaluation					✓	
16	On-Site Visit Planning					✓	✓
17	On-Site Visit					✓	✓
18	Exit Meeting					✓	✓
19	Program Final Report					✓	
20	EAC Plenary Meeting			✓			
21	Accreditation Decision		✓				
22	Accreditation Status Announcement	✓					

Step EPA-1. PR & POIR Registration

Officials appointed by Program Operating Institution as PR and POIR are required to register as members of IABEE Online Evaluation System in advance. Registration is made through the IABEE website at http://iabee.or.id/ by choosing the Menu “IABEE ku – login” (in Bahasa Indonesia version) or “My IABEE – login” (in English version) and creating a free user account. Uploading appropriate proof of authority is required as attachment to account registration.

Step EPA-2. PR & POIR Registration Verification

The IABEE Secretariat examines the credentials of the PR and POIR upon their registration through the IABEE website. Upon confirmation of the validity of the PR and POIR, a notification e-mail shall be sent to the officials.

Step EPA-3. Application for Program Evaluation

The Program Representative or POI Representative applies for Program evaluation by submitting proofs of eligibility requirements. In the case of Evaluation for Provisional Accreditation, these requirements include a copy of documents indicating:

(1) the national accreditation status of the Program and the Program Operating Institution,
(2) when the program was firstly established,
(3) when OBE was implemented for the first time,

(4) the statement of Program's Autonomous Professional Profile as its educational objective, and
(5) the statement of Program's Learning Outcomes.

Step EPA-4. Program Eligibility Verification

The Secretariat and EAC Chair examine the data entered in the Program Eligibility Form and check it against the eligibility criteria listed in Section 2.3.

Step EPA-5. Evaluation Scheduling

The EAC Chair compiles the results of Program eligibility verification for the Accreditation Cycle. An evaluation schedule plan for the cycle is then defined based on the list of eligible Programs, and availability of appropriate Program Evaluators (PEVs). The schedule for each Program shall include deadlines for all evaluation steps. If there are more than one Program of the same discipline are deemed eligible for evaluation, then the schedule shall be defined on a first come first served basis.

Step EPA-6. Notice of Evaluation Kick-off & Invoicing

Upon the confirmation of Program eligibility and the evaluation schedule of each Program, the Secretariat through IABEE Online Evaluation System sends a notification e-mail to each Program Representative, which contains notice of initiation of the evaluation process and important deadlines throughout the evaluation process. The Secretariat will also upload onto the online system an invoice for all evaluation fees, including information on payment method and deadline. The system will notify Program Representative regarding the invoice.

Step EPA-7. Full Payment Reception

No later than the payment deadline stipulated in the invoice, the Program must complete the full payment of evaluation fees in accordance to the invoice. Outstanding payment may cause suspension of evaluation process.

Step EPA-8. EAC Discipline Chair Assignment

Upon the definitive of the annual evaluation schedule, the EAC Chair examines the list of Programs to be evaluated either for General Accreditation or Provisional Accreditation and assigns the appropriate Discipline Chair for each engineering discipline involved in the accreditation cycle.

Step EPA-9. Program Evaluator (PEV) Selection

The assigned Discipline Chair selects a Program Evaluator based on available PEVs. The selection of Program Evaluator shall be based on academic competence, training qualifications, and potential conflict of interest with the Program to be evaluated. Requirements to become

program evaluator is described in Rules and Procedures for Accreditation-related Committees (RPARC) document.

Step EPA-10. Program Evaluator (PEV) Acceptance

The Program Representative (PR) or Program Operating Institution Representative (POIR) is expected to communicate their consent or objection to the Program Evaluator proposed by EAC Discipline Chair through IABEE Online Evaluation System. In case where a reasonable objection is stated by the PR or POIR, a different PEV shall be proposed by the EAC Discipline Chair.

Step EPA-11. Final Program Evaluator (PEV) Confirmation

Upon the acceptance of the PEV by the PR or POIR, EAC Chair makes confirmation of PEV assignment in the IABEE Online Evaluation System. IABEE Secretariat shall follow the step by producing an official Letter of Appointment to the PEV.

Step EPA-12. Completed Program Profile and Self Evaluation Report (SER) Submission

No later than the deadline shown on the related step in IABEE Online Evaluation System, the Program is expected to complete and submit the Program Profile and the Self-Evaluation Report (SER) including its necessary attachments to system. IABEE Online Evaluation System provides upload and submit procedure separately. It is to be noted that upload button is used only to store all the document files in the IABEE server. To send it as a submission, Program Representative must click the submit button. The Program can no longer amend the Program Profile and SER online documents after submit button has been used.

A Program may submit a total of six files, sizing 30 Mbytes each, to contain Program Profile and all SER attachment files (e.g. compendium of proofs/evidences), in addition to the SER itself. The SER itself is written separately in a dedicated spreadsheet template and uploaded onto the system by letting the system read and copy the data prepared in the template (see also Section 2.5.2).

Step EPA-13. Program First Evaluation

In the Program First Evaluation, Program Evaluator reviews the submitted Program Profile, Self-Evaluation Report, and all additional documents. The Program Evaluator for the first time shall assign the ‘Yes-No’ score and provide comments for each evaluation item in the Program Evaluator worksheet template downloaded from the IABEE Online Evaluation System. Program Evaluator shall notify the Program Representative on the need for any additional information, data, or explanation from the Program to ensure accurate evaluation. IABEE Online Evaluation System provides a message board facility to allow communications between Program Evaluator and Program Representative.

Step EPA-14. Program Response

The Program Representative is expected to respond to the request for additional data or explanation from the Program Evaluator, if any. This respond is to be documented and submitted as the Program First Response. At this step, although "Yes-No" scores as well as evaluation comments have been inputted by Program Evaluator for each criteria item, but Program Representative can only see the comments section. IABEE Online Evaluation System provides additional space for uploading a maximum of 3 files in PDF format sizing maximum 30 Mbyes each.

Step EPA-15. Program Second Evaluation

Based on the First Program Response, the Program Evaluator prepares a Program Second Evaluation report, which is essentially an improvement of Program First Evaluation based on additional evidences submitted by the Program, if any, during the Program Response step. This report shall contain the initial evaluation of the Program, and a list of items to be inquired further during the On-Site Visit.

Step EPA-16. On-Site Visit Planning

The Program Evaluator prepares a detailed On-Site Visit plan, which includes visit schedule and itinerary, list of persons to be interviewed, list of items to be inquired further, as well as logistical matters related to the visit. The Program Representative shall be notified through e-mail by IABEE Online Evaluation System right after Program Evaluator has posted the visit plan in the system. Program Representative may discuss with Program Evaluator to agree on the visit date and plan.

Step EPA-17. On-Site Visit

The On-Site Visit will be undertaken by Program Evaluator on the agreed-upon date. The visit shall include the following activities:

- Interview of faculty members, students, and support staff to obtain a comprehension on the compliance of the Program to Accreditation Criteria items, and to identify specific issues arising from the review of Program Profile and Self-Evaluation Report, as well as from the On-Site Visit activities.
- Examination on the following specific aspects:
    - Physical facilities: The Evaluator shall verify whether the learning atmosphere provided by the Program through the utilization of various facilities is sufficient, and that the facilities may be utilized in a safe manner for their intended purposes.
    - Learning materials: The Evaluator shall examine examples of course materials including course description and syllabi, textbooks, assignments and tests, and examples of student works which include works receiving borderline to very high marks.

- Proof that the Autonomous Professional Profile envisaged by Program's educational objectives and the Learning Outcomes declared by the Program has considered vision and mission of POIR, as well as the needs of Program Stakeholders.
- Assessment plan of Program Learning Outcomes.
- Support functions for the students, to ensure the adequacy of student services in accordance to the mission of the Institution, the Autonomous Professional Profile, and Program Learning Outcomes.
- The process for monitoring the completion of study and conferral of academic degree for each student.

Throughout the On-Site Visit, Program Evaluator is expected to re-evaluate the level of compliance of the Program to each evaluation item (i.e. the chance of meeting each criteria item by the time the Program is expected to apply Evaluation for General Accreditation) as temporarily scored during previous step as well as to take note of Observations.

IABEE upholds certain codes of conduct in undertaking an On-Site Visit to make sure the activity achieves its intended objectives effectively and to prevent any conflict of interest. Please see Section 2.9. for the related Codes of Conduct.

Step EPA-18. Exit Meeting

An Exit Meeting shall be held at the end of the On-Site Visit, in which the Program Evaluator shall verbally communicate findings to the Program Representative and Program Operating Institution Representative, including other official(s) if any. The meeting concludes the On-Site Visit by reading out the Exit Statement. The Evaluator will not leave any written copy of Exit Statement document with the Institution since all the material shall be made available at the IABEE Online Evaluation System. The Program may inspect these findings in the IABEE Online Evaluation System after the conclusion of the Exit Meeting at the Program First Evaluation step.

Step EPA-19. Program Final Report

Based on the Program Second Evaluation and results from the On-Site Visit, the Program Evaluator prepares the Program Final Report, which contains an evaluation of the current status of the Program and, if Provisional Accreditation Status is deemed appropriate, areas where compliance improvements are expected within 4 years. The report is submitted to the EAC Chair. The report shall include a description of the Program, its areas of strength, identified shortcomings, and constructive Observations, and a summary of its compliance to the Accreditation Criteria as indicated by the 'Yes-No' scores of evaluation items

Step EPA-20. EAC Plenary Meeting

The EAC Chair brings the Program Final Evaluation reports to the EAC Plenary Meeting for thorough review of the accreditation status decision-making.

Step EPA-21. Accreditation Decision

The IABEE Accreditation Council makes the final decision for Provisional Accreditation. For explanation regarding Accreditation Decision, please see further Section 2.6.

Step EPA-22. Accreditation Status Announcement

The IABEE Secretariat informs the Program Representative and Program Operating Institution Representative of the final evaluation decision. A "Not Accredited" status shall not be publicized in the IABEE website, but a "Provisional Accreditation" status shall be publicized. The PA-status notification shall also include instructions on the proper use of IABEE PA status by the Program and Program Operating Institution. Program Accreditation Evaluation Report and accreditation decision shall be saved in the IABEE Online Evaluation System and shall be accessible by the Program.

2.6. ACCREDITATION DECISIONS

Accreditation decisions following General and Provisional Accreditation Evaluations are taken by IABEE Accreditation Council (AC) in AC Meeting by considering EAC Chair's report. To take any decision, the AC Meeting shall be attended by at least 2/3 of its members. The meeting is normally conducted annually at the end of the accreditation cycle. Role and responsibility, as well as membership of the Council are explained in the RPARC document.

Based on the Program's evaluation type and compliance to Accreditation Criteria and the RPEA, the Program shall receive one of the following final status, as explained in Section 2.6.1 and 2.6.2 for General Accreditation and Provisional Accreditation, respectively.

2.6.1. DECISIONS IN EVALUATION FOR GENERAL ACCREDITATION

Evaluation for General Accreditation for a Program ultimately finalizes in one of the following status:

- *Accredited.* This status implies that the Program meets all criteria and rules as outlined in the Accreditation Criteria and the RPEA. This accreditation status is valid for a period of five years.
- *Accredited with Interim Evaluation without Visit*. This status implies that the Program indicates unresolved shortcomings of the 'Weakness' category ("W" score). These shortcomings are such that visit is not deemed necessary to assess future corrective actions. This status is valid for a period of two years, after which the Program must undergo an Interim Evaluation based on desk study.
- *Accredited with Interim Evaluation with Visit.* This status implies that the Program indicates unresolved shortcomings of the 'Weakness' ("W" score) category. These shortcomings are

such that a visit is deemed necessary to assess future corrective actions. This status is valid for a period of two years, after which the Program must undergo an Interim Evaluation which includes both desk study and on-site visit.

- *Not Accredited*. This status implies that the Program fails to substantially comply with IABEE Accreditation Criteria as indicated by unresolved shortcomings in the 'Deficiency' category ("D" score) and Rules and Procedures for Accreditation and Evaluation (RPEA).

Subsequent decision for accreditation status requiring Interim Evaluation, either with or without On-Site Visit, shall be taken based on the results of the Interim Evaluation as follows:

- If the Interim Evaluation results indicate that Program shortcomings of the previous 'Weakness' category ("W" score) remain unresolved, then the Program receives the "Not Accredited" final status. The Program may apply for new Evaluation for General Accreditation after one evaluation cycle has passed since the last Interim Evaluation.

- If the Interim Evaluation results indicate that the Program has managed to rectify Accreditation Criteria and RPEA compliance shortcomings in a satisfactory manner such that all the criteria and RPEA items are met, then the *Accredited with Interim Evaluation* status from the last Evaluation for General Accreditation (EGA) is changed to *Accredited* status, with a validity period of five years from the submission of Program Profile and Self-Evaluation Report documents in the last EGA process.

2.6.2. DECISIONS IN EVALUATION FOR PROVISIONAL ACCREDITATION

Evaluation for Provisional Accreditation for a Program ultimately finalizes in one of the following status:

- *Provisionally Accredited*. This status implies that the Program has the potentials of meeting the Accreditation Criteria within a foreseeable future (i.e. 4 years). Given eligibility requirements are fulfilled, a program accredited in Provisional Accreditation is expected to apply evaluation for General Accreditation within a period of four years.
- *Not Accredited*. This status implies that the Program has substantially low potentials to meet all Accreditation Criteria and RPEA items within 4 years.

2.7. PUBLIC DISCLOSURE OF ACCREDITATION STATUS

Accreditation by IABEE holds an unambiguous recognition that an undergraduate engineering Program is planned, operated, and managed in accordance to international quality standards for outcome-based engineering higher education. These standards are defined as IABEE Accreditation Criteria (AC) and Rules and Procedures for Evaluation and Accreditation (RPEA). An

accredited status by IABEE does not imply any ordinal ranking between one Program and others that are also accredited by IABEE.

IABEE shall not publicize the identity of Programs that receive NA (Not-Accredited) status.

Final decisions status from Evaluation for General Accreditation and Interim Evaluation for General Accreditation process recognized as accredited status are *Accredited, Accredited with Interim Evaluation without Visit,* and *Accredited with Interim Evaluation with Visit.* Each Program has the right for public disclosure of the accreditation status by IABEE according to the following rules:

(1) The accreditation validity period of each accredited Program shall be made accessible to the general public through the IABEE website. The Program and/or Program-Operating Institution may not publicly disclose the accreditation validity period.

(2) IABEE shall provide an electronic file of official "accreditation logo" for Programs that have been accredited.

(3) The accreditation logo is different from the IABEE institutional logo and contain the starting year of the accredited status. Under no circumstances shall the Program and/or Program-Operating Institution be allowed to apply the IABEE institutional logo in all public disclosures.

(4) The official accreditation logo electronic file must not be altered or edited by any means (adding color and/or shade gradation, shadow, text, and frame, inserting the logo into another design, overlapping with other image, and other alterations), except resizing to adjust to specific media to which it is to be applied; the resizing must not change the aspect ratio of the logo. A minimum logo dimension of 1.5 cm (measured along the longer axis of the image) is required.

(5) The public disclosure of non-official IABEE institutional logo and/or IABEE accreditation logo is strictly prohibited; the Program and/or Institution is obliged to prevent such disclosure and, if undertaken by parties not associated with the Program / Institution, to publicly declare their non-association. IABEE is not responsible for any misuse, deliberate or otherwise, of the IABEE institutional logo and/or accreditation logo.

(6) The public disclosure of official IABEE accreditation logo by the Program and/or its Institution is allowed within the validity period of the Program's accredited status.

(7) Public declaration of the accredited status in any media, whether or not involving the use of the IABEE accreditation logo, must be accompanied by a clear and unambiguous reference to specific Programs that are accredited by IABEE.

(8) The application of official IABEE accreditation logo is allowed for the following public disclosure and official documentation media:

   a. in official website of the Program and/or the associated Program-Operating Institution

b. in official letterheads, faculty member business cards, brochures, and other official institutional printed matter, except apparel

c. in promotional matter published in electronic or print media, such as the internet, television media, newspapers, magazines, etc.

d. in degree-granting certificate or diploma (*ijazah*), academic transcripts, and Letter of Reference Accompanying Diploma (*Surat Keterangan Pendamping Ijazah, SKPI*)

(9) Violation to the above rules shall result in the revocation of the Program's rights to public disclosure of its accreditation status. This revocation shall be made public by IABEE and shall be effective until the necessary corrective actions have been taken by the Program and/or Program-Operating Institution.

2.8. EVALUATION PROCESS FEEDBACK AND APPEALS

2.8.1. EVALUATION PROCESS FEEDBACK

In accordance with IABEE's vision as a reformer engineering higher education quality assurance body that operates in an independent and fair manner, IABEE solicits feedback from Programs that have undergone the evaluation process. This feedback shall be utilized for the improvement of internal business processes, evaluation process, and assessment instruments and documentations. The Program Representative and Program Operating Institution Representative may submit the feedback to IABEE Secretariat.

2.8.2. APPEAL AGAINST ACCREDITATION DECISION

The Program shall be given an opportunity to file an appeal to IABEE if an accreditation decision is deemed unfair. The appeal must include a clearly written rationale for the appeal, with reference to specific AC and/or RPEA items associated with the appeal. Only final decision of Not-Accredited (NA) status in General Accreditation may be appealed for. No appeal can be filled against NA status in Provisional Accreditation.

Procedure for handling an appeal is outlined as follows:

(1) Submission of official letter of appeal from the Program Institution highest executive officer to the IABEE Chair of Executive Committee, to be received no later than 60 calendar days from the official notification of accreditation decision. This submission must include the reasons for appeal with detailed evidences.

(2) Upon the receipt of an appeal submission, IABEE Chair of Executive Committee shall request Chair of Appeal Board to form an Appeal Committee for the particular appeal case.

Membership requirements of an Appeal Committee are stipulated in Rules and Procedures for Accreditation-Related Committee (RPARC).

(3) IABEE Secretariat shall notify the Program Representative upon the formation of the Appeal Committee and request him/her to submit the documents deemed necessary to support its appeal within 30 calendar days. Upon submission of the documents, Secretariat shall deliver them to Chair of Appeal Committee.

(4) Chair of Appeal Committee shall request EAC Chair to submit written materials for clarification of its position.

(5) The Appeal Committee members shall conduct a meeting to review the submitted materials. Only written materials which have been submitted as part of documents in the process of the disputed accreditation decision shall be considered. Representatives of the Program/Institution may not attend the meeting. The Appeal Committee is expected to take decision within 90 days.

(6) The decision taken by the Appeal Committee is limited to the accreditation decision options available in Section 2.6.1 of RPEA document. The decision shall be reported to the Chair of Appeal Board.

(7) Chair of Appeal Board shall report the decision of the Appeal Committee to the Chair of Executive Committee. This decision shall be the IABEE final decision on the matter.

(8) IABEE Secretariat shall communicate the final decision to the Program Representative. Final decision that affects the previous accreditation status shall immediately be made public in the IABEE website.

2.9. POLICIES ON CONDUCTING ON-SITE VISIT

The following are general policies for implementing an on-site visit:

(1) On-site visit activities are arranged so as not to interfere with the routine activities of Program personnel and carried out during working hours, not causing overtime work,
(2) Programs or Program Operating Institutions do not cover accommodation and transportation costs for evaluators,
(3) Programs or Program Operating Institutions do not give evaluators gifts of any kind,
(4) Programs or Program Operating Institutions have no obligation to provide pick-up to evaluators from the airport to the hotel/place of accommodation and vice versa,
(5) Programs or Program Operating Institutions do not provide entertainment reception to evaluators of any kind, including:
    a. putting up banners/billboards/posters/welcome videotrons, moreover loading the names and photos of the evaluators,
    b. giving a dinner party, and
    c. providing opportunities for social traveling or recreation.

(6) Programs or Program Operating Institutions do not take photos or videos that involve evaluators during the on-site visit,

(7) For the purposes of efficiency and time effectiveness of on-site visits, Programs or Program Operating Institutions are permitted, by maintaining the principle of simplicity:
   a. provide pick- up evaluator facilities from the hotel/accommodation to the campus and delivery from the campus back to the hotel/accommodation place, and
   b. provide lunch (working lunch) on the days of on-site visits

(8) In addition to the above policies, Programs or Program Operating Institutions are not allowed to make public exposure regarding on-going evaluation of accreditation until a definitive accreditation decision has been announced.

3. INDICATIVE SCHEDULE OF ACCREDITATION EVALUATION CYCLE

Table 3 outlines the typical timetable of an Accreditation Evaluation Cycle. An evaluation for accreditation cycle covers a period of twelve calendar months, starting on 1 April of the current year and ending on 31 March of the following year. Evaluation processes for General Accreditation (EGA), Provisional Accreditation (EPA), and Interim Evaluation (IE) commence and end at the same date, although detailed steps of each process are different.

Table 3. Typical timetable of an Accreditation Evaluation Cycle

Step no.	Activity	Evaluation Type*)	Period or Completion Deadline
1	PR & POIR registration	EGA, EPA, IE	1-15 April
2	PR & POIR registration verification	EGA, EPA, IE	1-15 April
3	Application for Program evaluation	EGA, EPA, IE	1-15 April
4	Program eligibility verification	EGA & EPA	1-15 April
5	Evaluation scheduling	EGA, EPA, IE	20 April
6	Notice of evaluation kickoff & invoicing	EGA, EPA, IE	21 April
7	EAC Discipline assignment	EGA, EPA, IE	15-20 April
8	Evaluation Team members selection	EGA, EPA, IE	15-20 April
9	Evaluation Team Chair assignment	EGA Only	15-20 April
10	Approval of evaluation observers	EGA Only	15-20 April
11	Evaluation Team acceptance	EGA, EPA, IE	8 May
12	Final Evaluation Team confirmation	EGA, EPA, IE	8 May
13	Completed SER submission	EGA, EPA, IE	30 June
14	Full payment reception	EGA, EPA, IE	1 May
15	Program First Evaluation	EGA, EPA, IE	31 July
16	Program Second Evaluation	EGA only	15 August
17	Program First Response	EGA, EPA, IE	15 September
18	Program Third Evaluation	EGA Only	30 September
19	On-Site Visit Planning	EGA, EPA, IE-V	7 October
20	On-Site Visit	EGA, EPA, IE-V	7 November
21	Exit Meeting	EGA, EPA, IE-V	7 November
22	Program First Evaluation	EGA, IE-V	7-14 November
23	Program Second Response	EGA, IE-V	14 November
24	Program Second Evaluation	EGA, IE-V	28 November
25	Program Final Response	EGA, IE	28 December
26	Program Final Report	EGA, EPA, IE	15 January
27	EAC Discipline Harmonization	EGA, IE	31 January
28	EAC Plenary Meeting	EGA, EPA, IE	1 February
29	Accreditation Decision	EGA, EPA, IE	15 March
30	Accreditation Announcement	EGA, EPA, IE	31 March

*) EGA = Evaluation for General Accreditation, EPA = Evaluation for Provisional Accreditation, IE = Interim Evaluation (either with or without visit), IE-V = Interim Evaluation with On-Site Visit

PERSATUAN INSINYUR INDONESIA
The Institution of Engineers Indonesia

Indonesian Accreditation Board for Engineering Education

ANNEX E

RULES AND PROCEDURES FOR EVALUATION AND ACCREDITATION-RELATED COMMITTEES (RPARC)

APPLICATION FOR
PROVISIONAL MEMBERSHIP
OF THE WASHINGTON ACCORD
2019

THE INSTITUTION OF ENGINEERS INDONESIA / INDONESIAN ACCREDITATION BOARD FOR ENGINEERING EDUCATION – PII / IABEE

INDONESIAN ACCREDITATION BOARD
FOR ENGINEERING EDUCATION (IABEE)

RULES & PROCEDURES FOR ACCREDITATION-RELATED COMMITTEES (RPARC)

VERSION 2018-

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1. INTRODUCTION

The purpose of this document of Rules and Procedures of Accreditation-Related Committees (RPARC) is to define the rules and procedures for operating IABEE committees that are directly related to the evaluation and accreditation process of a Program. These consist of Evaluation and Accreditation Committee (EAC), Pool of Program Evaluators, Accreditation Council and Appeal Board.

2. EVALUATION AND ACCREDITATION COMMITTEE

2.1 ROLES AND RESPONSIBILITY

This committee is responsible to conduct the accreditation evaluation of Programs. The activity includes planning and scheduling, appointing the evaluation team, implementing and monitoring the evaluation process, conducting post evaluation activities, including harmonization, making recommendation on accreditation decision based on the Accreditation Criteria and Rules and Procedures for Evaluation and Accreditation (RPPEA), and reporting.

2.2 CHAIR AND MEMBERSHIP

EAC is led by an EAC Chair and a Vice Chair. For the first time, its members consist of the experienced academics from reputable universities and representing various engineering disciplines, and the professional communities. The number and composition of members can be adjusted to the evaluation workload and the variety of engineering disciplines covered. All members of the Committee are voting members.

The Chair leads all meetings and is responsible for the conduct of the EAC roles. The Vice Chair provides general assistance to the Chair as assigned and, in the absence of the Chair, will assume the Chair's duties.

The EAC Chair designates, for every engineering discipline, a Discipline Chair among the EAC members according to his/her educational background. The function of the Discipline Chair is to propose the names of prospective evaluators who will serve in an accreditation evaluation process and lead the discipline-level harmonization process before accreditation decision making.

3. POOL OF PROGRAM EVALUATORS

3.1 ROLES AND RESPONSIBILITY

Program evaluators are responsible for conducting independent and systematic evaluations from the preparatory, implementation and reporting stages to the post-site visit activities. Program evaluators must provide an appropriate evaluation, in accordance with the level of conformity of the program to the IABEE's Accreditation Criteria and RPEA.

Program evaluators are required to behave ethically and professionally by upholding the Code of Ethics of Evaluators and avoiding conflicts of interest on evaluated institutions/programs.

As stated in the RPEA, an accreditation evaluation of programs is conducted by an evaluator team consists of usually two academics and one industrial practitioner. The evaluation team is led by a Team Chair. The competencies of evaluator team members and the Team Chair are explained in Section 6.7.

3.2 REQUIREMENTS FOR PROGRAM EVALUATOR CANDIDATES

The recruitment process to become a candidate for IABEE's program evaluators is carried out in coordination with the respective Discipline Chapters of PII (BK-PII). The requirements are as follow:

(1) Demonstrates interest and commitment in improving the quality of higher engineering education.
(2) Has a good professional and ethical reputation.
(3) Has a commitment to improve his/her professional development (lifelong learning).
(4) Has good skills in working online and with word processing programs and data.
(5) Graduated from reputable university and has a good academic qualification in the appropriate field (for domestic university with national accreditation of Program rank-A by BAN-PT, or for foreign university with reputable recognition by Minister of Research and Technology and Higher Education).
(6) Has certificate as professional educator and at least 10 years lecturing experience and or certification as professional engineer with minimum level of Professional Engineer (IPM).
(7) Registered as member of PII.

A candidate who has been assessed as fulfilling the above requirements must then undertake a series of IABEE candidate evaluator training programs. See Section 6 for further information on IABEE Evaluator Training Program.

4. ACCREDITATION COUNCIL

4.1 ROLES AND RESPONSIBILITY

Accreditation Council is a board of officials in charge of taking the final accreditation decision, based on the final results of accreditation recommended by the EAC Plenary Meeting. The main role of the council is to ensure that the accreditation process has been carried out in accordance with the established rules and procedures, code of ethics, the principle of confidentiality and avoidance of conflicts of interest. The council does not conduct a technical review so that it repeats what has been done by the EAC but rather on ensuring that all accreditation procedures have been carried out consistently and also emphasizing philosophical and strategic considerations if deemed necessary.

If any doubt arises concerning the recommendation of EAC, the Council has the right to request the EAC to re-examine the evaluation process for ensuring a justified accreditation decision.

4.2 MEMBERSHIP

The Council has 5-7 members consisting of representatives from academics, professional societies, and industry. Only in the initial period of IABEE’s establishment, there were members of the Council representing government with the aim of ensuring that IABEE's vision and mission were aligned with national laws and policies. After IABEE becomes fully independent, representation from the government is no longer needed. The members and the Chair of Accreditation Council are appointed by the Executive Committee in yearly basis.

5. APPEAL BOARD AND APPEAL COMMITTEE

5.1 ROLES AND RESPONSIBILITY

Appeal is a facility provided to a Program if a final accreditation decision of Not-Accredited is deemed inappropriate. Appeal Board and Appeal Committee are board of officials that are appointed to hear appeals. They judge whether the accreditation decision was right or wrong, when the program or institution affected by it thinks that it was wrong. This judgement shall be the IABEE final decision on the matter.

Upon request of the Chair of Executive Committee, Appeal Board shall form an Appeal Committee who will conduct the entire process of resolving an appeal case.

5.2 MEMBERSHIP

The Appeal Board constitutes of Chair and Vice Chair who are appointed by the Executive Committee. An Appeal Committee formed by the Appeal Board consists of three members comprising at least an experienced Program Evaluator and a representative of associated engineering discipline. No member of the committee shall be involved as a Team Chair in the evaluation cycle during which the appealing Program is evaluated. Chair of Appeal Board shall appoint one of the members to be the Chair of Appeal Committee.

6. TRAINING

6.1 OVERVIEW OF TRAINING PROGRAM

Participants selected to take part in the IABEE Evaluator Candidate Training need to undergo a series of training programs, namely Awareness Training, Modular Online Training, Face-to-Face Training, and Observation in an On-Site Evaluation. Evaluator Refresher Training will also be given to evaluators who get assignments in the particular year.

6.2 AWARENESS TRAINING

This training is carried out by Chapters of the Institution of Engineers Indonesia (BK-PII), with instructors from IABEE with the aim of recruiting IABEE evaluator candidates. The

purpose of this training is to:

(1) introduce IABEE and give an understanding to evaluator candidates about the relationship between educational institutions and industry in the context of Outcome Based Education (OBE), and

(2) Introduce evaluator candidates on the concept of outcome-based accreditation, IABEE Accreditation Criteria, and Rules and Procedures for Evaluation and Accreditation (RPEA) and the roles of evaluators.

6.3 MODULAR ONLINE TRAINING

This is a regular yearly training conducted by IABEE with the following objectives:

(1) to give understanding of the basic aspects of the entire IABEE accreditation process, and

(2) to provide experience in preparing a program visit by giving several assignments pertinent to it.

The modules consist of introduction to IABEE; accreditation concepts; Accreditation Criteria; RPEA; roles and duties of evaluators; improvement of learning quality; evaluation judgment and accreditation decision making. This is a prerequisite training for evaluator candidate to be eligible to participate in the following Face-To-Face Training.

6.4 FACE-TO-FACE TRAINING

~~This is a 2-day interactive training program that is designed to simulate a real activity of~~ program visit. It is designed for two purposes:

(1) to give participants a picture of the real situation and activities that occurs during a campus visit. The workshop is designed based on the online training materials that have been completed by participants, and

(2) to give participants the opportunity to demonstrate their competence as evaluators.

This training is guided by instructors and facilitators who function to guide participants in the learning process.

6.5 OBSERVATION IN ACTUAL ON-SITE VISIT

After successfully completing the series of evaluator training programs, IABEE will include the candidates in IABEE's Pool of Program Evaluators. However, assignment as a program evaluator can only be done after the candidate has direct experience in a

program evaluation activity. For this purpose, a candidate who has passed the series of training programs will be involved in an internship as an observer (evaluator-in-training) in an actual program evaluation activity.

The purposes of this observation are to:

(1) to improve the competence of evaluator candidates through direct involvement in the implementation of program evaluation, starting from document review (Program Profile, Self-Evaluation Report/SER), preparation of visits, interviews and observation, assessment, and report writing, and
(2) to demonstrate that the evaluator has the competence to evaluate the program.

Observer tasks include:

(1) observing the implementation of a program evaluation,
(2) practicing interview (with permission from the Team Chair), and
(3) practicing to give judgment.

6.6 EVALUATOR REFRESHER TRAINING

This training is specifically conducted for evaluators who will get the task of evaluating a program in that particular year. The objectives of this training are to:

(1) Recall evaluation processes and procedures
(2) Inform the latest developments in Accreditation Criteria and RPEA
(3) Share experiences (taking lessons) from the previous period evaluation process

This is half day training and held before the implementation of the current year evaluation process.

6.7 EXPECTED EVALUATOR COMPETENCE

After going through the series of training programs and after having adequate evaluation experience, a program evaluator is expected to have the following knowledge, skills and attitudes.

Technically current:

- Demonstrates required technical credentials for the position
- Engaged in lifelong learning and current in their field

Effective communicator:

- Easily conducts face-to-face interviews
- Writes clearly and succinctly
- Presents focused, concise oral briefings

Interpersonally skilled:

- Friendly and sets others at ease
- Listens and places input into context
- Remains open-minded and avoids personal bias
- Forthright, doesn't hold back what needs to be said
- Skillful at pointing out strengths and weaknesses in non-confrontational

Team-oriented:

- Readily accepts input from team members
- Works with team members to reach consensus
- Values team success over personal success

Professional:

- Conveys professional appearance and demeanor
- Is committed to contributing and adding value to the evaluation process
- Considered a person with high integrity and ethical standards

Organized:

- Is focused on meeting deadlines
- Focuses on critical issues and avoids minor detail
- Displays take-charge initiative
- Takes responsibility and works under minimum supervision

For a Team Chair, additional competencies are required, particularly those related to leadership quality and capability to manage an evaluation team. These include:

Leadership

- Takes responsibility, facilitating constructive discussion and fostering closure
- Exhibits adaptability and sound judgment
- Fosters a team environment that is cohesive and well organized
- Builds trust within the team and between the team and the institution

Good team manager:

- Able to build team cohesion and effectively manage team meetings and activities
- Able to bring the team to consensus, exhibiting skill in finding common ground and fostering cooperation
- Able to diplomatically manage an effective exit meeting

6.8 EVALUATOR PERFORMANCE EVALUATION

The performance evaluation of evaluator candidates during training, and team member of evaluators as well as team chair in conducting program evaluation is based on the evaluator competence described in point 6.7. This evaluation is primarily intended as a means for professional development of evaluators.

The evaluation of evaluator candidates is conducted by the Training Facilitators and Peers. The evaluation of evaluators is conducted by Institutions/Programs, Team Chair and Peers after each visit, and the evaluation of Team Chair is conducted by Institution/Program, Evaluators and EAC.

Evaluation instruments containing evaluation criteria and scoring system for evaluator candidates, evaluators, team chairs and training implementation are described in the IABEE training center website.

6.9 TRAINING ORGANIZER

The training organizer has the following duties and responsibilities:

(1) plan, schedule and carry out training activities
(2) preparing training materials, instructors and facilitators
(3) assessing evaluator candidates
(4) evaluate the implementation of training,
(5) make continuous improvements of training programs

Training Instructors are EAC members who have the following qualifications.

(1) Technical accreditation evaluation knowledge obtained through successful completion of overseas and IABEE's evaluator trainer training programs and recent accreditation evaluation experiences.
(2) Combination of adult-education delivery experience and knowledge of principles obtained through at least 10 years delivery experience or successful completion of an instructor training program based on adult learning principles.

(3) Have sufficient knowledge about the concept of Outcome-Based Education, Quality Improvement of Education, IABEE matters, IABEE's Accreditation Criteria and RPEA, and IABEE's Code of Ethics.
(4) Have the ability to create positive learning environments and adheres to the instructional design.

Training activities also involve several Facilitators who have the following tasks and roles:
(1) Assist in managing the flow and training time
(2) Helping participants to understand training materials
(3) Helping the success of group learning during program visit simulations

All members of EAC are eligible to become training facilitators.

7. CODE OF ETHICS

7.1 IABEE VALUES

IABEE demands that all personnel involved in carrying out the mission of IABEE demonstrate the highest standards of professionalism, honesty and integrity. The services provided by IABEE demand impartiality, justice and equality, so that every person must carry out their duties with the highest standards of ethical behavior.

7.2 EVALUATOR'S ETHICAL PRINCIPLES

The followings are evaluator's ethical principles:
(1) Evaluators must work objectively based on the Accreditation Criteria and RPEA regardless of the program reputation.
(2) Evaluators are not permitted to express personal opinions on behalf of IABEE.
(3) Evaluators are not permitted to request or accept gifts of any kind that should be suspected of having a bearing on / affecting the results of accreditation evaluation.
(4) Evaluators are required to follow the applicable legal rules in Indonesia regarding gratification.
(5) Each evaluator must make every effort to avoid providing evaluations or comments on matters not included in the scope of Accreditation Criteria and the RPEA.
(6) Evaluators should not compare the conditions of study program being evaluated with the conditions in the institutions of origin of evaluators or other institutions because each study program has the flexibility to determine the outcome standards of its graduates in accordance with the vision, mission and conditions of its resources.

8. CONFLICT OF INTEREST

8.1 POLICY ON CONFLICT OF INTEREST

The types of services provided by IABEE are vulnerable to conflicts of interest that can affect the objectivity of the accreditation process, and thus the credibility of IABEE. Therefore, IABEE expects that all personnel involved in IABEE activities to hold strong ethical principles and professionalism to avoid potential conflicts of interest as much as possible so as to guarantee objectivity of services.

The following policies and procedures regarding conflict of interest are established with the aim of:

(1) maintaining credibility in the accreditation evaluation process and confidence in decisions,
(2) ensuring fairness and impartiality in decision making,
(3) disclosing real or perceived conflicts of interest, and
(4) acting impartially and avoiding the appearance of impropriety.

8.2 PROCEDURES

The following conflict of interest procedures address situations and circumstances in which personal interests of IABEE personnel are - or can appear to be - in conflict with the IABEE's interest:

(1) Individuals representing IABEE must not participate in any decision-making capacity if they have or have had a close, active association with a program or institution being evaluated. Close, active association includes but is not limited to:
    a. Current or past employment as faculty, staff, or consultant by the institution or program;
    b. Current or past discussion or negotiation of employment with the institution or program;
    c. Attendance as student at the institution;
    d. Receipt of an honorary degree from the institution;
    e. An institution or program where a close family relative is, or was, a student or employee; or,
    f. An unpaid official relationship within the past 10 years with an institution, e.g. membership on the institution’s governing board or advisory board.
    g. Any reason that the individual cannot render an unbiased decision.
(2) The members of the evaluation team must not establish a close or active association with the institution or program under evaluation, until the entire accreditation

evaluation has been completed and accreditation decision has been publicly announced.

(3) All individuals representing IABEE must sign a conflict of interest and confidentiality statement indicating that they have read and understand these policies.

(4) Individuals must absent themselves from any portion of IABEE meeting in which discussions or decisions occur for which they have a real or perceived conflict of interest.

9. CONFIDENTIALITY

9.1 POLICY

IABEE upholds ethics in conducting all activities of its members and organizing staff, and requires that they exhibit highest standards in professionalism, fairness, and integrity. Information disclosed by programs undergoing evaluation, and information generated by review and discussion activities during the evaluation process shall be treated with confidentiality, and shall not be divulged without specific written authorization by IABEE and the program being evaluated.

9.2 PROCEDURES

(1) Evaluators must maintain the confidentiality of every information/document as well as the evaluation results except to IABEE.

(2) Evaluators may not use the information provided by the program for the purpose of evaluation for the benefit of themselves or other parties other than IABEE

(3) Even though the evaluation process is transparent, all the documents submitted by the study program to the evaluator as well as the results of the evaluation are confidential which are entrusted by the program to IABEE. Each evaluator must maintain this trust by not providing information from the document and the results of the evaluation to any party other than IABEE.

(4) The evaluator is also not allowed to take advantage of the use of data and information submitted by the program to IABEE both in the form of documents and the facts of the field.

PERSATUAN INSINYUR INDONESIA
The Institution of Engineers Indonesia

Indonesian Accreditation Board for Engineering Education

ANNEX F

PROGRAM PROFILE AND SELF-EVALUATION REPORT (SER) TEMPLATES

APPLICATION FOR
PROVISIONAL MEMBERSHIP
OF THE WASHINGTON ACCORD
2019

THE INSTITUTION OF ENGINEERS INDONESIA / INDONESIAN ACCREDITATION BOARD FOR ENGINEERING EDUCATION – PII / IABEE

Version 2018-

PROGRAM PROFILE

<NAME OF PROGRAM OPERATING INSTITUTION>

<NAME OF PROGRAM>

Accreditation Type
<General/Provisional>

Engineering Discipline
<eg. Chemical Engineering/Electrical Engineering/Mechanical Engineering….>

Evaluation Type
<New/Interim/Renew>

Version of Accreditation Criteria
<Year->

Date of Document Upload
<Year-Month-Date>

This document is a complement to the Program's Self Evaluation Report (SER) worksheet that must be uploaded to the IABEE Online Evaluation System as one of the SER attachments. Before uploading, please convert this document into a PDF file format and make sure not exceeding 30 Megabytes.

1. GENERAL INFORMATION

1.1. PROGRAM INFORMATION

1.1.1. Name of Program Operating Institution:

1.1.2. Name Program:

1.1.3. Graduate Degree:

1.1.4. Address of Program Website:

1.1.5. Contact Information:

1.1.5.1. ***Program Operating Institution Representative for IABEE***

(a) Name:

(b) Position:

(c) Postal Address:

(d) Phone No.:

(e) Fax No.:

(f) E-mail Address:

1.1.5.2. ***Program Representative***

(a) Name:

(b) Position:

(c) Postal Address:

(d) Phone No.:

(e) Fax No.:

(f) E-mail Address:

1.2. SUMMARY OF PROGRAM PROFILE

Write a brief summary of program profile approximately 3-4 pages that describes:

(1) History of the program, which explains the time of establishment, the time when its first graduate was produced, number of student bodies, current curriculum, and history of program accreditation (national and other accreditatiosn ever taken). If already obtained accreditation from IABEE, indicate when the last evaluation was conducted.
(2) Career relationships of graduates with the autonomous professional profiles expected by the program
(3) Characteristics and benchmarking of the Program Learning Outcomes
(4) Program relations with other similar or related programs
(5) Characteristics of the curriculum
(6) Other typical characteristics of the program implementation such as, limited only to regular classes, evening classes exist, learning using an online system. If so, explain for each type the number of students is involved.

1.3. LATEST EDUCATION IMPROVEMENT

Briefly explain when and how the program conducted a self-evaluation based on the level of achievement of the Program Learning Outcomes and the reflection on the societal and environmental changes and explain the results of the improvement. If the program considers there are no educational / learning activities need to be improved at this time, provide reasons for justification. If in the previous accreditation evaluation cycle there were weaknesses (W) and concerns (C), explain what kind of improvements had been made.

1.4. EXECUTIVE SUMMARY OF SELF EVALUATION REPORT (SER)

Write down the summary of program's SER and provide a brief explanation of whether the program considers it has met every element of the IABEE Accreditation Criteria. Give information on certain elements which are considered to have exceeded the criteria requirements.

2. FORMULATION OF AUTONOMOUS PROFESSIONAL PROFILE

Provide an explanation of the formulation of the Program's Autonomous Professional Profile as its educational objectives including:

(1) How the profile considers national and local potential resources, needs and values
(2) How the profile is linked to the institutional vision and mission.
(3) Systems and procedures used to establish and evaluate the profile in accordance with the development of the job market, industry, economy and environment.
(4) When the last time the review process of the profile carried out and if there were changes or adjustments whether it had involved stakeholders.
(5) How the profile is published, if the website is used give its URL.

3. RELATIONSHIP BETWEEN PROGRAM LEARNING OUTCOMES AND IABEE'S CRITERIA OF LEARNING OUTCOMES (SUB-CRITERION 1.3)

Give a sign "XX" in the Program Learning Outcomes matrix (A, B, C, etc.) that is highly compatible with the knowledge / skills / attitudes required by sub-criterion 1.3 (items (a) to (j)). Give a sign "X" if the relationship is not very strong. Leave it blank if there is no relationship. The matrix can be modified as needed, for example, if the Program defines Learning Outcomes and Sub-Learning Outcomes, the column can be formatted into A-1, A-2, A-3, ..., B-1, B-2, ... etc.

Knowledge/Skill/ Attitude of Sub- Criterion 1.3 / Program Learning Outcomes	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)
(A)										
(B)										
(C)										
(D)										
(E)										
…										
…										
…										

List the complete satements of of the Program Learning Outcomes under the matrix.

(A) ….

(B) ….

Also, explain how the achievement of the Program Learning Outcomes supports the achievement of the designated Autonomous Professional Profile.

4. PERFORMANCE INDICATORS AND METHOD OF PROGRAM LEARNING OUTCOMES MESUREMENT

Reproduce the table below to explain the performance indicators and methods used to measure each of the Program Learning Outcomes or Sub-Learning Outcomes as well as planning about when and how often the evaluation is carried out, for example every semester, every year, etc.

Program Learning Outcomes (PLO)	Sub-PLO (*)	Relation between PLO / Sub-PLO and Criteria (a) to (j)	Performance Indicators	Measurement Method of Learning Outcomes	Measurement Schedule of Learning Outcomes
(A)	(A-1)	(a) XX	PI-1 (A-1) _____ PI-2 (A-1) _____	(A-1): _____	
	(A-2)	(a) X	PI-1 (A-2) _____	(A-2): ____	
(B)		(a) XX (b) X	PI-1 (B) _____ PI-2(B) _____ PI-3(B) _____	(B): ____	
. . . .	. . . .	. . . .	. . . .	. . . .	

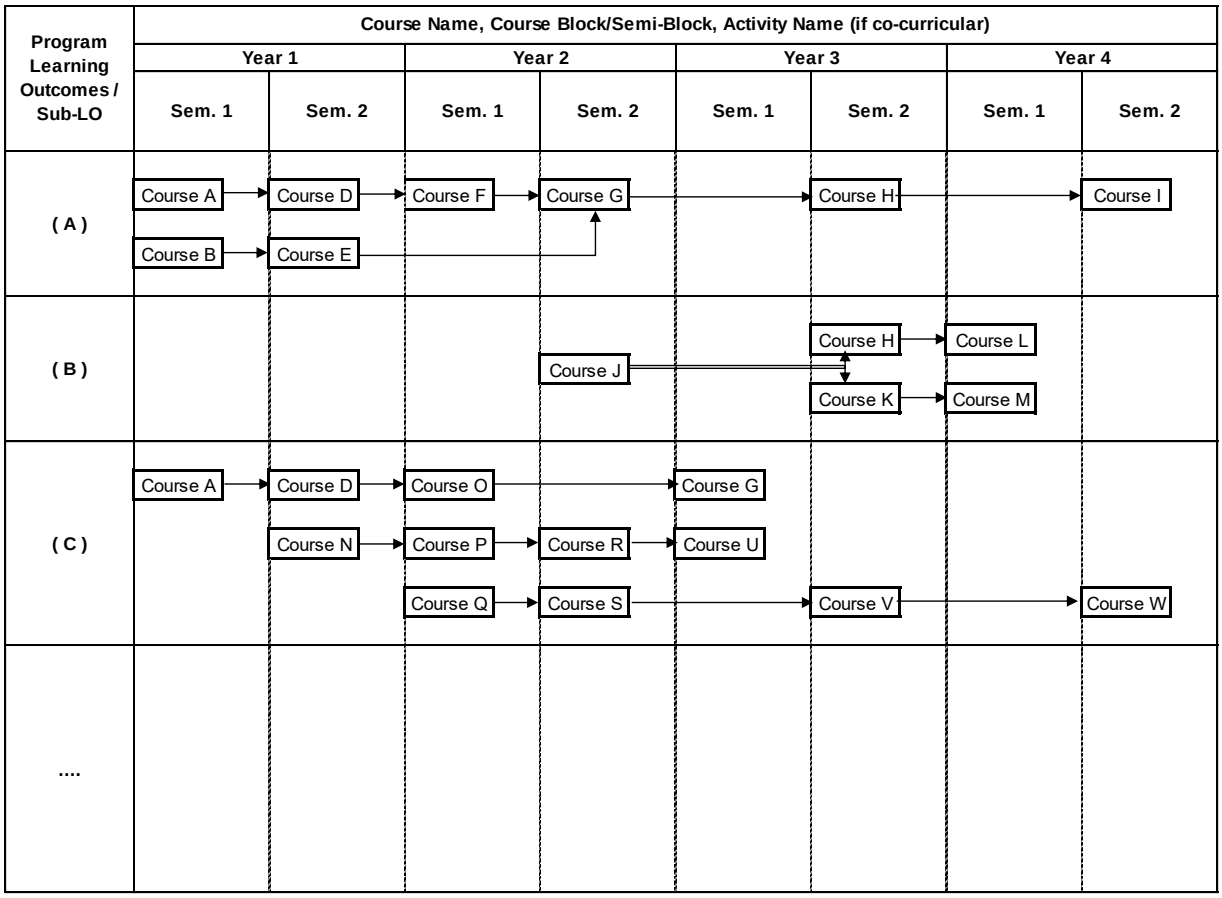
(*) This column may or may not be required depending how Program defines its Learning Outcomes

5. CURRICULUM DESIGN

Give an explanation of the curriculum design that characterizes uniqueness of the Program

6. ROAD MAP OF LEARNING OUTCOMES ACHIEVEMENT THROUGH COURSE STRUCTURE

Show the structure or road map for achieving each Program's Learning Outcomes through courses as designed in the curriculum, including co-curricular activities if exist. The following is only an example of the road map in question.



7. PROGRAM CURRICULUM

Fill in the list of courses in the current curriculum in the following table

No	Code and Name of Course/Block Course	Type of Course/Block: Compulsary (C) or Elective (E)	Implemented by the Program itself (P) or other program (OP)	Course Group (Credit)				
				Mathematics and basic sciences	Engineering science and technology	Information Technology and Communication	Engineering Design and Problem-based Experiment	General Education (moral, ethics, socio-culture, management, and environment)
	The list of subjects is sorted per semester starting from the earliest semester until the last semester							
	Total Credits							
	Credit percentage to total							
	IABEE's requirement			Min. 20%	Min. 40%			Maks. 30%

8. LEARNING IMPLEMENTATION ON ENGINEERING DESIGN

Briefly describe the learning process that provides experience to students in design ability of their fields, by explaining the following:

- *State and briefly explain the subjects or practical works or other forms of learning that give students experience to integrate various knowledge, skills and attitudes obtained throughout the curriculum.*
- *Explain how the program provides experience to students to practice their abilities in real conditions.*

9. SUMMARY OF PROGRAM'S QUANTITATIVE DATA

Provide the numeral data related to student body, faculty, and curriculum as requested below.

	Academic Year (at least past 4 years)				
Information on students	Number of new students accepted at the faculty level where the program is located				
	Number of new students accepted by the Program				
	Number of transfer students from other programs and from outside the institution				
	Number of active students (including those working on final/senior projects)				
	Total number of graduates				
	Number of graduates under OBE system				
Information on faculty and support staff	Number of Program's permanent faculty				
	Number of Program's non-permanent faculty				
	Number of Program's faculty assistants				
	Number of support staff members				
Information on curriculum	Minimum total credits for applying graduation				
	(*) The ratio of design courses load to the total curriculum load				
	(*) The ratio of group/team-type learning (such as Problem-based Learning, or Project-based learning) to individual-type learning				

Fill in the quantitative data requested in the table above. Additional explanations can be given separately below the table if needed, for example a list of subjects with problem / project based learning activities. Prepare documentation related to the learning activities during on-site visit

(*) The ratio here can be calculated in credits or in hours

10. SAMPLE OF ACADEMIC TRANSCRIPT

This section is only needed for Programs that apply for General Accreditation for the first time or re-accreditation.

Include in this section, a scanned copy of transcript of 2 (two) OBE graduates in each graduation period. Additional samples may be requested by the evaluator team if needed.

11. SUMMARY OF FACULTY MEMBERS DATA

Fill in the data of Program's permanent and non-permanent faculty members in the following table, and complete the curriculum vitae of each faculty member in Annex 1.

Name	Last Education	Academic Position	Professional Certificate (lecturer or others)	Working Experience (in Year)			Level of Involvement (L=low, M=Moderate, H=High)		
				Industry	Lecturing	This Institution	Professional Organisation	Industrial Consulting	Professional Development

Fill into the following table the faculty member (permanent and non-permanent) activities for the last academic year

Name	Name of Course Taught (odd and even semester)	Work Load Distribution (in Credits)*				Time Dedicated for Program	
		Teaching	Research and Community Development	Institutional Management	Outside of the Program	Total Credits in the Program	%

*) expressed in Full-Time Teaching Equivalent. Research includes student final project supervision. Institutional Management includes activities such as guidance and counseling, supervision of student activity, lab coordinator, student internship supervision, program organization management. Activity outside the program includes teaching and supervising post graduate students, or assigned as structural officer outside the program. Percentage of distribution is determined per semester.

12. SAMPLE OF SYLLABI AND / COURSE SEMESTER LEARNING PLAN

Include a sample of syllabus and semester learning plan from one of core courses showing:

- *Name and course code, semester, number of credits;*
- *Course learning outcomes mandated by the curriculum to fulfill the program learning outcomes;*
- *Course content related to capabilities to be achieved;*
- *Learning methods;*
- *Time allocation for each course content;*
- *Student learning experience in the forms of assignment, exam, or others;*
- *Criteria, indicators and assessment weights; and*
- *List of references used.*

The full course syllabi will be examined in the on-site visit.

13. SAMPLES OF EXAM QUESTIONS / ASSESSMENT OF COURSE LEARNING OUTCOMES, STUDENT ANSWER SHEET, AND ASSESSMENT RESULT

Include a sample of exam questions/course learning outcome assessment from one of the core courses, student answer sheets, and results of assessment by the lecturer. Include samples of answer sheets that are considered good, sufficient, or not good. During on-site visit, a portfolio of all required subjects must be prepared for the evaluation process.

14. FACILITY

Make a list of equipment that is owned and used for learning activities both in the laboratory, studio or elsewhere. Briefly explain the system of operation and maintenance of the equipment including the calibration process of measuring instruments and software licenses. State the specifications and quantity and location of the equipment.

APPENDIX 1
CURRICULUM VITAE OF FACULTY MEMBERS

1. *Name*
2. *Background of Education: level, field of study, place of study, year of graduation*
3. *Academic experience - academic position (specify the year of appointment), structural positions (lab coordinator, head of program, etc. and year of appointment)*
4. *Non-academic experience if any (position, organization / company name, time of appointment)*
5. *Professional certification (engineering, or other profession)*
6. *Membership in professional organizations and positions*
7. *Awards obtained (name and year for the last 3 years)*
8. *Community services involvement, such as giving training, counseling, etc. (name and year for the last 3 years)*
9. *List of publications (last 3 years), both as the main or co-author*
10. *Briefly explain the professional development obtained in the last 3 years (training, workshops, courses, consulting and engineering practices, etc.).*

SELF-EVALUATION REPORT TEMPLATE

Note: *This template is freely downloadable from IABEE Public Website. It serves only as practicing sheet for the Programs wishing to learn how to prepare a Self-Evaluation Report (SER). The official SER sheet is obtainable through Program Representative's account in the IABEE Online Evaluation System once the Program has been registered for evaluation in the System.*

CRITERION	Sub-criterion	Sub-sub-criterion	Evaluation item	DESCRIPTION OF CRITERION / EVALUATION ITEM	SELF-CLAIM	DESCRIPTION OF SELF-EVALUATION	REFERENCES
					Mark with "X" for good compliance or "XX" for above satisfactory compliance	*Describe concisely (within 250 words) how the Program meet each evaluation item. Description must be based on evidences. Evaluation team shall consider only evidence-based argument. Answer only the cells with no color. Leave the colored cells blank.*	*Provide list of evidences supporting the corresponding description in column (3). Compile the evidences in attachment files in PDF format to be uploaded to IABEE Online Evaluation System. A file may be sized up to 30 Mb. Program may upload up to 5 files of compiled evidence, save 1 slot for uploading Program Profile document.*
				(1)	(2)	(3)	(4)
1				**ORIENTATION OF THE GRADUATE COMPETENCE**			
	1.1.			**Program shall define the profile of graduates to be envisaged as autonomous professionals by considering country's potential resources, cultures, needs and interests**			
			[1]	Does the Program establish a clearly defined profile of Autonomous Professionals, taking into account local and/or national protential resources, wisdoms, needs, and interests, and considering traditions, vision, and mission of the institution operating the Program?			**[Example]:** [R1-1] University Charter - article XX on Vision and Mission [R1-2] program website at http://chemeng.ft.xx.ac.id/profil - Statement of Autonomous Professional Profile [R1-3] List of participant, minutes of meeting on Curriculum Development 2016 [R1-4] Curriculum Development White Paper, Ch. 1 page 13 on Envisaged Autonomous Professional Profile as Program Educational Objectives
			[2]	Does the Program implements an effective system or procedures for establishing and reviewing the envisaged profile of Autonomous Professionals, which involves the stakeholders of the Programs?			
	1.2.			**Program shall inform its students and faculty with the envisaged profile of autonomous professionals and widely publicize it**			
			[1]	Are Program students and faculty members knowledgeable of the profile of Autonomous Professionals, and is the profile accessible by the general public?			

CRITERION	Sub-criterion	Sub-sub-criterion	Evaluation item	DESCRIPTION OF CRITERION / EVALUATION ITEM	SELF-CLAIM	DESCRIPTION OF SELF-EVALUATION	REFERENCES
					Mark with "X" for good compliance or "XX" for above satisfactory compliance	*Describe concisely (within 250 words) how the Program meet each evaluation item. Description must be based on evidences. Evaluation team shall consider only evidence-based argument. Answer only the cells with no color. Leave the colored cells blank.*	*Provide list of evidences supporting the corresponding description in column (3). Compile the evidences in attachment files in PDF format to be uploaded to IABEE Online Evaluation System. A file may be sized up to 30 Mb. Program may upload up to 5 files of compiled evidence, save 1 slot for uploading Program Profile document.*
				(1)	(2)	(3)	(4)
	1.3.			**Program shall establish its expected Learning Outcomes which consist of abilities to utilize knowledge, skills, resources and attitudes as described in the (a) to (j) items of the Common Criteria to be acquired by the student at the time of completion of the study.**			
		1.3.1	[1]	Has the Program established its own Learning Outcomes, taking into account the envisaged profile of Autonomous Professionals?			
		1.3.2		**Do the Program Learning Outcomes include the standard competences, item (a) to (j), in a clearly identifiable manner?**			
			[1]	(a) ability to apply knowledge of mathematics, natural and/or materials sciences, information technology and engineering to acquire comprehensive understanding of engineering principles			
			[2]	(b)ability to design components, systems, and/or processes to meet desired needs within realistic constraints in such aspects as law, economic, environment, social, politics, health and safety, sustainability as well as to recognize and/or utilize the potential of local and national resources with global perspective			
			[3]	(c) Ability to design and conduct laboratory and/or field experiments as well as to analyze and interpret data to strengthen the engineering judgment			
			[4]	(d) Ability to identify, formulate, analyze, and solve engineering problems			
			[5]	(e) Ability to apply methods, skills and modern engineering tools necessary for engineering practices			
			[6]	(f) Ability to communicate effectively in oral and written manners			
			[7]	(g) ability to plan, accomplish, and evaluate tasks under given constraints			
			[8]	(h) ability to work in multidisciplinary and multicultural team			

CRITERION	Sub-criterion	Sub-sub-criterion	Evaluation item	DESCRIPTION OF CRITERION / EVALUATION ITEM	SELF-CLAIM	DESCRIPTION OF SELF-EVALUATION	REFERENCES
					Mark with "X" for good compliance or "XX" for above satisfactory compliance	*Describe concisely (within 250 words) how the Program meet each evaluation item. Description must be based on evidences. Evaluation team shall consider only evidence-based argument. Answer only the cells with no color. Leave the colored cells blank.*	*Provide list of evidences supporting the corresponding description in column (3). Compile the evidences in attachment files in PDF format to be uploaded to IABEE Online Evaluation System. A file may be sized up to 30 Mb. Program may upload up to 5 files of compiled evidence, save 1 slot for uploading Program Profile document.*
				(1)	(2)	(3)	(4)
			[9]	(i) ability to be accountable and responsible to the society and adhere to professional ethics in solving engineering problems			
			[10]	(j) ability to understand the need for life-long learning, including access to the relevant knowledge of contemporary issues			
		1.3.3		**Program shall establish its expected Learning Outcomes which consist of abilities to utilize knowledge, skills, resources and attitudes as described in the (a) to (j) items of the Common Criteria to be acquired by the student at the time of completion of the study**			
			[1]	Has a set of relevant performance indicators and assessment methods been appropriately established for each Program Learning Outcome?			
			[2]	Do the Learning Outcomes take into account the Discipline Criteria and Category Criteria ?			
			[3]	Are students and faculty members knowledgeable of the Program Learning Outcomes, and are the Learning Outcomes accessible to the general public ?			
2				**LEARNING IMPLEMENTATION**			
	2.1			**CURRICULUM**			
		2.1.1		**Curriculum shall include the following subject areas:** **(a) Mathematics and discipline-specific natural sciences** **(b) Discipline-specific engineering science and technology** **(c) Information and communication technology** **(d) Engineering design and problem based experiments** **(e) General education, which includes morality, ethics, socio-culture, environment and management**			

CRITERION	Sub-criterion	Sub-sub-criterion	Evaluation item	DESCRIPTION OF CRITERION / EVALUATION ITEM	SELF-CLAIM	DESCRIPTION OF SELF-EVALUATION	REFERENCES
					Mark with "X" for good compliance or "XX" for above satisfactory compliance	*Describe concisely (within 250 words) how the Program meet each evaluation item. Description must be based on evidences. Evaluation team shall consider only evidence-based argument. Answer only the cells with no color. Leave the colored cells blank.*	*Provide list of evidences supporting the corresponding description in column (3). Compile the evidences in attachment files in PDF format to be uploaded to IABEE Online Evaluation System. A file may be sized up to 30 Mb. Program may upload up to 5 files of compiled evidence, save 1 slot for uploading Program Profile document.*
				(1)	(2)	(3)	(4)
			[1]	Does the curriculum include a minimum of 20% of a combination of college level mathematics and basic sciences (e.g. biology, chemistry, or physics), a minimum of 40% of engineering topics, consisting of engineering sciences and engineering design, and a maximum of 30% general education components that complement the technical content of the curriculum and are consistent with the Learning Outcomes?			
			[2]	Does the curriculum sufficiently cover, both in terms of load and depth, all educational contents as defined in the Common Criteria and Discipline Criteria?			
		2.1.2.		**Curriculum development shall consider input from Program stakeholders**			
			[1]	Does the Program maintain an effective process to develop and review its curriculum periodically, to ensure its consistency with the institutional mission, stakeholders' needs (including the society, industry, and professional fields), and Accreditation Criteria (which includes Common Criteria and Criteria Guide, Discipline Criteria, and Category Criteria)?			
			[2]	Do the policies and procedure mentioned in 2.1.2.(1) above provide sufficient opportunity for the stakehoders to discuss Program Educational Objectives and to foster closer collaboration?			
		2.1.3.		**Curriculum shall indicate the structural relationship and contributions of the subject courses to fulfill Learning Outcomes. Procedures, including syllabus, shall be established and documented so that the expected learning process can be implemented in a controlled way**			
			[1]	Does the curriculum have a clear roadmap which describes the structural relationship and contribution of sets of subject courses to attain the Learning Outcomes?			

CRITERION	Sub-criterion	Sub-sub-criterion	Evaluation item	DESCRIPTION OF CRITERION / EVALUATION ITEM	SELF-CLAIM	DESCRIPTION OF SELF-EVALUATION	REFERENCES
					Mark with "X" for good compliance or "XX" for above satisfactory compliance	*Describe concisely (within 250 words) how the Program meet each evaluation item. Description must be based on evidences. Evaluation team shall consider only evidence-based argument. Answer only the cells with no color. Leave the colored cells blank.*	*Provide list of evidences supporting the corresponding description in column (3). Compile the evidences in attachment files in PDF format to be uploaded to IABEE Online Evaluation System. A file may be sized up to 30 Mb. Program may upload up to 5 files of compiled evidence, save 1 slot for uploading Program Profile document.*
				(1)	(2)	(3)	(4)
			[2]	Is the curriculum systematically designed for student to achieve the Learning Outcomes within the allocated academic years?			
			[3]	Are the students and the faculty well-informed on how each component of the Learning Outcomes will be realized through the learning process as described in the curriculum?			
			[4]	Is syllabus for each subject course prepared in accordance with the curriculum, with clear descriptions of its position in the curriculum, course load, educational components and methods, course learning outcomes, performance indicators, and assessment methods?			
			[5]	Is the syllabus made well-known to the students and the faculty?			
			[6]	Are learning activities implemented and assessed in accordance with the course syllabus?			
		2.1.4.		**Curriculum shall ensure that the students are exposed to engineering practices and major design project experience using engineering standards and multiple realistic constraints based on knowledge and skills acquired in preceding course work**			
			[1]	Does the curriculum include major design project(s) (capstone design or other equivalent terms) to provide an opportunity to students for developing competence in practical application of engineering skills, combining theory and experience along with the use of other relevant knowledge and skills?			
			[2]	Does the curriculum provide sufficient exposure for students to acquire practical experience in implementing their knowledge and skills in an actual working environment?			
	2.2.			**FACULTY**			

CRITERION	Sub-criterion	Sub-sub-criterion	Evaluation item	DESCRIPTION OF CRITERION / EVALUATION ITEM	SELF-CLAIM	DESCRIPTION OF SELF-EVALUATION	REFERENCES
					Mark with "X" for good compliance or "XX" for above satisfactory compliance	*Describe concisely (within 250 words) how the Program meet each evaluation item. Description must be based on evidences. Evaluation team shall consider only evidence-based argument. Answer only the cells with no color. Leave the colored cells blank.*	*Provide list of evidences supporting the corresponding description in column (3). Compile the evidences in attachment files in PDF format to be uploaded to IABEE Online Evaluation System. A file may be sized up to 30 Mb. Program may upload up to 5 files of compiled evidence, save 1 slot for uploading Program Profile document.*
				(1)	(2)	(3)	(4)
		2.2.1.		**Program shall provide necessary number, qualification and competence of faculty members for performing learning process, including planning, delivering, evaluating, and continually improving its effectiveness in order to achieve the Learning Outcomes**			
			[1]	Does the Program establish a clear description of qualifications and competence level of its faculty members to cover all curricular areas and to meet all applicable Accreditation Criteria? The description shall include composition, number, experience and the extent and quality of faculty involvement in interactions with students, student advising, and oversight of Program?			
			[2]	Does Program recruit the members of its faculty in accordance to the abovementioned description?			
			[3]	Is sufficient number of faculty members provided to implement learning process (including planning, delivering, evaluating, and continually improving its effectiveness) in order to achieve of the Learning Outcomes?			
			[4]	Does the Program promote and facilitate / provide Professional Development (PD) for its faculty to continually improve faculty's educational abilities?			
		2.2.2.		**Program shall ensure that the faculty members are aware of the relevance and importance of their roles and contributions to the Learning Outcomes**			
			[1]	Does the Program maintain effective policies and procedures which regulate faculty members' role in course creation, modification, and evaluation with respect to the definition, revision, and attainment of the Learning Outcomes?			
			[2]	Does the Program maintain effective policies and procedures to institutionally evaluate faculty members' educational activities in order to improve the learning process?			

CRITERION	Sub-criterion	Sub-sub-criterion	Evaluation item	DESCRIPTION OF CRITERION / EVALUATION ITEM	SELF-CLAIM	DESCRIPTION OF SELF-EVALUATION	REFERENCES
					Mark with "X" for good compliance or "XX" for above satisfactory compliance	*Describe concisely (within 250 words) how the Program meet each evaluation item. Description must be based on evidences. Evaluation team shall consider only evidence-based argument. Answer only the cells with no color. Leave the colored cells blank.*	*Provide list of evidences supporting the corresponding description in column (3). Compile the evidences in attachment files in PDF format to be uploaded to IABEE Online Evaluation System. A file may be sized up to 30 Mb. Program may upload up to 5 files of compiled evidence, save 1 slot for uploading Program Profile document.*
				(1)	(2)	(3)	(4)
			[3]	Does the Program facilitate and maintain an effective network of communication among faculty members which enables close collaboration in teaching to improve the attainment of Learning Outcomes?			
	2.3.			**STUDENTS AND ACADEMIC ATMOSPHERE**			
		2.3.1.		**Program shall define and implement an entry standard for both new and transfer students, as well as transfer of credits**			
			[1]	Does the Program maintain effective, clearly defined, and publicly accessible policies and procedures to ensure the admission of new students with a level of academic qualifications consistent with the Program curriculum designed to achieve the Learning Outcomes?			
			[2]	Does the Program maintain effective & publicly accessible policies and procedures for the transfer of credits of courses taken outside of the Program (this may also include equivalency of work experience and other non-matriculated activities in terms of credits)?			
			[3]	Does the Program maintain effective, publicly accessible policies and procedures for the admission of transfer students, including evaluation methods for the acknowledgment of prior study achievements?			
		2.3.2.		**Program shall define and implement ongoing monitoring of student progress and evaluation of student performance. Procedures of quality assurance shall be established to ensure that adequacy of standards is achieved in all assessments**			
			[1]	Does Program maintain effective quality assurance policies and procedures to monitor and evaluate student performance in attaining the Learning Outcomes?			
			[2]	Are activities of monitoring and evaluation of student performance implemented in accordance with the policies and procedures?			

CRITERION	Sub-criterion	Sub-sub-criterion	Evaluation item	DESCRIPTION OF CRITERION / EVALUATION ITEM	SELF-CLAIM	DESCRIPTION OF SELF-EVALUATION	REFERENCES
					Mark with "X" for good compliance or "XX" for above satisfactory compliance	*Describe concisely (within 250 words) how the Program meet each evaluation item. Description must be based on evidences. Evaluation team shall consider only evidence-based argument. Answer only the cells with no color. Leave the colored cells blank.*	*Provide list of evidences supporting the corresponding description in column (3). Compile the evidences in attachment files in PDF format to be uploaded to IABEE Online Evaluation System. A file may be sized up to 30 Mb. Program may upload up to 5 files of compiled evidence, save 1 slot for uploading Program Profile document.*
				(1)	(2)	(3)	(4)
			[3]	Are the results of monitoring and evaluation of student performance utilized to perform continual improvement of the program?			
		2.3.3.		**Program shall create and maintain good academic atmosphere conducive to successful learning**			
			[1]	Does Program provide student guidance and counseling services on academic as well as non-academic matters and career guidence?			
		2.3.4.		**Program shall promote co-curricular activities for character building and enhancing the students' awareness on the country's needs**			
			[2]	Does the Program facilitate and promote co-curricular activities for character building and to enhance students' awareness of the nation's needs?			
			[3]	Is the spirit of entrepreneurship as characterized by a deep sense of purpose, preserverance, resourcefulness, open-mindedness, and eagerness to learn emphasized in students' character building activities?			
	2.4.			**FACILITY**			
		2.4.1.		**Program shall ensure the availability and accessibility of facilities for effective functioning of the learning process and attainment of the Learning Outcomes**			
			[1]	Is the education institution that operates Program equipped with the facilities such as offices, classroms and associated equipment, laboratories, computing resources, library services, etc. necessary for effective functioning of the learning process and attainment of the Learning Outcomes?			
			[2]	Are the students made well-known regarding the use of tools, equipment, computing resources, laboratories, and other physical facilities so as to enable the utilization of these facilities in a safe and appropriate manner?			

CRITERION	Sub-criterion	Sub-sub-criterion	Evaluation item	DESCRIPTION OF CRITERION / EVALUATION ITEM	SELF-CLAIM	DESCRIPTION OF SELF-EVALUATION	REFERENCES
					Mark with "X" for good compliance or "XX" for above satisfactory compliance	*Describe concisely (within 250 words) how the Program meet each evaluation item. Description must be based on evidences. Evaluation team shall consider only evidence-based argument. Answer only the cells with no color. Leave the colored cells blank.*	*Provide list of evidences supporting the corresponding description in column (3). Compile the evidences in attachment files in PDF format to be uploaded to IABEE Online Evaluation System. A file may be sized up to 30 Mb. Program may upload up to 5 files of compiled evidence, save 1 slot for uploading Program Profile document.*
				(1)	(2)	(3)	(4)
			[3]	Does Program maintain effective policies and procedures for maintaining and upgrading the tools, equipment, computing resources, library and other facilities used by the students and faculty?			
	2.5.			**INSTITUTIONAL RESPONSILBILITY**			
		2.5.1.		**Program shall define and manage the process for the provision of the educational service, including education design, curriculum development and delivery, and assessment of learning**			
			[1]	Does the Program maintain an effective process to ensure the quality and continuity of the program?			
			[2]	Are efforts made by the institution hosting the program to ensure necessary financial resources to maintain, improve, and operate the educational environment and educational services, including education design, curriculum development and delivery, and assessment of learning?			
		2.5.2.		**Institution shall make efforts to establish resources, supporting service and cooperation with stakeholders on research, education and/or service to community with due consideration to existing local resources**			
			[1]	Are efforts made by the institution hosting the program to develop partnership with external parties such as industry, research centers, and community units to foster the Tridharma (education, research, and community services)?			
			[2]	Are partnership activities mentioned above used, among others, to improve students' learning process?			
3				**ASSESSMENT OF THE EXPECTED LEARNING OUTCOMES**			

CRITERION	Sub-criterion	Sub-sub-criterion	Evaluation item	DESCRIPTION OF CRITERION / EVALUATION ITEM	SELF-CLAIM	DESCRIPTION OF SELF-EVALUATION	REFERENCES
					Mark with "X" for good compliance or "XX" for above satisfactory compliance	*Describe concisely (within 250 words) how the Program meet each evaluation item. Description must be based on evidences. Evaluation team shall consider only evidence-based argument. Answer only the cells with no color. Leave the colored cells blank.*	*Provide list of evidences supporting the corresponding description in column (3). Compile the evidences in attachment files in PDF format to be uploaded to IABEE Online Evaluation System. A file may be sized up to 30 Mb. Program may upload up to 5 files of compiled evidence, save 1 slot for uploading Program Profile document.*
				(1)	(2)	(3)	(4)
	3.1.			**Program shall ensure that an effective assessment process of Learning Outcomes based on established performance indicators is implemented and maintained at planned intervals using appropriate methods**			
			[1]	Does the Program establish clearly defined policies and procedures for the assessment of Learning Outcomes attainment which include specific assessment methods using the established performance indicators and planned interval for conducting assessments ?			
			[2]	Are the policies and procedures referred to in 3.1.(1) effectively utilized in the Learning Outcomes assessment of the Program, resulting in actionable improvement measures?			
	3.2.			**Program shall ensure that graduates of the program achieve all expected Learning Outcomes**			
			[1]	Does the Program maintain an effective and well-documented process to ensure that all graduates of the Program have achieved all expected Program Learning Outcomes ?			
			[2]	Does the Program maintain clearly defined, effective & accessible (by student and faculties) policies and procedures to deal with non-performing students and to terminate students who are unable to complete their study?			
4				**CONTINUAL IMPROVEMENT**			
	4.1.			**Based on the assessment results, Program shall perform an evaluation at planned intervals with output in the form of decisions to improve the effectiveness of the educational process, the suitability of the Learning Outcomes related to the needs of stakeholders, and resources**			
			[1]	Does the Program maintain an effective quality assurance process for the periodic evaluation of Learning Outcomes based on direct and indirect assessment results?			

CRITERION	Sub-criterion	Sub-sub-criterion	Evaluation item	DESCRIPTION OF CRITERION / EVALUATION ITEM	SELF-CLAIM	DESCRIPTION OF SELF-EVALUATION	REFERENCES
					Mark with "X" for good compliance or "XX" for above satisfactory compliance	*Describe concisely (within 250 words) how the Program meet each evaluation item. Description must be based on evidences. Evaluation team shall consider only evidence-based argument. Answer only the cells with no color. Leave the colored cells blank.*	*Provide list of evidences supporting the corresponding description in column (3). Compile the evidences in attachment files in PDF format to be uploaded to IABEE Online Evaluation System. A file may be sized up to 30 Mb. Program may upload up to 5 files of compiled evidence, save 1 slot for uploading Program Profile document.*
				(1)	**(2)**	**(3)**	**(4)**
			[2]	Are the Program stakeholders knowledgeable and involved in the Learning Outcomes evaluation process?			
			[3]	Are the Learning Outcomes evaluation results effectively utilized to formulate decisions to improve the learning process, the suitability of Learning Outcomes to stakeholders' needs, and resources ?			
	4.2.			**Program shall maintain documents and records related to the implementation of evaluation, the results and their follow-up**			
			[1]	Does Program maintain effective policies and procedures for maintaining documents and records related to the implementation of evaluation, the results, and their follow-up?			
			[2]	Are these documents and records accessible to the faculty?			

PERSATUAN INSINYUR INDONESIA
The Institution of Engineers Indonesia

Indonesian Accreditation Board for Engineering Education

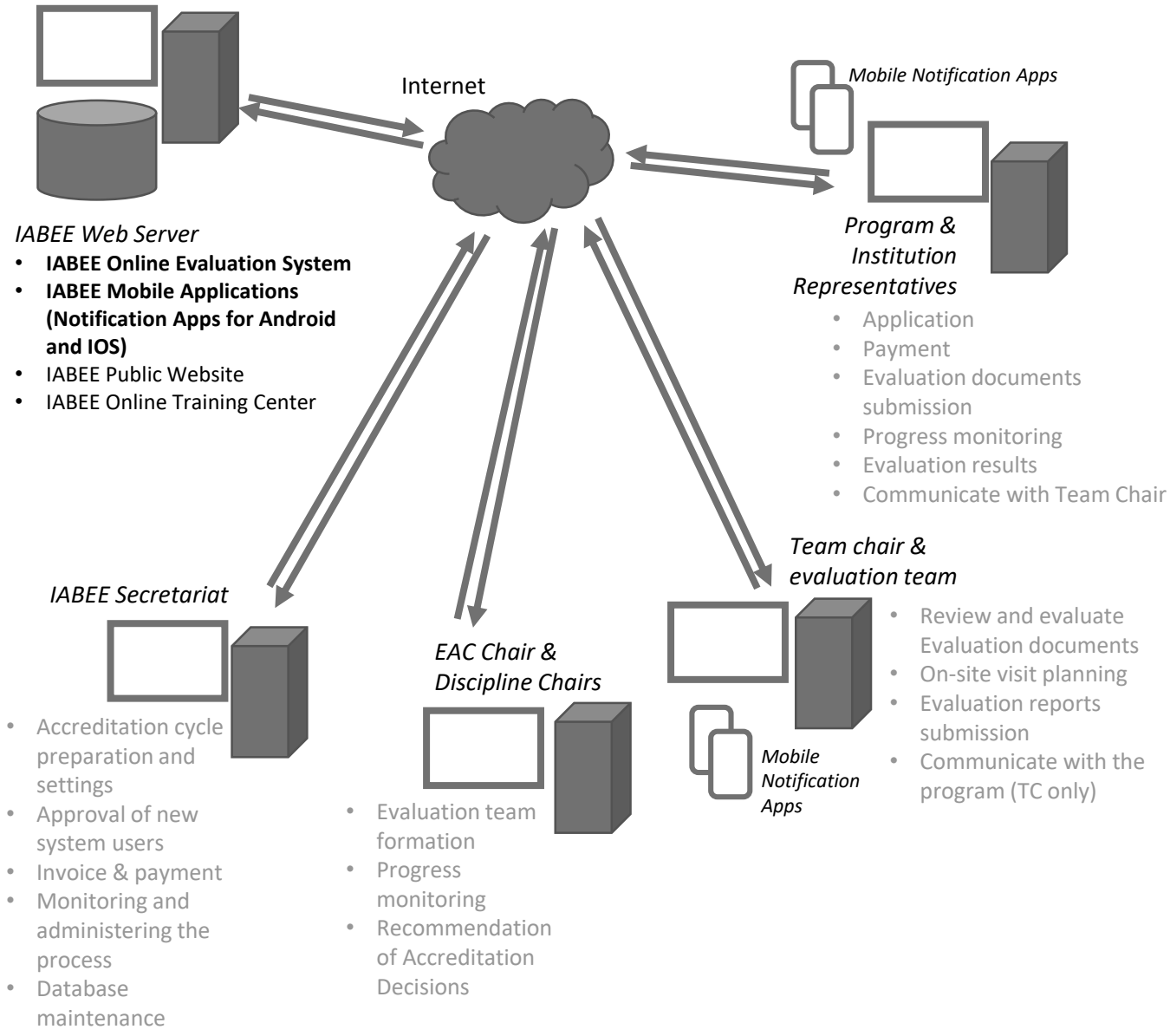
ANNEX G

IABEE ONLINE EVALUATION SYSTEM (EOS)

APPLICATION FOR
PROVISIONAL MEMBERSHIP
OF THE WASHINGTON ACCORD
2019

THE INSTITUTION OF ENGINEERS INDONESIA / INDONESIAN ACCREDITATION BOARD FOR ENGINEERING EDUCATION – PII / IABEE

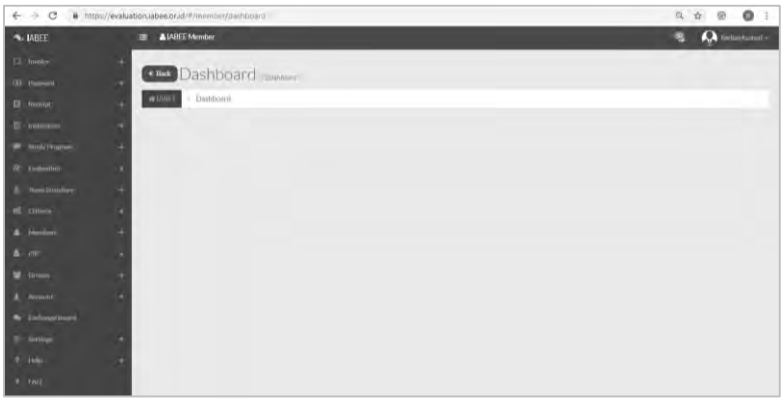
IABEE Online Evaluation System at a glance (1/4)



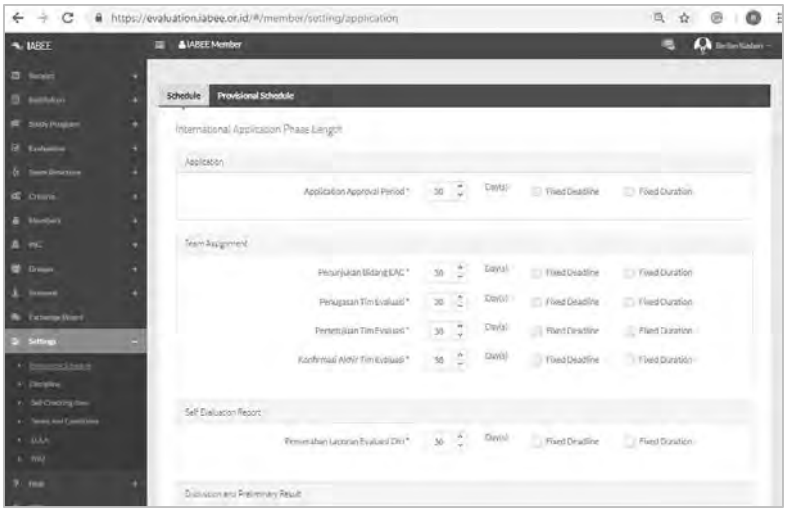
A conceptual diagram of the IABEE Online Evaluation System, depicting main parties involved in evaluation process and their respective roles in the system.

IABEE Online Evaluation System at a glance (2/4)

Log-in page of the IABEE Online Evaluation System. A Program representative or a new evaluator/observer shall first create a personal account and get verified by the Secretariat before access to log in as a system member is given

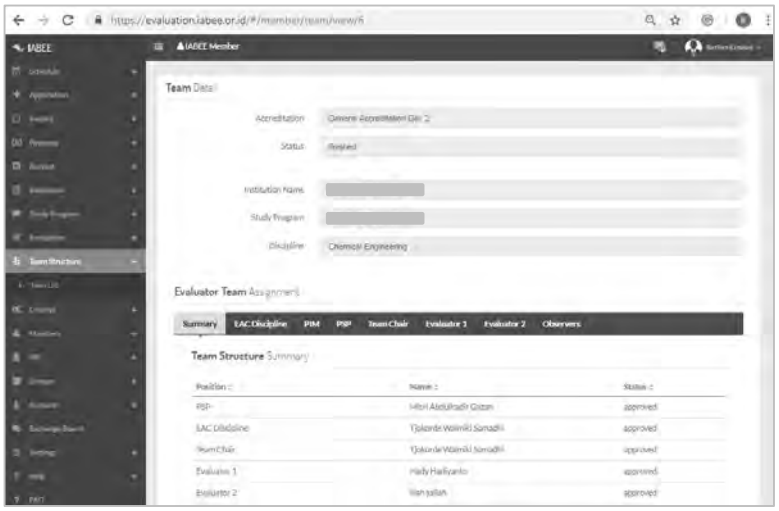


Dashboard page showing a complete list of menus as accessible from a superuser account. Only limited menus shall appear in other types of user role

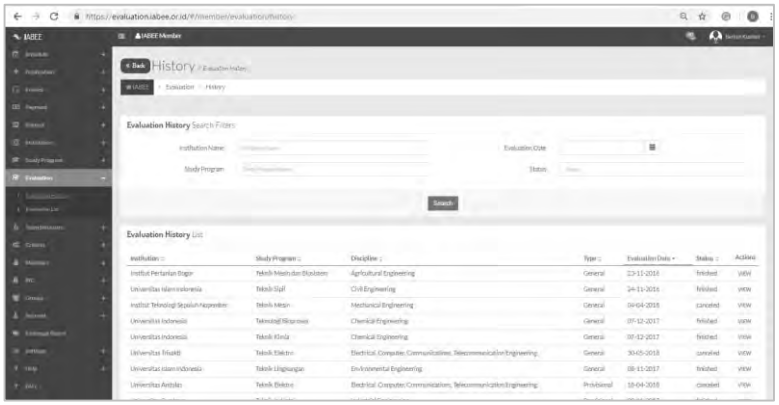


A view from Secretariat account featuring Menu Settings. In this menu, all steps of evaluation for accreditation are arranged, starting from application, evaluation team arrangement, self-evaluation report, down to EAC harmonization and plenary meetings, as well as recording of accreditation status and certificate.

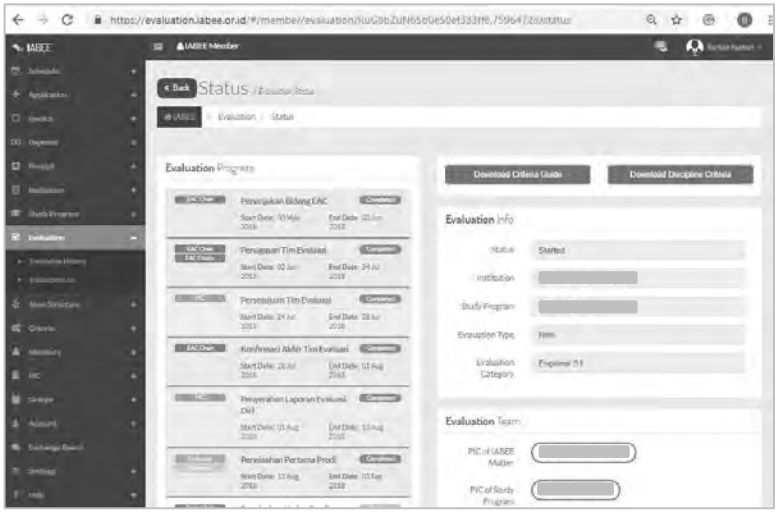
IABEE Online Evaluation System at a glance (3/4)



A view from a superuser account featuring Menu Team Structures. In this menu, EAC Chair or Discipline Chair can assign evaluation team to a program whose application has been declared eligible by Secretariat.



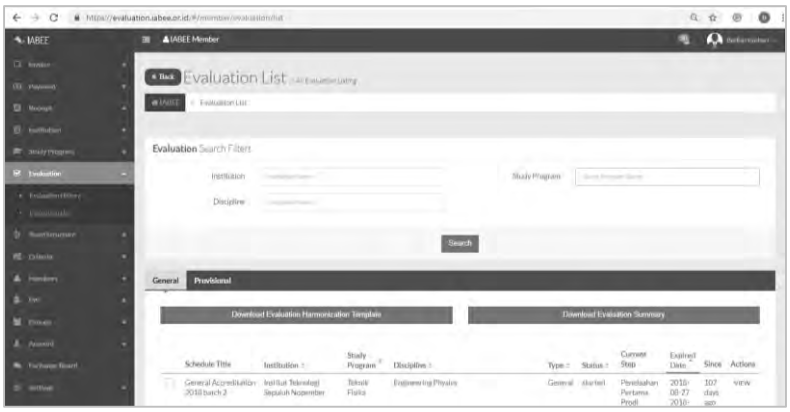
A view from a superuser account featuring Menu Evaluations and Sub-Menu Evaluation History. The table in this sub-menu enlists history of all evaluation conducted on all programs



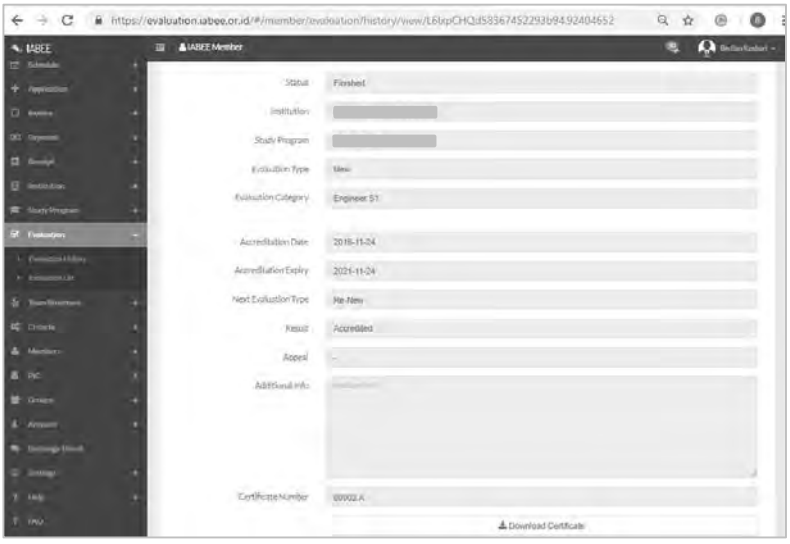
A view from a superuser account featuring Menu Evaluations where evaluation progress of a program is monitored. Progress status of a step may be “completed”, “on-going”, or “not-yet”. Each step box also contains the player(s) of that step, the name of the step, as well as start-date and end-date of the step.

IABEE Online Evaluation System at a glance (4/4)

A view from a superuser account featuring Menu Evaluations where Program Self-Evalation Report (SER) is submitted and reviewed. The SER takes a tabular form. In addition, this interface provides 6 slots for a program to upload files of evidences as well as its Program Profile



A view from a superuser account featuring Menu Evaluations in Sub-Menu Evaluation List. Secretariat and EAC Chair can monitor the whole progress within the accreditation cycle using the table provided in this sub-menu.



A view from a superuser account featuring Menu Evaluations in Sub-Menu Evaluation History. Clicking a finished evaluation of a program brings a summary table featuring program identity, accreditation decision and validity, as well as number and electronic copy of its accreditation certificate

PERSATUAN INSINYUR INDONESIA
The Institution of Engineers Indonesia

Indonesian Accreditation Board for Engineering Education

ANNEX H

MEMORANDUM OF UNDERSTANDING ON IABEE ESTABLISHMENT

The MoU is written in Bahasa Indonesia, signed by Prof. Intan Ahmad in his capacity as the Director General of Learning and Students Affairs (BELMAWA) of the Ministry of Research, Technology, and Higher Education and Dr. Hermanto Dardak in his capacity as the President of the Insitution of Engineers Indonsia (PII). Signed on October 2016, the scopes of the MoU include (Article 1): (a). developing quality education in engineering recognized at international level, (b). facilitating PII as a profession association to take part in engineering program accreditation in accordance with the law, (c). implementation of engineering program accreditation accteptable by international standards which shall be conducted by IABEE, and (d). continual improvement of IABEE as an organization. The MoU is valid until IABEE has been accepted as a provisional member of the Washington Accord (Article 3).

