

ENGINEERING TECHNICIAN EDUCATION PROGRAMME ACCREDITATION STANDARD (ETeAC)

&

ENGINEERING TECHNOLOGY PROGRAMME ACCREDITATION STANDARD (ETAC)

2019 vs 2020



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Assoc. Prof. Dr. Ir. Che Maznah Mat Isa (Panel 2)
Mr. Noor Azizan Itam (Panel 3)
Ir. Dr. Norazhar Abu Bakar (Moderator)
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ENGINEERING ACCREDITATION DEPARTMENT
BOARD OF ENGINEERS MALAYSIA
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Agenda

- ▶ Briefing on the changes in ETeAC Standard 2020 & ETAC Standard 2020
- ▶ Frequently Asked Questions
- ▶ Question and Answer





Notes on the period for which this Standard takes effect

1. Accreditation is accorded based on graduation years for students, not intake years.
2. Any new provision or any change to any existing provision in the Standard will take effect on 1st May 2020 and will be effective for all student cohorts from year 1 to year 3/4 (technician/technology).
3. Where programmes require time to adapt to any change, ETAC will allow adequate time for a reasonable transition to take place as justified by the programme.
4. In continually improving the Standards, the intention of ETAC is to accord the benefits to all students as soon as practically possible.

DEFINITION

Engineering Technician Education Programme Accreditation Standard

ETAC STANDARD 2019

ETeAC STANDARD 2020

- ▶ IEM - The Institution of Engineers, Malaysia
- ▶ MOE - Ministry of Education



Included IEM & MOE

Engineering Technology Programme Accreditation Standard

ETAC STANDARD 2019

ETAC STANDARD 2020

- ▶ MOHE - Ministry of Higher Education

- ▶ ETAD - Engineering Technology Accreditation Department
- ▶ MOE - Ministry of Education

Include ETAD & replace MOHE with MOE

Accreditation

ETAC STANDARD 2019

ETAC STANDARD 2019

ETeAC STANDARD 2020

ETAC STANDARD 2020

- ▶ Accreditation with interim condition - A programme given some conditions to be fulfilled within certain period of time which is shorter than the accorded accreditation period. A programme given some conditions to be fulfilled within certain period of time which is shorter than the accorded accreditation period.
- ▶ Continuing - A programme applying for extension of accreditation in the same cycle.



Include both terms in both ETeAC and ETAC Standard to be aligned with EAC Standard

1.0 INTRODUCTION

1.0 INTRODUCTION



ETAC STANDARD 2019

- ▶ The Board of Engineers Malaysia (BEM) traditionally registers graduates and professional engineers under the Registration of Engineers Act 1967. The pre-requisite for registration as a graduate engineer is any qualification in engineering recognised by the BEM. BEM is also in the process of registering engineering technologists who are also important stakeholders within the engineering workforce.

ETAC STANDARD 2020

- ▶ The Board of Engineers Malaysia (BEM) traditionally registers **inspector of works, engineering technologists,** graduate engineers and professional engineers under the Registration of Engineers Act 1967 (**Revised 2015**). The pre-requisite for registration **inspector of works, engineering technologists and** as a graduate engineers is any qualification in engineering recognised by the BEM. ~~BEM is also in the process of registering engineering technologists who are also important stakeholders within the engineering workforce.~~

Include terms:

"...inspector of works, engineering technologists and..."

&

"(Revised 2015)"

Deleted statement



1.0 INTRODUCTION

ETAC STANDARD 2019

- ▶ The BEM therefore has a duty to ensure that the quality of engineering technology education/programme of its registered technologists attains the minimum standard comparable to global practice. Hence the necessity to accredit engineering technology programmes conducted in IHLs.

ETAC STANDARD 2020

- ▶ The BEM therefore has a duty to ensure that the quality of **engineering, engineering technology and engineering technician** education/programme of its registered **engineers, engineering technologists and engineering technicians/inspector of works** attains the minimum standard comparable to global practice. Hence the necessity to accredit **engineering, engineering technology and engineering technician** education programmes conducted in IHLs.