APPLICATION FOR
PROVISIONAL MEMBERSHIP
OF THE WASHINGTON ACCORD
2019

THE INSTITUTION OF ENGINEERS INDONESIA / INDONESIAN ACCREDITATION BOARD FOR ENGINEERING EDUCATION – PII / IABEE

NOTA KESEPAHAMAN

ANTARA

DIREKTORAT JENDERAL PEMBELAJARAN DAN KEMAHASISWAAN

DENGAN

PERSATUAN INSINYUR INDONESIA

NOMOR : 153/B1/NK/2016

NOMOR : 67/PP-PII/X/2016

Pada hari ini selasa, tanggal sebelas bulan Oktober tahun dua ribu enam belas, bertempat di Jakarta, yang bertanda tangan di bawah ini:

INTAN AHMAD,	Direktur Jenderal Pembelajaran dan Kemahasiswaan Kementerian Riset, Teknologi, dan Pendidikan Tinggi, dalam hal ini bertindak untuk dan atas nama Direktorat Jenderal Pembelajaran dan Kemahasiswaan Kementerian Riset, Teknologi, dan Pendidikan Tinggi, yang berkedudukan di Jalan Jenderal Sudirman, Pintu Satu, Senayan, Jakarta 10270, selanjutnya disebut sebagai PIHAK KESATU.
HERMANTO DARDAK,	Ketua Umum Persatuan Insinyur Indonesia, berkedudukan di Jalan Bandung Nomor 1 Menteng Jakarta Pusat 10310, selanjutnya disebut PIHAK KEDUA.

PIHAK KESATU dan PIHAK KEDUA, secara bersama-sama selanjutnya disebut sebagai PARA PIHAK.

Bahwa PARA PIHAK terlebih dahulu menerangkan telah sepakat untuk menjalin kerja sama dalam rangka penguatan Lembaga Akreditasi Program Studi Teknik Indonesia (*Indonesian Accreditation Board for Engineering Education* disingkat IABEE dengan ketentuan sebagaimana diatur dengan ketentuan sebagai berikut:

Pasal 1

RUANG LINGKUP

Nota Kesepahaman adalah penguatan Lembaga Akreditasi Program Studi Teknik Indonesia, dengan ruang lingkup:

a. Pengembangan mutu pendidikan tinggi teknik yang diakui di tingkat internasional;

b. Memfasilitasi Persatuan Insinyur Indonesia sebagai Organisasi Profesi untuk berperan dalam akreditasi program studi teknik sesuai peraturan perundang-undangan;

c. Pelaksanaan persiapan pelaksanaan akreditasi program studi teknik yang memenuhi standar internasional yang akan dilaksanakan IABEE; dan

d. Penyempurnaan kelembagaan IABEE secara berkesinambungan.

Pasal 2

PELAKSANAAN NOTA KESEPAHAMAN

(1) Pelaksanaan Nota Kesepahaman ini ditindaklanjuti melalui perjanjian kerja sama.

(2) Masing-masing pihak dapat menunjuk wakil untuk membuat perjanjian kerjasama.

Pasal 3

JANGKA WAKTU

(1) Nota Kesepahaman ini berlaku sejak ditandatangani oleh PARA PIHAK sampai dengan IABEE diterima sebagai *Provisional Member of Washington Accord.*

(2) Masing-masing pihak berhak untuk menghentikan/mengakhiri atau mengubah isi Nota Kesepahaman sebelum berakhirnya jangka waktu sebagaimana dimaksud dalam ayat (1) dengan cara memberitahukan secara tertulis kepada PIHAK lainnya tentang maksud tersebut, dalam tenggang waktu sekurang-kurangnya 30 (tiga puluh) hari kalender sebelum penghentian/pengakhiran atau perubahan dimaksud.

Pasal 4

PENUTUP

Nota Kesepahaman ini dibuat sebanyak rangkap 2 (dua), dibubuhi meterai cukup, ditandatangani PARA PIHAK, dan mempunyai kekuatan hukum yang sama.

PIHAK PERTAMA,	PIHAK KEDUA,
	METERAI TEMPEL EC84DA4DF4527802 6000 ENAM RIBU RUPIAH
INTAN AHMAD	HERMANTO DARDAK

PERSATUAN INSINYUR INDONESIA
The Institution of Engineers Indonesia

Indonesian Accreditation Board for Engineering Education

ANNEX I

MEMORANDUM OF UNDERSTANDING BETWEEN JABEE AND PII

APPLICATION FOR
PROVISIONAL MEMBERSHIP
OF THE WASHINGTON ACCORD
2019

THE INSTITUTION OF ENGINEERS INDONESIA / INDONESIAN ACCREDITATION BOARD FOR ENGINEERING EDUCATION – PII / IABEE

MEMORANDUM OF UNDERSTANDING

between

JABEE

and

The Institution of Engineers Indonesia (PII)

Whereas:

(A) **JABEE** acknowledges its commitment to enhance the quality of engineering education and has experience in engineering accreditation system in Japan;

(B) **PII** acknowledges its commitment to enhance the quality of engineering education and has experience in engineering accreditation system in Indonesia;

(C) **JABEE** and **PII** share an interest in promoting quality assurance in engineering education, worldwide;

(D) **JABEE** and **PII** are interested in promoting cooperation between the two organizations in Japan and Indonesia.

JABEE and **PII** agree to collaborate in matters related to engineering education and accreditation activities. To establish linkages for cooperation, they agree to:

1. Develop procedures to facilitate the exchange of representatives to observe the accreditation evaluation activities of both **JABEE** and **IABEE** (Indonesian Accreditation Board for Engineering Education), which is a PII's autonomous department;

2. Collaborate in the development of workshops to promote principles and practices to address current needs of either party for the benefit of promoting development of accreditation of engineering education;

3. Develop substantial equivalency in accreditation systems under scope of the Washington Accord and the Seoul Accord, through information and document exchange, and review of each other's accreditation;

4. Conduct activities under the framework of accreditation of engineering programs in enhancing benefits of both organizations, in particular, the joint development of the digital evaluation system;

5. Discuss and settle direct and indirect expenses associated with the delivery of workshops, training, technical assistance and other such activities related to this Memorandum of Understanding prior to the execution of any projects or services.

This Memorandum of Understanding is valid from the day it is signed by both parties and shall be reviewed at any time either party wishes to make substantial changes to the terms contained herein.
This Memorandum of Understanding may be terminated by either party upon six months written notice to the other.

Agreed on: 13 November, 2018

Mutsuhiro ARINOBU
President
JABEE

Pengurus Pusat
Perhimpunan Insinyur Indonesia

Hermanto DARDAK
President.
PII

Application for Provisional Status in the Washington Accord

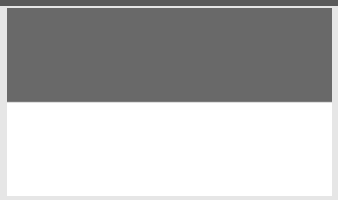
The Institution of Engineers Indonesia/ Indonesian Accreditation Board for Engineering Education (PII/IABEE)

Hong Kong, 12 June 2019

Prof. Muhammad Romli
Chair of IABEE International Committee

Annual GDP	GDP/capita	Total Area	Land	Sea	EEZ Area
USD 1015.4B	USD 3,876	5M km^2	35 %	65 %	7.8M km^2

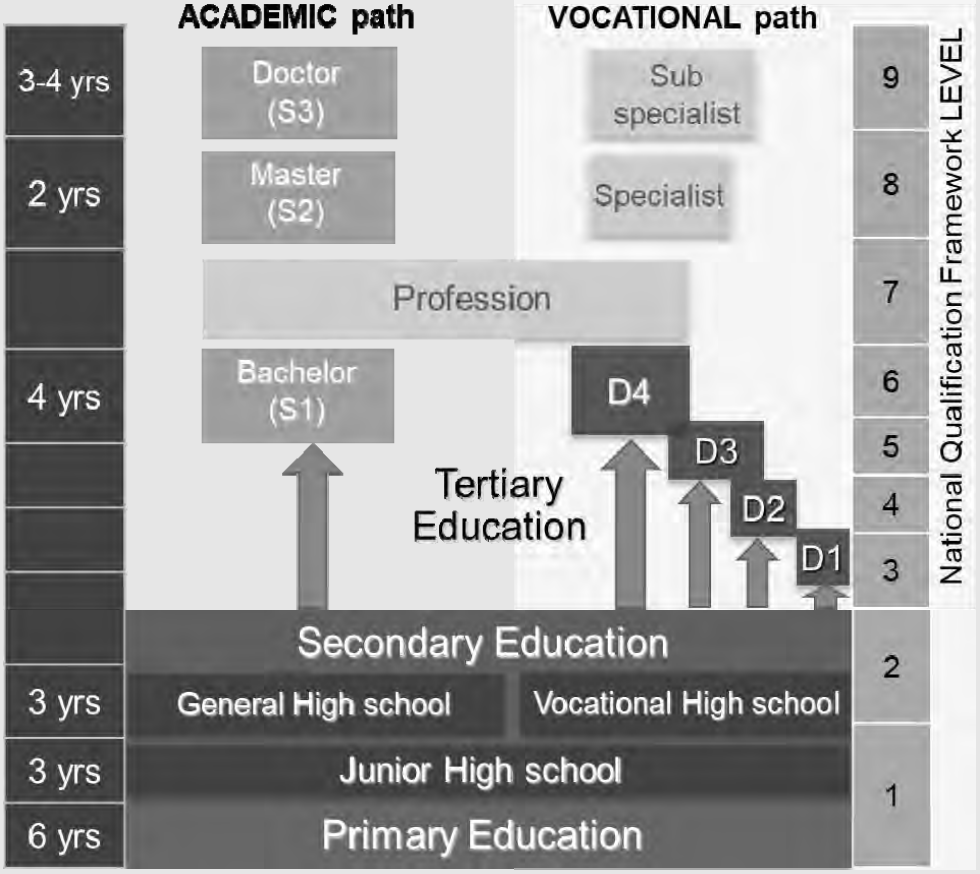
The Republic of Indonesia



34	267M	300+
Provinces	Population	Ethnic Groups

National Education System

Primary, Secondary, and Tertiary levels and the corresponding NQF



Edu. Expenditure
USD 30.845B

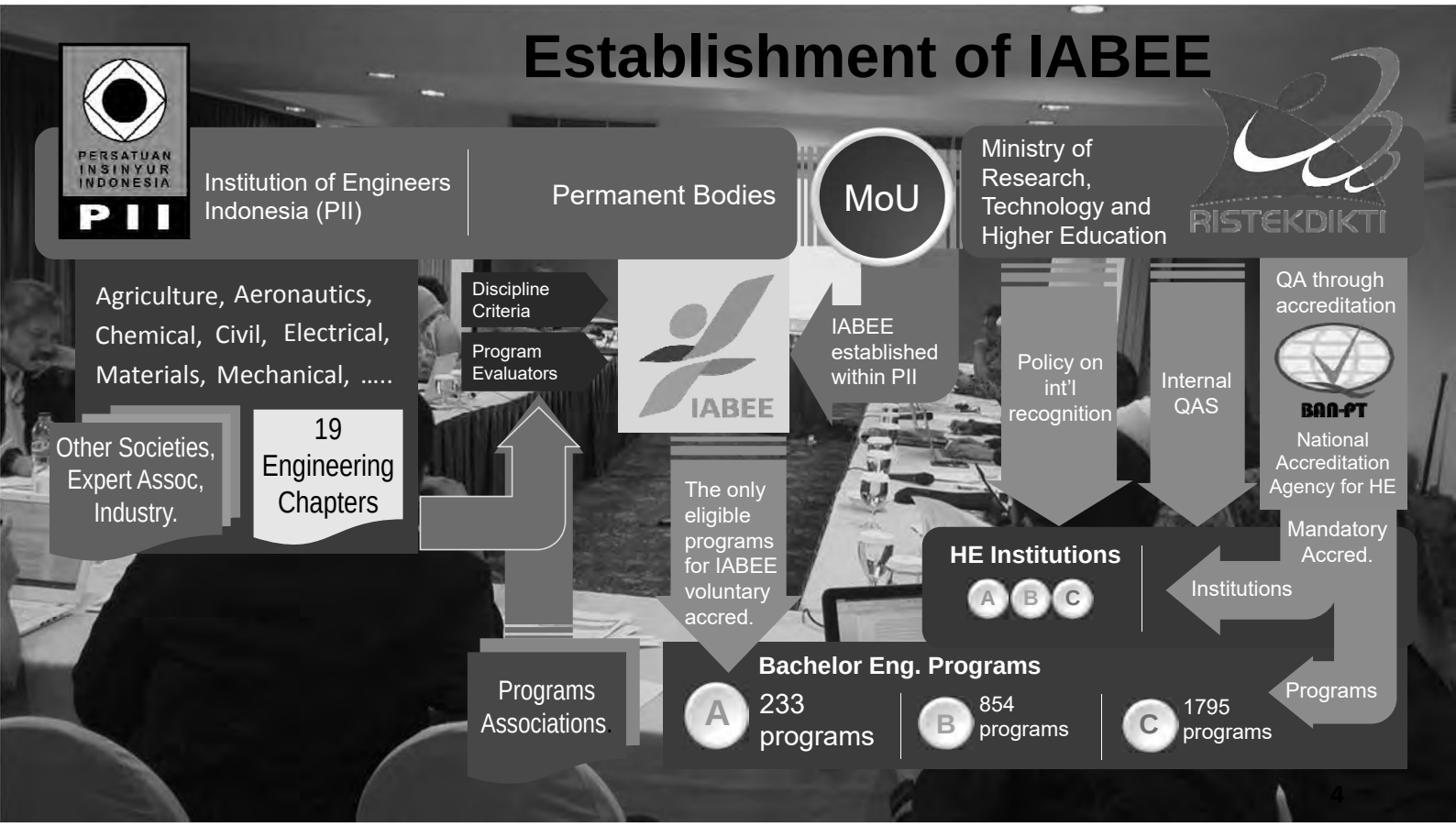
HEIs [public]
3267 [3.73%]

Eng. Programs
5017

Bachelor Eng. Programs
2882

Eng. Students
1,023,251

Establishment of IABEE



Our Journey thus far…

2013-14 Early establishment

- ✓Steering Committee
- ✓Criteria Committee
- ✓Dev't of Common Criteria for engineering programs

2014-15 Development #1

- ✓Evaluation & Accreditation Committee
- ✓Dev't of RPEA
- ✓O'seas Evaluator Training
- ✓Awareness Seminars

2015-16 Development #2

- ✓Online Evaluation System
- ✓Discipline Criteria
- ✓O'seas Evaluator Training
- ✓Establishment within PII
- ✓Awareness Sem.

2016-17 Start accreditation

- ✓O'seas and IABEE Evaluator Training
- ✓Pilot Accreditation Evaluation
- ✓General Accreditation (5P)
- ✓Provisional Accreditation (6P)
- ✓Awareness Sem.

2018-19 Accredit & recognize

- ✓IABEE Inauguration
- ✓IABEE Evaluator Tr.
- ✓General Accred. (28P)
- ✓Provisional Accred. (18P)
- ✓Submit proposal for WA provisional status
- ✓Awareness Sem.

2020-beyond Further recognition

- ✓Run Accreditation cycles
- ✓Submit proposal for WA signatory status
- ✓Receive WA verification team (2020)

The Accreditation Criteria

1. Autonomous Professional Profile as PEO
2. APP Publicity & Review System
3. Program Learning Outcomes

2
1. Curriculum & Syllabus
2. Faculty: quality, quantity, role in student learning
3. Students & Academic Atmosphere
4. Facility: adequacy, proper & safe operations
5. Institutional Responsibility

3
1. Effective Assessment of Learning Outcomes
2. Assurance of LO Attainment by Graduates

4
1. Continual Improvement based on LO Assessment
2. Maintenance & Access of Documents & Records

Specific LO, Faculty, Curriculum Requirements in ENG Disciplines:

- Agricultural & Biosystem
- Agroindustrial
- Chemical, Biochemical, Biomolecular
- Civil
- Earth & Energy
- Electrical, Computer, Communications, Telecomunications
- Environ-mental
- Engineering Physics
- Geodetic, Geomatic
- General
- Ocean
- Nuclear
- Mechanical
- Materials, Metallurgical
- Industrial

Program Evaluation Procedures

Evaluation for PA

Evaluation for GA & Renewal

Interim Evaluation with Visit

Interim Evaluation without Visit

Program Registration & Eligibility Check

mid of April

Submission of Self-Evaluation Report & Program Profile

end of June

Initial Reviews & Responses

July to September

On-Site Visit & Exit Statement

October to early November

Due Processes & Final Evaluation Report

until end of December

Discipline Harmonization & EAC Plenary Meetings

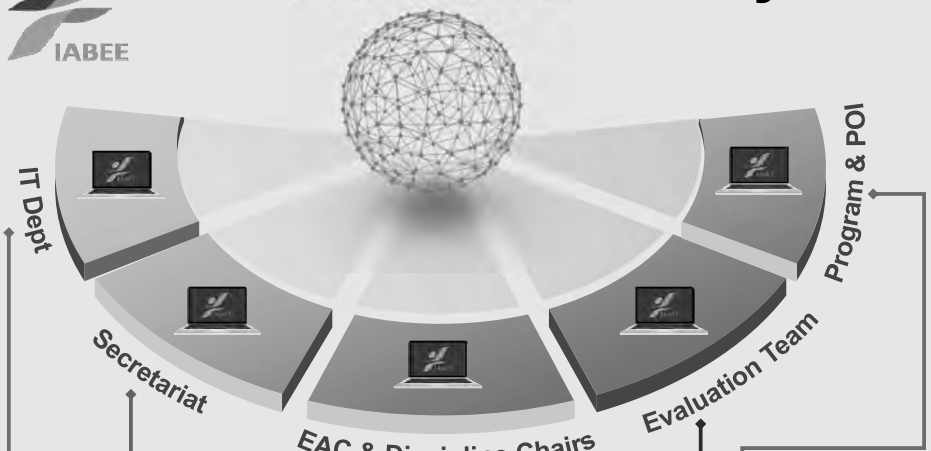
January-February

Accreditation Council Decision, & Announcement

February-March

Evaluation Cycle

Online Evaluation System



- System Development
- System Maintenance

- Preparation of evaluation cycle
- User accounts management
- Invoice & payment
- Process monitoring
- Database management

- Evaluation Team formation
- Progress monitoring
- Recommendation of accreditation decision

- Review & evaluate Program's documents
- On-site visit planning
- Reports submission
- Communicate with Prog. Representative

- Registration & application
- Payment notice
- Submission of PP, SER & evidences
- Progress monitoring
- Communicate with Chair of Eval. Team
- Accreditation results and decision

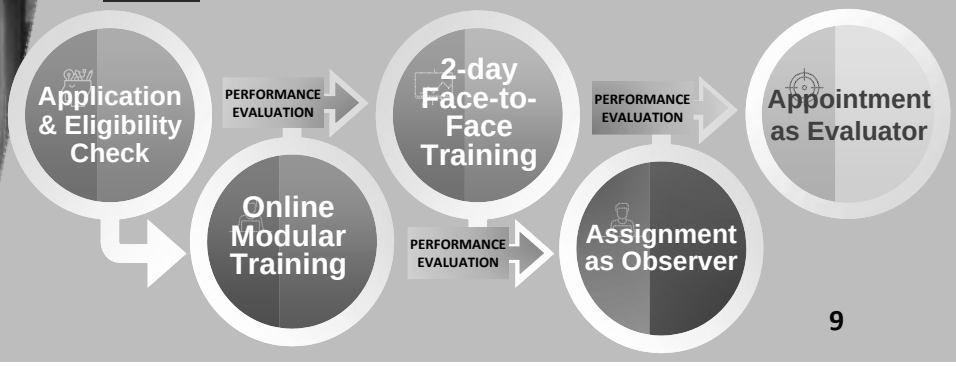
Program Evaluators

Trained overseas: 44 PEVs by JABEE, 16 by ABET, 3 observed CAST, 3 visited EA.

Trained and re-trained at home: 71 PEVs in 3 training programs conducted in 2017 & 2018.

Currently 86 PEVs in total, representing 12 engineering disciplines.

IABEE PEV Training:



Accredited Programs

Diponegoro Universiy	Chemical Engineering	2018
	Civil Engineering	2018
	Environmental Engineering	2018
	Industrial Engineering	2018
	Mechanical Engineering	2018

Sepuluh Nopember Institute of Technology	Chemical Engineering	2018
	Engineering Physics	2018
	Environmental Engineering	2018
	Material and Metallurgical Engineering	2018
	Mechanical Engineering	2018
	Naval Architecture	2018

Private Institution

Public Institution

Institut Teknologi Bandung	Bioengineering	2018

Sebelas Maret University	Industrial Engineering	2018

IPB University	Mechanical and Biosystem Engineering	2016

Islamic University of Indonesia	Civil Engineering	2016
	Environmental Engineering	2017

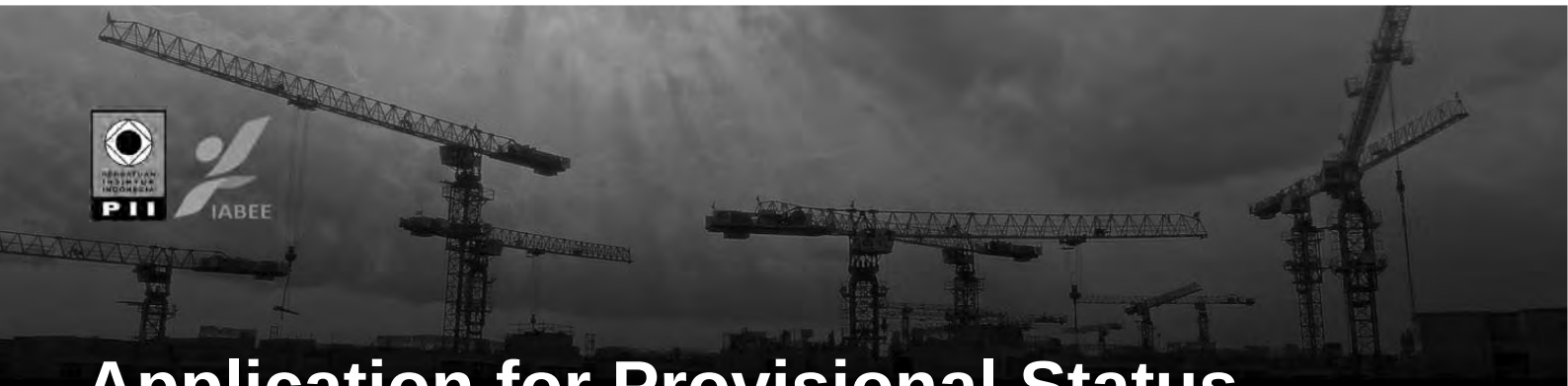
University of Indonesia	Bioprocess Engineering	2017
	Chemical Engineering	2017
	Mechanical Engineering	2018

BINUS UNIVERSITY	Industrial Engineering	2018
	Civil Engineering	2018

Tarumanagara University	Mechanical Engineering	2018

Gadjah Mada University	Chemical Engineering	2018
	Civil Engineering	2018
	Engineering Physics	2018
	Geological Engineering	2018
	Geodetic Engineering	2018
	Mechanical Engineering	2018
	Nuclear Engineering	2018
	Information Technology	2018
	Electrical Engineering	2018
	Industrial Engineering	2018

Thank you



Application for Provisional Status in the Washington Accord

The Institution of Engineers Indonesia / Indonesian Accreditation Board for Engineering Education (PII / IABEE)

Hong Kong, 12 June 2019

Prof. Muhammad Romli
Chair of IABEE International Committee

The Republic of Indonesia

34
Provinces

267M
Population

300+
Ethnic Groups

Annual GDP	GDP/capita	Total Area	Land	Sea	EEZ Area
USD 1015.4B	USD 3,876	5M km^2	35 %	65 %	7.8M km^2

National Education System

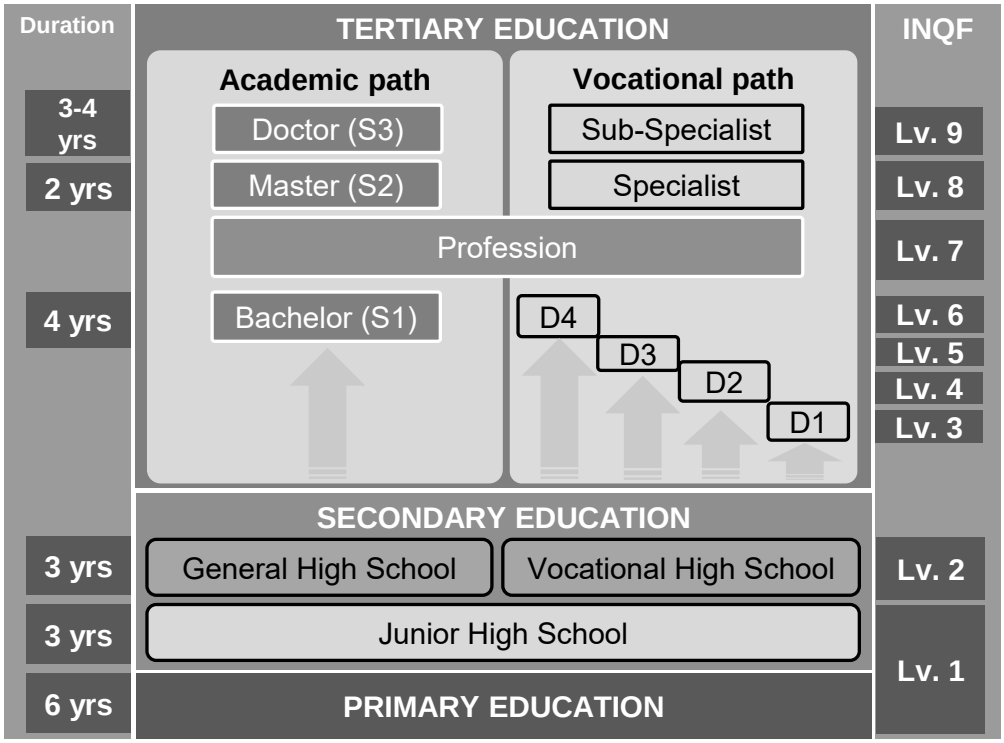
Edu. Expenditure
USD 30.845B

HEIs [public]
3267 [3.73%]

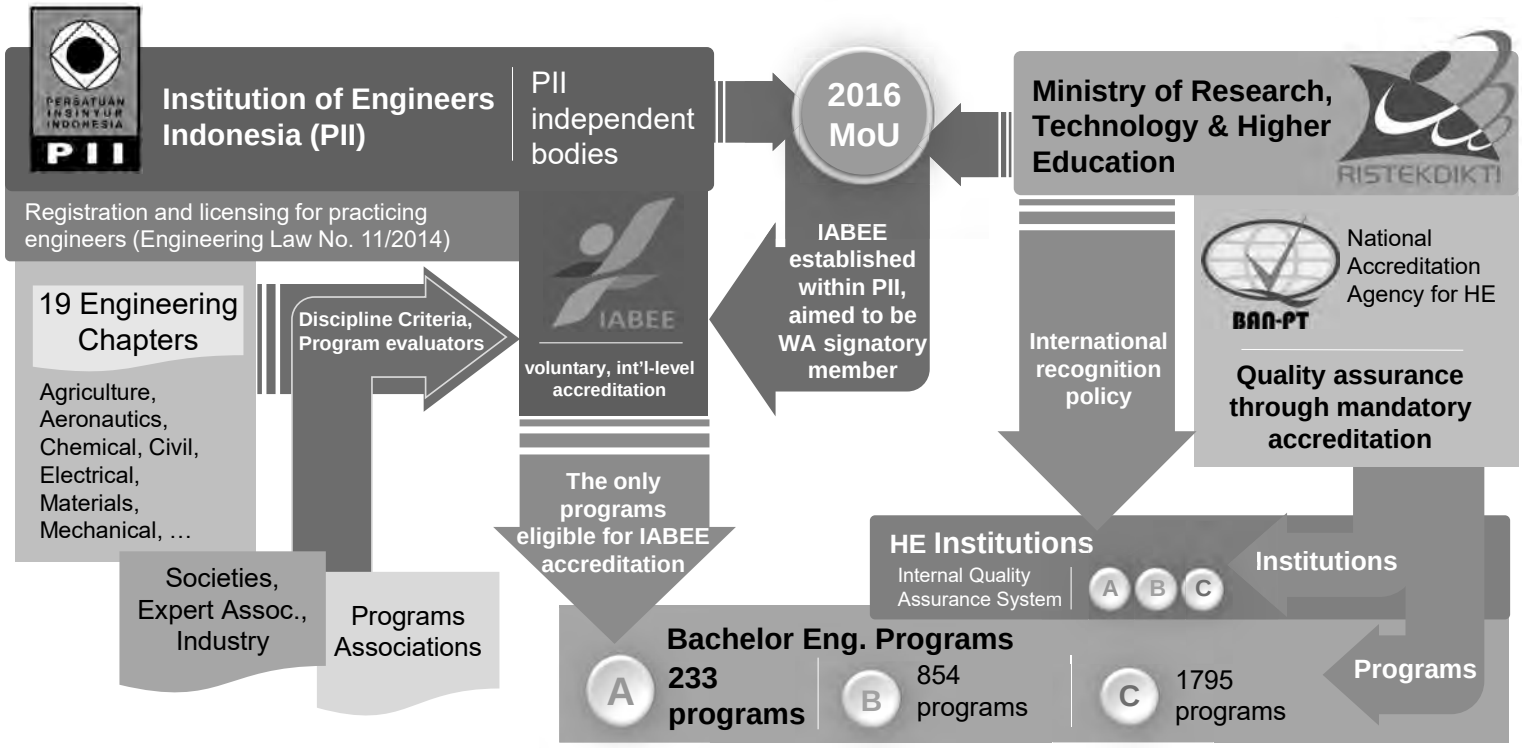
Eng. Programs
5017

Bachelor Eng. Programs
2882

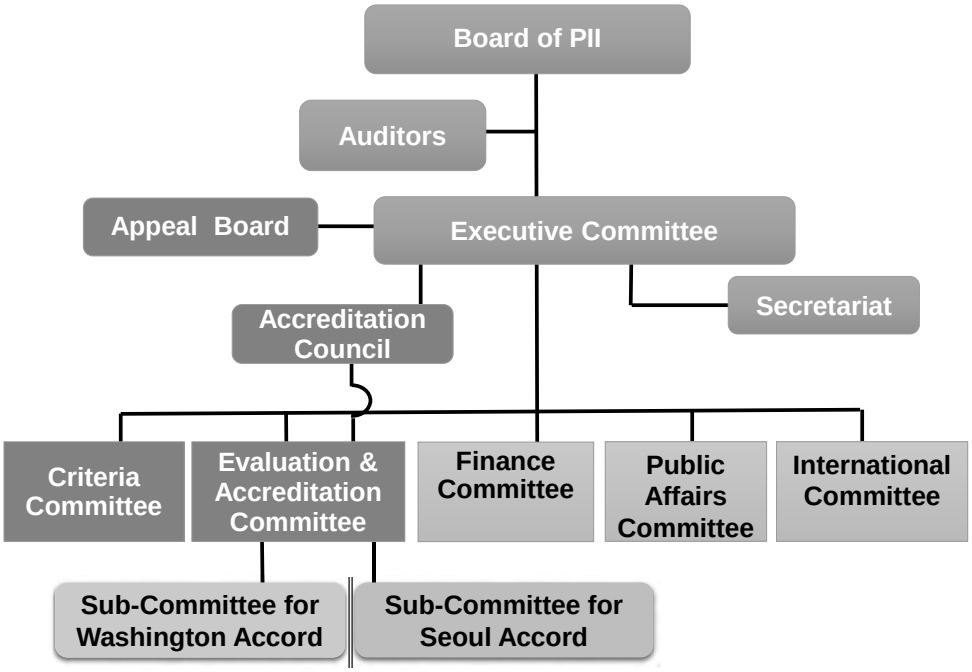
Eng. Students
1,023,251



IABEE Establishment



IABEE Organizational Chart



Criteria Committee establishes and approves the Accreditation Criteria which form the basis for the program evaluation.

In charge of conducting periodic reviews and revisions of the Accreditation Criteria

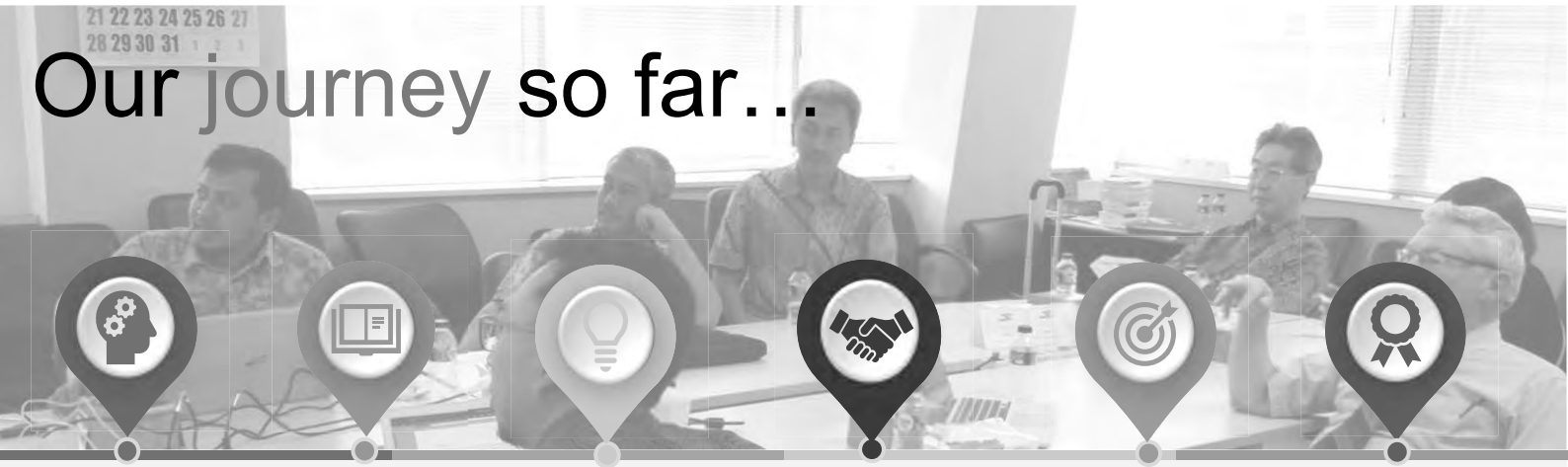
Evaluation & Accreditation Committee develops RPEA & RPARC, evaluation instruments, Online Evaluation System

It also plans, conducts and monitors the program accreditation processes, and recommends accreditation status to the Accreditation Council.

Accreditation Council validates the results of accreditation and ensures that the right process has been carried out

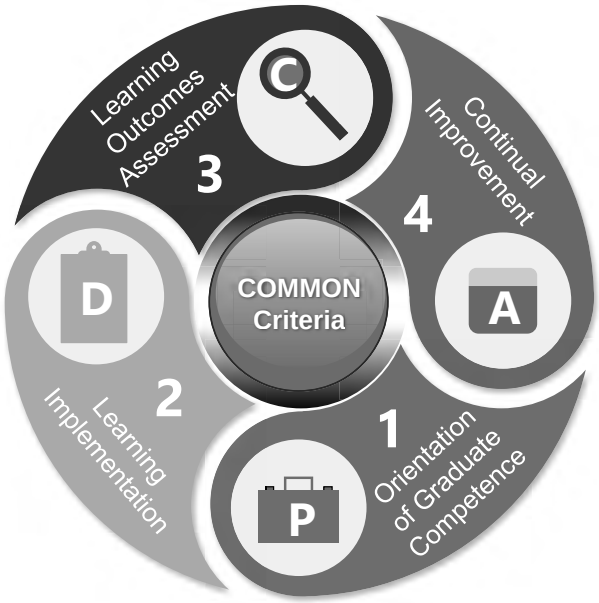
Appeal Board appointed to hear appeals; judges whether an evaluation/accreditation decision was right or wrong, when the party affected by it thinks that it was wrong

Our journey so far…



2013-14	2014-15	2015-16	2016-17	2018-19	2020-beyond
Establishment	**Development #1**	**Development #2**	**Start accreditation**	**Accredit & recognize**	**Further recognition**
✓Steering Committee	✓Evaluation & Accreditation Committee	✓Online Evaluation System	✓O'seas and IABEE Evaluator Training	✓IABEE Inauguration	✓Run Accreditation cycles
✓Criteria Committee	✓Dev't of RPEA	✓Discipline Criteria	✓Pilot Accreditation Evaluation	✓IABEE Evaluator Tr.	✓Submit proposal for WA signatory status
✓Dev't of Common Criteria for engineering programs	✓O'seas Evaluator Training	✓O'seas Evaluator Training	✓General Accr. (5P)	✓General Accred. (28P)	✓Receive WA verification team (2020)
	✓Awareness Seminars	✓Establishment within PII	✓Provisional Accreditation (6P)	✓Provisional Accred. (18P)	
		✓Awareness Sem.	✓Awareness Sem.	✓Submit proposal for WA provisional status	
				✓Awareness Sem.	

The Accreditation Criteria: Common Criteria



1

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3

1. Effective Assessment of Learning Outcomes
2. Assurance of LO Attainment by Graduates

4

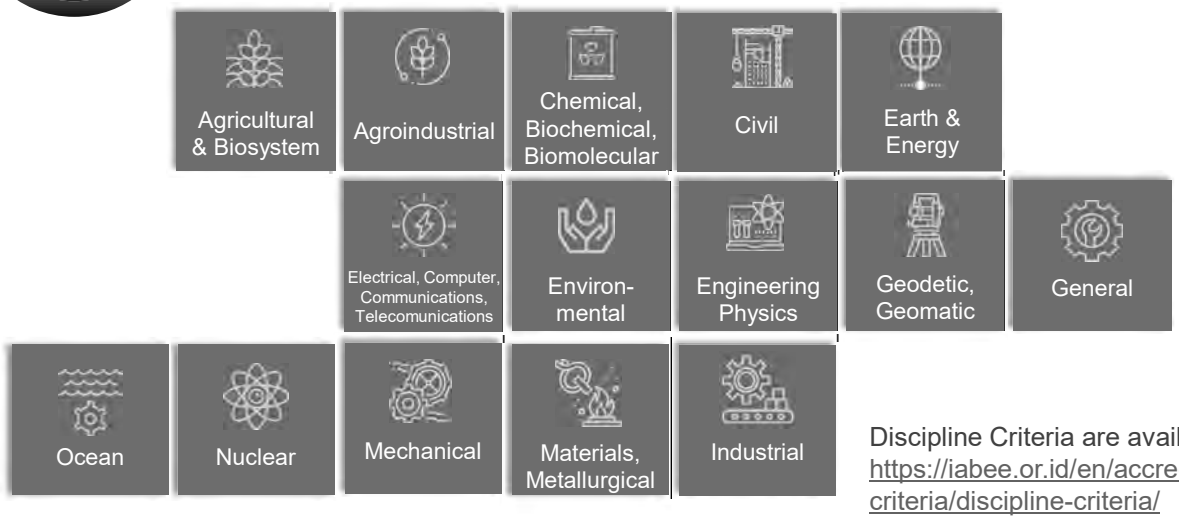
1. Continual Improvement based on LO Assessment
2. Maintenance & Access of Documents & Records

Common Criteria & Criteria Guide are available for download from https://iabee.or.id/en/accrediation/accreditation-criteria/common-criteria/ and https://iabee.or.id/en/accrediation/accreditation-criteria/criteria-guide/

The Accreditation Criteria: Discipline Criteria

DISCIPLINE Criteria

Specific Learning Outcomes, Faculty, and/or Curriculum Requirements in ENG Disciplines:



Discipline Criteria are available for download from https://iabee.or.id/en/accrediation/accreditation-criteria/discipline-criteria/

IABEE Learning Outcomes Criterion *vis-à-vis* Graduate Attribute Exemplar

(a) an ability to apply knowledge of mathematics, natural and/or materials sciences, information technology and engineering to acquire comprehensive understanding of engineering principles
(b) an ability to design components, systems, and/or processes to meet desired needs within realistic constraints in such aspects as law, economic, environment, social, politics, health and safety, sustainability as well as to recognize and/or utilize the potential of local and national resources with global perspective
(c) an ability to design and conduct laboratory and/or field experiments as well as to analyze and interpret data to strengthen the engineering judgment
(d) an ability to identify, formulate, analyze, and solve engineering problems
(e) an ability to apply methods, skills and modern engineering tools necessary for engineering practices
(f) an ability to communicate effectively in oral and written manners
(g) an ability to plan, accomplish, and evaluate tasks under given constraints
(h) an ability to work in multidisciplinary and multicultural team
(i) an ability to be accountable and responsible to the society and adhere to professional ethics in solving engineering problems
(j) an ability to understand the need for life-long learning, including access to the relevant knowledge of contemporary issues

1. Engineering Knowledge a
2. Problem Analysis d
3. Design/development of Solutions b
4. Investigation c
5. Modern Tool Usage e
6. The Engineer and Society i
7. Environment and Sustainability b
8. Ethics i
9. Individual and Team Work h
10. Communication f
11. Project Management and Finance g
12. Life-long Learning j

Accreditation Rules and Procedures

RPEA — **Rules and Procedures for Evaluation and Accreditation**

- **Background, Vision, & Mission**
- **Accreditation Policies & Procedures**
  - Confidentiality and Conflict of Interest
  - Scope of Accreditation
  - Eligibility for Evaluation
  - Accreditation Criteria
  - Program Evaluation Process
  - Accreditation Decisions
  - Public Disclosure
  - Feedback and Appeals
  - Policies on Conducting On-Site Visit
- **Indicative Schedule for Accreditation Evaluation Cycle**

RPARC — **Rules and Procedures for Accreditation-related Committees**

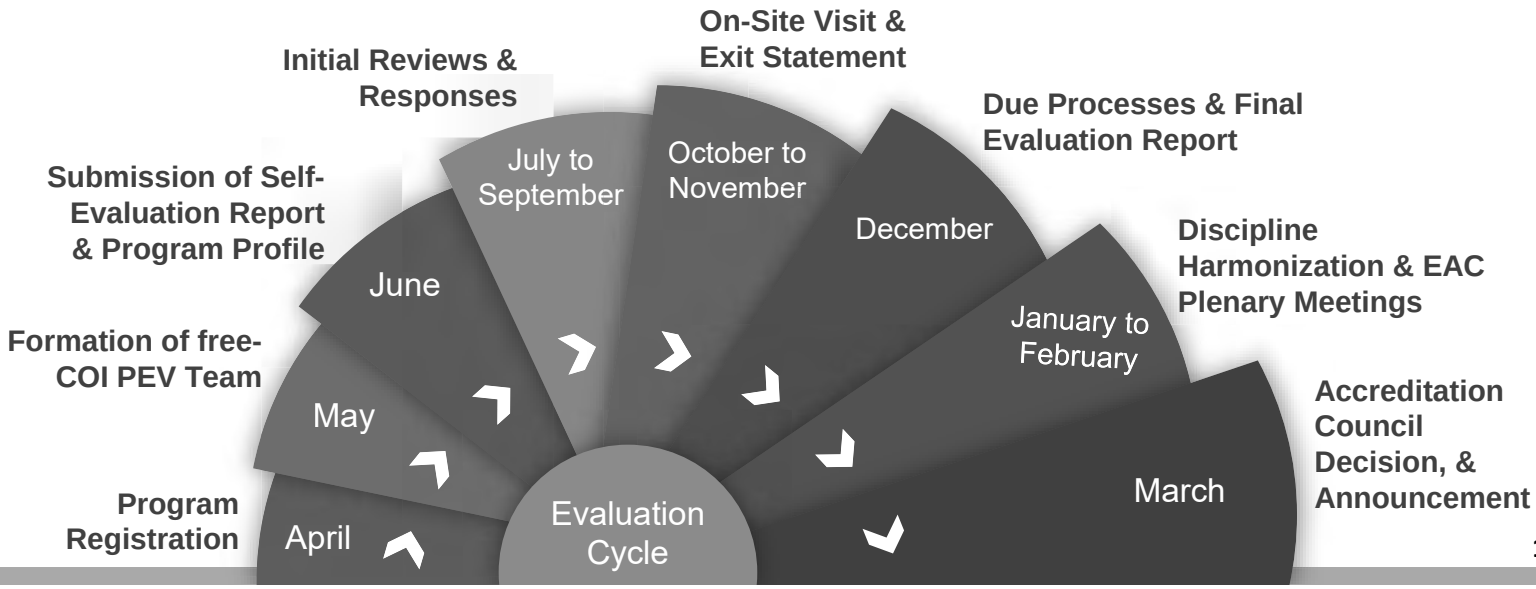
- **Introduction**
- **Evaluation and Accreditation Committee**
- **Pool of Program Evaluators**
- **Accreditation Council**
- **Appeal Board & Appeal Committee**
- **Training**
- **Code of Ethics**
- **Conflict of Interest**
- **Confidentiality**

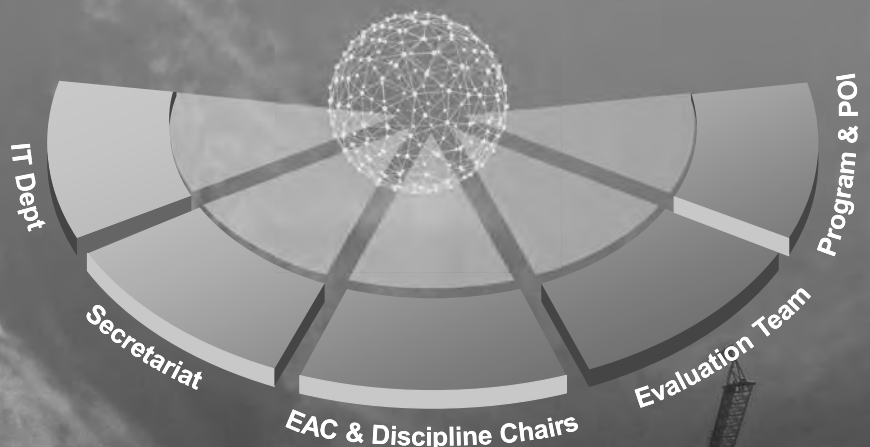
To be accredited, a program must satisfy the Accreditation Criteria & RPEA

RPEA and RPARC are available for download from https://iabee.or.id/en/accrediation/rules-and-policies-for-evaluation-and-accreditation/

Program Evaluation
Procedures

Evaluation for PA	Evaluation/re-evaluation for GA	Interim Evaluation with Visit	Interim Evaluation without Visit





IT Dept
- System development & maintenance

Secretariat
- Preparation of evaluation cycle
- User accounts & data management
- Invoice & payment
- Process monitoring

EAC & DCs
- PEV Team formation
- Progress monitoring
- Decision recommendation

PEV Team
- Program evaluation
- On-site visit planning
- Reports submission
- Communication with Program

Program & POI
- Registration
- PP & SER submission
- Progress monitoring
- Communication with Evaluation Team
- Receive results

Online Evaluation System

IABEE

evaluation.iabee.or.id

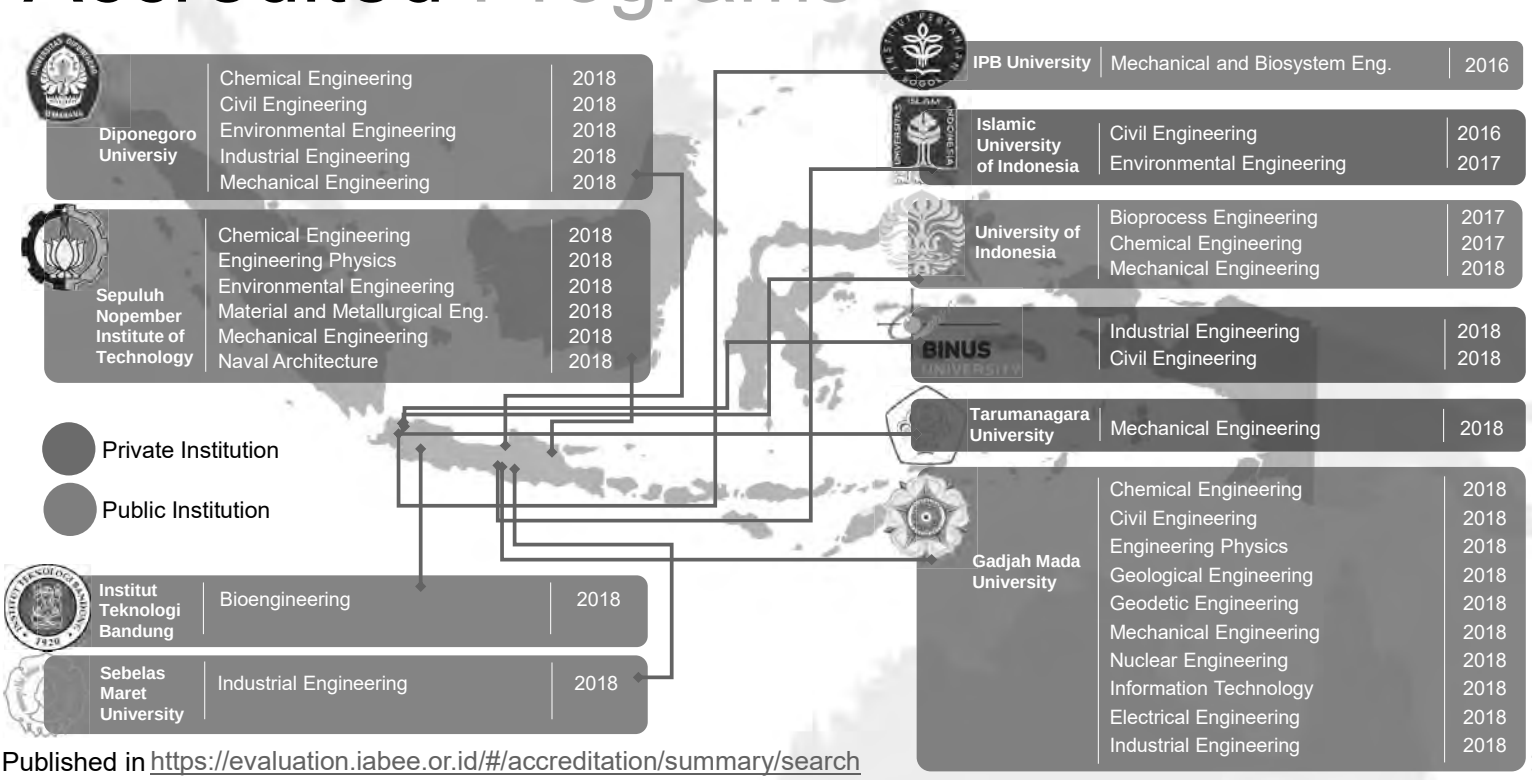
Program Evaluators

- Currently 86 PEVs in total, 85% academic & 15% industry
- 40 more PEVs to be recruited and trained in 2019
- Overseas training & observation: 44 PEVs trained by JABEE, 16 PEVs by ABET, 3 observed CAST, and 3 visited EA
- Since 2017, 3 domestic PEV training programs have been conducted
- Mechanism of PEV Training is available in RPARC

IABEE PEV **Training**

https://training.iabee.or.id/

Accredited Programs



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	Engineering Physics	2018
	Environmental Engineering	2018
	Material and Metallurgical Eng.	2018
	Mechanical Engineering	2018
	Naval Architecture	2018
Institut Teknologi Bandung	Bioengineering	2018
Sebelas Maret University	Industrial Engineering	2018
IPB University	Mechanical and Biosystem Eng.	2016
Islamic University of Indonesia	Civil Engineering	2016
	Environmental Engineering	2017
University of Indonesia	Bioprocess Engineering	2017
	Chemical Engineering	2017
	Mechanical Engineering	2018
BINUS UNIVERSITY	Industrial Engineering	2018
	Civil Engineering	2018
Tarumanagara University	Mechanical Engineering	2018
Gadjah Mada University	Chemical Engineering	2018
	Civil Engineering	2018
	Engineering Physics	2018
	Geological Engineering	2018
	Geodetic Engineering	2018
	Mechanical Engineering	2018
	Nuclear Engineering	2018
	Information Technology	2018
	Electrical Engineering	2018
	Industrial Engineering	2018

Published in https://evaluation.iabee.or.id/#/accreditation/summary/search

Thank you


CLP 中電

INTERNATIONAL ENGINEERING ALLIANCE

PO Box 12 241, Wellington 6144, New Zealand | +64 4 473 2022
secretariat@ipenz.org.nz | www.ieagreements.org

20 June 2019

Mr. Berlian KUSHARI
Secretary-General
Indonesian Accreditation Board for Engineering Education (IABEE)
c/o Persatuan Insinyur Indonesia (The Institution of Engineers Indonesia)
Jalan Bandung No. 1, RT 13/RW 5, Menteng, Jakarta 10310
Indonesia

Sent by email to: berlian.kushari@iabee.or.id; mrgozan@gmail.com; mromli@hotmail.com; satrio1@indo.net.id; takahashi@jabee.org; aoshima@jabee.org

Dear Mr Berlian KUSHARI

Provisional Signatory Status of the Washington Accord

We are pleased to confirm the decision of the Signatories of the Washington Accord to accept the Institution of Engineers Indonesia (PII) as a Provisional Signatory to the Washington Accord effective from June 2019. The decision meeting was held during IEAM 2019 in Hong Kong.

In becoming a Provisional Signatory, the Institution of Engineers Indonesia has accepted the obligations detailed in Section B.2.3 of the Accord Rules and Procedures, a copy of which is attached for your information.

We would like to take this opportunity to express our congratulations on your success. We look forward to working with you as you prepare towards becoming a Signatory. Your attention is drawn to the relevant parts of the Accord Rules and Procedures: B.2.2 and Schedule B2 as well as paragraphs C.3 and C.4 of the guidelines.

Should you have any further questions or issues, please do not hesitate to contact the IEA Secretariat.

Yours sincerely

Em Prof Elizabeth Taylor
Chair, Washington Accord

Professor Kai Sang LOCK
Deputy Chair, Washington Accord

	Schedule B2: Criteria for Admission to Full Signatory Status in an Accord	**Report analysis against Rules and Procedures requirements**	
		Meets Criteria? Yes/No	*Evidence provided/Comments*
4	The agency's accreditation system and processes conform to the Accord accepted practice as exemplified by:		
	a) High standards of professionalism, ethics and objectivity;	Yes	• Establishment of IABEE accreditation system involves key committees, namely Executive Committee (EXC), Criteria Committee (CC), Evaluation and Accreditation Committee (EAC), Accreditation Council (AC), and Appeal Board, each assumes different and specific roles and responsibilities Refer to https://iabee.or.id/en/about-iabee/organization/ • Policies and procedures on Code of Ethics, Conflict of Interests, and Confidentiality are established and maintained. Refer to Rules and Procedures of Accreditation-related Committee (RPARC) Chapters 7, 8, and 9, as well as Rules and Procedures of Evaluation and Accreditation (RPEA) Chapter 2.1, Both, RPARC and RPEA documents can be found at https://iabee.or.id/en/accrediation/rules-and-policies-for-evaluation-and-accreditation/
	b) All involved in programme evaluation are competent in the agency's accreditation system, and are of high standing as educators or practitioners in the profession;	Yes	• Evaluation are conducted by Program Evaluators from academic and industrial background who have fulfilled eligibility requirements. Refer to RPARC Chapter 3. • High standards of recruitment and training processes are established to ensure competent evaluators. Refer to RPARC Chapter 6. The information is also available at https://iabee.or.id/en/accrediation/requirements-to-be-evaluators/ • Program evaluation processes are supported by Online Evaluation System (OES) managed by competent administration staff. IABEE OES is accessible through https://evaluation.iabee.or.id/. A valid pair of username and password is required to get access. • Technical meeting inviting all representatives from programs to be evaluated is convened at the beginning of an evaluation cycle to ensure the programs' correct understanding of accreditation system and its requirements, as well as smooth evaluation processes. Evidence related to convened technical meetings (e.g. attendance list, photographs) is provided upon visit. • Refresher training inviting all evaluators assigned for current evaluation cycle is convened to strengthen evaluators' competency and share any recent update.

			Refer to RPARC Chapter 6.6. Evidence related to convened refresher trainings (e.g. attendance list, photographs) is provided upon visit. • Evaluation system includes feedback from evaluated programs to improve evaluators' performance and overall accreditation system. Refer to RPEA Chapter 2.8.1. The feedback mechanism is included in IABEE OES. Evidence related to the feedback is provided upon visit. • Mechanism exists to improve program evaluators' competency based on previous performance and feedbacks. Refer to RPARC Chapter 6.8
	c) The defined evaluation standards and processes are applied consistently and fairly;	Yes	• Evaluation standards and processes are outlined in RPEA Chapter 2.5. Consistency of application of standards and processes of accreditation system is ensured closely by related committees and secretariat, and by taking advantage of the use of On-line Evaluation System with pre-defined and clear schedule • Referring to RPEA Chapter 2.5, the processes include harmonization mechanisms conducted within and across engineering disciplines. These ensure objectivity, fairness, and consistency for accreditation decisions • Referring to RPEA Chapter 2.8.2, an appeal mechanism is provided to ensure fair accreditation decisions. Establishment of an Appeal Committee by the Appeal Board is outlined in RPARC Chapter 7. • For fairness and transparency, evaluation standards and processes are documented and disclosed for general public through IABEE website • Recently IABEE has also published Evaluation Guide for Programs and Evaluators, which is available for download from the link: https://iabee.or.id/wpcontent/uploads/2020/02/Evaluation-Guide.pdf
	d) The accreditation report records and justifies accreditation recommendations in sufficient detail to support decision-making and clearly differentiates recommendations from requirements.	Yes	• The accreditation report is structured in such a way to include sufficiently detailed information on the level of fulfilment (score and comments) against each criterion to support accreditation decision-making. The report includes introductory part about the program, its strengths, shortcomings found, and observations. In this way, the report clearly differentiates between requirements and recommendations. Refer to RPEA Chapter 2.5.4, especially under sub-section Step EGA-26 Program Final Report. • Rules are established to lead to accreditation decisions. Fulfilment to all criteria results in "Accredited" status, whereas any deficiency results in "Not-

			Accredited". Weakness against any criterion results in "Accredited with Interim Evaluation" either with or without on-site visit. Refer to RPEA Chapter 2.6 on Accreditation Decisions.
	e) The decision making body demonstrates capacity to make difficult decisions in a way likely to be beneficial to the engineering community in the longer term.	Yes	• Accreditation Council is IABEE's decision making body, whose membership consists of 5-7 intellectual and influential members representing academics, professional societies, and industries. They do not have conflict of interest with programs and are not evaluators in that academic year. Refer to RPARC Chapter 4. • Accreditation statistics from 2016 to 2019 cycles show a total of 45 programs have been evaluated. About 38% of programs evaluated for the first time received "Accredited" status with full validity period, while most programs (56%) are required to undergo Interim Evaluation. There is also 3 cases (7%) where a program received "Not Accredited" status. This, to a certain extent, reflects the capacity of IABEE to deal with difficult situations and to come up with decisions beneficial to the engineering community in the longer term.
5.	The graduate outcomes standard applied for accreditation is substantially equivalent to the Accord as exemplified by the Graduate Attribute exemplars as reflected in:		
	a) The agency's documented programme outcome standard;	Yes	• IABEE criteria on Program Learning Outcomes items (a) to (j) cover all required knowledge, skills, and attitudes that are substantially equivalent to the Accord's Graduate Attribute exemplars. Refer to the report of Analysis of Substantial Equivalence with the 2013 Version 3 Graduate Attributes – Washington Accord submitted by PII/IABEE
	b) The standard required of accredited programs in practice.	Yes (partially)	• IABEE accreditation criteria gives freedom to programs to establish their own learning outcomes by taking account of their respective institution's values, visions and missions, their resources, stakeholders' needs, and other considerations. However, IABEE criteria on Program Learning Outcomes items (a) to (j) shall be satisfactorily covered by programs' learning outcomes. IABEE Criteria Guide on Criterion 1.3 states that, "Program shall establish its own learning outcomes based on the autonomous professional profile to be acquired. The learning outcomes shall cover all graduate competences from (a) to (j) as mentioned in Common Criteria 1.3(3), which are expressed in such a way to give flexibility to Program" • Discussion has started within PII to recognize IABEE graduates and to give special treatment towards becoming licensed professional engineers
6.	The agency and its accreditation system are sustainable and adequately managed as indicated by:		

	a) Data from institutions offering educational programs that have sought accreditation in the jurisdiction;	Yes	• IABEE makes use of the BAN-PT (national agency conducting national compulsory accreditation) database on Program Operating Institutions/Higher Education Institutions. • Institutions offering engineering bachelor programs in Indonesia that have sought accreditation until 2019 cycle amount to 11 institutions, composed of both public and private institutions. • Annual Awareness Seminars conducted in several major cities from 2014 to 2019 witnessed participants from more than 30 different institutions. Most of them expressed an interest in seeking for accreditation from IABEE for their respective programs.
	b) Data regarding programs that have sought accreditation in the jurisdiction;	Yes	• Engineering bachelor programs in Indonesia that are eligible to seek for IABEE accreditation are those ranked A by the National Accreditation Agency for Higher Education (BAN-PT). These currently amount to 233 programs. Of these, 45 programs have sought General Accreditation (GA) until 2019 cycle • Apart from GA, IABEE offers Provisional Accreditation (PA) started from 2018 cycle. Substantial number of programs applying for PA so far (50 programs) indicates high demand for IABEE accreditation, and thus its sustainability. • Growing number of eligible programs due to governmental support on improving internal quality assurance and policy on achieving international recognition through accreditation is also anticipated to increase sustainability.
	c) The extent to which programs have gone through a full accreditation cycle and been re-evaluated;	Yes	• Re-evaluation cycle was of 6-year period but has now been modified to 5-year from 2019. The first re-evaluation of programs granted for 6-year accreditation will take place in 2022 (2 programs).
	d) The depth of considerations observed during the accreditation visit and decision making meeting enabling appropriate accreditation outcomes to be achieved for a range of evidence of programme quality;	Yes	• Accreditation visit serves as a medium to verify the level of fulfilment to each criterion previously reviewed based on program's Self Evaluation Report and its supporting evidences. Evaluation team is given enough time (2.5 days) to observe on-site evidences including relevant documents and records, interview key persons and program stakeholders, check learning facilities and environment in order to confirm and improve the accuracy of previously made judgement. Furthermore, post-visit chances are still given to program under evaluation to make improvements on identified shortcomings to the extent possible. Any improvement effort backed up by reasonable evidences will be considered in the Final Evaluation Report.

			• To improve consistency of judgement, Final Evaluation Reports of all programs evaluated in the same accreditation cycle are harmonized within and across engineering disciplines before final recommendations on accreditation decision are made. • Finally, a decision making meeting by Accreditation Council is convened to ensure that all processes have been conducted according to the rules and procedures and to take final decision on accreditation status.
	e) Mechanisms for the periodic review of accreditation policies, criteria and procedures;	Yes	• Review of accreditation criteria, policies, and procedures can be conducted periodically or when emerging issues arise. Matters related to accreditation criteria are discussed by Criteria Committee, while those related to accreditation policies and procedures are taken care by Evaluation and Accreditation Committee. Review results recommended by these committees are brought to Executive Committee meetings for further discussions and approval. Refer to https://iabee.or.id/en/about-iabee/organization/
	f) The depth of training of programme assessors;	Yes	• High standards of recruitment and training process are established to ensure competent evaluators recruited from both academics and industrial practitioners. • Recruitment of evaluators is conducted by considering the needs of various engineering disciplines. Candidate evaluators shall fulfill eligibility requirements before invited to join the training series. • The training series include: (1) Online Modular Training focusing on knowledge of accreditation system and processes; (2) 2-day Face-to-face Training focusing on gaining skills necessary to conduct on-site visit and to work as a part of an evaluation team; (3) assignment as observer (evaluator-in-training) to give an experience in a real on-site visit evaluation; and (4) Refresher Training focusing on sharing experiences, discussing emerging issues, and updating information regarding criteria and rules and procedures for on-going evaluation cycle. • A mechanism is established to evaluate the performance of candidate evaluators along the training series. This serves as the basis for considering the candidate's appointment as program evaluator. • Survey system is established during each evaluation cycle involving 360 degrees feedback to improve evaluators' performance and overall accreditation system

			• More information on Program Evaluator Training is provided in Refer to RPARC Chapter 6.
	g) The accreditation programme is led by personnel with appropriate expertise in engineering education, engineering practice and educational quality assurance	Yes	• In terms of organization, IABEE committees are led by committee chairs who have high expertise in engineering education, engineering practice, and quality assurance. As for evaluation teams, each team is led by a team chair with expertise in education, practice, and quality assurance and long experience in program evaluation.
	h) Separation of policy making from accreditation decision making	Yes	• IABEE organization clearly distinguishes the roles and responsibilities for policy making and accreditation decision making. The former are conducted by Executive Committee, while the later are by Accreditation Council, which is autonomous. Refer to https://iabee.or.id/en/about-iabee/organization/
	i) Mechanism exists to make consistent accreditation decisions sustainably;	Yes	• Consistent accreditation decisions are ensured to be made sustainable by the following mechanism: (1) evaluation report submitted by all evaluation teams are disclosed, discussed, and harmonized in two harmonization steps, i.e. within discipline and across disciplines in EAC meetings. (2) in the case of multiple teams assigned to an institution, harmonization of evaluation results between programs within the institution is made prior to submitting report; (3) recommendations of accreditation decisions by EAC are brought to Accreditation Council meetings for verification to ensure that all processes leading to recommendations have been implemented according to the Rules and Procedures. Having verified, AC will make final accreditation decisions.
	j) The agency's history of involvement (if any) with other Education Accords under the International Engineering Alliance with evidence of general, consistent conformance with published accreditation policies and procedures.	Not yet	• Washington Accord is the first Education Accord under IEA applied by IABEE. In near future, IABEE plans to seek for membership in other accords, such as Sydney Accord, Dublin Accord, and Seoul Accord.

INTERNATIONAL ENGINEERING ALLIANCE

Mentor's Report for IABEE
(Indonesian Accreditation Board for Engineering Education) under the Washington Accord

< October 2013 – February 2020>

Submitted by:

Dr. Yasuyuki AOSHIMA

Signature

JABEE, JAPAN

21 February 2020

RECOMMENDATION TO SIGNATORIES

JABEE, who has been mentoring IABEE since 2013, endorses the readiness of IABEE application for the signatory status in the Washington Accord and therefore recommends a verification team to be formed on the basis of IABEE compliance with Schedule B2 and askes WA signatories to consider voting for support as defined in the B.2.2.3 d) of the Accords Rules and Procedures.

The recommendation of the mentor is based on evidence collected during numbers of on-site visits to IABEE, including observations of more than dozen accreditation visits to around 30 programs as well as observation of accreditation decision-making meetings for the accreditation cycles 2016-2019 within JABEE mentoring period concurrent with JABEE assistance for IABEE under ODA which originally started in 2013.

EXECUTIVE SUMMARY

During the period of 2016-2019 of 4 accreditation cycles, JABEE conducted a review and monitored IABEE accreditation processes in accordance with Schedule B1 & B2 of the Accord.

At the request of the Indonesian Government to the Japanese Government to assist Indonesia in establishing an internationally recognized accreditation agency for engineering education, an ODA project to establish IABEE was approved and the Japan International Cooperation Agency (JICA) entrusted JABEE to implement the project.

The Indonesian Accreditation Board for Engineering Education (IABEE) is an accreditation body for higher education programs in engineering. IABEE is established as an autonomous department of the Institution of Engineers Indonesia (PII), a non-governmental organization of multi-disciplinary engineering professionals in engineering and technology. PII was founded in 1952 in Bandung and currently headquartered in Jakarta. IABEE started by the formation of a Steering Committee for IABEE Preparation in 2013.

The concept of accreditation is nothing new in Indonesia. The National Accreditation Board (BAN-PT) has been accrediting both institutional and program accreditations. In 2012, the Indonesian Government issued Higher Education Act that the program accreditations are to be carried out by independent accreditation agencies of respective fields and those field-oriented accreditation agencies are collectively called LAM-PS. As of today, LAM-PS for engineering has not been established yet. Accreditations by BAN-PT and/or LAM-PS are mandatory by law. Their accreditation criteria are regulated by the Government. BAN-PT and LAM-PS have started outcomes-based evaluation however, their levels do not meet the standard as required by the Washington Accord. IABEE is not a LAM-PS since it is voluntary and intended to pursue international-level accreditation, however, the Government recognizes the level of IABEE accreditation higher than that of national accreditation. The number of nationally accredited engineering programs at bachelor's level is approximately 2,500, 10% of which are ranked A by BAN-PT. Only those 10% are eligible to apply for IABEE accreditation. As in February 2020, IABEE has accredited 42 programs.

At the beginning phase of IABEE, all the activities including committees' meetings are financially supported by the Indonesian Government and JICA through JABEE. After IABEE has started evaluation and accreditation by application of their own prepared accreditation criteria, IABEE gradually started financing those activities by the income from accreditation fees. As of today, IABEE is completely independent from the Government in terms of finance, and IABEE secretariat administrates logistics related to the accreditation activities and runs committee meetings as well as hold seminars to increase qualified evaluators (e.g. evaluator training, refresher seminar etc.) and potential programs to be accredited in the future. As of today, pool of evaluators has reached 117.

Based on observations of and evaluations on IABEE activities comprehensively during mentoring process, JABEE is confident to confirm IABEE's accreditation visit process as well as accreditation system processes are substantially equivalent to those of WA signatories and in accordance with accord requirements.

IABEE has continuously been holding awareness seminars all over Indonesia for dissemination of outcomes-based education and importance to be in line with international standard. The number of seminars held from 2013 to 2019 is more than 40. After IABEE provisional admission to the Accords, 7 awareness seminars were held. Remarkably, the majority of which are held at the request of HEIs. This shows that IABEE provisional admission has given impact to HEIs in Indonesia.

IABEE started its own evaluation of programs in 2016. 2 programs in 2016, 3 programs in 2017, 27 programs in 2018 and 10 programs in 2019 totaling 42 programs have been accredited for general accreditation. Among 42, 17 programs were granted a full accreditation and 25 were granted an interim accreditation.

2 programs evaluated in 2019 were not accredited. However, accreditation may be granted if those two programs will take immediate remedial actions for the items pointed out as shortcomings and if EAC confirms its improvement and the Accreditation Council approves.

JABEE concludes that IABEE complies with the criteria for admission of signatory status documented in Schedule B2 of the Rules and Procedures and the standard of the graduates of IABEE accredited programs are substantially equivalent to the graduates of other WA signatories.

ACKNOWLEDGEMENTS

- Dr Yasuyuki AOSHIMA
  Ex-Executive Managing Director of JABEE. Currently he is an advisor of International Affairs. He has been mentoring IABEE before IABEE establishment to as of today. His mentoring begun from year 2013. He resided in Jakarta, Indonesia for one year from October 2013 to September 2014 in order to prepare ODA-JICA project and to establish network of Indonesian exerts and encourage them to be a part of the project. Participating in all major committees especially the Criteria Committee, Dr Aoshima provided guidance on Accreditation Criteria of almost all of WA signatories. JICA project started in November 2014. Since then, he has visited Indonesia almost every month until today as a project manager His mentoring is not mere single activity but it is more comprehensive support and it covers from assistance on creating IABEE Accreditation Criteria and its related evaluation and accreditation documents, assists setting up necessary committees to operate the accreditation body, advises how to effectively structure IABEE own systems while complying Accord requirements. The most remarkable contribution as mentor was to negotiate with the Indonesian Government to recognize IABEE as uncontested non-governmental organization eligible to apply for the Washington Accord. Since governmental program accreditation agency pre-existed in Indonesia, it was important that the Government recognizes IABEE international-level accreditation as superior to national accreditation. As a result of his continuous efforts on negotiation and having numbers of discussion with Government officials, IABEE acquired a status higher than national accreditation.

- Prof. Yukihiko SATO
  Member of JABEE BOD and Chair of the Evaluation and Accreditation Coordination Committee. He, at the beginning phase, highly engaged to disseminate concept of Outcomes-based Education and its Evaluation which are practiced and recognized internationally to the HEIs across the Indonesia, assisting educators and the study programs to get acquainted with the idea at the same time encouraging them to accelerate shifting their education from Input-based to Outcomes-based. He also served as lecturer for training for trainer of evaluator in Japan in three consecutive years, intended to increase people who can train program evaluator in Indonesia to effectively increase its total numbers.

- Prof. Yusuke HONJO
  Vice-President of JABEE and Chair of the International Affairs Committee. He mentored IABEE by accompanying some accreditation visits implemented by IABEE and told how to interpret GA and reflect it to IABEE criteria at the time of judgment when it is necessary (e.g. making judgment on difficult issue). He also shared his point of view from his experiences as experienced program evaluator to guide and betterment of IABEE accreditation activities. He was one of trainer of for training for trainer of evaluator in Japan in three consecutive years. Providing practical guidance on appropriate rationale to be apply in the process of outcomes-based evaluation to the trainees.

- Prof. Mitsunori MAKINO
  Member of JABEE BOD and Chair of the Criteria Committee. At the beginning phase of IABEE establishment, he greatly assisted IABEE to create Accreditation Criteria and associated documents. He attended numbers of Criteria Committee meetings and provided guidance on how to interpret Graduate Attributes and the concept of Outcomes-based education reflecting them into IABEE Accreditation Criteria. Based on his professional expertise, he supported IABEE to created digital/online evaluation system which allows IABEE to keep track of whole cycle of accreditation activities from the application until issuing certificate of accreditation to the program all by online. He accompanied to the numbers of IABEE accreditation visits and provided advices and guidance when necessary. He was also a trainer for train the evaluator trainer seminar held in Japan.

- Dr Shunji FUJII
  Member of JABEE BOD and Chair of the Public Affairs Committee. He accompanied with numbers of IABEE accreditation visits since IABEE beginning phase as a mentor and provided advices and guidance from the perspectives of Outcomes-based evaluation. He also served as trainer for train the evaluator trainer seminar held in Japan in 3 consecutive years.

- Prof. Hiroomi HOMMA
  He has served as professor of Toyohashi University of Technology in Japan and at that time he participated JABEE activities as an evaluator at numbers of occasions. After retirement, he moved to Indonesia and works as professor at Indonesian universities. He permanently lives in Indonesia and is knowledgeable about outcomes-based education and evaluation from the perspectives of JABEE Accreditation Criteria as well as IABEE Accreditation Criteria, he accompanied with IABEE accreditation visits to numbers of programs starting from IABEE pilot accreditation. As experienced program evaluator, he provided advices on critical points on evaluation.

- Ms. Akiko TAKAHASHI

  Visited Indonesia 20 time until today including visit prior to the official launch of IABEE project in 2014. Soon after IABEE Criteria Committee was established in 2013, she attended its committee and investigated accreditation criteria and its related documents of existing WA signatories and prepared committee documents while considering structure of each organization in order for IABEE to be able to consider what is the most appropriate figure of their own Accreditation Criteria to be created. From the point of view of the manager of JABEE International Affairs Division, she supported IABEE International Committee to get familiar with Accord Rules & Procedures and assisted preparation of IABEE application to provisional and signatory status in the Accord. When JABEE held training for evaluator trainer in Japan, she was in charge of translation of set of Self-review Reports of study programs, accompanied on-site visit. Also, she oversaw logistics of the training.

  Note:
  In total 25 JABEE experts including, professors, practitioners and JABEE secretariat staff, involved activities related to IABEE. Contribution includes mentoring at on-site visit of IABEE, assisting IABEE to create their systems from micro to macro such as training for secretariat administration, creating online systems, assisting consistency check of flow of evaluation and how to systematically operate IABEE not only accreditation-oriented issues but also well-formed and functioning organization. Additionally, most of experts have served mentoring activity more than once.

1.1 Purpose and Objectives

At the request of the IABEE, JABEE examined and now reports on the applicant and makes a recommendation to WA signatories. This report documents the observations, assessment, and recommendation resulting from the mentoring process.

1.2 Approach and Methodology

The monitoring review of IABEE was undertaken in accordance with the Washington Accord and mentoring visits took place in numbers of occasions.

During the period of 2016-2019 of 4 accreditation cycles, JABEE conducted a review and monitored IABEE accreditation processes in accordance with Schedule B1 & B2 of the Accord.
At the request of the Indonesian Government to the Japanese Government to assist Indonesia in establishing an internationally recognized accreditation agency for engineering education, an ODA project to establish IABEE was approved and the Japan International Cooperation Agency (JICA) entrusted JABEE to implement the project.
The Indonesian Accreditation Board for Engineering Education (IABEE) is an accreditation body for higher education programs in engineering. IABEE is established as an autonomous department of the Institution of Engineers Indonesia (PII), a non-governmental organization of multi-disciplinary engineering professionals in engineering and technology. PII was founded in 1952 in Bandung and currently headquartered in Jakarta. IABEE started by the formation of a Steering Committee for IABEE Preparation in 2013.
As one of autonomous departments of the PII, IABEE Executive Committee, former Steering Committee, has authority substantially equivalent to BOD of other WA Signatories. Criteria Committee, Evaluation & Accreditation Committee, International Committee are administrated under the Executive Committee.
Scope of IABEE accreditation is engineering programs at bachelor level that award a Bachelor's degree through 4-years academic curriculum implementation with a minimum total load of 144 credits. In Indonesia, Primary education is consisted of 6 years of elementary and 3 years of junior high school education are required in addition of 3 years of general high school education for secondary education. That would make 16 years of duration of academic formation to be awarded bachelor degree and in the reality, in order to complete 144 credits in the tertiary education takes more than 4 years in many cases.

The concept of accreditation is nothing new in Indonesia. The National Accreditation Board (BAN-PT) has been accrediting both institutional and program accreditations. In 2012, the Indonesian Government issued Higher Education Act that the program accreditations are to be carried out by independent accreditation agencies of respective fields and those field-oriented accreditation agencies are collectively called LAM-PS. As of today, LAM-PS for engineering has not been established yet. Accreditations by BAN-PT and/or LAM-PS are mandatory by law. Their accreditation criteria are regulated by the Government. BAN-PT and LAM-PS have started outcomes-based evaluation however, their levels do not meet the standard as required by the Washington Accord. IABEE is not a LAM-PS since it is voluntary and intended to pursue international-level accreditation, however, the Government recognizes the level of IABEE accreditation higher than that of national accreditation. The number of nationally accredited engineering programs at bachelor's level is approximately 2,500, 10% of which are ranked A by BAN-PT. Only those 10% are eligible to apply for IABEE accreditation. As in February 2020, IABEE has accredited 42 programs.

At the beginning phase of IABEE, all the activities including committees' meetings are financially supported by the Indonesian Government and JICA through JABEE. After IABEE has started evaluation and accreditation by application of their own prepared accreditation criteria, IABEE gradually started financing those activities by the income from accreditation fees. As of today, IABEE is completely independent from the Government in terms of finance, and IABEE secretariat administrates logistics related to the accreditation activities and runs committee meetings as well as hold seminars to increase qualified evaluators (e.g. evaluator training, refresher seminar etc.) and potential programs to be accredited in the future. As of today, pool of evaluators has reached 117.

IABEE Accreditation Criteria was set up based on the studies of accreditation criteria of WA signatories. JABEE assisted IABEE to fully take account of all IEA Graduate Attributes to be covered when IABEE defined student outcomes, in IABEE terminology "Orientation of the Graduate Competence", while guiding IABEE to consider essence unique to Indonesia in order to reflect country needs. The Criteria Committee held more than 30 meetings over 3 years, all of which JABEE attended to give advices. JABEE's mentoring started at the conceptional phase of IABEE establishment. JABEE involved in recruiting Indonesian experts. JABEE assisted IABEE experts providing guidance on abstract of IEA, WA, Graduate Attributes, Accord Rules & Procedures and introducing Accreditation Criteria of WA signatories so that allowed IABEE to compare and select the one most referential to create their own.

JABEE deeply engaged in the preparation process to make sure that IABEE fully takes account of and includes essential keys into their Accreditation Criteria, Criteria Guide, Rules & Procedure for Evaluation and Accreditation. As for Evaluation Guide, referential information was shared during evaluator training seminars and during awareness seminars to study programs. Recently Evaluation Guide has been published on IABEE Website.

JABEE provided IABEE with guidance and mentored for practically all IABEE activities such as, guidance on making appropriate judgment on evaluation items of which critical decision are required during accreditation visits on over 30 different occasions, practical attitude toward harmonization process at the Evaluation and Accreditation Committee meetings and accreditation final decision-making meetings. At every step of evaluation process, JABEE explained to IABEE not only WA basic philosophy but also practical understanding shared amongst WA signatories.

Based on observations of and evaluations on IABEE activities comprehensively during mentoring process, JABEE is confident to confirm IABEE's accreditation visit process as well as accreditation system processes are substantially equivalent to those of WA signatories and in accordance with accord requirements.

This report shows IABEE's organizational growth in a long term. Regarding the matureness in accreditation activities, JABEE witnessed not only one-time but also number of accreditation visits over the years with providing guidance and assistance. IABEE strived to adhere good practices on WA signatories and what IABEE has learned by participating in evaluator training seminars or on-site visits of some signatories and immediately reflected to their own training and accreditation activities updating their procedures to better suits for the level as equivalent to the international practice.

Major update which JABEE would like to note is the improvement of IABEE Accreditation Criteria after receiving feedback to explicitly state "Complex Engineering Problem" from some signatories at the time of IABEE provisional admission to the Accord in HK in June 2019. "Complex Engineering Problem" is now explicitly mentioned in Common Criteria.

As IABEE was first initiated from the ODA project, the large parts of their financial needs were supported by the project. Currently, IABEE is financed by accreditation fees. The accumulated investment reserve is estimated to decline until 2023, however from 2024 a large number of programs is expected to renew their accreditation status. In addition, the programs previously accredited under the provisional accreditation are expected to seek for the general accreditation. Therefore, the accumulated investment reserve shall increase from then on. IABEE's efforts to seek for stronger support such as from industry are recommended. Setting up a mechanism of supporting membership to IABEE with annual membership fees would be a solution.

IABEE has continuously been holding awareness seminars all over Indonesia for dissemination of outcomes-based education and importance to be in line with international standard. The number of seminars held from 2013 to 2019 is more than 40. After IABEE provisional admission to the Accords, 7 awareness seminars were held. Remarkably, the majority of which are held at the request of HEIs. This shows that IABEE provisional admission has given impact to HEIs in Indonesia.

JABEE conduced JABEE evaluations to a program of Bogor Agricultural University in 2014, a program of the Islamic University of Indonesia in 2015 and a program of University of Indonesia and a program of Bandung Institute of Technology in 2016. Those 4 JABEE evaluations are so-called "pilot evaluations for IABEE" in which IABEE executives and experts participated as observers.

IABEE started its own evaluation of programs in 2016. 2 programs in 2016, 3 programs in 2017, 27 programs in 2018 and 10 programs in 2019 totaling 42 programs have been accredited for general accreditation. Among 42, 17 programs were granted a full accreditation and 25 were granted an interim accreditation.
6 programs in 2017, 21 programs in 2018 and 28 programs in 2019, totaling 55 programs have been accredited for provisional accreditation (including 5 programs for Computing). These programs are expected to apply for general accreditation after 2020. This backs up high plausibility of maintaining consistent number of potential programs based on programs high interest and voluntary attitude toward outcomes-based accreditation.
JABEE concludes that IABEE complies with the criteria for admission of signatory status documented in Schedule B2 of the Rules and Procedures and the standard of the graduates of IABEE accredited programs are substantially equivalent to the graduates of other WA signatories.

The timelines of main activities of the mentor are shown below:

Date	Activity
Oct. 2013 to Sep. 2014	Dr Aoshima stayed in Jakarta, Indonesia for one year to prepare upcoming 5-year ODA project to establish IABEE.
Jan. 2014	With the assistance of Dr Aoshima and Ms. Takahashi, 1st IABEE Criteria Committee was held and started to prepare IABEE Accreditation Criteria. Firstly, the Committee studied accreditation criteria of WA signatories and Graduate Attributes of IEA. The Criteria Committee held more than 30 meetings over 3 years to finalize Indonesian-oriented one.
From Nov. 2014 to Oct. 2019	As a project manager of IABEE establishment, Dr Aoshima undertook missions to Indonesia practically every month. In total of 25 JABEE experts undertook missions to Indonesia during the period to accompany with major activities.
Feb. 2015	Invited 7 IABEE executives to Japan to learn framework of JABEE organization, principle of evaluation and its rules & Procedures to reflect to their own system by attending lecture session by JABEE professors, skill practice with JABEE accredited programs and visiting IPEJ and observation of JABEE Evaluation & Accreditation Coordination Committee.
April 2015, April & May 2016, Aug. & Sep. 2017	13 times of awareness seminars were held. Not only sending JABEE, Prof. Sato and Dr Aoshima as lecturers, Dr Michael Milligan, CEO of ABET had served as lecturers in five different cities.
April to May 2015, 2016 & 2017 (twice per year)	Sent in total 16 IABEE experts as participating observer to ABET PEV Training for them to be a trainer for evaluator in Indonesia. JABEE experts accompanied with each group for assistance.

May & Sep. 2016	Sent 3 IABEE executives to CAST, China in May 2016 and 3 other experts to EA, Australia in Sep. 2016 for them to be a trainer for evaluator. Both cases, had meeting with executives of CAST and EA and observed their accreditation visits.
Oct., 2015, Nov., 2016 & Oct. 2017	In total 43 IABEE potential Evaluator Trainers observed JABEE accreditation visits based on studying JABEE Accreditation Criteria and Evaluation Methods separately so that participants could practice outcomes-based evaluation.
2014-2016	JABEE conduced JABEE evaluations in 2014, 2015 and 2016. Those 4 JABEE evaluations are so-called "pilot evaluations for IABEE" in which IABEE executives and experts participated as observers
July to Oct., 2017	Sent JABEE experts to IABEE on-site evaluations visits in 8 different HEIs to provide advice.
Jan. 2015 to Oct. 2019	By showing JABEE online evaluation system, Prof. Makino, Dr Aoshima and 2 JABEE secretarial staff took initiative for IABEE to create more advanced system by comprehensively including whole activities occur one accreditation cycle; application submission to issuing accreditation certificate. In order to digitalize everything, all information related to evaluation were compiled into database. Assessment on evaluator and roster of the candidates are also embedded.

1.3 Scope of the Report

This report covers the mentor's findings based on review and observation of all necessary documentation to satisfy the requirements of Schedule B2 of the Educational Accords General Rules and Procedures.

1.4 Confirmation of Criteria for Admission

Checklists for B1 and B2 as well as for Gap Analysis duly completed by the Mentor are attached in the Annexes.

1.5 Concluding Remarks

I find that IABEE is ready to be considered for Full Signatory status in the Washington Accord.

2 RECOMMENDATION TO SIGNATORIES

JABEE, who has been mentoring IABEE since 2013, endorses the readiness of IABEE application for the signatory status in the Washington Accord and therefore recommends a verification team to be formed on the basis of IABEE compliance with Schedule B2 and askes the WA signatories to consider voting for support as defined in the B.2.2.3 d) of the Accords Rules and Procedures.

Requirements for Signatory Status Checklist

	Schedule B1: Criteria for Admission to Provisional Signatory Status in an Accord (also required for Admission to Full Signatory)	**Visit Report analysis against Rules and Procedures requirements**	
		Meets Criteria? *Yes/No*	*Evidence provided/Comments/any changes over time?*
1	The accrediting agency has the following characteristics:		
	a) Is non-governmental;	Yes	IABEE is an NPO/NGO organization established as an autonomous department under the Institution of Engineers Indonesia (PII), which is the most prominent NGO representing professional engineering community in Indonesia.
	b) Is legally incorporated in its home jurisdiction;	Yes	PII is regally incorporated. IABEE, as an autonomous department of PII, is also automatically legally incorporated.
	c) Is the uncontested accreditation agency of the engineering community in the jurisdiction; or, if circumstances in the jurisdiction allows multiple accreditation agencies, the applicant must be the prominent authority in accreditation of programmes;	Yes	IABEE is the only agency which voluntary accredits engineering education programs. IABEE is a part of PII and PII is given the authority to represent engineering profession by the engineering law, therefore, IABEE is a prominent authority in engineering education accreditation.
	d) Is a statutory or professionally recognised authority to accredit programs satisfying academic requirements for admission to practicing status (e.g. licensing, registration) in a jurisdiction;	Yes	IABEE as a part of PII accredits to evaluate whether the program meets academic requirements. PII, as an umbrella organization, regulates and implements licensing and registrations under given authority.
	e) Accredits programmes at institutions that have legal authority to confer higher education degrees qualifications;	Yes	Study programs accredited with rank-A by the National Accreditation Agency for Higher Education (BAN-PT), which is a national mandatory-accreditation agency, is only eligible to apply for IABEE evaluation.
	f) Has policies to set, approve, evaluate and execute accreditation criteria and procedures;	Yes	Defined in RPEA documents.
	g) Is independent of the educational providers delivering accredited programmes in its jurisdiction;	Yes	IABEE is independent from educational providers.
	h) Has autonomy to make accreditation decisions independent of stakeholder influence.	Yes	IABEE is established under PII as autonomous department and RPEA document defines details of individuals who should not involve decision making procedures in every levels of evaluation activities in order not to interfere independent accreditation decision.
2.	The accrediting agency has an operational accreditation system with documented procedures and practices conforming to the following principles:		
	a) The accreditation criteria and procedures are documented, publicized, and applied in accordance with set policies;	Yes	IABEE publishes evaluation and accreditation related documents on their website based on their regulations at: https://iabee.or.id/en/accrediation/rules-and-policies-for-evaluation-and-accreditation/
	b) The system accredits programmes or coordinated groups of individually identified programmes;	Yes	IABEE has modular online training, Face-to-Face training and observation of accreditation visit as step-by-step training for evaluator candidates which JABEE involved to establish its system.
	c) Programme assessors are academic and industry peer reviewers;	Yes	As JABEE introduced program evaluation implemented amongst Accords participating members are peer review made up of academia and industry. IABEE has been

			striving to keep a pool of evaluators in balance.
	d) There are mechanisms and documentation for training the programme assessors;	Yes	As mentioned above 2. b) and c), IABEE has mechanisms and the related documents are uploaded on the IABEE website as mentioned in 2.a)
	e) Programme evaluation requires a self-evaluation and site visit;	Yes	It is defined in RPEA document. As part of evaluation process, a study program is to submit a self-evaluation report via online system.
	f) Periodic re-evaluation is required to maintain accreditation;	Yes	IABEE first decided for a program granted a full accreditation to be re-evaluated in 6-year cycle to maintain accreditation status. From 2019, re-evaluation for continuous evaluation will be carried out in 5-year interval. IABEE also has system of Interim evaluation with or without on-site visit (desk audit-basis) for a program with “weakness”.
	g) Individual program evaluation is conducted in confidence;	Yes	Confidentiality and implementation of evaluation in confident are defined in Rules and Procedures for Accreditation-Related Committees (RPARC) document and its actual implementation were confirmed by JABEE’s observation of on-site visit for years.
	h) Mechanisms for addressing conflict of interest at all stages of the process exist;	Yes	IABEE publishes RPARC document which includes policies of conflict of interest and tries their best to avoid case of such.
	i) A list of accredited programmes is published;	Yes	It is published on IABEE website
	j) An appeal process exists.	Yes	It is also included in the RPARC document as mentioned in 2 h).
3.	The accreditation agency’s criteria for accreditation include requirements for:		
	a) Programme outcomes that are consistent with the purpose of the programme	Yes	Defined in criterion 1 of Orientation of the Graduate Competence
	b) A curriculum providing a broad basis for engineering practice;	Yes	Defined in criterion 2.1 of curriculum
	c) A suitable environment to deliver the programme;	Yes	IABEE criterion 2.3.3 in Students and Academic Atmosphere and 2.4 Facility require programs to ensure appropriate learning environment for achievement of learning outcomes by the students.
	d) Adequate leadership for the programme;	Yes	It is defined in criteria 2.5 of Institutional Responsibility
	e) Suitably qualified engineering practitioners teaching in the programme;	Yes	2.2 Faculty of IABEE criteria requires appropriate numbers, qualifications and competence in its members.
	f) Appropriate entry and progression standards; a*nd*	Yes	2.3 Students and Academic Atmosphere of IABEE criteria defines admission and transfer of students and its handling.
	g) Adequate human, physical and financial resources for the programme.	Yes	2.2, 2.3 and 2.4 mentioned above and 2.5 cover adequate efforts for the program to maintain appropriate resources to implement the program.

Schedule B2: Criteria for Admission to and Maintenance of Signatory Status in an Accord	**Visit Report analysis against Rules and Procedures requirements**

		Meets Criteria? Yes/No	*Evidence Provided/Comment/any changes over time?*
	Accreditation agencies under review must: 1. Continue to satisfy the requirement defined in Schedule B1: and 2. Satisfy criteria 4, 5 and 6 below		
4.	The agency's accreditation system and processes conform to the Accord accepted practice as exemplified by:		
	a) High standards of professionalism, ethics and objectivity;	Yes	6.7 "Expected evaluator competence" and 7 "Code of Ethics" defines its standard in the Rules and Procedures for Accreditation-related committees (RPARC). The former for expected quality in evaluator and the latter for ethical principles for the evaluators.
	b) All involved in programme evaluation are competent in the agency's accreditation system, and are of high standing as educators or practitioners in the profession;	Yes	In order to make sure the levels of understanding shared amongst appointed evaluators, and require to go through on-line training provided through IABEE website prior to attend IABEE candidate evaluator workshops and training sessions, 2 days face-to-face session, as well as evaluator's refresher workshops. Also, requirements to be evaluator are set and published on IABEE website to keep high level of eligibility and qualification. Assessment of evaluators, as prescribed in 6.8 "Evaluator performance Evaluation" of RPARC, who have served as evaluators and observers (in training) in 2019, is being implemented for the first time and the results will be used for the selection of evaluators for the accreditation cycle beyond 2020.
	c) The defined evaluation standards and processes are applied consistently and fairly;	Yes	Evaluation Guide is published on IABEE Website at: https://iabee.or.id/wp-content/uploads/2020/02/Evaluation-Guide.pdf
	d) The accreditation report records and justifies accreditation recommendations in sufficient detail to support decision-making and clearly differentiates recommendations from requirements.	Yes	Evaluation reports in all phases and harmonization results based on its reports at Evaluation & Accreditation Committee (EAC) are filed at Online Evaluation System. Accreditation recommendations made by EAC are examined by the Accreditation Council (AC), which is IABEE's final decision-making committee. The AC has been held properly since accreditation cycle 2016.
	e) The decision making body demonstrates capacity to make difficult decisions in a way likely to be beneficial to the engineering community in the longer term.	Yes	4.2 of IABEE RPARC "membership" of AC defines the members should be from academics, professional societies, and industry. No members shall have conflict of interests with study programs evaluated in the year of accreditation.
5.	The graduate outcomes standard applied for accreditation is substantially equivalent to the Accord as exemplified by the Graduate Attribute exemplars as reflected in:		
	a) The agency's documented programme outcome standard;	Yes	Items (a) to (i) of Criterion 1.3, "Orientation of the Graduate Competence", of Common Criteria are defined by fully taking account of Graduate Attribute exemplars to be substantially equivalent.
	b) The standard required of accredited programs in practice	Not (yet)	Based on IABEE's suggestion, the Institution of Engineers Indonesia (PII), which is IABEE's parent organization, has started the

			discussion to differentiate between IABEE graduates and non-IABEE graduates
6	The agency and its accreditation system are sustainable and adequately managed as indicated by:		
	a) Data from institutions offering educational programs that have sought accreditation in the jurisdiction	Yes	IABEE fully uses the database of BAN-PT on HEIs.
	b) Data regarding programs that have sought accreditation in the jurisdiction;	Yes	IABEE only evaluates engineering programs of HEIs which are ranked A by BAN-PT. Since IABEE has been accrediting study programs in 2016 cycle, number of accredited programs has been sustainably increasing 2 in 2016, 3 in 2017, 27 in 2018 and 10 in 2019. Noting that there are numbers of provisionally accredited programs, in total of 50, and all of which most likely seek for general accreditation after producing graduates.
	c) The extent to which programs have gone through a full accreditation cycle and been re-evaluated;	Yes	A program granted a full accreditation shall be re-evaluated within 6 years. The 6-year cycle will be changed to 5-year from 2020 accreditation. IABEE's first re-evaluation to a program granted a full accreditation in 2016 will occur in 2022.
	d) The depth of considerations observed during the accreditation visit and decision making meeting enabling appropriate accreditation outcomes to be achieved for a range of evidence of programme quality;	Yes	Evaluation is implemented based on the evidence collected from Self-study report and at on-site visit. Evaluation Guide is uploaded on IABEE Website to explain the evidences of program quality.
	e) Mechanisms for the periodic review of accreditation policies, criteria and procedures;	Yes	IABEE Rules and Procedures for Evaluation and Accreditation (RPEA) are defined by the Evaluation & Accreditation Committee (EAC) and Accreditation Criteria by the Criteria Committee (CC) however, both correlate and/or complement each other so one decided to revise, then the other also need to revise accordingly. The final decision over its revision is made by the Executive Committee (EXC). Both the Chair of EAC and CC are members of EXC. There is no scheduled change of IABEE evaluation and accreditation documents so far since IABEE is fairly new organization but minor modification has already been made for clarification i.e., inserting "Complex Engineering Problem" into Common Criteria.
	f) The depth of training of programme assessors;	Yes	IABEE first started to train IABEE executives to join ABET PEV training in 6 times in 3 consecutive years, observed accreditation visits of EA and CAST to learn the practical judgement made at the scene of accreditation exercise and joined JABEE conducted mock evaluation of JABEE actual programs including on-site visits. IABEE experts participated in 4 JABEE's evaluations as observers. All of those are to train IABEE evaluators and for their maturity. Based on those knowledge and experience, IABEE created gradual training scheme; on-line training, face-to-face-training, and observer-in-training. Details are defined in 6.1 to 6.6 of RPARC.
	g) The accreditation programme is led by personnel with appropriate expertise in engineering education, engineering practice and educational quality	Yes	In the IABEE Discipline Criteria, each field of discipline defines expected expertise.

	assurance		
	h) Separation of policy making from accreditation decision making	Yes	Policy making of IABEE is fully in hand of EXC which is similar to the division substantially equivalent to BOD of the WA signatories whereas, as defined in 4.1 & 4.2 of PRARC, accreditation final decision is made by Accreditation Council, which reviews all the evaluation procedures have been carried out with consistency, with members appointed by the Chair of EXC annually just for that occasion by avoiding conflict of interest. No members are from EAC, which functions as harmonization process of evaluated study programs in the applicable accreditation cycle prior to make final decision by the Accreditation Council.
	i) Mechanism exists to make consistent accreditation decisions sustainably;	Yes	RPARC in English and Evaluation Guide are published on IABEE Website.
	j) The agency's history of involvement (if any) with other Education Accords under the International Engineering Alliance with evidence of general, consistent conformance with published accreditation policies and procedures.	Not (yet)	PII/IABEE is interested in participating in the Sydney and Dublin Accords once successfully admitted as signatory in the Washington Accord.

Other matters		**Appraisal of Visit Report**	
		Section of report (p)	*Comment*
C.2.3.	The Guidelines state: Ultimately, the applicant must demonstrate that the level and content of the studies of accredited / recognised programmes are substantially equivalent to those of the current signatories. Therefore, the programme must be offered at an appropriate tertiary-level institution. The duration of academic formation will normally be at least sixteen years (Washington Accord), fifteen years (Sydney Accord), and thirteen years (Dublin Accord).	Mentor report p. B-7	As specifically mentioned on IABEE website, Scope of IABEE accreditation is engineering programs at bachelor level that award a Bachelor's degree through 4-years academic curriculum implementation with a minimum total load of 144 credits. In Indonesia, Primary education is consisted of 6 years of elementary and 3 years of junior high school education are required in addition of 3 years of general high school education for secondary education. That would make 16 years of duration of academic formation to be awarded bachelor degree and in the reality, in order to complete 144 credits in the tertiary education takes more than 4 years in many cases.
Educational standing *refer: Washington Accord Agreement (p6)*			
Para 2	Each signatory will make every reasonable effort to ensure that the bodies responsible for registering or licensing professional engineers to practice in its country or territory accept the substantial equivalence of engineering academic programmes accredited by the signatories to this agreement.		As the parent organization of IABEE, PII shall start the discussion.

Education Accord Report: Analysis of Substantial Equivalence with the 2013 Version 3 Graduate Attributes **WASHINGTON ACCORD**			
Accrediting Agency: Persatuan Insinyur Indonesia / Indonesian Accreditation Board for Engineering Education (PII/IABEE) Contact Person:		Date of Gap Analysis:	Date of Comment: 21 Feb. 2020
Washington Accord Graduate Attribute (WA1-WA12) with supporting knowledge profile statement (WK1-WK8) or level of problem solving (WP1-WP9) (Version 3: June 2013)	Elements of Accrediting Agency's Standard corresponding to Graduate Attributes and range/level information	Accrediting Agency's self-assessment of substantial equivalence of its standard and the Graduate Attributes and range/level information	Mentor Comments
WA1: Apply knowledge of mathematics, natural science, engineering fundamentals and an engineering specialization as specified in WK1 to WK4 respectively to the solution of complex engineering problems. *Where the knowledge profile elements referred to in this and other attribute statements are:* WK1: A systematic, theory-based understanding of the natural sciences applicable to the discipline WK2: Conceptually-based mathematics, numerical analysis, statistics and formal aspects of computer and information science to support analysis and modelling applicable to the discipline WK3: A systematic, theory-based formulation of engineering fundamentals required in the engineering discipline WK4: Engineering specialist knowledge that provides theoretical frameworks and bodies of knowledge for the accepted practice areas in the engineering discipline; much is at the forefront of the discipline. See WA3 for WK5 See WA5 for WK6 See WA6 for WK7 See WA4 for WK8	Criteria Guide for Criterion 1.3. Program shall establish its own learning outcomes based on the autonomous professional profile to be acquired. The learning outcomes shall cover all graduate competences from (a) to (j) as mentioned in Common Criteria 1 (3), which are expressed in such a way to give flexibility to Program. It is important to note that the learning outcomes shall take into account also the Category and Discipline Criteria Criterion 1.3. item (a): an ability to apply knowledge of mathematics, natural and/or materials sciences, information technology and engineering to acquire comprehensive understanding of engineering principles Criteria Guide for Criterion 1.3. item (a) • Engineering Principles refers to ideas, rules and concepts to be considered when solving an engineering problem. The set of principles may vary among engineering disciplines depending on the uniqueness of systems, problems, ethical issues, and problem solving methods of the discipline. • Attaining comprehensive understanding of engineering principles is indicated by acquisition of: 1. Mathematics, basic sciences (such as physics, biology, chemistry) and information technology in the engineering field of Program.	In general, WA1 corresponds to the IABEE Learning Outcomes Criterion item (a). Further requirements as requested by WK1 through WK4 have also been met by the IABEE Common Criteria, Criteria Guide, and Discipline Criteria, as explained below: • The requirements requested by WK1 and WK2 are sufficiently stated in the Criteria Guide for Criterion 1.3. item (a), namely the necessity to use mathematics, basic science relevant to the scientific disciplines, and information technology to provide solutions to complex engineering problems. In addition, Criterion 2.1 concerning the curriculum also requires the fulfillment of a minimum of 20% of the combination of college-level mathematics and basic sciences appropriate to the discipline to ensure adequate handling of the problem. • The WK3 requirements are satisfied by Criteria 2.1 on Curriculum, where a minimum of 40% of the curriculum must contain engineering topics encompassing engineering sciences and design appropriate to the disciplines. The engineering sciences are rooted in mathematics and basic sciences, but at the same time deliver to the knowledge and skills of creative application. Thus, this section provides a bridge between	WA 1 is covered by Criterion 1.3 (a) "an ability to apply knowledge of mathematics, natural and/or materials sciences, information technology and engineering to acquire comprehensive understanding of engineering principles.", and (a) to (e) of Criterion 2.1.1 and 2.1.3 of "Curriculum" are backed up by the Discipline Criteria. "Complex Engineering Problem" is now explicitly mentioned in Common Criteria.

	2. An ability to utilize the aforementioned knowledge. Criterion 2.1. Curriculum, item (1) Curriculum shall include the following subject areas: a. Mathematics and discipline-specific natural sciences b. Discipline-specific engineering science and technology c. Information and communication technology d. Engineering design and problem based experiments e. General education, which includes morality, ethics, socio-culture, environment and management Criteria Guide for Criterion 2.1. Curriculum, item (1) Program shall ensure that the curriculum meets the above mentioned subject areas appropriate to engineering regardless the subject/course names. The program must ensure that the curriculum devotes adequate attention and time to each component, consistent with the learning outcomes, which include: • A minimum of 20% of a combination of college level mathematics and basic sciences (some with experimental experience) appropriate to the discipline. Basic sciences are defined as courses such as biological, chemical, or physical sciences. • A minimum of 40% of engineering topics, consisting of engineering sciences and engineering design appropriate to the student's field of study. The engineering sciences have their roots in mathematics and basic sciences but carry knowledge further toward creative application. These studies provide a bridge between mathematics and basic sciences on the one hand and engineering practices on the other. Engineering design is the process of devising a system, component, or process to meet desired needs. It is a decision-making	mathematics and basic science on the one hand and engineering practice on the other. • In addition to the Common Criteria, which apply to all engineering disciplines, IABEE also establishes the Discipline Criteria that must be met by the engineering discipline concerned. The Discipline Criteria, in this case, mainly regulate further elaboration of learning outcomes and curricula that are appropriate to the field, as expected by the respective engineering societies. This answers WK4.	

	process, in which the basic sciences, mathematics, and the engineering sciences are applied to convert resources optimally to meet the stated needs. • A maximum of 30% general education components that complement the technical content of the curriculum and are consistent with the learning outcomes. Criteria Guide for Criterion 2.1.(3) on Curriculum • Program should explain how the specific requirements of each curricular area addressed in the Common Criteria or Discipline Criteria can be met, both in terms of load and depth of the material. • Program shall establish a syllabus for each course used to satisfy the mathematics, science, and discipline-specific requirements or any applicable criteria.		
WA2: Identify, formulate, research literature and analyse complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences and engineering sciences. (Refer to WK1 to WK4) *Where:* *Complex Engineering Problems* have characteristic WP1 and some or all of WP2 to WP7*:* WP1: Cannot be resolved without in-depth engineering knowledge at the level of one or more of WK3, WK4, WK5, WK6 or WK8 which allows a fundamentals-based, first principles analytical approach WP2: Involve wide-ranging or conflicting technical, engineering and other issues WP3: Have no obvious solution and require abstract thinking, originality in analysis to formulate suitable models WP4: Involve infrequently encountered issues WP5: Are outside problems encompassed by standards and codes of practice for professional engineering	Criterion 1.3. item (a): an ability to apply knowledge of mathematics, natural and/or materials sciences, information technology and engineering to acquire comprehensive understanding of engineering principles Criterion 1.3. item (d): an ability to identify, formulate, analyze, and solve engineering problem. Criteria Guide for Criterion 1.3. item (d) • Engineering problem solving involves iterative activities incorporating the definition of the problem, development of solution alternatives, selection of best alternative, application of solution, evaluation and validation of solution against problem constraints, and revision of solution. • This competence may include the ability to · utilize techniques and methods for performing engineering works comprising survey, data analysis, planning, design, operation and maintenance.	The WA2 requirements are directly related to the IABEE Learning Outcomes Criteria item (d). This item requires graduates to be able to identify, formulate, analyze, and solve engineering problems. As explained further in related Criteria Guide, this competency demands the ability to use techniques and methods to perform engineering work, including planning, surveys (including literature and field surveys), and data analysis. The level of engineering problems referred to in item (d) are complex, as are the characteristics mentioned in the related section of the Criteria Guide, namely those involving iterative activities to obtain the solution, including: - problem definition, - development of alternative solutions and selection of the best alternative (WP3), - apply logical thinking to handle the design and trouble-shooting (WP3), - application of solutions,	WA2 is covered by Criterion 1.3 (a) "…knowledge of mathematics, natural and/or materials sciences, information technology and engineering to acquire comprehensive understanding of engineering principles" and by criterion 1.3 (d) "an ability to identify, formulate, analyze, and solve engineering problems".

WP6: Involve diverse groups of stakeholders with widely varying needs WP 7: Are high level problems including many component parts or sub-problems	· apply the engineering logical thinking for handling both of the design and trouble-shooting context.	- evaluation and validation of solutions against problem constraints (WP2), and - revision of the solution. The problems above clearly require in-depth engineering knowledge to develop alternatives and to arrive at the best solution. IABEE Common Criteria 2.1 on Curriculum and IABEE Discipline Criteria ensure that the WK3 and WK4 requirements are fully covered. In addition, IABEE Learning Outcomes Criteria items (e), (i), and (c) each meets the requirements of WK5, WK6, and WK8, respectively. Therefore, the complex engineering problems that are characterized by WP1 are met.	
WA3: Design solutions for complex engineering problems and design systems, components or processes that meet specified needs with appropriate consideration for public health and safety, cultural, societal, and environmental considerations. (Refer to WK5) WK5: Knowledge that supports engineering design in a practice area	Criterion 1.3. item (b): an ability to design components, systems, and/or processes to meet desired needs within realistic constraints in such aspects as law, economic, environment, social, politics, health and safety, sustainability as well as to recognize and/or utilize the potential of local and national resources with global perspective Criteria Guide for Criterion 1.3. item (b) • The ability to design components, systems, and/or processes is the hallmark competence of engineering education. Design implies the ability to utilize multidimensional thinking with knowledge of global perspective to develop components, systems, and/or processes to achieve specific objectives. It is not limited to drawing a plan, but also refers to the synthesis of various academic disciplines and technologies to pursue practicable solutions to a problem that does not necessarily have one correct answer. • It involves also a process of optimization by taking into account some realistic constraints, such as law, economic, environment, social, politics, health and safety, and sustainability as well as utilization of the knowledge of culture, society and available resources.	The IABEE Learning Outcomes Criteria (b) and its elaboration in the Criteria Guide are in full compliance with WA3 requirements. Knowledge that supports engineering design as required by WK5 is fulfilled by Criterion 2.1 on Curriculum and its explanation in the relevant Criteria Guide section.	WA3 is covered by Criterion 1.3 (b).

	Criterion 2.1. Curriculum, item (4) Curriculum shall ensure that the students are exposed to engineering practices and major design project experience using engineering standards and multiple realistic constraints based on knowledge and skills acquired in preceding course work. Criteria Guide for Criterion 2.1. Curriculum, item (4) • Program must provide opportunity to students to develop competence in practical application of engineering skills, combining theory and experience along with the use of other relevant knowledge and skills. Training in engineering practices may be supported by several courses (subjects) but should culminate in a major design project. This major project serves as a capstone for the program which requires students to integrate knowledge and skills acquired in earlier coursework.		
WA4: Conduct investigations of *complex* problems using research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of information to provide valid conclusions. (Refer to WK8) WK8: Engagement with selected knowledge in the research literature of the discipline	Criterion 1.3. item (c): an ability to design and conduct laboratory and/or field experiments as well as to analyze and interpret data to strengthen the engineering judgment Criteria Guide for Criterion 1.3. item (c) • This competence refers to the design and application of laboratory and/or field experiments within the broad context of engineering practice such as problem identification, testing of potential solution ideas, solution implementation plan, and other design-related activities. • Experiments may include activities in physical laboratories, computer simulations, and field experiments Criteria Guide for Criterion 1.3. item (d) • Engineering problem solving involves iterative activities incorporating the definition of the problem, development of solution alternatives,	IABEE Learning Outcomes Criteria (c) and its elaboration in the Criteria Guide confirm WA4 requirements. Engagement with selected knowledge in the discipline research literature (WK8) is satisfactorily covered in the Criteria Guide for Criterion 1.3. item (d), which requires the ability to utilize techniques and methods for conducting surveys, including literature surveys, to support the investigation (formulation, research methodology, and analysis) of complex problems.	WA4 is covered by Criterion 1.3 (c) and (d).

	selection of best alternative, application of solution, evaluation and validation of solution against problem constraints, and revision of solution. • This competence may include the ability to · utilize techniques and methods for performing engineering works comprising survey, data analysis, planning, design, operation and maintenance. · apply the engineering logical thinking for handling both of the design and trouble-shooting context.		
WA5: Create, select and apply appropriate techniques, resources, and modern engineering and IT tools, including prediction and modelling, to *complex* engineering problems, with an understanding of the limitations. (Refer to WK6) WK6: Knowledge of engineering practice (technology) in the practice areas in the engineering discipline	Criterion 1.3. item (e): an ability to apply methods, skills and modern engineering tools necessary for engineering practices. Criteria Guide for Criterion 1.3. item (e) • Program shall have a clear definition of the methods, skills, and modern engineering tools appropriate for its level of study and engineering discipline, and how these are learnt throughout the curriculum. • An ability to select a method and tools with their strength and limitation characteristics for a given problem. • An ability to utilize and adjust the method and tools to suit specific problems. Criteria Guide for Criterion 2.1. Curriculum, item (4) • Program shall define curriculum subjects to optimally support main stream of discipline specific requirements and to provide opportunity for students to acquire practical experience in implementing the subjects in an actual working environment	WA5 requires graduates to have an adequate level of use of modern engineering tools, ranging from applying the tools that are already available, choosing the tools that are appropriate with an adequate understanding of their strengths and limitations, and creating, modifying, or adjusting the tools to meet specific needs. The capabilities described in WA5 must be supported by the required knowledge (WK6) of engineering practice gained from practical experience. These WA5 and WK6 requirements are sufficiently addressed in the Criterion 1.3 item (e), which is further described in the related section of the Criteria Guide. Also, the Criteria Guide for Curriculum explicitly require the program to provide opportunities for students to gain practical experience in the actual work environment to support them mastering WK6.	WA5 is covered by 1.3 (e) and 2.1.4.
WA6: Apply reasoning informed by contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to professional engineering practice and solutions to complex engineering problems. (Refer to WK7)	Criterion 1.3. item (i): An ability to be accountable and responsible to the society and adhere to professional ethics in solving engineering problems. Criteria Guide for Criterion 1.3. item (i):	WA6 requirements are met by IABEE Learning Outcomes (i) and (j) criteria items simultaneously. The application of contextual knowledge-based reasoning, as required by WA6, is possible if one has access to relevant knowledge about contemporary problems.	WA6 is covered by Criterion 1.3 (i) and (j).

WK7: Comprehension of the role of engineering in society and identified issues in engineering practice in the discipline: ethics and the professional responsibility of an engineer to public safety; the impacts of engineering activity: economic, social, cultural, environmental and sustainability	This competence refers to the understanding on the following issues and the ability to take action accordingly. • the impact of technology of related engineering fields on public welfare, environmental safety and sustainable development • the engineering ethics and regulations • the engineering history and standard & code philosophy in design. Criterion 1.3. item (j): an ability to understand the need for life-long learning, including access to the relevant knowledge of contemporary issues. Criteria Guide for Criterion 1.3. item (j): • Program is required to assist students to get accustomed to independent and continuous learning through lectures, research, experiments, practical training, exercises and assignment. • This competence refers to - Understanding the necessity of continuous professional development. - an ability to acquire updated information and knowledge. - an awareness of the importance of sharing knowledge		
WA7: Understand and evaluate the sustainability and impact of professional engineering work in the solution of complex engineering problems in societal and environmental contexts. (Refer to WK7)	Criterion 1.3. item (b): an ability to design components, systems, and/or processes to meet desired needs within realistic constraints in such aspects as law, economic, environment, social, politics, health and safety, sustainability as well as to recognize and/or utilize the potential of local and national resources with global perspective Criteria Guide for Criterion 1.3. item (b) • The ability to design components, systems, and/or processes is the hallmark competence of engineering education. Design implies the ability to utilize multidimensional thinking with knowledge of global perspective to develop components, systems, and/or processes to achieve specific objectives. It is not limited to drawing a plan, but also refers to the synthesis of various academic disciplines and technologies to pursue practicable solutions to a	WA7 requirements have been fulfilled by the IABEE Learning Outcomes (b) and (i) criteria items simultaneously. The first emphasizes sustainability as one of the key issues in professional engineering work, while the second involves the ability to understand the impact of engineering solutions in social and environmental contexts.	WA 7 is covered by Criterion 1.3 (b) and (i).

	problem that does not necessarily have one correct answer. • It involves also a process of optimization by taking into account some realistic constraints, such as law, economic, environment, social, politics, health and safety, and sustainability as well as utilization of the knowledge of culture, society and available resources. Criterion 1.3. item (i): An ability to be accountable and responsible to the society and adhere to professional ethics in solving engineering problems. Criteria Guide for Criterion 1.3. item (i): This competence refers to the understanding on the following issues and the ability to take action accordingly. • the impact of technology of related engineering fields on public welfare, environmental safety and sustainable development • the engineering ethics and regulations • the engineering history and standard & code philosophy in design.		
WA8: Apply ethical principles and commit to professional ethics and responsibilities and norms of engineering practice. (Refer to WK7)	Criterion 1.3. item (i): An ability to be accountable and responsible to the society and adhere to professional ethics in solving engineering problems. Criteria Guide for Criterion 1.3. item (i): This competence refers to the understanding on the following issues and the ability to take action accordingly. • the impact of technology of related engineering fields on public welfare, environmental safety and sustainable development • the engineering ethics and regulations • the engineering history and standard & code philosophy in design	IABEE Learning Outcomes criteria item (i) and its elaboration in the related section of the Criteria Guide demonstrates compliance with WA8 requirements.	WA 8 is covered by Criterion 1.3 (i).
WA9: Function effectively as an individual, and as a member or leader in diverse teams and in multi-disciplinary settings.	Criterion 1.3. item (h): an ability to work in multidisciplinary and multicultural team. Criteria Guide for Criterion 1.3. item (h) This competence refers to the ability to work collaboratively with people from different technical disciplines, fields and cultural backgrounds.	IABEE Learning Outcomes criteria item (h) and its elaboration in the relevant section of the Criteria Guide show the fulfillment of WA9 requirements. In addition, criterion (h) adds consideration of multicultural aspects in teamwork ability as a reflection of the diversity of Indonesian culture.	"Individual" is covered by Criterion 1.1 "autonomous professionals", and "diversity and multi-disciplinary settings" are covered by Criterion 1.3 (h).

	• Multicultural concerns such as tolerance, mutual understanding, appreciation on differences in building a synergy, are important considerations for the success of a team work. • Multidiscipline circumstances may cover disciplines within engineering and non-engineering disciplines.		
WA10: Communicate effectively on *complex* engineering activities with the engineering community and with society at large, such as being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.	Criterion 1.3. item (f): an ability to communicate effectively in oral and written manners. Criteria Guide for Criterion 1.3. item (f): This competence indicates the need of active and effective communication skills; socio-cultural perspective should be considered for the acceptability and workability of the implementation of engineering works. • These oral and written communications should include the use of engineering standards. • Program shall ensure that a measurable portion of the oral and/or written communications involve the use of internationally recognized languages	IABEE Learning Outcomes criteria item (f) and its elaboration in the relevant part of Criteria Guide confirm the requirements of WA10.	WA 10 is covered by Criterion 1.3 (f).
WA11:Demonstrate knowledge and understanding of engineering management principles and economic decision-making principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.	Criterion 1.3. item (g): an ability to plan, accomplish, and evaluate tasks under given constraints. Criteria Guide for Criterion 1.3. item (g): This competence refers to the ability to plan, accomplish, and evaluate tasks associated with any curricular activity deemed appropriate by Program for its assessment and evaluation. The assessment should focus more on the students' task management skills rather than the substantial outcome of the task itself.	IABEE Learning Outcomes criteria item (g) and its elaboration in the relevant part of Criteria Guide confirm the requirements of WA11. Application of these managerial skills in a teamwork is also related with IABEE Learning Outcomes criteria item (h).	WA 11 is covered by Criterion 1.3 (g).
WA12: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.	Criterion 1.3. item (j): an ability to understand the need for life-long learning, including access to the relevant knowledge of contemporary issues. Criteria Guide for Criterion 1.3. item (j): • Program is required to assist students to get accustomed to independent and continuous learning through lectures, research, experiments, practical training, exercises and assignment. • This competence refers to · Understanding the necessity of continuous professional development.	IABEE Learning Outcomes criteria item (j) and its elaboration in the relevant part of Criteria Guide confirm the requirements of WA12.	WA 12 is covered by Criterion 1.3 (j).

	· an ability to acquire updated information and knowledge. · an awareness of the importance of sharing knowledge		
Expected Duration of Programme Meeting WA Graduate Attributes A programme that builds this type of knowledge and develops the attributes listed is typically achieved in 4 to 5 years of study, depending on the level of students at entry	Criteria Guide Preamble Programs to be accredited are four-year bachelor of engineering programs or other higher education programs which IABEE considered as equivalent	IABEE requires that programs applying for accreditation under the WA shall be four-year bachelor of engineering programs or other higher education programs which IABEE considered as equivalent. As a matter of fact, the study period of four years for bachelor's level programs has become the norm in Indonesian Higher Education System.	IABEE defines duration expected in study programs which come under the scope of IABEE accreditation is 4 years with 144 credits. So the duration could be longer than the 4 years and never less than 4 years. (refer: https://iabee.or.id/en/accrediation/accrediation-scope/ , 1st second lines of the section describes "Accreditation Scope")

The Institution of Engineers Indonesia/
Indonesian Accreditation Board for Engineering Education
(PII / IABEE)

Application for Signatory Status in the Washington Accord

Prof. Dr. Muhammad Romli
IABEE Chair of International Committee

IEA Online Meeting / WA Closed Session
22 June 2020

Outlines

- Fulfillment of the requirements for WA signatory application
- Response to ABEEK's inquiry
- Follow-up to comments in 2019 IEAM at Hong Kong
- Readiness to be verified

Fulfillment of the requirements for WA signatory application

In February 2020 PII/IABEE has submitted:

- Self-Study Report using B1 and B2 templates showing fulfillment for WA signatory requirements
- Gap Analysis against the Accord Graduate Attributes
- Accreditation statistics and info

- JABEE, as mentor, has submitted Mentor's Report substantiating IABEE application for signatory status in the WA

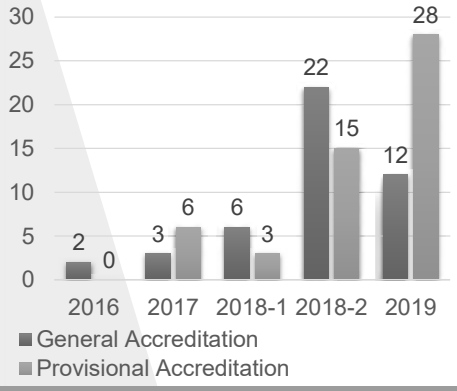
Response to ABEEK's inquiry

We thank ABEEK for its questions about IABEE, and are grateful to our mentor, JABEE, for providing the explanations in consultation with us

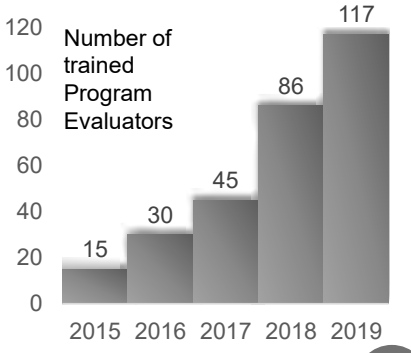
Number of programs accredited by mandatory National Accreditation System in 2019 (ranked A, B, and C)

Programs **eligible** for IABEE General Accreditation (rank A)

Number of programs applying for IABEE Accreditations since 2016 (first cycle)



Number of trained Program Evaluators



Follow-up to comments made in 2019 IEAM at Hong Kong

A comment was raised during 2019 WA Closed Session: IABEE Criteria of Learning Outcomes should be distinguishable of fitting the WA requirements, not SA or DA, especially related to the ability to solve **complex** engineering problems

Thank you for the comment! The previous LO criteria already has the requirements to apply knowledge and skills for complex problem solving, but the word “complex” was not used

The criteria have been amended to include explicitly the word “complex”:

> **(d) an ability to identify, formulate, analyze, and solve complex engineering problems**

The amended criteria is applicable from 2020 Evaluation Cycle onward

Readiness to be verified

We are ready to be verified!

- Even during the challenging time, 19 programs have already applied for General Accreditation evaluation
- Planned activities for 2020 Evaluation Cycle:

Dates	Activity
13 November to 8 December 2020	On-Site Visits
25-26 February 2021	Evaluation & Accreditation Committee meeting to recommend accreditation status
11 March 2021	Accreditation Council meeting to decide accreditation status


The Institution of Engineers Indonesia/
Indonesian Accreditation Board for Engineering Education
(PII / IABEE)
PII
IABEE
Thank you,
Terima kasih

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27 April 2021

Mentor's Report to the Washington Accord

Provisional Signatory: PII/IABEE (Indonesia)

Mentor: Dr. Yasuyuki AOSHIMA (JABEE), Advisor to the International Affairs Division

Recommendation to the Washington Accord Signatories:

- PII/IABEE has been conducting robust outcomes-based program evaluations and has accredited 57 engineering programs since 2016.
- The signatories are requested to refer to PII/IABEE's annual report 2021 submitted to IEA/WA which shall be released either on the IEA members page or the Basecamp by the IEA secretariat after May.
- IABEE's program evaluations are processed with an online evaluation system via the member page on the Website, which is accessible to related-parties: study programs, evaluation teams, Evaluation & Accreditation Committee members and the Secretariat. The system covers the steps from the application for evaluation to the accreditation decision to be determined by the Accreditation Council. The system also includes on-site visit evaluation team communication as well as discussions and harmonization at the Evaluation & Accreditation Committee. The tools for virtual evaluation in most of the parts are nothing new for IABEE. Under COVID-19, IABEE has smoothly shifted to the virtual on-site evaluation after having developed a new protocol of virtual on-site visits evaluation. In 2020, IABEE conducted virtual evaluations to 26 engineering programs for general accreditation and to 17 engineering programs for interim accreditation. Prior to virtual on-site visits, IABEE organized a series of awareness seminars to study programs and refreshing training to evaluators.
- JABEE also wishes to mention IABEE's transparent and robust evaluation attitude. In the 2020 accreditation cycle, IABEE accredited 13 out of 26 engineering study programs newly having applied and granted 15 out of 17 engineering programs for interim accreditation.

JABEE concludes and endorses that PII/IABEE is ready to be assessed by the Accord Verification Team either via face-to-face visit or virtual in the fall of 2021.

Yasuyuki AOSHIMA

International Engineering Alliance

Accord Self-Assessment Report

Prepared by:

Institution of Engineers Indonesia / Indonesian Accreditation Board for Engineering Education (PII / IABEE)

For the Purpose of:

Application for Full Signatory

under the Washington Accord

Dated:

15 September 2021

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APPENDIX A – Short CV of IABEE Executive Committee Members

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1. Introduction

1.1. Jurisdiction

The Republic of Indonesia is the largest archipelago in the world comprising about 17,500 large and small islands, situated between the continents of Asia and Australia and between the Pacific and the Indian Oceans. It lies across the equator and spans a distance equivalent to one-eighth of earth's circumference. Its islands can be grouped into Sumatera, Java, Kalimantan, and Sulawesi; Bali, Nusa Tenggara and a chain of islands that runs eastward through Timor; and Maluku islands and Papua (Figure 1.1).

The capital, Jakarta, is located near the northwestern coast of Java with local time UTC+7. Currently, Indonesia has a total population of more than 267 million people from more than 300 ethnic groups, making it the most populous country in Southeast Asia and the fourth in the world. Nearly 90% of the Indonesian population professes Islam, and the rests are Christian, Buddhism, and Hinduism. The national motto, *"Bhinneka Tunggal Ika"* ("Unity in Diversity"), makes reference to the extraordinary diversity of Indonesian peoples, languages and cultures. The national language is Indonesian (Bahasa Indonesia). Indonesia has 34 provinces, the largest subdivisions of the country and the highest tier of the local government.

Figure 1.1 Indonesian map showing the position and size relative to neighboring countries

Indonesia has the largest economy in Southeast Asia and is one of the emerging market economies of the world. It is the seventh largest in terms of GDP (PPP) after China, USA, India, Japan, Germany and Russia. It is contributed by agricultural sector (13.9%), industry (40.3%) and services (45.9%). Indonesia is a member of G-20 major economies and classified as a newly industrialized country. Indonesia's important agricultural commodities are palm oil, natural

rubber, cocoa, coffee, tea, cassava, rice and tropical spices. Palm oil production is important to the economy as Indonesia is the world's biggest producer and consumer of the commodity, providing about half of the world's supply. Indonesia is the world's largest tin market. Although mineral production traditionally centered on bauxite, silver, and tin, Indonesia is expanding its copper, nickel, gold, and coal output for export markets.

Since independence in 1945, the government has placed great emphasis on primary, secondary, and higher education for all people and by the early 21st century the great majority of Indonesians were literate. Responsibility for education is centered in the Ministry of National Education, but other government bodies also administer extensive educational programs. The national educational system involves six years of primary education, beginning at age seven, followed by six years of secondary education, which are divided into two three-year blocks. Since the early 1990s the first nine years have been compulsory. Higher education includes dozens of public institutions and thousands of private postsecondary schools. Enrollment is about evenly distributed between men and women. While a number of universities offer postgraduate education, a sizeable number of students go abroad, especially to North America, Europe, Japan and Australia to pursue master's and doctoral degrees.

1.2. Engineering Context

According to Engineering Law No. 11/2014, the scope of engineering practices in Indonesia covers seven bodies of knowledge and seven fields of work. These bodies of knowledge include:

(1) earth and energy,
(2) civil and built environment,
(3) industry,
(4) conservation and natural resource management,
(5) agriculture and agricultural products,
(6) marine and naval technology, and
(7) aeronautics and astronautics.

Meanwhile, the fields of work include:

(1) education & training,
(2) research & development and commercialization,
(3) consulting, design, and construction,
(4) industrial engineering and management,
(5) manufacturing, and processing,
(6) mineral resources exploration and exploitation, natural resources extraction, plantation, and breeding, and
(7) asset development, operation, and maintenance.

To ensure the competence and professionalism in engineering services, three standards of engineering profession are established by the Law. These consist

of standards of engineer's services, standards for engineer's competence, and standards for engineer's profession program. The Law mandates the Institution of Engineers Indonesia (PII) to develop these standards, which are to be established as Government Regulation.

Engineering societies through PII Engineering Colleges (Badan Kejuruan, or BK in short) play role in developing standards of engineer's services and competence. A College or Chapter is an organic part of PII which unifies people and societies working in the same engineering discipline. Currently, PII has 23 Engineering Colleges.

PII is mandated as the registering body of engineers in Indonesia. Before performing engineering practices, one must obtain an Engineer Registration Certificate (Surat Tanda Registrasi Insinyur, or STRI) from PII. STRI recognizes three levels of competence, i.e., IPP (Junior Professional Engineer), IPM (Senior Professional Engineer), and IPU (Prominent Professional Engineer). Engineering Law regulates that an STRI is valid for a period of 5 years and shall be re-registered every 5 years given all related requirements are fulfilled.

Foreign engineers may also practice engineering in Indonesia under a work permit issued by the Government. To obtain the work permit, a foreign engineer must first have a STRI from PII. The certificate is obtainable either through PII's recognition of registration certificate from his/her respective country of origin, or through PII standard procedures. A foreign engineer who does not have an engineer registration certificate or competency certificate in accordance with the law of his/her country must obtain a STRI issued by PII. This is given upon passing the Competency Test carried out by professional certification institutions in accordance with the stipulations of legislation.

Exemption from work permit requirement is given to foreign engineers who provide engineering services in disaster management or incidental consultation matters. However, notification to the relevant ministries must be provided.

More information about engineering context in Indonesia is described in Chapter 4.

2. Organization

2.1. Introduction to IABEE

Indonesian Accreditation Board for Engineering Education (IABEE) is an accreditation agency for higher education programs in engineering. IABEE is as an autonomous body of the Institution of Engineers Indonesia (PII), a non-governmental organization of multi-disciplinary engineering professionals in engineering and technology.

PII was founded in 1952 in Bandung. Currently headquartered in Jakarta, PII has regional representatives in all provinces in Indonesia. Transforming from merely a professional association, PII has been given the mandate by the Engineering Law No. 11/2014 to be the registering body for engineering professions. The mandate gives PII an important role to ensure good quality of engineering services. By having IABEE as one of its autonomous bodies, PII helps to ensure that engineering higher education graduates are equipped with adequate knowledge, skills, and attitudes as provisions to become qualified professional engineers

2.2. Key Information

Name	:	Indonesian Accreditation Board for Engineering Education
Trading Name	:	IABEE
Address	:	Graha Rekayasa Indonesia, 5th floor. Jln Halimun Raya No. 39, Setiabudi, South Jakarta 12980
Phone	:	+62 21 22083150, +62 21 83700663, +62 21 22833451
Website	:	https://iabee.or.id/
Key Contact/s	:	(1) Prof. Dr-Ing. Ir. Misri Gozan (Chair of Executive Committee), (2) Prof. Dr. Ir. Muhammad Romli (Chair of International Committee), and (3) Ir. Berlian Kushari (Secretary-General)
Email Address	:	info@iabee.or.id

Short curriculum vitae of IABEE Executive Committee members is given in Appendix A.

2.3. History and Governance of IABEE

2.3.1. History

Higher engineering education has a strategic and central role to produce skilled and talented human resources that generate new ideas and practices. With various complexities in utilizing natural resources for equitable and

environmentally friendly economic development, and with the challenges of tight global competition, engineering education is required to produce adequate quality human resources.

Quality assurance systems of an education program play a pivotal role to ascertain education quality. The systems can be developed internally or externally. External quality assurance is usually carried out through accreditation. Although accreditation of study programs in Indonesia is not new (since 1996), and even mandatory, the system was heavily input-based and not yet tailored to specific fields of study; one set of criteria to fit all fields. With the enactment of the Higher Education Law No. 12/2012, there was a growing need in the fields of engineering to establish a second accreditation system that is field-specific, voluntary, outcome-based, and able to ensure engineering graduates attaining international recognition to support the mobility of professionals.

The importance of having a good accreditation system is also justified by the need for significant numbers of engineering graduates towards the year of 2045, a century after Indonesian independence. In fact, with the current economic growth rate, towards 2025, Indonesia is estimated to have a shortage of engineering graduates reaching 10,000 graduates/year. Therefore, it is necessary to ensure that the fulfillment of the needs of the number of engineering graduates is also balanced with adequate graduate quality.

In 2013, Directorate General of Higher Education (DGHE) of the Ministry of Education and Culture (MoEC) formed a task force to establish future accreditation system for engineering fields of study. Having various models of accreditation systems in the world today studied, it was concluded that the mutual recognition agreement of the Washington Accord (WA) is viewed as the most appropriate framework for Indonesia to join, and for this reason, an independent accreditation body called the Indonesian Accreditation Board for Engineering Education (IABEE) is to be established.

In November 2013, the task force was formalized to become the Steering Committee as a realization of the Indonesian government's request to the Japanese government to assist Indonesia in establishing an internationally recognized accreditation institution for engineering education. Having the agreement of cooperation between the DGHE of the MoEC and Japan International Cooperation Agency (JICA) signed in 2014, JICA made a contract with JABEE to prepare and implement a 5-year technical cooperation project from 2014 to 2019.

Under the mentorship of JABEE, the Steering Committee formed the organizational organs needed to implement the project, including the Criteria Committee and the Evaluation and Accreditation Committee. Having the committees formed, Steering Committee later dissolved itself to become the Executive Committee. The complete version of IABEE organizational structure can be seen in Section 2.3.3.

With full awareness that IABEE must have a non-governmental organization status if it is to apply a membership in the Washington Accord, the Steering Committee drafted an MoU between DGHE of MoEC and PII to establish IABEE

under PII as one of its permanent bodies. Subsequently, the MoU was signed by both parties on October 11, 2016. IABEE was jointly inaugurated to engineering higher education communities and the public in general by DGHE of MoEC and PII on March 13, 2018, supported by National Development Planning Agency (BAPPENAS), Ministry of Trade, and other parties.

2.3.2. Governance and Oversight

As one of the permanent bodies of PII, IABEE is regulated by the Charter of PII. Article 24 of the Charter states that a permanent body is formed by PII National Governing Body to carry out the mandates and duties of PII in national development as well as international cooperation. Article 24 further states that organizational structure and membership of a permanent body is determined and appointed by PII President. A permanent body is responsible to report to PII President.

IABEE, in this matter, is a special permanent body due to its formation under PII being a result PII MoU with the MoEC. Other permanent bodies include, for example, Center for Engineering and Industrial Policy Studies (CEIPS), Engineer Competency Certification Agency (LSKI), and Accreditation Board for Engineering Expertise Associations (LA-HKK).

Detailed further in article 42 of PII Organizational Regulations, as an autonomous body, the governance of IABEE is self-managed by IABEE Rules and Procedures. R&Ps of IABEE are established by the Executive Committee as the highest decision-making organ within IABEE. Related to undertaking its main function, there are 2 IABEE R&P documents, i.e., Rules and Procedures for Evaluation and Accreditation (RPEA) and Rules and Procedures for Accreditation-related Committees (RPARC). Both documents are attached to this report.

To strengthen its commitment to quality services and continual improvement, IABEE Executive Committee has recently decided to implement the ISO Quality Management System 9001:2015 in near future. Currently, a special workgroup is developing the required quality documents.

2.3.3. Organization Structure

The organization structure of IABEE is depicted in Figure 2.1. Concise explanation on the roles and responsibilities of the committees is provided below.

Executive Committee (EXC) is the highest decision-making board in IABEE that is made up of high-level stakeholders and experts. This board sets up the directions and guidance on key issues such as IABEE's policy and objectives, resource allocation, budgetary control and decision, and marketing strategy. The main role of this board is to ensure successful mission and purpose of IABEE. The EXC is chaired by a Chair of Executive Committee with members

including representatives from PII Governing Body, academics, and industry. The Executive Committee nominates the members of the Criteria Committee, Evaluation & Accreditation Committee, Finance Committee, International Committee, Public Affairs Committee, Accreditation Council, as well as the Appeal Board. Important decisions made by these committees are to be reported for approval of the Executive Committee. The Chair of the Executive Committee shall be accountable to the Board of PII appointed by PII President.

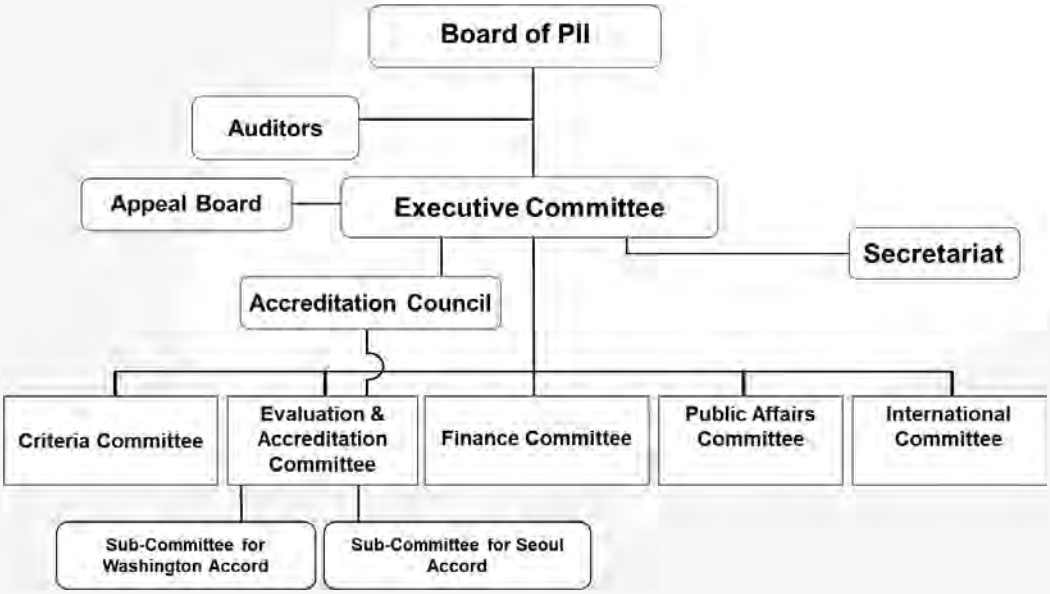

Figure 2.1. IABEE Organizational Chart

Secretariat is chaired by a Secretary General, who is the official entrusted with administrative duties, maintaining records, and performing other secretarial duties.

Accreditation Council (AC) is a board of officials in charge of validating the results of accreditation. They work to ensure that the accreditation evaluation process has been carried out according to established rules and procedures.

Appeal Board is a board of officials that are appointed to hear appeals. They judge whether an evaluation/accreditation decision was right or wrong, when the party (program, education institution) affected by it thinks that it was wrong.

Criteria Committee (CC) consists of academics from leading universities, professional organizations and industry practitioners, who are responsible to establish the White Paper, the Accreditation Criteria, namely Common Criteria and Criteria Guide, and approve the Discipline Criteria proposed by the professional societies. These criteria form the basis for the program evaluation. The committee is also in charge of conducting periodic reviews and revisions of the Accreditation Criteria based on the input from stakeholders and the existence of circumstances that require the criteria to be revised.

Evaluation and Accreditation Committee (EAC) is responsible for developing IABEE's Rules and Procedures for Evaluation and Accreditation (RPEA),

evaluation instruments, and IABEE's Online Evaluation System (OES). This committee is also responsible to plan, conduct and monitor the program accreditation processes in an accreditation cycle, including appointment of the evaluation team, monitoring the online review and on-site evaluation, and post evaluation activities, such as harmonization and reporting. The committee shall recommend accreditation status to the Accreditation Council. In addition to that, the committee also develops training programs and materials and conducts a series of training for program evaluators.

Finance Committee (FC) has the main duty to maintain a continuing review of the financial affairs and make appropriate recommendations to the Executive Committee regarding financial matters for the annual budget and the business plan. The committee also authorizes investment policy, accounting, and disbursement procedures for all funds under the authority of IABEE.

International Committee (IC) is responsible for managing IABEE's international activity, such as developing partnerships and collaborations, building international profile through presence at international events, meetings and forums, hosting visits by delegations from international bodies, preparing documents for application of WA membership and international agreements.

Public Affairs Committee has responsibility to build, develop and manage a good relationship between IABEE and its stakeholders, by providing information and lobby on issues that could impact upon IABEE's ability to operate successfully.

2.3.4. Strategic Goals: Vision, Mission & Objectives

IABEE has established a set of vision, missions, and purposes as follows.

Vision

IABEE sees itself as a reformer and stimulator for accelerating the progress of engineering higher education in Indonesia to produce innovative human resources and engineering innovation for improving human welfare.

Missions

(1) Promote quality improvement of engineering higher education through accreditation to produce autonomous professionals appropriate to the needs of stakeholders,

(2) Facilitate development of engineering higher education systems that emphasizes on continual quality improvement towards global quality standards,

(3) Encourage communication and partnerships between engineering higher education institutions and stakeholders to effectively utilize local resources and wisdom for the welfare of the community, and

(4) Support dissemination of innovations on advancement of engineering higher education.

Purpose

(1) IABEE accreditation is a tool for programs to ensure the implementation of outcome-based education that meets international standards and qualifications through continual quality improvement

(2) IABEE contributes to preparing Indonesian workers who can develop synergies in line with the global mobility of engineering practitioners.

2.3.5. Affiliation and Collaboration

As the parent organization of IABEE, PII is currently a member of WFEO (World Federation of Engineering Organizations), AFEO (ASEAN Federation of Engineering Organizations), FEISEAP (Federation of Engineering Institute South East Asia and Pacific), AEESEAP (Association of Engineering Education South East Asia and Pacific), as well as APEC Engineer Agreement.

As a member of Washington Accord with provisional signatory status, IABEE is now a full member of the NABEEA (Network of Accreditation Bodies of Engineering Education in Asia) since June 2021. Also, IABEE has just been accepted as a member of Seoul Accord with provisional signatory status in June 2021. Seoul Accord is a multilateral agreement for program accreditation in computing and IT-related fields.

2.3.6. Interaction with Government

As mentioned in Section 2.3.1, the Government of Indonesia through DGHE of the MoEC was the initiator of IABEE back in 2013. In a later development, DGHE signed a MoU with PII in October 2016 to establish IABEE as a non-governmental organization by forming it as an autonomous and permanent body under PII. As the initiator, DGHE supported IABEE establishment process through tying a bilateral agreement with JICA under which JABEE was asked to be the mentor for IABEE. One of the initial targets set out for the establishment project was for IABEE to obtain a provisional status in the Washington Accord (WA) in 2019. The target was successfully met by full acceptance of Washington Accord signatories during the WA Closed Session in the 2019 International Engineering Alliance Meeting in Hong Kong. The agreement has now been extended, due to appointment of JABEE as the WA Mentor for IABEE, until IABEE is admitted as a signatory of the WA.

Program accreditation conducted by IABEE is voluntary. As a form of recognition to IABEE and improving the quality of study programs, since 2016 the government has been providing a competitive grant to support programs wishing to apply for IABEE accreditation. In 2020, the government fortified its policy of international recognition for institutions and programs in all fields of study. Having been accepted as provisional signatory member of the Washington Accord

in 2019, IABEE is listed among the international accreditation agencies recognized by the government for bachelor programs in the fields of engineering.

Despite the role as initiator and the recognition given to IABEE, the government has no influence in the whole accreditation evaluation processes, including the culminating accreditation status decision-making meeting.

2.3.7. Involvement with Industry

The position of IABEE within PII organization is considered fit and appropriate. Engineering Law No. 11/2014 gives a mandate and strategic role to PII to ensure good quality of engineer services. This mandate can be implemented by PII, among others through the role of IABEE, which ensures that engineering higher education graduates have been equipped with adequate knowledge, skills, and attitudes as provisions to become qualified professional engineers.

As a permanent and autonomous department of PII, IABEE interacts very closely with all Engineering College (Chapters) of PII. As previously mentioned, a college is an organic part of PII which unifies people and societies working in the same engineering discipline. Apart from involving national study program associations, IABEE through Criteria Committee discusses and consults its accreditation criteria, mainly the discipline criteria, with relevant industry via colleges of PII. IABEE also recruits and trains program evaluators from among the colleges representing industry.

2.3.8. Other Bodies

In Indonesia, accreditation of both study program and program operating institution is mandatory by law. This accreditation has been traditionally conducted by National Accreditation Agency for Higher Education (BAN-PT). Since the Law of Higher Education No. 12/2012 was legislated, however, BAN-PT accreditation is limited to the institutions of higher education. The Law stipulates that program accreditation is to be conducted by autonomous independent accreditation agencies formed for each field of study. Only in the absence of such an independent agency, program accreditation is still carried out by BAN-PT.

In 2020, PII, IABEE as its permanent body, and a group of engineering program associations took the initiative of founding an independent national accreditation agency for engineering programs of all strata called National Accreditation Agency for Engineering Programs (LAM Teknik). Using IABEE as precedence, LAM Teknik is proposed as an autonomous and permanent body under PII.

MoEC approved the LAM Teknik proposal in 2021. The new agency under PII is currently in preparation to conduct national mandatory accreditation for engineering programs of all strata in 2022. As with BAN-PT previously, programs accredited by IABEE will be recognized by LAM Teknik as accredited with the highest status. In contrast, only programs accredited by LAM Teknik with a certain minimum status are eligible to apply for IABEE accreditation to get international recognition.

3. Education

3.1. Education System in Indonesia

3.1.1. Overview

According to the Law No. 20/2003 on the National Education System, national education functions to develop capabilities and form a dignified character and national civilization in order to educate the nation's life, aiming at the development of people's potency to become human beings who believe and fear God Almighty, noble, healthy, knowledgeable, competent, creative, independent, and a democratic and responsible citizen.

The path of education consists of formal, non-formal, and informal education that can complement and enrich each other. The level of formal education consists of primary education, secondary education, and tertiary/higher education. The types of education include general, vocational, academic, professional, religious, and special education. The path, level and type of education can be realized in the form of educational units organized by the government, regional government, and/or the community.

The implementation of national education adheres to the following principles:

(1) is carried out in a democratic, fair, and non-discriminatory manner by upholding human rights, religious values, cultural values, and national pluralism,

(2) is held as a systemic unit with an open and multi-meaning system,

(3) is held as a process of civilizing and empowering students that lasts a lifetime,

(4) is held by giving exemplary, building willingness, and developing students' creativity in the learning process,

(5) is held by developing a culture of reading, writing, and calculating for all citizens, and

(6) is organized by empowering all components of society through participation in the implementation and quality control of education services.

To ensure quality national education, the government establishes National Education Standards, i.e., the minimum criteria for the education system in the entire jurisdiction of the country. These standards serve as the basis for education planning, implementation, and supervision. The standards consist of standards of content, process, competency of graduates, education staff, facilities and infrastructure, management, financing, and assessment of education. The development of standards and monitoring and reporting of their achievements

nationally is carried out by a body of standardization (BSNP). The standards are refined in a planned, directed, and sustainable manner in accordance with the demands of changes in local, national, and global life.

The curriculum at all levels and types of education is developed with the principle of diversification in accordance with educational units, regional potential, and students. The curriculum is prepared in accordance with the level of education within the framework of the Unitary State of the Republic of Indonesia by considering:

(1) increased faith and piety,

(2) increase in noble characters,

(3) increase the potency, intelligence, and interests of students,

(4) diversity of regional and environmental potency,

(5) demands for regional and national development,

(6) labor market demands,

(7) the development of science, technology and art, religion, dynamics of global development, and

(8) national unity and national values

Accreditation is carried out to determine the feasibility of programs and educational units in the formal and non-formal education paths at every level and type of education. The accreditation is carried out by the Government and/or independent institutions in authority as a form of public accountability. The accreditation is based on open criteria.

3.1.2. Primary and Secondary Education

Early childhood (pre-school) education is a coaching effort aimed at children from birth to the age of six years which is carried out through giving educational stimuli to help growth and physical and spiritual development so that children have readiness in entering the primary education level. This education can be organized through formal, non-formal, and/or informal education paths. Early childhood education in formal education paths is carried out in the form of kindergarten or other forms of equal. That in the non-formal education is carried out in the form of playgroups, childcare centers, or other forms of equal. Early childhood education in the informal education paths take the form of family education or education organized by the environment.

Primary education is in the form of elementary school (6 years) and junior high school (3 years). Every citizen aged seven to fifteen years, according to the Law, is obliged to attend primary education. Meanwhile, secondary education is in the form of high school (3 years) which can be either general high school or vocational high school.

Primary and secondary education curriculum must contain religious education, civic education, language, mathematics, natural sciences, social sciences, art

and culture, physical education and sports, skills/vocational, and local contents. The fundamental framework and structure of the primary and secondary education curriculum is determined by the government, whereas the curriculum is developed according to its relevance by each group or education unit and school committee.

Public education institutions dominate the education system, particularly at primary and junior secondary levels. However, the private sector also plays a significant role, accounting for around 48% of all schools, 31% of all students, and 38% of all teachers. Government administration for managing primary and secondary education is carried out by the Ministry of Education and Culture (MoEC).

3.1.3. Tertiary/Higher Education

Tertiary/higher education is a level of education after secondary education which includes diploma (D) education programs, bachelor (S1), master (S2), specialist, and doctoral degrees (S3) held by higher education institution.

In the implementation of education and scientific development in higher education institutions, academic freedom and freedom of academic forum and scientific autonomy apply. Higher education institutions have the autonomy to manage the institution themselves as the center for organizing higher education, scientific research, and community service. They can obtain funding from the public whose management is based on the principle of public accountability.

The basic framework and structure of the higher education curriculum as well as the curriculum are developed by the higher education institutions concerned with reference to the national education standards for each study program. The higher education curriculum must include religious education, civic education, and language.

Higher education institution (HEI) can take the form of academies, polytechnics, colleges, institutes, or universities (Table 3.1). A higher education institution is obliged to organize education, research, and community service, and can hold academic, professional and/or vocational programs. The first two are specialize in vocational type of education, while the last three are more comprehensive and allowed to offer all type of education. Distribution of HEIs by types and ownership are given in Figure 3.1.

Unlike the 12-year basic education which is decentralized to district and provincial governments, the higher education system is centrally managed by the MoEC. Public universities also must comply with the prevailing regulations applied for all governmental units, including regulations on financial management issued by the Ministry of Finance and regulations on personnel management issued by the National Civil Service Agency (BKN).

Table 3.1. Types of Higher Education Institutions

Type of Institution	Type of Program
Universitas (university)	University provides education at the bachelor's level (called *Sarjana-1,* or S1, in Indonesian language). This type of program has a nominal length of 4 years. University also provides education service at post-graduate levels: master's (S2) and doctoral (S3) levels.
Politeknik (polytechnics)	*Politeknik* mainly provides *Diploma* (vocational) programs, ranging from D1 to D3, and very rarely D4 programs. This type of education provides a vocational qualification. However, their graduates can also continue on to higher-level education with some requirements. The curriculum is very practical in nature, with a minimum of 45% of the program being devoted to practices (including simulations) and training.
Akademi (academies)	It is relatively small institution offering a single specialization up to D2 and D3 levels.
Sekolah Tinggi (colleges)	This institution usually comprises of a single faculty with only a few hundred students and provide both Diploma (D1 to D4) and S1 levels.
Institut (institutes)	Institute usually provides education in a single specialization, at both Diploma and S1 level. Some institutes also provide education at post-graduate levels (S2 and S3).

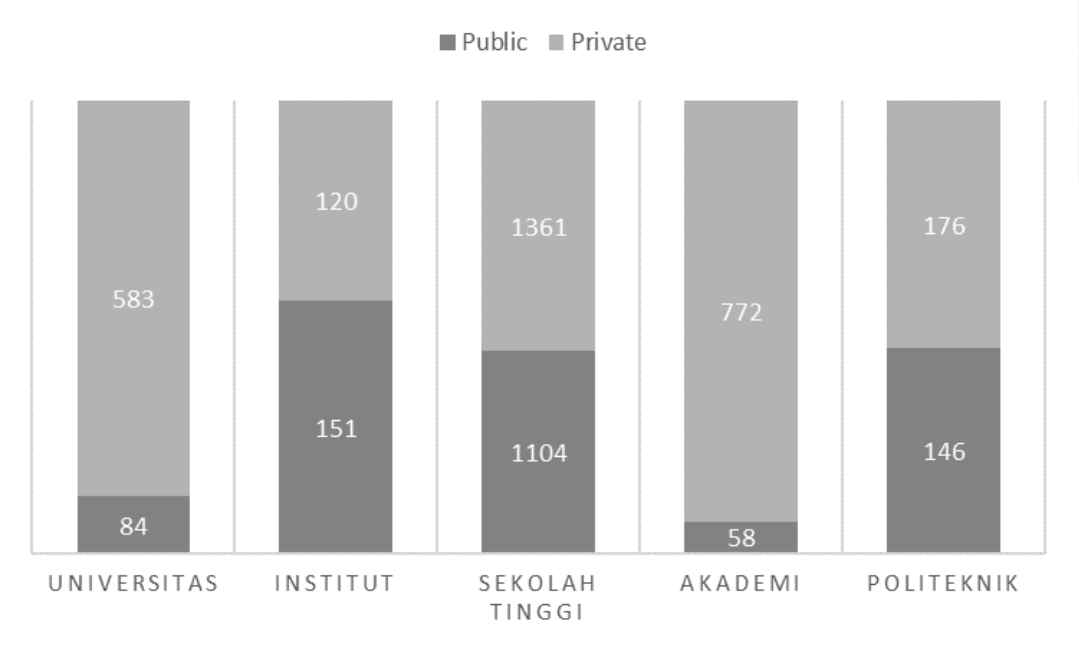

Figure 3.1. Number and Distribution of HEIs by types and ownership (Source: MoEC, 2020)

Figure 3.2 below shows a schematic diagram of the national education system that covers education levels (primary, secondary, and tertiary/higher education), length of study, type (or path) of education, and their relations to the national qualification framework. The two paths of academic and vocational, show the routes available for students to access engineering professions.

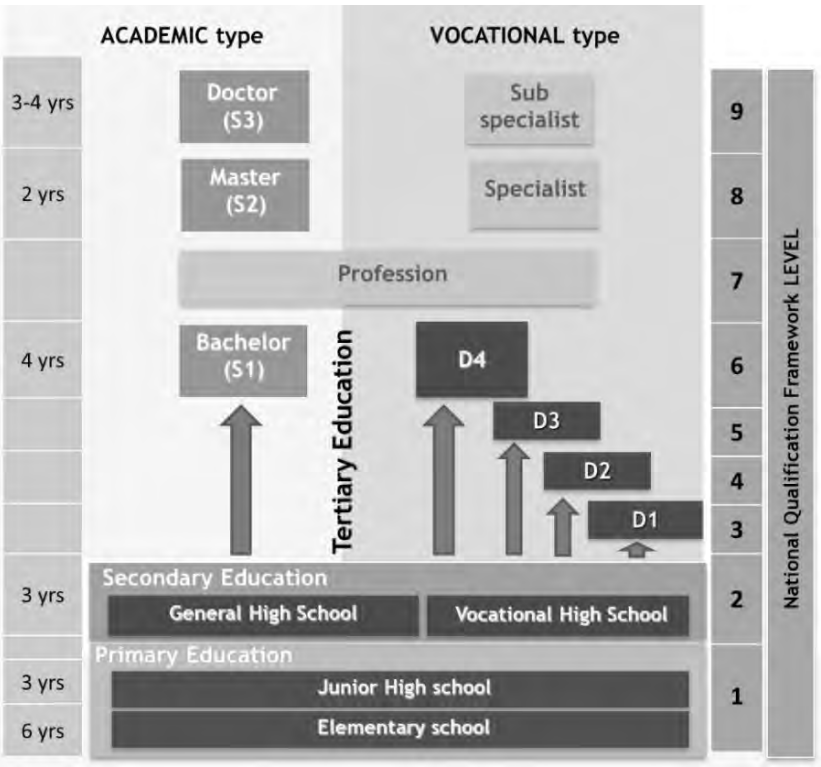

Figure 3.2 National Education System diagram showing Primary, Secondary, and Tertiary levels and their corresponding National Qualification Framework levels.

3.1.4. Accreditation of Higher Education

Higher education accreditation in Indonesia is not new. The Higher Education Law No. 12/2012 emphasizes the implementation of the national quality assurance system for higher education which includes external (accreditation) and internal systems to be implemented by individual institutions. Systematic effort aims to implement quality assurance should basically be an internally driven initiative. Therefore, all institutions are to establish their own quality assurance system.

Prior to the Law No. 12/2012, government regulations stipulate that every higher education program and institution must be accredited. As previously mentioned in Section 2.3.8, this mandatory accreditation has been carried out by BAN-PT, which began to accredit programs in 1996. The first accreditation results were published in 1998.

BAN-PT is a non-structural, non-profit, and independent agency under the MoEC with the main functions to assist and support the ministry in assessing the adequacy of higher education institutions to the national standard of education. BAN-PT adopts two accreditation models, namely program accreditation and education institution accreditation. BAN-PT website (banpt.or.id) contains an overview of all higher education programs, with their current accreditation status (categories A-D); A is very good, B is good, C is satisfactory, and D is unsatisfactory (not accredited). With the new accreditation criteria introduced in

2019, the status of accreditation now becomes Excellent, Very Good, Good, and Unsatisfactory.

The government continues to improve policies and regulations in higher education. With the issuance of the Higher Education Law No. 12/2012, BAN-PT is now given the mandate to carry out only accreditation at institutional level, while program accreditation is to be carried out by independent accreditation agency (LAM) for each field of education, using accreditation criteria that are suitable to the characteristics of the field of education.

In the context of Indonesia, the national mandatory accreditation of a study program is directly related to its legal status, to its registration in the Higher Education Database (PDDIKTI) maintained by the MoEC, and to its operational permit as required by law. IABEE is a not a LAM because its accreditation is voluntary, not mandatory. IABEE, however, is recognized by the MoEC as an agency responsible for the accreditation of engineering programs seeking international recognition. Accreditation by IABEE is optional for programs that have been accredited nationally at a certain status. IABEE accreditation is, therefore, a complement to the national accreditation and a tool for high quality engineering programs to seek international recognition.

As abovementioned in Section 2.3.8, PII, including IABEE, and several engineering program associations took the initiative of proposing the establishment of National Accreditation Agency for Engineering Programs (LAM Teknik). Engineering Deans Forum (FDTI) was also among the supporting parties to the initiative. Using IABEE as precedence, LAM Teknik is also proposed as one of the autonomous and permanent bodies of PII.

MoEC approved LAM Teknik proposal in 2021. In 2022, LAM Teknik is estimated to start its function as accreditation agency. As with BAN-PT previously, programs accredited by IABEE will be recognized by LAM Teknik as accredited with the highest status. In contrast, only programs accredited by LAM Teknik with a certain minimum status are eligible to apply for IABEE accreditation to get international recognition. Mandatory national accreditation conducted by LAM Teknik will cover more than 5300 engineering programs from all strata, including diploma, academic, applied, and professional engineers' programs. IABEE, in this case, maintains its policy of accrediting only the top-tier bachelor engineering programs (S1) that voluntarily seek for international recognition under the Washington Accord.

3.2. Engineering Education

Engineering programs admit prospective students who have completed their secondary education in a General or Vocational High School and passed the National Examination for secondary education. Higher education institutions, especially those offering engineering programs, would conduct a student admission system to recruit new students. This admission system normally applies certain passing criteria in mathematics, natural sciences, and language proficiency to assess potential candidates.

Opportunity is given to admit mature students, although it is rarely used. Policy of admitting mature students also varies across education institutions. Some institutions welcome students from abroad to study at their bachelor engineering programs. They do this by either setting up a special international class within a program or just welcoming them in regular classes. In fact, MoEC and BAN-PT have recently been using percent of foreign student enrolled in an HEI as one of the key performance indicators in the institution accreditation (not program accreditation).

The number of nationally accredited engineering programs at bachelor's level is currently 2548 programs. Some 23% of this figure are operated by public higher education institutions, while the other 77% by the private institutions.

Ministry of Education and Culture sets certain minimum requirements for establishment of a new study program, including that of engineering. The requirements include matters related to number and qualification of the faculty, program operating institution, and curriculum. Fulfillment of the minimum requirements will lead the program to obtain the lowest national accreditation status to legally produce graduates. Program operating institution should then make its best effort to increase the status of accreditation.

Although it is mandatory, national accreditation remains a fairly effective means to maintain and improve the quality of education and as a reinforcement to the internal quality assurance system required by the MoEC for study programs. Many universities in Indonesia have also implemented the ISO 9001 quality management system.

For monitoring purposes, the Ministry of Education and Culture requires all program implementing institutions to upload their program academic data every semester to the National Higher Education Database (PDDIKTI). The data includes new student enrollment, curriculum and courses offered, student grades, student graduations, etc. The Ministry has a policy that limits the maximum length of study. For undergraduate level, students must be able to complete their studies within 7 years (14 semesters).

A graduate of a Bachelor Engineering Program is awarded an academic title called "Sarjana Teknik" or S.T., in short. The title is equivalent to the widely known Bachelor of Engineering title. If the graduate wishes to become a professional engineer, he or she must first acquire early experience in supervised engineering practices for a minimum of 2 years and join one-year enrichment program, namely Professional Engineer Program (PPI). The program is organized in collaboration between PII, HEIs as program-operating institutions, and the industry to form engineering competence.

Successful accomplishment of the program will lead the participant awarded Engineer title (Ir), which is a professional title. With the professional title and the experience in engineering practice, he/she will have to apply an Engineer Registration Certificate (STRI) to PII. Related PII College will examine and approve the application.

3.3. Relevant Statistics

Distribution of HEIs across Indonesia is uneven, reflecting the distribution of national population. As seen in Figure 3.3, Java Island hosts the most of HEIs followed by Sumatera and Sulawesi. The figure also shows HEI distribution in 34 provinces of Indonesia.

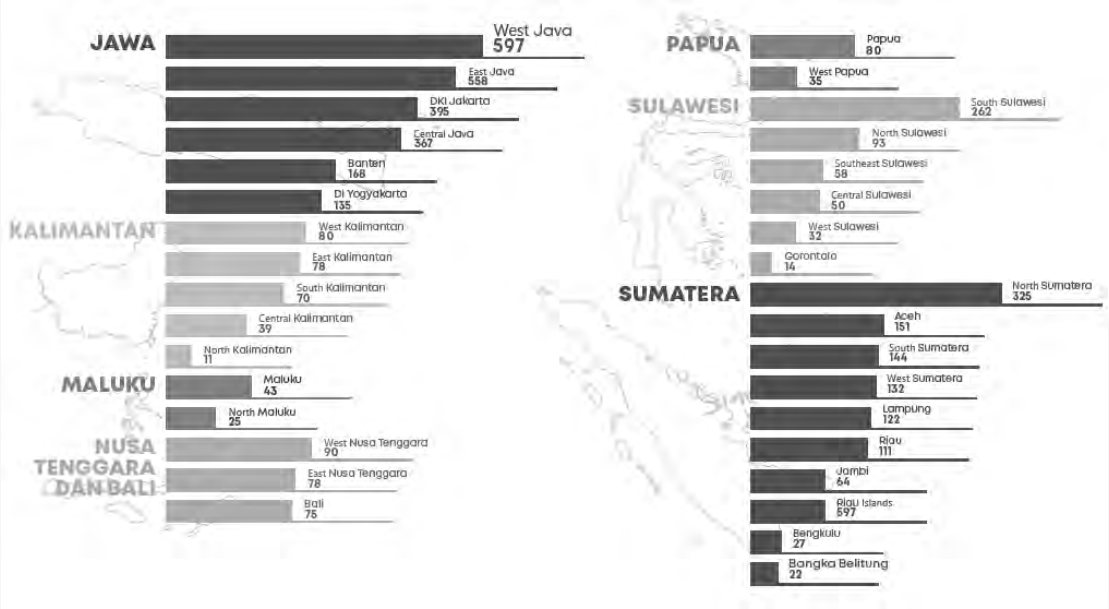

Figure 3.3. Number of Higher Education Institutions by Province on Each Island (Source: MoEC, 2020)

Programs in the fields of engineering represent the second largest cluster of study programs after education. Figure 3.4 presents the distribution of number of programs based on fields of study. The figures cover all strata, from vocational, academic, to profession and specialist programs.

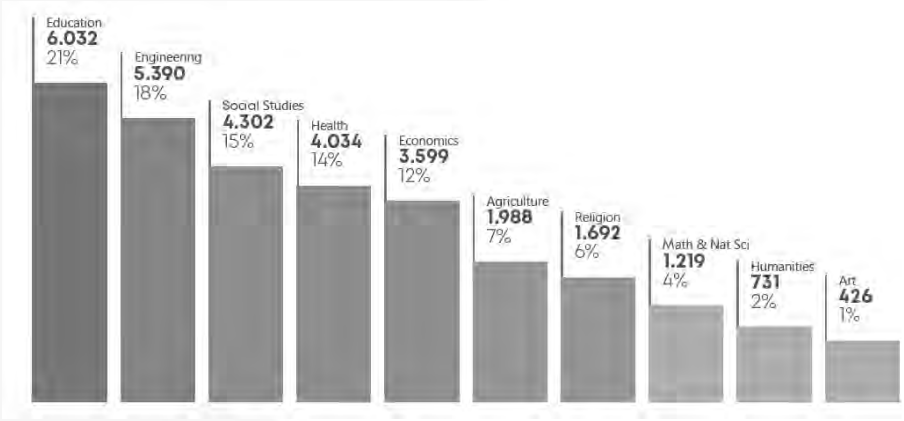

Figure 3.4 Number of programs based on Fields of Study (Source: MoEC, 2020)

As shown in Figure 3.5, engineering students represent the fourth largest (16.2%) enrolled student population by fields of study. Meanwhile, based on the

education strata, students of bachelor programs are the largest by far (83.9%). Figure 3.6 further shows the distribution of new students (2020 batch) by gender and education stratum.

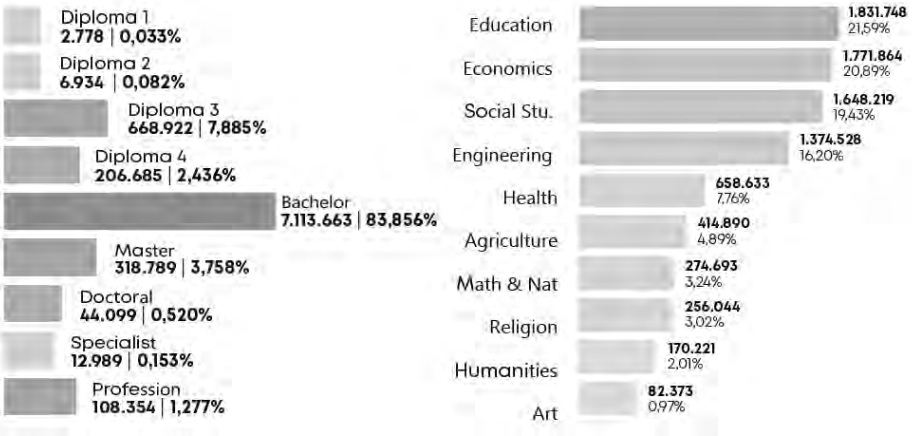

Figure 3.5 Number of enrolled students based on education stratum (left) and fields of study (right) (Source: MoEC, 2020)

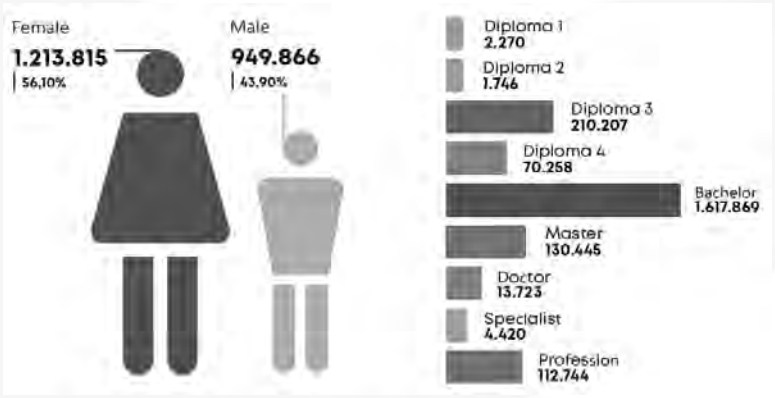

Figure 3.6 Number of new entrants based on gender (left) and education stratum (right) (Source: MoEC, 2020)

4. Engineering Community

4.1. Context

In Indonesia, the profession of engineers is seen in the context of Indonesia's National Qualification Framework (I-NQF). The I-NQF itself recognizes 9 levels of qualification that can be achieved by means of 4 dimensions of human capital development. Achieving the qualification levels through formal education, i.e., secondary and tertiary education, is a dimension that has been described in Figure 3.2. The other dimensions include profession, industry, and recognition of self-taught or past learning. This concept is illustrated in Figure 4.1.

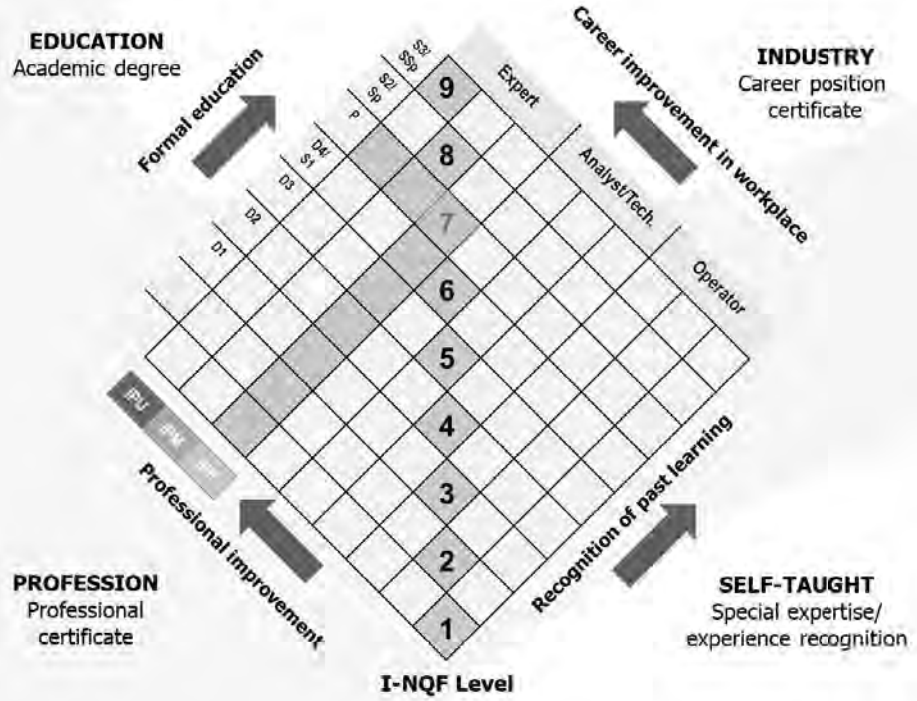

Figure 4.1. Engineer Professional Program and the Indonesia's National Qualification Framework

There are three qualification levels of professional engineer. Junior Professional Engineers (IPP) are professional engineers who are able to carry out professional engineering duties independently under the guidance of an IPM or IPU. Senior Professional Engineers (IPM) are professional engineers who are able to independently carry out professional engineering tasks and more complex engineering activities that require creativity and/or innovation. IPM is generally achieved by an engineer who has more than 7 years of work experience. Prominent Professional Engineers (IPU) are professional engineers who are capable of carrying out complex engineering professional executive duties. IPU is generally achieved after 15 years of work experience. IPP, IPM, and IPU are qualified as level 7, 8, and 9 in the I-NQF, respectively.

PII has Engineering Colleges or Chapters (Badan Kejuruan, or BK) that examine the experience, role, and level of difficulty of practicing engineers applying for professional engineer certificate. As stated previously, the BKs are the organizational units of PII as a forum for the gathering of engineers based on similarities in engineering disciplines and practices. The BKs also conduct the assessment of continuous professional development (CPD). Currently, there are 23 BKs in PII:

(1) College Architectural Engineering
(2) College Electrical Engineering
(3) College Engineering Physics
(4) College Geodetic Engineering
(5) College Earth and Energy Engineering
(6) College Urban and Regional Engineering
(7) College Industrial Engineering
(8) College Chemical Engineering
(9) College Mechanical Engineering
(10) College Environmental Engineering
(11) College Petroleum and Geothermal Engineering
(12) College Mining Engineering
(13) College Civil Engineering
(14) College Material Engineering
(15) College Forestry Engineering
(16) College Metallurgical Engineering
(17) College Agricultural Engineering
(18) College Husbandry Engineering
(19) College Agro-Industrial Engineering
(20) College Informatics Engineering
(21) College Aeronautics Engineering
(22) College Marine Engineering
(23) College Railway Engineering

4.2. Engineering Practice

Every engineer who performs engineering practice must have an Engineer Registration Certificate (Surat Tanda Registrasi Insinyur, or STRI in short) issued by PII and valid for 5 (five) years and re-registered every 5 (five) years. STRI application can be submitted online through the Professional Engineer Management Information System (SIMPoNI). STRI is given to engineers who already have an Engineer Competency Certificate (Sertifikat Kompetensi Insinyur, or SKI), Professional Engineer Certificate (Sertifikat Insinyur Profesional, or SIP), and are legally recognized to carry out engineering practices.

Engineer Competency Certificate (SKI) is written evidence given to engineers who have passed the competency test that assesses the level of engineering competence in a measurable and objective manner with reference to engineer competency standards. The standards set the criteria for assessing the experience, role, and level of difficulty of practice in engineering. As abovementioned,

the test is conducted by Competency Test Council (Majelis Uji Kompetensi, or MUK), which is an assessor panel formed by the chair of PII's BKs. BKs of PII hold the authority for the application and development of the field of engineering in order to manage, develop, and improve the quality of professional engineers in engineering practice and continuous professional development (CPD). Continuous Professional Development is requirements for renewal of Engineer Registration Certificate.

The competency standards consist of mandatory and optional ones. Mandatory standards include:

(1) the code of ethics of Indonesian engineers and professional ethics of engineering,
(2) skills in professional engineering work,
(3) engineering planning and design, and
(4) management of engineering work and communications.

Elective standards consist of:

(1) education and training,
(2) research, development, and commercialization,
(3) engineering consultancy and/or construction/installation works,
(4) production/manufacturing,
(5) materials and components,
(6) business management and marketing, and
(7) management of development and asset maintenance.

Each standard is then further elaborated into more detailed elements. Each element will be given a score, with the mandatory standard being given a weight of 70% and the optional of 30%, then the scores are added up. The minimum scores for IPP, IPM, and IPU are 600, 3000 and 6000, respectively. This competency assessment system has received equivalence recognition, among others from Australia and New Zealand (1997), APEC Engineer Register for IPM (2003), and ASEAN Engineer Register (AER) for IPM (2004), and ACPE-ASEAN Charter Professional Engineer for IPM (2015).

As explained earlier, to obtain the professional degree of engineer, a graduate must follow the Professional Engineer Program (PPI) to form engineering competence, a program conducted as a collaboration between universities, ministries, PII, and industry. This program is primarily designed to provide opportunities for graduates to gain professional work experience under the guidance of professional engineers, in addition to enriching materials such as professionalism, ethics, occupational health and safety, and the environment. Those who have followed this program will have qualifications one level higher than undergraduate, namely level 7 in Indonesia's national qualifications framework (Figure 9)

To conduct its mandate on registration and licensing, PII formalizes its competency assessment system and develops the necessary supporting tools. Although Engineering Law has been legislated since 2012, PII only formally

started conducting its mandate in 2019, after the Government Regulation No. 25/2019 was enacted. The GR serves as the organic regulation to implement the Law. The current statistics on number of registered professional engineers is given in Figure 4.2.

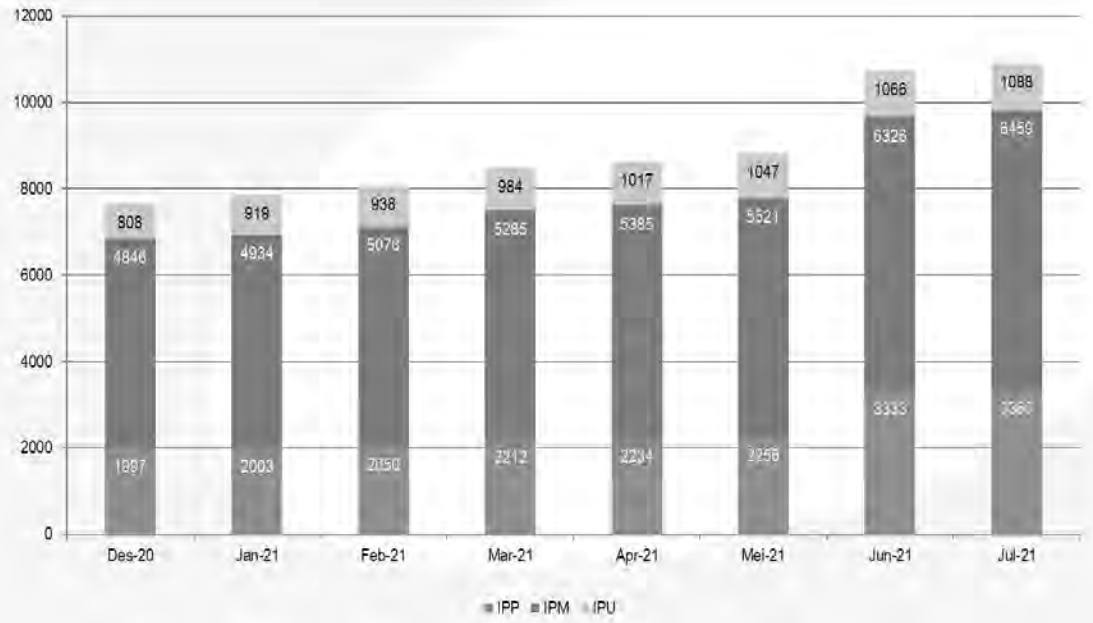

Figure 4.2. Number of registered professional engineers by competence levels (Source: PII, 2021)

4.3. Relationship to Jurisdictional Licensing & Registration

By being a permanent and autonomous body of PII, IABEE enjoys a strategic relationship with other bodies of PII responsible for registration and licensing. Since accepted as Provisional Signatory member of the Washington Accord in June 2019, IABEE has been working together with PII Governing Body and the Association of Professional Engineer Programs (FKPSPPI) to discuss the role of IABEE accreditation in the career path to become a professional engineer.

Recently, in September 2021, an agreement has been reached regarding the special treatments to be given to graduates of IABEE-accredited programs in their way to become professional engineers. The treatments are divided into 2 parts, one is related to the Professional Engineer Program which will be in the form of credit waiver, and the other is related to APEC Engineer's registration in the future. These will be explained more in Chapter 5.

5. Role of Accreditation / Recognition

5.1. Role of Accreditation in Registration

As described above, PII is mandated by the Law to conduct registration of engineers as a requirement for practice licensing recognized in Indonesia. As mobility in engineering profession continues to become a critical issue, there is a growing need for international recognition of registered engineers. To foster engineer's mobility in Indonesia, since 2004, PII has joined APEC Agreement that recognizes the substantial equivalence of competence standards for professional engineers within the APEC Economies. To become an APEC Engineer, a graduate from Indonesian bachelor's engineering program must fulfill the following three conditions:

(1) graduated from accredited programs,
(2) has a sufficient working experience, and
(3) maintains Continual Professional Development (CPD).

In the absence of an accrediting body in Indonesia that has signatory membership in the Washington Accord, under special agreement, APEC recognizes Indonesian engineering programs accredited by BAN-PT with "A" or "B" ranks as a fulfillment of the first condition. Having been accepted as a Washington Accord member, IABEE accreditation can fulfill the above requirement. Furthermore, as IABEE is a part of PII, membership in WA will be an important enabling factor for PII to enter larger mobility agreements of professional engineers. In this regard, IABEE accreditation will play a major role for strengthening Indonesian engineers' mobility across world economies.

Having IABEE accepted as a Washington Accord member, PII is now expected to modify the conditions of becoming a registered engineer by giving special considerations for candidates graduated from IABEE accredited programs as well as programs accredited by other Washington Accord signatories.

Section 3.2 above describes how the transition from graduates of bachelor engineering program to practicing engineers is to take place in general context. The transition requires the graduates to obtain a professional title of Engineer (Ir.) by completing 1-year Professional Engineer Program. Very recently in early September 2021, PII Governing Body, IABEE as PII permanent body in charge of accreditation under the Washington Accord, and Association of Professional Engineer Programs have come to a mutual understanding on special treatments to be given to graduates of IABEE-accredited programs in their ways of obtaining the Engineer title.

The special treatments related to obtaining Ir. title are as follows:

(1) Graduates of IABEE-accredited bachelor's engineering program can have less than 2-year experience of supervised engineering practice to enroll to an Engineer Profession Development Program.

(2) Experience of study at the previous bachelor's engineering program can be recognized by the Engineer Profession Development Program as credit waivers for the following courses:

a. Occupational Health, Security, and Safety (2 credits)
b. Capstone Design Case Study (4 credits)
c. Seminar and/or Workshop (2 credits)

In addition to the above, a special treatment is also given in relation to APEC Engineers registration conducted by PII. A new policy of PII Governing Body is to be issued, in which application of APEC Engineers registration by Indonesian engineers graduated from a bachelor's engineering program in 2016 onwards can only be submitted by those graduated from IABEE-accredited programs.

5.2. Degree of Participation in Accreditation

As will be described in Section 6.1 and 6.5, IABEE offers two accreditation types, namely General Accreditation (GA) and Provisional Accreditation (PA). GA is the accreditation designed to be substantially equivalent under the Washington Accord, while PA is an option to help review the readiness level of a program wishing to be fully accredited in the future. Provisional Accreditation helps the program with feedbacks on their efforts in fully adopting an outcome-based education system.

Unlike the national accreditation, which is mandatory, IABEE accreditation of both GA and PA are voluntary. However, there have been good signs that degree of participation in IABEE accreditation are relatively high. As previously mentioned in Section 3.2, there are currently 2548 bachelor engineering programs operated in Indonesia. Only less than 10% (about 250 programs) are eligible to apply for IABEE accreditation due to their national accreditation status. In only 6 evaluation cycles conducted by IABEE since 2016, a total of 83 programs have voluntarily applied for General Accreditation evaluation. So far, until the completion of 2020 evaluation cycle, 57 of these programs have been accredited. In addition, institutions whose programs have been accredited by international or foreign agencies previously, and still holding validity, have shown their interests of obtaining IABEE accreditation after the validity becomes expired. This shows a high degree of participation in voluntary accreditation conducted by IABEE.

Evaluation for Provisional Accreditation has been participated by 77 programs in total, since PA was introduced in 2017. There are also cases where programs with a provisionally accredited status and newly produced graduates have applied for General Accreditation (GA). Other programs accredited provisionally are waiting to produce graduates before they could apply for General Accreditation.

IABEE also conducts interim evaluation to programs accredited in GA but still have some weaknesses in fulfilling the accreditation criteria. In total, 22 interim evaluations have been conducted to date.

Figure 5.1 shows the number of requests for both types of accreditations (PA and GA) since the first evaluation cycle conducted by IABEE in 2016. Further, Figure 5.2 shows the distribution of requests by engineering disciplines. So far, IABEE has been able to conduct evaluation for all programs requesting accreditation. Both, GA and PA evaluation require on-site visit as a part of the evaluation processes, only the length of visit is different. Interim evaluation may require visit, depending on the characteristics of the weakness found previously.