Included terms:

Highlighted in red font

1.0 INTRODUCTION



ETAC STANDARD 2019

- ▶ Engineering Technology Accreditation Council (ETAC) is the body delegated by BEM for accreditation of engineering technology degrees. ETAC is made up of representatives from the Board of Engineers Malaysia (BEM), the Malaysian Qualification Agency (MQA), the Public Services Department (Jabatan Perkhidmatan Awam Malaysia (JPA)) and other relevant learned societies. The Terms of Reference of the ETAC are outlined in Appendix A (Engineering Technology Accreditation Council, Evaluation Panel and Accreditation Appeals Board).

ETAC STANDARD 2020

- ▶ Engineering Technology Accreditation Council (ETAC) is the body delegated by BEM for accreditation of engineering technology degrees **and engineering technician qualifications**. ETAC is made up of representatives from the ~~Board of Engineers Malaysia (BEM), the Malaysian Qualifications Agency (MQA), the Public Services Department (Jabatan Perkhidmatan Awam Malaysia (JPA)) and other~~ relevant learned societies, **related Ministries, related government agency, industry employers of Engineering Technologists and Engineering Technicians in Malaysia, and public representative**. The Terms of Reference of the ETAC are outlined in Appendix A (Engineering Technology Accreditation Council, Evaluation Panel and Accreditation Appeals Board).

Included terms:

Highlighted in red font

5.0 PROGRAMME OUTCOMES

5.0 PROGRAMME OUTCOMES

ETAC STANDARD 2019

iv Investigation: Conduct investigations of well-defined problems; locate and search relevant codes and catalogues, conduct standard tests and measurements;

vii Ethics: Understand and commit to professional ethics and responsibilities and norms of technician practice;

ETeAC STANDARD 2020

iv Investigation: Conduct investigations of well-defined problems; locate and search relevant codes and catalogues, conduct standard tests and measurements; (DK1 to DK4)

vii Ethics: Understand and commit to professional ethics and responsibilities and norms of technician practice; (DK7)



*Included terms
Knowledge Profiles
DK1-DK4 for PO iv
and
DK7 in PO vii*

5.0 PROGRAMME OUTCOMES



ETAC STANDARD 2019

- ▶ i. **Knowledge:** apply knowledge of mathematics, science, engineering fundamentals and an engineering specialisation to defined and applied engineering procedures, processes, systems or methodologies;
- ▶ ii. **Problem analysis:** Identify, formulate, research literature and analyse broadly-defined engineering problems reaching substantiated conclusions using analytical tools appropriate to their discipline or area of specialisation.;

ETAC STANDARD 2020

- ▶ i. **Knowledge:** apply knowledge of mathematics, science, engineering fundamentals and an engineering specialisation to defined and applied engineering procedures, processes, systems or methodologies; **(SK1 to SK4)**
- ▶ ii. **Problem analysis:** Identify, formulate, research literature and analyse broadly-defined engineering problems reaching substantiated conclusions using analytical tools appropriate to their discipline or area of specialisation; **(SK1 to SK4)**

Include Knowledge Profiles SK1-SK4 for

PO i and

PO ii

5.0 PROGRAMME OUTCOMES



ETAC STANDARD 2019

▶ iii. **Design/ development of solutions:** Design solutions for broadly-defined engineering technology problems and contribute to the design of systems, components or processes to meet specified needs with appropriate consideration for public health and safety, cultural, societal, and environmental considerations.;

▶ iv. **Investigation:** Conduct investigations of broadly-defined problems; locate, search and select relevant data from codes, data bases and literature, design and conduct experiments to provide valid conclusions.;

ETAC STANDARD 2020

▶ iii. **Design/ development of solutions:** Design solutions for broadly-defined engineering technology problems and contribute to the design of systems, components or processes to meet specified needs with appropriate consideration for public health and safety, cultural, societal, and environmental considerations; **(SK5)**

▶ iv. **Investigation:** Conduct investigations of broadly-defined problems; locate, search and select relevant data from codes, data bases and literature, design and conduct experiments to provide valid conclusions; **(SK8)**

Include Knowledge Profiles

SK5 in PO iii and SK8 in PO iv.