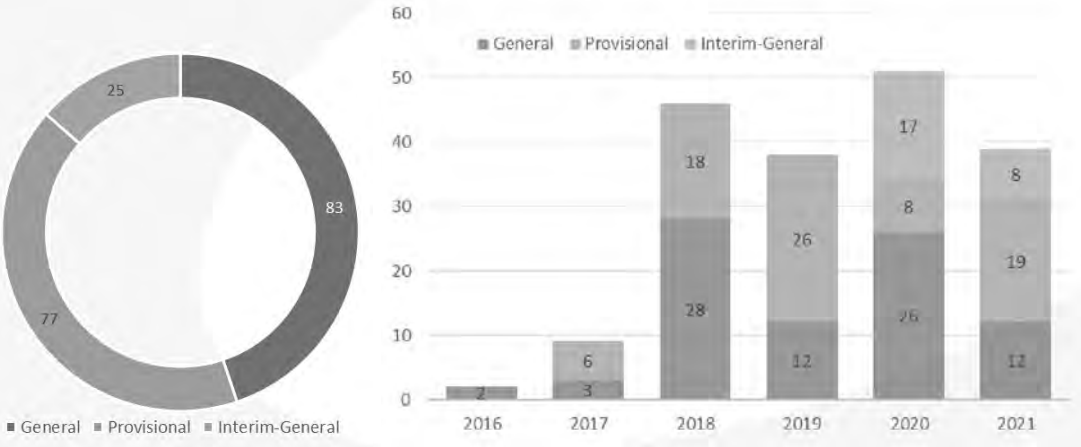

Figure 5.1. Number of requests for evaluation of IABEE accreditation; total (left) and annual distribution (right)

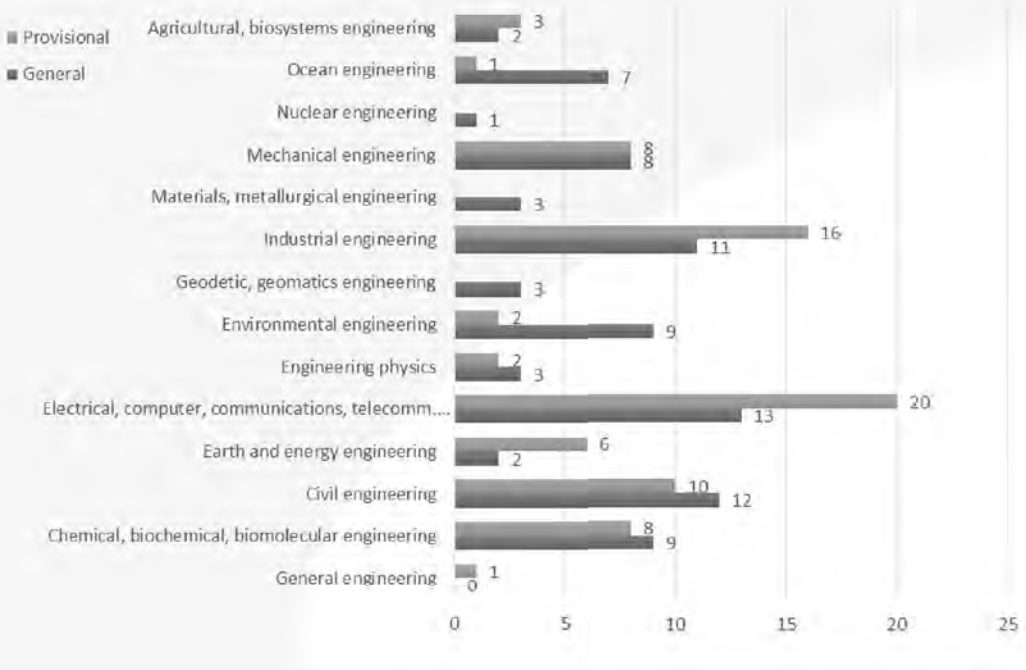

Figure 5.2 Total number of requests for IABEE accreditation by engineering discipline in 2016-2021

Table 5.1 presents some key information about the 57 programs accredited so far (until the completion of 2020 evaluation cycle on 31 March 2021) in General Accreditation category. Until 2021, there has been no case of program reaccreditation. This is due to 6-year validity of accreditation status which was

adopted by IABEE in the 2 earliest evaluation cycles, which was curtailed to 5 years afterwards. The first program reaccreditation is expected to take place in 2022 evaluation cycle. Figure 5.3 illustrates the geographic distribution of accredited programs across the jurisdiction.

IABEE publishes its accreditation activities and outcomes through its website at https://evaluation.iabee.or.id/#/accreditation/summary/search, which is accessible publicly. Important documents need to be understood by programs wishing to apply for accreditation, such as Rules and Procedures, Accreditation Criteria, Evaluation Schedule, etc., are also accessible from IABEE public website.

Table 5.1. List of programs accredited by IABEE in General Accreditation (GA) in 2016 – 2021 evaluation cycles

#	Program Name	Discipline Criteria	Accredited in	Program-operating HEI	Location	No. of graduates since accredited
1	Teknik Pertanian dan Biosistem (Agricultural and Biosystem Engineering)	Agricultural, biosystems engineering	2016	Institut Pertanian Bogor (IPB)	Bogor, West Java	509
2	Rekayasa Hayati (Bioengineering)	Chemical, biochemical, biomolecular engineering	2018	Institut Teknologi Bandung (ITB)	Bandung, West Java	79
3	Rekayasa Pertanian (Agricultural Engineering)	Agricultural, biosystems engineering	2020		Bandung, West Java	23
4	Teknik Fisika (Engineering Physics)	Engineering physics	2018	Institut Teknologi Sepuluh Nopember (ITS)	Surabaya, East Java	399
5	Teknik Geofisika (Geophysical Engineering)	Earth and energy engineering	2020		Surabaya, East Java	54
6	Teknik Kelautan (Ocean Engineering)	Ocean engineering	2019		Surabaya, East Java	*
7	Teknik Kimia (Chemical Engineering)	Chemical, biochemical, biomolecular engineering	2018		Surabaya, East Java	498
8	Teknik Lingkungan (Environmental Engineering)	Environmental engineering	2018		Surabaya, East Java	393
9	Teknik Material dan Metalurgi (Material and Metallurgical Engineering)	Materials, metallurgical engineering	2018		Surabaya, East Java	351
10	Teknik Mesin (Mechanical Engineering)	Mechanical engineering	2018		Surabaya, East Java	562
11	Teknik Perkapalan (Naval Architecture Eng.)	Ocean engineering	2018		Surabaya, East Java	*
12	Teknik Sistem Perkapalan (Marine Engineering)	Ocean engineering	2019		Surabaya, East Java	119
13	Teknik Transportasi Laut (Sea Transp. Eng.)	Ocean engineering	2019		Surabaya, East Java	99
14	Teknik Elektro (Electrical Engineering)	Electrical, computer, communications, telecomm. engineering	2020	Universitas Andalas (UNAND)	Padang, West Sumatera	51
15	Teknik Lingkungan (Environmental Engineering)	Environmental engineering	2020		Padang, West Sumatera	21
16	Sistem Komputer (Computer Engineering)	Electrical, computer, communications, telecomm. engineering	2019	Universitas Bina Nusantara (UBINUS)	Jakarta, DKI Jakarta	*
17	Teknik Industri (Industrial Engineering)	Industrial engineering	2018		Jakarta, DKI Jakarta	282
18	Teknik Sipil (Civil Engineering)	Civil engineering	2018		Jakarta, DKI Jakarta	90
19	Teknik Elektro (Electrical Engineering)	Electrical, computer, communications, telecomm. engineering	2019	Universitas Brawijaya (UB)	Malang, East Java	343
20	Teknik Lingkungan (Environmental Engineering)	Environmental engineering	2020		Malang, East Java	47

#	Program Name	Discipline Criteria	Accredited in	Program-operating HEI	Location	No. of graduates since accredited
21	Teknik Elektro (Electrical Engineering)	Electrical, computer, communications, telecomm. engineering	2020	Universitas Diponegoro (UNDIP)	Semarang, Central Java	21
22	Teknik Industri (Industrial Engineering)	Industrial engineering	2018		Semarang, Central Java	371
23	Teknik Kimia (Chemical Engineering)	Chemical, biochemical, biomolecular engineering	2018		Semarang, Central Java	415
24	Teknik Lingkungan (Environmental Engineering)	Environmental engineering	2018		Semarang, Central Java	266
25	Teknik Mesin (Mechanical Engineering)	Mechanical engineering	2018		Semarang, Central Java	*
26	Teknik Sipil (Civil Engineering)	Civil engineering	2018		Semarang, Central Java	395
27	Teknik Elektro (Electrical Engineering)	Electrical, computer, communications, telecomm. engineering	2018	Universitas Gadjah Mada (UGM)	Sleman, DI Yogyakarta	505
28	Teknik Fisika (Engineering Physics)	Engineering physics	2018		Sleman, DI Yogyakarta	262
29	Teknik Geodesi (Geodetic Engineering)	Geodetic, geomatics engineering	2018		Sleman, DI Yogyakarta	307
30	Teknik Geologi (Geological Engineering)	Earth and energy engineering	2018		Sleman, DI Yogyakarta	307
31	Teknik Industri (Industrial Engineering)	Industrial engineering	2018		Sleman, DI Yogyakarta	278
32	Teknik Kimia (Chemical Engineering)	Chemical, biochemical, biomolecular engineering	2018		Sleman, DI Yogyakarta	449
33	Teknik Mesin (Mechanical Engineering)	Mechanical engineering	2018		Sleman, DI Yogyakarta	394
34	Teknik Nuklir (Nuclear Engineering)	Nuclear engineering	2018		Sleman, DI Yogyakarta	81
35	Teknik Sipil (Civil Engineering)	Civil engineering	2018		Sleman, DI Yogyakarta	320
36	Teknologi Informasi (Information Engineering)	Electrical, computer, communications, telecomm. engineering	2018		Sleman, DI Yogyakarta	240
37	Teknik Elektro (Electrical Engineering)	Electrical, computer, communications, telecomm. engineering	2020	Universitas Hasanuddin (UNHAS)	Makassar, South Sulawesi	26
38	Teknik Lingkungan (Environmental engineering)	Environmental engineering	2020		Makassar, South Sulawesi	47
39	Teknik Sipil (Civil Engineering)	Civil engineering	2020		Makassar, South Sulawesi	94
40	Teknik Industri (Industrial Engineering)	Industrial engineering	2020	Universitas Indonesia (UI)	Depok, West Java	*
41	Teknik Kimia (Chemical Engineering)	Chemical, biochemical, biomolecular engineering	2017		Depok, West Java	736

#	Program Name	Discipline Criteria	Ac-cred-ited in	Program-operating HEI	Location	No. of grad-uates since accredited
42	Teknik Komputer (Computer Engineering)	Electrical, computer, communi-cations, telecomm. engineering	2019	Universitas Indonesia (UI)	Depok, West Java	127
43	Teknik Lingkungan (Environmental Engineering)	Environmental engineering	2019		Depok, West Java	107
44	Teknik Mesin (Mechanical Engineering)	Mechanical engineering	2018		Depok, West Java	423
45	Teknik Metalurgi dan Material (Teknik Metalurgi dan Material)	Materials, metallurgical engi-neering	2019		Depok, West Java	173
46	Teknik Sipil (Civil Engineering)	Civil engineering	2019		Depok, West Java	235
47	Teknologi Bioproses (Bioprocess Engineering)	Chemical, biochemical, bio-molecular engineering	2017		Depok, West Java	295
48	Teknik Lingkungan (Environmental Engineering)	Environmental engineering	2017	Universitas Islam Indone-sia (UII)	Sleman, DI Yogyakarta	528
49	Teknik Sipil (Civil Engineering)	Civil engineering	2016		Sleman, DI Yogyakarta	791
50	Teknik Sipil (Civil Engineering)	Civil engineering	2020	Univ. Mercu Buana (UMB)	Jakarta, DKI Jakarta	204
51	Teknik Industri (Industrial Engineering)	Industrial engineering	2018	Universitas Sebelas Maret (UNS)	Surakarta, Central Java	205
52	Teknik Kimia (Chemical Engineering)	Chemical, biochemical, bio-molecular engineering	2019		Surakarta, Central Java	108
53	Teknik Industri (Industrial Engineering)	Industrial engineering	2020	Universitas Surabaya (UBAYA)	Surabaya, East Java	40
54	Teknik Kimia (Chemical Engineering)	Chemical, biochemical, bio-molecular engineering	2020		Surabaya, East Java	37
55	Teknik Mesin (Mechanical Engineering)	Mechanical engineering	2018	Universitas Tarumana-gara (UNTAR)	Jakarta, DKI Jakarta	135
56	Teknik Industri (Industrial Engineering)	Industrial engineering	2020	Universitas Trisakti (USAKTI)	Jakarta, DKI Jakarta	83
57	Teknik Lingkungan (Environmental Engineering)	Environmental engineering	2020		Jakarta, DKI Jakarta	79

* to be provided

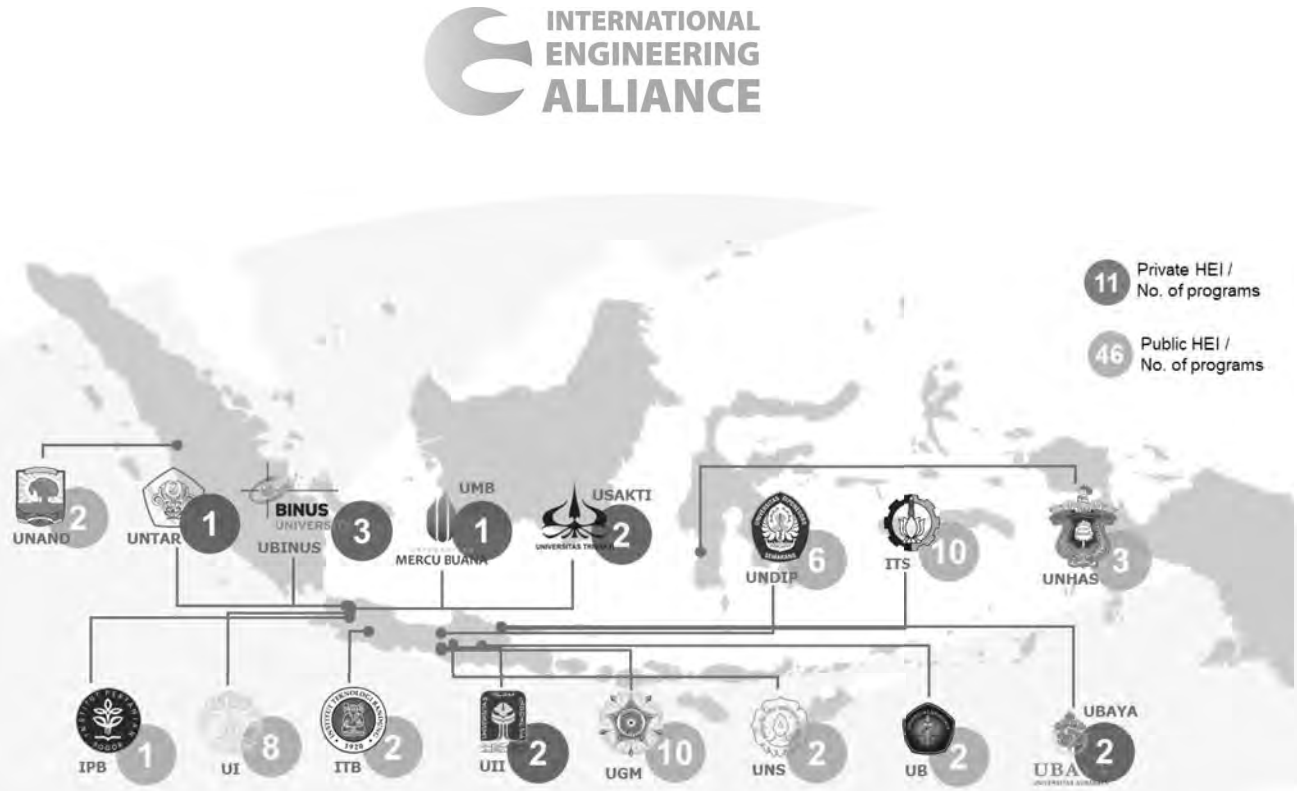

Figure 5.3. Geographical distribution of accredited programs (GA) and program-operating HEIs as of September 2021

6. Accreditation/Recognition System

6.1. Overview of Accreditation/Recognition System

As described in the previous section, development of IABEE accreditation system mostly took place in 2013 to 2016, under the mentorship of JABEE. The system essentially consists of accreditation criteria, rules and procedures for program evaluation and accreditation, online evaluation platform, as well as program evaluators. Development of the system and other milestones that indicate the maturity of the system are summarized in Figure 6.1.

Figure 6.1. Summary of Development of IABEE Accreditation System and its maturity

At the end of 2013, IABEE Criteria Committee (CC) was formed by the Steering Committee (SC) to formulate the first part of Accreditation Criteria, which consisted of Common Criteria and Criteria Guide. Criteria Committee studied the Washington Accord Graduate Attribute Exemplars, accreditation criteria used by all Washington Accord signatories as references. Indonesian national values and interests were also considered during the formulation. In a later process, the committee involved representatives of various Colleges (Engineering Disciplines) of PII to develop Discipline Criteria.

The first draft of IABEE Common Criteria was completed in mid-2014 and subsequently tested to evaluate 2 programs of 2 different HEIs as pilot accreditation exercises. In 2014, JABEE evaluation visit was conducted to Mechanical and Biosystems Engineering program of Bogor Agriculture University (IPB). A year later, in 2015, JABEE evaluated Civil Engineering program of Islamic University of Indonesia (UII). On both occasions, IABEE Criteria Committee and Steering Committee members participated as shadow evaluators with the aim of testing the newly developed criteria. Having been tested, the Common

Criteria were then approved by IABEE Executive Committee in August 2015 and published on the websites of PII and MoEC in October of the same year.

In March 2015, Evaluation and Accreditation Committee (EAC) was formed with the task to develop a set of rules and procedures based on the criteria formulated by the CC. EAC was also to develop an online platform to enable the implementation of accreditation system. EAC also assisted CC and PII Colleges in development of Discipline Criteria for various engineering disciplines, and in finalizing Criteria Guide.

Steering/Executive Committee invited 31 selected professionals in engineering teaching and practice recruited from reputable Indonesian universities, professional associations, as well as from engineering chapters of PII to become members of EAC. Among EAC members were professors whose programs of their HEIs were already accredited by international accreditation agencies, such as ABET and JABEE. Under the JICA project, 44 people including all EAC members and additional individuals to be recruited as program evaluators were sent to join the Training of Trainers conducted in Japan under the JABEE system and environment. In addition, 16 selected EAC members in total were also sent to join ABET PEV Training as practicing observers. Also 6 members were sent to observe CAST accreditation system in China and Australia.

EAC created 8 Working Groups working in parallel to develop public website and online evaluation website, documents of rules and procedures of evaluation and accreditation, instruments of evaluation, evaluator recruitment and training program, code of ethics, as well as advocacy and supporting services. A second type of accreditation, namely Provisional Accreditation (PA) was also introduced by EAC, and later approved by EXC. PA was considered necessary to enable gradual shifting from input-based to outcome-based education for majority of Indonesian engineering programs. In mid-2016, the final draft of rules and procedures, as well as instruments of evaluation were ready to implement.

Year 2016 also marked two evaluation teams set out to conduct the first accreditation evaluation for the 2 abovementioned programs accredited by JABEE in 2014 and 2015, respectively. Each team consists of 3 evaluators (with 1 being the team chair) and observers. JABEE experts observed the on-site visit to both programs as well as the subsequent EAC meetings discussing the results of evaluation. As a result, both programs were accredited by IABEE with the validity period of 6 years.

In 2017, IABEE run the second evaluation cycle, volunteered by 3 programs, including Chemical Engineering and Bioprocess Engineering Programs of Universitas Indonesia and Environmental Engineering of UII. The last has just been accredited by ABET in 2016. Eventually, the programs were accredited by IABEE. Year 2017 also marked the first 6 programs evaluated under Provisional Accreditation. As IABEE got more recognition in the country and thanks to supporting policy of MoEC, more institutions show interest to request accreditation to IABEE for their programs. In 2018 cycle, 28 programs were evaluated for General Accreditation and the other 18 for Provisional Accreditation.

To implement program evaluation, IABEE recruited and trained new evaluators in addition to existing EAC members. In 2016 to 2018, thanks to JICA project, IABEE was able to send its committee members and evaluators abroad to join JABEE and ABET evaluator trainings. The experience from abroad was quickly transformed into domestic training series. In 2017 and 2018, EAC conducted trainings for evaluators, participated by EAC, EXC, and CC members as well as newly recruited evaluators, based on IABEE's own accreditation criteria and evaluation rules and procedures. Three training series were conducted in three different Indonesian major cities during the period, i.e., Jakarta, Yogyakarta, and Bandung. Until mid-2018 IABEE has populated a pool of 86 evaluators, coming from 12 engineering disciplines, representing both professionals in engineering practice and engineering teaching.

Recruitment and training of program evaluators continued in 2019 and 2020. The last recruitment and training event in 2020 was specially conducted to get more people from industrial practitioners aboard. IABEE recruited and trained a series of evaluator recruitment and training in 2019 and 2020. As this report is produced, IABEE has a total of 127 program evaluators.

6.2. Governance of Accreditation

As explained in Section 2.3.3, there are 4 different committees in IABEE which share the governance of accreditation. These include Criteria Committee (CC), Evaluation and Accreditation Committee (EAC), Accreditation Council (AC), and Appeal Board.

CC is the committee that is responsible to establish the White Paper, the Accreditation Criteria, namely Common Criteria and Criteria Guide, and approve the Discipline Criteria proposed by the professional societies. These criteria form the basis for the program evaluation. The committee is also in charge of conducting periodic reviews and revisions of the Accreditation Criteria based on the input from stakeholders and the existence of circumstances that require the criteria to be revised.

Secondly, EAC has a wide responsibility in implementing the evaluation processes of accreditation. Firstly, it is responsible for developing Rules and Procedures for Evaluation and Accreditation (RPEA), evaluation instruments, and IABEE Online Evaluation System (OES). It also plans, conducts, and monitors program evaluation cycle, including appointment of the evaluation team and conducts post evaluation activities, such as result harmonization and reporting. The committee shall produce recommendation of an accreditation status to the Accreditation Council. In addition to that, the committee develops training programs and materials and conducts a series of training for program evaluators.

Towards the completion of an evaluation cycle, EAC recommends accreditation status of all programs evaluated in the cycle to AC. AC is a board of officials in charge of validating the results of accreditation. Before deciding on accreditation status, AC first ensures that the accreditation evaluation process has been

carried out according to established rules and procedures. Meanwhile, Appeal Board is a board of officials that are responsible to hear appeals and to decide whether an evaluation or accreditation decision was right or wrong, when the party (program and its HEI) affected by it thinks that it was wrong.

More detailed information regarding the committees related to governance of accreditation is explained in the Rules and Procedures for Accreditation-related Committees (RPARC).

6.3. Strategic Objectives

Strategic objectives of IABEE accreditation are as follows:

(1) IABEE accreditation is voluntary. A program requests accreditation because of its internal drive and appreciation for quality. In this way, accreditation functions as a means of improvement, not the purpose.

(2) IABEE accreditation is based on learning outcomes, which is self-determined by the program according to the vision, identity and uniqueness, resources, and user needs. Therefore, accreditation is not to rank nor to compare among programs.

(3) IABEE accreditation is a third-party evaluation; it is independent, autonomous, and non-governmental.

(4) IABEE accreditation is a means for the programs to get international recognition of substantial equivalency. This is enabled by referring to Washington Accord graduate attribute exemplars in developing accreditation criteria.

(5) IABEE accreditation is a means of accountability to engineering society by the programs answering the need of stakeholders through attainment of learning outcomes by the graduates.

With the abovementioned objectives, accreditation by IABEE is expected to play significant roles for multiple parties, including students and graduates, programs and education institutions, as well as industry, government, and stakeholders.

IABEE-accredited programs are excellent choices for prospective students to gain education basics that meet global standards, in line with science and technology development, support career and professional success, and wider employment opportunities. Through IABEE voluntary accreditation, programs and HEIs can demonstrate a commitment to provide quality education and global recognition. Also, by means of IABEE accreditation, industry, government, and other stakeholders are given the opportunity to provide feedback on employment needs, facilitate professional mobility, and thus more accountable to the community.

6.4. Accreditation Criteria, Policies & Processes

IABEE Accreditation Criteria follow an outcome-based accreditation model which ensures the students achieve certain learning outcomes (knowledge, skill, and attitudes) needed to the practice of engineering profession upon graduation. The criteria are applicable for bachelor-level engineering programs only. Until to date, IABEE has not developed accreditation criteria for other than bachelor programs.

The criteria are classified into two groups, namely Common Criteria and Discipline Criteria. The Common Criteria are elaborated further in the Criteria Guide and are composed with the intention of assuring the quality of engineering education and to foster a systematic continual quality improvement that satisfies the need of its constituencies in a dynamic and competitive environment.

Common Criteria and Criteria Guide are applicable for all engineering disciplines. The Discipline Criteria, on the other hand, provide specific requirements in the area of curricular topics and faculty qualifications for the interpretation of the baccalaureate level as applicable to a given engineering discipline.

An engineering study program seeking accreditation from IABEE shall clearly demonstrate the fulfillment of all applicable criteria. Common Criteria, Criteria Guide, and Discipline Criteria are referred to as the Accreditation Criteria (refer to Appendix B or download from IABEE website).

The Common Criteria consists of 4 criteria as illustrated in Figure 6.2, following the management approach of Plan-Do-Check-Act (or P-D-C-A in short).

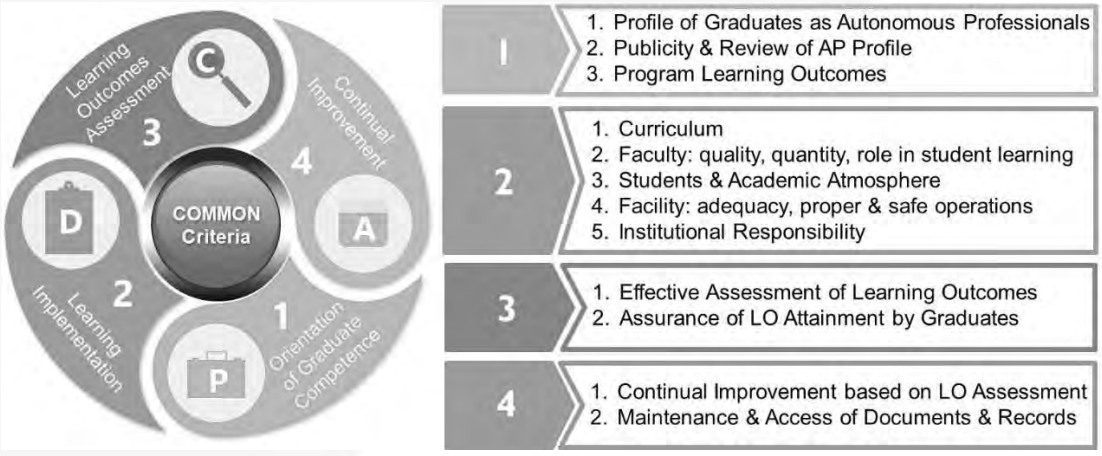

Figure 6.2. Conceptual illustration of elements of IABEE Common Accreditation Criteria

Elements of each common criteria are as follows.

Criterion 1. Orientation of the Graduate Competence

(1) Profile of Graduates as Autonomous Professionals
(2) Publicity and Review of Autonomous Professional Profile
(3) Program Learning Outcomes

Criterion 2. Learning Implementation

(1) Curriculum
(2) Faculty
(3) Students and Academic Atmosphere
(4) Facility
(5) Institutional Responsibility

Criterion 3. Assessment of the Expected Learning Outcomes

(1) Effective Assessment of Learning Outcomes
(2) Assurance of Learning Outcome Attainment by Graduates

Criterion 4. Continual Improvement

(1) Continual Improvement based on Learning Outcomes Assessment
(2) Maintenance and Access of Documents and Records

In addition to the Common Criteria, currently there are 14 Discipline Criteria for the following programs:

(1) Agricultural and biosystems engineering
(2) Agro-Industrial and similarly named engineering programs
(3) Chemical, biochemical, biomolecular engineering and similarly named engineering programs
(4) Civil engineering and similarly named engineering programs
(5) Earth and energy engineering
(6) Environmental engineering and similarly named engineering programs
(7) Electrical, computer, communications, telecommunication engineering and similarly named engineering programs
(8) Engineering physics and similarly named engineering programs
(9) Geodetic, geomatics engineering
(10) Industrial engineering and similarly named engineering programs
(11) Materials, metallurgical engineering and similarly named engineering programs
(12) Mechanical engineering
(13) Nuclear engineering and similarly named engineering programs
(14) Ocean engineering and similarly named engineering programs

In addition, there is one Discipline Criteria named General Engineering, which is applicable only for programs that are not fit within any of the above discipline.

To implement the evaluation of accreditation requests, IABEE has developed a clear set of policies and procedures to be followed by the programs. These are written in a document called Rules and Procedures for Evaluation and Accreditation (RPEA). Please refer to Appendix C or download from IABEE website. In addition to meeting the accreditation criteria, a program will be accredited if it also meets the RPEA.

The RPEA regulates the following matters:

- Confidentiality and conflict of interests
- Scope of accreditation
- Eligibility for evaluation
- Accreditation criteria
- Program evaluation process
- Accreditation decisions
- Withdrawal and change of type
- Public disclosure of accreditation status
- Appeals
- Policies on conducting on-site visit
- Indicative schedule of accreditation evaluation cycle

IABEE also has developed a document called Evaluation Guide that is useful for both programs and evaluators to understand and prepare for evaluation processes and related activities. The newest version (2020a) of Evaluation Guide has included the new protocol for conducting Live-online Evaluation Visit as a temporary replacement to on-site visit during Pandemic Covid-19. Please refer to Appendix E or download from IABEE website. The contents of the guide are as follows:

- General information, covering: type of accreditation and evaluation; program eligibility; understanding Accreditation Criteria and RPEA; overview of evaluation process; quality assurance
- Information for programs seeking for accreditation, covering: preparation of Self-Evaluation Report and Program Profile documents; evaluation judgement and decision
- Information for program evaluators, covering: competency and code of ethics; principles of evidence-based evaluation; judgement and feedbacks
- Live-Online Visit, covering: principles; requirements; policies; preparing evidence; program's integrity statement; force majeure

6.5. Philosophy

IABEE offers two types of accreditation, i.e. Provisional Accreditation (PA) and General Accreditation (GA). PA is intended for programs newly adopting an outcome-based education system and have not produced graduates under the system. A program applying evaluation of PA will be evaluated to observe its potentials of meeting the Accreditation Criteria within a foreseeable future (2-4 years). General Accreditation (GA), on the other hand, is applicable for a program seeking to be accredited by IABEE and to get international recognition. PA is offered as an option, not necessarily a requirement prior to a program applying GA. Table 6.1 enlists eligibility requirements for programs wishing to be evaluated in Provisional and General Accreditations according to IABEE Rules and Procedures for Evaluation and Accreditation.

Table 6.1. Eligibility requirements for programs applying evaluation of Provisional and General Accreditation

General Accreditation	Provisional Accreditation
(1) The associated Program Operating Institution (POI) has obtained National Accreditation of Institution status with a minimum rank of "B".	(1) The associated Program Operating Institution has obtained National Accreditation of Institution status with a minimum rank of 'B'.
(2) The Program has obtained National Accreditation status ranked "A".	(2) The Program has obtained National Accreditation status at least ranked "B".
(3) The Program is a bachelor-level program in an engineering discipline with a curricular study period of four years, and with a total course-load of a minimum of 144 credit units.	(3) The Program is a bachelor-level program in an engineering discipline with a curricular study period of four years, and with a total credit of a minimum of 144 credit units.
(4) The Program is at least in the 4th year of continuous Outcome-Based Education (OBE) implementation.	(4) The Program has implemented Outcome-Based Education (OBE) at least for one year before applying for the evaluation.
(5) The OBE shall include assessment and evaluation of the Learning Outcomes of the students.	(5) The Program has established and publicized the Autonomous Professional Profile statement formulated as its educational objectives.
(6) By the time of the on-site visit evaluation, the Program has produced at least one graduate under its OBE system.	(6) The Program has established and publicized its Learning Outcomes as the basis for developing its curriculum and learning methods
(7) The Program has established and publicized the Autonomous Professional Profile statement formulated as its educational objectives.	
(8) The Program has established and publicized its Learning Outcomes as the basis for developing its curriculum and learning methods.	

IABEE Criteria Guide further explains that the program is not restricted to single programs operated by a department or faculty. A program may be formed and/or operated by multiple departments or faculties. Programs may include matriculated learning activities outside of its home campus, in conjunction with other higher education institutions. In cases where a program is offered as parallel classes, evaluation by IABEE shall encompass all parallel classes. In cases where multiple programs of the same nomenclature are offered in multiple locations by the same program-operating institution (such as programs established according to the Outside-Main-Campus Programs scheme as defined by the MoEC Regulation No. 1/ 2017), evaluation by IABEE shall treat the parallel programs as separate entities.

6.6. Accreditation Process Overview

IABEE conducts one cycle of accreditation process annually. The cycle starts from April and ends in March the next year. The main processes take place in an evaluation cycle are depicted in Figure 6.3. To manage the processes smoothly and comprehensively, IABEE uses an online platform called IABEE Online Evaluation System (OES).

Figure 6.3. Typical schedule of an evaluation cycle

IABEE offers two types of accreditation, General and Provisional. Each has its own purposes as described before. Consequently, IABEE carries out two different accreditation processes. However, both share the common evaluation cycle which starts and ends at the same time. As shown in Figure 16, both processes require the programs to submit Self-Evaluation Report (SER) together with its supporting documents and evidence. Both also require on-site evaluation visit to be carried out. However, in GA evaluation, a visit is conducted for 3 days while in PA, it is only one day.

Evaluation for PA practically ends with an exit statement given as concluding remarks at the completion of the visit. No due processes take place after the visit. Program evaluator will write up the Final Evaluation Report and make report during the EAC Plenary Meeting. After which, EAC will bring evaluation results and its recommendation to Accreditation Council for final decision. Having the decision announced in March, the evaluation processes for PA officially ends.

In the case of evaluation for GA, the program will be given an opportunity to respond to the exit statement. Exit statement represents the temporary conclusion of how the program fulfill the Accreditation Criteria. It summarizes the strength of the program and its shortcomings in the fulfillment of the criteria, which may take form as concerns, weaknesses, and even deficiencies. A 7-day response is given to make correction to any factual mistakes. Subsequently, another 30-day response is given as opportunity for the program to improve the shortcomings found during evaluation.

Only after the time for the program final responses expires, the final evaluation report will be written by the evaluation team. In the case of GA, prior to bringing the final report to EAC at the plenary meeting for overall harmonization, there will be meetings conducted by each engineering discipline, led by the Discipline Chair, to harmonize the evaluation results of programs within the respective discipline.

Appeal or reconsideration in terms of Grace Period Improvement exist in GA evaluation processes only. The are post-decision opportunities provided as an extension to the evaluation cycle to programs decided with Not-Accredited decision. Terms and conditions apply for taking these opportunities, such as explained in the RPEA. Section 6.10 explains more details about post-visit processes, including appeals and grace period.

6.7. Criteria

As described in Section 6.4, IABEE Accreditation Criteria are developed following an outcome-based accreditation model which ensures the students achieve certain learning outcomes needed to the practice of engineering upon graduation. The Accreditation Criteria consists of Common Criteria, its elaboration in Criteria Guide, and Discipline Criteria. Accreditation Criteria play central roles in IABEE accreditation as:

(1) the reference for programs to conduct self-evaluation,
(2) the reference for IABEE evaluators to review program’s self-evaluation report, and
(3) the basis for IABEE to award accreditation status.

Criteria Committee is responsible for developing and evaluating IABEE Accreditation Criteria. Currently the criteria developed are only for bachelor engineering programs. IABEE does not have criteria that apply to other degree programs, such as diploma or master's programs.

Regarding the types of accreditation offered by IABEE, namely General Accreditation and Provisional Accreditation, both types use the same accreditation criteria but used differently and for different purposes.

In PA, each of the 12 elements in the 4 criteria of the Common Criteria (see Figure 6.2 and Section 6.4) is evaluated to answer whether the program has a potential of meeting the criteria within a foreseeable future (roughly 2-4 years).

A concluding “Yes” or “No” answer will be provided for each component with comments of the evaluator. In this way, the program will get feedbacks to improve their newly adopted outcome-based education system.

On the other hand, in General Accreditation, each of the 12 elements in the 4 criteria of the Common Criteria will be assessed to judge the level of fulfillment demonstrated by the program against the criteria. Four possible judgements for each element are: acceptable (A), concern (C), weakness (W), and deficiency (D). These will be the basis to decide the accreditation status given to the program (see further Section 6.10 and Table 6.4)

To prove that a program has met all the components of the Accreditation Criteria, it must submit Self-Evaluation Report (SER). To facilitate uniform, consistent, and systematic evaluation, IABEE prepares an SER and Program Profile templates. Program Profile template is available for download from IABEE website. Meanwhile, SER template is coded in the Online Evaluation System in a spreadsheet form and can be downloaded through Program Representative’s registered account, worked on, and uploaded back to the online system.

SER template is structured in a way that expects the program to deliberate how it fulfills each criterion and review item, and to enclose, or to provide links to proofs of the fulfillment. The proofs or evidence of the fulfillment are gathered as PDF files attached to the SER. IABEE Online Evaluation System allows a program to attach 6 files sizing 30 Mbytes each to accompany Program Profile and SER submission.

6.8. Evaluation Team

While evaluation for PA is conducted by an experienced program evaluator, evaluation for GA requires a team of three evaluators led by one of the members assigned as team chair. The team is composed of 2 evaluators with academic background and 1 evaluator coming from the industry or engineering practitioners. A GA evaluation team may include evaluator-in-training as observers, as a part of the training series to become program evaluators. The team is responsible to review all documents submitted by an applying program, including its Program Profile, Self-Evaluation Report, and the accompanying evidence. It also conducts on-site visit and produces evaluation report in which program’s fulfillment level against all items required by the Accreditation Criteria and RPEA is measured.

Formation and assignment of evaluation teams are the responsibility of EAC Chair in consultation with the Discipline Chairs. Discipline Chairs will propose three members for a GA evaluation team, with one of them being the team chair, and one senior evaluator for a PA evaluation. Selection of the members shall be based on academic competence, training qualifications, and absence of potential conflict of interest with the program to be evaluated. Before official designation, applying program will have an opportunity to express conformity to all appointed evaluation team members, including the evaluators and observers, in accordance with IABEE policy on conflict of interest.

The Rules and Procedures for Accreditation-related Committees (RPARC) defines the qualifications for one to be recruited as IABEE evaluators, as follows:

(1) demonstrates interest and commitment in improving the quality of higher education,
(2) has a good professional and ethical reputation,
(3) has a commitment to improve his/her professional development (lifelong learning).
(4) has good skills in working online and with word processing programs and data.
(5) graduated from reputable university and has a good academic qualification in the appropriate field (for domestic university with national accreditation of Program rank A by BAN-PT, or for foreign university with reputable recognition by MoEC),
(6) has certificate as professional educator and at least 10 years lecturing experience and/or certification as professional engineer with minimum level of Senior Professional Engineer (IPM), and
(7) registered as member of PII.

Participants selected to take part in the IABEE Evaluator Candidate Training need to join a series of training programs, namely Awareness Seminar (optional), Modular Online Training (knowledge aspects of accreditation), Face-to-Face Training (simulation of onsite visit evaluation), and sit-in as Evaluator-in-training to observe an On-Site Evaluation (evaluation experience). Evaluator Refresher Training will also be given to evaluators who get assignments in the particular year.

IABEE evaluator training series is illustrated in Figure 6.4. EAC-IABEE has developed a special website to facilitate online modular training. The website https://training.iabee.or.id/ is accessible only to trainees and registered guests.

Figure 6.4. Illustration of IABEE-evaluator training series

After going through the series of training programs and having adequate evaluation experience, a program evaluator is expected to demonstrate themselves as technically current, effective communicator, team-oriented, professional, organized, having good leadership, and good team manager. These are the expected evaluator competencies. Evaluation of performance is conducted during

the training, by team members and team chair in conducting program evaluation, and by the program being evaluated. This 360-degree evaluation is primarily intended as a means for professional development of evaluators.

IABEE applies code of ethics for evaluation. These policies are written in the RPEA and detailed further in the RPARC. IABEE demands that all personnel involved in carrying out the mission of IABEE demonstrate the highest standards of professionalism, honesty, and integrity. The services provided by IABEE demand impartiality, justice, and equality, so that every person must carry out their duties with the highest standards of ethical behavior.

The types of services provided by IABEE are vulnerable to conflicts of interest that can affect the objectivity of the accreditation process, and thus the credibility of IABEE. Therefore, IABEE expects that all personnel involved in IABEE activities to hold strong ethical principles and professionalism to avoid potential conflicts of interest as much as possible to guarantee objectivity of services.

IABEE upholds ethics in conducting all activities of its members and organizing staff, and requires that they exhibit highest standards in professionalism, fairness, and integrity. Information disclosed by programs undergoing evaluation, and information generated by review and discussion activities during the evaluation process shall be treated with confidentiality and shall not be divulged without specific written authorization by IABEE and the program being evaluated. For these reasons, every time an evaluator is assigned, he or she must sign a statement free from conflict of interest and a commitment to maintain confidentiality.

6.9. On-Campus/Virtual Visit Procedures and Assessment

Information about typical schedule of evaluation cycle is written in the RPEA and shared publicly through IABEE website. In this way, programs wishing to be accredited by IABEE have learned the range of time on which the on-site evaluation is likely to take place.

Having registration process completed in mid-April, IABEE Secretariat will inform Chair of EAC to start forming evaluation teams, assigning team members, and finalizing evaluation schedule, including indicative dates of visits. This information will be uploaded to the Online Evaluation System (OES) and will go to both sides, individual evaluators assigned by EAC and the programs.

The program representatives can monitor the planned schedule in the Online Evaluation System by using their account. Facilitated by Secretariat, EAC will convene a technical meeting participated by all program representatives to explain the evaluation processes they are going to go through until the completion of the cycle. Having all explained, the programs will have to state that they agree with evaluation team assigned for them and the schedule of the evaluation cycle. This is done by Program Representative giving approval in the OES.

On-site visits for evaluation of GA are conducted for a period of 3 calendar days (about 2 and a half day-worth of activities). The visit is mainly aimed to confirm the fulfillment level against the criterion components that cannot be done merely based on SER and its documented evidence. Table 6.2 provides the list of activities normally carried out on each day of the visit. Duration of each activity may be adjusted as necessary.

Table 6.2. Typical On-site Visit activities during a GA evaluation

Day #	Activity	Parties involved	Objectives
0	Internal meeting (after dinner)	All TCs, PEVs assigned to a HEI (led by Delegation Team Chair in case of multiple teams sent to a HEI)	Discuss and share findings within a team and between teams (related to common HEI-wide issues), discuss visit approach and strategies
1	Courtesy visit to HEI's top managers	All TCs, PEVs, HEI managers, Program Representatives	Officially start the visit evaluation, confirm aspects related to HEI's vision, mission, educational objectives, stakeholders, policies, and institutional support to programs being evaluated
	Meeting with Program Chair and Representative	TC, PEVs, Program Representatives	Discuss key issues needed to be confirmed during the visits
	Evidence examination	TC, PEVs	Examine evidence on-site to confirm related components of the criteria. These include, for example, academic policies and regulation, course portfolios, examples of student's works such as capstone design project reports, internship reports, etc.
	Facility tour	TC, PEVs	Inspect and confirm the availability and other aspects (such as safe operation, level of sophistication, accessibility, etc.) demanded by the criteria in relation to facility provision.
	Internal meeting (after dinner)	All TCs, PEVs assigned to a HEI (led by Delegation Team Chair in case of multiple teams sent to a HEI)	Discuss and share findings of Day-1 within and between teams (related to common HEI-wide issues), harmonize judgements and comments, discuss visit approach and strategies for Day-2
2	Interview with program advisory board, faculty members, alumnae, student representatives, supporting staff	TC, PEVs, and interviewees	Confirm fulfillment of the criteria related to internal and external stakeholders of the program
	Internal meeting (after dinner)	All TCs, PEVs and Observers assigned to a HEI (led by Delegation Team Chair in case of multiple teams sent to a HEI)	Discuss and share findings of Day-2 within a team and between teams (related to common HEI-wide issues), harmonize judgements and comments, discuss the exit meeting statement

Day #	Activity	Parties involved	Objectives
3	Debriefing with Program Chair and Program Representatives	TC, PEVs, Program Representatives	Explain the results of evaluation as will be read during the exit meeting
	Exit meeting	All TCs, PEVs, HEI managers, Program Representatives	Read out the exit statements as conclusion of the evaluation processes until completion of the visit

On-site visits for evaluation of PA essentially follow the same path as that of GA but are conducted only for a period of 1 day. In PA evaluation, there is no internal meeting activity because only one program evaluator (senior and experienced PEV) is assigned to the program. Overall aim of the visit in PA evaluation is to check whether the newly adopted OBE runs on the right track and qualitatively weigh the potentials of fulfilling all components of the accreditation criteria in near future.

In the wake of pandemic Covid-19 in early 2020, IABEE Executive Committee decided to proceed with the 2020-2021 evaluation cycle with adjusted mode and schedule. The decision was made mainly to maintain the high momentum and trust already gained by IABEE as international-level accreditation agency from engineering HEIs and the government. To implement the EXC policy, EAC subsequently developed Live-Online Visit Evaluation (virtual visit) protocols to temporarily replace the on-site evaluation visits due to the pandemic. These protocols are explained in the document called Evaluation Guide version 2020a (Appendix E).

Typical activities related to virtual visit in the case where the Live-Online Visit Evaluation is activated by EAC are presented in Table 6.3. To realize a safe and healthy procedure and environment for conducting the online meetings, the duration of Live-Online Visit is arranged for 3 working days, with a maximum of 5 workhours per day and 1 hour lunch break for each day.

Table 6.3. Live-Online Visit related activities

Day	Activity	Parties involved	Objectives
-	Technical meeting on Live-Online Visit (LOV)	EAC, Program Representatives	Explaining the policies and procedures to Program Representatives to prepare Live-Online Visit evaluation
-	Refresher Training on Live-Online Visit	EAC, TCs, PEVs	Explaining the policies and procedures to evaluation teams to prepare Live-Online Visit evaluation
-	Preparing evidence in a cloud storage	Program representatives	Providing evaluation teams with program's self-evaluation supporting evidence as early as possible prior to the dates of visit
-7	LOV rehearsal (one week prior to actual dates of LOV)	TCs, PEVs, Program representatives	To have common understanding on how the LOV will be carried out chronologically, to prevent any misunderstanding during LOV, to check all devices and peripherals work as intended

Day	Activity	Parties involved	Objectives
0	Online internal meeting (1-2 hours)	All TCs, PEVs assigned to a HEI (led by DTC in case of multiple teams sent to a HEI)	Discuss and share findings within a team and between teams (related to common HEI-wide issues), discuss visit approach and strategies
1	Courtesy visit to HEI's top managers (30 min)	All TCs, PEVs, HEI managers, Program Representatives	Officially start the visit evaluation, confirm aspects related to HEI's vision, mission, educational objectives, stakeholders, policies, and institutional support to programs being evaluated
	Facility tour (2.5 hours)	TC, PEVs	Inspect through online cameras and reconfirm the availability and other aspects (such as safe operation, level of sophistication, accessibility, etc.) demanded by the criteria in relation to facility provision.
	Evidence examination (2 hours)	TC, PEVs	Check through online cameras on evidence to confirm related components of the criteria. To reconfirm evidence that have previously been uploaded to cloud storage and examined.
2	Online internal meeting (30 minutes)	All TCs, PEVs assigned to a HEI (led by DTC in case of multiple teams sent to a HEI)	Discuss and share findings of Day-1 within and between teams (related to common HEI-wide issues), harmonize judgements and comments
	Online interview with program advisory board, faculty members, alumnae, student representatives, supporting staff (5 hours with 1 hour break)	TC, PEVs, and interviewees	Confirm fulfillment of the criteria related to internal and external stakeholders of the program
3	Online internal meeting (30 minutes)	All TCs, PEVs assigned to a HEI (led by DTC in case of multiple teams sent to a HEI)	Discuss and share findings of Day-2 within and between teams (related to common HEI-wide issues), harmonize judgements and comments
	Online internal meeting within a team (as necessary)	TC, PEVs	Finalizing judgements and exit meeting statement
	Online debriefing with Program Chair and Program Representatives (30 minutes)	TC, PEVs, Program Representatives	Explain the results of evaluation as will be read during the exit meeting
	Online Exit meeting (30 minutes)	All TCs, PEVs, HEI managers, Program Representatives	Read out the exit statements as conclusion of the evaluation processes until completion of the visit

IABEE RPEA requires the policies of anonymity and objectivity implemented during accreditation visits.

6.10. Post-Visit Policies and Procedures

Post-visit activities start after the completion of exit meeting that concludes an evaluation visit. Follow up activities, in the case of GA evaluation, that will take place are explained in the RPEA as follows.

Program First Evaluation Report. Program First Evaluation Report is produced by the evaluation team and uploaded the team chair to IABEE OES. It consists of evaluation results and findings read out during the Exit Meeting. The report is to be uploaded approximately two weeks after the Exit Meeting. The report is accessible by the program using its account.

Program 7-day Response. Upon the disclosure of the findings in the IABEE OES, the program is given 7 days to submit amendments or omissions only to factual errors if such errors are identified in the online system entries. The period is initiated in the system right after the Program First Evaluation Report is uploaded. Example of factual errors include errors in quoting names, identities, figures, locations, etc. related to the program and its institution. If the program finds no factual error in the Program First Evaluation Report, its representative may notify the team chair and let the 7-day period pass automatically.

Program Second Evaluation Report. Upon the expiration period of Program 7-day Response, the team chair thoroughly examines the evaluation results documented in the IABEE Online Evaluation System to amend factual errors pointed out by the Program, if any. The Team Chair then proceeds to prepare the Program Second Evaluation Report in the IABEE Online Evaluation System. After submission of the Report by the team chair, program representative can see the “A-C-W-D” judgements, the Team Chair’s comments on each evaluation or criteria item.

Program 30-day (final) Response. Upon the completion of the Program Second Evaluation Report by the team chair, the Program 30-day Response is triggered to start in the IABEE Online System. In this period, the program is given 30 days to follow up on shortcomings identified in the evaluation process to date. The program is encouraged to upload report and proofs of corrective actions and/or improvements undertaken to address the shortcomings, until the 30-day deadline.

Program Final Evaluation Report. After the deadline of the 30-day response period has passed, the team chair prepares the Program Final Evaluation Report to be uploaded to IABEE OES, by considering corrective actions and/or improvements reported by the Program to date. The report shall include a description of the Program, its areas of strength, identified shortcomings, and constructive observations, and a summary of its fulfillment to the Accreditation Criteria as indicated by the ‘A-C-W-D’ judgements of evaluation items. The report is submitted to the Discipline Chair and EAC Chair.

Engineering Discipline Harmonization Meeting. The Discipline Chair convene EAC Discipline Harmonization meeting to discuss and harmonize any inconsistency between evaluation teams within the same discipline, and

inconsistencies with past evaluation results of similar programs. Results of the Discipline Harmonization are documented in the IABEE OES.

EAC Plenary Meeting. After the Discipline Harmonization is completed, the EAC Chair organizes an EAC Plenary Meeting to discuss and harmonize any inconsistency with past and current evaluation results of programs operated under different institutions and disciplines. EAC Plenary Meeting then recommend the final accreditation decision to IABEE Accreditation Council.

Final Evaluation Report Editing. EAC Chair is to assign Editors in this step, in which the Program Final Evaluation Report draft shall be edited to ensure consistency between the scores and comments or narratives given by the Team Chair and the criteria or sub-criteria items associated with the scores and narratives.

Accreditation Decision. Final decision on the accreditation status of a program is taken by the IABEE Accreditation Council, with due consideration to the recommendation from the EAC Plenary Meeting. The decision shall be kept in IABEE's permanent records.

Accreditation Announcement. After the final decision has been reached, the IABEE Secretariat conducts the public announcement of the decision. The Not-Accredited status shall not be publicly declared, but directly communicated to the corresponding program representative (PR) and program-operating institution representative (POIR). Other status shall be declared in the IABEE Website and communicated to the PR and POIR. Program Accreditation Evaluation Report and accreditation decision shall be saved in the IABEE Online Evaluation System and shall be accessible by the program.

Table 6.4 provides the possible accreditation status of a program as the outcome of accreditation decision by Accreditation Council. As shown in the table, Not-Accredited program may appeal the decision or take the last chance of making improvement through the Grace Period.

Table 6.4. Accreditation status of a program (General Accreditation)

Level of Criteria Fulfillment	Status	Validity	Next Step
All criterion components are scored A (acceptable) or C (concern)	Accredited	5 years	Re-accreditation
Unresolved weakness(es) leads to W score(s), but visit is not deemed necessary to assess future corrective actions	Accredited	3 years	Interim Evaluation without visit
Unresolved weakness(es) leads to W score(s), but visit is deemed necessary to assess future corrective actions	Accredited	3 years	Interim Evaluation with visit
Unresolved deficiency(ies) leads to D score(s)	Not Accredited	-	Appeal or take Grace Period

The program shall be given an opportunity to file an appeal if an accreditation decision is deemed unfair. The appeal must include a clearly written rationale for the appeal, with reference to specific accreditation criterion component associated with the appeal. Only final decision of Not-Accredited status in General Accreditation may be appealed.

Program with unresolved D score in only one component of the Accreditation Criteria may opt to ask a final grace period to rectify the associated shortcoming. The grace period will be given until no later than 31 August of the subsequent accreditation evaluation cycle. The program shall produce an evidence-based report on how it has satisfactorily rectified the shortcoming with respect to the Accreditation Criteria.

The report is sent to IABEE Secretariat no later than 31 August of the subsequent accreditation cycle. EAC will subsequently assess the worthiness of the report. Satisfactory improvement from the 'D'-level shortcoming shall result in an Accredited status with interim evaluation, either with or without visit, effective from 1 April of the following accreditation evaluation cycle.

6.11. Schedule of Up-Coming Accreditation Activities

The 2021-2022 evaluation cycle has been run in progress, following the schedule as presented in Table 6.5. The schedule is also published in IABEE website. RPEA provides indicative schedule to be decided each year.

Table 6.5. Schedule of activities of the 2021-2022 evaluation cycle (General Accreditation)

No.	Activity	Dates
1	Account sign-up for program and institution representatives	5 – 30 April 2021
2	Account registration verification	5 – 30 April 2021
3	Program registration for accreditation by its representative	5 – 30 April 2021
4	Program eligibility verification by Secretariat	5 – 30 April 2021
5	Scheduling and assignments by EAC	~ 5 May 2021
6	Technical meeting (kick-off meeting)	8 May 2021
7	Evaluation team approval by program representative	~ 7 May 2021
8	Finalizing assignments	~ 10 May 2021
9	Invoicing and payments	~ 8 June 2021
10	Submission of SER, Program Profile, and supporting evidence	~2 July 2021
11	First review by evaluation team members	~ 31 July 2021
12	Second review by team chair	~ 15 August 2021
13	First response by program representative	~ 15 September 2021
14	Third review by evaluation team	~ 30 September 2021
15	Detailed visit plan by team chair	~ 7 October 2021
16	On-site/Online visit rehearsal	1 week prior to visit dates
17	On-site/Online visit period (including exit statement)	~ 7 November 2021

No.	Activity	Dates
18	First Evaluation Report	~ 7 days after exit meeting
19	Program 7-day response	~ 7 days after 1st Evaluation Report uploaded
20	Second Evaluation Report	~ 7 days after program response expires
21	Program 30-day (final) response	~ 30 days after 2nd report uploaded, but no later than 28 December
22	Final Evaluation Report	~ 15 January 2022
23	Discipline Harmonization meeting	20 and 27 (if needed) January 2022
24	EAC Plenary meeting	No later than 10 February 2022
25	Accreditation Council meeting	23 February 2022
26	Accreditation decision announcement	31 March 2022

6.12. External Relationships

As described earlier, IABEE is established as a permanent and autonomous body of the Institution of Engineers Indonesia (PII). This status enables IABEE to interact very closely with all Engineering College (Chapters) of PII. A college is an organic part of PII which unifies people and societies working in the same engineering discipline. Key interactions between IABEE and PII Colleges take form in the formulation of discipline criteria and in recruitment of candidate program evaluators with industry background. More strategic relationship is being paved between IABEE and its parent organization, PII. A membership in the Washington Accord can open the door for PII to entering a wider engineer mobility agreement, beyond APEC region.

The government, more specifically, Directorate General of Higher Education of the Ministry of Education and Culture is the initiator of IABEE. However, since MoU between DGHE of MoEC and PII was signed in 2016, IABEE has been an independent entity from the government. Nevertheless, IABEE maintains good mutual relationship with the government. Through its voluntary and internationally recognized accreditation system, IABEE helps the government in its mission and effort to develop high quality education, specifically in the fields of engineering. In return, government recognition to IABEE and its policies that encourage programs and institutions to earn international recognition through accreditation help IABEE playing its role in improving the quality of education, especially in engineering.

7. Response to Schedule B1

Criteria for Admission to Provisional Signatory Status

7.1. Accrediting Agency Criteria

7.1.1. Governmental & Legal Status

IABEE is an autonomous, not-for-profit organization under The Institution of Engineers Indonesia (PII), which is a NGO of multi-disciplinary engineering professionals association in Indonesia. IABEE is one of PII's permanent bodies entrusted to conduct bachelor engineering program accreditation. Since the Engineering Law No. 11/2014 was legislated, PII has been mandated to conduct registration and licensing for practicing professional engineers in Indonesia.

With the status of a PII permanent body, IABEE is legally incorporated in Indonesia's jurisdiction. The Memorandum of Understanding between the Ministry of Education and Culture and the Institution of Engineers Indonesia (PII) in 2016 to establish IABEE as permanent and autonomous body within PII provides the first legal basis for IABEE. Subsequently, PII has incorporated IABEE in its Charter and Organizational Regulation.

7.1.2. Uncontested Agency or Prominent Authority

As a part of PII, which is given the authority by the Engineering Law No. 11/2014 to represent the engineering profession, IABEE is the uncontested agency for voluntary program accreditation in engineering in Indonesia. In the jurisdiction, where program accreditation is mandatory, the prominence of IABEE accreditation is also shown by the fact that programs accredited by IABEE will be recognized by the national accreditation system as accredited with the highest status. In contrast, only programs accredited nationally with a certain minimum status are eligible to apply for IABEE accreditation to get international recognition.

7.1.3. Recognition of Authority & Accredited Programmes

PII is the institution that administers the registration and licensing for practicing engineers in Indonesia. Graduate of any nationally accredited engineering program is eligible by law to attend to Professional Engineering Program to become a professional engineer, and subsequently to get registered and licensed to practice engineering. Since IABEE accreditation (GA) is eligible only to programs that have been nationally accredited with the highest rank, the academic requirements of IABEE's accredited programs should be more that satisfying for admission to the path of becoming a PE.

IABEE has eligibility requirements for programs wishing to request accreditation, one of which states that the program shall be operated by a nationally accredited HEI with minimum rank of B (RPEA Section 2.3.1). In addition, there is also a requirement that the program itself is already nationally accredited with the highest rank. These requirements warrant the legal authority of the HEI to confer academic degree to the graduates of its program. As a note, in Indonesia where national accreditation is mandatory, only accredited HEIs have the legal authority to confer higher education degrees. Also, only accredited programs can produce graduates legally.

7.1.4. Policies, Procedures & Criteria

IABEE has developed policies, procedures, and criteria to conduct accreditation. Further, it has policies to set, approve, evaluate, and execute the accreditation criteria and procedures. As explained through IABEE organizational structure, IABEE has Criteria Committee that is responsible to develop and evaluate periodically the Accreditation Criteria which consist of Common Criteria, Criteria Guide, and Discipline Criteria. Another committee called Evaluation and Accreditation Criteria is the one responsible to run the evaluation/accreditation cycle based on the procedures and the criteria. Both, Rules and Procedures and Accreditation Criteria documents shall be approved by IABEE Executive Committee.

7.1.5. Independence & Autonomy

IABEE organization that is positioned under the umbrella of PII signifies IABEE independence of the educational providers delivering programs in Indonesia. In practice, IABEE makes sure that evaluators assigned to evaluate program accreditation requests are free from any conflict of interest.

IABEE has a full autonomy to conduct accreditation; no influence from other bodies within PII nor from any external bodies. Evaluation and Accreditation Committee (EAC) are given all the rights to design and oversee accreditation evaluation processes according to the RPEA. Accreditation Council is also given all the authority to review EAC accreditation actions and recommendations and to decide accreditation status.

The independence of EAC is ascertained by applying the policy and procedure regarding the evaluator code of ethics and the conflict of interest. The AC on the other hand, has a specific role to ensure that the accreditation process has been carried out consistently and in accordance with the established rules and procedures, code of ethics, the principle of confidentiality and avoidance of conflicts of interest. The council does not conduct a technical review, so it does not repeat what has been done by the EAC.

7.2. Operational Accreditation System

7.2.1. Documented Criteria & Procedures

The IABEE Accreditation Criteria have been documented and publicized on the website (iabee.or.id). Policy and procedures to apply the criteria have been explained in the Rules and Procedures for Evaluation and Accreditation (RPEA) document. RPEA is also available for download from the website.

IABEE accredits programs, not institution. This is made clear in the statement written in the Preamble of IABEE Common Criteria and Criteria Guide. The program is not restricted to single programs operated by a department or faculty. A program may be formed and/or operated by multiple departments or faculties. Programs may include matriculated learning activities outside of its home campus, in conjunction with other higher education institutions. In cases where a program is offered as parallel classes, evaluation by IABEE shall encompass all parallel classes. In cases where multiple programs of the same nomenclature are offered in multiple locations by the same program-operating institution (such as programs established according to the Outside-Main-Campus Programs scheme as defined by the MoEC Regulation No. 1/ 2017), evaluation by IABEE shall treat the parallel programs as separate entities.

7.2.2. Assessor Selection & Training

The Rules and Procedures for Accreditation-related Committees (RPARC) document explains in Section 3 the evaluation team consists of academic and industrial practitioner. It further details the requirements for program evaluator candidates. The document also explains the mechanism for of evaluator (assessor) training (Section 6), which includes Awareness Training, Modular Online Training, Face-to-Face Training, and Observation in Actual On-Site Visit Evaluation. Documentations of evaluator training are managed by IABEE Secretariat.

7.2.3. Programme Evaluation

The Rules and Procedures for Evaluation and Accreditation (RPEA) explains the requirement for Program to submit Self-Evaluation Report (Section 2.5.2) and when such a document is to be submitted (Section 2.5.4, Table 1, Activity 14). Section 2.5.4 in Table 1 of the RPEA also explains about On-Site Visit Planning and On-Site Visit (Activity 19 and 20), which is further explained in EGA-19 and EGA-20 (pp. 15 to 16). Policies on conducting On-Site Visit are explained in section 2.9 (pp. 29-30).

The RPEA document explains the validity period of “Accredited” status of General Accreditation, which is 5 years, and “Accredited with Interim Evaluation” either with or without visit, which is 3 years (Section 2.6.1 Decisions in Evaluation for General Accreditation). To maintain accreditation, Program shall submit re-evaluation with respect to the above validity periods.

7.2.4. Procedural Integrity

Procedural integrity comprises confidentiality, conflict of interest, and publication of accredited programs. IABEE accreditation processes are fully in compliance with these requirements. The Rules and Procedures for Accreditation-related Committees (RPARC) document in Section 9 explains the confidentiality policies and procedures to ensure that individual program evaluation is conducted in confidence. In Section 8, it explains the conflict-of-interest (COI) policies and procedures to ensure that evaluation process at all stages is free of COI. Finally, all programs accredited by IABEE are listed and published in IABEE website according to Public Disclosure of Accreditation Status policies (RPEA Section 2.8).

7.2.5. Appeals

The RPEA document explains about appeal procedure against “Not-Accredited” decision (Section 2.8.2). Further, the RPARC document explains about Appeal Board and Appeal Committee.

7.3. Accreditation Criteria

7.3.1. Programme Outcomes, Purpose & Curriculum

IABEE Accreditation Criteria (Appendix A) have the program establish program outcomes that are consistent with the purpose of the program. Criterion 1 on Orientation of the Graduate Competence states that Program shall define the profile of graduates to be envisaged as autonomous professionals by considering country’s potential resources, cultures, needs and interests. Further, it states that Program shall establish its own expected learning outcomes which consist of abilities to utilize knowledge, skills, resources, and attitudes as described in the (a) to (j) items and any additional requirement in its Discipline Criteria (if any) to be acquired by the student at the time of completion of the study. The (a) to (j) items are learning outcomes criteria developed by IABEE referring to the Graduate Attribute exemplars of the Washington Accord.

IABEE has conducted gap analysis between IABEE Accreditation Criteria and Washington Accord Graduate Attribute Exemplars. Please refer to Appendix F.

Regarding the curriculum, IABEE Accreditation Criteria requires the program to provide a curriculum that is able to provide a broad basis for engineering practice. Criterion 2.1 on Curriculum asks Program to ensure that the curriculum includes proportionally subject areas of mathematics and discipline-specific natural sciences, discipline-specific engineering science and technology, information and communication technology, engineering design and problem-based experiments, as well as general education (Article 1). It also asks program to consider inputs from program’s stakeholders in the process of curriculum development (Article 2). It further asks program that the curriculum shall indicate the structural relationship and contributions of the subject courses to fulfill learning outcomes. Procedures, including syllabus, shall be established and

documented so that the expected learning process can be implemented in a controlled way (Article 3). Lastly, the criterion on curriculum asks the provision of exposure for the students to engineering practices and major design project experience using engineering standards and multiple realistic constraints based on knowledge and skills acquired in preceding course work (Article 4).

7.3.2. Environment for Delivery

IABEE Accreditation Criteria requires program and its operating institution to provide suitable environment for delivery. Criterion 2.3 on Students and Academic Atmosphere, in article (3) asks program to create and maintain good academic atmosphere conducive to successful learning. Further in Criterion 2.3.4 on Facility, program is asked to ensure the availability and accessibility of facilities for effective functioning of the learning process and attainment of the learning outcomes.

7.3.3. Leadership & Qualifications

IABEE Accreditation Criteria (Criterion 2.5 on Institutional Responsibility) asks program to define and manage the process for the provision of the educational service, including education design, curriculum development and delivery, and assessment of learning. Criteria Guide of this article further asks program to describe its governance and its adequacy to ensure the quality and continuity of the program and how the leadership is involved in decisions that affect the program.

Regarding qualification, Criterion 2.2 on Faculty demands Program to provide necessary number, qualification, and competence of faculty members for performing learning process, including planning, delivering, evaluating, and continually improving its effectiveness in order to achieve the learning outcomes. Further, each Discipline Criteria may address more specific requirements on the qualification of faculty teaching in the program.

7.3.4. Entry & Progression Requirements

IABEE Accreditation Criteria, specifically Criterion 2.3 on Students and Academic Atmosphere asks Program to define and implement an entry standard for both new and transfer students, as well as transfer of credits. Also, the criterion asks Program to define and implement ongoing monitoring of student progress and evaluation of student performance. Procedures of quality assurance shall be established to ensure that adequacy of standards is achieved in all assessments.

7.3.5. Resourcing

Adequacy of physical resources is addressed in Criterion 2.4 on Facility. Meanwhile, human resources adequacy is addressed in Criterion 2.2 on Faculty. Financial resource adequacy is addressed in Criterion 2.5 on Institutional Responsibility.

Schedule B1: Criteria for Admission to Provisional Signatory Status in an Accord (also required for Admission to Full Signatory)		**Report analysis against Rules and Procedures requirements**	
		Meets Criteria? Yes/No	*Evidence provided/Comments*
1	The accrediting agency has the following characteristics:		
	a) Is non-governmental;	Yes	IABEE is an autonomous, not-for-profit organization under The Institution of Engineers Indonesia (PII), which is a NGO of multi-disciplinary engineering professionals association in Indonesia.
	b) Is legally incorporated in its home jurisdiction;	Yes	The Memorandum of Understanding between the Directorate General for Student and Learning Affairs of the Ministry of Education and the Institution of Engineers Indonesia (PII) to establish IABEE as an autonomous department within PII provides the legal basis for IABEE.
	c) Is the uncontested accreditation agency of the engineering community in the jurisdiction; or, if circumstances in the jurisdiction allows multiple accreditation agencies, the applicant must be the prominent authority in accreditation of programmes;	Yes	Being part of PII, which is given the authority by the Engineering Law No. 11/2014 as a representative of the engineering profession, IABEE is the uncontested agency for voluntary program accreditation in engineering in Indonesia.
	d) Is a statutory or professionally recognised authority to accredit programs satisfying academic requirements for admission to practicing status (e.g. licensing, registration) in a jurisdiction;	Yes	PII is the institution that administers the registration and licensing for practicing engineers. Graduate of any national compulsory accredited engineering program is so far eligible to attend the exam to become a professional engineer, as one of the requirements to get registered. Since only programs with A-rank (the highest rank) of national compulsory accreditation are eligible for IABEE General Accreditation, the academic requirements of IABEE's accredited program are accordingly satisfied.
	e) Accredits programmes at institutions that have legal authority to confer higher education degrees qualifications;	Yes	With the enactment of B-rank status from national compulsory institutional accreditation (by BAN-PT) as the minimum eligibility criterion for program implementing institutions to be accredited by IABEE, this ensures the legal authority of the institutions that provide higher education degree qualifications (RPEA, Section 2.3.1 Eligibility Requirements for General Accreditation point (1)).
	f) Has policies to set, approve, evaluate and execute accreditation criteria and procedures;	Yes	As stated in RPEA (Section 2.4), Criteria Committee has produced the Accreditation Criteria, comprising the Common Criteria and the Discipline Criteria. Common Criteria are further elaborated by the Criteria Guide. The Accreditation Criteria together with the RPEA provide the basis for program evaluation. As mentioned in the document of **Application for Provisional Membership of The Washington Accord**, Section 2.2 on Organizational Structure, the Criteria Committee is also responsible of conducting periodic reviews and revisions of the Accreditation Criteria based on the input from stakeholders and the existence of circumstances that require the criteria to be revised.
	g) Is independent of the educational providers delivering accredited programmes in its jurisdiction;	Yes	The organizational structure of IABEE within the PII (document of **Application for Provisional Membership of The Washington Accord,** page 9**)** indicates its independence of the educational providers. Also, evaluators involved in the process of evaluation must adhere to the ethical principles stated in Sections 7.1 and 7.2 and policy and

			procedure to avoid conflict of interest of Section 8.1 and 8.2 of RPARC.
	h) Has autonomy to make accreditation decisions independent of stakeholder influence.	Yes	Accreditation decisions are fully the autonomy of the Evaluation and Accreditation Committee (EAC) and the Accreditation Council (AC). The independence of EAC is ascertained by applying the policy and procedure regarding the evaluator code of ethics and the conflict of interest. The AC on the other hand, although consists of representatives from academics, professionals and industry, has a specific role namely ensuring that the accreditation process has been carried out consistently in accordance with the established rules and procedures, code of ethics, the principle of confidentiality and avoidance of conflicts of interest. The council does not conduct a technical review so that it repeats what has been done by the EAC (Sections 4.1 and 4.2 of RPARC)
2.	The accrediting agency has an operational accreditation system with documented procedures and practices conforming to the following principles:		
	a) The accreditation criteria and procedures are documented, publicized, and applied in accordance with set policies;	Yes	The IABEE Accreditation Criteria **(Annex B)** have been documented and publicized on the website (iabee.or.id). Policy and procedures to apply the criteria have been explained in the Rules and Procedures for Evaluation and Accreditation (RPEA) document **(Annex C)**. RPEA is also available for download from the website.
	b) The system accredits programmes or coordinated groups of individually identified programmes;	Yes	IABEE accredits programs, not institution. This is made clear in the statement written in the Preamble of IABEE Common Criteria and Criteria Guide (**Annex B**).
	c) Programme assessors are academic and industry peer reviewers;	Yes	The Rules and Procedures for Accreditation-related Committees (RPARC) document (**Annex D**) explains in Section 3 on Pool of Program Evaluators that the evaluation team consists of academic and industrial practitioner. It further details the requirements for program evaluator candidates.
	d) There are mechanisms and documentation for training the programme assessors;	Yes	The document of Rules and Procedures for Accreditation-related Committees (RPARC) (**Annex D**) explains the mechanism of evaluator (assessor) training (Section 6), which includes Awareness Training, Modular Online Training, Face-to-Face Training, and Observation in Actual On-Site Visit.
	e) Programme evaluation requires a self-evaluation and site visit;	Yes	The Rules and Procedures for Evaluation and Accreditation (RPEA) document (**Annex C**) explains the requirement for Program to submit Self-Evaluation Report (Section 2.5.2) and when such a document is to be submitted (Section 2.5.4, Table 1, Activity 14). Section 2.5.4 in Table 1 also explains about On-Site Visit Planning and On-Site Visit (Activity 19 and 20), which is further explained in EGA-19 and EGA-20 (pp. 15 to 16). Policies on conducting On-Site Visit are explained in section 2.9 (pp. 29-30).
	f) Periodic re-evaluation is required to maintain accreditation;	Yes	The RPEA document (**Annex C**) explains the validity period of “Accredited” status of General Accreditation, which is 5 years, and “Accredited with Interim Evaluation” either with or without visit, which is 3 years (Section 2.6.1 Decisions in Evaluation for General Accreditation). To maintain accreditation, Program shall submit re-evaluation with respect to the above validity periods.

	g) Individual program evaluation is conducted in confidence;	Yes	The Rules and Procedures for Accreditation-related Committees (RPARC) document (**Annex D**) in Section 9 explains the confidentiality policies and procedures to ensure that individual program evaluation is conducted in confidence.
	h) Mechanisms for addressing conflict of interest at all stages of the process exist;	Yes	The Rules and Procedures for Accreditation-related Committees (RPARC) document (**Annex D**) in Section 8 explains the conflict-of-interest (COI) policies and procedures to ensure that evaluation process at all stages is free of COI.
	i) A list of accredited programmes is published;	Yes	All programs accredited by IABEE are listed and published in IABEE website (**iabee.or.id**).
	j) An appeal process exists.	Yes	The RPEA document (**Annex C**) explains about appeal procedure against "Not-Accredited" decision (Section 2.8.2). Further, the RPARC document (Annex D) explains about Appeal Board and Appeal Committee (Section 5).
3.	The accreditation agency's criteria for accreditation include requirements for:		References for this section forward are the **IABEE Accreditation Criteria (Annex B)** which consist of Common Criteria, Criteria Guide, and Discipline Criteria.
	a) Programme outcomes that are consistent with the purpose of the programme. Note: Programme outcomes in item 3a are not expected to conform fully to the Graduate Attribute exemplars at this stage.	Yes	**Criterion 1 on Orientation of the Graduate Competence** states that Program shall define the profile of graduates to be envisaged as autonomous professionals by considering country's potential resources, cultures, needs and interests. Further, it states that Program shall establish its own expected learning outcomes which consist of abilities to utilize knowledge, skills, resources and attitudes as described in the (a) to (j) items and any additional requirement in its Discipline Criteria (if any) to be acquired by the student at the time of completion of the study. The (a) to (j) items are learning outcomes criteria developed by IABEE referring to the Graduate Attribute exemplars.
	b) A curriculum providing a broad basis for engineering practice;	Yes	**Criterion 2.1 on Curriculum** asks Program to ensure that the curriculum includes proportionally subject areas of mathematics and discipline-specific natural sciences, discipline-specific engineering science and technology, information and communication technology, engineering design and problem-based experiments, as well as general education [**Article (1)**]. It also asks Program to consider inputs from Program's stakeholders in the process of curriculum development [**Article (2)**]. It further asks Program that the curriculum shall indicate the structural relationship and contributions of the subject courses to fulfill learning outcomes. Procedures, including syllabus, shall be established and documented so that the expected learning process can be implemented in a controlled way [**(Article (3)**]. Lastly, the criterion on curriculum asks the provision of exposure for the students to engineering practices and major design project experience using engineering standards and multiple realistic constraints based on knowledge and skills acquired in preceding course work [**(Article (4)**].
	c) A suitable environment to deliver the programme;	Yes	**Criterion 2.3 on Students and Academic Atmosphere, in article (3)** asks Program to create and maintain good academic atmosphere conducive to successful learning. Further in **Criterion 2.3.4 on Facility**, Program is asked to ensure the availability and accessibility of facilities for effective functioning of the learning process and attainment of the learning outcomes.

	d) Adequate leadership for the programme;	Yes	**Criterion 2.5 on Institutional Responsibility** asks Program to define and manage the process for the provision of the educational service, including education design, curriculum development and delivery, and assessment of learning. **Criteria Guide of this article** further asks Program to describe its governance and its adequacy to ensure the quality and continuity of the program and how the leadership is involved in decisions that affect the program.
	e) Suitably qualified engineering practitioners teaching in the programme;	Yes	**Criterion 2.2 on Faculty** demands Program to provide necessary number, qualification and competence of faculty members for performing learning process, including planning, delivering, evaluating, and continually improving its effectiveness in order to achieve the learning outcomes. Further, each **Discipline Criteria** would normally address more specific requirements on the qualification of faculty teaching in the Program.
	f) Appropriate entry and progression standards; a*nd*	Yes	**Criterion 2.3 on Students and Academic Atmosphere** asks Program to define and implement an entry standard for both new and transfer students, as well as transfer of credits. Also, the criterion asks Program to define and implement ongoing monitoring of student progress and evaluation of student performance. Procedures of quality assurance shall be established to ensure that adequacy of standards is achieved in all assessments.
	g) Adequate human, physical and financial resources for the programme.	Yes	Adequacy of physical resources is addressed in **Criterion 2.4 on Facility**. Meanwhile, human resources adequacy is addressed in **Criterion 2.2 on Faculty**. Financial resource adequacy is addressed in **Criterion 2.5 on Institutional Responsibility**.

8. Response to Schedule B2

Criteria for Admission to and Maintenance of Signatory Status in an Accord

8.1. Conformity to Accord Practice

8.1.1. Professionalism, Ethics & Objectivity

IABEE upholds high standards of professionalism, ethics, and objectivity in all accreditation processes and system. Establishment of IABEE accreditation system involves key committees, namely Executive Committee (EXC), Criteria Committee (CC), Evaluation and Accreditation Committee (EAC), Accreditation Council (AC), and Appeal Board, each assumes different and specific roles and responsibilities.

Policies and procedures on Code of Ethics, Conflict of Interests, and Confidentiality are established and maintained. Refer to Rules and Procedures of Accreditation-related Committee (RPARC) Chapters 7, 8, and 9, as well as Rules and Procedures of Evaluation and Accreditation (RPEA) Chapter 2.1, Both, RPARC and RPEA documents are attached in the appendix section.

8.1.2. Competence & Standing of Evaluators

IABEE has been putting its best efforts to make sure that all involved in programme evaluation are competent and are of high standing as educators or practitioners in the profession. These are shown by the followings.

- Evaluations are conducted by Program Evaluators from academic and industrial background who have fulfilled eligibility requirements (RPARC Chapter 3). High standards of recruitment and training processes are established to ensure competent evaluators. (RPARC Chapter 6).

- Program evaluation processes are supported by Online Evaluation System (OES) managed by competent administration staff. IABEE OES is accessible through https://evaluation.iabee.or.id/. A valid pair of username and password is required to get access.

- Technical meeting inviting all representatives from programs to be evaluated is convened at the beginning of an evaluation cycle to ensure the programs' correct understanding of accreditation system and its requirements, as well as smooth evaluation processes.

- Refresher training inviting all evaluators assigned for current evaluation cycle is convened to strengthen evaluators' competency and share any recent update (Refer to RPARC Chapter 6.6).

- Evaluation system includes feedback from evaluated programs to improve evaluators' performance and overall accreditation system. Refer to RPEA Chapter 2.8.1. The feedback mechanism is included in IABEE OES.

- Mechanism exists to improve program evaluators' competency based on previous performance and feedbacks. Refer to RPARC Chapter 6.8.

8.1.3. Application of Standards & Procedures

IABEE has been putting its best efforts to make sure consistent and fair application of defined evaluation standards. These are exemplified by the followings.

- Evaluation standards and processes are outlined in RPEA Chapter 2.5. Consistency of application of standards and processes of accreditation system is ensured closely by related committees and secretariat, and by taking advantage of the use of On-line Evaluation System with pre-defined and clear schedule.

- Referring to RPEA Chapter 2.5, the processes include harmonization mechanisms conducted within and across engineering disciplines. These ensure objectivity, fairness, and consistency for accreditation decisions.

- Referring to RPEA Chapter 2.8.2, an appeal mechanism is provided to ensure fair accreditation decisions. Establishment of an Appeal Committee by the Appeal Board is outlined in RPARC Chapter 7.

- For fairness and transparency, evaluation standards and processes are documented and disclosed for the public through IABEE website.

- Recently IABEE has also published Evaluation Guide for Programs and Evaluators which is available for download.

8.1.4. Reporting & Decision Making

Accreditation report produced by IABEE justifies accreditation recommendations in sufficient detail to support decision-making. The report also clearly differentiates recommendations from requirements. The accreditation report is structured in such a way to include sufficiently detailed information on the level of fulfilment (score and comments) against each criterion to support accreditation decision-making. The report includes introductory part about the program, its strengths, shortcomings found, and observations. In this way, the report clearly differentiates between requirements and recommendations. The final editing process by the editorial team of the report manuscript is also carried out to ensure consistency in the use of terminology. Refer to RPEA Chapter 2.5.4, especially under sub-section Step EGA-26 Program Final Report. Rules are established to lead to accreditation decisions. Fulfilment to all criteria results in "Accredited" status, whereas any deficiency results in "Not- Accredited". Weakness against any criterion results in "Accredited with Interim Evaluation" either with or without on-site visit (RPEA Chapter 2.6 on Accreditation Decisions).

Regarding decision making, Accreditation Council is IABEE's decision making body, whose membership consists of 5-7 intellectual and influential members representing academics, professional societies, and industries. They do not have conflict of interest with programs and are not evaluators in that academic year. Refer to RPARC Chapter 4. Accreditation statistics from 2016 to 2019 cycles show a total of 45 programs have been evaluated. About 38% of programs evaluated for the first time received "Accredited" status with full validity period, while most programs (56%) are required to undergo Interim Evaluation. There are also 3 cases (7%) where a program received "Not Accredited" status.

In 2020-2021 cycle which was concluded on 31 March 2021, IABEE evaluated new accreditation request from 26 engineering programs. In conclusion, only 3 programs were accredited with full validity of 5 years, 10 programs accredited with interim evaluation, and 13 others not accredited. The top reason for not-accredited status was unresolved deficiency in fulfilling minimum proportion of 20% mathematics and discipline-related basic sciences in curriculum as required by the criteria.

These statistics reflects the capacity of IABEE to deal with difficult situations and to come up with decisions beneficial to the engineering community in the longer term.

8.2. Graduate Outcomes & Substantial Equivalence

IABEE learning outcomes criteria applied for accreditation is substantially equivalent to Washington Accord Graduate Attribute exemplars. IABEE has conducted a gap analysis to conclude the substantial equivalence. Analysis of Substantial Equivalence with the 2013 Washington Accord Graduate Attributes has been submitted to WA Executives in 2020 and attached in Appendix F.

In practice, IABEE accreditation criteria gives freedom to programs to establish their own learning outcomes by taking account of their respective institution's values, visions and missions, their resources, stakeholders' needs, and other considerations. However, IABEE criterion 1.3 on Program Learning Outcomes items (a) to (j) shall be satisfactorily covered by programs' learning outcomes. IABEE Criteria Guide on Criterion 1.3 states that program shall establish its own learning outcomes based on the autonomous professional profile to be acquired. The learning outcomes shall cover all graduate competences from (a) to (j) as mentioned in Common Criteria 1.3(3), which are expressed in such a way to give flexibility to program.

8.3. Sustainability & Management

8.3.1. Data & Statistics

Sustainability and adequate management of IABEE and its accreditation system can be seen from statistics of institutions and programs that have sought accreditation in Indonesia. Until 2019 when IABEE was accepted as Provisional Signatory of the Washington Accord, there were 11 institutions (private and

public) that requested accreditation for their respective programs. With the most recent 2020-2021 evaluation cycle, a total of 16 institutions have participated General Accreditation for their respective programs. If both, General and Provisional Accreditations are considered, by 2020-2021 evaluation cycle there are already 35 institutions applied for IABEE accreditation.

In terms of programs, IABEE has evaluated in total 83 programs for General Accreditation and 77 for Provisional Accreditation. These figures include programs evaluated in the on-going 2021-2022 evaluation cycle.

Every year, IABEE conduct Awareness Seminar for at least 3 times, which are self-organized by IABEE. In addition, IABEE keeps receiving request from HEIs and national engineering program associations throughout the year to explain IABEE Accreditation in their events. In 2021 alone, IABEE has conducted 8 such seminars up to early September.

Growing number of eligible programs due to governmental support on improving internal quality assurance and policy on achieving international recognition through accreditation is also anticipated to increase sustainability.

8.3.2. Re-Evaluation Cycle

Until 2021-2022 evaluation cycle there has been no program having gone through a full accreditation cycle and been re-evaluated. Prior to 2019-2020 evaluation cycle, re-evaluation period was 6 years. But since 2019-2020 it has been modified to 5 years. The first re-evaluation of programs is expected in 2022-2023 cycle (2 programs accredited in 2016).

8.3.3. Quality Assurance & Training

IABEE ensures the depth of considerations observed during the accreditation visit and decision-making meeting enable appropriate accreditation outcomes to be achieved for a range of evidence of program quality.

Accreditation visit serves as a medium to verify the level of fulfilment to each criterion previously reviewed based on program's Self Evaluation Report and its supporting evidence. Evaluation team is given enough time (3 days) to observe on-site evidence including relevant documents and records, interview key persons and program stakeholders, check learning facilities and environment in order to confirm and improve the accuracy of previously made judgement. Furthermore, post-visit chances are still given to program under evaluation to make improvements on identified shortcomings to the extent possible. Any improvement effort backed up by reasonable evidence will be considered in the Final Evaluation Report.

To improve consistency of judgement, Final Evaluation Report of all programs evaluated in the same accreditation cycle are harmonized within and across engineering disciplines before final recommendations on accreditation decision

are made. Finally, a decision-making meeting by Accreditation Council is convened to ensure that all processes have been conducted according to the rules and procedures and to take final decision on accreditation status.

IABEE has established the mechanisms for the periodic review of accreditation policies, criteria, and procedures. In fact, review of accreditation criteria, policies, and procedures can be conducted periodically or when emerging issues arise. Matters related to accreditation criteria are discussed by Criteria Committee, while those related to accreditation policies and procedures are taken care of by Evaluation and Accreditation Committee. Review results recommended by these committees are brought to Executive Committee meetings for further discussions and approval.

IABEE ensures sufficient depth of training of program evaluators. This is even started from applying high standards of recruitment and training process to ensure competent evaluators recruited from both academics and industrial practitioners. Furthermore, recruitment of evaluators is conducted by considering the needs of various engineering disciplines. Candidate evaluators shall fulfill eligibility requirements before invited to join the training series. The training series include: (1) Online Modular Training focusing on knowledge of accreditation system and processes; (2) 2-day Face-to-face Training focusing on gaining skills necessary to conduct on-site visit and to work as a part of an evaluation team; (3) assignment as observer (evaluator-in-training) to give an experience in a real on-site visit evaluation; and (4) Refresher Training focusing on sharing experiences, discussing emerging issues, and updating information regarding criteria and rules and procedures for on-going evaluation cycle.

A mechanism is established to evaluate the performance of candidate evaluators along the training series. This serves as the basis for considering the candidate's appointment as program evaluator and for individual improvement purposes. A survey module has been developed in IABEE Online Evaluation System to enable survey during each evaluation cycle involving 360 degrees feedback to improve evaluators' performance and overall accreditation system.

8.3.4. Leadership

IABEE ensures good leadership. In terms of organization, IABEE committees are led by committee chairs who have high expertise in engineering education, engineering practice, and quality assurance. As for evaluation teams, each team is led by a team chair with expertise in education, practice, and quality assurance and long experience in program evaluation.

8.3.5. Independence & Consistency of Decision Making

IABEE maintains independence and consistency of decision-making policies. IABEE organization clearly distinguishes the roles and responsibilities for policy making and accreditation decision making. The former is conducted by Executive Committee, while the later is by Accreditation Council, which is autonomous.

Consistent accreditation decisions are ensured to be made sustainable by the following mechanism: (1) evaluation report submitted by all evaluation teams are disclosed, discussed, and harmonized in two harmonization steps, i.e. within discipline and across disciplines in EAC meetings. (2) in the case of multiple teams assigned to an institution, harmonization of evaluation results between programs within the institution is made prior to submitting report; (3) recommendations of accreditation decisions by EAC are brought to Accreditation Council meetings for verification to ensure that all processes leading to recommendations have been implemented according to the Rules and Procedures. Having the recommendation verified, AC will make final accreditation decisions.

8.3.6. Wider IEA Involvement

Washington Accord is the first Education Accord under IEA applied by IABEE. In near future, IABEE plans to seek for membership in other accords, such as Sydney Accord. In June 2020, IABEE has been accepted as a Provisional Signatory member of the Seoul Accord – a multilateral agreement between accreditation agencies in the fields of computing and information technology.

	Schedule B2: Criteria for Admission to Full Signatory Status in an Accord	**Report analysis against Rules and Procedures requirements**	
		Meets Criteria? Yes/No	*Evidence provided/Comments*
4	The agency's accreditation system and processes conform to the Accord accepted practice as exemplified by:		
	a) High standards of professionalism, ethics and objectivity;	Yes	• Establishment of IABEE accreditation system involves key committees, namely Executive Committee (EXC), Criteria Committee (CC), Evaluation and Accreditation Committee (EAC), Accreditation Council (AC), and Appeal Board, each assumes different and specific roles and responsibilities Refer to https://iabee.or.id/en/about-iabee/organization/ • Policies and procedures on Code of Ethics, Conflict of Interests, and Confidentiality are established and maintained. Refer to Rules and Procedures of Accreditation-related Committee (RPARC) Chapters 7, 8, and 9, as well as Rules and Procedures of Evaluation and Accreditation (RPEA) Chapter 2.1, Both, RPARC and RPEA documents can be found at https://iabee.or.id/en/accrediation/rules-and-policies-for-evaluation-and-accreditation/
	b) All involved in programme evaluation are competent in the agency's accreditation system, and are of high standing as educators or practitioners in the profession;	Yes	• Evaluation are conducted by Program Evaluators from academic and industrial background who have fulfilled eligibility requirements. Refer to RPARC Chapter 3. • High standards of recruitment and training processes are established to ensure competent evaluators. Refer to RPARC Chapter 6. The information is also available at https://iabee.or.id/en/accrediation/requirements-to-be-evaluators/ • Program evaluation processes are supported by Online Evaluation System (OES) managed by competent administration staff. IABEE OES is accessible through https://evaluation.iabee.or.id/. A valid pair of username and password is required to get access. • Technical meeting inviting all representatives from programs to be evaluated is convened at the beginning of an evaluation cycle to ensure the programs' correct understanding of accreditation system and its requirements, as well as smooth evaluation processes. Evidence related to convened technical meetings (e.g. attendance list, photographs) is provided upon visit. • Refresher training inviting all evaluators assigned for current evaluation cycle is convened to strengthen evaluators' competency and share any recent update.