5.0 PROGRAMME OUTCOMES



ETAC STANDARD 2019

- ▶ v. Modern Tool Usage: Select and apply appropriate techniques, resources, and modern engineering and IT tools, including prediction and modelling, to broadly-defined engineering activities, with an understanding of the limitations.;
- ▶ vi. The Engineer and Society: Demonstrate understanding of the societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to engineering technology practice.;

ETAC STANDARD 2020

- ▶ v. Modern Tool Usage: Select and apply appropriate techniques, resources, and modern engineering and IT tools, including prediction and modelling, to broadly-defined engineering activities, with an understanding of the limitations;
(SK6)
- ▶ vi. The Engineer and Society: Demonstrate understanding of the societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to engineering technology practice;
(SK7)

Include Knowledge Profiles

SK6 in PO v and SK7 in PO vi



5.0 PROGRAMME OUTCOMES

ETAC STANDARD 2019

- ▶ **vii. Environment and Sustainability:** Understand the impact of engineering technology solutions in societal and environmental context and demonstrate knowledge of and need for sustainable development;
- ▶ **viii. Ethics:** Understand and commit to professional ethics and responsibilities and norms of engineering technology practice;

ETAC STANDARD 2020

- ▶ **vii. Environment and Sustainability:** Understand the impact of engineering technology solutions in societal and environmental context and demonstrate knowledge of and need for sustainable development; **(SK7)**
- ▶ **viii. Ethics:** Understand and commit to professional ethics and responsibilities and norms of engineering technology practice; **(SK7)**

Included Knowledge Profiles

SK7 in PO vii and SK7 in PO viii

6.0 ACCREDITATION POLICY

6.0 ACCREDITATION POLICY

6.1 THE ACCREDITATION PROCESS

ETAC STANDARD 2019

- ▶ Accreditation of engineering technology programmes undertaken by the ETAC at the request of the IHL is accorded to the engineering technology programmes.

ETAC STANDARD 2020

- ▶ Accreditation of engineering technology programmes undertaken by the ETAC at the request of the IHL. ~~is accorded to the engineering technology programmes.~~

Sentence is shortened

6.0 ACCREDITATION POLICY

6.3 Programmes

ETAC STANDARD 2019

- ▶ An IHL may offer programme/s via various modes and at different locations, such as fulltime, franchised, twinning, part-time, distance learning, joint degree, multi campus etc. For each of the programmes, the IHL shall apply for accreditation separately. However, if any programme at a different location and/or via a different mode of delivery fails to get accreditation and the diploma issued by the IHL does not differentiate with regard to the location and/or mode of delivery, ETAC may take action to withdraw accreditation of any such programmes by that IHL.

ETeAC STANDARD 2020

- ▶ An IHL may offer programme/s via various modes and at different locations, such as fulltime, franchised, twinning, part-time, distance learning, joint ~~degree~~ programme, multi campus etc. For each of the programmes, the IHL shall apply for accreditation separately. However, if any programme at a different location and/or via a different mode of delivery fails to get accreditation and the diploma issued by the IHL does not differentiate with regard to the location and/or mode of delivery, ETAC may take action to withdraw accreditation of any such programmes by that IHL.



*Replaced word
'degree' with
'programme'*

6.0 ACCREDITATION POLICY

6.4 Application and Preparation for Accreditation Visit



ETAC STANDARD 2019

- ▶ The IHL should make an application for programme accreditation as per the requirements of Section 8 of the Standard to ETAC and MQA. For programmes already in the Malaysian Qualification Register, application should be directed to ETAC only. Appendix C shows the process flow chart on Application for Accreditation and Approval of Engineering Technician Education Programmes.