			Refer to RPARC Chapter 6.6. Evidence related to convened refresher trainings (e.g. attendance list, photographs) is provided upon visit. • Evaluation system includes feedback from evaluated programs to improve evaluators' performance and overall accreditation system. Refer to RPEA Chapter 2.8.1. The feedback mechanism is included in IABEE OES. Evidence related to the feedback is provided upon visit. • Mechanism exists to improve program evaluators' competency based on previous performance and feedbacks. Refer to RPARC Chapter 6.8
	c) The defined evaluation standards and processes are applied consistently and fairly;	Yes	• Evaluation standards and processes are outlined in RPEA Chapter 2.5. Consistency of application of standards and processes of accreditation system is ensured closely by related committees and secretariat, and by taking advantage of the use of On-line Evaluation System with pre-defined and clear schedule • Referring to RPEA Chapter 2.5, the processes include harmonization mechanisms conducted within and across engineering disciplines. These ensure objectivity, fairness, and consistency for accreditation decisions • Referring to RPEA Chapter 2.8.2, an appeal mechanism is provided to ensure fair accreditation decisions. Establishment of an Appeal Committee by the Appeal Board is outlined in RPARC Chapter 7. • For fairness and transparency, evaluation standards and processes are documented and disclosed for general public through IABEE website • Recently IABEE has also published Evaluation Guide for Programs and Evaluators, which is available for download from the link: https://iabee.or.id/wpcontent/uploads/2020/02/Evaluation-Guide.pdf
	d) The accreditation report records and justifies accreditation recommendations in sufficient detail to support decision-making and clearly differentiates recommendations from requirements.	Yes	• The accreditation report is structured in such a way to include sufficiently detailed information on the level of fulfilment (score and comments) against each criterion to support accreditation decision-making. The report includes introductory part about the program, its strengths, shortcomings found, and observations. In this way, the report clearly differentiates between requirements and recommendations. Refer to RPEA Chapter 2.5.4, especially under sub-section Step EGA-26 Program Final Report. • Rules are established to lead to accreditation decisions. Fulfilment to all criteria results in "Accredited" status, whereas any deficiency results in "Not-

			Accredited". Weakness against any criterion results in "Accredited with Interim Evaluation" either with or without on-site visit. Refer to RPEA Chapter 2.6 on Accreditation Decisions.
	e) The decision making body demonstrates capacity to make difficult decisions in a way likely to be beneficial to the engineering community in the longer term.	Yes	• Accreditation Council is IABEE's decision making body, whose membership consists of 5-7 intellectual and influential members representing academics, professional societies, and industries. They do not have conflict of interest with programs and are not evaluators in that academic year. Refer to RPARC Chapter 4. • Accreditation statistics from 2016 to 2019 cycles show a total of 45 programs have been evaluated. About 38% of programs evaluated for the first time received "Accredited" status with full validity period, while most programs (56%) are required to undergo Interim Evaluation. There is also 3 cases (7%) where a program received "Not Accredited" status. This, to a certain extent, reflects the capacity of IABEE to deal with difficult situations and to come up with decisions beneficial to the engineering community in the longer term.
5.	The graduate outcomes standard applied for accreditation is substantially equivalent to the Accord as exemplified by the Graduate Attribute exemplars as reflected in:		
	a) The agency's documented programme outcome standard;	Yes	• IABEE criteria on Program Learning Outcomes items (a) to (j) cover all required knowledge, skills, and attitudes that are substantially equivalent to the Accord's Graduate Attribute exemplars. Refer to the report of Analysis of Substantial Equivalence with the 2013 Version 3 Graduate Attributes – Washington Accord submitted by PII/IABEE
	b) The standard required of accredited programs in practice.	Yes	• IABEE accreditation criteria gives freedom to programs to establish their own learning outcomes by taking account of their respective institution's values, visions and missions, their resources, stakeholders' needs, and other considerations. However, IABEE criteria on Program Learning Outcomes items (a) to (j) shall be satisfactorily covered by programs' learning outcomes. IABEE Criteria Guide on Criterion 1.3 states that, "Program shall establish its own learning outcomes based on the autonomous professional profile to be acquired. The learning outcomes shall cover all graduate competences from (a) to (j) as mentioned in Common Criteria 1.3(3), which are expressed in such a way to give flexibility to Program" • Discussion has concluded within PII on how to give special recognition to graduates of IABEE-accredited programs in to become professional engineers
6.	The agency and its accreditation system are sustainable and adequately managed as indicated by:		

	a) Data from institutions offering educational programs that have sought accreditation in the jurisdiction;	Yes	• IABEE makes use of the BAN-PT (national agency conducting national compulsory accreditation) database on Program Operating Institutions/Higher Education Institutions. • Institutions offering engineering bachelor programs in Indonesia that have sought accreditation until 2019 cycle amount to 11 institutions, composed of both public and private institutions. • Annual Awareness Seminars conducted in several major cities from 2014 to 2019 witnessed participants from more than 30 different institutions. Most of them expressed an interest in seeking for accreditation from IABEE for their respective programs.
	b) Data regarding programs that have sought accreditation in the jurisdiction;	Yes	• Engineering bachelor programs in Indonesia that are eligible to seek for IABEE accreditation are those ranked A by the National Accreditation Agency for Higher Education (BAN-PT). These currently amount to 233 programs. Of these, 45 programs have sought General Accreditation (GA) until 2019 cycle • Apart from GA, IABEE offers Provisional Accreditation (PA) started from 2018 cycle. Substantial number of programs applying for PA so far (50 programs) indicates high demand for IABEE accreditation, and thus its sustainability. • Growing number of eligible programs due to governmental support on improving internal quality assurance and policy on achieving international recognition through accreditation is also anticipated to increase sustainability.
	c) The extent to which programs have gone through a full accreditation cycle and been re-evaluated;	Yes	• Re-evaluation cycle was of 6-year period but has now been modified to 5-year from 2019. The first re-evaluation of programs granted for 6-year accreditation will take place in 2022 (2 programs).
	d) The depth of considerations observed during the accreditation visit and decision making meeting enabling appropriate accreditation outcomes to be achieved for a range of evidence of programme quality;	Yes	• Accreditation visit serves as a medium to verify the level of fulfilment to each criterion previously reviewed based on program's Self Evaluation Report and its supporting evidences. Evaluation team is given enough time (2.5 days) to observe on-site evidences including relevant documents and records, interview key persons and program stakeholders, check learning facilities and environment in order to confirm and improve the accuracy of previously made judgement. Furthermore, post-visit chances are still given to program under evaluation to make improvements on identified shortcomings to the extent possible. Any improvement effort backed up by reasonable evidences will be considered in the Final Evaluation Report.

			• To improve consistency of judgement, Final Evaluation Reports of all programs evaluated in the same accreditation cycle are harmonized within and across engineering disciplines before final recommendations on accreditation decision are made. • Finally, a decision making meeting by Accreditation Council is convened to ensure that all processes have been conducted according to the rules and procedures and to take final decision on accreditation status.
	e) Mechanisms for the periodic review of accreditation policies, criteria and procedures;	Yes	• Review of accreditation criteria, policies, and procedures can be conducted periodically or when emerging issues arise. Matters related to accreditation criteria are discussed by Criteria Committee, while those related to accreditation policies and procedures are taken care by Evaluation and Accreditation Committee. Review results recommended by these committees are brought to Executive Committee meetings for further discussions and approval. Refer to https://iabee.or.id/en/about-iabee/organization/
	f) The depth of training of programme assessors;	Yes	• High standards of recruitment and training process are established to ensure competent evaluators recruited from both academics and industrial practitioners. • Recruitment of evaluators is conducted by considering the needs of various engineering disciplines. Candidate evaluators shall fulfill eligibility requirements before invited to join the training series. • The training series include: (1) Online Modular Training focusing on knowledge of accreditation system and processes; (2) 2-day Face-to-face Training focusing on gaining skills necessary to conduct on-site visit and to work as a part of an evaluation team; (3) assignment as observer (evaluator-in-training) to give an experience in a real on-site visit evaluation; and (4) Refresher Training focusing on sharing experiences, discussing emerging issues, and updating information regarding criteria and rules and procedures for on-going evaluation cycle. • A mechanism is established to evaluate the performance of candidate evaluators along the training series. This serves as the basis for considering the candidate's appointment as program evaluator. • Survey system is established during each evaluation cycle involving 360 degrees feedback to improve evaluators' performance and overall accreditation system

			• More information on Program Evaluator Training is provided in Refer to RPARC Chapter 6.
	g) The accreditation programme is led by personnel with appropriate expertise in engineering education, engineering practice and educational quality assurance	Yes	• In terms of organization, IABEE committees are led by committee chairs who have high expertise in engineering education, engineering practice, and quality assurance. As for evaluation teams, each team is led by a team chair with expertise in education, practice, and quality assurance and long experience in program evaluation.
	h) Separation of policy making from accreditation decision making	Yes	• IABEE organization clearly distinguishes the roles and responsibilities for policy making and accreditation decision making. The former are conducted by Executive Committee, while the later are by Accreditation Council, which is autonomous. Refer to https://iabee.or.id/en/about-iabee/organization/
	i) Mechanism exists to make consistent accreditation decisions sustainably;	Yes	• Consistent accreditation decisions are ensured to be made sustainable by the following mechanism: (1) evaluation report submitted by all evaluation teams are disclosed, discussed, and harmonized in two harmonization steps, i.e. within discipline and across disciplines in EAC meetings. (2) in the case of multiple teams assigned to an institution, harmonization of evaluation results between programs within the institution is made prior to submitting report; (3) recommendations of accreditation decisions by EAC are brought to Accreditation Council meetings for verification to ensure that all processes leading to recommendations have been implemented according to the Rules and Procedures. Having verified, AC will make final accreditation decisions.
	j) The agency's history of involvement (if any) with other Education Accords under the International Engineering Alliance with evidence of general, consistent conformance with published accreditation policies and procedures.	Not yet	• Washington Accord is the first Education Accord under IEA applied by IABEE. In near future, IABEE plans to seek for membership in other accords, such as Sydney Accord, Dublin Accord, and Seoul Accord.

APPENDICES & SUPPORTING DOCUMENTS

APPENDIX A – Short CV of IABEE Executive Committee Members

Misri Gozan

Chair of Executive Committee

Dr. Misri is a professor of chemical engineering. In August 2018, he's elected as the Chair of IABEE Executive Committee. He obtained his Dr.-Ing. degree from Technical University of Dresden, Germany in 2004, and M. Tech. degree from Massey University, New Zealand. Since 2007, he has been serving as assessor/evaluator for the National Accreditation Agency for Higher Education (BAN-PT). He was involved in the preparation of IABEE establishment in 2014, and the development of IABEE afterwards. He is a lecturer and researcher at Bioprocess Engineering Program, Chemical Engineering Department, Universitas Indonesia. He is also the Director of Research Centre for Biomedical Engineering, at Universitas Indonesia. He has research interests in the field of bioprocess engineering and biochemical products from biomass. He joined the Institution of Engineers Indonesia (PII) in 2004 and registered as IPU (Prominent Professional Engineer) in 2016.

Muhammad Romli

Chair of International Committee

Dr. Romli is an agro-industrial senior engineer and professor of the Faculty of Engineering and Technology, Bogor Agricultural University (IPB). He received his master's degree in biotechnology and Ph.D. in chemical engineering from The University of Queensland, Australia. Romli has been working for Bogor Agricultural University with more than 30 years lecturing experience in the areas of industrial pollution control and management, cleaner industrial production, and industrial ecology. He has served many positions in the university, including Head Division of Environmental Engineering and Management (1993-2000), Director of Center for Development of Safe Agro-industrial Processes (1997-2000), and Head Department of Agro-industrial Technology (2000-2008). He is also an active member of PII, serving as Chair of PII Chapter for Agroindustry in 2015. Romli has an extensive experience as auditor in quality assurance of education, quality and environmental management systems (ISO 9001 and 14001), and as assessor of National Committee of Accreditation for Research and Development Institution (KNAPPP).

Satryo Soemantri Brodjonegoro

Chair of Accreditation Council

Emeritus Professor in Mechanical Engineering, Institut Teknologi Bandung (ITB), Dr. Satryo is the President of the Indonesian Academy of Sciences. He has a long and distinguished academic and public service career. He was a faculty member of the Mechanical Engineering Department of ITB than 30 years since 1980. He has served many positions in ITB including Chairman of the Department (1992-1995) and Vice Dean of Academic Affairs (1995-1998). From 1999-2007 Satryo served as Director General of Higher Education of the Ministry of National Education, Indonesia. He obtained his Ph.D. in Mechanical Engineering from the University of California at Berkeley in 1985. His research areas include tribology, fracture mechanics, finite element analysis, mechanical design, and higher education development and policy. He is a Fellow of the Indonesian Academy of Sciences since 2008. He served also as visiting professor in mechanical engineering at Toyohashi University of Technology, Japan. In April 2018 he was appointed as Special Advisor to Coordinating Minister of Maritime Affairs, Republic of Indonesia. He was the former Chair of IABEE Steering Committee in 2015-2016.

Sudjarwadi

Chair of Appeal Board

Emeritus Professor Dr. Sudjarwadi was a civil engineer in construction industry in 1970 to 1972. In 1974 he returned to his alma mater, Gadjah Mada University (UGM), to become a lecturer. After 37 years conducting research and teaching, in 2012 he retired as professor emeritus of civil engineering. He currently teaches as part time professor in UGM and Islamic University of Indonesia (UII) at Yogyakarta. He has long and distinguished career, both in academic and public service. He was an assistant director for UGM's Inter University Center for Engineering in 1988-1991. In 1991 he served as Assistant Dean of Faculty of Engineering. In 1994 to 1999 he was appointed as Secretary of Directorate General of Higher Education. Returning to UGM he served as the Dean and subsequently the Vice Rector for Academic Affairs. In 2007 was appointed as the Rector of UGM. After retirement, in 2013 he supervises a board for Indonesian International Education Foundation and serves as Independent Commissioner in PT Sri Rejeki Isman Tbk, a textile company considered as the best integrated textile industry in Southeast Asia. He assisted the Ministry of Education and Culture as chair of Education Committee in 2019. He was a key member of Steering Committee that contributes to IABEE during the initial phase of establishment.

Tjipto Kusumo

Chair of Finance Committee

Engineer Tjipto graduated from ITB with a degree in Engineering Physics in 1974. He has an extensive professional experience, starting in Elnusa company where he served as Manager of Instrument & Control Division. He moved to Tripatra Engineering company and retired from it in 2005, after serving several positions, including Technical Development Director, Off-Shore Projects Marketing Director, and Operation Senior Director. Later he served as Advisor for EPC companies and presently he is a commissioner for Java Energy Semesta, a CNG operation company. He also has academic related activities, including 6 years as practitioner lecturer for Engineering Physics Department of ITB. He also a member of Advisory Board of ITB Engineering Physics Program and Environmental Engineering Program of Islamic University of Indonesia Yogyakarta. He is also an active member of PII, where he co-founded PII Chapter for Engineering Physics in 1997. He was also the Head of the Chapter and the Head of Certification Committee as well as Continual Professional Development Committee. His professional titles as engineer include PII's IPM (Professional Engineer), APEC Engineer, as well as ASEAN Engineer

Arief Syaichu Rohman

Chair of Evaluation and Accreditation Committee

Dr. Arief obtained his bachelor's degree in Electrical Engineering from Institut Teknologi Bandung (ITB). He received an M.Eng.Sc. degree in Systems & Control from the University of New South Wales. He finished his Ph.D. in the same field in 2005 from the University of Newcastle, Australia. He worked for the Research & Development Division at PT IPTN, the Indonesian aircraft industry, in 1990 to 1992. Since 1992 he joined ITB and has been teaching undergraduate and graduate courses in Electrical Engineering at the School of Electrical Engineering & Informatics. He was the Chair of the Undergraduate Program in 2011-2015 and is currently the Chair of Quality Control Circle in the school. He joined PII and awarded IPM (Professional Engineer) title in 2017. He is also an active member of FORTEI (Indonesia Higher Education Forum in Electrical Engineering) where he served as Vice Chair in 2012-2014 and Chair in 2014-2016). He attended program evaluator training in JABEE Japan in 2015 and both IDEAL and PEV training in ABET USA in 2017, respectively. He is a member Control System Society of IEEE. He joined IABEE in 2015 and presently serves as EAC Chair of IABEE.

Tjokorde Walmiki Samadhi

Chair of Criteria Committee

Dr. Samadhi is an associate professor in Chemical Engineering at the Faculty of Industrial Technology at Institut Teknologi Bandung (ITB). He served as the Chemical Engineering Undergraduate Program Chair in 2012-2015, Vice Dean of Academic Affairs in 2015-2020, and currently as the Chemical Engineering Graduate Program Chair. He presided as Undergraduate Curricular Section Coordinator of the Indonesian Association of Chemical Engineering Higher Education (APTEKIM) in 2012-2015, during which he coordinated the formulation of national core curriculum recommendations for undergraduate chemical engineering programs in Indonesia. He has been a member of the IABEE Evaluation and Accreditation Committee and Program Evaluator since 2015. Dr. Samadhi received his Bachelor's and Master degrees in Chemical Engineering from ITB, and PhD in Ceramic Science from Alfred University in New York State, USA in 2003. His academic interests include the development of oxide materials, utilization of inorganic waste materials, high-temperature thermochemical systems, and statistical experimental design and analysis. He received the distinction of 3rd Place in National Most Achieved Program Chairs in 2013 from the Ministry of Education and Culture for implementing outcome-based education and thorough improvements of the Chemical Engineering Program at ITB, which led to ABET accreditation in 2010.

Heru Dewanto

PII President, IABEE Executive Committee member

Dr. Heru is the current President of Indonesia Institute of Engineers (PII). He is a civil engineer by training. He received bachelor's degree in civil engineering from Gadjah Mada University (UGM), an M.Sc.Eng. degree in transport planning and engineering from the University of Leeds, and doctoral degree in strategic management from Graduate School of Economics of the University of Indonesia (UI). He also holds Senior Professional Engineer (IPU) title from PII. He has more than 21 years of experiences in infrastructure investment and business development, ranging from power, toll roads, railways, light rapid transit, wastewater treatment, clean water supply, terminals to housing in various global corporations and national enterprises. He is currently the President Director of PT. Cirebon Energi Prasarana, an independent power producer for 1x1000 MW ultra-supercritical clean coal technology to be firstly applied in Indonesia. Prior to serving PII as president, he was PII Vice President in 2015-2018.

Illah Sailah

Chair of Public Affairs Committee

Dr. Illah is associate professor in agroindustrial process technology at Bogor Agricultural University (IPB). She received bachelor's degree in prost-harvest technology from IPB (1981), master's in chemical engineering from ITB (1986), and doctoral degree in chemical engineering from University of Queensland (1994). Apart from academic career, she has served various managerial positions in the Ministry of Education and Culture (MoEC). She was a key person and one of the initiators of the establishment of IABEE during her tenure as Director of Learning and Student Affairs of the MoEC in 2011-2014. She was also the first IABEE Chair of Executive Committee from 2015 to 2018. In addition to engineering, Dr. Illah pays a considerable interest in higher education development and research. She played a significant role in the development of Competence-based National Curriculum for undergraduate programs; a national project of the MoEC in 2005.

Tresna Soemardi

Executive Committee member

Dr. Tresna is professor in mechanical-biomechanical, product innovation, design, prototyping and development at Universitas Indonesia (UI). Apart from his academic career, he also serves as a consultant for PLN, the state-owned electricity generating company, in 2009-2012. He was also a commissioner for Commission for Supervision of Business Competion in 2007-2011. Tresna holds two bachelor's degrees, i.e. in mechanical engineering from ITB and economics/financial management from UI. He also has a M.Sc. degree in environmental studies, environmental science–human ecology and environmental economic from UI. His Ph.D. is in the field of applied mechanics and advanced composite material. Tresna is also a member of several professional associations, including ASME, SAE, SME-CME, and SAMPE

Faizal Safa

PII Executive Director,
IABEE Executive Committee member

Engineer Faizal is the Chairman of Immara Infoglobal, a national management consultant company headquartered in Jakarta. He is an industrial engineer by training, a senior professional engineer (IPU), and active member of PII. He has been serving PII for various positions, including Vice Chair for Continuous Professional Development committee, member for Industrial Company Development task-force under the PII Chapter for Industrial Engineers, and the most recent appointment as PII Executive Director. He is also the chair of Industrial Management and Engineering Graduates Association.

Sri Hartati

Executive Committee member

Dr. Sri Hartati is professor in computer science at Faculty of Mathematics and Natural Sciences, Gadjah Mada University (UGM). She received bachelor's degree in computer science from UGM in 1986. Her master's and doctoral degrees were obtained from University of New Brunswick, Canada, also in the field of computer science in 1990 and 1996, respectively. Her research interests cover the fields of intelligent systems including knowledge-based system, reasoning system, expert system, fuzzy system, pattern recognition, decision support system, medical computing, and software computation using ANN, fuzzy logic, and genetic algorithm. Besides teaching and conducting research, she is also active in several professional associations, including Computer Science, Electronics and Instrumentation Support Society, Indonesian Physics Society, Indonesian Mathematical Society, and APTIKOM, which is National Higher Education Association for Informatics and Computer Science. She represents APTIKOM in IABEE Executive Committee to pave the way for IABEE's future membership in Seoul Accord.

Berlian Kushari

Secretary-General

Engineer Berlian is a civil engineer by training and a registered professional engineer of PII. He received his bachelor's engineering degree from Gadjah Mada University in 2001 and master's degree (M. Eng.) from Chulalongkorn University, Thailand, in 2005. He served as a consultant to the Ministry of Public Works, Directorate General of Highway Administration for various road safety and pavement management projects in 2007-2017. He also contributed to the development of provincial and national transportation systems planning conducted by the Ministry of Transportation in 2011-2012. He has an academic position in the Faculty of Civil Engineering and Planning of the Islamic University of Indonesia in Yogyakarta and was appointed secretary of Undergraduate Civil Engineering Program in 2014-2018. In 2015, Berlian joined IABEE Evaluation and Accreditation Committee. He was appointed to serve as IABEE Secretary-General since 2019.

APPENDIX B – Accreditation Criteria for Bachelor Engineering Programs

Accreditation Criteria for Engineering Programs

Developed according to the Graduate Attribute Exemplars of the Washington Accord

Version 2020

- Common Criteria
- Criteria Guide
- Discipline Criteria

Indonesian Accreditation Board for Engineering Education
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Document Control

The International Common Criteria and Criteria Guide version 2020 for Engineering Programs have been approved by IABEE Executive Committee on 16 January 2020.

This 2020 version document replaces the version published in 2015. Changes made in this version are as follows:

- Overall grammatical checks and revisions,
- Inclusion of definition of parallel Programs in accordance to the PSDKU (*Program Studi di Luar Kampus Utama*) scheme,
- Addition of the modifier 'complex engineering problem' in graduate competence criterion point (d),
- Simplification of Criteria Guide for sub-criterion 2.3.2.,
- Addition of facility safety aspect in the description of sub-criterion 2.4.,
- Editorial restructuring of Criteria Guide for sub-criterion 3.1., and
- Editorial restructuring of Criteria Guide for sub-criterion 3.2.

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Common Criteria

Preamble

The Indonesian Accreditation Board for Engineering Education (IABEE) builds this set of Criteria using outcome-based education approach. All engineering education programs seeking international accreditation from IABEE shall fulfill the following Criteria.

1. Orientation of the Graduate Competence

1.1. Program shall define the profile of graduates to be envisaged as autonomous professionals by considering country's potential resources, cultures, needs and interests.

1.2. Program shall inform its students and faculty with the envisaged autonomous professional profile and widely publicize it.

1.3. Program shall establish its expected Learning Outcomes which consist of abilities to utilize knowledge, skills, resources and attitudes as described in the following (a) to (j) items to be acquired by the student at the time of completion of the study:

(a) an ability to apply knowledge of mathematics, natural and/or materials sciences, information technology and engineering to acquire comprehensive understanding of engineering principles,

(b) an ability to design components, systems, and/or processes to meet desired needs within realistic constraints in such aspects as law, economic, environment, social, politics, health and safety, sustainability as well as to recognize and/or utilize the potential of local and national resources with global perspective,

(c) an ability to design and conduct laboratory and/or field experiments as well as to analyze and interpret data to strengthen the engineering judgment,

(d) an ability to identify, formulate, analyze, and solve complex engineering problems,

(e) an ability to apply methods, skills and modern engineering tools necessary for engineering practices,

(f) an ability to communicate effectively in oral and written manners,

(g) an ability to plan, accomplish, and evaluate tasks under given constraints,

(h) an ability to work in multidisciplinary and multicultural team,

(i) an ability to be accountable and responsible to the society and adhere to professional ethics in solving engineering problems, and

(j) an ability to understand the need for life-long learning, including access to the relevant knowledge of contemporary issues.

2. Learning Implementation

2.1. Curriculum

2.1.1. Curriculum shall include the following subject areas:

(a) Mathematics and discipline-specific natural sciences

(b) Discipline-specific engineering science and technology

(c) Information and communication technology

(d) Engineering design and problem based experiments

(e) General education, which includes morality, ethics, socio-culture, environment and management

2.1.2. Curriculum development shall consider input from Program stakeholders.

2.1.3. Curriculum shall indicate the structural relationship and contributions of the subject courses to fulfill Learning Outcomes. Procedures, including syllabus, shall be established and documented so that the expected learning process can be implemented in a controlled way.

2.1.4. Curriculum shall ensure that the students are exposed to engineering practices and major design project experience using engineering standards and multiple realistic constraints based on knowledge and skills acquired in preceding course work.

2.2. Faculty

2.2.1. The Program shall provide necessary number, qualification and competence of faculty members for performing learning process, including planning, delivering, evaluating, and continually improving its effectiveness in order to achieve the Learning Outcomes.

2.2.2. The Program shall ensure that faculty members are aware of the relevance and importance of their roles and contributions to the Learning Outcomes.

2.3. Students and Academic Atmosphere

2.3.1. The Program shall define and implement an entry standard for both new and transfer students, as well as transfer of credits.

2.3.2. Program shall define and implement ongoing monitoring of student progress and evaluation of student performance. Procedures of quality assurance shall be established to ensure that adequacy of standards is achieved in all assessments.

2.3.3. The Program shall create and maintain good academic atmosphere conducive to successful learning.

2.3.4. The Program shall promote co-curricular activities for character building and enhancing the students' awareness on the country's needs.

2.4. Facilities

Program shall ensure the availability, accessibility, and safety of facilities for effective functioning of the learning process and attainment of the Learning Outcomes.

2.5. Institutional Responsibility

2.5.1. The Program shall define and manage the process for the provision of the educational service, including education design, curriculum development and delivery, and assessment of learning.

2.5.2. The Program Operating Institution shall make efforts to establish resources, supporting service and cooperation with stakeholders on research, education and/or service to community with due consideration to existing local resources.

3. Assessment of the Learning Outcomes

3.1. The Program shall ensure that an effective assessment process of Learning Outcomes based on established performance indicators is implemented and maintained at planned intervals using appropriate methods.

3.2. The Program shall ensure that graduates of the program achieve all expected Learning Outcomes.

4. Continual Improvement

4.1. Based on Program Learning Outcomes assessment results, the Program shall perform an evaluation at planned intervals with output in the form of decisions to improve the effectiveness of the educational process and resources.

4.2. The Program shall maintain documents and records related to the implementation of evaluation, the results and their follow-up.

Criteria Guide

0. Preamble

The Indonesian Accreditation Board for Engineering Education (IABEE) establishes this set of Criteria using outcome-based education approach. All engineering education programs seeking international accreditation from IABEE shall fulfill the following Criteria.

0.1. IABEE Common Criteria (CC) are established as a framework to perform accreditation of higher education programs. These CC comprise of elements that must be fulfilled by the Study Program to be accredited.

0.2. Programs to be accredited are four-year engineering Bachelor Programs or other higher education programs which IABEE considers as equivalent.

0.3. The Program is not restricted to single Programs operated by a Department or Faculty. A Program may be formed and/or operated by multiple Departments / Faculties. Programs may include matriculated learning activities outside of its home campus, in conjunction with other higher education institutions.

0.4. In cases where a Program is offered as parallel classes, evaluation by IABEE shall encompass all parallel classes. In cases where multiple Programs of the same nomenclature are offered in multiple locations by the same Program-Operating Institution (such as Programs established according to the *Program Studi di Luar Kampus Utama* (PKSDU) scheme as defined by the Indonesian Ministerial Regulation of *Peraturan Menteri Riset, Teknologi, dan Pendidikan Tinggi* No. 1/ 2017), evaluation by IABEE shall treat the parallel Programs as separate entities.

0.5. The Program shall define the profile of autonomous professionals to be fostered, and define the knowledge, skills, and attitudes as Learning Outcomes that graduates are expected to master upon completion of their study.

0.6. The Program should promote self-reliance, welfare, advancement, fairness and justice for the national and global community in general, based on science, technology, culture and sustainable utilization of natural resources.

0.7. The Program is required to design the curriculum systematically to ascertain the achievement of Program Learning Outcomes. Student and faculty should be aware of these Learning Outcomes.

0.8. The Program must disclose its Learning Outcomes to the public. The Program is also required to engage in continual improvement and at the same time to consider the sustainability of operation.

0.9. Common Criteria consist of 4 elements, following the management approach of PDCA (Plan-Do-Check-Act) continual improvement cycle. Criterion 1 describes the orientation of the graduate competence, Criterion 2 explains the learning implementation, Criterion 3 explains the assessment of the expected Learning Outcomes, and Criterion 4 explains the continual improvements.

0.10. In addition to these Common Criteria, Program seeking for accreditation shall fulfill also the Category and Discipline Criteria, as well as eligibility requirements and accreditation policies stipulated in the Rules and Procedures of Evaluation and Accreditation (RPEA).

1. Orientation of the Graduate Competence

1.1. The Program shall define the profile of graduates to be envisaged as Autonomous Professionals by considering country's potential resources, cultures, needs and interests.

1.1.1. The Program is required to define the Profile of the Autonomous Professionals intended to foster as its educational objectives, by taking account of:

(1) Local and/or national resources, such as human and physical resources.
(2) Local and/or national wisdoms,
(3) Local and national needs and interests
(4) Traditions, vision and mission of the education institution

1.1.2. The Program should demonstrate the process of establishing and periodic reviewing of the Autonomous Professional Profiles, including the involvements of the stakeholders.

1.2. The Program shall inform its students and faculty of the envisaged Autonomous Professional Profile and widely publicize it.

1.2.1. The envisaged Autonomous Professional Profile shall be informed to students and faculty and made accessible to the general public.

1.3. The Program shall establish its expected Learning Outcomes which consist of abilities to utilize knowledge, skills, resources and attitudes as described in the following (a) to (j) graduate competences to be acquired by the student at the time of completion of the study.

1.3.1. The Program shall establish its own Program Learning Outcomes based on the Autonomous Professional Profile to be acquired. The Learning Outcomes shall cover all graduate competences from (a) to (j) as referred to in Common Criteria 1 (3), which are expressed in such a way to provide flexibility to Program. It is important to note that the Learning Outcomes shall also include Category and Discipline Criteria

1.3.2. The Program shall establish procedures to conduct periodic review of the Learning Outcomes.

1.3.a. Ability to apply knowledge of mathematics, natural and/or materials sciences, information technology and engineering to acquire comprehensive understanding of engineering principles.

1.3.a.1. Engineering Principles refers to ideas, rules and concepts to be considered when solving an engineering problem. The set of principles may vary among engineering disciplines depending on the uniqueness of systems, problems, ethical issues, and problem-solving methods of the discipline.

1.3.a.2. Attainment of comprehensive understanding of engineering principles is indicated by mastery of mathematics, basic sciences (such as physics, biology, chemistry) and information technology relevant to the discipline of the Program, and the ability to utilize the aforementioned knowledge.

1.3.b. Ability to design components, systems, and/or processes to meet desired needs within realistic constraints in such aspects as law, economic, environment, social, politics, health and safety, sustainability as well as to recognize and/or utilize the potential of local and national resources with global perspective.

1.3.b.1. The ability to design components, systems, and/or processes is the hallmark competence of engineering education. Design implies the ability to utilize multidimensional thinking with knowledge of global perspective to develop components, systems, and/or processes to achieve specific objectives. It is not limited to drawing a plan, but also refers to the synthesis of various academic disciplines and technologies to pursue practicable solutions to a problem that does not necessarily have one correct answer.

1.3.b.2. Design also involves a process of optimization which considers multiple realistic constraints, such as law, economic, environment, social, politics, health and safety, and sustainability as well as utilization of the knowledge of culture, society and available resources.

1.3.c. Ability to design and conduct laboratory and/or field experiments as well as to analyze and interpret data to strengthen the engineering judgment.

1.3.c.1. This competence refers to the design and application of laboratory and/or field experiments within the broad context of engineering practice such as problem identification, testing of potential solution ideas, solution implementation plan, and other design-related activities.

1.3.c.2. Experiments may include activities in physical laboratories, computer simulations, and field experiments.

1.3.d. Ability to identify, formulate, analyze, and solve complex engineering problems.

1.3.d.1. Engineering problem solving involves iterative activities incorporating the definition of the problem, development of solution alternatives, selection of best alternative, application of solution, evaluation and validation of solution against multiple problem constraints, and revision of solution.

1.3.d.2. This competence should include the ability to:

- utilize techniques and methods for performing engineering works comprising survey, data analysis, planning, design, operation and maintenance.
- apply the engineering logical thinking for handling both of the design and troubleshooting context.
- utilize creative/innovative thinking and knowledge creation/co-creation skills.

1.3.e. Ability to apply methods, skills and modern engineering tools necessary for engineering practices

1.3.e.1. The Program shall have a clear definition of the methods, skills, and modern engineering tools appropriate for its level of study and engineering discipline, and how these are learnt throughout the curriculum. This definition shall include:

- ability to select a method and tools with their strength and limitation characteristics for a given problem
- ability to utilize and adjust the method and tools to suit specific problems

1.3.f. Ability to communicate effectively in oral and written manners

1.3.f.1. This competence indicates the need of active and effective communication skills; socio-cultural perspective should be considered for the acceptability and workability of the implementation of engineering works.

1.3.f.2. These oral and written communications should include the use of engineering standards.

1.3.f.3. The Program shall ensure that a measurable portion of the oral and/or written communications involve the use of internationally recognized languages.

1.3.g. Ability to plan, accomplish, and evaluate tasks under given constraints

1.3.g.1. This competence refers to the ability to plan, accomplish, and evaluate tasks associated with any curricular activity deemed appropriate by Program for its assessment and evaluation. The assessment should focus more on the students' task management skills rather than the substantial outcome of the task itself.

1.3.h. Ability to work in multidisciplinary and multicultural teams

1.3.h.1. This competence refers to the ability to work collaboratively with people from different technical disciplines, fields and cultural backgrounds.

1.3.h.2. Multicultural concerns such as tolerance, mutual understanding, appreciation on differences in building a synergy, are important considerations for the success of a teamwork.

1.3.h.3. Multidiscipline circumstances may cover disciplines within engineering and non-engineering disciplines.

1.3.i. Ability to be accountable and responsible to the society and adhere to professional ethics in solving engineering problems

1.3.i.1. This competence refers to the understanding on the following issues and the ability to elaborate, discuss, present argument, and/or respond accordingly:

- the impact of technology of related engineering fields on public welfare, environmental safety and sustainable development
- the engineering ethics and regulations
- the engineering history and standard & code philosophy in design.

1.3.j. Ability to understand the need for life-long learning, including access to the relevant knowledge of contemporary issues

1.3.j.1. The Program is required to assist students to become accustomed to independent and continuous learning through lectures, research, experiments, practical training, exercises and assignment.

1.3.j.2. This competence refers to understanding the necessity of continuous professional development, an ability to acquire updated information and knowledge, and an awareness of the importance of sharing knowledge.

2. Learning Implementation

2.1. Curriculum

2.1.1. Curriculum of the Program shall include the following subject areas:

a) Mathematics and discipline-specific natural sciences

b) Discipline-specific engineering science and technology

c) Information and communication technology

d) Engineering design and problem-based experiments

e) General education, which includes morality, ethics, socio-culture, environment and management

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2.1.1.1. The Program shall ensure that the curriculum meets the abovementioned subject areas appropriate to engineering regardless of the subject/course names. The Program must ensure that the curriculum devotes adequate attention and time to each component, consistent with the Program Learning Outcomes, which include (expressed as percentage of total coursework load in semester credits (SKS)):

- A minimum of 20% of a combination of college level mathematics and basic sciences (some with experimental experience) appropriate to the discipline. Basic sciences are defined as courses such as biological, chemical, or physical sciences.
- A minimum of 40% of engineering topics, consisting of engineering sciences and engineering design appropriate to the student's field of study. The engineering sciences have their roots in mathematics and basic sciences but carry knowledge further toward creative application. These studies provide a bridge between mathematics and basic sciences on the one hand and engineering practices on the other. Engineering design is the process of devising a system, component, or process to meet desired needs. It is a decision-making process, in which the basic sciences, mathematics, and the engineering sciences are applied to convert resources optimally to meet the stated needs.
- A maximum of 30% general education components that complement the technical content of the curriculum and are consistent with the Learning Outcomes.

2.1.2. Curriculum development shall consider input from Program stakeholders.

2.1.2.1. The Program should demonstrate on how to develop the curriculum and to assure the requirement of the society, industry and professional fields.

2.1.2.2. There must be a documented, systematically utilized, and effective procedure describing the way to meet the need of stakeholders and to review the curriculum periodically to ensure its consistency with the institutional mission, the stakeholders needs, and these criteria.

2.1.2.3. The Program should provide sufficient opportunity for the stakeholders to discuss Program educational objectives/Profile of Autonomous Professionals, and to foster closer collaboration.

2.1.3. The Curriculum must indicate the structural relationship and contributions of the subject courses to fulfill Learning Outcomes. Procedures, including syllabus, shall be established and documented so that the expected learning process can be implemented in a controlled way.

2.1.3.1. The Program shall describe how the curriculum content and structure are aligned to enable the attainment of Program Learning Outcomes by students.

2.1.3.2. The Program should describe how specific requirements of each curricular area in Common Criteria or Discipline Criteria can be met, both in terms of load and depth of the curricular content.

2.1.3.3. The Program shall establish syllabi for all courses designed to satisfy mathematics, science, and discipline-specific requirements or any applicable criteria.

2.1.3.4. The Program is required to implement educational activities for students to achieve its Program Learning Outcomes.

2.1.3.5. The Program is required to systematically design curriculum to enable students to achieve the expected Program Learning Outcomes within the intended period of study.

2.1.3.6. The Program is required to adequately inform the faculty and students through various means such as guidebooks, orientation programs etc. about the curriculum, and how the Program Learning Outcomes will be attained through the learning process.

2.1.4. The Curriculum shall ensure that students are exposed to engineering practices and major design project experience which incorporates engineering standards and multiple realistic constraints based on knowledge and skills acquired in preceding coursework.

2.1.4.1. The Program must provide opportunity to students to develop competence in practical application of engineering skills, combining theory and experience along with the use of other relevant knowledge and skills. Training in engineering practices may be supported by several courses (subjects) but should culminate in a major design project. This major project serves as a capstone for the program which requires students to integrate knowledge and skills acquired in earlier coursework.

2.1.4.2. The Program shall define curriculum subjects to optimally support mainstream discipline specific requirements and to provide opportunity for students to acquire practical experience in implementing the subjects in an actual working environment.

2.2. *Faculty*

2.2.1. The Program shall provide necessary number, qualification and competence of faculty members for performing learning process, including planning, delivering, evaluating, and continually improving its effectiveness in order to achieve the Learning Outcomes.

2.2.1.1. The Program shall describe qualifications of the faculty and their adequacy to cover all curricular areas and to meet any applicable criteria.

2.2.1.2. This description should include the composition, size, experience and the extent and quality of faculty member involvement in interactions with students, student advising, and oversight of the Program.

2.2.1.3. The Program shall provide detailed descriptions of professional development activities for each faculty member and how activities such as sabbaticals, travel, workshops, seminars, etc., are planned and supported.

2.2.2. The Program shall ensure that faculty members are aware of the relevance and importance of their roles and contributions to the Learning Outcomes.

2.2.2.1. The Program shall describe the role played by the faculty with respect to the course creation, modification, and evaluation, and with respect to the definition, revision and attainment of the Learning Outcomes.

2.2.2.2. The Program shall have a method to institutionally develop and evaluate faculty educational activities.

2.2.2.3. The Program shall define and set up communication network among faculty members for close collaboration among the courses set in the curriculum to obtain better educational results.

2.3. Students and Academic Atmosphere

2.3.1. The Program shall define and implement an entry standard for both new and transfer students, as well as transfer of credits.

2.3.1.1. The Program shall establish written policies on student admission, covering the requirements and the process for accepting new students into Program, including information on how Program ensures and documents that students are meeting prerequisites and how it handles cases where prerequisite have not been met.

2.3.1.2. The Program shall describe the requirements and process for accepting transfer students and transfer credits.

2.3.2. Program shall define and implement ongoing monitoring of student progress and evaluation of student performance. Procedures of quality assurance shall be established to ensure that adequacy of standards is achieved in all assessments.

2.3.2.1. The Program shall establish policies and procedures to monitor students' progress and performance

2.3.2.2. The Program shall document the process by which student performance is monitored.

2.3.3. The Program shall create and maintain good academic atmosphere conducive to successful learning.

2.3.3.1. The Program shall develop supporting activities to create and maintain good academic atmosphere for learning, such as by providing student guidance and counseling on academic as well as non-academic aspects and career guidance.

2.3.3.2. The Program shall describe the process for advising and providing career guidance to students, how often students are advised, and who provides the advising.

2.3.4. The Program shall promote co-curricular activities for character building and enhancing the students' awareness on the country's needs.

2.3.4.1. The Program shall create and maintain various co-curricular activities particularly to improve the student soft skills, such as conducting *studium generale*, involving student in faculty research projects, and participating in scientific forums.

2.3.4.2. An entrepreneurial spirit as characterized by a deep sense of purpose, perseverance, resourcefulness, open-mindedness, and eagerness to learn should be emphasized in the learning process.

2.4. Facilities

2.4.1. Program shall ensure the availability, accessibility, and safety of facilities for effective functioning of the learning process and attainment of the Learning Outcomes.

2.4.1.1. The Program shall describe the facilities in terms of their ability to support the attainment of the Learning Outcomes and to provide an atmosphere conducive to learning, such as:

- offices (such as administrative, faculty, clerical, and teaching assistants) and any associated equipment,
- classrooms and associated equipment,
- in house laboratory facilities including those containing computers (describe available hardware and software) and the associated tools and equipment that support instruction, and field laboratory whenever necessary
- computing resources (workstations, servers, storage, networks including software)
- library services.

2.4.1.2. The Program shall describe and assess the adequacy of these facilities to support the scholarly and professional activities of the students and faculty.

2.4.1.3. The Program shall describe how students are provided with appropriate guidance regarding the use of tools, equipment, computing resources, laboratories, and other physical facilities to enable the utilization of these facilities in a safe and appropriate manner.

2.4.1.4. The Program shall also describe the policies and procedures for maintaining and upgrading the tools, equipment, computing resources, laboratories, library and other facilities used by students and faculty.

2.5. Institutional Responsibility

2.5.1. The Program shall define and manage the process for the provision of the educational service, including education design, curriculum development and delivery, and assessment of learning.

2.5.1.1. The Program shall describe the governance of the program and its adequacy to ensure the quality and continuity of the program and how the leadership is involved in decisions that affect the Program.

2.5.1.2. The Program shall describe the process used to establish the program's budget and provide evidence of continuity of institutional support for the program, including the sources of financial support for both permanent (recurring) and temporary (one-time) funds.

2.5.1.3. The Program shall describe how teaching is supported by the institution in terms of graders, teaching assistants, teaching workshops, etc.

2.5.1.4. The Program shall describe the adequacy of the staff (administrative, instructional, and technical) and institutional services provided to the Program.

2.5.2. The Program Operating Institution (POI) shall make efforts to establish resources, supporting service and cooperation with stakeholders on research, education and/or service to community with due consideration to existing local resources.

2.5.2.1. The POI shall make efforts to develop partnership with external institutions such as industry, research centers, and community units to foster the *Tridharma* (learning, research, and community engagement).The institution hosting the Program shall demonstrate the support to these efforts.

2.5.2.2. The improvement of the students' learning process through the engagement of academia, business, and/or the government in the development of local region through the use of local resources is viewed as a particular advantage of the Program.

3. Assessment of the Learning Outcomes

3.1. The Program shall ensure that an effective assessment process of Learning Outcomes based on established performance indicators is implemented and maintained at planned intervals using appropriate methods.

3.1.1. The Program shall define for each Learning Outcome the relevant performance indicators and appropriate assessment method as the basis for measuring achievements of these indicators.

3.1.2. A complete and clearly documented method and procedure for measuring the achievement of Learning Outcomes shall be established.

3.1.3. The assessment of each learning outcome shall be conducted at planned interval.

3.2. The Program shall ensure that graduates of the program achieve all expected Learning Outcomes.

3.2.1. The Program shall maintain effective policy and procedures to ensure that its graduates meet all graduation requirements.

3.2.2. The process and results of graduation requirement review shall be documented and the records are maintained as evidence that all graduates have been evaluated and that all Program Learning Outcomes have been fulfilled.

3.2.3. The Program shall have written policies and procedures on how handle non-performing students and how to terminate students who are not able to complete their study.

4. Continual Improvement

4.1. Based on Program Learning Outcomes assessment results, the Program shall perform an evaluation at planned intervals with output in the form of decisions to improve the effectiveness of the educational process and resources.

4.1.1. To ensure the continual improvement, the Program should run its educational activities by implementing a quality assurance system follows the P-D-C-A cycle as described in the preamble.

4.1.2. The evaluation shall be based on assessment of the Program Learning Outcomes attainment. The output of the evaluation shall contain recommendations on the improvement of learning materials, methods of delivery and other educational processes, suitability and adequacy of the Learning Outcomes with regards to the needs of stakeholders, and resources.

4.1.3. The evaluation shall be carried out at planned intervals following a method and procedure made well-known to the faculty. The evaluation method and procedure should be designed to enable the identification of constraints and root causes of problems, and therefore resulting in opportunities for improvement.

4.2. The Program shall maintain documents and records related to the implementation of evaluation, the results and their follow-up.

4.2.1. A documented procedure for the implementation of Program evaluation shall be established.

4.2.2. The documentation of evaluation implementation, its results and its follow-up shall be maintained and accessible to the faculty. These records provide evidence that evaluation has been conducted, the results have been implemented and periodic improvement has been achieved, thereby signifying the implementation of P-D-C-A cycle.

Discipline Criteria

Discipline Criteria for Agricultural and/or Bio-Systems Engineering in Bachelor Programs

Lead Society(ies):

- *Badan Kejuruan Teknik Pertanian Persatuan Insinyur Indonesia* (BKTP PII) – PII Chapter for Agricultural Engineers

These Discipline Criteria apply to bachelor programs that include "agricultural engineering", "bio-system engineering," "bio-production engineering", and similar modifiers in their titles.

Curriculum

The curriculum shall provide fundamental knowledge of engineering principles, agriculture and/or biosystem related sciences and ability to apply them to analyze, interpret, identify alternative solutions, and implement experiments for enhancing the performance agricultural systems or solution of common problems in agriculture and/or biosystem.

The learning and educational process articulating in the curriculum must be conducted in such a way to ensure that the graduates have sufficient knowledge, skill and attitude in the process to identify, analyze, formulate, design, use and control of machinery, structure and systems to solve engineering problems as required in the production of plant and animal, processing and handling the agricultural and/or biological materials.

The curriculum content that be considered as "educational components of mathematics, natural sciences and technologies" appropriate to the field shall include systematic subject clusters related with mathematics and natural sciences (focusing on multiple subjects such as, physics, chemistry, biology, or geography), and area of agricultural meteorology, irrigation, drainage and reclamation engineering (agricultural civil and environmental engineering), and/or area of agricultural machinery & automation, and/or area of agricultural work system and safety, and/or area of agricultural/biological production system, and/or area of agriculture/biological and environment information.

To conduct the learning and educational process the program shall be considered as "to provide a sufficient number of faculty members able to realize the curriculum with applicable educational methods and to improve the educational result of the program, and shall provide the faculty with institutional support."

Discipline Criteria for Agro-Industrial and Similarly-named Engineering Programs

Lead Society(ies):
o *Badan Kejuruan Industri Pertanian Persatuan Insinyur Indonesia* (BKIP PII) – PII Chapter for Agro-Industrial Engineers
o *Forum Komunikasi Program Studi Industri Pertanian Indonesia* (FKPSIP) -

These Discipline Criteria apply to engineering programs that include “agro-industrial” and similar modifiers in their titles

Curriculum

The curriculum prepares graduates with ability to design, develop, implement, control, evaluate, and improve the system performance of sustainable agroindustry, through an integrated approach of transformation process, system engineering, industrial management, and environmental aspects to increase the added value of agricultural/bio-based resources and their derivatives.

Faculty

Faculty members are required to have a combined expertise in the aspects of transformation, systems engineering, industrial management, and environment for developing sustainable and integrated agro-industrial system.

Discipline Criteria for Chemical, Biochemical, and Similarly-named Engineering Programs

Lead Society(ies):
o *Asosiasi Pendidikan Tinggi Teknik Kimia Indonesia* (APTEKINDO) – Association of Indonesian Higher Education Programs in Chemical Engineering
o *Badan Kejuruan Kimia Persatuan Insinyur Indonesia* (BKK PII) – PII Chapter for Chemical Engineers

These Discipline Criteria apply to engineering programs that include "chemical", "biochemical", "bioprocess", "bioenergy", and similar modifiers in their titles.

Curriculum

The curriculum shall provide a firm grasp in basic sciences which include chemistry and chemistry-related sciences, physics, and/or biology with some reference to local context as appropriate to the objectives of the Program. The curriculum must include the engineering application of these basic sciences to the design, analysis, and control of chemical, physical, and/or biological processes and the design and development of products, including the economics and hazards associated with these processes and products.

The learning process articulating this curriculum must be conducted in such a way to ensure that the graduates have sufficient knowledge, skills, and attitude in the process design, analysis, and control, and product design and development. The learning process must also enable students to apply research-based knowledge and research methods to identify, formulate, and solve engineering problems.

Discipline Criteria for Civil and Similarly-named Engineering Programs

Lead Society(ies):

- *Badan Kejuruan Teknik Sipil Persatuan Insinyur Indonesia* (BKTS PII) – PII Chapter for Civil Engineers

These Discipline Criteria apply to bachelor programs that include "civil engineering" and similar modifiers in their titles.

Curriculum

The program shall prepare graduates to be proficient in applied mathematics and natural sciences relevant to civil engineering, in a minimum of three recognized major civil engineering areas (namely structural, project management, geotechnical, water resources, environmental, and transportation), in conducting civil engineering experiments and analyzing and interpreting the resulting data, and in designing and integrating all professional components of the curriculum. The program shall also prepare graduates to explain basic concepts in management, business, public policy, and leadership, and explain the importance of ethics and professional licensure.

Faculty

Faculty members teaching courses on design should have either certification of professional engineer or qualification through experience in engineering design and practices.

Discipline Criteria for Earth and Energy Engineering Programs

Lead Society(ies):
o *Badan Kejuruan Teknik Kebumian dan Energi* PII – PII Chapter for Earth and Energy Engineers
o *Ikatan Ahli Geologi Indonesia* – Association of Geological Experts Indonesia
o Himpunan Ahli Geofisika Indonesia – Association of Geophysical Experts Indonesia

Curriculum

The program shall prepare graduates to be proficient in applied mathematics and natural sciences relevant to earth and energy engineering, such as geological engineering, geophysical engineering, or other scope related to earth and energy engineering mapping, in conducting earth and energy engineering data acquisition, data processing and interpretation for experiments and research toward design and planning of engineering or exploration purpose, in which it integrates all professional components in the curriculum. The program shall also prepare graduates to explain basic concepts in management, business, public policy, and leadership, and explain the importance of ethics and professional licensure.

Faculty

Faculty members teaching courses should have either certification in related earth and energy engineering profession, or professional engineer or qualification through experience in engineering practice.

Discipline Criteria for Electrical, Computer, Communications, Telecommunication and Similarly-named Engineering Programs

Lead Society(ies):
o *Forum Pendidikan Tinggi Teknik Elektro Indonesia* (FORTEI) – Indonesian Forum for Higher Education in Electrical Engineering
o *Badan Kejuruan Elektro Persatuan Insinyur Indonesia* (BKE PII) – PII Chapter for Electrical Engineers

These Discipline Criteria apply to engineering programs that include "electrical", "electronic(s)," "computer," "communication(s)," "telecommunication(s)," or similar modifiers in their titles.

Curriculum

The curriculum specifies subject areas appropriate to engineering and must include:

a. 30 credits minimum of a combination of university level mathematics and basic sciences (one with experimental experience) appropriate to the discipline.

b. 45 credits minimum of engineering topics, i.e. engineering sciences and engineering design, appropriate to the title of the program.

Students must be prepared for engineering practice through a curriculum culminating in a major design experience based on the knowledge and skills acquired in earlier course work to meet desired needs within realistic constraints.

The structure of the curriculum must provide both breadth and depth across the range of engineering topics implied by the title of the program.

The curriculum must include probability and statistics, with applications appropriate to the program name; mathematics through differential and integral calculus; basic sciences and engineering topics (including computing science) necessary to analyze and design complex electrical/electronic devices or systems containing hardware and/or software components.

The curriculum for programs containing the modifier "electrical," "electronic(s)," "communication(s)," or "telecommunication(s)" in the title must include advanced mathematics, such as differential equations, linear algebra, and complex variables.

The curriculum for programs containing the modifier "computer" in the title must include discrete mathematics.

The curriculum for programs containing the modifier "communication(s)" or "telecommunication(s)" in the title must include topics in communication systems.

The curriculum for programs containing the modifier "telecommunication(s)" must include design and operation of telecommunication networks for services such as but not limited to voice, data, image, and video transport.

Discipline Criteria for Engineering Physics and Similarly-named Engineering Programs

Lead Society(ies):

- *Badan Kejuruan Teknik Fisika Persatuan Insinyur Indonesia (BKTF PII)* – PII Chapter for Engineering Physics

These Discipline Criteria apply to bachelor programs that include “engineering physics” and similar modifiers in their titles.

Curriculum

The program must prepare graduates to engage in the development of the forefront of technology, such as and not limited to, instrumentation & control, built environment and energy systems, material design and processing, renewable energy

The curriculum must provide strong fundamentals on mathematics, physics, engineering sciences and engineering design. The curriculum should cover the capability to thrive in professional and industry sectors, such as engineering economics, project management and core competences of the forefront technology.

Faculty

The program shall demonstrate that those faculty members teaching courses that are primarily design in content are qualified to teach the subject matter by virtue of education and experience or professional licensure.

Discipline Criteria for Environmental and Similarly-named Engineering Programs

Lead Society(ies):
o *Badan Kejuruan Teknik Lingkungan Persatuan Insinyur Indonesia* (BKTL PII) – PII Chapter for Environmental Engineers
o *Ikatan Ahli Teknik Penyehatan dan Lingkungan Indonesia* (IATPI) – Indonesian Association of Experts in Sanitation and Environmental Engineering
o *Badan Kerja Sama Perguruan Penyelenggara Pendidikan Tinggi Teknik Lingkungan* (BAKERMA-TL) – Association of Higher Education Programs in Environmental Engineering

These Discipline Criteria apply to engineering programs that include "environmental" and similar modifiers in their titles.

Curriculum

The curriculum must prepare graduates to apply knowledge of mathematics and basic sciences; introductory level knowledge of environmental issues associated with air, land, and water systems and associated environmental health impacts; conduct laboratory experiments and analyze and interpret the resulting data in more than one major environmental engineering focus area, (e.g., air, water, land, environmental health); performing design of environmental engineering systems; understanding in advanced principles and practice relevant to the program objectives. The curriculum must prepare graduates to understand concepts of professional practice, project management, and the roles and responsibilities of public institutions and private organizations pertaining to environmental policy and regulations.

Faculty

The program must demonstrate that a majority of those faculty teaching courses that are primarily design in content are qualified to teach the subject matter by virtue of professional licensure, board certification in environmental engineering, or by education and equivalent design experience.

Discipline Criteria for Geodetics, Geomatics, and Similarly-named Engineering Programs

Lead Society(ies):

- *Forum Ketua Jurusan dan Program Studi Teknik Geodesi-Geomatika se-Indonesia* – Indonesian Forum for Higher Education in Geodetic-Geomatics Engineering

These Discipline Criteria apply to engineering programs that include "surveying," "geodetic," "geomatics", and similar modifiers in their titles.

Curriculum

The curriculum must prepare graduates to apply knowledge of mathematics, natural sciences and statistics in Geodetics/Geomatics engineering field, complete task related to spatial data acquisition using modern measurement tools, perform geospatial data processing using industry-standard software, and also perform standard analysis and design in at least one of the recognized technical specialties within surveying/geodetics/geomatics technology, include boundary and/or land surveying, geographic and/or land information systems, engineering project surveying, photogrammetry, remote sensing, mapping and geodesy, and other related areas.

Faculty

The program must demonstrate that a majority of those faculty members are qualified to teach engineering courses by education, equivalent design experience or board certification of a surveyor professional/geomatics engineering.

Discipline Criteria for Industrial and Similarly-named Engineering Programs

Lead Society(ies):
o *Badan Kerja Sama Penyelenggara Pendidikan Tinggi Teknik Industri Indonesia (BKSTI)* – Indonesian Association of Higher Education in Industrial Engineering
o *Badan Kejuruan Teknik Industri Persatuan Insinyur Indonesia* (BKTI PII) – PII Chapter for Industrial Engineers

Curriculum

The program shall prepare graduates to be proficient in design, improve, and implement integrated systems that include people, materials, equipment, energy and information. To meet these needs, the curriculum must provide adequate knowledge about the application of mathematics, statistics and probabilistic theory as well as analysis and design engineering as well as knowledge with regard to social sciences. The education program should ensure the provision of an integrated system design experiences to students. The curriculum must include in depth instruction to accomplish the integration of systems using appropriate analytical, computational and experimental practices.

Faculty

Faculty members must understand the professional practice and maintain currency in their respective professional areas. Faculty members must be responsible and able to make the definition, evaluation, implementation and improvement on the achievement of Learning Outcomes in the framework of an continuous improvement of the study program.

Discipline Criteria for Materials, Metallurgical and Similarly-named Engineering Programs

Lead Society(ies):
o *Badan Kejuruan Teknik Material Persatuan Insinyur Indonesia* – PII Chapter for Material Engineers
o *Badan Kejuruan Teknik Metalurgi Persatuan Insinyur Indonesia* – PII Chapter for Metallurgical Engineers

These Discipline Criteria apply to engineering programs including “materials,” “metallurgical,” “ceramics,” “glass”, “polymer,” “biomaterials,” and similar modifiers in their titles.

Curriculum

The curriculum must prepare graduates to apply advanced science (such as chemistry, biology and physics), computational techniques and engineering principles to materials systems implied by the program modifier, e.g., ceramics, metals, polymers, biomaterials, composite materials; to integrate the understanding of the scientific and engineering principles underlying the four major elements of the field: structure, properties, processing, and performance related to material systems appropriate to the field; to apply and integrate knowledge from each of the above four elements of the field using experimental, computational and statistical methods to solve materials problems including selection and design consistent with the program educational objectives.

Faculty

The faculty expertise for the professional area must encompass the four major elements of the field.

Discipline Criteria for Mechanical and Similarly-named Engineering Programs

Lead Society(ies):
o *Badan Kerjasama Teknik Mesin Seluruh Indonesia* (BKSTM) – Indonesian Association of Higher Education in Mechanical Engineering
o *Badan Kejuruan Mesin Persatuan Insinyur Indonesia* (BKM PII) – PII Chapter for Mechanical Engineers

These Discipline Criteria apply to all engineering programs that include “mechanical” or similar modifiers in their titles.

Curriculum

The curriculum must require students to apply basic sciences, mathematics (including multivariate calculus and differential equations) and principles of engineering sciences; to model, analyze, design, and apply physical systems, components or processes; and prepare students to work professionally in either thermal or mechanical systems.

Faculty

Faculty members teaching courses on design should have either certification of professional engineer or qualification through experience in engineering design and practices.

Discipline Criteria for Nuclear and Similarly-named Engineering Programs

Lead Society(ies):
o *Himpunan Masyarakat Nuklir Indonesia* (HIMNI) – Indonesian Association for Nuclear Society

These Discipline Criteria apply to engineering program that include “nuclear”, “radiological”, “radiation”, or similar modifiers in their titles.

Curriculum

The curriculum shall provide strong fundamentals on advanced mathematics, science, engineering science and engineering design related to the objectives of the program. The curriculum must include the application of atomic and nuclear physics, and the transport of radiation and its interaction with matter, for nuclear power generation, medical, industrial, and agricultural areas; to perform nuclear engineering design; to measure nuclear and radiation processes. The program shall ensure that the curriculum must comply with international and national nuclear regulations by emphasizing the requirements for nuclear safety, non-destructive inspection, security and safeguards.

Faculty

The program must demonstrate that faculty members are qualified to teach nuclear engineering courses by education, equivalent design experience or board certification of a professional engineer depending on the program needs.

Discipline Criteria for Ocean and Similarly-named Engineering Programs

Lead Society(ies):
o *Himpunan Ahli Pengelola Pesisir Indonesia* (HAPPI) – Indonesian Association of Experts in Coastal Management
o *Himpunan Ahli Teknik Hidraulik Indonesia* (HATHI) – Indonesian Association of Experts in Hydraulics Engineering

These Discipline Criteria apply to engineering programs that include “coastal”, “ocean”, “marine”, “naval architecture”, or similar modifiers in their titles.

Curriculum

The curriculum must prepare graduates to have the knowledge and the skills to apply the principles of fluid and solid mechanics, dynamics, hydrostatics, hydrodynamics, probability and applied statistics, oceanography, and water waves, to engineering problems and to work in groups to perform engineering design at the system level, integrating multiple technical areas and addressing design optimization.

Faculty

Program faculty must have responsibility and sufficient authority to define, revised, implement, and achieve the program objectives

Discipline Criteria for General Engineering Programs

Lead Society(ies):

- *Persatuan Insinyur Indonesia (PII)* – The Institute of Engineers Indonesia

These criteria is applicable only for programs having no available Discipline Criteria and wish to be evaluated solely by the Common Criteria.

Curriculum

No additional requirement beyond those required by the Common Criteria

Faculty

No additional requirement beyond those required by the Common Criteria

APPENDIX C – Rules and Procedures of Evaluation and Accreditation (RPEA)

Rules and Procedures for Evaluation and Accreditation

RPEA

Version 2020

- Background, Vision, and Mission of IABEE
- Accreditation Policies and Procedures
- Indicative Schedule of Accreditation Evaluation Cycle

Indonesian Accreditation Board for Engineering Education
an autonomous subsidiary of the Institute of Engineers Indonesia (PII)
w: iabee.or.id
e: info@iabee.or.id

Document Control

The Rules and Procedures for Evaluation and Accreditation (RPEA) version 2020 has been approved by Executive Committee on 14 February 2020. It replaces the version published in 2018. Changes made in this version are as follows:

- Overall grammatical checks and revisions,
- Addition of more information in Background, Vision, and Mission,
- Change in IABEE postal address,
- Inclusion of bachelor of computing degrees in Scope of Accreditation in addition to engineering degrees,
- New way of denoting an Evaluation Cycle,
- New policy on validity of an Accredited status,
- Survey for collecting feedbacks on evaluation accreditation processes,
- Addition of a new policy to treat a study program with one “D” (Deficient) score that cannot be resolved at the Evaluation and Accreditation Committee’s Harmonization Meeting,
- Emphasis on policy of not publicizing the identity of study programs that receive Not-Accredited status in both, General and Provisional Accreditation Types,
- Emphasis on the meaning of a Provisional Status received by a study program.
- Addition of Final Evaluation Report Editing by assigned editors as an evaluation step between Harmonization Meeting and Accreditation Decision Meeting for both General and Provisional Accreditation Evaluation processes,
- Addition of an article that regulates withdrawal and change of accreditation type (from PA to GA, or GA to PA), and
- Revision (exclusion) of an On-Site Visit policy which asked Program or Program Operating Institution not to cover the costs of transportation and accommodation for evaluation team.

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1. Background, Vision, and Mission

1.1. Background

The ever-evolving challenges faced by the engineering profession in the global paradigm of sustainable development highlight the absolute necessity of managing the quality of engineering higher education outcomes within the framework of an internationally recognized quality standards and practices. Another key paradigm in engineering higher education is the relevance of academic programs operated by higher education institutions to the needs of the profession and the industry.

Quality, relevance, and expanded opportunities are paramount to the effectiveness and competitiveness of engineering higher education institutions in the future. These aspects form the framework of a higher education quality management system in Indonesia. The ever-evolving challenges faced by the engineering profession in the globalization era highlight the absolute necessity of managing the quality of engineering higher education outcomes within the framework of an internationally recognized quality standards and practices. Another key paradigm in engineering higher education is the relevance of academic programs operated by higher education institutions to the needs of the profession and the industry.

The aim of this education quality management system is to improve the quality of engineering education in a sustainable manner. Essential to the achievement of this aim are the principle of autonomy of higher education institutions as a driving force for a more dynamic and accountable system, and an accreditation system to ensure the quality of graduates and the implementation of an effective continuous engineering learning process improvement system which in turn ensures that improvement decisions are based on real, accountable information.

1.2. Vision

The Indonesian Accreditation Board for Engineering Education (IABEE) is a reformer and stimulator for accelerating the progress of engineering higher education in Indonesia to produce innovative human resources and engineering innovation for improving human welfare.

1.3. Mission

To attain the above vision, IABEE upholds the following missions:

(1) to promote quality improvement of engineering higher education through accreditation to produce autonomous professionals appropriate to the needs of stakeholders,

(2) to facilitate development of engineering higher education systems that emphasizes on continual quality improvement towards global quality standards,

(3) to encourage communication and partnerships between engineering higher education institutions and stakeholders to effectively utilize local resources and wisdom for the welfare of the community, and

(4) to support dissemination of innovations on advancement of engineering higher education.

1.4. Identity & Recognition

IABEE is an independent, non-profit organization founded as a part of the Institution of Engineers Indonesia (PII), to develop and foster quality culture in the management of engineering higher education. This is achieved by assurance that the Study Programs (or referred as Programs henceforth) are operated in compliance to minimum standards, and by encouraging continuous quality improvement in engineering higher education institutions.

The IABEE Headquarter is located at the following postal address:

Indonesian Accreditation Board for Engineering Education (IABEE)
c/o *Persatuan Insinyur Indonesia* (The Institution of Engineers Indonesia)
Gedung AdMail Lt. 2, Jl. Percetakan Negara No.19, Jakarta Pusat 10570
Phone: (+62) 0811 939 0909 e-mail: info@iabee.or.id

The address of IABEE public website is iabee.or.id. The official logo of IABEE is presented in Figure 1.

Figure 1. Official logo of IABEE

IABEE is recognized in Indonesia by the Ministry of Education and Culture (KEMDIKBUD) as an independent international accrediting body for study programs in higher education institutions which grant degrees in engineering, technology, and computing disciplines.

Through multilateral Mutual Recognition Agreements (MRAs), IABEE seeks international recognition of substantial equivalence of its evaluation and accreditation criteria and processes with those of other overseas accrediting bodies participating in a particular MRA. At present, accreditation by IABEE for engineering programs leading to professional practice is recognized by the Washington Accord, of which IABEE has been granted a Provisional Signatory status in 2019. Participation and recognition by other MRAs are being pursued.

2. Accreditation Policies and Procedures

2.1. Confidentiality and Conflict of Interests

2.3.1. Confidentiality of Information

IABEE upholds ethics in conducting all activities of its members and organizing staff and requires that each Member and Organizing Staff exhibits highest standards in professionalism, fairness, and integrity. Information disclosed by Programs undergoing evaluation, and information generated by review and discussion activities during the evaluation process shall be treated with confidentiality and shall not be divulged without specific written authorization by IABEE and the Program being evaluated.

2.3.2. Code of Ethics

Code of ethics upheld by all members and organizing staff is stipulated in detail in document called Rules and Procedures for Accreditation-Related Committees (RPARC).

2.3.3. Conflict of Interests

Service as IABEE committee members and organizing staff presents the possibility of various situations that may result in conflict of interest or doubt regarding the objectivity, fairness, and credibility of the accreditation process. IABEE requires its personnel to act in a professional and ethical manner, and to inform of any real or perceived conflict of interest in their activities. Further details of IABEE policies on conflict of interest are described in Rules and Procedures for Accreditation-Related Committee (RPARC) document.

2.2. Scope of Accreditation

The Indonesian Higher Education Act No. 12/2012 defines a Program as an educational and learning unit which implements a specific curriculum and learning methods, in the context of a type of academic, professional, and/or vocational education. At present, scope of evaluation and accreditation by IABEE include bachelor-level academic Programs in engineering and computing disciplines. Degrees granted by these Programs include Bachelor of Engineering (*Sarjana Teknik*), Bachelor of Science in Engineering (*Sarjana Teknik*), Bachelor of Science in Computing (*Sarjana Teknik* or *Sarjana Komputer*), and Bachelor in Computing (*Sarjana Komputer*), by implementing Program curricula which stipulate a study period of four academic years, and a minimum total course-load of 144 semester-credit units (SKS in Indonesian terminology).

Programs are operated by Program Operating Institutions (POI). POIs are academic institutions operating at range of organizational level from Faculty, School, or equivalent units and up to University, Institute, or equivalent units. POIs are accredited by National Accreditation Agency for Higher Education (BAN-PT). IABEE does not accredit POIs.

IABEE offers two types of evaluation process, i.e. General Accreditation (GA) and Provisional Accreditation (PA).

(1) **General Accreditation (GA)** is intended for programs seeking international recognition through IABEE accreditation. Program wishing to apply for evaluation of GA must comply with eligibility requirements stipulated in Section 2.3.1. of this document.

(2) **Provisional Accreditation (PA)** is intended for programs newly adopting an outcome-based education system and have not yet produced graduates under the system. A program applying for PA will be evaluated to measure its potentials of meeting the Accreditation Criteria within a foreseeable future (2-4 years). Eligibility requirements for a program applying PA evaluation is specified in Section 2.3.2. of this document.

Provisional Accreditation is *not* recognized as an accreditation status at international level.

2.3. Eligibility for Evaluation

The following are eligibility requirements for Programs seeking to be evaluated according to the types of accreditation offered by IABEE (See Section 2.2). Eligibility status must be proven by the Program by making a self-claim and providing a set of documents supporting the claim during the application process. Application procedures are further explained in Section 2.5.

2.3.1. Eligibility Requirements for General Accreditation

Programs eligible to apply evaluation for General Accreditation (GA) are those which meet the following requirements.

(1) The associated Program Operating Institution (POI) has obtained National Accreditation for Institution status with a minimum rank of “B”.

(2) The Program has obtained National Accreditation status ranked “A”.

(3) The Program is a bachelor-level program in an engineering discipline with a curricular study period of four years, and with a total course-load of a minimum of 144 credit units (or SKS).

(4) The Program is at least in the 4th year of continuous Outcome-Based Education (OBE) implementation.

(5) The OBE shall include assessment and evaluation of the Learning Outcomes of the students.

(6) By the time of the on-site visit evaluation, the Program has produced at least one graduate under its OBE system.

(7) The Program has established and publicized the Profile of Autonomous Professionals statement formulated as its educational objectives.

(8) The Program has established and publicized its Learning Outcomes as the basis for developing its curriculum and learning methods.

2.3.2. Eligibility Requirements for Provisional Accreditation

Programs wishing to apply evaluation for Provisional Accreditation (PA) must fulfill the following requirements.

(1) The associated Program Operating Institution has obtained National Accreditation for Institution status with a minimum rank of "B".

(2) The Program has obtained National Accreditation status at least ranked "B".

(3) The Program is a bachelor-level program in an engineering or computing discipline with a curricular study period of four years, and with a total credit of a minimum of 144 credit units (or SKS).

(4) The Program has implemented Outcome-Based Education (OBE) at least for one year before applying for the evaluation.

(5) The Program has established and publicized the Autonomous Professional Profile statement formulated as its educational objectives.

(6) The Program has established and publicized its Learning Outcomes as the basis for developing its curriculum and learning methods.

2.4. Accreditation Criteria

IABEE Criteria Committee has produced criteria categories for conducting accreditation evaluation, comprising the Common Criteria and the Discipline Criteria. Common Criteria are further elaborated by the Criteria Guide. The Common Criteria, the Criteria Guide, and the Discipline Criteria are referred to as the Accreditation Criteria.

2.4.1. *Common Criteria and Criteria Guide*

The Common Criteria are intended to assure the quality of engineering education conducted by Program and to foster a systematic continual quality improvement that satisfies the need of its stakeholders in a dynamic and competitive environment. The Common Criteria and their elaboration in the Criteria Guide address requirements for all disciplines of engineering Programs to be accredited by IABEE.

The Common Criteria and the Criteria Guide are available for download at the IABEE website at iabee.or.id.

2.4.2. Discipline Criteria

Discipline Criteria address program-specific requirements within engineering areas of specialization. These criteria have been developed by Chapters of the Institution of Engineers Indonesia (PII) and other supporting professional and higher education societies, coordinated by IABEE Criteria Committee. The Discipline Criteria are available for download at IABEE website iabee.or.id. For application of evaluation, a Program is required to select one engineering discipline which best describe its body of knowledge.

2.5. Program Evaluation Process

The entire process of application, payment, document submission, evaluation for accreditation, and announcement of accreditation decision is undertaken solely through the IABEE Online Evaluation System at evaluation.iabee.or.id. Therefore, individuals representing a Program and its Institution must first become registered member of the system. This section explains recognition of individuals representing a Program and its Institution, general principles of evaluation against accreditation criteria, and evaluation process for General Accreditation and Provisional Accreditation.

2.5.1. Program and Institution Representatives

IABEE acknowledges two officials per Program to represent and be in communication with IABEE Secretariat and Program Evaluation Team Chair throughout application and evaluation process through IABEE Online Evaluation System. One of these is assigned as Program Representative (PR), while the other as Program Operating Institution Representative (POIR). Official recognized by IABEE to become a PR is normally the Program Chair (*Ketua Program Studi*) or other appointed by the Program Operating Institution, while a POIR is normally the Dean of the Faculty or other official ranked above Program Chair. PR and POIR should have a good understanding of the general requirements and processes of Program outcome-based evaluation and accreditation.

In a case where more than one Programs within an Institution apply for evaluation, all those Programs may share the same POIR, but each shall have its own PR.

2.5.2. Program Profile and Self-Evaluation Report

The Program evaluation process is conducted based, in part, on the two documents submitted to IABEE Online Evaluation System. Program can only submit the documents to the system through its PR account. These documents are Program Profile and Program Self-Evaluation Report (SER).

Program Profile (or *Ikhtisar Program Studi*) template is available for download from IABEE website at iabee.or.id. Meanwhile, SER (LED or *Laporan Evaluasi Diri*) template is coded in the Online Evaluation System in a spreadsheet form and can be downloaded through PR's registered e-mail account, worked on, and uploaded back to the online system.

The SER template is structured in a way that expects the Program to deliberate how it complies with each criterion and review item, and to enclose, or to provide links to, proofs of the compliance. The proofs or evidences of the compliance are to be gathered systematically in a file(s) (in PDF format) and uploaded as attachment(s) to the SER. To assist the Program in completing the Program Profile and SER, IABEE openly publishes a Program Profile and Self-Evaluation Report Preparation Guidelines as can be found in IABEE website at iabee.or.id.

2.5.3. Accreditation Evaluation Cycle

IABEE denotes its accreditation evaluation cycle as two consecutive calendar years (for example: "2020-2021 Accreditation Evaluation Cycle"). Normally, a cycle commences on 1 April of the first year and ends on 31 March of the second year of the cycle. See Table 3 at the end of this document.

2.5.4. General Description of the Evaluation Process

The Program evaluation process is in general undertaken by a thorough desk study of Program Profile, Self-Evaluation Report (SER) including its evidences submitted to IABEE Online Evaluation System, as well as through on-site visit.

Depending on the accreditation categories (Section 2.2) and the accreditation decisions (Section 2.6), IABEE implements four types of Program evaluation, namely:

(1) Evaluation for General Accreditation,

(2) Interim Evaluation for General Accreditation with On-Site Visit,

(3) Interim Evaluation for General Accreditation without On-Site Visit, and

(4) Evaluation for Provisional Accreditation.

Evaluation for General Accreditation evaluates the compliance of the Program to RPEA and all evaluation items contained in the Accreditation Criteria for the accreditation cycle. Interim Evaluation measures the compliance to a portion of the evaluation items in the Accreditation Criteria, which may be undertaken with or without on-site visit. An Interim Evaluation (No. 2 or 3) is an evaluation to be conducted following a certain accreditation decision in General Accreditation (see further Section 2.6). Lastly, Evaluation for Provisional Accreditation measures the potential for compliance of the Program to the Accreditation Criteria.

Programs applying for their initial evaluation may select either Evaluation for General Accreditation or for Provisional Accreditation, in accordance to the eligibility requirements explained in Section 2.3. The type of evaluation for Programs applying for re-evaluation shall be based on their previous accreditation status. Evaluation for Provisional Accreditation is not allowed for Programs applying for re-evaluation.

In the case of Evaluation for General Accreditation, the degree of fulfillment of Accreditation Criterion is determined from evaluation results documented in the IABEE Online Evaluation System. The terminology used to declare the degree of fulfillment of each evaluation item is as follows:

- *Acceptable* (abbreviated as ‘A’), which means that the evaluated item fulfills the associated Accreditation Criteria item.
- *Concern* (abbreviated as ‘C’), which means that the evaluated item fulfills the associated Accreditation Criteria item, but with a possibility of changes in pertinent conditions in the future which may compromise the compliance.
- *Weakness* (abbreviated as ‘W’), which means that the evaluated item indicates an insufficiently strong fulfillment of the associated Accreditation Criteria item. This shortcoming requires corrective actions to strengthen the fulfillment of the specific evaluation item to the appropriate Accreditation Criteria item.
- *Deficiency* (abbreviated as ‘D’), which means that the Program is unable to fulfill the particular Accreditation Criteria item.

In addition, evaluation may also provide an Observation, i.e. comments that are not directly related to accreditation criteria and actions but are offered to assist the program in conducting continual quality improvement; and the Statement of Strength, which is a very

effective and prominent condition or practice that is above the norm and has a positive effect on the Program.

The final "A-C-W-D" judgement shall determine the accreditation status given to the Program in the case of General Accreditation (see further Section 2.6 for explanation on accreditation decision).

In the Evaluation for Provisional Accreditation, the degree of Program fulfillment of Accreditation Criteria is determined from evaluation results documented in the IABEE Online Evaluation System. Based on the evidences studied by assigned a Program Evaluator, a score of either "Yes" or "No" would be used to mark each evaluation item as a conclusion whether or not, from the Evaluator's viewpoint, the Program has a solid potential to fulfill the item within a foreseeable future (4 years or less). See further Section 2.6 for explanation on accreditation decision

2.5.5. Evaluation for General Accreditation

Table 1 in the next page presents the activity diagram of the Evaluation for General Accreditation process. All documentation resulting from these activities are recorded in the IABEE Online Evaluation System. A concise description of each step of the Evaluation for General Accreditation (EGA) process outlined in Table 1 follows.

Step EGA-1. PR & POIR Registration

Officials appointed by Program Operating Institution as PR and POIR are required to register as members of IABEE Online Evaluation System in advance. Registration is made through the IABEE website at iabee.or.id by choosing the Menu "IABEE ku – login" (in Bahasa Indonesia version) or "My IABEE – login" (in English version) and creating a free user account. Uploading appropriate proof of authority is required as attachment to account registration.

Step EGA-2. PR & POIR Registration Verification

The IABEE Secretariat examines the credentials of the PR and POIR upon their registration through the IABEE website. Upon confirmation of the validity of the PR and POIR, a notification e-mail shall be sent to the officials.

Step EGA-3. Application for Program Evaluation

The Program Representative or POI Representative applies for Program evaluation by submitting proofs of eligibility requirements. In the case of Evaluation for General Accreditation (EGA), these requirements include a copy of documents indicating:

(1) the national accreditation status of the Program and the Program Operating Institution,

(2) when the program was firstly established,

(3) when OBE was implemented for the first time,

(4) the statement of Program's Autonomous Professional Profile as its educational objective,

(5) the statement of Program's Learning Outcomes,

(6) number of graduates produced since OBE was adopted, or expected number of graduates under OBE system by October of the evaluation year, and

(7) a sample of Learning Outcomes assessment results.

Table 1. Steps for accomplishing an Evaluation for General Accreditation

EGA Step no.	Activity	Actor(s)						
		IABEE						Program
		Secreta-riat	Accred. Council	EAC Chair	EAC Discipl. Chair	Team Chair	Program Evaluator	Program Rep.
1	Registration of Program Representative (PR) & Program Operating Institution Representative (POIR)	✓						✓
2	PR & POIR registration verification	✓						
3	Application for Program evaluation							✓
4	Program eligibility verification	✓		✓				
5	Evaluation scheduling	✓		✓				
6	Notice of evaluation kickoff & invoicing	✓						
7	Full payment reception	✓						✓
8	EAC Discipline assignment			✓				
9	Evaluation Team members selection				✓			
10	Evaluation Team Chair assignment			✓				
11	Approval of evaluation observers			✓				
12	Evaluation Team acceptance							✓
13	Final Evaluation Team confirmation	✓		✓				
14	Completed Program Profile and Self-Evaluation Report (SER) submission							✓
15	Program First Review						✓	
16	Program Second Review					✓		
17	Program First Response							✓
18	Program Third Review					✓		
19	On-Site Visit Planning					✓		✓
20	On-Site Visit					✓	✓	✓
21	Exit Meeting					✓	✓	✓
22	Program First Evaluation					✓		
23	Program Second Response							✓
24	Program Second Evaluation					✓		
25	Program Final Response							✓
26	Program Final Evaluation Report					✓		
27	EAC Discipline Harmonization				✓			
28	EAC Plenary Meeting			✓				
29	Program Final Eval. Report Editing	✓		✓				
30	Accreditation Decision		✓					
31	Accreditation Status Announcement	✓						

Step EGA-4. Program Eligibility Verification

The Secretariat and EAC Chair examine the data entered in the Program Eligibility Form and check it against the eligibility criteria listed in Section 2.3.

Step EGA-5. Evaluation Scheduling

The EAC Chair compiles the results of Program eligibility verification for the Accreditation Cycle. An evaluation schedule plan for the cycle is then defined based on the list of eligible Programs, and availability of appropriate Program Evaluators (PEVs). The schedule for each Program shall include deadlines for all evaluation steps. If there are more than one Program

of the same discipline are deemed eligible for evaluation, then the schedule shall be defined on a first come first served basis.

Step EGA-6. Notice of Evaluation Kick-off & Invoicing

Upon the confirmation of Program eligibility and the evaluation schedule of each Program, the Secretariat through IABEE Online Evaluation System sends a notification e-mail to each Program Representative, which contains notice of initiation of the evaluation process and important deadlines throughout the evaluation process. The Secretariat will also upload onto the online system an invoice for all evaluation fees, including information on payment method and deadline. The system will notify Program Representative regarding the invoice.

Step EGA-7. Full Payment Reception

No later than the payment deadline stipulated in the invoice, the Program must complete the full payment of evaluation fees in accordance to the invoice. Outstanding payment may cause suspension of evaluation process.

Step EGA-8. EAC Discipline Chair Assignment

Upon the definitive of the annual evaluation schedule, the EAC Chair examines the list of Programs to be evaluated and assigns the appropriate Discipline Chair for each engineering discipline involved in the accreditation cycle.

Step EGA-9. Evaluation Team Members Selection

The assigned Discipline Chair selects the member for the Program Evaluation Team, based on available PEVs. The selection of the members shall be based on academic competence, training qualifications, and potential conflict of interest with the Program to be evaluated. Requirements to become program evaluator is described in Rules and Procedures for Accreditation-Related Committees (RPARC) document.

Step EGA-10. Evaluation Team Chair Assignment

The EAC Chair assigns one Team Chair for each Evaluation Team. In the case where more than one Program in an Institution are to be evaluated simultaneously, some or all Evaluation Teams involved may share the same Team Chair.

Step EGA-11. Approval of Evaluation Observers

As part of the requirements to become a program evaluator, IABEE may assign candidates of program evaluator to observe a real program evaluation as evaluator-in-training. Also, IABEE welcomes non-IABEE members to become observer of the evaluation process. As the entire evaluation process in conducted through IABEE Online Evaluation System, before becoming an observer one must register a personal user account in the system. The EAC Chair assigns and attaches observer(s) to the appropriate Evaluation Team based on best match to his/her academic background or engineering discipline. The involvement of observer(s) shall be approved by the Program.

Step EGA-12. Evaluation Team Acceptance

The Program is expected to examine the acceptability of the Evaluation Team initially proposed by IABEE, and to send their approval through IABEE Online Evaluation System. If the Program does not approve the Evaluation Team members due to a valid reason (e.g. a conflict of interest), the EAC Chair shall re-assign a new Evaluation Team.

Step EGA-13. Final Evaluation Team Confirmation

Upon acceptance of the Evaluation Team by the Program, the EAC Chair confirms the Team Chair and Evaluation Team members through notification to the Program via the IABEE Online Evaluation System, issuance of an official Letter of Assignment, and provision of access to the Online System as Evaluation Team members.

Step EGA-14. Completed Program Profile and SER Submission

No later than the deadline shown on the related step in IABEE Online Evaluation System, the Program is expected to complete and submit the Program Profile and the Self-Evaluation Report (SER) including its necessary attachments to system. IABEE Online Evaluation System provides upload and submit procedure separately. It is to be noted that upload button is used only to store all the document files in the IABEE server. To send it as a submission, Program Representative must click the submit button. The Program can no longer amend the Program Profile and SER online documents after submit button has been used.

A Program may submit a total of six files, sizing 30 Mbytes each, to contain Program Profile and all SER attachment files (e.g. compendium of proofs/evidences), in addition to the SER itself. The SER itself is written separately in a dedicated spreadsheet template and uploaded onto the system by letting the system read and copy the data prepared in the template (see also Section 2.5.2).

Step EGA-15. Program First Review

In the Program First Review, Evaluation Team members review the submitted Program Profile, Self-Evaluation Report, and all additional documents. Each member independently assigns the 'A-C-W-D' score and provide comments for each evaluation item in the Program Evaluator worksheet template downloaded from the IABEE Online Evaluation System. An observer (evaluator-in-training) may also review the documents submitted by the Program, but his/her judgment is not accounted for in the evaluation (only for training purposes). At this step, only Team Chair can see all evaluation results (i.e. A-C-W-D scores and comments on each criteria item). Evaluation results are not yet accessible by Program Representative.

Evaluation Team members are also expected to notify the Team Chair on the need for any additional information, data, or explanation from the Program to ensure accurate evaluation. IABEE Online Evaluation System provides internal message board facility to allow communication among Evaluation Team members and its chair.

Step EGA-16. Program Second Review

The Team Chair collects the Program First Review results from the Evaluation Team members. Subsequently, he/she prepares the Program Second Evaluation by assigning the 'A-C-W-D' score and provide comments for each evaluation item in the Team Chair worksheet based on the results collected from his/her team member, his/her own judgement, and considering any different opinion between the individual Evaluation Team members. The Team Chair also compiles the list of required additional information, data, or explanation from the Program. The Program Second Review results are then uploaded and submitted to the IABEE Online Evaluation System.

Step EGA-17. Program First Response

Upon submission of the Program Second Review results to the IABEE Online Evaluation System by the Team Chair, the Program Representative will get a notification e-mail from the system. The Program is expected to respond to the request for any additional information, data, or explanation. The additional information is to be submitted through IABEE Online Evaluation System. At this step, Program Representative can only see the Team Chair's comments on each evaluation or criteria item. No "A-C-W-D" score is accessible to the Program.

The system again provides a space to upload three attachment files sizing 30 Mb at maximum for each file, in addition to SER improvement.

To facilitate smooth communication, IABEE Online Evaluation System provides external message board facility that can be used only by Program Representative and the Evaluation Team Chair. The deadline for this Program First Response is made known to the PR/POIR by the system.

Step EGA-18. Program Third Review

The Team Chair collects the additional information provided by the Program in the Program First Response. Together with the results of the Program Second Review, this information is then used to formulate the Program Third Review, which contains the tentative 'A-C-W-D' scores of each evaluation item. This report shall also contain a list of items to be further elaborated during the On-Site Visit. At this step, Program Representative can only see the Team Chair's comments on each evaluation or criteria item. No "A-C-W-D" score is accessible to the Program.

Step EGA-19. On-Site Visit Planning

Upon the completion of the Program Third Review, the Team Chair prepares an On-Site Visit Plan via the IABEE Online Evaluation System. This plan contains the visit dates, a detailed list of daily activities to be undertaken by the Evaluation Team during the visit, including groups of people from Program stakeholders they wish to meet, as well as logistical matters related to the visit. Team Chair shall propose the visit dates to the Program and shall discuss further with Program Representative which of the options is the most suitable one to undertake the visit.

Step EGA-20. On-Site Visit

The On-Site Visit will be undertaken by the Evaluation Team on the agreed-upon dates. The visit shall include the following activities:

- Interview of faculty members, students, support staff, as well as alumnae and other stakeholders to obtain a comprehension on the compliance of the Program to RPEA and Accreditation Criteria items, and to identify specific issues arising from the review of Program Profile and Self-Evaluation Report, as well as from the On-Site Visit activities.
- Examination on the following specific aspects:
    - Physical facilities: The Evaluation Team shall verify whether the learning atmosphere provided by the Program through the utilization of various facilities is sufficient, and that the facilities may be utilized in a safe manner for their intended purposes.

- Learning materials: The Evaluation Team shall examine examples of course materials including course description and syllabi, textbooks, assignments and tests, and examples of student works which include works receiving borderline to very high marks.
- Proof that the Autonomous Professional Profile envisaged by Program's educational objectives and the Learning Outcomes declared by the Program has considered vision and mission of the POIR as well as the needs of Program Stakeholders.
- Proof of the implementation of a process that is documented and effectively utilized, with involvement of Program Stakeholders, for the periodic review of the Autonomous Professional Profile.
- Proof of the undertaking of learning assessment, evaluation, and attainment of Program Learning Outcomes.
- Proof of the undertaking of actions to continually improve the quality of the Program. Support functions for the students, to ensure the adequacy of student services in accordance to the mission of the Institution, the Autonomous Professional Profile, and Program Learning Outcomes.
- The process for monitoring the completion of study and conferral of academic degree for each student.

Throughout the On-Site Visit, Program Evaluators are expected to re-evaluate the level of fulfillment of the Program to each evaluation item as temporarily scored during the desk study of its Program Profile and Self-Evaluation Report and to take note of Observations.

IABEE upholds certain codes of conduct in undertaking an On-Site Visit to make sure the activity achieves its intended objectives effectively and to prevent any conflict of interest. Please see Section 2.9. for the related Codes of Conduct.

Step EGA-21. Exit Meeting

An Exit Meeting shall be held at the end of the On-Site Visit, in which the Evaluation Team Chair shall verbally communicate findings observed by the Evaluation Team to the Program Operating Institution's highest executive officer of his/her representative, and other official(s) that the highest executive officer wishes to include in the meeting. The meeting concludes the On-Site Visit by reading out the Exit Statement. Prior to Exit Meeting, the Evaluation Team shall normally communicate the findings to the Program Representative and his/her team in a debrief session. This session is conducted to reach common understanding between the Evaluation Team and the Program about the findings and their consequences.

Exit Meeting is essentially a one-way communication. No discussion of the results shall be entertained during the meeting. The Evaluation Team shall not leave any written copy of Exit Statement document with the Program and Program Operating Institution since the statement shall be made available at the IABEE Online Evaluation System. The Program may inspect these findings in the IABEE Online Evaluation System after the conclusion of the Exit Meeting at the Program First Evaluation step.

Step EGA-22. Program First Evaluation

Program First Evaluation Report is produced by the Evaluation Team and sent by the Team Chair to IABEE Online Evaluation System. It consists of evaluation results and findings read out during the Exit Meeting.

A definite deadline is set for the Team Chair to complete the Program First Evaluation, which is approximately two weeks after the Exit Meeting date. The Program First Evaluation is accessible by the Program Representative and Program Operating Institution Representative. At this step, Program Representative can see the Team Chair's comments on each evaluation or criteria item and a draft Exit Statement. No "A-C-W-D" judgement is accessible to the Program.

Step EGA-23. Program Second Response

Upon the disclosure of the findings in the IABEE Online Evaluation System, the Program is given 7 days to submit amendments only to factual errors or omissions, if such errors or omissions are identified in the online system entries. The period is initiated in the system right after Team Chair submits Program First Evaluation Report. Example of factual errors include errors in quoting names, identities, figures, locations, etc. related to the Program and its Institution. If the Program finds no factual error in the Program First Evaluation Report, its Program Representative may notify the Team Chair and let the 7-day period pass automatically.