ETeAC STANDARD 2020

- ▶ The IHL should make an application for programme accreditation as per the requirements of Section 8 of the Standard to **MQA and** ETAC—~~and MQA~~. For programmes already in the Malaysian Qualifications Register, application should be directed to ETAC only. Appendix C shows the process flow chart on Application for Accreditation and Approval of Engineering Technician Education Programmes.

*Switched place
"MQA and ETAC"*

6.0 ACCREDITATION POLICY

6.4 APPLICATION AND PREPARATION FOR ACCREDITATION VISIT

ETAC STANDARD 2019

- ▶ The IHL should make an application for programme accreditation as per the requirements of Section 8 of the Standard to MQA. Appendix C shows the process flow chart on Application for Accreditation and Approval of Engineering Technology Programmes.

ETAC STANDARD 2020

- ▶ The IHL should make an application for programme accreditation as per the requirements of Section 8 of the Standard to MQA **and ETAC**. Appendix C shows the process flow chart on Application for Accreditation and Approval of Engineering Technology Programmes.



Added
"and ETAC"

6.0 ACCREDITATION POLICY

6.6 Accreditation Decisions



ETAC STANDARD 2019

- ▶ Upon completion of the programme accreditation exercise, the ETAC, based on the recommendation of the Evaluation Panel, may decide on the graduating cohorts one of the following:
 - i. To accord accreditation for six years.
 - ii. To accord accreditation for less than six years.
 - iii. To decline accreditation. In such a case, a further application will normally not be considered within the next one year.

ETeAC STANDARD 2020

- ▶ Upon completion of the programme accreditation exercise, the ETAC, based on the recommendation of the Evaluation Panel, may decide on the graduating cohorts one of the following:
 - a. To accord accreditation
 - i. To accord for six years.
 - ii. To accord accreditation for less than six years **with interim report within three years.**
 - iii. **To accord for three years.**
 - a. **To defer accreditation for a period based on ETAC decision.**
 - b. To decline accreditation. ~~In such a case of decline,~~ A further application will normally not be considered within ~~the~~ **a period of** next one year.

**Additional
information**

6.0 ACCREDITATION POLICY

6.6 ACCREDITATION DECISION



ETAC STANDARD 2019

- ▶ Upon completion of the programme accreditation exercise, the ETAC, based on the recommendation of the Evaluation Panel, may decide on the graduating cohorts one of the following:
 - i. To accord accreditation for six years.
 - ii. To accord accreditation for less than six years.
 - iii. To decline accreditation. In such a case, a further application will normally not be considered within the next one year.

ETAC STANDARD 2020

- ▶ Upon completion of the programme accreditation exercise, the ETAC, based on the recommendation of the Evaluation Panel, may decide on the graduating cohorts one of the following:
 - i. To accord accreditation for six years.
 - ii. To accord accreditation for ~~less than~~ six years **with interim report within three years.**
 - iii. **To accord accreditation for three years**
 - iv. To decline/**defer** accreditation. In ~~such a case~~ **of decline**, a further application will normally not be considered within the next one year.

**Additional
information**

6.0 ACCREDITATION POLICY

6.6 Accreditation Decisions

ETAC STANDARD 2019 ➤ ETAC STANDARD 2020

ETAC STANDARD 2019 ➤ **ETeAC STANDARD 2020**

- ▶ A programme that has major shortcoming(s) is accorded less than six years accreditation. The IHL shall take appropriate actions to remedy the shortcoming(s), and submit evidence of such corrective action(s). If this is adjudged satisfactory, the remaining period of the accreditation may be accorded by the ETAC. A further visit will be scheduled to verify the results of the remedial action(s), if deemed necessary. Failure to address the shortcoming(s) may result in cessation of accreditation at the end of the stated period.

- ~~▶ A programme that has major shortcoming(s) is accorded less than six years accreditation. The IHL shall take appropriate actions to remedy the shortcoming(s), and submit evidence of such corrective action(s). If this is adjudged satisfactory, the remaining period of the accreditation may be accorded by the ETAC. A further visit will be scheduled to verify the results of the remedial action(s), if deemed necessary. Failure to address the shortcoming(s) may result in cessation of accreditation at the end of the stated period.~~



Deleted for both ETeAC and ETAC.

6.0 ACCREDITATION POLICY

6.6 Accreditation Decisions

ETAC STANDARD 2019

ETAC STANDARD 2019

- ▶ The ETAC's decision shall be sent to the IHL, through the MQA, with copies to BEM. The accreditation shall be accorded to a specific programme, location and mode.

▶ **ETeAC STANDARD 2020**

▶ **ETAC STANDARD 2020**

- ▶ The ETAC's decision shall be sent to the **MQA, IHL,** ~~through the MQA,~~ with copies to ~~BEM~~ **IHL, JPA and MOE.** The accreditation shall be accorded to a specific programme, location and mode.



Rewritten
statement for
both
ETeAC and ETAC.



6.0 ACCREDITATION POLICY

6.7 REVISIONS ON AN ACCREDITED PROGRAMME

ETAC STANDARD 2019

- ▶ The IHL shall advise the ETAC of any changes made to an accredited programme. Failure to do so may cause the ETAC to withdraw the accreditation. The ETAC may then direct the IHL to apply for re-accreditation of the revised programme.

ETAC STANDARD 2020

- ~~▶ The IHL shall advise the ETAC of any changes made to an accredited programme. Failure to do so may cause the ETAC to withdraw the accreditation. The ETAC may then direct the IHL to apply for re-accreditation of the revised programme.~~
- ▶ The IHL shall advise the ETAC of changes made to an accredited programme exceeding 30% thereof. Failure to do so may cause the ETAC to withdraw the accreditation. The ETAC may then direct the IHL to apply for re-accreditation of the revised programme. However, there is no guarantee that the programme will continue to be accredited if there is contravention with the changes.

*Clearer
statement*

6.0 ACCREDITATION POLICY

6.8 THE APPROVAL TO CONDUCT A PROGRAMME



ETAC STANDARD 2019

- ▶ The IHL should submit the complete set of documents as specified in Section 8 of this Standard to the ETAC through MQA for programme evaluation. The recommendation from ETAC shall be forwarded to the relevant authorities.

ETAC STANDARD 2020

- ▶ The IHL should submit the complete set of documents as specified in Section 8 of this Standard to the ETAC ~~through~~ and MQA for programme evaluation. The recommendation from ETAC shall be forwarded to the relevant authorities.

Replacement of word "through" with "and"

6.0 ACCREDITATION POLICY

6.9 PUBLICATION OF ACCREDITATION STATUS



ETAC STANDARD 2019

- ▶ ETAC shall regularly update the list of accredited programmes.

ETAC STANDARD 2020

- ~~▶ ETAC shall regularly update the list of accredited programmes.~~
- ▶ ETAC shall regularly update the list of provisionally accredited (recommended for approval) and accredited programmes.

Deleted statement

Additional statement

6.0 ACCREDITATION POLICY

6.10 PROCEDURES FOR APPEAL



ETAC STANDARD 2019

- ▶ The Appeals Board shall be constituted by BEM. The number of members including the Chairman shall not exceed 5 comprising of independent members.
- ▶ The decision of the Appeals Board shall be forwarded to the IHL within 3 months from the receipt of the complete documents. The decision of the Appeals Board shall be final.

ETAC STANDARD 2020

- ▶ The Appeals Board shall be constituted by BEM. The number of members including the Chairman shall not exceed ~~5~~ **be less than 3** comprising of independent members, **including a representative of MQA.**
- ▶ The decision of the Appeals Board shall be forwarded to the IHL **and MQA** within 3 months from the receipt of the complete documents. The decision of the Appeals Board shall be final.