Step EGA-24. Program Second Evaluation

Upon the expiration period of Program Second Response, the Team Chair thoroughly examines the evaluation results documented in the IABEE Online Evaluation System to amend factual errors pointed out by the Program, if any. The Team Chair then proceeds to prepare the Program Second Evaluation report in the IABEE Online Evaluation System. After submission of Program Second Evaluation Report by the Team Chair, Program Representative can see the "A-C-W-D" judgements, the Team Chair's comments on each evaluation or criteria item and a final Exit Statement.

Step EGA-25. Program Final Response

Upon the completion of the Program Second Evaluation Report by the Team Chair, the Program Final Response is triggered to commence in the IABEE Online System. In this period, the Program is given 30 days to follow up on shortcomings identified in the evaluation process to date. The Program is encouraged to upload report and proofs of corrective actions and/or improvements undertaken to address the shortcomings, until the 30-day deadline.

Step EGA-26. Program Final Evaluation Report

After the deadline of the 30-day response period has passed, the Team Chair prepares the Program Final Evaluation document in the IABEE Online Evaluation System, by considering corrective actions and/or improvements reported by the Program to date. The report shall include a description of the Program, its areas of strength, identified shortcomings, and constructive Observations, and a summary of its compliance to the Accreditation Criteria as indicated by the 'A-C-W-D' judgements of evaluation items. The report is submitted through the online system to the respective EAC Discipline Chair and EAC Chair.

Step EGA-27. EAC Discipline Harmonization

The EAC Discipline Chair receives the Program Final Report from the Team Chair and holds an EAC Discipline Harmonization meeting to discuss and harmonize any inconsistency between the respective Evaluation Teams within the same discipline, and inconsistencies with past evaluation results of similar Programs. Results of the Discipline Harmonization are documented in the IABEE Online Evaluation System.

Step EGA-28. EAC Plenary Meeting

After the Discipline Harmonization is completed, the EAC Chair organizes an EAC Plenary Meeting to discuss and harmonize any inconsistency with past and current evaluation results of Programs operated under different institutions. EAC Plenary Meeting then recommend the final accreditation decision to the IABEE Accreditation Council.

Step EGA-29. Program Final Evaluation Report Editing

EAC Chair is to assign Editors in this step, in which the Program Final Evaluation Report draft shall be edited to ensure consistency between the scores and comments or narratives given by the Team Chair and the criteria or sub-criteria items associated with the scores and narratives.

Step EGA-30. Accreditation Decision

Final decision of the accreditation status of a Program is taken by the IABEE Accreditation Council, with due consideration to the recommendation from the EAC Plenary Meeting. The decision shall be kept in IABEE's permanent records.

Step EGA-31. Accreditation Announcement

After the final decision has been reached, the IABEE Secretariat conducts the public announcement of the decision. The Not-Accredited status shall not be publicly declared, but directly communicated to the corresponding Program Representative (PR) and Program Operating Institution Representative (POIR). Other status shall be declared in the IABEE Website and communicated to the PR and POIR. Program Accreditation Evaluation Report and accreditation decision shall be saved in the IABEE Online Evaluation System and shall be accessible by the Program.

2.5.6. Interim Evaluation for General Accreditation

The Interim Evaluation is implemented if unresolved shortcomings of the 'Weakness' category are identified at the conclusion of a preceding Evaluation for General Accreditation. The Interim Evaluation shall focus on evaluation items exhibiting the shortcomings in the preceding evaluation, although other evaluation items may also be included. As outlined in Section 2.5.3, there are two types of Interim Evaluation for General Accreditation, namely *Interim Evaluation with On-Site Visit* and *Interim Evaluation without On-Site Visit*. The appropriate type of Interim Evaluation is determined in the final decision of the preceding evaluation. Both types of Interim Evaluation require the Program to submit a Self-Evaluation Report.

New *Concern*, *Weakness*, and *Deficiency* shortcomings that arise during the Interim Evaluation may be reported. Evaluation process steps in an Interim Evaluation are identical

to those implemented in the Evaluation for General Accreditation (see Section 2.5.2), except that in Interim Evaluation only one Program Evaluator shall be assigned by IABEE.

Decision of accreditation status upon the completion of an Interim Evaluation is explained in Section 2.6 on Accreditation Decision.

2.5.7. Evaluation for Provisional Accreditation

Evaluation for Provisional Accreditation is provided as an option for Programs that have never been evaluated and have yet to commit to apply for evaluation for General Accreditation. A Program is only allowed to undergo this evaluation once. The evaluation reviews all parts of the Accreditation Criteria, except for those related to continual improvements based on learning outcomes assessment. This evaluation and is conducted by one Program Evaluator.

Table 2 presents the activity diagram of the evaluation process. All documentation resulting from these activities are recorded in the IABEE Online Evaluation System. Following Table 2 is a concise explanation of each Evaluation for Provisional Accreditation (EPA) step outlined in the table.

Table 2. Steps in the Evaluation for Provisional Accreditation (EPA)

EPA Step No.	Activity	Primary Actor(s)					
		IABEE					Program
		Secretari-at	Accred. Council	EAC Chair	EAC Discip. Chair	Program Evaluator	Program Rep.
1	Registration of Program Representative (PR) & Program Operating Institution Representative (POIR)	✓					✓
2	PR & POIR registration verification	✓					
3	Application for Program evaluation						✓
4	Program eligibility verification			✓			
5	Evaluation scheduling			✓			
6	Notice of evaluation kickoff & invoicing	✓					
7	Full payment reception	✓					✓
8	EAC Discipline assignment			✓			
9	Program Evaluator (PEV) selection				✓		
10	PEV acceptance						✓
11	Final PEV confirmation	✓		✓			
12	Completed Program Profile and Self-Evaluation Report (SER) submission						✓
13	Program First Review					✓	
14	Program Response						✓
15	Program Second Review					✓	
16	On-Site Visit Planning					✓	✓
17	On-Site Visit					✓	✓
18	Exit Meeting					✓	✓
19	Program Final Evaluation Report					✓	
20	EAC Plenary Meeting			✓			
21	Program Final Evaluation Report Editing	✓		✓			
22	Accreditation Decision		✓				
23	Accreditation Status Announcement	✓					

Step EPA-1. PR & POIR Registration

Officials appointed by Program Operating Institution as PR and POIR are required to register as members of IABEE Online Evaluation System in advance. Registration is made through the IABEE website at iabee.or.id by choosing the Menu “IABEE ku – login” (in Bahasa Indonesia version) or “My IABEE – login” (in English version) and creating a free user account. Uploading appropriate proof of authority is required as attachment to account registration.

Step EPA-2. PR & POIR Registration Verification

The IABEE Secretariat examines the credentials of the PR and POIR upon their registration through the IABEE website. Upon confirmation of the validity of the PR and POIR, a notification e-mail shall be sent to the officials.

Step EPA-3. Application for Program Evaluation

The Program Representative or POI Representative applies for Program evaluation by submitting proofs of eligibility requirements. In the case of Evaluation for Provisional Accreditation, these requirements include a copy of documents indicating:

(1) the national accreditation status of the Program and the Program Operating Institution,

(2) when the program was firstly established,

(3) when OBE was implemented for the first time,

(4) the statement of Program’s Autonomous Professional Profile as its educational objective, and

(5) the statement of Program’s Learning Outcomes.

Step EPA-4. Program Eligibility Verification

The Secretariat and EAC Chair examine the data entered in the Program Eligibility Form and check it against the eligibility criteria listed in Section 2.3.

Step EPA-5. Evaluation Scheduling

The EAC Chair compiles the results of Program eligibility verification for the Accreditation Cycle. An evaluation schedule plan for the cycle is then defined based on the list of eligible Programs, and availability of appropriate Program Evaluators (PEVs). The schedule for each Program shall include deadlines for all evaluation steps. If there are more than one Program of the same discipline are deemed eligible for evaluation, then the schedule shall be defined on a first come first served basis.

Step EPA-6. Notice of Evaluation Kick-off & Invoicing

Upon the confirmation of Program eligibility and the evaluation schedule of each Program, the Secretariat through IABEE Online Evaluation System sends a notification e-mail to each Program Representative, which contains notice of initiation of the evaluation process and important deadlines throughout the evaluation process. The Secretariat will also upload onto the online system an invoice for all evaluation fees, including information on payment method and deadline. The system will notify Program Representative regarding the invoice.

Step EPA-7. Full Payment Reception

No later than the payment deadline stipulated in the invoice, the Program must complete the full payment of evaluation fees in accordance to the invoice. Outstanding payment may cause suspension of evaluation process.

Step EPA-8. EAC Discipline Chair Assignment

Upon the definitive of the annual evaluation schedule, the EAC Chair examines the list of Programs to be evaluated either for General Accreditation or Provisional Accreditation and assigns the appropriate Discipline Chair for each engineering discipline involved in the accreditation cycle.

Step EPA-9. Program Evaluator (PEV) Selection

The assigned Discipline Chair selects a Program Evaluator based on available PEVs. The selection of Program Evaluator shall be based on academic competence, training qualifications, and potential conflict of interest with the Program to be evaluated. Requirements to become program evaluator is described in Rules and Procedures for Accreditation-related Committees (RPARC) document.

Step EPA-10. Program Evaluator (PEV) Acceptance

The Program Representative (PR) or Program Operating Institution Representative (POIR) is expected to communicate their consent or objection to the Program Evaluator proposed by EAC Discipline Chair through IABEE Online Evaluation System. In case where a reasonable objection is stated by the PR or POIR, a different PEV shall be proposed by the EAC Discipline Chair.

Step EPA-11. Final Program Evaluator (PEV) Confirmation

Upon the acceptance of the PEV by the PR or POIR, EAC Chair makes confirmation of PEV assignment in the IABEE Online Evaluation System. IABEE Secretariat shall follow the step by producing an official Letter of Appointment to the PEV.

Step EPA-12. Completed Program Profile and Self Evaluation Report (SER) Submission

No later than the deadline shown on the related step in IABEE Online Evaluation System, the Program is expected to complete and submit the Program Profile and the Self-Evaluation Report (SER) including its necessary attachments to system. IABEE Online Evaluation System provides upload and submit procedure separately. It is to be noted that upload button is used only to store all the document files in the IABEE server. To send it as a submission, Program Representative must click the submit button. The Program can no longer amend the Program Profile and SER online documents after submit button has been used.

A Program may submit a total of six files, sizing 30 Mbytes each, to contain Program Profile and all SER attachment files (e.g. compendium of proofs/evidences), in addition to the SER itself. The SER itself is written separately in a dedicated spreadsheet template and uploaded onto the system by letting the system read and copy the data prepared in the template (see also Section 2.5.2).

Step EPA-13. Program First Review

In the Program First Review, Program Evaluator reviews the submitted Program Profile, Self-Evaluation Report, and all additional documents. The Program Evaluator for the first time shall

assign the 'Yes-No' score and provide comments for each evaluation item in the Program Evaluator worksheet template downloaded from the IABEE Online Evaluation System. Program Evaluator shall notify the Program Representative on the need for any additional information, data, or explanation from the Program to ensure accurate evaluation. IABEE Online Evaluation System provides a message board facility to allow communications between Program Evaluator and Program Representative.

Step EPA-14. Program Response

The Program Representative is expected to respond to the request for additional data or explanation from the Program Evaluator, if any. This respond is to be documented and submitted as the Program First Response. At this step, although "Yes-No" scores as well as evaluation comments have been inputted by Program Evaluator for each criteria item, but Program Representative can only see the comments section. IABEE Online Evaluation System provides additional space for uploading a maximum of 3 files in PDF format sizing maximum 30 Mbytes each.

Step EPA-15. Program Second Review

Based on the First Program Response, the Program Evaluator prepares a Program Second Review report, which is essentially an improvement of Program First Review based on additional evidences submitted by the Program, if any, during the Program Response step. This report shall contain the initial evaluation of the Program, and a list of items to be inquired further during the On-Site Visit.

Step EPA-16. On-Site Visit Planning

The Program Evaluator prepares a detailed On-Site Visit plan, which includes visit schedule and itinerary, list of persons to be interviewed, list of items to be inquired further, as well as logistical matters related to the visit. The Program Representative shall be notified through e-mail by IABEE Online Evaluation System right after Program Evaluator has posted the visit plan in the system. Program Representative may discuss with Program Evaluator to agree on the visit date and plan.

Step EPA-17. On-Site Visit

The On-Site Visit will be undertaken by Program Evaluator on the agreed-upon date. The visit shall include the following activities:

- Interview of faculty members, students, and support staff to obtain a comprehension on the compliance of the Program to Accreditation Criteria items, and to identify specific issues arising from the review of Program Profile and Self-Evaluation Report, as well as from the On- Site Visit activities.
- Examination on the following specific aspects:
    - Physical facilities: The Evaluator shall verify whether learning atmosphere provided by the Program through the utilization of various facilities is sufficient, and that the facilities may be utilized in a safe manner for their intended purposes.
    - Learning materials: The Evaluator shall examine examples of course materials including course description and syllabi, textbooks, assignments and tests, and examples of student works which include works receiving borderline to very high marks.

- Proof that the Autonomous Professional Profile envisaged by Program's educational objectives and the Learning Outcomes declared by the Program has considered vision and mission of POIR, as well as the needs of Program Stakeholders.
- Assessment plan of Program Learning Outcomes.
- Support functions for the students, to ensure the adequacy of student services in accordance to the mission of the Institution, the Autonomous Professional Profile, and Program Learning Outcomes.
- The process for monitoring the completion of study and conferral of academic degree for each student.

Throughout the On-Site Visit, Program Evaluator is expected to re-evaluate the level of compliance of the Program to each evaluation item (i.e. the chance of meeting each criteria item by the time the Program is expected to apply Evaluation for General Accreditation) as temporarily scored during previous step as well as to take note of Observations.

IABEE upholds certain codes of conduct in undertaking an On-Site Visit to make sure the activity achieves its intended objectives effectively and to prevent any conflict of interest. Please see Section 2.9. for the related Codes of Conduct.

Step EPA-18. Exit Meeting

An Exit Meeting shall be held at the end of the On-Site Visit, in which the Program Evaluator shall verbally communicate findings to Program Representative and Program Operating Institution Representative, including other official(s) if any. The meeting concludes the On-Site Visit by reading out the Exit Statement. The Evaluator will not leave any written copy of Exit Statement document with the Institution since all the material shall be made available at the IABEE Online Evaluation System. The Program may inspect these findings in the IABEE Online Evaluation System after the conclusion of the Exit Meeting at the Program First Evaluation step.

Step EPA-19. Program Final Evaluation Report

Based on the Program Second Evaluation and results from the On-Site Visit, the Program Evaluator prepares the Program Final Report, which contains an evaluation of the current status of the Program and, if Provisional Accreditation Status is deemed appropriate, areas where compliance improvements are expected within 4 years. The report is submitted to the EAC Chair. The report shall include a description of the Program, its areas of strength, identified shortcomings, and constructive Observations, and a summary of its compliance to the Accreditation Criteria as indicated by the 'Yes-No' scores of evaluation items

Step EPA-20. EAC Plenary Meeting

The EAC Chair brings the Program Final Evaluation reports to the EAC Plenary Meeting for thorough review of the accreditation status decision-making.

Step EPA-21. Program Final Evaluation Report Editing

Respective Discipline Chairs are assigned as Editors in this step, in which the Program Final Evaluation Report draft shall be edited to ensure consistency between the scores and comments or narratives given by the Team Chair and the criteria or sub-criteria items associated with the scores and narratives.

Step EPA-22. Accreditation Decision

The IABEE Accreditation Council makes the final decision for Provisional Accreditation. For explanation regarding Accreditation Decision, please see further Section 2.6.

Step EPA-23. Accreditation Status Announcement

The IABEE Secretariat informs the Program Representative and Program Operating Institution Representative of the final evaluation decision. A "Not Ready" status shall not be publicized in the IABEE website, but a "Provisional status" shall be publicized. The PA-status notification shall also include instructions on the proper use of IABEE PA status by the Program and Program Operating Institution. Program Accreditation Evaluation Report and accreditation decision shall be saved in the IABEE Online Evaluation System and shall be accessible by the Program.

2.5.8. Survey of Accreditation Evaluation Process

As a means of collecting 360-degree feedbacks for continual improvement purposes, IABEE Secretariat conducts a comprehensive survey through Online Evaluation System, which will be available after an Exit Meeting step. The survey allows each evaluation team member and chair, services provided by Secretariat, IABEE public website, as well as Online Evaluation System to be rated and given feedback by Institution and Program Representatives. It also allows all team members to give ratings and feedback to each other.

2.6. Accreditation Decisions

Accreditation decisions following General and Provisional Accreditation Evaluations are taken by IABEE Accreditation Council (AC) in AC Meeting by considering EAC Chair's report. To take any decision, the AC Meeting shall be attended by at least 2/3 of its members. The meeting is normally conducted annually at the end of the accreditation cycle. Role and responsibility, as well as membership of the Council are explained in the RPARC document.

Based on the Program's evaluation type and compliance to Accreditation Criteria and the RPEA, the Program shall receive one of the following final status, as explained in Section 2.6.1 and 2.6.2 for General Accreditation and Provisional Accreditation, respectively.

2.6.1. Decisions in Evaluation for General Accreditation

Evaluation for General Accreditation for a Program ultimately finalizes in one of the following status:

- *Accredited*. This status implies that the Program meets all criteria and rules as outlined in the Accreditation Criteria and the RPEA. This accreditation status is valid for a period of five years.
- *Accredited with Interim Evaluation without Visit*. This status implies that the Program indicates unresolved shortcomings of the 'Weakness' category ("W" score). These shortcomings are such that visit is not deemed necessary to assess future corrective actions. This status is valid for a period of three years, after which the Program must undergo an Interim Evaluation based on desk study.

- *Accredited with Interim Evaluation with Visit*. This status implies that the Program indicates unresolved shortcomings of the 'Weakness' ("W" score) category. These shortcomings are such that a visit is deemed necessary to assess future corrective actions. This status is valid for a period of three years, after which the Program must undergo an Interim Evaluation which includes both desk study and on-site visit.
- *Not Accredited*. This status implies that the Program fails to substantially comply with IABEE Accreditation Criteria as indicated by unresolved shortcomings in the 'Deficiency' category ("D" score) and Rules and Procedures for Accreditation and Evaluation (RPEA).

Subsequent decision for accreditation status requiring Interim Evaluation, either with or without visit, shall be taken based on the results of the Interim Evaluation as follows:

- If the Interim Evaluation results indicate that Program shortcomings of the previous 'Weakness' category ("W" score) remain unresolved, then the Program receives the "Not Accredited" final status. The Program may apply for new Evaluation for General Accreditation after one evaluation cycle has passed since the last Interim Evaluation.
- If the Interim Evaluation results indicate that the Program has managed to rectify Accreditation Criteria and RPEA compliance shortcomings in a satisfactory manner such that all the criteria and RPEA items are met, then the Accredited with Interim Evaluation status from the last Evaluation for General Accreditation (EGA) is changed to Accredited status, with a validity period of five years from the submission of Program Profile and Self-Evaluation Report documents in the last EGA process.

An *Accredited* status for initial accreditation of a Program shall be effective on 1 April of the following accreditation evaluation cycle, and shall expire on 31 March of the fifth calendar year after the effective date for an Accredited status, or of the third calendar year after the effective date for an Accredited with Interim Evaluation status.

A Program receiving 'D' score in one element of the Accreditation Criteria in EGA-28 step for the General Accreditation shall be given a final grace period to rectify the associated shortcoming. The grace period shall end no later than 31 August of the subsequent accreditation evaluation cycle. The Program shall produce an evidence-based report on how it has satisfactorily rectified the shortcoming with respect to the Accreditation Criteria.

The report shall be sent to IABEE Secretariat no later than 31 August of the subsequent accreditation cycle. EAC shall assess the worthiness of the report. Satisfactory improvement from the 'D'-level shortcoming shall result in an *Accredited* status, either *with* or *without On-Site Visit*, effective from 1 April of the following accreditation evaluation cycle.

2.6.2. Decision in Evaluation for Provisional Accreditation

Evaluation for Provisional Accreditation for a Program ultimately finalizes in one of the following status:

- *Provisionally Accredited*. This status implies that the Program has the potentials of meeting the Accreditation Criteria within a foreseeable future (i.e. 3-4 years). Given eligibility requirements are fulfilled, a program accredited in Provisional Accreditation is expected to apply evaluation for General Accreditation within a period of four years.
- *Not Accredited*. This status implies that the Program has substantially low potentials to meet all Accreditation Criteria and RPEA items within 4 years.

Provisionally Accredited status of a Program shall be effective on 1 April of the following accreditation cycle and shall expire on 31 March of the third calendar year after the effective date.

2.7. Withdrawal and Change of Type

A Program may voluntarily withdraw at any step of an ongoing evaluation process for any reason, without refund of the paid accreditation fees. A Program undergoing its initial General Accreditation evaluation process may voluntarily request change to Provisional Accreditation and vice versa, subject to eligibility of the Program (refer to RPEA Section 2.3 on Program eligibility requirements). Request for this change of evaluation type must be submitted to IABEE Secretariat before the conclusion of steps number EGA-6 or EPA-6. IABEE EAC shall then make the necessary adjustments for the remainder of the evaluation and accreditation process steps.

2.8. Public Disclosure of Accreditation Status

Accreditation by IABEE holds an unambiguous recognition that an undergraduate engineering Program is planned, operated, and managed in accordance to international quality standards for outcome-based engineering higher education. These standards are defined as IABEE Accreditation Criteria (AC) and Rules and Procedures for Evaluation and Accreditation (RPEA). An accredited status by IABEE does not imply any ordinal ranking between one Program and others that are also accredited by IABEE.

The identity of Programs that receive Not Accredited status in EGA or EPA will not be publicized by IABEE. Programs accredited by IABEE with Accredited, Accredited with Interim Evaluation without Visit, or Accredited with Interim Evaluation with Visit status have the rights for public disclosure of the accreditation status according to the following rules:

(1) The accreditation validity period of each accredited Program shall be made accessible to the general public through the IABEE website. The Program and/or Program-Operating Institution may not publicly disclose the accreditation validity period.

(2) IABEE shall provide an electronic file of official “accreditation logo” for Programs that have been accredited.

(3) The accreditation logo is different from the IABEE institutional logo and contain the starting year of the accredited status. Under no circumstances shall the Program and/or Program- Operating Institution be allowed to apply the IABEE institutional logo in all public disclosures.

(4) The official accreditation logo electronic file must not be altered or edited by any means (adding color and/or shade gradation, shadow, text, and frame, inserting the logo into another design, overlapping with other image, and other alterations), except resizing to adjust to specific media to which it is to be applied; the resizing must not change the aspect ratio of the logo. A minimum logo dimension of 1.5 cm (measured along the longer axis of the image) is required.

(5) The public disclosure of non-official IABEE institutional logo and/or IABEE accreditation logo is strictly prohibited; the Program and/or Institution is obliged to prevent such

disclosure and, if undertaken by parties not associated with the Program / Institution, to publicly declare their non-association. IABEE is not responsible for any misuse, deliberate or otherwise, of the IABEE institutional logo and/or accreditation logo.

(6) Public disclosure of official IABEE accreditation logo by the Program and/or its Institution is allowed within the validity period of the Program's accredited status.

(7) Public declaration of the accredited status in any media, whether or not involving the use of the IABEE accreditation logo, must be accompanied by a clear and unambiguous reference to specific Programs that are accredited by IABEE.

(8) The application of official IABEE accreditation logo is allowed for the following public disclosure and official documentation media:

a. in official website of the Program and/or the associated Program Operating Institution

b. in official letterheads, faculty member business cards, brochures, and other official institutional printed matter, except apparel

c. in promotional matter published in electronic or print media, such as the internet, television media, newspapers, magazines, etc.

d. in degree-granting certificate or diploma (*ijazah*), academic transcripts, and Letter of Reference Accompanying Diploma (*Surat Keterangan Pendamping Ijazah*, SKPI)

Violation to the above rules shall result in the revocation of the Program's rights to public disclosure of its accreditation status. This revocation shall be made public by IABEE and shall be effective until the necessary corrective actions have been taken by the Program and/or Program-Operating Institution.

It is also important to be noted that a Provisional Status does not in any way imply that a Program is accredited by IABEE. The Program must not misrepresent this Provisional Status to reflect any manner of accreditation given by IABEE.

2.9. Appeals

The Program shall be given an opportunity to file an appeal if an accreditation decision is deemed unfair. The appeal must include a clearly written rationale for the appeal, with reference to specific AC and/or RPEA items associated with the appeal. Only final decision of Not-Accredited status in General Accreditation may be appealed. No appeal can be filed against Not-Accredited status in Provisional Accreditation.

Procedure for handling an appeal is outlined as follows:

(1) Submission of official letter of appeal from the Program Institution highest executive officer to the IABEE Chair of Executive Committee, to be received no later than 60 calendar days from the official notification of accreditation decision. This submission must include the reasons for appeal with detailed evidences.

(2) Upon the receipt of an appeal submission, Chair of Executive Committee shall request Chair of Appeal Board to form an Appeal Committee for the appeal case. Membership requirements of an Appeal Committee are stipulated in Rules and Procedures for Accreditation-Related Committee (RPARC).

(3) IABEE Secretariat shall notify the Program Representative upon the formation of the Appeal Committee and request him/her to submit the documents deemed necessary to support its appeal within 30 calendar days. Upon submission of the documents, Secretariat shall deliver them to Chair of Appeal Committee.

(4) Chair of Appeal Committee shall request EAC Chair to submit written materials for clarification of its position.

(5) The Appeal Committee members shall conduct a meeting to review the submitted materials. Only written materials which have been submitted as part of documents in the process of the disputed accreditation decision shall be considered. Representatives of the Program/Institution may not attend the meeting. The Appeal Committee is expected to take decision within 90 days.

(6) The decision taken by the Appeal Committee is limited to the accreditation decision options available in Section 2.6.1 of RPEA document. The decision shall be reported to the Chair of Appeal Board.

(7) Chair of Appeal Board shall report the decision of the Appeal Committee to the Chair of Executive Committee. This decision shall be the IABEE final decision on the matter.

(8) IABEE Secretariat shall communicate the final decision to the Program Representative. Final decision that affects the previous accreditation status shall immediately be made public in the IABEE website.

2.10. Policies on Conducting On-Site Visit

The following are general policies for implementing an on-site visit:

(1) On-site visit activities are arranged so as not to interfere with the routine activities of Program personnel and carried out during working hours, not causing overtime work,

(2) Programs or Program Operating Institutions do not give evaluators gifts of any kind,

(3) Programs or Program Operating Institutions have no obligation to provide pick-up to evaluators from the airport to the hotel/place of accommodation and vice versa,

(4) Programs or Program Operating Institutions do not provide entertainment reception to evaluators of any kind, including:

   a. putting up banners/billboards/posters/videotrons, moreover loading the names and photos of the evaluators,

   b. giving a dinner party, and

   c. providing opportunities for social traveling or recreation.

(5) Programs or Program Operating Institutions do not take photos or videos that involve evaluators during the on-site visit,

(6) For the purposes of efficiency and time effectiveness of on-site visits, Programs or Program Operating Institutions are permitted, by maintaining the principle of simplicity:

   a. provide pick-up evaluator facilities from the hotel/accommodation to the campus and delivery from the campus back to the hotel/accommodation place, and

b. provide lunch (working lunch) on the days of on-site visits

(7) In addition to the above policies, Programs or Program Operating Institutions are not allowed to make public exposure regarding on-going evaluation of accreditation until a definitive accreditation decision has been announced.

3. Indicative Schedule of Accreditation Evaluation Cycle

Table 3 outlines the typical timetable of an Accreditation Evaluation Cycle. An evaluation for accreditation cycle covers a period of twelve calendar months, starting on 1 April of the current year and ending on 31 March of the following year.

Table 3. Typical timetable of an Accreditation Evaluation Cycle

Step no.	Activity	Evaluation Type*)	Period or Completion Deadline
1	PR & POIR registration	EGA, EPA, IE	1-15 April
2	PR & POIR registration verification	EGA, EPA, IE	1-15 April
3	Application for Program evaluation	EGA, EPA, IE	1-15 April
4	Program eligibility verification	EGA & EPA	1-15 April
5	Evaluation scheduling	EGA, EPA, IE	20 April
6	Notice of evaluation kickoff & invoicing	EGA, EPA, IE	21 April
7	EAC Discipline assignment	EGA, EPA, IE	15-20 April
8	Evaluation Team members selection	EGA, EPA, IE	15-20 April
9	Evaluation Team Chair assignment	EGA Only	15-20 April
10	Approval of evaluation observers	EGA Only	15-20 April
11	Evaluation Team acceptance	EGA, EPA, IE	8 May
12	Final Evaluation Team confirmation	EGA, EPA, IE	8 May
13	Completed SER submission	EGA, EPA, IE	30 June
14	Full payment reception	EGA, EPA, IE	1 May
15	Program First Review	EGA, EPA, IE	31 July
16	Program Second Review	EGA only	15 August
17	Program First Response	EGA, EPA, IE	15 September
18	Program Third Review	EGA Only	30 September
19	On-Site Visit Planning	EGA, EPA, IE-V	7 October
20	On-Site Visit	EGA, EPA, IE-V	7 November
21	Exit Meeting	EGA, EPA, IE-V	7 November
22	Program First Evaluation	EGA, IE-V	7-14 November
23	Program Second Response	EGA, IE-V	14 November
24	Program Second Evaluation	EGA, IE-V	28 November
25	Program Final Response	EGA, IE	28 December
26	Program Final Evaluation Report	EGA, EPA, IE	15 January
27	EAC Discipline Harmonization	EGA, IE	31 January
28	EAC Plenary Meeting	EGA, EPA, IE	1 February
29	Program Final Evaluation Report Editing	EGA, EPA, IE	20 January – 1 March
30	Accreditation Decision	EGA, EPA, IE	15 March
31	Accreditation Announcement	EGA, EPA, IE	31 March

*) EGA = Evaluation for General Accreditation, EPA = Evaluation for Provisional Accreditation, IE = Interim Evaluation (either with or without visit), IE-V = Interim Evaluation with On-Site Visit

APPENDIX D – Rules and Procedures of Accreditation-related Committees (RPARC)

INDONESIAN ACCREDITATION BOARD
FOR ENGINEERING EDUCATION (IABEE)

RULES & PROCEDURES FOR ACCREDITATION-RELATED COMMITTEES (RPARC)

VERSION 2020

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1. INTRODUCTION

The purpose of this document of Rules and Procedures of Accreditation-Related Committees (RPARC) is to define the rules and procedures for operating IABEE committees that are directly related to the evaluation and accreditation process of a Program. These consist of Evaluation and Accreditation Committee (EAC), Pool of Program Evaluators, Accreditation Council and Appeal Board.

2. EVALUATION AND ACCREDITATION COMMITTEE

2.1 ROLES AND RESPONSIBILITY

This committee is responsible to conduct the accreditation evaluation of Programs. The activity includes planning and scheduling, appointing the evaluation team, implementing and monitoring the evaluation process, conducting post evaluation activities, including harmonization, making recommendation on accreditation decision based on the Accreditation Criteria and Rules and Procedures for Evaluation and Accreditation (RPPEA), and reporting.

2.2 CHAIR AND MEMBERSHIP

EAC is led by an EAC Chair and a Vice Chair. For the first time, its members consist of the experienced academics from reputable universities and representing various engineering disciplines, and the professional communities. The number and composition of members can be adjusted to the evaluation workload and the variety of disciplines covered. All members of the Committee are voting members.

The Chair leads all meetings and is responsible for the conduct of the EAC roles. The Vice Chair provides general assistance to the Chair as assigned and, in the absence of the Chair, will assume the Chair's duties.

The EAC Chair designates, for every discipline, a Discipline Chair among the EAC members according to his/her educational background. The function of the Discipline Chair is to propose the names of prospective evaluators who will serve in an accreditation evaluation process and lead the discipline-level harmonization process before accreditation decision making.

3. POOL OF PROGRAM EVALUATORS

3.1 ROLES AND RESPONSIBILITY

Program evaluators are responsible for conducting independent and systematic evaluations from the preparatory, implementation and reporting stages to the post-site visit activities. Program evaluators must provide an appropriate evaluation, in accordance with the level of conformity of the program to the IABEE's Accreditation Criteria and RPEA.

Program evaluators are required to behave ethically and professionally by upholding the Code of Ethics of Evaluators and avoiding conflicts of interest on evaluated institutions/programs.

As stated in the RPEA, an accreditation evaluation of programs is conducted by an evaluator team consists of usually two academics and one industrial practitioner. The evaluation team is led by a Team Chair. The competencies of evaluator team members and the Team Chair are explained in Section 6.7.

3.2 REQUIREMENTS FOR PROGRAM EVALUATOR CANDIDATES

The recruitment process to become a candidate for IABEE's engineering program evaluators is carried out in coordination with the respective Discipline Chapters of PII (BK-PII). IABEE collaborates with Association of Higher Education in Computing (APTIKOM) In case of recruitment for computing program evaluators. The requirements are as follow:

(1) Demonstrates interest and commitment in improving the quality of higher education.
(2) Has a good professional and ethical reputation.
(3) Has a commitment to improve his/her professional development (lifelong learning).
(4) Has good skills in working online and with word processing programs and data.
(5) Graduated from reputable university and has a good academic qualification in the appropriate field (for domestic university with national accreditation of Program rank-A by BAN-PT, or for foreign university with reputable recognition by Minister of Education and Culture).
(6) Has certificate as professional educator and at least 10 years lecturing experience and/ or certification as professional engineer with minimum level of Professional Engineer (IPM) for candidates of engineering program evaluator, and/or professional certificate in the field(s) of computing/IT-related for candidates of computing program evaluator.

(7) Registered as member of PII (for candidates of engineering program evaluator) or member of a computing/IT-related professional association acknowledged by APTIKOM (for candidates of computing program evaluator).

A candidate who has been assessed as fulfilling the above requirements must then undertake a series of IABEE candidate evaluator training programs. See Section 6 for further information on IABEE Evaluator Training Program.

4. ACCREDITATION COUNCIL

4.1 ROLES AND RESPONSIBILITY

Accreditation Council is a board of officials in charge of taking the final accreditation decision, based on the final results of accreditation recommended by the EAC Plenary Meeting. The main role of the council is to ensure that the accreditation process has been carried out in accordance with the established rules and procedures, code of ethics, the principle of confidentiality and avoidance of conflicts of interest. The council does not conduct a technical review so that it repeats what has been done by the EAC but rather on ensuring that all accreditation procedures have been carried out consistently and also emphasizing philosophical and strategic considerations if deemed necessary.

If any doubt arises concerning the recommendation of EAC, the Council has the right to request the EAC to re-examine the evaluation process for ensuring a justified accreditation decision.

4.2 MEMBERSHIP

The Council has 5-7 members consisting of representatives from academics, professional societies, and industry. Only in the initial period of IABEE's establishment, there were members of the Council representing government with the aim of ensuring that IABEE's vision and mission were aligned with national laws and policies. After IABEE becomes fully independent, representation from the government is no longer needed. The members and the Chair of Accreditation Council are appointed by the Executive Committee in yearly basis.

5. APPEAL BOARD AND APPEAL COMMITTEE

5.1 ROLES AND RESPONSIBILITY

Appeal is a facility provided to a Program if a final accreditation decision of Not-Accredited is deemed inappropriate. Appeal Board and Appeal Committee are board of officials that are appointed to hear appeals. They judge whether the accreditation decision was right or wrong, when the program or institution affected by it thinks that it was wrong. This judgement shall be the IABEE final decision on the matter.

Upon request of the Chair of Executive Committee, Appeal Board shall form an Appeal Committee who will conduct the entire process of resolving an appeal case.

5.2 MEMBERSHIP

The Appeal Board constitutes of Chair and Vice Chair who are appointed by the Executive Committee. An Appeal Committee formed by the Appeal Board consists of three members comprising at least an experienced Program Evaluator and a representative of associated engineering discipline. No member of the committee shall be involved as a Team Chair in the evaluation cycle during which the appealing Program is evaluated. Chair of Appeal Board shall appoint one of the members to be the Chair of Appeal Committee.

6. TRAINING

6.1 OVERVIEW OF TRAINING PROGRAM

Participants selected to take part in the IABEE Evaluator Candidate Training need to undergo a series of training programs, namely Awareness Training, Modular Online Training, Face-to-Face Training, and Observation in an On-Site Evaluation. Evaluator Refresher Training will also be given to evaluators who get assignments in the particular year.

6.2 AWARENESS TRAINING

This training is carried out by Chapters of the Institution of Engineers Indonesia (BK-PII), with instructors from IABEE with the aim of recruiting IABEE evaluator candidates. The

purpose of this training is to:

(1) introduce IABEE and give an understanding to evaluator candidates about the relationship between educational institutions and industry in the context of Outcome Based Education (OBE), and

(2) Introduce evaluator candidates on the concept of outcome-based accreditation, IABEE Accreditation Criteria, and Rules and Procedures for Evaluation and Accreditation (RPEA) and the roles of evaluators.

6.3 MODULAR ONLINE TRAINING

This is a regular yearly training conducted by IABEE with the following objectives:

(1) to give understanding of the basic aspects of the entire IABEE accreditation process, and

(2) to provide experience in preparing a program visit by giving several assignments pertinent to it.

The modules consist of introduction to IABEE; accreditation concepts; Accreditation Criteria; RPEA; roles and duties of evaluators; improvement of learning quality; evaluation judgment and accreditation decision making. This is a prerequisite training for evaluator candidate to be eligible to participate in the following Face-To-Face Training.

6.4 FACE-TO-FACE TRAINING

This is a 2-day interactive training program that is designed to simulate a real activity of program visit. It is designed for two purposes:

(1) to give participants a picture of the real situation and activities that occurs during a campus visit. The workshop is designed based on the online training materials that have been completed by participants, and

(2) to give participants the opportunity to demonstrate their competence as evaluators.

This training is guided by instructors and facilitators who function to guide participants in the learning process.

6.5 OBSERVATION IN ACTUAL ON-SITE VISIT

After successfully completing the series of evaluator training programs, IABEE will include the candidates in IABEE's Pool of Program Evaluators. However, assignment as a program evaluator can only be done after the candidate has direct experience in a

program evaluation activity. For this purpose, a candidate who has passed the series of training programs will be involved in an internship as an observer (evaluator-in-training) in an actual program evaluation activity.

The purposes of this observation are to:
(1) to improve the competence of evaluator candidates through direct involvement in the implementation of program evaluation, starting from document review (Program Profile, Self-Evaluation Report/SER), preparation of visits, interviews and observation, assessment, and report writing, and
(2) to demonstrate that the evaluator has the competence to evaluate the program.

Observer tasks include:
(1) observing the implementation of a program evaluation,
(2) practicing interview (with permission from the Team Chair), and
(3) practicing to give judgment.

6.6 EVALUATOR REFRESHER TRAINING

This training is specifically conducted for evaluators who will get the task of evaluating a program in that particular year. The objectives of this training are to:
(1) Recall evaluation processes and procedures
(2) Inform the latest developments in Accreditation Criteria and RPEA
(3) Share experiences (taking lessons) from the previous period evaluation process

This is half-day training and held before the implementation of the current year evaluation process.

6.7 EXPECTED EVALUATOR COMPETENCE

After going through the series of training programs and after having adequate evaluation experience, a program evaluator is expected to have the following knowledge, skills and attitudes.

Technically current:
- Demonstrates required technical credentials for the position
- Engaged in lifelong learning and current in their field

Effective communicator:

- Easily conducts face-to-face interviews
- Writes clearly and succinctly
- Presents focused, concise oral briefings

Interpersonally skilled:

- Friendly and sets others at ease
- Listens and places input into context
- Remains open-minded and avoids personal bias
- Forthright, doesn't hold back what needs to be said
- Skillful at pointing out strengths and weaknesses in non-confrontational

Team-oriented:

- Readily accepts input from team members
- Works with team members to reach consensus
- Values team success over personal success

Professional:

- Conveys professional appearance and demeanor
- Is committed to contributing and adding value to the evaluation process
- Considered a person with high integrity and ethical standards

Organized:

- Is focused on meeting deadlines
- Focuses on critical issues and avoids minor detail
- Displays take-charge initiative
- Takes responsibility and works under minimum supervision

For a Team Chair, additional competencies are required, particularly those related to leadership quality and capability to manage an evaluation team. These include:

Leadership

- Takes responsibility, facilitating constructive discussion and fostering closure
- Exhibits adaptability and sound judgment
- Fosters a team environment that is cohesive and well organized
- Builds trust within the team and between the team and the institution

Good team manager:

- Able to build team cohesion and effectively manage team meetings and activities
- Able to bring the team to consensus, exhibiting skill in finding common ground and fostering cooperation
- Able to diplomatically manage an effective exit meeting

6.8 EVALUATOR PERFORMANCE EVALUATION

The performance evaluation of evaluator candidates during training, and team member of evaluators as well as team chair in conducting program evaluation is based on the evaluator competence described in point 6.7. This evaluation is primarily intended as a means for professional development of evaluators.

The evaluation of evaluator candidates is conducted by the Training Facilitators and Peers. The evaluation of evaluators is conducted by Institutions/Programs, Team Chair and Peers after each visit, and the evaluation of Team Chair is conducted by Institution/Program, Evaluators and EAC.

Evaluation instruments containing evaluation criteria and scoring system for evaluator candidates, evaluators, team chairs and training implementation are described in the IABEE training center website.

6.9 TRAINING ORGANIZER

The training organizer has the following duties and responsibilities:

(1) plan, schedule and carry out training activities
(2) preparing training materials, instructors and facilitators
(3) assessing evaluator candidates
(4) evaluate the implementation of training,
(5) make continuous improvements of training programs

Training Instructors are EAC members who have the following qualifications.

(1) Technical accreditation evaluation knowledge obtained through successful completion of overseas and IABEE's evaluator trainer training programs and recent accreditation evaluation experiences.
(2) Combination of adult-education delivery experience and knowledge of principles obtained through at least 10 years delivery experience or successful completion of an instructor training program based on adult learning principles.

(3) Have sufficient knowledge about the concept of Outcome-Based Education, Quality Improvement of Education, IABEE matters, IABEE's Accreditation Criteria and RPEA, and IABEE's Code of Ethics.
(4) Have the ability to create positive learning environments and adheres to the instructional design.

Training activities also involve several Facilitators who have the following tasks and roles:
(1) Assist in managing the flow and training time
(2) Helping participants to understand training materials
(3) Helping the success of group learning during program visit simulations

All members of EAC are eligible to become training facilitators.

7. CODE OF ETHICS

7.1 IABEE VALUES

IABEE demands that all personnel involved in carrying out the mission of IABEE demonstrate the highest standards of professionalism, honesty and integrity. The services provided by IABEE demand impartiality, justice and equality, so that every person must carry out their duties with the highest standards of ethical behavior.

7.2 EVALUATOR'S ETHICAL PRINCIPLES

The followings are evaluator's ethical principles:
(1) Evaluators must work objectively based on the Accreditation Criteria and RPEA regardless of the program reputation.
(2) Evaluators are not permitted to express personal opinions on behalf of IABEE.
(3) Evaluators are not permitted to request or accept gifts of any kind that should be suspected of having a bearing on / affecting the results of accreditation evaluation.
(4) Evaluators are required to follow the applicable legal rules in Indonesia regarding gratification.
(5) Each evaluator must make every effort to avoid providing evaluations or comments on matters not included in the scope of Accreditation Criteria and the RPEA.
(6) Evaluators should not compare the conditions of study program being evaluated with the conditions in the institutions of origin of evaluators or other institutions because each study program has the flexibility to determine the outcome standards of its graduates in accordance with the vision, mission and conditions of its resources.

8. CONFLICT OF INTEREST

8.1 POLICY ON CONFLICT OF INTEREST

The types of services provided by IABEE are vulnerable to conflicts of interest that can affect the objectivity of the accreditation process, and thus the credibility of IABEE. Therefore, IABEE expects that all personnel involved in IABEE activities to hold strong ethical principles and professionalism to avoid potential conflicts of interest as much as possible so as to guarantee objectivity of services.

The following policies and procedures regarding conflict of interest are established with the aim of:

(1) maintaining credibility in the accreditation evaluation process and confidence in decisions,
(2) ensuring fairness and impartiality in decision making,
(3) disclosing real or perceived conflicts of interest, and
(4) acting impartially and avoiding the appearance of impropriety.

8.2 PROCEDURES

The following conflict of interest procedures address situations and circumstances in which personal interests of IABEE personnel are - or can appear to be - in conflict with the IABEE's interest:

(1) Individuals representing IABEE must not participate in any decision-making capacity if they have or have had a close, active association with a program or institution being evaluated. Close, active association includes but is not limited to:
    a. Current or past employment as faculty, staff, or consultant by the institution or program;
    b. Current or past discussion or negotiation of employment with the institution or program;
    c. Attendance as student at the institution;
    d. Receipt of an honorary degree from the institution;
    e. An institution or program where a close family relative is, or was, a student or employee; or,
    f. An unpaid official relationship within the past 10 years with an institution, e.g. membership on the institution’s governing board or advisory board.
    g. Any reason that the individual cannot render an unbiased decision.
(2) The members of the evaluation team must not establish a close or active association with the institution or program under evaluation, until the entire accreditation

evaluation has been completed and accreditation decision has been publicly announced.

(3) All individuals representing IABEE must sign a conflict of interest and confidentiality statement indicating that they have read and understand these policies.

(4) Individuals must absent themselves from any portion of IABEE meeting in which discussions or decisions occur for which they have a real or perceived conflict of interest.

9. CONFIDENTIALITY

9.1 POLICY

IABEE upholds ethics in conducting all activities of its members and organizing staff, and requires that they exhibit highest standards in professionalism, fairness, and integrity. Information disclosed by programs undergoing evaluation, and information generated by review and discussion activities during the evaluation process shall be treated with confidentiality, and shall not be divulged without specific written authorization by IABEE and the program being evaluated.

9.2 PROCEDURES

(1) Evaluators must maintain the confidentiality of every information/document as well as the evaluation results except to IABEE.

(2) Evaluators may not use the information provided by the program for the purpose of evaluation for the benefit of themselves or other parties other than IABEE

(3) Even though the evaluation process is transparent, all the documents submitted by the study program to the evaluator as well as the results of the evaluation are confidential which are entrusted by the program to IABEE. Each evaluator must maintain this trust by not providing information from the document and the results of the evaluation to any party other than IABEE.

(4) The evaluator is also not allowed to take advantage of the use of data and information submitted by the program to IABEE both in the form of documents and the facts of the field.

APPENDIX E – Evaluation Guide

Evaluation Guide for Programs and Evaluators

Evaluation and Accreditation Committee

Version 2020a

- General Information
- Information for Programs seeking for Accreditation
- Information for Program and Candidate Evaluators

*With additional section on Live Online Visit Protocols

Indonesian Accreditation Board for Engineering Education
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Document Control

Evaluation Guide for Programs and Evaluators version 2020 is produced by Evaluation and Accreditation Committee (EAC) as supplementary document to be used from 2020 Evaluation Cycle onwards.

A special section has been added in September 2020 to include Live Online Visit Evaluation, which is an alternate to the standard On-Site Evaluation Visit to be utilized under certain circumstances that prohibit its application.

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Introduction

This Evaluation Guide for Evaluators and Programs provides program management, quality managers in higher education institutions, and IABEE Program Evaluators with a concise reference for understanding the accreditation process and criteria, context for judgment by Evaluators, information and documents expected to be provided by programs for the evaluation process, and supplementary information not covered in the RPEA. Through this document, both the program and the Evaluators are expected to form a common quality-oriented and criteria-based understanding on the expectations associated with IABEE's accreditation process. For the Evaluators in particular, this guide facilitates the consistent and objective judgment throughout the entire program evaluation process.

To meet the above-mentioned purpose, this guide is composed of the following sections:

A. General Information: (1) types of accreditation and evaluation, (2) program eligibility, (3) understanding accreditation criteria, rules, and procedures for evaluation and accreditation, (4) overview of evaluation process, and (5) quality assurance

B. Information for Programs seeking for Accreditation: (1) preparation for Self-Evaluation Report and Program Profile and (2) evaluation judgement and decision

C. Information for Program Evaluators: (1) competency and code of ethics, (2) principles of evidence-based evaluation, (3) judgement and feedbacks

A special section is added to explain rules and procedures for conducting Live Online Visit Evaluation. This type of evaluation is an alternate to the normal On-Site Visit and may be opted by IABEE in a situation where the normal On-Site procedure is not plausible to undertake.

D. Live Online Visit Evaluation: (1) principles, (2) requirements, (3) rules, (4) preparing evidence, (5) Program's integrity statement, (6) force majeure

A. General Information

A.1. Types of Accreditation and Evaluation

IABEE offers two types of accreditation, i.e. General Accreditation (GA) and Provisional Accreditation (PA).

(1) **General Accreditation (GA)** is intended for programs seeking international recognition through IABEE accreditation. Program wishing to apply for evaluation of GA must comply with eligibility requirements (see Section 2.3.1. of Rules and Procedures of Evaluation and Accreditation (RPEA) document).

(2) **Provisional Accreditation (PA)** is intended for programs newly adopting an outcome-based education system and have not yet produced graduates under the system. A program applying for PA will be evaluated to measure its potentials of meeting the Accreditation Criteria within a foreseeable future (2-4 years). Eligibility requirements for a program applying PA evaluation is specified in Section 2.3.2. of RPEA document.

A Provisional status is not recognized as an accreditation status at international level.

A.2. Program Eligibility

A.2.1. Eligibility Requirements for General Accreditation

Programs eligible to apply evaluation for General Accreditation (GA) are those which meet the following requirements (see Section 2.3.1. of RPEA).

(1) The associated Program Operating Institution (POI) has obtained National Accreditation for Institution status with a minimum rank of “B”.

(2) The Program has obtained National Accreditation status ranked “A”.

(3) The Program is a bachelor-level program in an engineering discipline with a curricular study period of four years, and with a total course-load of a minimum of 144 credit units (or SKS).

(4) The Program is at least in the 4th year of continuous Outcome-Based Education (OBE) implementation.

(5) The OBE shall include assessment and evaluation of the Learning Outcomes of the students.

(6) By the time of the on-site visit evaluation, the Program has produced at least one graduate under its OBE system.

(7) The Program has established and publicized the Profile of Autonomous Professionals statement formulated as its educational objectives.

(8) The Program has established and publicized its Learning Outcomes as the basis for developing its curriculum and learning methods.

A.2.2. Eligibility Requirements for Provisional Accreditation

Programs wishing to apply evaluation for Provisional Accreditation (PA) must fulfill the following requirements (see Section 2.3.2. of RPEA).

(1) The associated Program Operating Institution has obtained National Accreditation for Institution status with a minimum rank of "B".

(2) The Program has obtained National Accreditation status at least ranked "B".

(3) The Program is a bachelor-level program in an engineering or computing discipline with a curricular study period of four years, and with a total credit of a minimum of 144 credit units (or SKS).

(4) The Program has implemented Outcome-Based Education (OBE) at least for one year before applying for the evaluation.

(5) The Program has established and publicized the Autonomous Professional Profile statement formulated as its educational objectives.

(6) The Program has established and publicized its Learning Outcomes as the basis for developing its curriculum and learning methods.

A.3. Understanding Accreditation Criteria, and Rules, and Procedures for Evaluation and Accreditation

IABEE conducts all Program evaluation and accreditation process based on a well-defined set of criteria, and documented accreditation policies, rules, and procedures. Therefore, an understanding of these formal framework of accreditation is critical to ensure fairness and objectivity of the entire evaluation process, and ultimately the accreditation decision-making. To provide an insight on the fundamental elements of the accreditation framework, the following is an overview of the Accreditation Criteria, Criteria Guide, as well as Rules and Procedures for Evaluation and Accreditation.

A.3.1. Accreditation Criteria

Program evaluation process conducted by IABEE is based on specific accreditation criteria, which is composed of: Common Criteria, Criteria Guide, and Discipline Criteria. These documents are to be treated as a single, cohesive framework for program evaluation and accreditation. IABEE periodically reviews and publishes the Accreditation Criteria. The evaluation process undertaken in an accreditation cycle adheres to the latest version.

Common Criteria are organized as a concise set of evaluation criteria that must be fulfilled by all Programs eligible for IABEE evaluation process, regardless of their discipline. Discipline

criteria are discipline- or area-specific requirements defined by the appointed national professional association. Criteria Guide provides concise elaborations and/or additional details for each of the Common Criteria item. Evaluation items in the Program Evaluation Worksheet embedded in the IABEE Online Evaluation System are based on the three criteria-related documents. IABEE Program Evaluators conduct their evaluation based on evidences provided by the Program against the Accreditation Criteria.

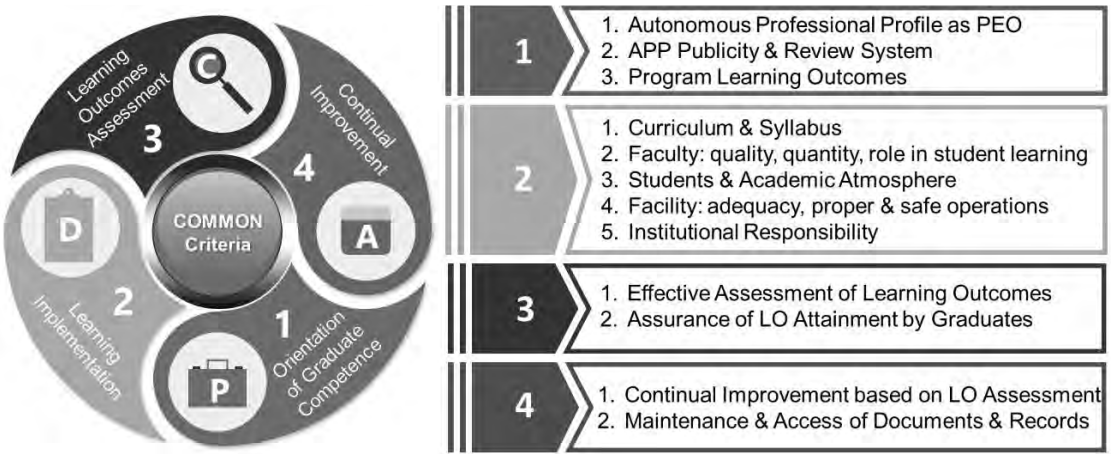


Fig. 1. Illustration of Common Criteria

Common Criteria consist of 4 criteria (Fig.1), following the management approach of PDCA (Plan-Do-Check-Act) continual improvement cycle. The four criteria are as follows:

- **Criterion 1** is associated with the orientation of the graduate competence (profile of autonomous professionals or graduate profile, and program learning outcomes).
- **Criterion 2** is associated with the learning implementation, which includes curriculum, faculty, students and academic atmosphere, learning facilities, and institutional responsibility related to the operation and sustainability of the Program.
- **Criterion 3** is associated with the assessment of the expected learning outcomes, ensuring that the Program must regularly conduct direct and indirect assessment of learning outcomes attainment, and that all graduates satisfy the minimum requirements for outcomes attainment.
- **Criterion 4** is associated with continual improvements, which essentially expects that the Program effectively utilizes their outcomes assessment results to identify and pursue improvement follow-up actions.

The Common Criteria are elaborated into 12 sub-criteria (Fig. 1), which are articulated into evaluation items listed in online evaluation worksheet used by programs and IABEE Evaluators throughout the evaluation process. In addition, the program evaluation online worksheet has also articulated Criteria Guide and Discipline Criteria.

A.3.2. Rules and Procedures for Evaluation and Accreditation

IABEE maintains and periodically updates the Rules and Procedures for Evaluation and Accreditation (RPEA) document. This document serves as the main reference for issues

related to rules, policies, procedures, and general timeline governing evaluation and accreditation processes. These rules, policies and procedures are to be adhered to by both the Programs and the Evaluators involved in the evaluation and accreditation processes.

The following are key aspects included in the RPEA, along with concise description of issues related to each aspect.

- Confidentiality and avoidance of conflict of interest: Information provided by the Program associated with its evaluation process is treated with confidentiality by IABEE. Furthermore, IABEE requires its personnel to act in a professional and ethical manner, and to inform of any real or perceived conflict of interest in their activities.
- Scope and eligibility for accreditation: IABEE accredits bachelor-level academic Programs in engineering and computing disciplines. Degrees granted by these Programs include Bachelor of Engineering (*Sarjana Teknik*), Bachelor of Science in Engineering (*Sarjana Teknik*), Bachelor of Science in Computing (*Sarjana Teknik* or *Sarjana Komputer*), and Bachelor of Computing (*Sarjana Komputer*). These degrees are bestowed upon completion of a study period of four academic years, with a minimum total course load of 144 semester-credit units (SKS).
- Description of Program evaluation process: This section in RPEA contains a detailed step-by-step description of the standard processes implemented by IABEE, namely: (1) Evaluation for General Accreditation (2) Interim Evaluation for General Accreditation with On-Site Visit (3) Interim Evaluation for General Accreditation without On-Site Visit, and (4) Evaluation for Provisional Accreditation. The reader is referred to the most up to date version of IABEE RPEA document for these process details. It is notable here that IABEE conducts a major part of the evaluation process using an online system. On-site evaluation is an integral part of the process.
- Types of accreditation decisions: Accreditation decisions are taken by IABEE Accreditation Council (AC) by considering EAC recommendation. The AC meeting is normally conducted annually at the end of the accreditation cycle. Types of decision are based on categories of unresolved shortcomings by the end of the evaluation process. The decisions with regards to General Accreditation are Accredited, Accredited with Interim Evaluation without Visit, Accredited with Interim Evaluation with Visit, or Not Accredited. As for Provisional Accreditation, the decision can be Provisionally Accredited or Not Accredited. It should be noted and emphasized that Provisional status is not regarded as an accredited status with substantially equivalent implication.
- Rules on public disclosure of accreditation status by the Program: Accreditation by IABEE holds an unambiguous recognition that an undergraduate engineering Program is planned, operated, and managed in accordance to international quality standards for outcome-based engineering higher education. An accredited status by IABEE does not imply any ordinal ranking between one Program and others that are also accredited by IABEE. The reader is referred to the IABEE RPEA document for a detailed list of approved and disapproved methods of public disclosure of an accredited status. Violation to these rules results in the revocation of the Program's rights to public disclosure of its accreditation status.

- Evaluation feedback and appeal procedures: IABEE solicits feedback from Programs that have undergone the evaluation process. This feedback shall be utilized for the improvement of internal business processes, evaluation process, and assessment instruments and documentations. The Program shall be given an opportunity to file an appeal to IABEE if an accreditation decision is deemed unfair. The appeal must include a clearly written rationale for the appeal, with reference to specific AC and/or RPEA items associated with the appeal. Only final decision of Not-Accredited (NA) status in General Accreditation may be appealed for. The reader is referred to the RPEA document for a more detailed description of the feedback and decision appeal procedures.
- On-site visit policies: The policies detailed in the RPEA are developed to minimize unnecessary interactions between the Program and/or Program Operating Institution and IABEE Evaluators, that may bias the Evaluators' judgment and/or potentially create clear or perceived conflict of interest. The reader is urged to review the details in the RPEA document.
- Indicative schedule for General Accreditation Evaluation and Provisional Accreditation Evaluation processes: This aspect is self-explanatory; the reader is encouraged to review the details in the RPEA document.

Rules and policies stipulated in the RPEA apply not only during the Program evaluation process, but also during a Program's accredited period.

A.4. Overview of Evaluation Process

IABEE evaluation process is conducted during a 12-month Evaluation Cycle (Fig. 2) and is implemented through IABEE Online Evaluation System (OES). The evaluation process in general is described as the following.

Fig. 2. Illustration of Common Criteria

- Evaluation Team comprises of a Team Chair and 2 (two) Program Evaluators for evaluation for General Accreditation, whereas only one evaluator is assigned for Provisional Accreditation.
- Members of evaluation team are a combination of academics and industrial practitioners whose disciplines are related to the program under evaluation. They are

assigned by an Evaluation and Accreditation Committee (EAC) Discipline Chair or EAC Chair. Having been assured of free of any conflict of interest and acceptable to the program, the evaluation team is finalized by the EAC Chair.

- The Team Chair is the only contact person for the program related to evaluation process. Any communications between the program and evaluation team shall be conducted through the Team Chair.
- SER, Program Profile, and related evidence submitted by the program are evaluated by each member of Evaluation Team, after which the Team Chair is to prepare and submit the First Review report.
- Upon submission of the First Review, program may submit responses and additional information and evidence through OES which would be considered by the Evaluation Team during the subsequent evaluation processes.
- IABEE Secretariat will contact program and/or institution representatives to arrange schedule of On-Site Visit, meanwhile Team Chair will follow up with detailed evaluation plan to be agreed by the program. An on-site visit normally is scheduled for 3 days and takes place during October or November.
- The purpose of an On-Site Visit is to explore evidence which cannot be found or fully understood from the submitted documents through direct observations, interviews, and review of display materials. Throughout the On-Site Visit, Program Evaluators are expected to revisit the judgement made during the initial review.
- An On-Site Visit ends with an Exit Statement to be read by the Team Chair. A written report called the First Evaluation Report would elaborate the Exit Statement and would be submitted to Program through OES. The statement contains short description about the Program, identified strength and shortcomings. Some of the shortcomings might be rectified by the Program during the 7-day and 30-day due processes.
- Based on First Evaluation Report and subsequent Program responses (if any), the Team Chair will prepare the Final Evaluation Report to be discussed during Discipline Harmonization and EAC Plenary Meetings to form the EAC recommendation on accreditation decision. This final report is not accessible by the program.
- The purpose of Discipline Harmonization meeting is to harmonize evaluation findings across different programs within a discipline. Meanwhile, EAC Plenary Meeting is convened to harmonize evaluation findings across all disciplines and all program-operating institutions. EAC Plenary Meeting produces EAC recommendation on accreditation decisions to be decided by the Accreditation Council (AC).
- AC will examine the report and recommendation presented by EAC during the AC Meeting to ensure that accreditation evaluation has been conducted in accordance to RPEA and, subsequently, decide accreditation decisions.

A.5. Quality Assurance

Internal quality assurance is maintained in all aspects of IABEE accreditation activities to ensure consistent implementation of criteria, rules and procedures, objective review, fair accreditation decision, and quality report as a means for program's continual quality improvements. Three areas of particular importance in assuring quality include provision of quality program evaluators, consistency checks, and overall management of IABEE business processes.

A.5.1. Provision of Quality Program Evaluators

Program evaluation is conducted by Program Evaluators having reputable academic and/or industrial background. High standards of recruitment and training processes are established to ensure competent evaluators (Fig. 3).

Fig. 3. Training series towards provision of quality program evaluators

Candidates for programs evaluators must first meet eligibility requirements as stipulated in Ch. 3 of Rules and Procedures of Accreditation-related Committees (RPARC). To become a program evaluator, candidate must undertake and pass a series of training, namely Online Modular Training, Face-to-Face Training, and Observation. Online Modular Training is designed to provide the candidate with basic knowledge on IABEE, evaluation and accreditation principles, role of an evaluator, accreditation criteria, and overall evaluation process, including document review and judgement. Building up the knowledge gained from the online resource, the candidate will have an opportunity to simulate On-Site Visit evaluation during the 2-day Face-to-Face Training, especially on how to apply evaluation judgment. Assignment of the candidate as an observer will give hands-on experience of conducting real program evaluation.

In addition, a refresher training inviting all evaluators assigned for an on-going evaluation cycle is convened as a platform for strengthening evaluators' competency and sharing lessons learned and any recent updates on Accreditation Criteria and RPEA.

Regular evaluation system of program evaluators includes feedbacks from evaluated programs to improve evaluators' performance and overall accreditation system. Mechanism exists to improve program evaluators' competency based on previous performance and feedbacks.

A.5.2. Consistency Checks

IABEE evaluation process has several built-in mechanisms to ensure consistent application of accreditation criteria as well as rules and procedures. Processes of accreditation system is ensured closely by related committees and secretariat, and by taking advantage of the use of On-line Evaluation System (OES) with pre-defined and clear schedule.

Consistent judgement on the extent of accreditation criteria fulfilment by a program under evaluation is ensured by collective and collegial work of the Team Chair and the members of evaluation team throughout initial reviews, on-site evaluation, and due process period.

Consistent judgement is further ascertained by the harmonization mechanisms conducted within and across disciplines. Final consistency check takes place prior to the release of Final Evaluation Report to the program, in which Editors are assigned to ensure consistency between the judgement and the description of evaluation results in association with the accreditation criteria.

A.5.3. Adoption of QMS of ISO 9001:2015

In a broader context of organization quality assurance, IABEE is also in the process of establishing a quality management system by adopting the international standard on quality management and quality assurance of ISO 9001:2015. By adopting this standard IABEE is expected to have better management control and reporting, better basis for continual improvement, and to ensure that customers will consistently obtain high quality services, which in turn will bring many benefits, including satisfied customer, management, and internal stakeholders.

These basic requirements are being prepared in documented form, namely IABEE's Quality Policy, Procedures, Business Process Map and Scope of the Quality Management System, Quality Objectives, Quality Plan, and Work Instructions. After all these requirements are completed, IABEE's management will start to implement the quality management system. The level of system compliance and its implementation against the ISO 9001: 2015 standard requirements will be checked through an internal audit program. This quality management system is expected to be fully implemented in 2021 Evaluation Cycle onwards.

B. Information for Programs seeking for accreditation

B.1. Preparation for Self-Evaluation Report and Program Profile

A program seeking for accreditation to IABEE shall prepare and submit Self-Evaluation Report (SER), Program Profile, and supporting evidence. SER is basically a collective statement made by program seeking for accreditation claiming that its current practice has fulfilled the accreditation criteria. Evidence is therefore of utmost importance for the program to be prepared appropriately since any claim of fulfilment of criteria by the program, as well as evaluator judgement, shall be based upon it. Meanwhile, Program Profile is a supplementary document to provide the evaluators with pertinent information for a quick and comprehensive understanding about the program and its education system.

B.1.1. Self-Evaluation Report (SER)

The SER template is structured in a spreadsheet format (Fig. 4) with column (1) listing the criteria, sub-criteria, and evaluation items related to a certain sub-criterion. The worksheet essentially expects the program to make a claim of fulfillment in column (2), deliberate and describe how it fulfills each evaluation item in column (3) and, provide a list of evidence to support the claim and deliberation in column (4). The evidences listed in column (4) must be provided in attachment file(s) accompanying SER submission, as described in Section B.1.3.

Kriteria	Sub-kriteria	Sub-sub Kriteria	Item Evaluasi	DESKRIPSI KRITERIA/ITEM EVALUASI (PRODI TEKNIK)	KLAIM PEMENUHAN	DESKRIPSI EVALUASI DIRI PROGRAM STUDI	REFERENSI
					Beri tanda "X" jika dianggap memenuhi, dan "XX" jika dianggap melampaui kriteria/item Evaluasi	Deskripsikan bagaimana Program Studi memenuhi tiap /item Evaluasi yang ditanyakan (pada sel tidak berwarna). Argumen yang disampaikan harus berdasarkan pada bukti-bukti faktual (evidence-based description). Tim Evaluasi/ IABEE akan memeriksa deskripsi ini dan bukti-bukti pendukungnya	Berikan daftar referensi/bukti-bukti yang mendukung argumentasi yang disampaikan pada kolom Evaluasi Mandiri Program Studi. Unggah referensi/bukti-bukti tersebut secara terpisah, sebagai file-file lampiran dari Laporan Evaluasi Diri ini
				[1]	(2)	(3)	(4)
1				**ORIENTASI KOMPETENSI LULUSAN** [*ORIENTATION OF THE GRADUATE COMPETENCE*]			
	1.1			**Prodi menetapkan profil lulusan yang digagaskan untuk menjadi para Profesional Mandiri, dengan mempertimbangkan potensi sumberdaya, budaya, kebutuhan maupun kepentingan Negara** [*The Program shall define the profile of graduates to be envisaged as Autonomous Professionals by considering country's potential resources, cultures, needs and interests*]			
			1)	Paparkan Profil Profesional Mandiri Prodi yang ditetapkan sebagai sasaran-sasaran kependidikan Prodi, yang mempertimbangkan sumberdaya, kearifan, kebutuhan, serta kepentingan lokal dan/atau nasional, serta misi institusi Pengelola Prodi (POI). [*Describe the Program's Profile of Autonomous Professionals to be fostered as its educational objectives, which takes into account local and/or national resources, wisdoms, needs and interests, as well as vision and mission of the Program-Operating Institution (POI)*]			<contoh> (1.1) Naskah Akademik Pengembangan Kurikulum XXXX hal. 13-18 (1.2) Laporan Workshop Pengembangan Kurikulum XXXX (1.3) Statuta Universitas XXXX pasal X Visi & Misi
			2)	Paparkan proses yang dilselenggarakan oleh Prodi untuk menyusun dan mengkajiulang secara berkala Profil Profesional Mandiri, dengan melibatkan para pemangku kepentingan Prodi. [*Describe the process maintained by the Program for establishing and periodically reviewing the Profile of Autonomous Professionals, which includes the involvements of its stakeholders*]			<contoh> (1.4) Peraturan Universitas No. XX tahun XXXX tentang Peninjauan dan Pengembangan Kurikulum. pasal. X (1.2) Laporan Workshop Pengembangan Kurikulum XXXX (1.5) Laporan Tracer Study tahun 2018 hal. 30-35
	1.2			**Prodi menginformasikan Profil Profesional Mandiri yang telah ditetapkan kepada mahasiswa, dosen, dan masyakat umum** [*The Program shall inform its students and faculty of the envisaged Autonomous Professional Profile and widely publicize it*]			
			1)	Jelaskan bagaimana Prodi menyebarluaskan Profil Profesional Mandiri tersebut secara memadai kepada para mahasiswa, dosen, dan masyarakat umum [*Describe how the Program disseminates its Profile of Autonomous Professionals adequately to students, faculties, and the general public*]			<contoh> (1.6) website prodi: https://www.abc.ac.id/tk/profilprof (1.7) Buku Panduan Akademik Mahasiswa tahun XXXX Halaman 5
	1.3	1.3.1		**Prodi menetapkan Capaian-capaian Pembelajaran Prodi (dikenal juga dengan istilah Luaran Lulusan, Student Outcomes, atau sejenisnya), yang terdiri dari kemampuan memanfaatkan pengetahuan, kecakapan, sumberdaya, serta sikap seperti tercermin dalam kompetensi-kompetensi lulusan butir (a) hingga (j) berikut, yang harus dikuasai oleh para mahasiswa pada saat menyelesaikan studi.** [*The Program shall establish its expected Learning Outcomes which consist of abilities to utilize knowledge, skills, resources and attitudes as described in the following (a) to (j) graduate competences to be acquired by students at the completion of their study*]			

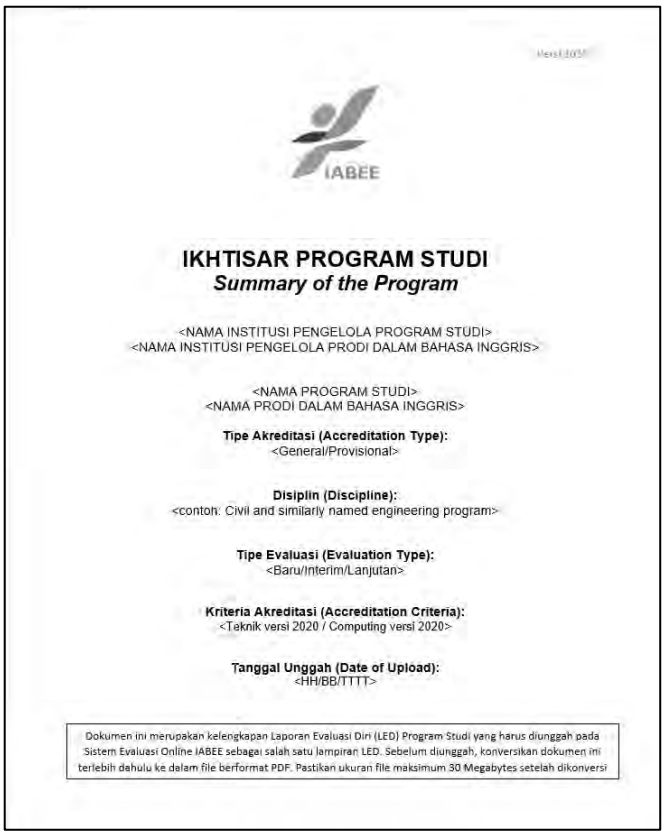
Fig. 4. Illustration of a SER template

The official SER template will be downloadable through Program Representative's registered e-mail account once evaluation process has started. It has to be worked on and uploaded back to the OES to store the information to the system.

B.1.2. Program Profile

The Program Profile template is available in .docx format and downloadable from IABEE website (iabee.or.id). Information required to be provided in this document include: (1) General Information and Program Identity, (2) Summary of Program Profile, (3) Latest Education Improvement, (4) Executive Summary of SER, (5) Formulation of Autonomous Professional Profile, (6) Relationship between Program Learning Outcomes and IABEE's Criteria of Learning Outcomes, (7) Performance Indicators and Method of Program Learning Outcomes Assessment, (8) Curriculum Design, (9) Road Map of Learning Outcomes Achievement through Course Structure, (10) Program Curriculum, (11) Learning Implementation on Engineering Design, (12) Summary of Program's Quantitative Data, (13) Sample of Academic Transcript, (14) Summary of Faculty Members Data, (15) Sample of Syllabi and/or Course Semester Learning Plan, (16) Samples of Exam Questions or Assessment of Learning Outcomes, Student Answer Sheet, and Assessment Results, (16) List of Facility of Learning, and (17) Condensed Curriculum Vitae of Faculty Members.

Fig. 5 depicts the cover page of Program Profile template. Upon completion, this document is to be converted into PDF format and submitted to OES together with SER and other document(s) of supporting evidence.



IABEE

IKHTISAR PROGRAM STUDI
Summary of the Program

<NAMA INSTITUSI PENGELOLA PROGRAM STUDI>
<NAMA INSTITUSI PENGELOLA PRODI DALAM BAHASA INGGRIS>

<NAMA PROGRAM STUDI>
<NAMA PRODI DALAM BAHASA INGGRIS>

Tipe Akreditasi (Accreditation Type):
<General/Provisional>

Disiplin (Discipline):
<contoh: Civil and similarly named engineering program>

Tipe Evaluasi (Evaluation Type):
<Baru/Interim/Lanjutan>

Kriteria Akreditasi (Accreditation Criteria):
<Teknik versi 2020 / Computing versi 2020>

Tanggal Unggah (Date of Upload):
<HH/BB/TTTT>

Dokumen ini merupakan kelengkapan Laporan Evaluasi Diri (LED) Program Studi yang harus diunggah pada Sistem Evaluasi Online IABEE sebagai salah satu lampiran LED. Sebelum diunggah, konversikan dokumen ini terlebih dahulu ke dalam file berformat PDF. Pastikan ukuran file maksimum 30 Megabytes setelah dikonversi

Fig. 5. A Program Profile template

B.1.3. Preparing Evidence

Evidence provided to support a claim of fulfillment must be directly related or relevant to the evaluation item in question. Relevant evidences can assume various forms, such as documents (e.g. institution's policies and procedures, curriculum and syllabi, quality assurance, tracer study reports, activity reports, etc.), records (e.g. student transcripts, minutes of meeting, sample of student's works, assessment results), and others (e.g. photographs, audio-visuals, software). Due to limited file size allowance for a program, only relevant parts of the evidence are considered sufficient to support a claim. Full or larger volume of evidence may be inspected during On-Site Visit upon evaluator's request.

The proofs or evidences of the fulfillment of evaluation items are to be gathered systematically in a file(s) (in PDF format) and uploaded as attachment(s) to the SER.

In circumstances where Live Online Evaluation has been decided by IABEE to replace On-Site Visit during an Accreditation Evaluation Cycle, there will be additional instructions for study programs in preparing evidence (see Section D).

B.2. Evaluation Judgement and Decision

B.2.1. General Accreditation

In an evaluation for General Accreditation, the degree of fulfillment to each accreditation criterion of a program is determined by evaluation results documented in the OES. The terminology used to declare the degree of fulfillment to each evaluation item is as follows:

- ***Acceptable*** (abbreviated as 'A'), which means that the evaluated item fulfills the associated Accreditation Criteria item.
- ***Concern*** (abbreviated as 'C'), which means that the evaluated item fulfills the associated Accreditation Criteria item, but with a possibility of changes in pertinent conditions in the future which may compromise the fulfillment.
- ***Weakness*** (abbreviated as 'W'), which means that the evaluated item indicates an insufficiently strong fulfillment to the associated Accreditation Criteria item. This shortcoming requires corrective actions to strengthen the fulfillment of the specific evaluation item to the appropriate Accreditation Criteria item.
- ***Deficiency*** (abbreviated as 'D'), which means that the Program is unable to fulfill with the particular Accreditation Criteria item.

In addition, evaluation may also provide an observation, i.e. comments that are not directly related to accreditation criteria and actions but are offered to assist the program in conducting continual quality improvement; and statement of strength, which is a very effective and prominent condition or practice that is above the norm and has a positive effect on the program.

Each Accreditation Criterion consists of several sub-criteria, and in total there are 12 sub-criteria to be judged. Each sub-criterion may have several evaluation items listed in the Evaluation Worksheet. The "A-C-W-D" judgement is applicable to each of evaluation item and will be eventually aggregated to form just 12 scores. Aggregation of evaluation item scores into a single sub-criteria score is in general determined by the lowest item score. The final

results of “A-C-W-D” judgement containing 12 sub-criteria scores shall determine the accreditation status given to the program in the case of General Accreditation.

Upon approval of Accreditation Council, final judgement results will lead to one of the following accreditation decisions:

- **Accredited.** This status implies that the Program meets all criteria and rules as outlined in the Accreditation Criteria and the RPEA. This accreditation status is valid for a period of five years.
- **Accredited with Interim Evaluation without Visit**. This status implies that the Program indicates unresolved shortcomings of the ‘Weakness’ category (“W” score). These shortcomings are such that visit is not deemed necessary to assess future corrective actions. This status is valid for a period of two or three years, after which the Program must undergo an Interim Evaluation based on desk study.
- **Accredited with Interim Evaluation with Visit**. This status implies that the Program indicates unresolved shortcomings of the ‘Weakness’ (“W” score) category. These shortcomings are such that a visit is deemed necessary to assess future corrective actions. This status is valid for a period of three years, after which the Program must undergo an Interim Evaluation which includes both desk study and on-site visit.
- **Not Accredited**. This status implies that the Program fails to substantially fulfill IABEE Accreditation Criteria as indicated by unresolved shortcomings in the ‘Deficiency’ category (“D” score) and Rules and Procedures for Accreditation and Evaluation (RPEA).

B2.2. Provisional Accreditation

In the Evaluation for Provisional Accreditation, the degree of program fulfillment to Accreditation Criteria is determined by evaluation results documented in the OES. Based on the evidences studied by assigned program evaluator, a score of either “Yes” or “No” would be used to mark each evaluation item as a conclusion whether or not, from the evaluator’s viewpoint, the Program has a solid potential to meet the requirement within a foreseeable future (4 years or less).

Reflecting on the purpose of Provisional Accreditation, namely to measure program’s potentials of meeting the Accreditation Criteria within a foreseeable future, the importance of a provisional accreditation evaluation lies in the narratives or comments made by the evaluator showing shortcomings and gap analysis between the current practice and the requirement, rather than the “Yes-No” judgement itself.

Upon approval for Accreditation Council, evaluation for Provisional Accreditation for a program ultimately finalizes in one of the following status:

- **Provisionally Accredited**. This status implies that the Program has the potentials of meeting the Accreditation Criteria within a foreseeable future (i.e. 4 years). Given eligibility requirements are fulfilled, a program accredited in Provisional Accreditation is expected to apply evaluation for General Accreditation within a period of four years.
- **Not Accredited.** This status implies that the Program has substantially low potentials to meet all Accreditation Criteria and RPEA items within 4 years.

C. Information for Program Evaluators

C.1. Competency and Code of Ethics

Program evaluators are the most important "face" of IABEE. They play a significant role to ensure consistent implementation of criteria, rules and procedures, objective review, fair accreditation decision, and produce quality report. A program evaluator is therefore expected to be technically current, an effective communicator, interpersonally skilled, team-oriented, professional, and organized. Evaluator who assumes the responsibility as a Team Chair is expected to have a good leadership and team management skills, in addition to the above-mentioned qualities.

IABEE demands that all personnel, including program evaluators, involved in carrying out the mission of IABEE demonstrate the highest standards of professionalism, honesty and integrity. The services provided by IABEE demand impartiality, justice and equality, so that every person must carry out their duties with the highest standards of ethical behavior, by avoiding any potential conflict of interest, and by maintaining the confidentiality principles.

C.2. Principles of Evidence-based Evaluation

To achieve objectivity and un-biased decision, evaluation for accreditation shall be conducted based on evidence in a strict adherence to the accreditation criteria and RPEA, regardless of the reputation which may be associated with the program under evaluation or its operating institution. No evaluation is to be made without the presence of supporting evidence. An evaluator is, therefore, expected to give a maximum opportunity to the program for presenting the evidence for every claim of fulfillment.

Upon presentation of evidence, evaluator should not compare the conditions of the program being evaluated with the conditions in the institutions of his/her origin or any other institutions, because each program has the flexibility to determine the outcome standards of its graduates in accordance with the vision, mission, and conditions of its resources.

C.3. Judgement and Feedbacks

A program evaluator must be able to clearly distinguish between four levels of fulfillment to a given evaluation item, whether it is acceptable (A), a concern (C), a weakness (W), or a deficiency (D), to provide appropriate statement reflecting the judgement, and to be aware of the consequences carried by each of the fulfillment levels in both determining accreditation

decision and the necessary corrective measures. To realize these abilities, a considerable proportion on the context of judgement is taught in evaluator training exercise. In addition, exchanges of opinions and viewpoints among evaluators regarding the judgement that take place during document review processes and On-Site Visit should enhance the ability.

In writing an evaluation report, a program evaluator must be fully aware that accreditation is a means of quality betterment. Therefore, the way the report is written should be able to assist the program in improving its education quality.

D. Live Online Visit

D.1. Principles

Live online visit is an evaluation step set out as an alternative for conducting the normal on-site visit. Originally developed during the world-wide outbreak of COVID-19 in 2020, this type of visit can replace the normal visit in a situation where EAC IABEE considers it necessary. Whenever IABEE decides to resort to a live online visit in replacement of an on-site visit, it has to be kept in mind that the objectivity principles of an evidence-based evaluation are to be maintained, with maximum reference to the typical on-site visit schedule and policies as mentioned in the RPEA document. While a quality face-to-face online and live meeting should take place to allow for an effective evaluation, a safe and healthy procedure and environment for conducting the meeting shall be one of primary considerations.

D.2. Requirements

IABEE will provide an online meeting platform and delegate the evaluation team/evaluator as the host of the meeting. Program representatives and other related meeting participants will be invited by the host. However, to enable successful and seamless live online visits, Program is required to provide the followings:

(1) Sufficient and stable internet connection. A connection provided by a main internet provider with a secondary backup provider to secure the connection is advisable,
(2) Acceptable quality of audio visuals and mobile camera,
(3) Cloud storage that is well structured and accessible to the evaluation team/evaluator,
(4) Sufficient number of accounts registered to the online meeting platform,
(5) Sufficient quality of computer performance.

D.3. Policies

In addition to the general policies governing a standard on-site visit as stated in the RPEA, the following policies apply to a live online visit.

(1) Program shall provide on-campus rooms to accommodate 3 (three) functions, i.e. meeting, evidence display, and interview. Rooms which are assigned for meeting and interview shall be equipped with a spatial camera linked to a meeting account to show the whole room situation.

(2) Program shall organize display names so that meeting participants are easily recognizable by evaluation team/evaluator in which group they belong to (e.g. lecturers, students, alumnae, POIR, PR, etc.)
(3) Program shall be available for rehearsal session to be arranged by evaluation team chair/ evaluator well before the date(s) of online visit.
(4) Formal business dress code applies to all meeting participants.
(5) Taking photographs, screen shots, audio/video taping and recording are not allowed during all live sessions.
(6) Publicizing accreditation evaluation process in any media is prohibited.

D.4. Preparing Evidence

Evidence to be prepared for accreditation evaluation that utilized live online visits are of two groups, i.e. physical and digital. Evidence will be examined by the evaluation team throughout the evaluation processes, including during desk reviews, evaluation visits, and post-visit improvement reviews.

D4.1. Digital Evidence accompanying Self Evaluation Report (SER)

To accompany evidence provided partially in the PDF files submitted as attachments of the SER, the complete version of the evidence shall be stored in a cloud storage and well organized into 12 different folders associated with each of the 12 sub-criteria found in Common Criteria, i.e. 1.1, 1.2, 1.3, 2.1, 2.2, 2.3, 2.4, 2.5, 3.1, 3.2, 4.1 and 4.2. Evidence applicable for several criteria must be duplicated in each relevant folder for easy access. Evidence shall include recorded virtual tour of facilities, including classrooms, teaching laboratories and lab equipment, library, student common spaces, supporting facilities, program management offices, etc.

D4.2. Digital Evidence to be confirmed during Online Visit

Evidence prepared to be confirmed during live online visit is typical to that prepared and displayed for an on-site visit. The evidence includes, but not limited to learning outcome assessment documents (including evaluation results & their improvement actions), rubric files, portfolios for each class of all courses offered in the last academic year, organized by subject course. In advance communication with program representative, evaluation team chair may request additional evidence needed to confirm fulfillment of accreditation criteria. All evidence stored in the cloud shall be organized and well-structured for easy access by evaluator team. Any update made after exit meeting shall be written in different file name(s) and not to replace or overwrite the existing evidence in the same folder.

D4.3. Physical Evidence

Physical evidence is any evidence to accompany evidence that has already been submitted with SER or additional evidence considered necessary to prove any fulfillment claim of an accreditation criterion. For example: main textbooks, program handbooks, curriculum documents, safety guidelines, examples of students lab reports, lab works modules, capstone project reports, co-op/internship reports, university/faculty regulation and decrees, minutes of meetings of program's faculties, with students, with stakeholders, etc. All physical evidence shall be organized and well-structured, stored in a room dedicated for evidence display.

Physical evidence will be inspected during the live on-line visit. Program representative will be asked to show a particular evidence to evaluation team using a live streaming camera.

D.5. Program's Integrity Statement

Program Representative, on behalf of Program Operating Institution, related faculty, students, alumnae, and stakeholders shall sign the Integrity Statement Form prepared by IABEE. The form shall be submitted to IABEE along with SER submission or via IABEE Secretariat through email.

D.6. Force Majeure

Under an unpredictable situation which cause the failure of live session(s), the evaluation team/evaluator will reschedule the session(s) in consultation with the program. Since live online visit is basically a replacement of on-site visit, referring to RPEA, any rescheduled session shall take place prior to the First Evaluation step.

APPENDIX F – Analysis of Substantial Equivalency with the 2013 version 3 Graduate Attributes of the Washington Accord

Education Accord Report: Analysis of Substantial Equivalence with the 2013 Version 3 Graduate Attributes **WASHINGTON ACCORD**			
Accrediting Agency: Persatuan Insinyur Indonesia / Indonesian Accreditation Board for Engineering Education (PII/IABEE) Contact Person: Mr. Berlian Kushari (IABEE Secretary General) at berlian.kushari@iabee.or.id		Date of Gap Analysis: 14 November 2019	Date of Comment/Review:
Washington Accord Graduate Attribute (WA1-WA12) with supporting knowledge profile statement (WK1-WK8) or level of problem solving (WP1-WP9) (Version 3: June 2013)	Elements of Accrediting Agency's Standard corresponding to Graduate Attributes and range/level information	Accrediting Agency's self-assessment of substantial equivalence of its standard and the Graduate Attributes and range/level information	*Delete inapplicable heading* Mentor Comments Review Team Evaluation
WA1: Apply knowledge of mathematics, natural science, engineering fundamentals and an engineering specialization as specified in WK1 to WK4 respectively to the solution of complex engineering problems. *Where the knowledge profile elements referred to in this and other attribute statements are:* WK1: A systematic, theory-based understanding of the natural sciences applicable to the discipline WK2: Conceptually-based mathematics, numerical analysis, statistics and formal aspects of computer and information science to support analysis and modelling applicable to the discipline WK3: A systematic, theory-based formulation of engineering fundamentals required in the engineering discipline WK4: Engineering specialist knowledge that provides theoretical frameworks and bodies of knowledge for the accepted practice areas in the engineering discipline; much is at the forefront of the discipline. See WA3 for WK5 See WA5 for WK6 See WA6 for WK7 See WA4 for WK8	Criteria Guide for Criterion 1.3. Program shall establish its own learning outcomes based on the autonomous professional profile to be acquired. The learning outcomes shall cover all graduate competences from (a) to (j) as mentioned in Common Criteria 1 (3), which are expressed in such a way to give flexibility to Program. It is important to note that the learning outcomes shall take into account also the Category and Discipline Criteria Criterion 1.3. item (a): an ability to apply knowledge of mathematics, natural and/or materials sciences, information technology and engineering to acquire comprehensive understanding of engineering principles Criteria Guide for Criterion 1.3. item (a) • Engineering Principles refers to ideas, rules and concepts to be considered when solving an engineering problem. The set of principles may vary among engineering disciplines depending on the uniqueness of systems, problems, ethical issues, and problem solving methods of the discipline. • Attaining comprehensive understanding of engineering principles is indicated by acquisition of: 1. Mathematics, basic sciences (such as physics, biology, chemistry) and information technology in the engineering field of Program.	In general, WA1 corresponds to the IABEE Learning Outcomes Criterion item (a). Further requirements as requested by WK1 through WK4 have also been met by the IABEE Common Criteria, Criteria Guide, and Discipline Criteria, as explained below: • The requirements requested by WK1 and WK2 are sufficiently stated in the Criteria Guide for Criterion 1.3. item (a), namely the necessity to use mathematics, basic science relevant to the scientific disciplines, and information technology to provide solutions to complex engineering problems. In addition, Criterion 2.1 concerning the curriculum also requires the fulfillment of a minimum of 20% of the combination of college-level mathematics and basic sciences appropriate to the discipline to ensure adequate handling of the problem. • The WK3 requirements are satisfied by Criteria 2.1 on Curriculum, where a minimum of 40% of the curriculum must contain engineering topics encompassing engineering sciences and design appropriate to the disciplines. The engineering sciences are rooted in mathematics and basic sciences, but at the same time deliver to the knowledge and skills of creative application. Thus, this section provides a bridge between mathematics and basic science on the one	

	2. An ability to utilize the aforementioned knowledge. Criterion 2.1. Curriculum, item (1) Curriculum shall include the following subject areas: a. Mathematics and discipline-specific natural sciences b. Discipline-specific engineering science and technology c. Information and communication technology d. Engineering design and problem based experiments e. General education, which includes morality, ethics, socio-culture, environment and management Criteria Guide for Criterion 2.1. Curriculum, item (1) Program shall ensure that the curriculum meets the above mentioned subject areas appropriate to engineering regardless the subject/course names. The program must ensure that the curriculum devotes adequate attention and time to each component, consistent with the learning outcomes, which include: • A minimum of 20% of a combination of college level mathematics and basic sciences (some with experimental experience) appropriate to the discipline. Basic sciences are defined as courses such as biological, chemical, or physical sciences. • A minimum of 40% of engineering topics, consisting of engineering sciences and engineering design appropriate to the student's field of study. The engineering sciences have their roots in mathematics and basic sciences but carry knowledge further toward creative application. These studies provide a bridge between mathematics and basic sciences on the one hand and engineering practices on the other. Engineering design is the process of devising a system, component, or process to meet desired needs. It is a decision-making	hand and engineering practice on the other. • In addition to the Common Criteria, which apply to all engineering disciplines, IABEE also establishes the Discipline Criteria that must be met by the engineering discipline concerned. The Discipline Criteria, in this case, mainly regulate further elaboration of learning outcomes and curricula that are appropriate to the field, as expected by the respective engineering societies. This answers WK4.	

	process, in which the basic sciences, mathematics, and the engineering sciences are applied to convert resources optimally to meet the stated needs. • A maximum of 30% general education components that complement the technical content of the curriculum and are consistent with the learning outcomes. Criteria Guide for Criterion 2.1.(3) on Curriculum • Program should explain how the specific requirements of each curricular area addressed in the Common Criteria or Discipline Criteria can be met, both in terms of load and depth of the material. • Program shall establish a syllabus for each course used to satisfy the mathematics, science, and discipline-specific requirements or any applicable criteria.		
WA2: Identify, formulate, research literature and analyse complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences and engineering sciences. (Refer to WK1 to WK4) *Where:* *Complex Engineering Problems* have characteristic WP1 and some or all of WP2 to WP7*:* WP1: Cannot be resolved without in-depth engineering knowledge at the level of one or more of WK3, WK4, WK5, WK6 or WK8 which allows a fundamentals-based, first principles analytical approach WP2: Involve wide-ranging or conflicting technical, engineering and other issues WP3: Have no obvious solution and require abstract thinking, originality in analysis to formulate suitable models WP4: Involve infrequently encountered issues WP5: Are outside problems encompassed by standards and codes of practice for professional engineering WP6: Involve diverse groups of stakeholders	Criterion 1.3. item (a): an ability to apply knowledge of mathematics, natural and/or materials sciences, information technology and engineering to acquire comprehensive understanding of engineering principles Criterion 1.3. item (d): an ability to identify, formulate, analyze, and solve engineering problem. Criteria Guide for Criterion 1.3. item (d) • Engineering problem solving involves iterative activities incorporating the definition of the problem, development of solution alternatives, selection of best alternative, application of solution, evaluation and validation of solution against problem constraints, and revision of solution. • This competence may include the ability to · utilize techniques and methods for performing engineering works comprising survey, data analysis, planning, design, operation and maintenance. · apply the engineering logical thinking for	The WA2 requirements are directly related to the IABEE Learning Outcomes Criteria item (d). This item requires graduates to be able to identify, formulate, analyze, and solve engineering problems. As explained further in related Criteria Guide, this competency demands the ability to use techniques and methods to perform engineering work, including planning, surveys (including literature and field surveys), and data analysis. The requirements are also supported by Learning Outcomes Criteria item (a). The level of engineering problems referred to in item (d) are complex, as are the characteristics mentioned in the related section of the Criteria Guide, namely those involving iterative activities to obtain the solution, including: - problem definition, - development of alternative solutions and selection of the best alternative (WP3), - apply logical thinking to handle the design and trouble-shooting (WP3), - application of solutions,	

with widely varying needs WP 7: Are high level problems including many component parts or sub-problems	handling both of the design and trouble-shooting context.	- evaluation and validation of solutions against problem constraints (WP2), and - revision of the solution. The problems above clearly require in-depth engineering knowledge to develop alternatives and to arrive at the best solution. IABEE Common Criteria 2.1 on Curriculum and IABEE Discipline Criteria ensure that the WK3 and WK4 requirements are fully covered. In addition, IABEE Learning Outcomes Criteria items (e), (i), and (c) each meets the requirements of WK5, WK6, and WK8, respectively. Therefore, the complex engineering problems that are characterized by WP1 are met.	
WA3: Design solutions for complex engineering problems and design systems, components or processes that meet specified needs with appropriate consideration for public health and safety, cultural, societal, and environmental considerations. (Refer to WK5) WK5: Knowledge that supports engineering design in a practice area	Criterion 1.3. item (b): an ability to design components, systems, and/or processes to meet desired needs within realistic constraints in such aspects as law, economic, environment, social, politics, health and safety, sustainability as well as to recognize and/or utilize the potential of local and national resources with global perspective Criteria Guide for Criterion 1.3. item (b) • The ability to design components, systems, and/or processes is the hallmark competence of engineering education. Design implies the ability to utilize multidimensional thinking with knowledge of global perspective to develop components, systems, and/or processes to achieve specific objectives. It is not limited to drawing a plan, but also refers to the synthesis of various academic disciplines and technologies to pursue practicable solutions to a problem that does not necessarily have one correct answer. • It involves also a process of optimization by taking into account some realistic constraints, such as law, economic, environment, social, politics, health and safety, and sustainability as well as utilization of the knowledge of culture, society and available resources.	The IABEE Learning Outcomes Criteria (b) and its elaboration in the Criteria Guide are in full compliance with WA3 requirements. Knowledge that supports engineering design as required by WK5 is fulfilled by Criterion 2.1 on Curriculum and its explanation in the relevant Criteria Guide section.	