**Additional
statement**

7.0 ACCREDITATION PROCEDURE

7.0 ACCREDITATION PROCEDURE

7.1 Application for Accreditation



ETAC STANDARD 2019

- ▶ The IHL should make an application for programme accreditation as per the requirements of Section 8 of the Standard to ETAC and MQA. Appendix C shows the process flow chart on Application for Accreditation and Approval of Engineering Technician Education Programmes.
- ▶ A cut-off period for submission of application for programme accreditation by IHL is twelve (12) months beyond graduation of any cohort, if the graduates are to be included in the accreditation decision.

ETeAC STANDARD 2020

- ▶ The IHL should make an application for programme accreditation as per the requirements of Section 8 of the Standard to **MQA and** ETAC ~~and MQA~~. Appendix C shows the process flow chart on Application for Accreditation and Approval of Engineering Technician Education Programmes.
- ▶ A cut-off period for submission of application for programme accreditation by IHL is twelve (12) months ~~beyond~~ **after** graduation of any cohort, if the graduates are to be included in the accreditation decision.

Switched place

*Replacement
word*

*"beyond" with
"after"*

7.0 ACCREDITATION procedure

7.1 APPLICATION FOR ACCREDITATION



ETAC STANDARD 2019

- ▶ The IHL should make an application for programme accreditation as per the requirements of Section 8 of the Standard to MQA. Appendix C shows the process flow chart on Application for Accreditation and Approval of Engineering Technology Programmes.
- ▶ For a current accredited programme, the IHL should apply for re-accreditation at least 6 months before the expiry date of the accreditation.

ETAC STANDARD 2020

- ▶ The IHL should make an application for programme accreditation as per the requirements of Section 8 of the Standard to **MQA and ETAC** ~~MQA~~. Appendix C shows the process flow chart on Application for Accreditation and Approval of Engineering Technology Programmes.
- ▶ For a current accredited programme, the IHL should apply for re-accreditation at least 6 months before the expiry date of the accreditation **to avoid delay in graduates' registration with BEM.**

**Additional
statement**



7.0 ACCREDITATION procedure

7.1 APPLICATION FOR ACCREDITATION

ETAC STANDARD 2019

- ▶ The IHL applying for accreditation shall ensure that complete information is forwarded to ETAC through MQA. If the information submitted is found to be insufficient, the IHL shall be required to provide further information before an accreditation visit can be scheduled. The application will be deemed to have been withdrawn, if the requested information is not submitted within a period of 3 months.

ETAC STANDARD 2020

- ▶ The IHL applying for accreditation shall ensure that complete information is forwarded to ETAC through MQA. If the information submitted is found to be insufficient, the IHL shall be required to provide further information before an accreditation visit can be scheduled. The application will be deemed to have been withdrawn, if the requested information is not submitted within a period of 3 months.
- ▶ A cut-off period for submission of application for programme accreditation by IHL is twelve (12) months after graduation of any cohort, if the graduates are to be included in the accreditation decision.

*Additional
statement*

7.0 ACCREDITATION PROCEDURE

7.2 Appointment of Evaluation Panel



ETAC STANDARD 2019

- ▶ The Guidelines for Evaluation Panel (Appendix G) (Guidelines on Evaluation Panel Report) are useful tools for ensuring that every important aspect of a degree programme and its delivery are assessed and reported on.

ETeAC STANDARD 2020

- ▶ The Guidelines for Evaluation Panel (Appendix G) (Guidelines on Evaluation Panel Report) are useful tools for ensuring that every important aspect of a ~~degree~~ **diploma** programme and its delivery are assessed and reported on.

*Replacement
"degree" with
"diploma"*

7.0 ACCREDITATION procedure

7.2 APPOINTMENT OF EVALUATION PANEL



ETAC STANDARD 2019

- ▶ On submission of all required documents, an Evaluation Panel shall be appointed as per Appendix A of this Standard. Members of the Evaluation Panel are selected on the basis of their expertise and standing in a particular discipline of engineering. Representatives from both the industry and academia may be appointed because of the perspective and experience that each area of endeavour can bring to the assessment of a programme, and to the maintenance of high professional standards.