	Criterion 2.1. Curriculum, item (4) Curriculum shall ensure that the students are exposed to engineering practices and major design project experience using engineering standards and multiple realistic constraints based on knowledge and skills acquired in preceding course work. Criteria Guide for Criterion 2.1. Curriculum, item (4) • Program must provide opportunity to students to develop competence in practical application of engineering skills, combining theory and experience along with the use of other relevant knowledge and skills. Training in engineering practices may be supported by several courses (subjects) but should culminate in a major design project. This major project serves as a capstone for the program which requires students to integrate knowledge and skills acquired in earlier coursework.		
WA4: Conduct investigations of *complex problems* using research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of information to provide valid conclusions. (Refer to WK8) WK8: Engagement with selected knowledge in the research literature of the discipline	Criterion 1.3. item (c): an ability to design and conduct laboratory and/or field experiments as well as to analyze and interpret data to strengthen the engineering judgment Criteria Guide for Criterion 1.3. item (c) • This competence refers to the design and application of laboratory and/or field experiments within the broad context of engineering practice such as problem identification, testing of potential solution ideas, solution implementation plan, and other design-related activities. • Experiments may include activities in physical laboratories, computer simulations, and field experiments Criteria Guide for Criterion 1.3. item (d) • Engineering problem solving involves iterative activities incorporating the definition of the problem, development of solution alternatives,	IABEE Learning Outcomes Criteria (c) and its elaboration in the Criteria Guide confirm WA4 requirements. Engagement with selected knowledge in the discipline research literature (WK8) is satisfactorily covered in the Criteria Guide for Criterion 1.3. item (d), which requires the ability to utilize techniques and methods for conducting surveys, including literature surveys, to support the investigation (formulation, research methodology, and analysis) of complex problems.	

	selection of best alternative, application of solution, evaluation and validation of solution against problem constraints, and revision of solution. • This competence may include the ability to · utilize techniques and methods for performing engineering works comprising survey, data analysis, planning, design, operation and maintenance. · apply the engineering logical thinking for handling both of the design and trouble-shooting context.		
WA5: Create, select and apply appropriate techniques, resources, and modern engineering and IT tools, including prediction and modelling, to *complex* engineering problems, with an understanding of the limitations. (Refer to WK6) WK6: Knowledge of engineering practice (technology) in the practice areas in the engineering discipline	Criterion 1.3. item (e): an ability to apply methods, skills and modern engineering tools necessary for engineering practices. Criteria Guide for Criterion 1.3. item (e) • Program shall have a clear definition of the methods, skills, and modern engineering tools appropriate for its level of study and engineering discipline, and how these are learnt throughout the curriculum. • An ability to select a method and tools with their strength and limitation characteristics for a given problem. • An ability to utilize and adjust the method and tools to suit specific problems. Criteria Guide for Criterion 2.1. Curriculum, item (4) • Program shall define curriculum subjects to optimally support main stream of discipline specific requirements and to provide opportunity for students to acquire practical experience in implementing the subjects in an actual working environment	WA5 requires graduates to have an adequate level of use of modern engineering tools, ranging from applying the tools that are already available, choosing the tools that are appropriate with an adequate understanding of their strengths and limitations, and creating, modifying, or adjusting the tools to meet specific needs. The capabilities described in WA5 must be supported by the required knowledge (WK6) of engineering practice gained from practical experience. These WA5 and WK6 requirements are sufficiently addressed in the Criterion 1.3 item (e), which is further described in the related section of the Criteria Guide. Also, the Criteria Guide for Curriculum explicitly require the program to provide opportunities for students to gain practical experience in the actual work environment to support them mastering WK6.	
WA6: Apply reasoning informed by contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to professional engineering practice and solutions to complex engineering problems. (Refer to WK7)	Criterion 1.3. item (i): An ability to be accountable and responsible to the society and adhere to professional ethics in solving engineering problems. Criteria Guide for Criterion 1.3. item (i): This competence refers to the understanding on the following issues and the ability to take action	WA6 requirements are met by IABEE Learning Outcomes (i) and (j) criteria items simultaneously. The application of contextual knowledge-based reasoning, as required by WA6, is possible if one has access to relevant knowledge about contemporary problems.	

WK7: Comprehension of the role of engineering in society and identified issues in engineering practice in the discipline: ethics and the professional responsibility of an engineer to public safety; the impacts of engineering activity: economic, social, cultural, environmental and sustainability	accordingly. • the impact of technology of related engineering fields on public welfare, environmental safety and sustainable development • the engineering ethics and regulations • the engineering history and standard & code philosophy in design. Criterion 1.3. item (j): an ability to understand the need for life-long learning, including access to the relevant knowledge of contemporary issues. Criteria Guide for Criterion 1.3. item (j): • Program is required to assist students to get accustomed to independent and continuous learning through lectures, research, experiments, practical training, exercises and assignment. • This competence refers to - Understanding the necessity of continuous professional development. - an ability to acquire updated information and knowledge. - an awareness of the importance of sharing knowledge		
WA7: Understand and evaluate the sustainability and impact of professional engineering work in the solution of complex engineering problems in societal and environmental contexts. (Refer to WK7)	Criterion 1.3. item (b): an ability to design components, systems, and/or processes to meet desired needs within realistic constraints in such aspects as law, economic, environment, social, politics, health and safety, sustainability as well as to recognize and/or utilize the potential of local and national resources with global perspective Criteria Guide for Criterion 1.3. item (b) • The ability to design components, systems, and/or processes is the hallmark competence of engineering education. Design implies the ability to utilize multidimensional thinking with knowledge of global perspective to develop components, systems, and/or processes to achieve specific objectives. It is not limited to drawing a plan, but also refers to the synthesis of various academic disciplines and technologies to pursue practicable solutions to a problem that does not necessarily have one	WA7 requirements have been fulfilled by the IABEE Learning Outcomes (b) and (i) criteria items simultaneously. The first emphasizes sustainability as one of the key issues in professional engineering work, while the second involves the ability to understand the impact of engineering solutions in social and environmental contexts.	

	correct answer. • It involves also a process of optimization by taking into account some realistic constraints, such as law, economic, environment, social, politics, health and safety, and sustainability as well as utilization of the knowledge of culture, society and available resources. Criterion 1.3. item (i): An ability to be accountable and responsible to the society and adhere to professional ethics in solving engineering problems. Criteria Guide for Criterion 1.3. item (i): This competence refers to the understanding on the following issues and the ability to take action accordingly. • the impact of technology of related engineering fields on public welfare, environmental safety and sustainable development • the engineering ethics and regulations • the engineering history and standard & code philosophy in design.		
WA8: Apply ethical principles and commit to professional ethics and responsibilities and norms of engineering practice. (Refer to WK7)	Criterion 1.3. item (i): An ability to be accountable and responsible to the society and adhere to professional ethics in solving engineering problems. Criteria Guide for Criterion 1.3. item (i): This competence refers to the understanding on the following issues and the ability to take action accordingly. • the impact of technology of related engineering fields on public welfare, environmental safety and sustainable development • the engineering ethics and regulations • the engineering history and standard & code philosophy in design	IABEE Learning Outcomes criteria item (i) and its elaboration in the related section of the Criteria Guide demonstrates compliance with WA8 requirements.	
WA9: Function effectively as an individual, and as a member or leader in diverse teams and in multi-disciplinary settings.	Criterion 1.3. item (h): an ability to work in multidisciplinary and multicultural team. Criteria Guide for Criterion 1.3. item (h) This competence refers to the ability to work collaboratively with people from different technical disciplines, fields and cultural backgrounds. • Multicultural concerns such as tolerance, mutual understanding, appreciation on differences in	IABEE Learning Outcomes criteria item (h) and its elaboration in the relevant section of the Criteria Guide show the fulfillment of WA9 requirements. In addition, criterion (h) adds consideration of multicultural aspects in teamwork ability as a reflection of the diversity of Indonesian culture.	

	building a synergy, are important considerations for the success of a team work. • Multidiscipline circumstances may cover disciplines within engineering and non-engineering disciplines.		
WA10: Communicate effectively on *complex* engineering activities with the engineering community and with society at large, such as being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.	Criterion 1.3. item (f): an ability to communicate effectively in oral and written manners. Criteria Guide for Criterion 1.3. item (f): This competence indicates the need of active and effective communication skills; socio-cultural perspective should be considered for the acceptability and workability of the implementation of engineering works. • These oral and written communications should include the use of engineering standards. • Program shall ensure that a measurable portion of the oral and/or written communications involve the use of internationally recognized languages	IABEE Learning Outcomes criteria item (f) and its elaboration in the relevant part of Criteria Guide confirm the requirements of WA10.	
WA11:Demonstrate knowledge and understanding of engineering management principles and economic decision-making principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.	Criterion 1.3. item (g): an ability to plan, accomplish, and evaluate tasks under given constraints. Criteria Guide for Criterion 1.3. item (g): This competence refers to the ability to plan, accomplish, and evaluate tasks associated with any curricular activity deemed appropriate by Program for its assessment and evaluation. The assessment should focus more on the students' task management skills rather than the substantial outcome of the task itself.	IABEE Learning Outcomes criteria item (g) and its elaboration in the relevant part of Criteria Guide confirm the requirements of WA11. Application of these managerial skills in a teamwork is also related with IABEE Learning Outcomes criteria item (h).	
WA12: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.	Criterion 1.3. item (j): an ability to understand the need for life-long learning, including access to the relevant knowledge of contemporary issues. Criteria Guide for Criterion 1.3. item (j): • Program is required to assist students to get accustomed to independent and continuous learning through lectures, research, experiments, practical training, exercises and assignment. • This competence refers to · Understanding the necessity of continuous professional development. · an ability to acquire updated information and knowledge. · an awareness of the importance of sharing	IABEE Learning Outcomes criteria item (j) and its elaboration in the relevant part of Criteria Guide confirm the requirements of WA12.	

	knowledge		
Expected Duration of Programme Meeting WA Graduate Attributes A programme that builds this type of knowledge and develops the attributes listed is typically achieved in 4 to 5 years of study, depending on the level of students at entry	Criteria Guide Preamble Programs to be accredited are four-year bachelor of engineering programs or other higher education programs which IABEE considered as equivalent	IABEE requires that programs applying for accreditation under the WA shall be four-year bachelor of engineering programs or other higher education programs which IABEE considered as equivalent. As a matter of fact, the study period of four years for bachelor's level programs has become the norm in Indonesian Higher Education System.	

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- **New Zealand** - Represented by Engineering New Zealand (EngNZ) (1989)
- **Australia** - Represented by Engineers Australia (EA) (1989)
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- **India** - Represented by National Board of Accreditation (NBA) (2014)
- **United States** - Represented by Accreditation Board for Engineering and Technology (ABET) (1989)
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- **Costa Rica** - Represented by Colegio Federado de Ingenieros y de Arquitectos de Costa Rica (CFIA) (2020)
- **Mexico** - Represented by Consejo de Acreditación de la Enseñanza de la Ingeniería (CACEI) (2022)

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- **Pakistan** - Represented by Pakistan Engineering Council (PEC) (2017)
- **Peru** - Represented by Instituto de Calidad y Acreditacion de Programas de Computacion, Ingenieria y Tecnologia (ICACIT) (2018)
- **Indonesia** - Represented by Persatuan Insinyur Indonesia (PII) (2022)

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WASHINGTON ACCORD

WASHINGTON ACCORD
> SIGNATORIES
EXECUTIVE COMMITTEE
HOW TO APPLY

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INTERNATIONAL ENGINEERING ALLIANCE
6.11-6.15 TAICHUNG 台中
IEAM 2023
IEET
中國工程師學會

2023 IABEE Engineering Education Outlook Symposium & Ceremony of JICA Project Completion held on 13 July 2023

Dr. Ir. Danis H. Sumadilaga, President of Institution of Engineers Indonesia (PII)

Prof. Nizam, Acting DGoHERT of Ministry of Education, Culture, Research and Technology

Mr. Masami Tamura, Minister and Deputy Chief of Mission, Embassy of Japan

Mr. Takehiro Yasui, Chief Representative of JICA Indonesia Office

Prof. Muhammad Romli, Chair of IABEE Executive Committee

Ms. Akiko Takahashi, Manager, International Affairs Division, JABEE

Prof. Nizam handed over the Certificate of Appreciation to Dr. Aoshima, Chief Advisor to JICA Project for IABEE

Thanking Speech from Dr. Y. Aoshima

Moderator: Prof. Satryo Soemantri Brodjonegoro, Chair of IABEE Accreditation Council
Prof. Kai Sang Lock, Chair of Washington Accord, Institution of Engineers Singapore
Prof. Megat Johari Megat Mohd. Noor, Board of Engineers Malaysia
Prof. Sudjarwadi, Former Chair of IABEE Criteria Committee

Mr Akihiro Iwasaki, Director of Technical and Higher Education Team, Human Development Department, JICA HQs


IABEE ENGINEERING EDUCATION OUTLOOK SYMPOSIUM &
CEREMONY OF JICA PROJECT COMPLETION
13th JULY 2023 | THE WESTIN JAKARTA

BERITA NEGARA REPUBLIK INDONESIA

No.49, 2020 KEMENDIKBUD. Program Studi. Perguruan Tinggi. Akreditasi. Pencabutan.

PERATURAN MENTERI PENDIDIKAN DAN KEBUDAYAAN REPUBLIK INDONESIA

NOMOR 5 TAHUN 2020

TENTANG

AKREDITASI PROGRAM STUDI DAN PERGURUAN TINGGI

REPUBLIC OF INDONESIA EDUCATION AND CULTURE MINISTERIAL REGULATION
NUMBER 5 YEAR 2020
ON
STUDY PROGRAM AND HIGHER EDUCATION INSTITUTION ACCREDITATION

DENGAN RAHMAT TUHAN YANG MAHA ESA

MENTERI PENDIDIKAN DAN KEBUDAYAAN REPUBLIK INDONESIA,

Menimbang : bahwa untuk melaksanakan ketentuan Pasal 55 ayat (8) Undang-Undang Nomor 12 Tahun 2012 tentang Pendidikan Tinggi, perlu menetapkan Peraturan Menteri Pendidikan dan Kebudayaan tentang Akreditasi Program Studi dan Perguruan Tinggi;

Mengingat :

1. Pasal 17 Ayat (3) Undang-Undang Dasar Negara Republik Indonesia Tahun 1945;
2. Undang-Undang Nomor 39 Tahun 2008 tentang Kementerian Negara (Lembaran Negara Republik Indonesia Tahun 2008 Nomor 166, Tambahan Lembaran Negara Republik Indonesia Nomor 4916);
3. Undang-Undang Nomor 12 Tahun 2012 tentang Pendidikan Tinggi (Lembaran Negara Republik Indonesia Tahun 2012 Nomor 158, Tambahan Lembaran Negara Republik Indonesia Nomor 5336);
4. Peraturan Pemerintah Nomor 4 Tahun 2014 tentang Penyelenggaraan Pendidikan Tinggi dan Pengelolaan Perguruan Tinggi (Lembaran Negara Republik Indonesia

Tahun 2014 Nomor 16, Tambahan Lembaran Negara Republik Indonesia Nomor 5500);

5. Peraturan Presiden Nomor 82 Tahun 2019 tentang Kementerian Pendidikan dan Kebudayaan (Lembaran Negara Republik Indonesia Tahun 2019 Nomor 242);
6. Peraturan Menteri Pendidikan dan Kebudayaan Nomor 45 Tahun 2019 tentang Organisasi dan Tata Kerja Kementerian Pendidikan dan Kebudayaan (Berita Negara Republik Indonesia Tahun 2019 Nomor 1673);

MEMUTUSKAN:

Menetapkan : PERATURAN MENTERI PENDIDIKAN DAN KEBUDAYAAN TENTANG AKREDITASI PROGRAM STUDI DAN PERGURUAN TINGGI.

BAB I
KETENTUAN UMUM

Pasal 1

Dalam Peraturan Menteri ini yang dimaksud dengan:

1. Akreditasi adalah kegiatan penilaian untuk menentukan kelayakan Program Studi dan Perguruan Tinggi.
2. Akreditasi Program Studi adalah kegiatan penilaian untuk menentukan kelayakan Program Studi.
3. Akreditasi Perguruan Tinggi adalah kegiatan penilaian untuk menentukan kelayakan Perguruan Tinggi.
4. Lembaga Akreditasi Mandiri, yang selanjutnya disingkat LAM adalah lembaga yang dibentuk oleh Pemerintah atau Masyarakat untuk melakukan Akreditasi Program Studi secara mandiri.
5. Badan Akreditasi Nasional Perguruan Tinggi, yang selanjutnya disingkat BAN-PT adalah badan yang dibentuk oleh Pemerintah untuk melakukan dan mengembangkan Akreditasi Perguruan Tinggi secara mandiri.
6. Standar Pendidikan Tinggi adalah satuan standar yang meliputi Standar Nasional Pendidikan Tinggi dan Standar

Pendidikan Tinggi yang ditetapkan oleh setiap Perguruan Tinggi dengan mengacu pada Standar Nasional Pendidikan Tinggi.

7. Standar Nasional Pendidikan Tinggi adalah satuan standar yang meliputi Standar Nasional Pendidikan, ditambah dengan Standar Penelitian, dan Standar Pengabdian kepada Masyarakat.
8. Standar Pendidikan Tinggi yang ditetapkan oleh setiap Perguruan Tinggi adalah sejumlah standar dalam bidang akademik dan nonakademik yang melampaui Standar Nasional Pendidikan Tinggi.
9. Perguruan Tinggi adalah satuan pendidikan yang menyelenggarakan pendidikan tinggi.
10. Program Studi adalah kesatuan kegiatan pendidikan dan pembelajaran yang memiliki kurikulum dan metode pembelajaran tertentu dalam satu jenis pendidikan akademik, pendidikan profesi, dan/atau pendidikan vokasi.
11. Pemimpin Perguruan Tinggi adalah rektor pada universitas dan institut, ketua pada sekolah tinggi, direktur pada politeknik, akademi, dan akademi komunitas.
12. Masyarakat adalah kelompok warga negara Indonesia nonpemerintah yang mempunyai perhatian dan peranan dalam bidang pendidikan tinggi.
13. Kementerian adalah kementerian yang menyelenggarakan urusan pemerintahan di bidang pendidikan.
14. Pangkalan Data Pendidikan Tinggi yang selanjutnya disebut PDDIKTI adalah kumpulan data penyelenggaraan pendidikan tinggi seluruh Perguruan Tinggi yang terintegrasi secara nasional di Kementerian.
15. Menteri adalah menteri yang menyelenggarakan urusan pemerintahan di bidang pendidikan.

Pasal 2

(1) Akreditasi merupakan sistem penjaminan mutu eksternal sebagai bagian dari sistem penjaminan mutu pendidikan tinggi.

(2) Akreditasi sebagaimana dimaksud pada ayat (1) bertujuan:

a. menentukan kelayakan Program Studi dan Perguruan Tinggi berdasarkan kriteria yang mengacu pada Standar Nasional Pendidikan Tinggi; dan

b. menjamin mutu Program Studi dan Perguruan Tinggi secara eksternal baik bidang akademik maupun nonakademik untuk melindungi kepentingan mahasiswa dan Masyarakat.

BAB II

AKREDITASI

Bagian Kesatu

Umum

Pasal 3

(1) Akreditasi dilakukan terhadap Program Studi dan Perguruan Tinggi berdasarkan Standar Nasional Pendidikan Tinggi.

(2) Peringkat Akreditasi Program Studi dan Perguruan Tinggi sebagaimana dimaksud pada ayat (1) terdiri atas:

a. Baik;

b. Baik Sekali; dan

c. Unggul.

Pasal 4

(1) Akreditasi untuk Program Studi dilaksanakan oleh LAM.

(2) Akreditasi untuk Perguruan Tinggi dilaksanakan oleh BAN-PT.

(3) Dalam hal LAM sebagaimana dimaksud pada ayat (1) belum terbentuk, maka Akreditasi untuk Program Studi diberikan oleh BAN-PT.

Pasal 5

Pelaksanaan Akreditasi untuk pendirian Perguruan Tinggi oleh BAN-PT sebagaimana dimaksud dalam Pasal 4 ayat (2) bersamaan dengan pelaksanaan Akreditasi terhadap semua Program Studi yang ada baik oleh LAM atau BAN-PT.

Pasal 6

(1) Jangka waktu berlakunya Akreditasi untuk Program Studi atau Perguruan Tinggi yang dilakukan oleh BAN-PT selama 5 (lima) tahun.
(2) Dalam hal jangka waktu Akreditasi sebagaimana dimaksud pada ayat (1) berakhir maka BAN-PT akan memperpanjang kembali jangka waktu Akreditasi setiap 5 (lima) tahun tanpa melalui permohonan perpanjangan Akreditasi.
(3) Perpanjangan Akreditasi sebagaimana dimaksud pada ayat (2) setelah dilakukan evaluasi oleh BAN-PT, dengan menggunakan data dan informasi yang diperoleh dari:
    a. Kementerian; dan/atau
    b. laporan Masyarakat;

    tentang dugaan pelanggaran terhadap ketentuan peraturan perundang-undangan dalam bidang pendidikan tinggi dan/atau penurunan mutu dalam penyelenggaraan pendidikan tinggi.
(4) Penurunan mutu sebagaimana dimaksud pada ayat (3) berupa menurunnya jumlah peminat/pendaftar dan/atau lulusan pada Program Studi yang ada selama 5 (lima) tahun berturut-turut berdasarkan data pada PDDIKTI.
(5) Peringkat Akreditasi yang telah diberikan dapat ditinjau kembali oleh BAN-PT sebelum jangka waktu Akreditasi berakhir apabila terdapat penurunan mutu sebagaimana dimaksud pada ayat (4).

(6) Ketentuan lebih lanjut mengenai peninjauan kembali Akreditasi sebagaimana dimaksud pada ayat (5) ditetapkan oleh direktur jenderal terkait sesuai dengan kewenangannya.

Pasal 7

(1) Program Studi atau Perguruan Tinggi yang telah memiliki Akreditasi dengan peringkat Baik dan akan menaikkan peringkat Akreditasi ke peringkat Baik Sekali atau peringkat Unggul dapat mengusulkan Akreditasi ulang kepada BAN-PT sebelum jangka waktu 5 (lima) tahun sebagaimana dimaksud dalam Pasal 6 berakhir.

(2) Dalam hal peringkat Akreditasi ulang oleh BAN-PT sebagaimana dimaksud pada ayat (1) tetap mendapatkan Akreditasi dengan peringkat yang sama maka Program Studi dan Perguruan Tinggi baru dapat mengusulkan Akreditasi ulang kembali ke BAN-PT dalam waktu 2 (dua) tahun sejak mendapatkan penetapan peringkat Akreditasi ulang.

(3) Ketentuan sebagaimana dimaksud pada ayat (1) dan ayat (2) berlaku juga untuk Program Studi atau Perguruan Tinggi yang telah memiliki Akreditasi dengan peringkat Baik Sekali yang akan menaikkan peringkat Akreditasi ke peringkat Unggul.

Pasal 8

(1) Jangka waktu Akreditasi Program Studi yang dilakukan oleh LAM ditentukan oleh LAM.

(2) Dalam hal jangka waktu Akreditasi yang ditentukan oleh LAM sebagaimana dimaksud pada ayat (1) berakhir maka Akreditasi ulang wajib dilakukan oleh LAM.

Article 9

(1) Study Program, having been accredited by LAM or BAN-PT, may request accreditation to recognized international accreditation agencies.

Pasal 9

(1) Program Studi setelah mendapatkan Akreditasi dari LAM atau BAN-PT dapat mengajukan Akreditasi kepada lembaga akreditasi internasional yang diakui.

(2) Recognition of international accreditation agencies as mentioned in verse (1) is established by the Minister

(2) Pengakuan atas lembaga akreditasi internasional sebagaimana dimaksud pada ayat (1) ditetapkan oleh Menteri.

(3) Accreditation status given by the international accreditation agencies referred in verse (1) is recognized equivalent to the rank of Excellent in [National] Accreditation

(3) Hasil Akreditasi oleh lembaga akreditasi internasional sebagaimana dimaksud pada ayat (1) diakui setara dengan peringkat Akreditasi Unggul.

(4) Recognition as accredited with rank Excellent as referred in verse (1) is conducted by LAM or BAN-PT in accordance with the prevailing regulations.

(4) Pengakuan setara dengan peringkat Akreditasi Unggul sebagaimana dimaksud pada ayat (3) ditetapkan oleh LAM atau BAN-PT sesuai dengan ketentuan peraturan perundang-undangan.

Pasal 10

(1) Akreditasi Program Studi dan Perguruan Tinggi dilakukan dengan menggunakan instrumen Akreditasi.

(2) Instrumen Akreditasi sebagaimana dimaksud pada ayat (1) terdiri atas:
   a. instrumen Akreditasi untuk Program Studi; dan
   b. instrumen Akreditasi untuk Perguruan Tinggi.

(3) Instrumen Akreditasi Program Studi dan Perguruan Tinggi sebagaimana dimaksud pada ayat (2) disusun oleh LAM atau BAN-PT sesuai dengan ketentuan peraturan perundang-undangan dengan berpedoman pada Standar Nasional Pendidikan Tinggi.

Pasal 11

Selain menggunakan instrumen sebagaimana dimaksud dalam Pasal 10, Akreditasi Program Studi dan Perguruan Tinggi juga menggunakan data dan informasi pada PDDIKTI.

Bagian Kedua

Mekanisme Akreditasi

Pasal 12

(1) LAM dan BAN-PT menyusun instrumen Akreditasi sesuai dengan kewenangan masing-masing dan ditetapkan sesuai dengan ketentuan peraturan perundang-undangan.

(2) Tahapan Akreditasi terdiri atas:
   a. evaluasi data dan informasi;
   b. penetapan peringkat Akreditasi; dan
   c. pemantauan dan evaluasi peringkat Akreditasi.

Pasal 13

(1) Tahap evaluasi data dan informasi sebagaimana dimaksud dalam Pasal 12 ayat (2) huruf a meliputi:
   a. Pemimpin Perguruan Tinggi mengajukan permohonan kepada LAM untuk Akreditasi Program Studi dan/atau BAN-PT untuk Akreditasi Perguruan Tinggi; dan
   b. LAM dan/atau BAN-PT melakukan evaluasi kecukupan atas data dan informasi Program Studi dan/atau Perguruan Tinggi sebagaimana dimaksud dalam huruf a, dengan menggunakan data dan informasi pada PDDIKTI.

(2) Evaluasi kecukupan atas data dan informasi sebagaimana dimaksud pada ayat (1) huruf b dilakukan oleh asesor.

Pasal 14

(1) Tahap penetapan peringkat Akreditasi sebagaimana dimaksud dalam Pasal 12 ayat (2) huruf b meliputi:
   a. LAM dan/atau BAN-PT mengolah dan menganalisis data dan informasi dari Perguruan Tinggi pemohon Akreditasi, untuk menetapkan peringkat Akreditasi Program Studi dan/atau Perguruan Tinggi; dan
   b. LAM dan/atau BAN-PT mengumumkan peringkat Akreditasi Program Studi dan/atau Perguruan Tinggi sesuai kewenangan masing-masing.

Pasal 15

Tahap pemantauan dan evaluasi peringkat Akreditasi sebagaimana dimaksud dalam Pasal 12 ayat (2) huruf c meliputi:

a. LAM atau BAN-PT melakukan pemantauan dan evaluasi terhadap pemenuhan syarat peringkat Akreditasi Program Studi dan/atau Perguruan Tinggi yang telah ditetapkan, berdasarkan data dan informasi dari:
   1. PDDIKTI;
   2. fakta hasil asesmen lapang; dan/atau
   3. direktorat terkait.

b. peringkat Akreditasi Program Studi dan/atau Perguruan Tinggi dapat dicabut sebelum masa berlakunya berakhir, apabila Program Studi dan/atau Perguruan Tinggi terbukti tidak lagi memenuhi syarat peringkat Akreditasi.

Pasal 16

Ketentuan lebih lanjut mengenai mekanisme Akreditasi ditetapkan oleh LAM atau BAN-PT sesuai dengan kewenangan masing-masing.

BAB III

LEMBAGA AKREDITASI

Bagian Kesatu

Badan Akreditasi Nasional Perguruan Tinggi

Pasal 17

(1) BAN-PT dibentuk oleh Menteri.
(2) BAN-PT merupakan badan nonstruktural di lingkungan Kementerian dan bertanggung jawab kepada Menteri.
(3) BAN-PT memiliki kemandirian dalam melakukan Akreditasi Perguruan Tinggi.
(4) BAN-PT didukung oleh sekretariat yang dikepalai oleh pejabat setara eselon II dalam hal pelaksanaan operasional kegiatan.

Pasal 18

Tugas dan wewenang BAN-PT:

a. mengembangkan sistem Akreditasi Program Studi dan Perguruan Tinggi selaras dengan kebijakan pengembangan pendidikan tinggi;
b. menyusun dan menetapkan instrumen Akreditasi Perguruan Tinggi berdasarkan Standar Pendidikan Tinggi;
c. melakukan Akreditasi Perguruan Tinggi;
d. menerbitkan, mengubah, atau mencabut keputusan peringkat Akreditasi Perguruan Tinggi dan menyampaikannya kepada pihak terkait;
e. memeriksa, melakukan uji kebenaran, dan memutuskan keberatan yang diajukan atas peringkat Akreditasi Perguruan Tinggi;
f. membangun dan mengembangkan jejaring dengan pemangku kepentingan baik di tingkat nasional maupun internasional;
g. melakukan penilaian kelayakan pendirian LAM sebagai dasar rekomendasi pengakuan Menteri kepada LAM;
h. mengevaluasi kinerja LAM secara berkala yang hasilnya disampaikan kepada Menteri;
i. menyusun instrumen evaluasi pendirian Perguruan Tinggi berdasarkan Standar Nasional Pendidikan Tinggi bersama dengan Menteri;
j. memberikan rekomendasi pemenuhan persyaratan minimum Akreditasi untuk pendirian Perguruan Tinggi kepada Menteri;
k. menyampaikan laporan hasil Akreditasi dilengkapi dengan rekomendasi secara berkala kepada Menteri; dan
l. menyusun instrumen evaluasi pendirian berdasarkan Standar Nasional Pendidikan Tinggi Kementerian dan/atau kementerian yang menyelenggarakan urusan pemerintahan di bidang agama.

Pasal 19

BAN-PT memiliki susunan organ sebagai berikut:

a. Majelis Akreditasi; dan
b. Dewan Eksekutif.

Pasal 20

(1) Majelis Akreditasi memiliki susunan organisasi sebagai berikut:
    a. 1 (satu) orang ketua merangkap anggota;
    b. 1 (satu) orang sekretaris merangkap anggota;
    c. anggota; dan
    d. direktur Dewan Eksekutif secara *ex officio* sebagai anggota.
(2) Keanggotaan Majelis Akreditasi sebagaimana dimaksud pada ayat (1) huruf a, huruf b, dan huruf c berjumlah gasal, paling sedikit 7 (tujuh) orang dan paling banyak 9 (sembilan) orang, termasuk 1 (satu) orang anggota dari profesional yang ditunjuk oleh Menteri.
(3) Anggota Majelis Akreditasi sebagaimana dimaksud pada ayat (1) huruf a, huruf b, dan huruf c bekerja paruh waktu.
(4) Direktur Dewan Eksekutif sebagaimana dimaksud pada ayat (1) huruf d tidak memiliki hak suara dalam pengambilan keputusan yang terkait dengan evaluasi kinerja Dewan Eksekutif.
(5) Keanggotaan atau proses pengambilan keputusan Majelis Akreditasi bersifat kolektif dan kolegial.

Pasal 21

Tugas dan wewenang Majelis Akreditasi:

a. menetapkan kebijakan dan pengembangan sistem Akreditasi Program Studi dan Perguruan Tinggi secara nasional;
b. menetapkan kebijakan pelaksanaan Akreditasi Perguruan Tinggi dengan mempertimbangkan usul Dewan Eksekutif;

c. mengesahkan rencana strategis, rencana kerja, dan anggaran tahunan BAN-PT yang diusulkan oleh Dewan Eksekutif dan menyampaikan kepada Menteri;
d. menetapkan instrumen Akreditasi Perguruan Tinggi;
e. menetapkan instrumen Akreditasi Program Studi atas usul LAM;
f. memberikan rekomendasi atas usul pendirian LAM dari Pemerintah atau Masyarakat kepada Menteri;
g. memantau, mengevaluasi, dan mengawasi kinerja LAM;
h. memutuskan hasil evaluasi permohonan keberatan atas peringkat Akreditasi Perguruan Tinggi;
i. memberikan rekomendasi kepada Menteri tentang pencabutan pengakuan LAM berdasarkan hasil evaluasi sebagaimana dimaksud dalam huruf g;
j. memantau, mengevaluasi, dan mengawasi kinerja Dewan Eksekutif;
k. melakukan evaluasi dan memberi persetujuan terhadap laporan Dewan Eksekutif; dan
l. melaporkan pelaksanaan tugas kepada Menteri setiap semester dan setiap tahun.

Pasal 22

Persyaratan anggota Majelis Akreditasi:
a. warga negara Indonesia;
b. sehat jasmani dan rohani;
c. memiliki integritas yang tinggi;
d. usia paling tinggi 64 (enam puluh empat) tahun pada saat mendaftar;
e. tidak pernah dihukum/sedang menjalani hukuman karena melakukan tindak pidana kejahatan;
f. dosen yang memiliki nomor induk dosen nasional;
g. memiliki pengalaman sebagai pimpinan Perguruan Tinggi, pimpinan fakultas/pascasarjana, ketua jurusan atau nama lain yang sejenis, pemimpin unit penjaminan mutu, dan/atau profesional yang pernah menjadi asesor paling sedikit 5 (lima) tahun;

h. bersedia melepaskan jabatan sebagaimana dimaksud dalam huruf g setelah diangkat sebagai anggota Majelis Akreditasi;
i. berpendidikan doktor;
j. memiliki jabatan akademik paling rendah lektor kepala;
k. memahami dan berpengalaman dalam pengelolaan Perguruan Tinggi;
l. memiliki pengalaman di bidang penjaminan mutu pendidikan tinggi;
m. tidak memiliki afiliasi dan/atau menjadi anggota partai politik;
n. bebas dari penggunaan dan keterkaitan dengan narkotika dan zat adiktif lainnya;
o. mendapatkan izin dari Pemimpin Perguruan Tinggi; dan
p. memiliki wawasan dan komitmen pada peningkatan mutu dan relevansi pendidikan tinggi.

Pasal 23

(1) Anggota Majelis Akreditasi sebagaimana dimaksud dalam Pasal 20 ayat (2) diseleksi oleh tim seleksi yang ditetapkan oleh Menteri.
(2) Tim seleksi sebagaimana dimaksud pada ayat (1) bertugas:
    a. menyelenggarakan pendaftaran calon anggota Majelis Akreditasi secara terbuka;
    b. melakukan seleksi calon anggota Majelis Akreditasi; dan
    c. mengusulkan calon anggota Majelis Akreditasi paling banyak 2 (dua) kali jumlah anggota Majelis Akreditasi yang dibutuhkan kepada Menteri.
(3) Menteri memilih dan menetapkan anggota Majelis Akreditasi berdasarkan usul tim seleksi.
(4) Masa jabatan anggota Majelis Akreditasi adalah 5 (lima) tahun dan dapat diangkat kembali untuk 1 (satu) kali masa jabatan berikutnya.

Pasal 24

(1) Ketua dan sekretaris Majelis Akreditasi diangkat dan ditetapkan oleh Menteri.

(2) Jabatan ketua dan sekretaris Majelis Akreditasi sebagaimana dimaksud pada ayat (1) adalah 5 (lima) tahun, dan dapat diangkat kembali untuk 1 (satu) kali masa jabatan berikutnya.

Pasal 25

(1) Tugas dan wewenang ketua Majelis Akreditasi:
   a. memimpin dan mengoordinasikan pelaksanaan tugas Majelis Akreditasi; dan
   b. melakukan koordinasi dengan unit kerja terkait di lingkungan Kementerian dan pemangku kepentingan lain.

(2) Tugas dan wewenang sekretaris Majelis Akreditasi:
   a. memimpin pengelolaan operasional harian Majelis Akreditasi; dan
   b. membantu pelaksanaan tugas dan wewenang ketua Majelis Akreditasi.

(3) Tugas dan wewenang anggota Majelis Akreditasi ditetapkan oleh ketua Majelis Akreditasi.

(4) Dalam hal ketua dan/atau sekretaris Majelis Akreditasi berhalangan sementara, tugas dan wewenang Majelis Akreditasi dilaksanakan oleh anggota yang ditunjuk oleh Anggota Majelis.

Pasal 26

(1) Anggota Majelis Akreditasi diberhentikan karena:
   a. masa jabatan telah berakhir;
   b. permohonan sendiri;
   c. ditetapkan sebagai tersangka karena diduga melakukan tindak pidana kejahatan;
   d. tidak menunjukkan kinerja, integritas, atau dedikasi sebagai anggota Majelis Akreditasi;
   e. sakit yang tidak dapat disembuhkan yang menyebabkan tidak dapat menjalankan tugas dan

kewajiban, dibuktikan dengan surat keterangan dari instansi yang berwenang; atau

f. meninggal dunia.

(2) Anggota Majelis Akreditasi diberhentikan sementara karena diduga telah melakukan tindak pidana kejahatan.

(3) Kinerja, integritas, atau dedikasi anggota Majelis Akreditasi sebagaimana dimaksud pada ayat (1) huruf d dievaluasi oleh Menteri secara berkala.

(4) Pemberhentian ketua, sekretaris, dan/atau anggota Majelis Akreditasi ditetapkan oleh Menteri.

Pasal 27

(1) Apabila terjadi pemberhentian ketua dan/atau sekretaris Majelis Akreditasi sebagaimana dimaksud dalam Pasal 26 ayat (1) huruf b sampai dengan huruf f, Menteri mengangkat dan menetapkan salah satu anggota Majelis Akreditasi untuk menyelesaikan sisa masa jabatan.

(2) Apabila terjadi pemberhentian anggota Majelis Akreditasi, Menteri mengangkat dan menetapkan anggota baru sesuai dengan urutan hasil seleksi untuk menyelesaikan sisa masa jabatan.

Pasal 28

(1) Dewan Eksekutif memiliki susunan organisasi sebagai berikut:

a. 1 (satu) orang direktur merangkap anggota;

b. 1 (satu) orang sekretaris merangkap anggota; dan

c. anggota.

(2) Keanggotaan Dewan Eksekutif sebagaimana dimaksud pada ayat (1) berjumlah gasal, paling banyak 5 (lima) orang.

(3) Anggota Dewan Eksekutif bekerja penuh waktu dan keanggotaan dalam Dewan Eksekutif merupakan tugas tambahan.

Pasal 29

Tugas dan wewenang Dewan Eksekutif:

a. melaksanakan kebijakan sistem Akreditasi Perguruan Tinggi secara nasional yang telah ditetapkan oleh Majelis Akreditasi;
b. menyusun rencana strategis, rencana kerja, dan anggaran tahunan BAN-PT untuk diusulkan kepada Majelis Akreditasi;
c. melaksanakan rencana strategis, rencana kerja, dan anggaran tahunan BAN-PT yang telah ditetapkan Menteri;
d. menyiapkan kebijakan pelaksanaan Akreditasi Perguruan Tinggi untuk diusulkan kepada Majelis Akreditasi;
e. menjalankan kebijakan pelaksanaan Akreditasi Perguruan Tinggi, termasuk penilaian kembali hasil Akreditasi Perguruan Tinggi;
f. menerima dan menyampaikan usul instrumen Akreditasi Program Studi dari LAM kepada Majelis Akreditasi;
g. menyampaikan rekomendasi pendirian dan pencabutan pengakuan LAM kepada Menteri;
h. melakukan pemantauan dan evaluasi terhadap pemenuhan syarat peringkat Akreditasi Perguruan Tinggi yang telah ditetapkan;
i. menyusun dan menyampaikan laporan secara berkala kepada Majelis Akreditasi;
j. membangun, mengembangkan, dan melaksanakan kegiatan aliansi strategis BAN-PT dengan pihak luar;
k. menyelenggarakan kegiatan Akreditasi sesuai dengan sistem penjaminan mutu Pendidikan Tinggi;
l. melakukan pengembangan sistem informasi, penelitian, dan pengembangan sistem Akreditasi;
m. mengelola asesor BAN-PT, mulai dari rekrutmen, pelatihan dan pengembangan serta pemberhentian asesor;
n. mengangkat tim ahli dan panitia *ad hoc* sesuai kebutuhan; dan
o. menjalankan tugas teknis dan administratif.

Pasal 30

Persyaratan anggota Dewan Eksekutif:

a. warga negara Indonesia;
b. sehat jasmani dan rohani;
c. memiliki integritas yang tinggi;
d. usia paling tinggi 60 (enam puluh) tahun pada saat mendaftar;
e. tidak pernah dihukum/sedang menjalani hukuman karena melakukan tindak pidana kejahatan;
f. dosen yang memiliki nomor induk dosen nasional;
g. memiliki pengalaman sebagai pimpinan Perguruan Tinggi, pimpinan fakultas/pascasarjana, ketua jurusan atau nama lain yang sejenis, pemimpin unit penjaminan mutu, dan/atau profesional yang pernah menjadi asesor paling sedikit 5 (lima) tahun;
h. bersedia melepaskan jabatan sebagaimana dimaksud dalam huruf g setelah diangkat sebagai anggota Dewan Eksekutif;
i. berpendidikan doktor;
j. memahami dan berpengalaman dalam pengelolaan Perguruan Tinggi;
k. memiliki pengalaman di bidang penjaminan mutu pendidikan tinggi;
l. tidak memiliki afiliasi dan/atau menjadi anggota partai politik;
m. bebas dari penggunaan dan keterkaitan dengan narkotika dan zat adiktif lainnya;
n. mendapatkan izin dari Pemimpin Perguruan Tinggi; dan
o. memiliki wawasan dan komitmen pada peningkatan mutu dan relevansi pendidikan tinggi.

Pasal 31

(1) Anggota Dewan Eksekutif sebagaimana dimaksud dalam Pasal 28 ayat (2) diseleksi oleh tim seleksi yang ditetapkan oleh Menteri.
(2) Tim seleksi sebagaimana dimaksud pada ayat (1) bertugas:

a. merekrut dan menyeleksi calon anggota Dewan Eksekutif; dan
b. mengusulkan calon anggota Dewan Eksekutif paling banyak 2 (dua) kali jumlah anggota Dewan Eksekutif yang dibutuhkan kepada Menteri.

(3) Menteri menetapkan anggota Dewan Eksekutif berdasarkan usul tim seleksi.

(4) Masa jabatan anggota Dewan Eksekutif adalah 5 (lima) tahun dan dapat diangkat kembali untuk 1 (satu) kali masa jabatan berikutnya.

Pasal 32

(1) Direktur dan sekretaris Dewan Eksekutif ditetapkan oleh Menteri.

(2) Jabatan direktur dan sekretaris Dewan Eksekutif sebagaimana dimaksud pada ayat (1) adalah 5 (lima) tahun dan dapat diangkat kembali untuk 1 (satu) kali masa jabatan berikutnya.

Pasal 33

(1) Tugas dan wewenang direktur Dewan Eksekutif:
a. memimpin dan mengoordinasikan pelaksanaan tugas Dewan Eksekutif;
b. melakukan koordinasi dengan Majelis Akreditasi dan pemangku kepentingan lain dalam pelaksanaan Akreditasi Perguruan Tinggi; dan
c. menetapkan penugasan staf sekretariat yang terkait dengan pelaksanaan proses Akreditasi.

(2) Tugas dan wewenang sekretaris Dewan Eksekutif:
a. memimpin pengelolaan operasional harian Dewan Eksekutif;
b. melaksanakan tugas teknis dan administratif Majelis Akreditasi dan Dewan Eksekutif;
c. membantu pelaksanaan tugas dan wewenang ketua Dewan Eksekutif; dan
d. memantau dan mengevaluasi kinerja staf sekretariat untuk disampaikan kepada kepala sekretariat.

(3) Tugas dan wewenang anggota Dewan Eksekutif ditetapkan oleh direktur Dewan Eksekutif.

(4) Dalam hal direktur dan/atau sekretaris Dewan Eksekutif berhalangan sementara, tugas dan wewenang Dewan Eksekutif dilaksanakan oleh anggota yang ditunjuk oleh para anggota Dewan Eksekutif.

Pasal 34

(1) Anggota Dewan Eksekutif diberhentikan karena:
   a. masa jabatan telah berakhir;
   b. permohonan sendiri;
   c. ditetapkan sebagai tersangka karena diduga melakukan tindak pidana kejahatan;
   d. tidak menunjukkan kinerja, integritas, atau dedikasi sebagai anggota Dewan Eksekutif;
   e. sakit yang tidak dapat disembuhkan yang menyebabkan tidak dapat menjalankan tugas dan kewajiban, dibuktikan dengan surat keterangan dari instansi yang berwenang; atau
   f. meninggal dunia.

(2) Anggota Dewan Eksekutif diberhentikan sementara karena diduga telah melakukan tindak pidana kejahatan.

(3) Kinerja, integritas, atau dedikasi anggota Dewan Eksekutif sebagaimana dimaksud pada ayat (1) huruf d dievaluasi oleh Menteri secara berkala.

(4) Pemberhentian direktur, sekretaris, dan/atau anggota Dewan Eksekutif ditetapkan oleh Menteri.

Pasal 35

(1) Apabila terjadi pemberhentian direktur dan/atau sekretaris Dewan Eksekutif sebagaimana dimaksud dalam Pasal 34 ayat (1) huruf b sampai dengan huruf f, Menteri menetapkan direktur dan/atau sekretaris Dewan Eksekutif dari salah satu anggota Dewan Eksekutif untuk menyelesaikan sisa masa jabatan.

(2) Dalam hal anggota Dewan Eksekutif berhalangan tetap, Menteri menetapkan anggota baru sesuai dengan urutan

hasil seleksi untuk meneruskan sisa masa jabatan anggota.

Bagian Kedua
Lembaga Akreditasi Mandiri

Paragraf 1
Umum

Pasal 36

(1) LAM dibentuk oleh Pemerintah atau Masyarakat.
(2) LAM dibentuk berdasarkan rumpun, pohon, dan/atau cabang ilmu pengetahuan.
(3) LAM sebagaimana dimaksud pada ayat (2) dibentuk di tempat kedudukan lembaga layanan pendidikan tinggi.
(4) Rumpun, pohon, dan/atau cabang ilmu pengetahuan sebagaimana dimaksud pada ayat (2) ditetapkan oleh Menteri.

Pasal 37

(1) Tugas dan wewenang LAM :
    a. menyusun instrumen Akreditasi Program Studi berdasarkan Standar Nasional Pendidikan Tinggi;
    b. melakukan Akreditasi Program Studi;
    c. menerbitkan, mengubah, atau mencabut keputusan tentang peringkat Akreditasi Program Studi;
    d. memeriksa, melakukan uji kebenaran dan memutuskan keberatan yang diajukan atas peringkat Akreditasi Program Studi;
    e. membangun dan mengembangkan jejaring dengan pemangku kepentingan, baik tingkat nasional maupun internasional;
    f. menyusun instrumen evaluasi pembukaan Program Studi berdasarkan Standar Nasional Pendidikan Tinggi bersama dengan Menteri;

g. melakukan pemantauan dan evaluasi terhadap pemenuhan syarat peringkat Akreditasi Program Studi yang telah ditetapkan;
h. memberikan rekomendasi pemenuhan persyaratan minimum Akreditasi untuk pembukaan Program Studi kepada Menteri atau PTN badan hukum; dan
i. menyampaikan laporan hasil Akreditasi dilengkapi dengan rekomendasi secara berkala kepada Menteri dengan tembusan kepada BAN-PT.

(2) LAM yang bertugas memberikan rekomendasi pemenuhan persyaratan minimum Akreditasi untuk pembukaan Program Studi kepada PTN badan hukum, ditentukan oleh PTN badan hukum.

(3) Dalam menjalankan tugas dan wewenang sebagaimana dimaksud pada ayat (1), LAM dapat mengangkat tim asesor, tim ahli, dan panitia *ad hoc.*

Paragraf 2
LAM Pemerintah

Pasal 38

(1) LAM Pemerintah dibentuk oleh Menteri atas rekomendasi dari BAN-PT.

(2) LAM Pemerintah merupakan badan nonstruktural di lingkungan Kementerian dan bertanggung jawab kepada Menteri.

(3) Dalam melakukan Akreditasi Program Studi, LAM Pemerintah memiliki kemandirian.

Pasal 39

(1) LAM Pemerintah memiliki susunan organisasi sebagai berikut:
a. 1 (satu) orang ketua merangkap anggota;
b. 1 (satu) orang sekretaris merangkap anggota; dan
c. anggota.

(2) Keanggotaan LAM Pemerintah sebagaimana dimaksud pada ayat (1) berjumlah gasal, paling sedikit 5 (lima) orang dan paling banyak 7 (tujuh) orang.

(3) Anggota LAM Pemerintah diangkat dan diberhentikan oleh Menteri.

(4) Ketua dan sekretaris LAM Pemerintah dipilih dari dan oleh anggota LAM Pemerintah untuk ditetapkan oleh Menteri.

(5) Masa jabatan ketua, sekretaris, dan anggota LAM Pemerintah sebagaimana dimaksud pada ayat (3) adalah 5 (lima) tahun, dan dapat diangkat kembali untuk 1 (satu) kali masa jabatan berikutnya.

Pasal 40

Persyaratan anggota LAM Pemerintah

a. Warga Negara Indonesia;
b. sehat jasmani dan rohani;
c. memiliki integritas yang tinggi;
d. usia paling tinggi 60 (enam puluh) tahun pada saat mendaftar;
e. tidak pernah dihukum/sedang menjalani hukuman karena melakukan tindak pidana kejahatan;
f. dosen yang memiliki nomor induk dosen nasional;
g. pakar dalam rumpun, pohon, dan/atau cabang ilmu pengetahuan yang dibina oleh suatu Program Studi;
h. memiliki pengalaman sebagai pimpinan Perguruan Tinggi, pimpinan fakultas/pascasarjana, ketua jurusan atau nama lain yang sejenis, pemimpin unit penjaminan mutu, dan/atau profesional yang pernah menjadi asesor paling sedikit 5 (lima) tahun;
i. bersedia melepaskan jabatan sebagaimana dimaksud dalam huruf h setelah diangkat sebagai anggota LAM;
j. tidak menjadi anggota unit kerja yang berhubungan dengan pembinaan dan pengembangan mutu pendidikan tinggi;
k. berpendidikan doktor;
l. memiliki jabatan akademik paling rendah lektor kepala;

m. tidak memiliki afiliasi dan/atau menjadi anggota partai politik;
n. bebas dari penggunaan dan keterkaitan dengan narkotika dan zat adiktif lainnya;
o. mendapatkan izin dari Pemimpin Perguruan Tinggi; dan
p. memiliki wawasan dan komitmen pada peningkatan mutu dan relevansi pendidikan tinggi.

Pasal 41

(1) Seleksi anggota LAM Pemerintah dilakukan oleh tim seleksi yang ditetapkan oleh Menteri.
(2) Tim seleksi sebagaimana dimaksud pada ayat (1) bertugas:
    a. menyelenggarakan pendaftaran calon anggota LAM Pemerintah secara terbuka;
    b. melakukan seleksi calon anggota LAM Pemerintah; dan
    c. mengusulkan calon anggota LAM Pemerintah paling banyak 2 (dua) kali jumlah anggota LAM Pemerintah yang dibutuhkan kepada Menteri.
(3) Menteri memilih dan menetapkan anggota LAM Pemerintah berdasarkan usul tim seleksi.
(4) Masa jabatan anggota LAM Pemerintah adalah 5 (lima) tahun dan dapat diangkat kembali untuk 1 (satu) kali masa jabatan berikutnya.

Pasal 42

(1) Ketua, sekretaris, dan anggota LAM Pemerintah bekerja penuh waktu.
(2) Tugas dan wewenang ketua LAM Pemerintah:
    a. memimpin LAM Pemerintah dalam pelaksanaan Akreditasi Program Studi; dan
    b. melakukan koordinasi dengan unit terkait di lingkungan Kementerian dan pemangku kepentingan lain.

(3) Tugas dan wewenang sekretaris LAM Pemerintah:
   a. memimpin pengelolaan operasional harian LAM Pemerintah;
   b. melaksanakan tugas teknis dan administratif LAM Pemerintah; dan
   c. membantu pelaksanaan tugas dan wewenang ketua LAM Pemerintah.

Pasal 43

(1) Anggota LAM Pemerintah diberhentikan karena:
   a. masa jabatan telah berakhir;
   b. permohonan sendiri;
   c. ditetapkan sebagai tersangka karena diduga melakukan tindak pidana kejahatan;
   d. tidak menunjukkan kinerja, integritas, atau dedikasi sebagai anggota LAM Pemerintah;
   e. sakit yang tidak dapat disembuhkan yang menyebabkan tidak dapat menjalankan tugas dan kewajiban, dibuktikan dengan surat keterangan dari instansi yang berwenang; atau
   f. meninggal dunia.
(2) Anggota LAM Pemerintah diberhentikan sementara karena diduga telah melakukan tindak pidana kejahatan.
(3) Kinerja, integritas, atau dedikasi anggota LAM Pemerintah dievaluasi oleh BAN-PT secara berkala untuk selanjutnya dilaporkan kepada Menteri.
(4) Pemberhentian ketua, sekretaris, dan/atau anggota LAM Pemerintah ditetapkan oleh Menteri.

Pasal 44

(1) Apabila terjadi pemberhentian ketua dan/atau sekretaris LAM Pemerintah sebagaimana dimaksud dalam Pasal 43 ayat (1) huruf b sampai dengan huruf f, Menteri mengangkat dan menetapkan salah satu anggota LAM Pemerintah untuk menyelesaikan sisa masa jabatan.
(2) Apabila terjadi pemberhentian anggota LAM Pemerintah, Menteri mengangkat dan menetapkan anggota baru

sesuai dengan urutan hasil seleksi untuk menyelesaikan sisa masa jabatan.

Pasal 45

(1) Dalam melaksanakan tugas dan wewenangnya LAM Pemerintah dibantu oleh sekretariat.
(2) Kepala sekretariat LAM Pemerintah ditetapkan oleh Menteri.

Paragraf 3
LAM Masyarakat

Pasal 46

(1) LAM Masyarakat berbentuk badan hukum nirlaba.
(2) Badan hukum nirlaba sebagaimana dimaksud pada ayat (1) dibentuk oleh pemrakarsa yang terdiri atas organisasi profesi dan/atau asosiasi unit pengelola Program Studi berbadan hukum dari suatu rumpun, pohon, dan/atau cabang ilmu pengetahuan.
(3) Organisasi profesi sebagaimana dimaksud pada ayat (2) merupakan himpunan individu profesional dalam suatu bidang ilmu pengetahuan atau teknologi tertentu yang bertanggung jawab atas pembinaan dan pengembangan profesi tersebut.

Pasal 47

(1) Persyaratan pendirian LAM Masyarakat wajib memiliki:
    a. rencana sumber daya manusia yang diperlukan untuk melakukan Akreditasi Program Studi;
    b. rancangan prosedur operasi standar Akreditasi Program Studi;
    c. sumber pendanaan paling sedikit untuk 3 (tiga) tahun anggaran LAM Masyarakat;
    d. rancangan satuan biaya pelaksanaan Akreditasi Program Studi sesuai bidangnya;
    e. sarana dan prasarana LAM Masyarakat;

f. rancangan sistem penjaminan mutu internal LAM Masyarakat; dan

g. rancangan mekanisme penanganan keberatan yang diajukan atas peringkat Akreditasi Program Studi, baik dari Pemimpin Perguruan Tinggi maupun dari Masyarakat.

(2) Prosedur pendirian LAM Masyarakat:

a. pemrakarsa sebagaimana dimaksud dalam Pasal 46 ayat (2) mengusulkan pendirian LAM Masyarakat kepada Menteri dilengkapi dengan studi kelayakan untuk memperoleh pengakuan;

b. Menteri menugaskan BAN-PT untuk melakukan penilaian terhadap studi kelayakan sebagaimana dimaksud dalam huruf a;

c. BAN-PT memberikan rekomendasi kepada Menteri tentang persetujuan pengakuan LAM Masyarakat;

d. dalam hal Menteri memberikan persetujuan pengakuan LAM Masyarakat berdasarkan rekomendasi BAN-PT, pemrakarsa mengajukan pembentukan badan hukum nirlaba sesuai dengan ketentuan perundang-undangan;

e. dalam hal Menteri tidak memberikan persetujuan pengakuan LAM Masyarakat berdasarkan rekomendasi BAN-PT, pemrakarsa dapat mengajukan kembali usulan pendirian LAM Masyarakat; dan

f. LAM Masyarakat dapat menjalankan fungsinya setelah mendapat status sebagai badan hukum nirlaba.

Pasal 48

(1) Studi kelayakan sebagaimana dimaksud dalam Pasal 47 ayat (2) huruf a paling sedikit berisi tentang:

a. latar belakang dan tujuan pendirian LAM Masyarakat;

b. visi dan misi LAM Masyarakat;

c. nama LAM Masyarakat yang akan digunakan;

d. rencana ruang lingkup rumpun, pohon, dan/atau cabang ilmu pengetahuan yang dibina Program Studi yang akan diakreditasi LAM Masyarakat;
e. bukti sumber pendanaan LAM Masyarakat paling sedikit untuk 3 (tiga) tahun anggaran LAM Masyarakat;
f. rancangan alur proses Akreditasi LAM Masyarakat;
g. rancangan tata kelola LAM Masyarakat; dan
h. rancangan sistem penjaminan mutu internal LAM Masyarakat.

(2) Rancangan tata kelola LAM Masyarakat sebagaimana dimaksud pada ayat (1) huruf g paling sedikit meliputi:
a. susunan organisasi;
b. sumber daya manusia serta pengembangannya;
c. sistem pengelolaan keuangan; dan
d. sarana dan prasarana.

(3) Rancangan sistem penjaminan mutu internal LAM Masyarakat sebagaimana dimaksud pada ayat (1) huruf h paling sedikit memuat:
a. kebijakan sistem penjaminan mutu internal;
b. manual sistem penjaminan mutu internal;
c. standar dalam sistem penjaminan mutu internal; dan
d. formulir dalam sistem penjaminan mutu internal.

Pasal 49

(1) Susunan organisasi, kepengurusan, dan tata kelola LAM Masyarakat diatur dalam anggaran dasar badan hukum nirlaba.

(2) Pendanaan LAM Masyarakat bersumber dari dana Masyarakat, sumber lain atau dapat bersumber dari dana pemerintah sesuai dengan ketentuan peraturan perundang-undangan.

(3) Dalam hal LAM Masyarakat memungut biaya untuk melakukan Akreditasi Program Studi, besaran biaya harus mendapat persetujuan Menteri.

Pasal 50

(1) LAM Masyarakat menyampaikan laporan kegiatan setiap tahun kepada Menteri melalui BAN-PT.
(2) LAM Masyarakat diaudit oleh akuntan publik secara berkala dan diumumkan kepada Masyarakat.
(3) Menteri dapat mencabut persetujuan pengakuan atas LAM Masyarakat apabila terbukti tidak menunjukkan kinerja yang baik, melanggar integritas, atau melanggar ketentuan peraturan perundang-undangan.

Pasal 51

(1) Dalam pelaksanaan Akreditasi Program Studi, LAM Masyarakat berkoordinasi dengan unit terkait di lingkungan Kementerian dan pemangku kepentingan lain.
(2) Koordinasi sebagaimana dimaksud pada ayat (1) bertujuan agar pelaksanaan Akreditasi Program Studi mampu berkontribusi secara harmonis dalam Sistem Penjaminan Mutu Pendidikan Tinggi, membangun dan mengembangkan budaya mutu pendidikan tinggi.

BAB IV
PENGAWASAN

Pasal 52

(1) Menteri melakukan pengawasan terhadap pelaksanaan Akreditasi oleh BAN-PT.
(2) BAN-PT melakukan pengawasan terhadap pelaksanaan Akreditasi oleh LAM.

Pasal 53

(1) BAN-PT secara berkala melakukan evaluasi terhadap proses Akreditasi yang dilaksanakan oleh LAM paling lambat setiap 2 (dua) tahun.
(2) Apabila berdasarkan hasil evaluasi sebagaimana dimaksud pada ayat (1) LAM tidak melaksanakan proses Akreditasi sesuai ketentuan, pelaksanaan Akreditasi oleh

LAM dilakukan di bawah pembinaan dan pengawasan BAN-PT selama 1 (satu) tahun.

(3) Apabila setelah masa pembinaan oleh BAN-PT sebagaimana dimaksud pada ayat (2) LAM tidak melakukan proses Akreditasi sesuai ketentuan, BAN-PT merekomendasikan penutupan LAM Pemerintah atau pencabutan pengakuan LAM Masyarakat kepada Menteri.

(4) Menteri menutup LAM Pemerintah atau mencabut pengakuan LAM Masyarakat dan melimpahkan penyelenggaraan Akreditasi kepada BAN-PT sampai dengan LAM dalam rumpun, pohon, dan/atau cabang ilmu pengetahuan yang sama terbentuk.

(5) LAM Masyarakat yang dicabut pengakuannya sebagaimana dimaksud pada ayat (4), berkewajiban menyelesaikan seluruh tanggung jawab sesuai dengan ketentuan peraturan perundang-undangan.

BAB V
KETENTUAN PERALIHAN

Pasal 54

(1) Program Studi yang sudah memenuhi persyaratan minimum Akreditasi dan sedang menunggu proses Akreditasi sebelum berlakunya Peraturan Menteri ini maka Program Studi yang bersangkutan mendapatkan Akreditasi dengan peringkat Baik.

(2) Program Studi dan/atau Perguruan Tinggi yang saat ini sudah memasukkan berkas perpanjangan dan masih menunggu proses Akreditasi ulang maka dengan berlakunya Peraturan Menteri ini peringkat Akreditasi yang terakhir dimiliki dinyatakan masih tetap berlaku sampai dengan 5 (lima) tahun terhitung sejak berakhirnya jangka waktu peringkat Akreditasi terakhir ditetapkan.

(3) Program Studi dan/atau Perguruan Tinggi yang peringkat Akreditasinya dinyatakan masih berlaku sebagaimana

dimaksud pada ayat (2) tetap dapat mengajukan Akreditasi ulang untuk menaikkan peringkat Akreditasi.

BAB VI
KETENTUAN PENUTUP

Pasal 55

Pada saat Peraturan Menteri ini berlaku, Peraturan Menteri Riset, Teknologi, dan Pendidikan Tinggi Nomor 32 Tahun 2016 tentang Akreditasi Program Studi dan Perguruan Tinggi (Berita Negara Republik Indonesia Tahun 2016 Nomor 774), dicabut dan dinyatakan tidak berlaku.

Pasal 56

Peraturan Menteri ini mulai berlaku pada tanggal diundangkan.

Agar setiap orang mengetahuinya, memerintahkan pengundangan Peraturan Menteri ini dengan penempatannya dalam Berita Negara Republik Indonesia.

Ditetapkan di Jakarta
pada tanggal 24 Januari 2020

MENTERI PENDIDIKAN DAN KEBUDAYAAN
REPUBLIK INDONESIA,

ttd

NADIEM ANWAR MAKARIM

Diundangkan di Jakarta
pada tanggal 28 Januari 2020

DIREKTUR JENDERAL
PERATURAN PERUNDANG-UNDANGAN
KEMENTERIAN HUKUM DAN HAK ASASI MANUSIA
REPUBLIK INDONESIA,

ttd

WIDODO EKATJAHJANA

SURAT KEPUTUSAN

LEMBAGA AKREDITASI MANDIRI PROGRAM STUDI KETEKNIKAN (LAM TEKNIK)

NOMOR: 10/BATAP APK-PII/210/VI/2022

TENTANG

PEDOMAN PENYETARAAN AKREDITASI INTERNASIONAL

KOMITE EKSEKUTIF LAM TEKNIK

Menimbang:

a. bahwa untuk mewujudkan transparansi dan akuntabilitas terhadap proses penyetaraan akreditasi internasional, maka perlu ditetapkan Pedoman Penyetaraan Akreditasi Internasional;
b. bahwa berdasarkan pertimbangan sebagaimana dimaksud dalam huruf (a), perlu ditetapkan melalui Keputusan Ketua Komite Eksekutif LAM Teknik.

Mengingat:

1. Undang-Undang Nomor 12 Tahun 2012 tentang Pendidikan Tinggi (Lembaran Negara Republik Indonesia Tahun 2012 Nomor 158, Tambahan Lembaran Negara Republik Indonesia Nomor 5336);
2. Peraturan Menteri Pendidikan dan Kebudayaan Republik Indonesia Nomor 3 Tahun 2020 tentang Standar Nasional Pendidikan Tinggi (Berita Negara Republik Indonesia Tahun 2020 Nomor 47);
3. Peraturan Menteri Pendidikan dan Kebudayaan Nomor 5 Tahun 2020 tentang Akreditasi Program Studi dan Perguruan Tinggi (Berita Negara Republik Indonesia Tahun 2020 Nomor 49);
4. Surat Menteri Pendidikan dan Kebudayaan Nomor 11125/MPK.A/HK/2021 tentang Persetujuan Pengakuan Menteri Pendidikan dan Kebudayaan Terhadap Usul Pendirian Lembaga Akreditasi Mandiri Teknik;
5. Keputusan Menteri Pendidikan dan Kebudayaan Nomor 83/P/2020 tentang Lembaga Akreditasi Internasional;
6. Keputusan Menteri Pendidikan, Kebudayaan, Riset, dan Teknologi Republik Indonesia Nomor 385/P/2021 tentang Kriteria dan Prosedur Pengakuan Lembaga Akreditasi Internasional;
7. Keputusan Direktur Dewan Eksekutif Badan Akreditasi Nasional Perguruan Tinggi Nomor 006/BAN-PT/SK/IV/2022 tentang Pedoman Penyetaraan Akreditasi Internasional;
8. Anggaran Dasar dan Anggaran Rumah Tangga Persatuan Insinyur Indonesia sebagaimana disahkan oleh Menteri Hukum dan Hak Asasi Manusia Nomor: AHU-0000440.AH.01.01.08 Tahun 2020.

MEMUTUSKAN:

Menetapkan: KEPUTUSAN KOMITE EKSEKUTIF LAM TEKNIK NOMOR 10/BATAP APK-PII/210/VI/2022 TENTANG PEDOMAN PENYETARAAN AKREDITASI INTERNASIONAL

PERTAMA : Penyetaraan akreditasi internasional program studi kepada LAM Teknik saat ini hanya dibatasi untuk Program Sarjana dan Sarjana Terapan;

KEDUA : Penyetaraan akreditasi internasional oleh LAM Teknik harus memenuhi syarat-syarat sebagai berikut:
1. Program Studi terlebih dahulu telah memperoleh peringkat minimal Baik Sekali pada akreditasi nasional;
2. Lembaga akreditasi yang memberikan akreditasi internasional merupakan lembaga anggota dari perjanjian internasional di dalam lingkup International Engineering Alliance (IEA), yaitu: Washington Accord, Sydney Accord, atau Dublin Accord;

KETIGA : Program Studi yang mengajukan Penyetaraan Unggul melalui skema akreditasi internasional tetap memiliki kewajiban untuk membuktikan terpenuhinya Syarat Perlu Akreditasi Nasional LAM Teknik untuk Peringkat Unggul. Pembuktian keterpenuhan Syarat Perlu tersebut disampaikan pada pengajuan perpanjangan Penyetaraan Unggul dengan mengisi Instrumen Perpanjangan Penyetaraan Akreditasi Unggul LAM Teknik;

KEEMPAT : Program Studi yang telah memperoleh Penyetaraan Unggul melalui akreditasi internasional dan terus-menerus memelihara status akreditasi internasionalnya dan pemenuhan Syarat Perlunya sebagaimana dimaksud pada diktum KETIGA di atas, dibebaskan dari mengikuti asesmen akreditasi nasional;

KELIMA : Keputusan Komite Eksekutif LAM Teknik ini berlaku sejak tanggal ditetapkan dan apabila terdapat kekeliruan di kemudian hari akan diperbaiki sebagaimana mestinya.

Ditetapkan di Jakarta

pada tanggal 27 Juni 2022

Ketua Komite Eksekutif LAM Teknik,

LEMBAGA AKREDITASI MANDIRI PROGRAM STUDI KETEKNIKAN
LAM TEKNIK

Prof. Dr-Ing. Ir. Misri Gozan, M.Tech, IPU., ASEAN. Eng.

[TRANSLATION]

DECISION LETTER

ENGINEERING PROGRAM ACCREDITATION AGENCY (LAM TEKNIK)

NO. 10/BATAP APK-PII/210/VI/2022

ON

GUIDES OF INTERNATIONAL ACCREDITATION RECOGNITION

LAM TEKNIK EXECUTIVE COMMITEE

Considering: a to b

Recalling: 1 to 8

DECIDES TO

Establish: The Decision of the Executive Committee of LAM Teknik number 10/BATAP APK-PII/210/VI/2022 on the Guides of International Accreditation Recognition

FIRST:

SECOND: Recognition of international accreditation by LAM Teknik shall meet the following requirements:

1. Study Program requesting recognition shall have been first accredited nationally with the minimum rank of Very Good.
2. International accreditation agency awarding accreditation to the Study Program shall be a signatory of the International Engineering Alliance in the Washington Accord, Sydney Accord, or Dublin Accord.

THIRD:

FOURTH: Study programs which have been recognized as having Excellent rank through an international-level accreditation and proven to maintain its status as internationally accredited programs and fulfill the necessary conditions for the rank as are exempted from undergoing assessment for national accreditation

FIFTH:

Decision enacted in Jakarta

On 27 June 2022

Chair of LAM Teknik Executive Committee

Prof. Misri Gozan

ANNEX 3: PDM (All versions of PDM)

Project Monitoring Sheet I （Revision of Project Design Matrix）

Project Title: Project for the Establishment of Indonesia Accreditation Board for Engineering Education (IABEE) Version 1

Implementing Agency:Ministry of Education and Culture (MOEC) Dated December 10, 2014

Target Group: (Direct) General Assembly members (profesional engineerig societies), Board directors, Committee members, Secretsariat staff, evaluators,

(Indirect) Faculty and graduates of accredited enginnering education programs

Period of Project: November 2014 to October 2019 (5years)

Project Site:Jakarta and the whole country

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumption	Achievement	Remarks
Overall Goal					
Engineering education* provided by universities and institutes in Indonesia are changed from input based teaching to outcome based learning, responding to the needs of the society. The level of the engineering education is recognized by the international society as substantially equivalent to that of the countries of the Washington Accord signatories.	・Among 2,371 engineering education programs provided by public and private universities and instituites, 240 programs (10%) are accredited by IABEE. ・IABEE joins the Washington Accord as a signatiry.	・IABEE Database ・Y/N	Indonesian government's policy on Engineering Education does not change drastically.	The project just started late November. Then, no notable achievement/issue is found so far.	
Project Purpose					
An accreditation system is established to change engineering education* from input based teaching to outcome based learning, and IABEE becomes a provisional member of the Washington Accord.	・Among 2,371 engineering education programs provided by public and private universities and instituites, 25 programs (1%) are accredited by IABEE. ・IABEE is accepted as a provisional member of the Washington Accord.	・IABEE Database ・Y/N	Indonesian government's policy on Engineering Education does not change drastically.	Ditto	
Outputs					
1. IABEE is established.	・The establishment of IABEE is approved by the Ministry of Education and Culture. ・Human resources, infrastructure and financial resources required for the functioning of IABEE are provided.	・Y/N ・IABEE Organization Chart, Financial Statement	MOEC decree for instrument for evaluation of LAM is effectuated in appropriate timing.	Ditto	
2. The accreditation documents are developped, and evaluators are trained.	・4 documents relating to accreditation criteria are developped in English and Indonesian languages. ・8 documentrs relating to evaluation are developped in English and Indonesian languages. ・200 evaluators for evaluation of engineering education programs are trained.	・IABEE Database		Ditto	
3. Some education programs are accredited.	25 education programs are accredited including pilot accreditations.	・IABEE Database		Ditto	
4. IABEE's Request for provisional status is submitted to the Washington Accord.	The Washington Accord approves the provisional status of IABEE.	・Y/N		Ditto	

Activities	Inputs		Pre-Conditions
	The Japanese Side	**The Indonesian Side**	
1-1 Identifying IABEE General Assembly members and Board members. Involving engineering societies as major players of IABEE activities.	a) Dispatch of Expert - Chief Advisor/Organization Management - Accreditation documents development - Advocacy, Training and Consultation - Program evaluation Website and databese development b) Short-termTraining in Japan and third countries c) Equipment - Website and database with necessary software and servers **In case of importation, the equioment will become the property of the government of Indonesia upon being delivered C.I.F. (cost, insurance and freight) to the Indonesian authorities concerned at the ports and/or airports of disembarkation.* d) A portion of implementation cost - Cost for experts' daily activities - Cost for pilot international evaluation	a) Personnel assignment - MOEC counterpart personnel - IABEE key personnel and secretariat staff b) Facility - Suitable office space with necessary furniture and equipment for JICA experts -Suitable office space with necessary furniture and equipment for IABEE c) Equipment - Hosting and maintenance of website and database - Expenses necessary for transportation within Indonesia of the equipment provided by JICA as well as for the installation, operation and maintenance d) A portion of implementation cost - Cost for holding Committee meetings - Cost for holding Seminars - Cost for holding evaluator trainings - Cost for IEA meetings - Other Initial and running cost of IABEE	Necessary budge for the project implementation is secured.
1-2 Drawing up and reviewing midterm activity plan and financial plan of IABEE.			**<Issues and countermesures>**
1-3 Drawing up the Charter of IABEE.			The project just started late November. Then, no notable achievement/issue is found so far.
1-4 Recruting sectretariat staff			
1-5 Inaugurating IABEE Office			
1-6 Submitting to BAN-PT the document for establishment of IABEE.			
1-7 Training key personnel (executives and committee members) and sectretariat staff in Japan and in Indonesia			
2-1 Establishing a homepage for publicizing the documents of accreditation crteria and of evaluation of education programs. Setting up a database for evaluation related dossiers.			
2-2 Drawing up accreditation criteria in English.			
2-3 Translating the accreditation criteria into Indonesian language and publicizing on homepage.			
2-4 Drawing up documents relating to evaluation (R&P, guideline) in English.			
2-5 Translating the documents relating to evaluation into Indonesian language and publicizing on homepage.			
2-6 Organizing training courses for evaluator trainers in Japan.			
2-7 Organizing training courses for evaluator in Indonesia.			
3-1 Organizing advocacy seminars for educational institutions on accreditation for engineering education based on outcome evaluation.			
3-2 Providing educational institutions with consulting services for preparation of accreditation.			
3-3 Implementing some pilot evaluations to test the appropriateness of accreditation criteria and R&P of evaluation.			
3-4 Revising the documents relating to accreditation and evaluation if necessary			
3-5 Implementing evaluations for real accreditations.			
4-1 Attending IEA meetings for updating information and lobbying towards provisinal membership.			
4-2 Submitting to the Washington Accord a document requesting for the provisional status.			

Engineering education*: Engineering education at Bachelor level

Project Monitoring Sheet I （Revision of Project Design Matrix）

Project Title: Project for the Establishment of Indonesia Accreditation Board for Engineering Education (IABEE) Version 2

Implementing Agency:Ministry of Education and Culture (MOEC) Dated June 24, 2015

Target Group: (Direct) General Assembly members (profesional engineerig societies), Board directors, Committee members, Secretsariat staff, evaluators,

(Indirect) Faculty and graduates of accredited enginnering education programs

Period of Project: November 2014 to October 2019 (5years)

Project Site:Jakarta and the whole country

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumption	Achievement	Remarks
Overall Goal					
Engineering education* provided by universities and institutes in Indonesia are changed from input based teaching to outcome based learning, responding to the needs of the society. The level of the engineering education is recognized by the international society as substantially equivalent to that of the countries of the Washington Accord signatories.	・Among 2,371 engineering education programs provided by public and private universities and instituites, 240 programs (10%) are accredited by IABEE. ・IABEE joins the Washington Accord as a signatiry.	・IABEE Database ・Y/N	Indonesian government's policy on Engineering Education does not change drastically.	・The Government requests IABEE to take care of not only international voluntary accreditation but also national mandatory accreditation of study programs of D and S. ・3 IABEE Committees have been discussing how to set up comprehensive	The total number of study programs will be more than 4,000.
Project Purpose					
An accreditation system is established to change engineering education* from input based teaching to outcome based learning, and IABEE becomes a provisional member of the Washington Accord.	・Among 2,371 engineering education programs provided by public and private universities and instituites, 25 programs (1%) are accredited by IABEE. ・IABEE is accepted as a provisional member of the Washington Accord.	・IABEE Database ・Y/N	Indonesian government's policy on Engineering Education does not change drastically.	Ditto	
Outputs					
1. IABEE is established.	・The establishment of IABEE is approved by the Ministry of Education and Culture. ・Human resources, infrastructure and financial resources required for the functioning of IABEE are provided.	・Y/N ・IABEE Organization Chart, Financial Statement	MOEC decree for instrument for evaluation of LAM is effectuated in appropriate timing.	・Started preparing a document for submission for the establishment of IABEE as a LAM-PS with a target date of the end of August 2015. ・2 Secretariat staff were recruited.	・Negotiation with PII on how to establish IABEE is underway.
2. The accreditation documents are developped, and evaluators are trained.	・4 documents relating to accreditation criteria are developped in English and Indonesian languages. ・8 documentrs relating to evaluation are developped in English and Indonesian languages. ・200 evaluators for evaluation of engineering education programs are trained.	・IABEE Database		・Common Criteria and the Criteria Guide have been been established in English and Indonesian languages. ・7 IABEE peronnel were trained in February 2015 in Japan. 4 IABEE personnel were trained at ABET Program Evaluator Candidate Training in May 2015 in USA. ・Basic design of Web-based program evaluation system	Claud will be used instead of having own server.

3. Some education programs are accredited.	25 education programs are accredited including pilot accreditations.	・IABEE Database		A study program was evaluated at a pilot basis to check the appropriateness of IABEE Common Criteria in draft at the time of end of 2014.	
4. IABEE's Request for provisional status is submitted to the Washington Accord.	The Washington Accord approves the provisional status of IABEE.	・Y/N			

Activities	Inputs		Pre-Conditions
	The Japanese Side	**The Indonesian Side**	
1-1 Identifying IABEE General Assembly members and Board members. Involving engineering societies as major players of IABEE activities.	a) Dispatch of Expert - Chief Advisor/Organization Management - Accreditation documents development - Advocacy, Training and Consultation - Program evaluation Website and databese development b) Short-termTraining in Japan and third countries c) Equipment - Website and database with necessary software and servers **In case of importation, the equioment will become the property of the government of Indonesia upon being delivered C.I.F. (cost, insurance and freight) to the Indonesian authorities concerned at the ports and/or airports of disembarkation.* d) A portion of implementation cost - Cost for experts' daily activities - Cost for pilot international evaluation	a) Personnel assignment - MOEC counterpart personnel - IABEE key personnel and secretariat staff b) Facility - Suitable office space with necessary furniture and equipment for JICA experts -Suitable office space with necessary furniture and equipment for IABEE c) Equipment - Hosting and maintenance of website and database - Expenses necessary for transportation within Indonesia of the equipment provided by JICA as well as for the installation, operation and maintenance d) A portion of implementation cost - Cost for holding Committee meetings - Cost for holding Seminars - Cost for holding evaluator trainings - Cost for IEA meetings - Other Initial and running cost of IABEE	Necessary budge for the project implementation is secured.
1-2 Drawing up and reviewing midterm activity plan and financial plan of IABEE.			**<Issues and countermesures>**
1-3 Drawing up the Charter of IABEE.			・C/P provided all necessary budget for committee meetings, seminars and pilot evaluation held in Indonesia as well as the cost for 2 participants in IEA meeting. ・Claud will be used instead of having own server.
1-4 Recruting sectretariat staff			
1-5 Inaugurating IABEE Office			
1-6 Submitting to BAN-PT the document for establishment of IABEE.			
1-7 Training key personnel (executives and committee members) and sectretariat staff in Japan and in Indonesia			
2-1 Establishing a homepage for publicizing the documents of accreditation crteria and of evaluation of education programs. Setting up a database for evaluation related dossiers.			
2-2 Drawing up accreditation criteria in English.			
2-3 Translating the accreditation criteria into Indonesian language and publicizing on homepage.			
2-4 Drawing up documents relating to evaluation (R&P, guideline) in English.			
2-5 Translating the documents relating to evaluation into Indonesian language and publicizing on homepage.			
2-6 Organizing training courses for evaluator trainers in Japan.			
2-7 Organizing training courses for evaluator in Indonesia.			
3-1 Organizing advocacy seminars for educational institutions on accreditation for engineering education based on outcome evaluation.			
3-2 Providing educational institutions with consulting services for preparation of accreditation.			
3-3 Implementing some pilot evaluations to test the appropriateness of accreditation criteria and R&P of evaluation.			
3-4 Revising the documents relating to accreditation and evaluation if necessary			
3-5 Implementing evaluations for real accreditations.			
4-1 Attending IEA meetings for updating information and lobbying towards provisinal membership.			
4-2 Submitting to the Washington Accord a document requesting for the provisional status.			

Engineering education*: Engineering education at Bachelor level

Project Monitoring Sheet I （Revision of Project Design Matrix）

Project Title: Project for the Establishment of Indonesia Accreditation Board for Engineering Education (IABEE) Version 3

Implementing Agency:Ministry of Education and Culture (MOEC) Dated August 7, 2015

Target Group: (Direct) General Assembly members (profesional engineerig societies), Board directors, Committee members, Secretariat staff, evaluators,

(Indirect) Faculty and graduates of accredited enginnering education programs

Period of Project: November 2014 to October 2019 (5years)

Project Site:Jakarta and the whole country

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumption	Achievement	Remarks
Overall Goal					
Engineering education* provided by universities and institutes in Indonesia are changed from input based teaching to outcome based learning, responding to the needs of the society. The level of the engineering education is recognized by the international society as substantially equivalent to that of the countries of the Washington Accord signatories.	・Among 2,371 engineering education programs provided by public and private universities and instituites, 240 programs (10%) are accredited by IABEE. ・IABEE joins the Washington Accord as a signatory.	・IABEE Database ・Y/N	Indonesian government's policy on Engineering Education does not change drastically.	・The Government requests IABEE to take care of not only international voluntary accreditation but also national mandatory accreditation of study programs of D and S. ・3 IABEE Committees have been discussing how to set up comprehensive	The total number of study programs will be more than 4,000.
Project Purpose					
An accreditation system is established to change engineering education* from input based teaching to outcome based learning, and IABEE becomes a provisional member of the Washington Accord.	・Among 2,371 engineering education programs provided by public and private universities and instituites, 25 programs (1%) are accredited by IABEE. ・IABEE is accepted as a provisional member of the Washington Accord.	・IABEE Database ・Y/N	Indonesian government's policy on Engineering Education does not change drastically.	Ditto	
Outputs					
1. IABEE is established.	・The establishment of IABEE is approved by the Ministry of Education and Culture. ・Human resources, infrastructure and financial resources required for the functioning of IABEE are provided.	・Y/N ・IABEE Organization Chart, Financial Statement	MOEC decree for instrument for evaluation of LAM is effectuated in appropriate timing.	・Started preparing a document for submission for the establishment of IABEE as a LAM-PS with a target date of the end of August 2015. ・2 Secretariat staff were recruited.	・Negotiation with PII on how to establish IABEE is underway.
2. The accreditation documents are developped, and evaluators are trained.	・4 documents relating to accreditation criteria are developped in English and Indonesian languages. ・8 documentrs relating to evaluation are developped in English and Indonesian languages. ・200 evaluators for evaluation of engineering education programs are trained.	・IABEE Database		・Common Criteria and the Criteria Guide have been been established in English and Indonesian languages. ・7 IABEE peronnel were trained in February 2015 in Japan. 4 IABEE personnel were trained at ABET Program Evaluator Candidate Training in May 2015 in USA. ・Basic design of Web-based program evaluation system	Claud will be used instead of having own server.

3. Some education programs are accredited.	25 education programs are accredited including pilot accreditations.	・IABEE Database		A study program was evaluated at a pilot basis to check the appropriateness of IABEE Common Criteria in draft at the time of end of 2014.	
4. IABEE's Request for provisional status is submitted to the Washington Accord.	The Washington Accord approves the provisional status of IABEE.	・Y/N			

Activities	Inputs		Pre-Conditions
	The Japanese Side	The Indonesian Side	
1-1 Identifying IABEE General Assembly members and Board members. Involving engineering societies as major players of IABEE activities.	a) Dispatch of Expert - Chief Advisor/Organization Management - Accreditation documents development - Advocacy, Training and Consultation - Program evaluation Website and databese development b) Short-termTraining in Japan and third countries c) Equipment - Website and database with necessary software and servers **In case of importation, the equioment will become the property of the government of Indonesia upon being delivered C.I.F. (cost, insurance and freight) to the Indonesian authorities concerned at the ports and/or airports of disembarkation.* d) A portion of implementation cost - Cost for experts' daily activities - Cost for pilot international evaluation	a) Personnel assignment - MOEC counterpart personnel - IABEE key personnel and secretariat staff b) Facility - Suitable office space with necessary furniture and equipment for JICA experts -Suitable office space with necessary furniture and equipment for IABEE c) Equipment - Hosting and maintenance of website and database - Expenses necessary for transportation within Indonesia of the equipment provided by JICA as well as for the installation, operation and maintenance d) A portion of implementation cost - Cost for holding Committee meetings - Cost for holding Seminars - Cost for holding evaluator trainings - Cost for IEA meetings - Other Initial and running cost of IABEE	Necessary budge for the project implementation is secured.
1-2 Drawing up and reviewing midterm activity plan and financial plan of IABEE.			
1-3 Drawing up the Charter of IABEE.			
1-4 Recruting sectretariat staff			
1-5 Inaugurating IABEE Office			
1-6 Submitting to BAN-PT the document for establishment of IABEE.			**<Issues and countermesures>**
1-7 Training key personnel (executives and committee members) and sectretariat staff in Japan and in Indonesia			・C/P provided all necessary budget for committee meetings, seminars and pilot evaluation held in Indonesia as well as the cost for 2 participants in IEA meeting. ・Claud will be used instead of having own server.
2-1 Establishing a homepage for publicizing the documents of accreditation crteria and of evaluation of education programs. Setting up a database for evaluation related dossiers.			
2-2 Drawing up accreditation criteria in English.			
2-3 Translating the accreditation criteria into Indonesian language and publicizing on homepage.			
2-4 Drawing up documents relating to evaluation (R&P, guideline) in English.			
2-5 Translating the documents relating to evaluation into Indonesian language and publicizing on homepage.			
2-6 Organizing training courses for evaluator trainers in Japan.			
2-7 Organizing training courses for evaluator in Indonesia.			
3-1 Organizing advocacy seminars for educational institutions on accreditation for engineering education based on outcome evaluation.			
3-2 Providing educational institutions with consulting services for preparation of accreditation.			
3-3 Implementing some pilot evaluations to test the appropriateness of accreditation criteria and R&P of evaluation.			
3-4 Revising the documents relating to accreditation and evaluation if necessary			
3-5 Implementing evaluations for real accreditations.			
4-1 Attending IEA meetings for updating information and lobbying towards provisinal membership.			
4-2 Submitting to the Washington Accord a document requesting for the provisional status.			

Engineering education*: Engineering education at Bachelor level

Project Monitoring Sheet I （Revision of Project Design Matrix）

Project Title: Project for the Establishment of Indonesian Accreditation Board for Engineering Education (IABEE) Version 4

Implementing Agency: Ministry of Research, Technology and Higher Education Dated 20 May 2016

Target Group: (Direct) General Assembly members (profesional engineerig societies), Board directors, Committee members, Secretariat staff, evaluators,

(Indirect) Faculty and graduates of accredited enginnering education programs

Period of Project: November 2014 to October 2019 (5years)

Project Site: Jakarta and the whole country

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumption	Achievement	Remarks
Overall Goal					
Engineering education* provided by universities and institutes in Indonesia are changed from input based teaching to outcome based learning, responding to the needs of the society. The level of the engineering education is recognized by the international society as substantially equivalent to that of the countries of the Washington Accord signatories.	・Among 2,371 engineering education programs (S1) provided by public and private universities and instituites, 240 programs (10%) are accredited by IABEE. ・IABEE joins the Washington Accord as a signatory.	・IABEE homepage ・Y/N	Indonesian government's policy on Engineering Education does not change drastically.		
Project Purpose					
An accreditation system is established to change engineering education* from input based teaching to outcome based learning, and IABEE becomes a provisional member of the Washington Accord.	・Among 2,371 engineering education programs provided by public and private universities and instituites, 25 programs (1%) are accredited by IABEE at international level. ・IABEE is accepted as a provisional member of the Washington Accord.	・IABEE homepage ・Y/N	Indonesian government's policy on Engineering Education does not change drastically.		
Outputs					
1. IABEE is established.	・The establishment of IABEE is approved by the Ministry of Reasearch, Technology and Higher Education. ・Human resources, infrastructure and financial resources required for the functioning of IABEE are provided.	・Y/N ・IABEE Organization Chart, Financial Statement	C/P decides where and how to establish IABEE	・IABEE has been established with in PII ・2 Secretariat staff were recruited.	・Negotiation with PII on how to establish IABEE is underway.
2. The accreditation documents are developped, and evaluators are trained.	・4 documents relating to accreditation criteria are developped in English and Indonesian languages. ・8 documentrs relating to evaluation are developped in English and Indonesian languages. ・200 evaluators for evaluation of engineering education programs are trained.	・IABEE homepage		・Common Criteria and Criteria Guide have been publicized at PII homepage ・Discipline Criteria have been drafted ・Evaluator Trainer Training in Japan, USA and China as well as in Indonesia	
3. Some education programs are accredited.	25 education programs are accredited including pilot accreditations.	・IABEE homepage			
4. IABEE's Request for provisional status is submitted to the Washington Accord.	The Washington Accord approves the provisional status of IABEE.	・Y/N			

Activities	Inputs		Pre-Conditions
	The Japanese Side	**The Indonesian Side**	
1-1 Identifying IABEE General Assembly members and Board members. Involving engineering societies as major players of IABEE activities.	a) Dispatch of Expert - Chief Advisor/Organization Management - Accreditation documents development - Advocacy, Training and Consultation - Program evaluation - Website and databese development b) Short-termTraining in Japan and third countries c) Equipment - Website and database with necessary software and servers **In case of importation, the equioment will become the property of the government of Indonesia upon being delivered C.I.F. (cost, insurance and freight) to the Indonesian authorities concerned at the ports and/or airports of disembarkation.* d) A portion of implementation cost - Cost for experts' daily activities - Cost for pilot international evaluation	a) Personnel assignment - C/P personnel - IABEE key personnel and secretariat staff b) Facility - Suitable office space with necessary furniture and equipment for JICA experts -Suitable office space with necessary furniture and equipment for IABEE c) Equipment - Hosting and maintenance of website and database - Expenses necessary for transportation within Indonesia of the equipment provided by JICA as well as for the installation, operation and maintenance d) A portion of implementation cost - Cost for holding Committee meetings - Cost for holding Seminars - Cost for holding evaluator trainings - Cost for IEA/Washington Accord meetings and Seoul Accord meetings - Other initial and running cost of IABEE including salaries of IABEE secretariat staff	Necessary budge for the project implementation is secured. **<Issues and countermesures>** ・C/P provides all necessary budget for committee meetings, seminars and pilot evaluation held in Indonesia as well as the cost for 2 participants in IEA meeting. ・Claud will be used instead of having own server.
1-2 Drawing up and reviewing midterm activity plan and financial plan of IABEE.			
1-3 Drawing up the Charter of IABEE.			
1-4 Recruting sectretariat staff			
1-5 Inaugurating IABEE Office			
1-6 Submitting to BAN-PT the document for establishment of IABEE.			
1-7 Training key personnel (executives and committee members) and sectretariat staff in Japan and in Indonesia			
2-1 Establishing a homepage for publicizing the documents of accreditation crteria and of evaluation of education programs. Setting up a database for evaluation related dossiers.			
2-2 Drawing up accreditation criteria in English.			
2-3 Translating the accreditation criteria into Indonesian language and publicizing on homepage.			
2-4 Drawing up documents relating to evaluation (R&P, guideline) in English.			
2-5 Translating the documents relating to evaluation into Indonesian language and publicizing on homepage.			
2-6 Organizing training courses for evaluator trainers in Japan.			
2-7 Organizing training courses for evaluator in Indonesia.			
3-1 Organizing advocacy seminars for educational institutions on accreditation for engineering education based on outcome evaluation.			
3-2 Providing educational institutions with consulting services for preparation of accreditation.			
3-3 Implementing some pilot evaluations to test the appropriateness of accreditation criteria and R&P of evaluation.			
3-4 Revising the documents relating to accreditation and evaluation if necessary			
3-5 Implementing evaluations for real accreditations.			
4-1 Attending IEA meetings for updating information and lobbying towards provisinal membership.			
4-2 Submitting to the Washington Accord a document requesting for the provisional status.			

Engineering education*: Engineering education at Bachelor level

Project Monitoring Sheet I （Revision of Project Design Matrix）

Project Title: Project for the Establishment of Indonesian Accreditation Board for Engineering Education (IABEE) Version 5

Implementing Agency: Ministry of Research, Technology and Higher Education Dated 25 October 2016

Target Group: (Direct) General Assembly members (profesional engineerig societies), Board directors, Committee members, Secretariat staff, evaluators,

(Indirect) Faculty and graduates of accredited enginnering education programs

Period of Project: November 2014 to October 2019 (5years)

Project Site: Jakarta and the whole country

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumption	Achievement	Remarks
Overall Goal					
Engineering education* provided by universities and institutes in Indonesia are changed from input based teaching to outcome based learning, responding to the needs of the society. The level of the engineering education is recognized by the international society as substantially equivalent to that of the countries of the Washington Accord signatories.	・Among 2,371 engineering education programs (S1) provided by public and private universities and instituites, 240 programs (10%) are accredited by IABEE. ・IABEE joins the Washington Accord as a signatory.	・IABEE homepage ・Y/N	Indonesian government's policy on Engineering Education does not change drastically.		
Project Purpose					
An accreditation system is established to change engineering education* from input based teaching to outcome based learning, and IABEE becomes a provisional member of the Washington Accord.	・Among 2,371 engineering education programs provided by public and private universities and instituites, 25 programs (1%) are accredited by IABEE at international level. ・IABEE is accepted as a provisional member of the Washington Accord.	・IABEE homepage ・Y/N	Indonesian government's policy on Engineering Education does not change drastically.		
Outputs					
1. IABEE is established.	・The establishment of IABEE is approved by the Ministry of Reasearch, Technology and Higher Education. ・Human resources, infrastructure and financial resources required for the functioning of IABEE are provided.	・Y/N ・IABEE Organization Chart, Financial Statement	C/P decides where and how to establish IABEE	・MOU was signed by DG Belmawa and President of PII on the occasion of PII Annual Conference in October 2016 ・2 Secretariat staff were trained (OJT) at JABEE	
2. The accreditation documents are developped, and evaluators are trained.	・4 documents relating to accreditation criteria are developped in English and Indonesian languages. ・8 documentrs relating to evaluation are developped in English and Indonesian languages. ・200 evaluators for evaluation of engineering education programs are trained.	・IABEE homepage		8 WGs of Evaluation & Accrditation Commettee (EAC) have been developing eveluation procedures and documents.	

3. Some education programs are accredited.	25 education programs are accredited including pilot accreditations.	・IABEE homepage		Two study programs agreed to be evaluated as pilot accreditations.	
4. IABEE's Request for provisional status is submitted to the Washington Accord.	The Washington Accord approves the provisional status of IABEE.	・Y/N			

Activities	Inputs		Pre-Conditions
	The Japanese Side	**The Indonesian Side**	
1-1 Identifying IABEE General Assembly members and Board members. Involving engineering societies as major players of IABEE activities.	a) Dispatch of Expert - Chief Advisor/Organization Management - Accreditation documents development - Advocacy, Training and Consultation - Program evaluation - Website and databese development b) Short-termTraining in Japan and third countries c) Equipment - Website and database with necessary software and servers **In case of importation, the equioment will become the property of the government of Indonesia upon being delivered C.I.F. (cost, insurance and freight) to the Indonesian authorities concerned at the ports and/or airports of disembarkation.* d) A portion of implementation cost - Cost for experts' daily activities - Cost for pilot international evaluation	a) Personnel assignment - C/P personnel - IABEE key personnel and secretariat staff b) Facility - Suitable office space with necessary furniture and equipment for JICA experts -Suitable office space with necessary furniture and equipment for IABEE c) Equipment - Hosting and maintenance of website and database - Expenses necessary for transportation within Indonesia of the equipment provided by JICA as well as for the installation, operation and maintenance d) A portion of implementation cost - Cost for holding Committee meetings - Cost for holding Seminars - Cost for holding evaluator trainings - Cost for IEA/Washington Accord meetings and Seoul Accord meetings - Other initial and running cost of IABEE - Salaries of IABEE secretyrait staff	Necessary budge for the project implementation is secured.
1-2 Drawing up and reviewing midterm activity plan and financial plan of IABEE.			
1-3 Drawing up the Charter of IABEE.			
1-4 Recruting sectretariat staff			
1-5 Inaugurating IABEE Office			
1-6 Submitting to BAN-PT the document for establishment of IABEE.			**<Issues and countermesures>**
1-7 Training key personnel (executives and committee members) and sectretariat staff in Japan and in Indonesia			・C/P provides all necessary budget for committee meetings, seminars and pilot evaluation held in Indonesia as well as the cost for 2 participants in IEA meeting. ・Claud will be used instead of having own server.
2-1 Establishing a homepage for publicizing the documents of accreditation crteria and of evaluation of education programs. Setting up a database for evaluation related dossiers.			
2-2 Drawing up accreditation criteria in English.			
2-3 Translating the accreditation criteria into Indonesian language and publicizing on homepage.			
2-4 Drawing up documents relating to evaluation (R&P, guideline) in English.			
2-5 Translating the documents relating to evaluation into Indonesian language and publicizing on homepage.			
2-6 Organizing training courses for evaluator trainers in Japan.			
2-7 Organizing training courses for evaluator in Indonesia.			
3-1 Organizing advocacy seminars for educational institutions on accreditation for engineering education based on outcome evaluation.			
3-2 Providing educational institutions with consulting services for preparation of accreditation.			
3-3 Implementing some pilot evaluations to test the appropriateness of accreditation criteria and R&P of evaluation.			
3-4 Revising the documents relating to accreditation and evaluation if necessary			
3-5 Implementing evaluations for real accreditations.			
4-1 Attending IEA meetings for updating information and lobbying towards provisinal membership.			
4-2 Submitting to the Washington Accord a document requesting for the provisional status.			

Engineering education*: Engineering education at Bachelor level

Project Monitoring Sheet I （Revision of Project Design Matrix）

Project Title: Project for the Establishment of Indonesian Accreditation Board for Engineering Education (IABEE) Version 6

Implementing Agency: Ministry of Research, Technology and Higher Education Dated 12 April 2017

Target Group: (Direct) General Assembly members (profesional engineerig societies), Board directors, Committee members, Secretariat staff, evaluators,

(Indirect) Faculty and graduates of accredited enginnering education programs

Period of Project: November 2014 to October 2019 (5years)

Project Site: Jakarta and the whole country

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumption	Achievement	Remarks
Overall Goal					
Engineering education* provided by universities and institutes in Indonesia are changed from input based teaching to outcome based learning, responding to the needs of the society. The level of the engineering education is recognized by the international society as substantially equivalent to that of the countries of the Washington Accord signatories.	・Among 2,371 engineering education programs (S1) provided by public and private universities and instituites, 240 programs (10%) are accredited by IABEE. ・IABEE joins the Washington Accord as a signatory.	・IABEE homepage ・Y/N	Indonesian government's policy on Engineering Education does not change drastically.		
Project Purpose					
An accreditation system is established to change engineering education* from input based teaching to outcome based learning, and IABEE becomes a provisional member of the Washington Accord.	・Among 2,371 engineering education programs provided by public and private universities and instituites, 25 programs (1%) are accredited by IABEE at international level. ・IABEE is accepted as a provisional member of the Washington Accord.	・IABEE homepage ・Y/N	Indonesian government's policy on Engineering Education does not change drastically.		
Outputs					
1. IABEE is established.	・The establishment of IABEE is approved by the Ministry of Reasearch, Technology and Higher Education. ・Human resources, infrastructure and financial resources required for the functioning of IABEE are provided.	・Y/N ・IABEE Organization Chart, Financial Statement	C/P decides where and how to establish IABEE	・MOU was signed by DG Belmawa and President of PII on the occasion of PII Annual Conference in October 2016 ・2 Secretariat staff were trained (OJT) at JABEE	
2. The accreditation documents are developped, and evaluators are trained.	・4 documents relating to accreditation criteria are developped in English and Indonesian languages. ・8 documentrs relating to evaluation are developped in English and Indonesian languages. ・200 evaluators for evaluation of engineering education programs are trained.	・IABEE homepage		8 WGs of Evaluation & Accrditation Commettee (EAC) have been developing eveluation procedures and documents.	

3. Some education programs are accredited.	25 education programs are accredited including pilot accreditations.	・IABEE homepage		・Two study programs were evaluated by JABEE as pilot accreditations ・2 IABEE evaluations to Mechanical and Biosystem Engineering of IPB and the Civil Engineering of UI have been made	
4. IABEE's Request for provisional status is submitted to the Washington Accord.	The Washington Accord approves the provisional status of IABEE.	・Y/N			

Activities	Inputs		Pre-Conditions
	The Japanese Side	The Indonesian Side	
1-1 Identifying IABEE General Assembly members and Board members. Involving engineering societies as major players of IABEE activities.	a) Dispatch of Expert - Chief Advisor/Organization Management - Accreditation documents development - Advocacy, Training and Consultation - Program evaluation - Website and databese development b) Short-termTraining in Japan and third countries c) Equipment - Website and database with necessary software and servers **In case of importation, the equioment will become the property of the government of Indonesia upon being delivered C.I.F. (cost, insurance and freight) to the Indonesian authorities concerned at the ports and/or airports of disembarkation.* d) A portion of implementation cost - Cost for experts' daily activities - Cost for pilot international evaluation	a) Personnel assignment - C/P personnel - IABEE key personnel and secretariat staff b) Facility - Suitable office space with necessary furniture and equipment for JICA experts -Suitable office space with necessary furniture and equipment for IABEE c) Equipment - Hosting and maintenance of website and database - Expenses necessary for transportation within Indonesia of the equipment provided by JICA as well as for the installation, operation and maintenance d) A portion of implementation cost - Cost for holding Committee meetings in particular EAC and 8 WGs - Cost for holding Seminars - Cost for holding evaluator trainings - Cost for IEA/Washington Accord meetings and Seoul Accord meetings - Other initial and running cost of IABEE - Salaries of IABEE secretyrait staff	Necessary budge for the project implementation is secured.
1-2 Drawing up and reviewing midterm activity plan and financial plan of IABEE.			
1-3 Drawing up the Charter of IABEE.			
1-4 Recruting sectretariat staff			
1-5 Inaugurating IABEE Office			
1-6 Submitting to BAN-PT the document for establishment of IABEE.			**<Issues and countermesures>**
1-7 Training key personnel (executives and committee members) and sectretariat staff in Japan and in Indonesia			・C/P provides all necessary budget for committee meetings, seminars and pilot evaluation held in Indonesia as well as the cost for 2 participants in IEA meeting. ・Claud will be used instead of having own server.
2-1 Establishing a homepage for publicizing the documents of accreditation crteria and of evaluation of education programs. Setting up a database for evaluation related dossiers.			
2-2 Drawing up accreditation criteria in English.			
2-3 Translating the accreditation criteria into Indonesian language and publicizing on homepage.			
2-4 Drawing up documents relating to evaluation (R&P, guideline) in English.			
2-5 Translating the documents relating to evaluation into Indonesian language and publicizing on homepage.			
2-6 Organizing training courses for evaluator trainers in Japan.			
2-7 Organizing training courses for evaluator in Indonesia.			
3-1 Organizing advocacy seminars for educational institutions on accreditation for engineering education based on outcome evaluation.			
3-2 Providing educational institutions with consulting services for preparation of accreditation.			
3-3 Implementing some pilot evaluations to test the appropriateness of accreditation criteria and R&P of evaluation.			
3-4 Revising the documents relating to accreditation and evaluation if necessary			
3-5 Implementing evaluations for real accreditations.			
4-1 Attending IEA meetings for updating information and lobbying towards provisinal membership.			
4-2 Submitting to the Washington Accord a document requesting for the provisional status.			

Engineering education*: Engineering education at Bachelor level

Project Monitoring Sheet I （Revision of Project Design Matrix）

Project Title: Project for the Establishment of Indonesian Accreditation Board for Engineering Education (IABEE) Version 7

Implementing Agency: Ministry of Research, Technology and Higher Education Dated 29 January 2018

Target Group: (Direct) General Assembly members (profesional engineerig societies), Board directors, Committee members, Secretariat staff, evaluators,

(Indirect) Faculty and graduates of accredited enginnering education programs

Period of Project: November 2014 to October 2019 (5years)

Project Site: Jakarta and the whole country

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumption	Achievement	Remarks
Overall Goal					
Engineering education* provided by universities and institutes in Indonesia are changed from input based teaching to outcome based learning, responding to the needs of the society. The level of the engineering education is recognized by the international society as substantially equivalent to that of the countries of the Washington Accord signatories.	・Among 2,371 engineering education programs (S1) provided by public and private universities and instituites, 240 programs (10%) are accredited by IABEE. ・IABEE joins the Washington Accord as a signatory.	・IABEE homepage ・Y/N	Indonesian government's policy on Engineering Education does not change drastically.		
Project Purpose					
An accreditation system is established to change engineering education* from input based teaching to outcome based learning, and IABEE becomes a provisional member of the Washington Accord.	・Among 2,371 engineering education programs provided by public and private universities and instituites, 25 programs (1%) are accredited by IABEE at international level. ・IABEE is accepted as a provisional member of the Washington Accord.	・IABEE homepage ・Y/N	Indonesian government's policy on Engineering Education does not change drastically.		
Outputs					
1. IABEE is established.	・The establishment of IABEE is approved by the Ministry of Reasearch, Technology and Higher Education. ・Human resources, infrastructure and financial resources required for the functioning of IABEE are provided.	・Y/N ・IABEE Organization Chart, Financial Statement	C/P decides where and how to establish IABEE	・The Secretary-General of IABEE was hired (November 2017). ・The EXC decided to hold IABEE Inauguration and International Seminar in Jakarta on 13 March 2018 and formed the Organizing Committee.	

2. The accreditation documents are developped, and evaluators are trained.	・4 documents relating to accreditation criteria are developped in English and Indonesian languages. ・8 documentrs relating to evaluation are developped in English and Indonesian languages. ・200 evaluators for evaluation of engineering education programs are trained.	・IABEE homepage		・ Digital evaluation system was extended to the provisional accreditation and was internally tested by WGs1, 2 and 7 of EAC. ・ 8 WGs established in EAC have been developing different documents relating to evaluation procedure and material evaluator training including online module training materials. ・6 EAC members participated in ABET Program Evaluator Candidate Training in April and May 2017. ・13 evaluator candidates participated in JICA/JABEE Evaluator Trainer Training held in Japan in October 2017. ・Evaluator Trainer Training was held in Jakarta in September 2017.	
3. Some education programs are accredited.	25 education programs are accredited including pilot accreditations.	・IABEE homepage		・7 socialization seminars were held in 7 cities (Surabaya, Makassar, Batam, Bandung, Jakarta, Yogyakarta and Medan).	
4. IABEE's Request for provisional status is submitted to the Washington Accord.	The Washington Accord approves the provisional status of IABEE.	・Y/N		・The Deputy Chair of EXC and the Chair of International Committee attended the 2017 IEA General Meeting held in Anchorage in USA in June 2017.	

Activities	Inputs		Pre-Conditions
	The Japanese Side	The Indonesian Side	
1-1 Identifying IABEE General Assembly members and Board members. Involving engineering societies as major players of IABEE activities.	a) Dispatch of Expert - Chief Advisor/Organization Management - Accreditation documents development - Advocacy, Training and Consultation - Program evaluation - Website and databese development b) Short-termTraining in Japan and third countries c) Equipment - Website and database with necessary software and servers **In case of importation, the equioment will become the property of the government of Indonesia upon being delivered C.I.F. (cost, insurance and freight) to the Indonesian authorities concerned at the ports and/or airports of disembarkation.* d) A portion of implementation cost - Cost for experts' daily activities - Cost for pilot international evaluation	a) Personnel assignment - C/P personnel - IABEE key personnel and secretariat staff b) Facility - Suitable office space with necessary furniture and equipment for JICA experts -Suitable office space with necessary furniture and equipment for IABEE c) A portion of implementation cost - Cost for holding Committee meetings in particular EAC and 8 WGs - Cost for holding Seminars - Cost for holding evaluator trainings	Necessary budge for the project implementation is secured. **<Issues and countermesures>**
1-2 Drawing up and reviewing midterm activity plan and financial plan of IABEE.			
1-3 Drawing up the Charter of IABEE.			
1-4 Recruting sectretariat staff			
1-5 Inaugurating IABEE Office			
1-6 Submitting to BAN-PT the document for establishment of IABEE.			
1-7 Training key personnel (executives and committee members) and sectretariat staff in Japan and in Indonesia			
2-1 Establishing a homepage for publicizing the documents of accreditation crteria and of evaluation of education programs. Setting up a database for evaluation related dossiers.			
2-2 Drawing up accreditation criteria in English.			
2-3 Translating the accreditation criteria into Indonesian language and publicizing on homepage.			
2-4 Drawing up documents relating to evaluation (R&P, guideline) in English.			
2-5 Translating the documents relating to evaluation into Indonesian language and publicizing on homepage.			
2-6 Organizing training courses for evaluator trainers in Japan.			
2-7 Organizing training courses for evaluator in Indonesia.			
3-1 Organizing advocacy seminars for educational institutions on accreditation for engineering education based on outcome evaluation.			
3-2 Providing educational institutions with consulting services for preparation of accreditation.			
3-3 Implementing some pilot evaluations to test the appropriateness of accreditation criteria and R&P of evaluation.			
3-4 Revising the documents relating to accreditation and evaluation if necessary			
3-5 Implementing evaluations for real accreditations.			
4-1 Attending IEA meetings for updating information and lobbying towards provisinal membership.			
4-2 Submitting to the Washington Accord a document requesting for the provisional status.			

Engineering education*: Engineering education at Bachelor level

Project Monitoring Sheet I （Revision of Project Design Matrix）

Project Title: Project for the Establishment of Indonesian Accreditation Board for Engineering Education (IABEE) Version 8

Implementing Agency: Ministry of Research, Technology and Higher Education Dated 30 March 2018

Target Group: (Direct) General Assembly members (profesional engineerig societies), Board directors, Committee members, Secretariat staff, evaluators,

(Indirect) Faculty and graduates of accredited enginnering education programs

Period of Project: November 2014 to October 2019 (5years)

Project Site: Jakarta and the whole country

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumption	Achievement	Remarks
Overall Goal					
Engineering education* provided by universities and institutes in Indonesia are changed from input based teaching to outcome based learning, responding to the needs of the society. The level of the engineering education is recognized by the international society as substantially equivalent to that of the countries of the Washington Accord signatories.	・Among 2,371 engineering education programs (S1) provided by public and private universities and instituites, 240 programs (10%) are accredited by IABEE. ・IABEE joins the Washington Accord as a signatory.	・IABEE homepage ・Y/N	Indonesian government's policy on Engineering Education does not change drastically.		
Project Purpose					
An accreditation system is established to change engineering education* from input based teaching to outcome based learning, and IABEE becomes a provisional member of the Washington Accord.	・Among 2,371 engineering education programs provided by public and private universities and instituites, 25 programs (1%) are accredited by IABEE at international level. ・IABEE is accepted as a provisional member of the Washington Accord.	・IABEE homepage ・Y/N	Indonesian government's policy on Engineering Education does not change drastically.	・5 programs were accredited. ・ 6 programs were accredited as provisional accreditations.	
Outputs					
1. IABEE is established.	・The establishment of IABEE is approved by the Ministry of Reasearch, Technology and Higher Education. ・Human resources, infrastructure and financial resources required for the functioning of IABEE are provided.	・Y/N ・IABEE Organization Chart, Financial Statement	C/P decides where and how to establish IABEE	・ The Secretary-General of IABEE was hired (November 2017). ・ IABEE Inauguration and International Seminar were held in Jakarta on 13 March 2018.	

2. The accreditation documents are developped, and evaluators are trained.	・4 documents relating to accreditation criteria are developped in English and Indonesian languages. ・8 documentrs relating to evaluation are developped in English and Indonesian languages. ・200 evaluators for evaluation of engineering education programs are trained.	・IABEE homepage		・ Digital evaluation system was extended to the provisional accreditation and was internally tested by WGs1, 2 and 7 of EAC. ・ 8 WGs established in EAC have been developing different documents relating to evaluation procedure and material evaluator training including online module training materials. ・ 6 EAC members participated in ABET Program Evaluator Candidate Training in April and May 2017. ・ 13 evaluator candidates participated in JICA/JABEE Evaluator Trainer Training held in Japan in October 2017. ・ Evaluator Trainer Training was held in Jakarta in September 2017. ・ Evaluator Training was held in Jakarta	
3. Some education programs are accredited.	25 education programs are accredited including pilot accreditations.	・IABEE homepage		cities (Surabaya, Makassar, Batam, Bandung, Jakarta, Yogyakarta and Medan). ・ In 2016, 2 programs were accredited. ・ In 2017, 3 programs were accredited. ・ In 2017, 6 programs were accredited as provisional accreditations.	
4. IABEE's Request for provisional status is submitted to the Washington Accord.	The Washington Accord approves the provisional status of IABEE.	・Y/N		・ The Deputy Chair of EXC and the Chair of International Committee attended the 2017 IEA General Meeting held in Anchorage in USA in June 2017.	

Activities	Inputs		Pre-Conditions
	The Japanese Side	The Indonesian Side	
1-1 Identifying IABEE General Assembly members and Board members. Involving engineering societies as major players of IABEE activities.	a) Dispatch of Expert - Chief Advisor/Organization Management - Accreditation documents development - Advocacy, Training and Consultation - Program evaluation - Website and databese development b) Short-termTraining in Japan and third countries c) Equipment - Website and database with necessary software and servers **In case of importation, the equioment will become the property of the government of Indonesia upon being delivered C.I.F. (cost, insurance and freight) to the Indonesian authorities concerned at the ports and/or airports of disembarkation.* d) A portion of implementation cost - Cost for experts' daily activities - Cost for pilot international evaluation	a) Personnel assignment - C/P personnel - IABEE key personnel and secretariat staff b) Facility - Suitable office space with necessary furniture and equipment for JICA experts -Suitable office space with necessary furniture and equipment for IABEE c) A portion of implementation cost - Cost for holding Committee meetings in particular EAC and 8 WGs - Cost for holding Seminars - Cost for holding evaluator trainings	Necessary budge for the project implementation is secured. **<Issues and countermesures>**
1-2 Drawing up and reviewing midterm activity plan and financial plan of IABEE.			
1-3 Drawing up the Charter of IABEE.			
1-4 Recruting sectretariat staff			
1-5 Inaugurating IABEE Office			
1-6 Submitting to BAN-PT the document for establishment of IABEE.			
1-7 Training key personnel (executives and committee members) and sectretariat staff in Japan and in Indonesia			
2-1 Establishing a homepage for publicizing the documents of accreditation crteria and of evaluation of education programs. Setting up a database for evaluation related dossiers.			
2-2 Drawing up accreditation criteria in English.			
2-3 Translating the accreditation criteria into Indonesian language and publicizing on homepage.			
2-4 Drawing up documents relating to evaluation (R&P, guideline) in English.			
2-5 Translating the documents relating to evaluation into Indonesian language and publicizing on homepage.			
2-6 Organizing training courses for evaluator trainers in Japan.			
2-7 Organizing training courses for evaluator in Indonesia.			
3-1 Organizing advocacy seminars for educational institutions on accreditation for engineering education based on outcome evaluation.			
3-2 Providing educational institutions with consulting services for preparation of accreditation.			
3-3 Implementing some pilot evaluations to test the appropriateness of accreditation criteria and R&P of evaluation.			
3-4 Revising the documents relating to accreditation and evaluation if necessary			
3-5 Implementing evaluations for real accreditations.			
4-1 Attending IEA meetings for updating information and lobbying towards provisinal membership.			
4-2 Submitting to the Washington Accord a document requesting for the provisional status.			

Engineering education*: Engineering education at Bachelor level

Project Monitoring Sheet I （Revision of Project Design Matrix）

Project Title: Project for the Establishment of Indonesian Accreditation Board for Engineering Education (IABEE) Version 9

Implementing Agency: Ministry of Research, Technology and Higher Education Dated 11 October 2018

Target Group: (Direct) General Assembly members (profesional engineerig societies), Board directors, Committee members, Secretariat staff, evaluators,

(Indirect) Faculty and graduates of accredited enginnering education programs

Period of Project: November 2014 to October 2019 (5years)

Project Site: Jakarta and the whole country

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumption	Achievement	Remarks
Overall Goal					
Engineering education* provided by universities and institutes in Indonesia are changed from input based teaching to outcome based learning, responding to the needs of the society. The level of the engineering education is recognized by the international society as substantially equivalent to that of the countries of the Washington Accord signatories.	・Among 2,371 engineering education programs (S1) provided by public and private universities and instituites, 240 programs (10%) are accredited by IABEE. ・IABEE joins the Washington Accord as a signatory.	・IABEE homepage ・Y/N	Indonesian government's policy on Engineering Education does not change drastically.		
Project Purpose					
An accreditation system is established to change engineering education* from input based teaching to outcome based learning, and IABEE becomes a provisional member of the Washington Accord.	・Among 2,371 engineering education programs provided by public and private universities and instituites, 25 programs (1%) are accredited by IABEE at international level. ・IABEE is accepted as a provisional member of the Washington Accord.	・IABEE homepage ・Y/N	Indonesian government's policy on Engineering Education does not change drastically.		
Outputs					
1. IABEE is established.	・The establishment of IABEE is approved by the Ministry of Reasearch, Technology and Higher Education. ・Human resources, infrastructure and financial resources required for the functioning of IABEE are provided.	・Y/N ・IABEE Organization Chart, Financial Statement	C/P decides where and how to establish IABEE	Due to passing away of Dr Ari (Secretary-General), the Acting Secrtary-General was hired from September to December 2018.	
2. The accreditation documents are developped, and evaluators are trained.	・4 documents relating to accreditation criteria are developped in English and Indonesian languages. ・8 documentrs relating to evaluation are developped in English and Indonesian languages. ・200 evaluators for evaluation of engineering education programs are trained.	・IABEE homepage		・ Digital evaluation system was revised. ・ 8 WGs established in EAC have been developing different documents relating to evaluation procedure and material evaluator training including online module training materials. ・ Evaluator Training was held in Bandung on in July 2018.	

3. Some education programs are accredited.	25 education programs are accredited including pilot accreditations.	・IABEE homepage		・In 2016, 2 programs were accredited. ・In 2017, 3 programs were accredited. 6 programs were accredited as provisional accreditation. ・In 2018, 28 programs for general accreditation and 22 for provisional accredtation are under evaluation.	
4. IABEE's Request for provisional status is submitted to the Washington Accord.	The Washington Accord approves the provisional status of IABEE.	・Y/N		・The Chief Advisor, the Chair of International Committee and the Secretary-General attended the 2018 IEA General Meeting held in London in June 2018. ・ABET expert observed IABEE on-site evaluation to the Chemical Engineering of UGM (October 2018).	

Activities	Inputs		Pre-Conditions
	The Japanese Side	**The Indonesian Side**	
1-1 Identifying IABEE General Assembly members and Board members. Involving engineering societies as major players of IABEE activities.	a) Dispatch of Expert - Chief Advisor/Organization Management - Accreditation documents development - Advocacy, Training and Consultation - Program evaluation - Website and databese development b) Short-termTraining in Japan and third countries c) Equipment - Website and database with necessary software and servers **In case of importation, the equioment will become the property of the government of Indonesia upon being delivered C.I.F. (cost, insurance and freight) to the Indonesian authorities concerned at the ports and/or airports of disembarkation.* d) A portion of implementation cost - Cost for experts' daily activities - Cost for pilot international evaluation	a) Personnel assignment - C/P personnel - IABEE key personnel and secretariat staff b) Facility - Suitable office space with necessary furniture and equipment for JICA experts -Suitable office space with necessary furniture and equipment for IABEE c) A portion of implementation cost - Cost for holding Committee meetings in particular EAC and 8 WGs - Cost for holding Seminars - Cost for holding evaluator trainings - Salaries of IABEE secretrait staff d) Subsidies to study programs for IABEE accreditation fee	Necessary budge for the project implementation is secured. **<Issues and countermesures>**
1-2 Drawing up and reviewing midterm activity plan and financial plan of IABEE.			
1-3 Drawing up the Charter of IABEE.			
1-4 Recruting sectretariat staff			
1-5 Inaugurating IABEE Office			
1-6 Submitting to BAN-PT the document for establishment of IABEE.			
1-7 Training key personnel (executives and committee members) and sectretariat staff in Japan and in Indonesia			
2-1 Establishing a homepage for publicizing the documents of accreditation crteria and of evaluation of education programs. Setting up a database for evaluation related dossiers.			
2-2 Drawing up accreditation criteria in English.			
2-3 Translating the accreditation criteria into Indonesian language and publicizing on homepage.			
2-4 Drawing up documents relating to evaluation (R&P, guideline) in English.			
2-5 Translating the documents relating to evaluation into Indonesian language and publicizing on homepage.			
2-6 Organizing training courses for evaluator trainers in Japan.			
2-7 Organizing training courses for evaluator in Indonesia.			
3-1 Organizing advocacy seminars for educational institutions on accreditation for engineering education based on outcome evaluation.			
3-2 Providing educational institutions with consulting services for preparation of accreditation.			
3-3 Implementing some pilot evaluations to test the appropriateness of accreditation criteria and R&P of evaluation.			
3-4 Revising the documents relating to accreditation and evaluation if necessary			
3-5 Implementing evaluations for real accreditations.			
4-1 Attending IEA meetings for updating information and lobbying towards provisinal membership.			
4-2 Submitting to the Washington Accord a document requesting for the provisional status.			

Engineering education*: Engineering education at Bachelor level

Project Monitoring Sheet I （Revision of Project Design Matrix）

Project Title: Project for the Establishment of Indonesian Accreditation Board for Engineering Education (IABEE) Version 10

Implementing Agency: Ministry of Research, Technology and Higher Education Dated 10 April 2019

Target Group: (Direct) General Assembly members (profesional engineerig societies), Board directors, Committee members, Secretariat staff, evaluators,

(Indirect) Faculty and graduates of accredited enginnering education programs

Period of Project: November 2014 to October 2019 (5years)

Project Site: Jakarta and the whole country

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumption	Achievement	Remarks
Overall Goal					
Engineering education* provided by universities and institutes in Indonesia are changed from input based teaching to outcome based learning, responding to the needs of the society. The level of the engineering education is recognized by the international society as substantially equivalent to that of the countries of the Washington Accord signatories.	・Among 2,371 engineering education programs (S1) provided by public and private universities and instituites, 240 programs (10%) are accredited by IABEE. ・IABEE joins the Washington Accord as a signatory.	・IABEE homepage ・Y/N	Indonesian government's policy on Engineering Education does not change drastically.		
Project Purpose					
An accreditation system is established to change engineering education* from input based teaching to outcome based learning, and IABEE becomes a provisional member of the Washington Accord.	・Among 2,371 engineering education programs provided by public and private universities and instituites, 25 programs (1%) are accredited by IABEE at international level. ・IABEE is accepted as a provisional member of the Washington Accord.	・IABEE homepage ・Y/N	Indonesian government's policy on Engineering Education does not change drastically.		
Outputs					
1. IABEE is established.	・The establishment of IABEE is approved by the Ministry of Reasearch, Technology and Higher Education. ・Human resources, infrastructure and financial resources required for the functioning of IABEE are provided.	・Y/N ・IABEE Organization Chart, Financial Statement	C/P decides where and how to establish IABEE	Mr Berlian (Acting Secretary-General from September to November 2018) was confirmed to Secretary-General in November 2018.	
2. The accreditation documents are developped, and evaluators are trained.	・4 documents relating to accreditation criteria are developped in English and Indonesian languages. ・8 documentrs relating to evaluation are developped in English and Indonesian languages. ・200 evaluators for evaluation of engineering education programs are trained.	・IABEE homepage		Digital evaluation system was further revised.	

3. Some education programs are accredited.	25 education programs are accredited including pilot accreditations.	・IABEE homepage		・In 2016, 2 programs were accredited for general accreditation. ・In 2017, 3 programs were accredited for general accreditation. 6 programs were accredited for provisional accreditation. ・In 2018, 27 programs were accredited for general accreditation. 21 programs were accredited for provisional accredtation.	
4. IABEE's Request for provisional status is submitted to the Washington Accord.	The Washington Accord approves the provisional status of IABEE.	・Y/N		The application documednt for the provisional status in the Washington Accord accompanied by 2 supporting letters from JABEE and ABETwas submitted to the IEA Secretariat.	

Activities	Inputs		Pre-Conditions
	The Japanese Side	**The Indonesian Side**	
1-1 Identifying IABEE General Assembly members and Board members. Involving engineering societies as major players of IABEE activities.	a) Dispatch of Expert - Chief Advisor/Organization Management - Accreditation documents development - Advocacy, Training and Consultation - Program evaluation - Website and databese development b) Short-termTraining in Japan and third countries c) Equipment - Website and database with necessary software and servers **In case of importation, the equioment will become the property of the government of Indonesia upon being delivered C.I.F. (cost, insurance and freight) to the Indonesian authorities concerned at the ports and/or airports of disembarkation.* d) A portion of implementation cost - Cost for experts' daily activities - Cost for pilot international evaluation	a) Personnel assignment - C/P personnel - IABEE key personnel and secretariat staff b) Facility - Suitable office space with necessary furniture and equipment for JICA experts -Suitable office space with necessary furniture and equipment for IABEE c) A portion of implementation cost - Cost for holding Committee meetings in particular EAC and 8 WGs - Cost for holding Seminars - Cost for holding evaluator trainings - Salaries of IABEE secretrait staff d) Subsidies to study programs for IABEE accreditation fee	Necessary budge for the project implementation is secured. **<Issues and countermesures>**
1-2 Drawing up and reviewing midterm activity plan and financial plan of IABEE.			
1-3 Drawing up the Charter of IABEE.			
1-4 Recruting sectretariat staff			
1-5 Inaugurating IABEE Office			
1-6 Submitting to BAN-PT the document for establishment of IABEE.			
1-7 Training key personnel (executives and committee members) and sectretariat staff in Japan and in Indonesia			
2-1 Establishing a homepage for publicizing the documents of accreditation crteria and of evaluation of education programs. Setting up a database for evaluation related dossiers.			
2-2 Drawing up accreditation criteria in English.			
2-3 Translating the accreditation criteria into Indonesian language and publicizing on homepage.			
2-4 Drawing up documents relating to evaluation (R&P, guideline) in English.			
2-5 Translating the documents relating to evaluation into Indonesian language and publicizing on homepage.			
2-6 Organizing training courses for evaluator trainers in Japan.			
2-7 Organizing training courses for evaluator in Indonesia.			
3-1 Organizing advocacy seminars for educational institutions on accreditation for engineering education based on outcome evaluation.			
3-2 Providing educational institutions with consulting services for preparation of accreditation.			
3-3 Implementing some pilot evaluations to test the appropriateness of accreditation criteria and R&P of evaluation.			
3-4 Revising the documents relating to accreditation and evaluation if necessary			
3-5 Implementing evaluations for real accreditations.			
4-1 Attending IEA meetings for updating information and lobbying towards provisinal membership.			
4-2 Submitting to the Washington Accord a document requesting for the provisional status.			

Engineering education*: Engineering education at Bachelor level

Project Monitoring Sheet I （Revision of Project Design Matrix）

Project Title: Project for the Establishment of Indonesian Accreditation Board for Engineering Education (IABEE) Version 11

Implementing Agency: Ministry of Research, Technology and Higher Education Dated 23 August 2019

Target Group: (Direct) General Assembly members (profesional engineerig societies), Board directors, Committee members, Secretariat staff, evaluators,

(Indirect) Faculty and graduates of accredited enginnering education programs

Period of Project: November 2014 to September 2019 (5years)

Project Site: Jakarta and the whole country

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumption	Achievement	Remarks
Overall Goal					
Engineering education* provided by universities and institutes in Indonesia are changed from input based teaching to outcome based learning, responding to the needs of the society. The level of the engineering education is recognized by the international society as substantially equivalent to that of the countries of the Washington Accord signatories.	・Among 2,371 engineering education programs (S1) provided by public and private universities and instituites, 240 programs (10%) are accredited by IABEE. ・IABEE joins the Washington Accord as a signatory.	・IABEE homepage ・Y/N	Indonesian government's policy on Engineering Education does not change drastically.	R/D was signed to extend the Project until August 2021 with an additional goal that PII/IABEE will get the signatory status in the Washington Accord in June 2021.	
Project Purpose					
An accreditation system is established to change engineering education* from input based teaching to outcome based learning, and IABEE becomes a provisional member of the Washington Accord.	・Among 2,371 engineering education programs provided by public and private universities and instituites, 25 programs (1%) are accredited by IABEE at international level. ・IABEE is accepted as a provisional member of the Washington Accord.	・IABEE homepage ・Y/N	Indonesian government's policy on Engineering Education does not change drastically.		
Outputs					
1. IABEE is established.	・The establishment of IABEE is approved by the Ministry of Reasearch, Technology and Higher Education. ・Human resources, infrastructure and financial resources required for the functioning of IABEE are provided.	・Y/N ・IABEE Organization Chart, Financial Statement	C/P decides where and how to establish IABEE	・IABEE Secretariat will be moving to PII's new building in the near future. ・From 29 to 31 July 2019, the Secretary-General was trained at JABEE including a 2-day JABEE evaluator training.	
2. The accreditation documents are developped, and evaluators are trained.	・4 documents relating to accreditation criteria are developped in English and Indonesian languages. ・8 documentrs relating to evaluation are developped in English and Indonesian languages. ・200 evaluators for evaluation of engineering education programs are trained.	・IABEE homepage		・Digital evaluation system is being further revised to include a database of evaluators and evaluator candidates with 360 degrees evaluation. ・On 12 and 13 July 2019, an evaluator training was organized with the attendance of 31 evaluator candidates. Up to date, 117 evaluators have been trained. ・On 3 August 2019, a refresher training was organized for evaluators, who will participate in the 2019 program evaluations.	

3. Some education programs are accredited.	25 education programs are accredited including pilot accreditations.	・IABEE homepage		・2 programs in 2016, 3 programs in 2017 and 27 programs in 2018, totaling 32 programs have been accredited for general accreditation. The Project target has been acheaved one year ahead. ・6 programs in 2017 and 21 programs in 2018, totaling and 27 programs have been accredited for provisional accreditation. These programs are expected to apply for general accreditation in 2020 and 2021. ・For 2019, 12 study programs have applied for evaluation for general accreditation and 28 study programs for provisional accreditation. Those programs are under evaluation. Evaluation Teams will be conducting the on-site evaluation visits in October and November 2019. ・4 awareness seminars were organized.	
4. IABEE's Request for provisional status is submitted to the Washington Accord.	The Washington Accord approves the provisional status of IABEE.	・Y/N		・PII/IABEE provisional membership has been approved with unanimous support by 20 signatories at the Washington Accord Closed Session held on 12 June 2019 in Hong Kong. ・The International Committee has started preparing the application documents for the signatory status in the WA, the deadline for submission of which is 28 February 2020	

Activities	Inputs		Pre-Conditions
	The Japanese Side	**The Indonesian Side**	
1-1 Identifying IABEE General Assembly members and Board members. Involving engineering societies as major players of IABEE activities.	a) Dispatch of Expert - Chief Advisor/Organization Management - Accreditation documents development - Advocacy, Training and Consultation - Program evaluation - Website and databese development b) Short-termTraining in Japan and third countries c) Equipment - Website and database with necessary software and servers **In case of importation, the equioment will become the property of the government of Indonesia upon being delivered C.I.F. (cost, insurance and freight) to the Indonesian authorities concerned at the ports and/or airports of disembarkation.* d) A portion of implementation cost - Cost for experts' daily activities - Cost for pilot international evaluation	a) Personnel assignment - C/P personnel - IABEE key personnel and secretariat staff b) Facility - Suitable office space with necessary furniture and equipment for JICA experts -Suitable office space with necessary furniture and equipment for IABEE c) A portion of implementation cost - Cost for holding Committee meetings in particular EAC and 8 WGs - Cost for holding Seminars - Cost for holding evaluator trainings - Salaries of IABEE secretrait staff d) Subsidies to study programs for IABEE accreditation fee	Necessary budge for the project implementation is secured. **<Issues and countermesures>**
1-2 Drawing up and reviewing midterm activity plan and financial plan of IABEE.			
1-3 Drawing up the Charter of IABEE.			
1-4 Recruting sectretariat staff			
1-5 Inaugurating IABEE Office			
1-6 Submitting to BAN-PT the document for establishment of IABEE.			
1-7 Training key personnel (executives and committee members) and sectretariat staff in Japan and in Indonesia			
2-1 Establishing a homepage for publicizing the documents of accreditation crteria and of evaluation of education programs. Setting up a database for evaluation related dossiers.			
2-2 Drawing up accreditation criteria in English.			
2-3 Translating the accreditation criteria into Indonesian language and publicizing on homepage.			
2-4 Drawing up documents relating to evaluation (R&P, guideline) in English.			
2-5 Translating the documents relating to evaluation into Indonesian language and publicizing on homepage.			
2-6 Organizing training courses for evaluator trainers in Japan.			
2-7 Organizing training courses for evaluator in Indonesia.			
3-1 Organizing advocacy seminars for educational institutions on accreditation for engineering education based on outcome evaluation.			
3-2 Providing educational institutions with consulting services for preparation of accreditation.			
3-3 Implementing some pilot evaluations to test the appropriateness of accreditation criteria and R&P of evaluation.			
3-4 Revising the documents relating to accreditation and evaluation if necessary			
3-5 Implementing evaluations for real accreditations.			
4-1 Attending IEA meetings for updating information and lobbying towards provisinal membership.			
4-2 Submitting to the Washington Accord a document requesting for the provisional status.			

Engineering education*: Engineering education at Bachelor level

Project Monitoring Sheet I （Revision of Project Design Matrix）

Project Title: Project for the Establishment of Indonesian Accreditation Board for Engineering Education (IABEE) Version 12

Implementing Agency: Ministry of Research, Technology and Higher Education Dated 14 February 2020

Target Group: (Direct) General Assembly members (profesional engineerig societies), Board directors, Committee members, Secretariat staff, evaluators,

(Indirect) Faculty and graduates of accredited enginnering education programs

Period of Project: November 2014 to August 2021 (6 years and 10 months)

Project Site: Jakarta and the whole country

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumption	Achievement	Remarks
Overall Goal					
Engineering education* provided by universities and institutes in Indonesia are changed from input based teaching to outcome based learning, responding to the needs of the society. The level of the engineering education is recognized by the international society as substantially equivalent to that of the countries of the Washington Accord signatories.	・Among 2,371 engineering education programs (S1) provided by public and private universities and instituites, 240 programs (10%) are accredited by IABEE. ・IABEE joins the Washington Accord as a signatory.	・IABEE homepage ・Y/N	Indonesian government's policy on Engineering Education does not change drastically.	・R/D was signed to extend the Project until August 2021 with an additional goal that PII/IABEE will get the signatory status in the Washington Accord in June 2021.	
Project Purpose					
An accreditation system is established to change engineering education* from input based teaching to outcome based learning, and IABEE becomes a provisional member of the Washington Accord.	・Among 2,371 engineering education programs provided by public and private universities and instituites, 25 programs (1%) are accredited by IABEE at international level. ・IABEE is accepted as a provisional member of the Washington Accord.	・IABEE homepage ・Y/N	Indonesian government's policy on Engineering Education does not change drastically.		
Outputs					
1. IABEE is established.	・The establishment of IABEE is approved by the Ministry of Reasearch, Technology and Higher Education. ・Human resources, infrastructure and financial resources required for the functioning of IABEE are provided.	・Y/N ・IABEE Organization Chart, Financial Statement	C/P decides where and how to establish IABEE	・IABEE Secretariat could not move yet to PII's new building due to a delay in the construction.	
2. The accreditation documents are developped and evaluators are trained.	・4 documents relating to accreditation criteria are developped in English and Indonesian languages. ・8 documentrs relating to evaluation are developped in English and Indonesian languages. ・200 evaluators for evaluation of engineering education programs are trained.	・IABEE homepage		・Digital evaluation system has been further developed to include a database of evaluators and evaluator candidates with 360 degrees evaluation. The system was used for the program evaluations of the year 2019.	

3. Some education programs are accredited.	25 education programs are accredited including pilot accreditations.	・IABEE homepage		・For 2019, 12 study programs for general accreditation and 28 study programs for provisional accreditation were evaluated. The results of evaluations were harmonized at the EAC of 30 January 2020 and10 programs were accredited by the Accreditation Council (AC) of 13 February 2020. ・5 awareness seminars were organized.	
4. IABEE's Request for provisional status is submitted to the Washington Accord.	The Washington Accord approves the provisional status of IABEE.	・Y/N		・The International Committee has completed the application documents for the signatory status in the WA and is ready to submit it to IEA Secretariat by the deadline of 21 February 2020.	

Activities	Inputs		Pre-Conditions
	The Japanese Side	**The Indonesian Side**	
1-1 Identifying IABEE General Assembly members and Board members. Involving engineering societies as major players of IABEE activities.	a) Dispatch of Expert - Chief Advisor/Organization Management - Accreditation documents development - Advocacy, Training and Consultation - Program evaluation - Website and databese development b) Short-termTraining in Japan and third countries c) Equipment - Website and database with necessary software and servers **In case of importation, the equioment will become the property of the government of Indonesia upon being delivered C.I.F. (cost, insurance and freight) to the Indonesian authorities concerned at the ports and/or airports of disembarkation.* d) A portion of implementation cost - Cost for experts' daily activities - Cost for pilot international evaluation	a) Personnel assignment - C/P personnel b) A portion of implementation cost - Cost for holding Committee meetings - Cost for holding Seminars - c) Subsidies to study programs for IABEE accreditation fee	Necessary budge for the project implementation is secured.
1-2 Drawing up and reviewing midterm activity plan and financial plan of IABEE.			
1-3 Drawing up the Charter of IABEE.			
1-4 Recruting sectretariat staff			
1-5 Inaugurating IABEE Office			
1-6 Submitting to BAN-PT the document for establishment of IABEE.			**<Issues and countermesures>**
1-7 Training key personnel (executives and committee members) and sectretariat staff in Japan and in Indonesia			
2-1 Establishing a homepage for publicizing the documents of accreditation crteria and of evaluation of education programs. Setting up a database for evaluation related dossiers.			
2-2 Drawing up accreditation criteria in English.			
2-3 Translating the accreditation criteria into Indonesian language and publicizing on homepage.			
2-4 Drawing up documents relating to evaluation (R&P, guideline) in English.			
2-5 Translating the documents relating to evaluation into Indonesian language and publicizing on homepage.			
2-6 Organizing training courses for evaluator trainers in Japan.			
2-7 Organizing training courses for evaluator in Indonesia.			
3-1 Organizing advocacy seminars for educational institutions on accreditation for engineering education based on outcome evaluation.			
3-2 Providing educational institutions with consulting services for preparation of accreditation.			
3-3 Implementing some pilot evaluations to test the appropriateness of accreditation criteria and R&P of evaluation.			
3-4 Revising the documents relating to accreditation and evaluation if necessary			
3-5 Implementing evaluations for real accreditations.			
4-1 Attending IEA meetings for updating information and lobbying towards provisinal membership.			
4-2 Submitting to the Washington Accord a document requesting for the provisional status.			

Engineering education*: Engineering education at Bachelor level

Project Monitoring Sheet I （Revision of Project Design Matrix）

Project Title: Project for the Establishment of Indonesian Accreditation Board for Engineering Education (IABEE) Version 13

Implementing Agency: Ministry of Education and Culture Dated 30 September 2020

Target Group: (Direct) General Assembly members (profesional engineerig societies), Board directors, Committee members, Secretariat staff, evaluators,

(Indirect) Faculty and graduates of accredited enginnering education programs

Period of Project: November 2014 to August 2021 (6 years and 10 months)

Project Site: Jakarta and the whole country

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumption	Achievement	Remarks
Overall Goal					
Engineering education* provided by universities and institutes in Indonesia are changed from input based teaching to outcome based learning, responding to the needs of the society. The level of the engineering education is recognized by the international society as substantially equivalent to that of the countries of the Washington Accord signatories.	・Among 2,371 engineering education programs (S1) provided by public and private universities and instituites, 240 programs (10%) are accredited by IABEE. ・IABEE joins the Washington Accord as a signatory.	・IABEE Website	Indonesian government's policy on Engineering Education does not change drastically.	・R/D was signed to extend the Project until August 2021 with an additional goal that PII/IABEE will get the signatory status in the Washington Accord in June 2021.	
Project Purpose					
An accreditation system is established to change engineering education* from input based teaching to outcome based learning, and IABEE becomes a signatory of the Washington Accord.	・Among 2,371 engineering education programs provided by public and private universities and instituites, 25 programs (1%) are accredited by IABEE at international level. ・IABEE is accepted as a provisional member of the Washington Accord.	・IABEE Website	Indonesian government's policy on Engineering Education does not change drastically.		
Outputs					
1. IABEE is established.	・The establishment of IABEE is approved by the Ministry of Reasearch, Technology and Higher Education. ・Human resources, infrastructure and financial resources required for the functioning of IABEE are provided.	・IABEE Organization Chart, Financial Statement		・IABEE Secretariat could not move to PII's new building due to a delay in the interior work. ・C/P provides IABEE with a free office space in DIKITI building temporarily. ・PII's new building, named Graha Rekayasa Indonesia, was officially inaugurated on 4 September 2020 and PII Secretariat operates there since then. IABEE Secretariat could also be relocated. However, due to COVID-19, the relocation should better wait until COVID-19 situation has calmed down.	

2. The accreditation documents are developped and evaluators are trained.	・4 documents relating to accreditation criteria are developped in English and Indonesian languages. ・8 documentrs relating to evaluation are developped in English and Indonesian languages. ・200 evaluators for evaluation of engineering education programs are trained.	・IABEE Website		・Continue further improvement ・A special WG established within EAC has developed the protocols necessary to conduct virtual evaluation due to COVID-19.	
3. Some education programs are accredited	25 education programs are accredited including pilot accreditations.	・IABEE Website		・In 2019, 2 programs for general accreditation were not accredited, one of which accepted to take immediate remedial actions against the deficiency and the IABEE Evaluation Team will be re-evaluating the program for possible accreditation. Another program did not accept the decision of “Not accredited” and made an appeal. The IABEE Appeal Board set up an Appeal Committee. Appeal Committee’s recommendation to change “Not accredited” to “Accreditation with interim” was not supported by the EXC held on 14 August 2020. The decision was notified to the program ・For 2020, 27 engineering programs and 3 computing programs (in total 30) have been registered for evaluation for general accreditation and 17 engineering programs, which, in 2018, had been granted accreditation status with interim, have been registered for interim evaluation. Out of 17 programs, 7 programs fall into the category of interim evaluation without on-site visit. 9 engineering programs and 4 computing programs (in total 13) have been registered for evaluation for provisional accreditation. 60 programs in total are currently under evaluation. Evaluation Teams will be undertaking “virtual” on-site visits to 53 study programs during a period from 13 November to 8 December 2020. ・For 2020, IABEE requested DIKTI to provide 12 programs for general accreditation with subsidies of Rp30M per program and 3 programs for provisional accreditation with subsidies of Rp10M per program, totaling Rp390M.	
4. IABEE's provisional status in the Washington Accord is approved.	The Washington Accord approves the provisional status of IABEE.	IEA Website		Completed	
5. IABEE's signatory status is approved to the Washington Accord.	The Washington Accord approves the provisional status of IABEE.	IEA Website	COVID-19 will calm down in 2021 so that the WA Verification Review Team to IABEE could visit Indonesia in 2021.	The Washington Accord Closed Session held in a form of videoconference on 22 June 2020 reviewed IABEE’s application documents and JABEE’s mentor’s report. The signatories unanimously approved the formation of a Washington Accord Verification Review Team to IABEE. However, due to COVID-19, the Washington Accord decided to postpone all Accord Reviews (including the review to IABEE) to 2021. Therefore, the Verification Review Team’s visit to Indonesia will not take place in 2020 but in 2021.	

Activities	Inputs		Pre-Conditions
	The Japanese Side	**The Indonesian Side**	
1-1 Identifying IABEE General Assembly members and Board members. Involving engineering societies as major players of IABEE activities.	a) Dispatch of Expert - Chief Advisor/Organization Management - Accreditation documents development - Advocacy, Training and Consultation - Program evaluation - Website and databese development b) Short-termTraining in Japan and third countries c) Equipment - Website and database with necessary software and servers **In case of importation, the equioment will become the property of the government of Indonesia upon being delivered C.I.F. (cost, insurance and freight) to the Indonesian authorities concerned at the ports and/or airports of disembarkation.* d) A portion of implementation cost - Cost for experts' daily activities - Cost for pilot international evaluation	a) Personnel assignment - C/P personnel b) A portion of implementation cost - Cost for holding Seminars c) Subsidies to study programs for IABEE accreditation fee d) Provision of a free office space in DIKTI building	Necessary budge for the project implementation is secured. **<Issues and countermesures>**
1-2 Drawing up and reviewing midterm activity plan and financial plan of IABEE.			
1-3 Drawing up the Charter of IABEE.			
1-4 Recruting sectretariat staff			
1-5 Inaugurating IABEE Office			
1-6 Submitting to BAN-PT the document for establishment of IABEE.			
1-7 Training key personnel (executives and committee members) and sectretariat staff in Japan and in Indonesia			
2-1 Establishing a homepage for publicizing the documents of accreditation crteria and of evaluation of education programs. Setting up a database for evaluation related dossiers.			
2-2 Drawing up accreditation criteria in English.			
2-3 Translating the accreditation criteria into Indonesian language and publicizing on homepage.			
2-4 Drawing up documents relating to evaluation (R&P, guideline) in English.			
2-5 Translating the documents relating to evaluation into Indonesian language and publicizing on homepage.			
2-6 Organizing training courses for evaluator trainers in Japan.			
2-7 Organizing training courses for evaluator in Indonesia.			
3-1 Organizing advocacy seminars for educational institutions on accreditation for engineering education based on outcome evaluation.			
3-2 Providing educational institutions with consulting services for preparation of accreditation.			
3-3 Implementing some pilot evaluations to test the appropriateness of accreditation criteria and R&P of evaluation.			
3-4 Revising the documents relating to accreditation and evaluation if necessary			
3-5 Implementing evaluations for real accreditations.			
4-1 Attending IEA meetings for updating information and lobbying towards provisinal membership.			
4-2 Submitting to the Washington Accord a document requesting for the provisional status.			

Engineering education*: Engineering education at Bachelor level

Project Monitoring Sheet I （Revision of Project Design Matrix）

Project Title: Project for the Establishment of Indonesian Accreditation Board for Engineering Education (IABEE) Version 14

Implementing Agency: Ministry of Education and Culture Dated 31 March 2021

Target Group: (Direct) General Assembly members (profesional engineerig societies), Board directors, Committee members, Secretariat staff, evaluators,

(Indirect) Faculty and graduates of accredited enginnering education programs

Period of Project: November 2014 to August 2022 (7 years and 10 months)

Project Site: Jakarta and the whole country

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumption	Achievement	Remarks
Overall Goal					
Engineering education* provided by universities and institutes in Indonesia are changed from input based teaching to outcome based learning, responding to the needs of the society. The level of the engineering education is recognized by the international society as substantially equivalent to that of the countries	・Among 2,371 engineering education programs (S1) provided by public and private universities and instituites, 240 programs (10%) are accredited by IABEE. ・IABEE joins the Washington Accord as a signatory.	・IABEE Website	Indonesian government's policy on Engineering Education does not change drastically.	・R/D was signed to extend the Project until August 2022 as due to COVID-19 all WA Accord Reviews of 2020 (including the Verfication Review to PII/IABEE) were postponed.	
Project Purpose					
An accreditation system is established to change engineering education* from input based teaching to outcome based learning, and IABEE becomes a signatory of the Washington Accord.	・Among 2,371 engineering education programs provided by public and private universities and instituites, 25 programs (1%) are accredited by IABEE at international level. ・IABEE is accepted as a provisional member of the Washington Accord.	・IABEE Website	Indonesian government's policy on Engineering Education does not change drastically.		
Outputs					
1. IABEE is established.	・The establishment of IABEE is approved by the Ministry of Reasearch, Technology and Higher Education. ・Human resources, infrastructure and financial resources required for the functioning of IABEE are provided.	・IABEE Organization Chart, Financial Statement		・C/P provides IABEE with a free office space in DIKITI building temporarily. ・PII's new building, named Graha Rekayasa Indonesia, was officially inaugurated on 4 September 2020 and PII Secretariat operates there since then. IABEE Secretariat could also be relocated. However, due to COVID-19, the relocation should better wait until COVID-19 situation has calmed down.	
2. The accreditation documents are developped and evaluators are trained.	・4 documents relating to accreditation criteria are developped in English and Indonesian languages. ・8 documentrs relating to evaluation are developped in English and Indonesian languages. ・200 evaluators for evaluation of engineering education programs are trained.	・IABEE Website		・Continue further improvement ・The protocols necessary to conduct virtual program evaluations under COVID-19 has been developped.	

3. Some education programs are accredited	25 education programs are accredited including pilot accreditations.	・IABEE Website		・The Project targeted to accredit 25 engineering study programs at international level by the 2019. 2 programs in 2016, 3 programs in 2017, 27 programs in 2018 and 10 programs in 2019 totaling 42 programs were accredited for general accreditation. ・In 2020, 2 engineering programs, which were not accredited in 2019, were accredited and 13 new engineering programs for general accreditation were granted. ・As of March 2021, the total of 57 engineering programs are accredited. ・For 2020, DIKTI provides 13 programs for general accreditation with subsidies of Rp30M per program and 1 program for provisional accreditation with subsidies of	
4. IABEE's provisional status in the Washington Accord is approved.	The Washington Accord approves the provisional status of IABEE.	IEA Website		Completed in 2019	
5. IABEE's signatory status is approved to the Washington Accord.	The Washington Accord approves the signatory status of IABEE.	IEA Website	COVID-19 will calm down in 2021 so that the WA Verification Review Team to IABEE could visit Indonesia in 2021.	・In January 2021, the WA Chair announced the composition of the Verification Review Team to PII/IABEE: they are Engineers Australia, Board of Engineers Malaysia and Pakistan Engineering Council. ・The Washington Accord Closed Session to be held in a form of videoconference in June 2021 will decide whether the Accord Reviews (including the Verification Review to PII/IABEE) should be once again postponed to further years or the Accord Reviews could be conducted in a virtual form in 2021. Currently, a basecamp is set up to exchange opinions among the WA signatories and provisional members on the issue of virtual accord	

Activities	Inputs		Pre-Conditions
	The Japanese Side	**The Indonesian Side**	
1-1 Identifying IABEE General Assembly members and Board members. Involving engineering societies as major players of IABEE activities.	a) Dispatch of Expert - Chief Advisor/Organization Management - Accreditation documents development - Advocacy, Training and Consultation - Program evaluation - Website and databese development b) Short-termTraining in Japan and third countries c) Equipment - Website and database with necessary software and servers **In case of importation, the equioment will become the property of the government of Indonesia upon being delivered C.I.F. (cost, insurance and freight) to the Indonesian authorities concerned at the ports and/or airports of disembarkation.* d) A portion of implementation cost - Cost for experts' daily activities - Cost for pilot international evaluation	a) Personnel assignment - C/P personnel b) A portion of implementation cost - Cost for holding Seminars c) Subsidies to study programs for IABEE accreditation fee d) Provision of a free office space in DIKTI building	Necessary budge for the project implementation is secured. **<Issues and countermesures>**
1-2 Drawing up and reviewing midterm activity plan and financial plan of IABEE.			
1-3 Drawing up the Charter of IABEE.			
1-4 Recruting sectretariat staff			
1-5 Inaugurating IABEE Office			
1-6 Submitting to BAN-PT the document for establishment of IABEE.			
1-7 Training key personnel (executives and committee members) and sectretariat staff in Japan and in Indonesia			
2-1 Establishing a homepage for publicizing the documents of accreditation crteria and of evaluation of education programs. Setting up a database for evaluation related dossiers.			
2-2 Drawing up accreditation criteria in English.			
2-3 Translating the accreditation criteria into Indonesian language and publicizing on homepage.			
2-4 Drawing up documents relating to evaluation (R&P, guideline) in English.			
2-5 Translating the documents relating to evaluation into Indonesian language and publicizing on homepage.			
2-6 Organizing training courses for evaluator trainers in Japan.			
2-7 Organizing training courses for evaluator in Indonesia.			
3-1 Organizing advocacy seminars for educational institutions on accreditation for engineering education based on outcome evaluation.			
3-2 Providing educational institutions with consulting services for preparation of accreditation.			
3-3 Implementing some pilot evaluations to test the appropriateness of accreditation criteria and R&P of evaluation.			
3-4 Revising the documents relating to accreditation and evaluation if necessary			
3-5 Implementing evaluations for real accreditations.			
4-1 Attending IEA meetings for updating information and lobbying towards provisinal membership.			
4-2 Submitting to the Washington Accord a document requesting for the provisional status.			

Engineering education*: Engineering education at Bachelor level

Project Monitoring Sheet I （Revision of Project Design Matrix）

Project Title: Project for the Establishment of Indonesian Accreditation Board for Engineering Education (IABEE) Version 15

Implementing Agency: Ministry of Education and Culture Dated 30 September 2021

Target Group: (Direct) General Assembly members (profesional engineerig societies), Board directors, Committee members, Secretariat staff, evaluators,

(Indirect) Faculty and graduates of accredited enginnering education programs

Period of Project: November 2014 to August 2022 (7 years and 10 months)

Project Site: Jakarta and the whole country

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumption	Achievement	Remarks
Overall Goal					
Engineering education* provided by universities and institutes in Indonesia are changed from input based teaching to outcome based learning, responding to the needs of the society. The level of the engineering education is recognized by the international society as substantially equivalent to that of the countries	・Among 2,371 engineering education programs (S1) provided by public and private universities and instituites, 240 programs (10%) are accredited by IABEE. ・IABEE joins the Washington Accord as a signatory.	・IABEE Website	Indonesian government's policy on Engineering Education does not change drastically.	・R/D was signed to extend the Project until August 2022 as due to COVID-19 all WA Accord Reviews of 2020 (including the Verfication Review to PII/IABEE) were postponed.	
Project Purpose					
An accreditation system is established to change engineering education* from input based teaching to outcome based learning, and IABEE becomes a signatory of the Washington Accord.	・Among 2,371 engineering education programs provided by public and private universities and instituites, 25 programs (1%) are accredited by IABEE at international level. ・IABEE is accepted as a provisional member of the Washington Accord.	・IABEE Website	Indonesian government's policy on Engineering Education does not change drastically.		
Outputs					
1. IABEE is established.	・The establishment of IABEE is approved by the Ministry of Reasearch, Technology and Higher Education. ・Human resources, infrastructure and financial resources required for the functioning of IABEE are provided.	・IABEE Organization Chart, Financial Statement		・C/P provides IABEE with a free office space in DIKITI building temporarily. ・PII's new building, named Graha Rekayasa Indonesia, was officially inaugurated on 4 September 2020 and PII Secretariat operates there since then. IABEE Secretariat could also be relocated. However, due to COVID-19, the relocation should better wait until COVID-19 situation has calmed down.	
2. The accreditation documents are developped and evaluators are trained.	・4 documents relating to accreditation criteria are developped in English and Indonesian languages. ・8 documentrs relating to evaluation are developped in English and Indonesian languages. ・200 evaluators for evaluation of engineering education programs are trained.	・IABEE Website		・Continue further improvement ・The protocols necessary to conduct virtual program evaluations under COVID-19 has been developped.	

3. Some education programs are accredited	25 education programs are accredited including pilot accreditations.	・IABEE Website		・The Project targets to accredit 25 engineering study programs at international level by the 2019. ・2 programs in 2016, 3 programs in 2017, 27 programs in 2018, 10 programs in 2019 and 15 programs in 2020 were accredited. As on 30 September 2021, 57 engineering programs in total are accredited. ・For 2021, 12 new engineering programs are under evaluation for general accreditation and 8 engineering programs, which, in 2019, had been granted accreditation status with interim period, are under evaluation. 18 engineering programs and 4 computing programs (in total 22) are under evaluation for provisional accreditation. Due to COVID-19, Evaluation Teams will be virtually visiting study programs during a period from 16 October to 2 November 2021.	
4. IABEE's provisional status in the Washington Accord is approved.	The Washington Accord approves the provisional status of IABEE.	IEA Website		Completed in 2019	
5. IABEE's signatory status is approved to the Washington Accord.	The Washington Accord approves the signatory status of IABEE.	IEA Website		・The Washington Accord Closed Session held in a form of videoconference on 23 June 2021 decided that all Accord Reviews (including the Verification Review to PII/IABEE) would be conducted in a virtual form in 2021.	

Activities	Inputs		Pre-Conditions
	The Japanese Side	**The Indonesian Side**	
1-1 Identifying IABEE General Assembly members and Board members. Involving engineering societies as major players of IABEE activities.	a) Dispatch of Expert - Chief Advisor/Organization Management - Accreditation documents development - Advocacy, Training and Consultation - Program evaluation - Website and databese development b) Short-termTraining in Japan and third countries c) Equipment - Website and database with necessary software and servers **In case of importation, the equioment will become the property of the government of Indonesia upon being delivered C.I.F. (cost, insurance and freight) to the Indonesian authorities concerned at the ports and/or airports of disembarkation.* d) A portion of implementation cost - Cost for experts' daily activities - Cost for pilot international evaluation	a) Personnel assignment - C/P personnel b) Provision of a free office space in DIKTI building	Necessary budge for the project implementation is secured.
1-2 Drawing up and reviewing midterm activity plan and financial plan of IABEE.			
1-3 Drawing up the Charter of IABEE.			
1-4 Recruting sectretariat staff			
1-5 Inaugurating IABEE Office			
1-6 Submitting to BAN-PT the document for establishment of IABEE.			**<Issues and countermesures>**
1-7 Training key personnel (executives and committee members) and sectretariat staff in Japan and in Indonesia			
2-1 Establishing a homepage for publicizing the documents of accreditation crteria and of evaluation of education programs. Setting up a database for evaluation related dossiers.			
2-2 Drawing up accreditation criteria in English.			
2-3 Translating the accreditation criteria into Indonesian language and publicizing on homepage.			
2-4 Drawing up documents relating to evaluation (R&P, guideline) in English.			
2-5 Translating the documents relating to evaluation into Indonesian language and publicizing on homepage.			
2-6 Organizing training courses for evaluator trainers in Japan.			
2-7 Organizing training courses for evaluator in Indonesia.			
3-1 Organizing advocacy seminars for educational institutions on accreditation for engineering education based on outcome evaluation.			
3-2 Providing educational institutions with consulting services for preparation of accreditation.			
3-3 Implementing some pilot evaluations to test the appropriateness of accreditation criteria and R&P of evaluation.			
3-4 Revising the documents relating to accreditation and evaluation if necessary			
3-5 Implementing evaluations for real accreditations.			
4-1 Attending IEA meetings for updating information and lobbying towards provisinal membership.			
4-2 Submitting to the Washington Accord a document requesting for the provisional status.			

Engineering education*: Engineering education at Bachelor level

Project Monitoring Sheet I （Project Design Matrix）

Project Title: Project for the Establishment of Indonesia Accreditation Board for Engineering Education (IABEE) Version 16

Implementing Agency:Ministry of Education and Culture Dated 31 March 2022

Target Group: (Direct) General Assembly members (profesional engineerig societies), Board directors, Committee members, Secretsariat staff, evaluators,
(Indirect) Faculty and graduates of accredited enginnering education programs

Period of Project: November 2014 to August 2023 (8 years and 10 months)

Project Site:Jakarta and the whole country

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumption	Achievement	Remarks
Overall Goal					
Engineering education* provided by universities and institutes in Indonesia are changed from input based teaching to outcome based learning, responding to the needs of the society. The level of the engineering education is recognized by the international society as substantially equivalent to that of the countries of the Washington Accord signatories.	・Among 2,371 engineering education programs provided by public and private universities and instituites, 240 programs (10%) are accredited by IABEE.	・IABEE Database ・Y/N	Indonesian government's policy on Engineering Education does not change drastically.	・M/M for the Amendment of R/D was signed to extend the project until August 2023 as due to COVID-19 all WA Accord Reviews of 2020 (including the Verfication Review to PII/IABEE) were postponed to 2021 (in a virutal form）and to 2022 (in a physical form).	
Project Purpose					
An accreditation system is established to change engineering education* from input based teaching to outcome based learning, and IABEE becomes a signatory member of the Washington Accord.	・Among 2,371 engineering education programs provided by public and private universities and instituites, 50 programs (2%) are accredited by IABEE. ・IABEE is accepted as the signatory member of the Washington Accord.	・IABEE Database ・Y/N	Indonesian government's policy on Engineering Education does not change drastically.		
Outputs					
1. IABEE is established.	・The establishment of IABEE is approved by the Ministry of Education and Culture. ・Human resources, infrastructure and financial resources required for the functioning of IABEE are provided.	・Y/N ・IABEE Organization Chart, Financial Statement	MORTHE decree for instrument for evaluation of LAM is effectuated in appropriate timing.	・DIKTI offers a free office space for the secretariat of IABEE. ・The interior work for the office space for IABEE in PII's new building completed in January 2022. The secretariat of IABEE expects to move to PII's building in May 2022.	
2. The accreditation documents are developped, and evaluators are trained.	・4 documents relating to accreditation criteria are developped in English and Indonesian languages. ・8 documentrs relating to evaluation are developped in English and Indonesian languages. ・200 evaluators for evaluation of engineering education programs are trained.	・IABEE Database		・Continue further improvement	

3. Some education programs are accredited.	50 education programs are accredited including pilot accreditations.	・IABEE Database		・The Accreditation Council held on 10 February 2022 approved the interim accreditations of 9 new engineering programs for general accreditation and granted the full accreditation status to 8 engineering programs, which had been granted accreditation status with interim period in 2019. 3 engineering programs having applied for the “Grace Period” evaluation were granted the interim accreditation.	
4. IABEE's Request for provisional status is submitted to the Washington Accord.	The Washington Accord approves the provisional status of IABEE.	・Y/N		・Completed in 2019	
5. IABEE's Request for signatory status is submitted to the Washington Accord.	The Washington Accord approves the signatory status of IABEE.	・Y/N		・The Washington Accord Verification Review Team conducted a virtual review to PII/IABEE in a period from 14 October 2021 to 10 February 2022.	

Activities	Inputs		Pre-Conditions
	The Japanese Side	**The Indonesian Side**	
1-1 Identifying IABEE General Assembly members and Board members. Involving engineering societies as major players of IABEE	a) Dispatch of Expert - Chief Advisor/Organization Management - Accreditation documents development - Advocacy, Training and Consultation - Program evaluation Website and databese development b) Short-termTraining in Japan and third countries c) Equipment - Website and database with necessary software and servers **In case of importation, the equioment will become the property of the government of Indonesia upon being delivered C.I.F. (cost, insurance and freight) to the Indonesian authorities concerned at the ports and/or airports of disembarkation.* d) A portion of implementation cost - Cost for experts' daily activities - Cost for pilot international evaluation	a) Personnel assignment -MORTHE counterpart personnel - IABEE key personnel and secretariat staff b) Facility - Suitable office space with necessary furniture and equipment for JICA experts -Suitable office space with necessary furniture and equipment for IABEE c) Equipment - Hosting and maintenance of website and database - Expenses necessary for transportation within Indonesia of the equipment provided by JICA as well as for the installation, operation and maintenance d) A portion of implementation cost - Cost for holding Committee meetings - Cost for holding Seminars - Cost for holding evaluator trainings - Cost for IEA meetings - Other Initial and running cost of IABEE	Necessary budge for the project implementation is secured.
1-2 Drawing up and reviewing midterm activity plan and financial plan of IABEE.			
1-3 Drawing up the Charter of IABEE.			
1-4 Recruting sectretariat staff			
1-5 Inaugurating IABEE Office			
1-6 Submitting to BAN-PT the document for establishment of IABEE.			**<Issues and countermesures>**
1-7 Training key personnel (executives and committee members) and sectretariat staff in Japan and in Indonesia			
2-1 Establishing a homepage for publicizing the documents of accreditation crteria and of evaluation of education programs. Setting up a database for evaluation related dossiers.			
2-2 Drawing up accreditation criteria in English.			
2-3 Translating the accreditation criteria into Indonesian language and publicizing on			
2-4 Drawing up documents relating to evaluation (R&P, guideline) in English.			
2-5 Translating the documents relating to evaluation into Indonesian language and publicizing on homepage.			
2-6 Organizing training courses for evaluator trainers in Japan.			
2-7 Organizing training courses for evaluator in Indonesia.			
3-1 Organizing advocacy seminars for educational institutions on accreditation for engineering education based on outcome			
3-2 Providing educational institutions with consulting services for preparation of accreditation.			
3-3 Implementing some pilot evaluations to test the appropriateness of accreditation criteria and R&P of evaluation.			
3-4 Revising the documents relating to accreditation and evaluation if necessary			
3-5 Implementing evaluations for real accreditations.			
4-1 Attending IEA meetings for updating information and lobbying towards provisinal membership.			
4-2 Submitting to the Washington Accord a document requesting for the provisional status.			
5-1 Attending IEA meetings for updating information and lobbying towards the signatory membership.			
5-2 Submitting to the Washington Accord a document requesting for the signatory status.			

Engineering education*: Engineering education at Bachelor level

Project Monitoring Sheet I （Project Design Matrix）

Project Title: Project for the Establishment of Indonesia Accreditation Board for Engineering Education (IABEE) Version 17

Implementing Agency:Ministry of Education and Culture Dated 30 September 2022

Target Group: (Direct) General Assembly members (profesional engineerig societies), Board directors, Committee members, Secretsariat staff, evaluators,
(Indirect) Faculty and graduates of accredited enginnering education programs

Period of Project: November 2014 to August 2023 (8 years and 10 months)

Project Site:Jakarta and the whole country

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumption	Achievement	Remarks
Overall Goal					
Engineering education* provided by universities and institutes in Indonesia are changed from input based teaching to outcome based learning, responding to the needs of the society. The level of the engineering education is recognized by the international society as substantially equivalent to that of the countries of the Washington Accord signatories.	・Among 2,371 engineering education programs provided by public and private universities and instituites, 240 programs (10%) are accredited by IABEE.	・IABEE Database ・Y/N	Indonesian government's policy on Engineering Education does not change drastically.	・M/M for the Amendment of R/D was signed to extend the project until August 2023 as due to COVID-19 all WA Accord Reviews of 2020 (including the Verfication Review to PII/IABEE) were postponed to 2021 (in a virutal form）and to 2022 (in a physical form).	
Project Purpose					
An accreditation system is established to change engineering education* from input based teaching to outcome based learning, and IABEE becomes a signatory member of the Washington Accord.	・Among 2,371 engineering education programs provided by public and private universities and instituites, 50 programs (2%) are accredited by IABEE. ・IABEE is accepted as the signatory member of the Washington Accord.	・IABEE Database ・Y/N	Indonesian government's policy on Engineering Education does not change drastically.		
Outputs					
1. IABEE is established.	・The establishment of IABEE is approved by the Ministry of Education and Culture. ・Human resources, infrastructure and financial resources required for the functioning of IABEE are provided.	・Y/N ・IABEE Organization Chart, Financial Statement	MORTHE decree for instrument for evaluation of LAM is effectuated in appropriate timing.	・The interior work for the office space for IABEE in PII's new building completed in January 2022. The secretariat of IABEE expected to move to PII's building in the beginning of May 2022 but due to a too narrow space provided by PII, IABEE secretariat has not moved yet. PII has agreed with IABEE to provide more space on the 6th floor and the renovation work will start soon.	
2. The accreditation documents are developped, and evaluators are trained.	・4 documents relating to accreditation criteria are developped in English and Indonesian languages. ・8 documentrs relating to evaluation are developped in English and Indonesian languages. ・200 evaluators for evaluation of engineering education programs are trained.	・IABEE Database		・Continue further improvement	

3. Some education programs are accredited.	50 education programs are accredited including pilot accreditations.	・IABEE Database		・For 2022, 36 new engineering programs and 3 new computing programs are under evaluation for general accreditation and 18 engineering programs are under evaluation for periodic accreditation (in total 57 in GA). 12 engineering programs and 7 computing programs are under evaluation for provisional accreditation (in total 19 in PA). Evaluation Teams will be physically conducting on-site visits to above study programs during a period from 17 October to 16 November 2022.	
4. IABEE's Request for provisional status is submitted to the Washington Accord.	The Washington Accord approves the provisional status of IABEE.	・Y/N		・Completed in 2019	
5. IABEE's Request for signatory status is submitted to the Washington Accord.	The Washington Accord approves the signatory status of IABEE.	・Y/N		・The Washington Accord Closed Session held on 1 July 2022 in a form of a videoconference unanimously voted in favor of the Washington Accord Verification Review Report, which recommended the signatory status of PII/IABEE. PII/IABEE has become the 23rd signatory. ・One representative of the same Verification Review Team will be physically visiting Indonesia in January/February 2023 to visit one of the 2 programs, IABEE Evaluation Teams' on-site visits to which the Verification Review Team virtually observed in 2021 and which were accredited by IABEE. The Verification Review Team will desk audit the current situation of the other 2 program, IABEE Evaluation Teams' on-site visits to which the Verification Review Team virtually observed in 2021 but which were NOT accredited by IABEE. The Verification Review Team will also review any actions or plans implemented by IABEE to address the Review Team's Recommendations for Improvement set out in the Phase 1 Verification Review Report based on the virtual review in 2021. ・The Verification Review Team report on the basis of the physical visit will be reviewed at the Washington Accord Closed session to be held in June 2023. If the signatories unanimously reaffirm their decision of 2022, the right of vote and the substantial equivalency of accredited program will be granted to PII/IABEE.	

Activities	Inputs		Pre-Conditions
	The Japanese Side	**The Indonesian Side**	
1-1 Identifying IABEE General Assembly members and Board members. Involving engineering societies as major players of IABEE activities.	a) Dispatch of Expert - Chief Advisor/Organization Management - Accreditation documents development - Advocacy, Training and Consultation - Program evaluation Website and databese development b) Short-termTraining in Japan and third countries c) Equipment - Website and database with necessary software and servers **In case of importation, the equioment will become the property of the government of Indonesia upon being delivered C.I.F. (cost, insurance and freight) to the Indonesian authorities concerned at the ports and/or airports of disembarkation.* d) A portion of implementation cost - Cost for experts' daily activities - Cost for pilot international evaluation	a) Personnel assignment -MORTHE counterpart personnel - IABEE key personnel and secretariat staff b) Facility - Suitable office space with necessary furniture and equipment for JICA experts -Suitable office space with necessary furniture and equipment for IABEE c) Equipment - Hosting and maintenance of website and database - Expenses necessary for transportation within Indonesia of the equipment provided by JICA as well as for the installation, operation and maintenance d) A portion of implementation cost - Cost for holding Committee meetings - Cost for holding Seminars - Cost for holding evaluator trainings - Cost for IEA meetings - Other Initial and running cost of IABEE	Necessary budge for the project implementation is secured.
1-2 Drawing up and reviewing midterm activity plan and financial plan of IABEE.			
1-3 Drawing up the Charter of IABEE.			
1-4 Recruting sectretariat staff			
1-5 Inaugurating IABEE Office			
1-6 Submitting to BAN-PT the document for establishment of IABEE.			**<Issues and countermesures>**
1-7 Training key personnel (executives and committee members) and sectretariat staff in Japan and in Indonesia			
2-1 Establishing a homepage for publicizing the documents of accreditation crteria and of evaluation of education programs. Setting up a database for evaluation related dossiers.			
2-2 Drawing up accreditation criteria in English.			
2-3 Translating the accreditation criteria into Indonesian language and publicizing on homepage.			
2-4 Drawing up documents relating to evaluation (R&P, guideline) in English.			
2-5 Translating the documents relating to evaluation into Indonesian language and publicizing on homepage.			
2-6 Organizing training courses for evaluator trainers in Japan.			
2-7 Organizing training courses for evaluator in Indonesia.			
3-1 Organizing advocacy seminars for educational institutions on accreditation for engineering education based on outcome evaluation.			
3-2 Providing educational institutions with consulting services for preparation of accreditation.			
3-3 Implementing some pilot evaluations to test the appropriateness of accreditation criteria and R&P of evaluation.			
3-4 Revising the documents relating to accreditation and evaluation if necessary			
3-5 Implementing evaluations for real accreditations.			
4-1 Attending IEA meetings for updating information and lobbying towards provisinal membership.			
4-2 Submitting to the Washington Accord a document requesting for the provisional status.			
5-1 Attending IEA meetings for updating information and lobbying towards the signatory membership.			

5-2 Submitting to the Washington Accord a document requesting for the signatory status.			

Engineering education*: Engineering education at Bachelor level

Project Monitoring Sheet I （Project Design Matrix）

Project Title: Project for the Establishment of Indonesia Accreditation Board for Engineering Education (IABEE) Version 18

Implementing Agency:Ministry of Education and Culture Dated 31 March 2023

Target Group: (Direct) General Assembly members (profesional engineerig societies), Board directors, Committee members, Secretsariat staff, evaluators,
(Indirect) Faculty and graduates of accredited enginnering education programs

Period of Project: November 2014 to August 2023 (8 years and 10 months)

Project Site:Jakarta and the whole country

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumption	Achievement	Remarks
Overall Goal					
Engineering education* provided by universities and institutes in Indonesia are changed from input based teaching to outcome based learning, responding to the needs of the society. The level of the engineering education is recognized by the international society as substantially equivalent to that of the countries of the Washington Accord signatories.	・Among 2,371 engineering education programs provided by public and private universities and instituites, 240 programs (10%) are accredited by IABEE.	・IABEE Database ・Y/N	Indonesian government's policy on Engineering Education does not change drastically.	・M/M for the Amendment of R/D was signed to extend the project until August 2023 as due to COVID-19 all WA Accord Reviews of 2020 (including the Verfication Review to PII/IABEE) were postponed to 2021 (in a virutal form）and to 2022 (in a physical form).	
Project Purpose					
An accreditation system is established to change engineering education* from input based teaching to outcome based learning, and IABEE becomes a signatory member of the Washington Accord.	・Among 2,371 engineering education programs provided by public and private universities and instituites, 50 programs (2%) are accredited by IABEE. ・IABEE is accepted as the signatory member of the Washington Accord.	・IABEE Database ・Y/N	Indonesian government's policy on Engineering Education does not change drastically.		
Outputs					
1. IABEE is established.	・The establishment of IABEE is approved by the Ministry of Education and Culture. ・Human resources, infrastructure and financial resources required for the functioning of IABEE are provided.	・Y/N ・IABEE Organization Chart, Financial Statement	MORTHE decree for instrument for evaluation of LAM is effectuated in appropriate timing.	・The interior work for the expansion of the office space for IABEE in PII's new building completed in January 2023. The secretariat of IABEE moved to PII's building in the beginning of January 2023.	
2. The accreditation documents are developped, and evaluators are trained.	・4 documents relating to accreditation criteria are developped in English and Indonesian languages. ・8 documentrs relating to evaluation are developped in English and Indonesian languages. ・200 evaluators for evaluation of engineering education programs are trained.	・IABEE Database		・Continue further improvement	

3. Some education programs are accredited.	50 education programs are accredited including pilot accreditations.	・IABEE Database		・11 new engineering programs have been granted with 5-year full period, 13 with interim accreditation with on-site visit, 3 with interim accreditation without on-site visit (in total 27). 9 engineering programs have not been accredited. 3 engineering programs having applied for evaluation under the Grace Period have been granted the interim accreditation. One was not accredited. Therefore, in 2022, 30 new engineering programs were accredited. ・All 18 engineering programs under periodic evaluation (re-evaluation) have been accredited (13 with full accreditation, 3 with interim accreditation with on-site visit ad 2 with interim accreditation without on-site visit. ・2 programs in 2016, 3 programs in 2017, 27 programs in 2018, 10 programs in 2019, 15 programs in 2020, 12 programs in 2021 and 30 programs in 2022 were accredited. As on 31 March 2023, 99 engineering programs in total are accredited.	
4. IABEE's Request for provisional status is submitted to the Washington Accord.	The Washington Accord approves the provisional status of IABEE.	・Y/N		・Completed in 2019	
5. IABEE's Request for signatory status is submitted to the Washington Accord.	The Washington Accord approves the signatory status of IABEE.	・Y/N		・The Washington Accord Closed Session held on 1 July 2022 unanimously voted in favor of the Washington Accord Verification Review Report, which recommended the signatory status of PII/IABEE. PII/IABEE has become the 23rd signatoryory. ・As the Phase 2 Verification Review, one representative of the same Verification Review Team physically visited Indonesia from 22 to 26 January 2023 to visit the 2 programs which the Verification Review Team virtually observed in 2021 and which were accredited by IABEE. The Verification Review Team also reviewed actions taken by IABEE to address the Review Team’s Recommendations for Improvement in 2022. ・ PII/IABEE.ABEE received at the end of February 2023 a draft report to re-affirm the Verification Review Team Report of 2022, which recommends IABEE signatory status with full privileges. ・The Verification Review Team Report on the basis of the physical visit will be reviewed at the Washington Accord Closed Session to be held on 14 June 2023. If the signatories unanimously re-affirm their decision of 2022, the right of vote and the substantial equivalency of accredited programs will be retroactively granted to	

Activities	Inputs		Pre-Conditions
	The Japanese Side	**The Indonesian Side**	
1-1 Identifying IABEE General Assembly members and Board members. Involving engineering societies as major players of IABEE	a) Dispatch of Expert - Chief Advisor/Organization Management - Accreditation documents development - Advocacy, Training and Consultation - Program evaluation Website and databese development b) Short-termTraining in Japan and third countries c) Equipment - Website and database with necessary software and servers **In case of importation, the equioment will become the property of the government of Indonesia upon being delivered C.I.F. (cost, insurance and freight) to the Indonesian authorities concerned at the ports and/or airports of disembarkation.* d) A portion of implementation cost - Cost for experts' daily activities - Cost for pilot international evaluation	a) Personnel assignment -MORTHE counterpart personnel - IABEE key personnel and secretariat staff b) Facility - Suitable office space with necessary furniture and equipment for JICA experts -Suitable office space with necessary furniture and equipment for IABEE c) Equipment - Hosting and maintenance of website and database - Expenses necessary for transportation within Indonesia of the equipment provided by JICA as well as for the installation, operation and maintenance d) A portion of	Necessary budge for the project implementation is secured. **<Issues and countermesures>**
1-2 Drawing up and reviewing midterm activity plan and financial plan of IABEE.			
1-3 Drawing up the Charter of IABEE.			
1-4 Recruting sectretariat staff			
1-5 Inaugurating IABEE Office			
1-6 Submitting to BAN-PT the document for establishment of IABEE.			
1-7 Training key personnel (executives and committee members) and sectretariat staff in Japan and in Indonesia			
2-1 Establishing a homepage for publicizing the documents of accreditation crteria and of evaluation of education programs. Setting up a database for evaluation related dossiers.			
2-2 Drawing up accreditation criteria in English.			
2-3 Translating the accreditation criteria into Indonesian language and publicizing on			
2-4 Drawing up documents relating to evaluation (R&P, guideline) in English.			
2-5 Translating the documents relating to evaluation into Indonesian language and publicizing on homepage.			
2-6 Organizing training courses for evaluator trainers in Japan.			

2-7 Organizing training courses for evaluator in Indonesia.		implementation cost - Cost for holding Committee meetings - Cost for holding Seminars - Cost for holding evaluator trainings - Cost for IEA meetings - Other Initial and running cost of IABEE	
3-1 Organizing advocacy seminars for educational institutions on accreditation for engineering education based on outcome			
3-2 Providing educational institutions with consulting services for preparation of accreditation.			
3-3 Implementing some pilot evaluations to test the appropriateness of accreditation criteria and R&P of evaluation.			
3-4 Revising the documents relating to accreditation and evaluation if necessary			
3-5 Implementing evaluations for real accreditations.			
4-1 Attending IEA meetings for updating information and lobbying towards provisinal membership.			
4-2 Submitting to the Washington Accord a document requesting for the provisional status.			
5-1 Attending IEA meetings for updating information and lobbying towards the signatory membership.			
5-2 Submitting to the Washington Accord a document requesting for the signatory status.			

Engineering education*: Engineering education at Bachelor level