ETAC STANDARD 2020

- ▶ On submission of all required documents, an Evaluation Panel shall be appointed as per Appendix A of this Standard. Members of the Evaluation Panel are selected on the basis of their expertise and standing in a particular discipline of engineering **or engineering technology**. Representatives from both the industry and academia may be appointed because of the perspective and experience that each area of endeavour can bring to the assessment of a programme, and to the maintenance of high professional standards.

Added
"or engineering technology"

7.0 ACCREDITATION procedure

7.2 APPOINTMENT OF EVALUATION PANEL



ETAC STANDARD 2019

- ▶ The Evaluation Panel needs to be aware of ETAC policies on accreditation as outlined in Section 6 of this Standard. The Evaluation Panel will assess all the accreditation criteria set forth in this Standard. The assessment includes the auditing and confirmation of documents submitted by the IHL.

ETAC STANDARD 2020

- ▶ The Evaluation Panel needs to be aware of ETAC policies on accreditation as outlined in Section 6 of this Standard. The Evaluation Panel will assess all the accreditation criteria set forth in this Standard. The assessment includes ~~the auditing and confirmation of documents submitted by the IHL~~ **obtaining objective evidence from documents submitted by the IHL, interviews and observation.**

Reword of statement

8.0 QUALIFYING REQUIREMENTS AND ACCREDITATION CRITERIA

8.0 QUALIFYING REQUIREMENTS AND ACCREDITATION CRITERIA



ETAC STANDARD 2019

- ▶ There are 8 components of the qualifying requirements and each programme is expected to have all the components. These components are:
- ▶ Minimum 90 SLT* credit units. A minimum of 60 SLT credit units shall be engineering or engineering technology courses, of which at least 50% time should be allocated for practice-oriented components in the technical and specialists areas.
- ▶ External examiner report (and availability of the process that requires a minimum of one report over two years)

ETeAC STANDARD 2020

- ▶ There are 8 components of the qualifying requirements and each programme is expected to have all the components. These components are:
- ▶ Minimum 90 SLT* credit units. A ~~minimum of~~ **At least** 60 SLT credit units shall be engineering or engineering technology courses, of which at least 50% time **a minimum 30 SLT credit units** ~~should~~ **shall** be allocated for practice-oriented components in the technical and specialist areas.
- ▶ External examiner report (and availability of the process that requires a minimum of one report over ~~two~~ **three** years)

Reword

Changed
from "two" with
"three"

8.0 QUALIFYING REQUIREMENTS AND ACCREDITATION CRITERIA



ETAC STANDARD 2019

- ▶ There are 8 components of the qualifying requirements and each programme is expected to have all the components. These components are:
 - ▶ 1 Minimum 140 SLT* credit units of which about 40-50% time should be allocated for practice-oriented components.
 - ▶ 6 External examiner's report

ETAC STANDARD 2020

- ▶ There are 8 components of the qualifying requirements and each programme is expected to have all the components. These components are:
 - ~~▶ Minimum 140 SLT* credit units of which about 40-50% time should be allocated for practice-oriented components.~~
 - ▶ 1 Minimum 140 SLT* credit unit. At least 100 SLT credit units shall be engineering or engineering technology courses, of which a minimum 50% 50 SLT credit units ~~should~~ shall be allocated for practice-oriented components in the technical and specialist area.
 - ▶ 6 External examiner's report (and availability of the process that requires a minimum of one report over two years)

Reword- clearer statement

Additional info on EE report

8.3

CRITERION 3:
ACADEMIC
CURRICULUM



8.3

CRITERION 3: ACADEMIC CURRICULUM

ETAC STANDARD 2019

- ▶ A balanced curriculum shall include all technical and non-technical attributes listed in the Programme Outcomes, and shall have the balance between the essential elements forming the core of the programme and additional specialist or optional studies (electives). The curriculum shall ensure that about 50% of the face to face time on technical and specialists components should be allocated for practice-oriented
- ▶ The academic programme component must consist of a normally three-year duration minimum 2.5 years duration of full-time-equivalent study with a minimum total of 90 SLT credit units (not including units for remedial courses) made up as follows:

ETeAC STANDARD 2020

- ▶ A balanced curriculum shall include all technical and non-technical attributes listed in the Programme Outcomes, and shall have the balance between the essential elements forming the core of the programme and additional specialist or optional studies (electives). ~~The curriculum shall ensure that about 50% of the face to face time on technical and specialists components should be allocated for practice-oriented~~
- ▶ The academic programme component must consist of a ~~normally three-year duration~~ **minimum 2.5 years duration** of full-time-equivalent study with a minimum total of 90 SLT credit units (not including units for remedial courses) made up as follows:

Deleted repetitive statement

Replaced with "minimum of 2.5 years duration"



8.3

CRITERION 3: ACADEMIC CURRICULUM

ETAC STANDARD 2019

- ▶ A balanced curriculum shall include all technical and non-technical attributes listed in the Programme Outcomes, and shall have the balance between the essential elements forming the core of the programme and additional specialist or optional studies (electives).
- ▶ The curriculum shall ensure that about 50% of the face to face time should be allocated for practice-oriented components.

ETAC STANDARD 2020

- ▶ A balanced curriculum shall include all technical and non-technical attributes listed in the Programme Outcomes, and shall have the balance between the essential elements forming the core of the programme and additional specialist or optional studies (electives).
- ~~▶ The curriculum shall ensure that about 50% of the face to face time should be allocated for practice-oriented components.~~

Deleted the repetitive statement



8.3

CRITERION 3: ACADEMIC CURRICULUM

ETAC STANDARD 2019

SLT Credit Units

- ▶ For industrial training, the following guideline shall be followed:
- Industrial training shall be for a minimum of 16 weeks and a maximum of one year

ETeAC STANDARD 2020

SLT Credit Units

- ▶ For industrial training, the following guideline shall be followed:
- The requirements for industrial training of a programme can be fulfilled in two approaches; the conventional and/or the Work-Based Learning.
- The conventional industrial training shall be adequately structured, supervised and recorded in log books/report.
- Industrial training shall be for a minimum of 16 weeks and a maximum of ~~one~~ 1 year.

Additional statement related to WBL approach



8.3

CRITERION 3: ACADEMIC CURRICULUM

ETAC STANDARD 2019

SLT Credit Units

- ▶ For industrial training, the following guideline shall be followed:
- industrial training shall be for a minimum of 6-month and a maximum of 1-year training.

ETAC STANDARD 2020

SLT Credit Units

- ▶ For industrial training, the following ~~guideline~~ shall be followed:
- The requirements for industrial training of a programme can be fulfilled in two approaches; the conventional and/or the Work-Based Learning.
- The conventional industrial training shall be adequately structured and evaluated to acquire appropriate competencies.
- Industrial training shall be for a minimum of ~~6-month~~ 24 weeks and a maximum of 1 year ~~training~~.

*Additional
statement
related to WBL
approach*

8.3

CRITERION 3: ACADEMIC CURRICULUM



ETAC STANDARD 2019

- One SLT credit unit is allocated for every 60 hours of gross working time where the student is expected to spend at least two thirds of the time (or 40 hours) learning the various crafts in the industry, subject to a maximum of 38 SLT credits.

ETeAC STANDARD 2020

SLT credit calculation for conventional industrial training

- ~~• One SLT credit unit is allocated for every 60 hours of gross working time where the student is expected to spend at least two thirds of the time (or 40 hours) learning the various crafts in the industry, subject to a maximum of 38 SLT credits.~~
- One (1) credit is allocated for every two (2) weeks of training.

Additional statement

Deleted statement

Additional information



8.3

CRITERION 3: ACADEMIC CURRICULUM

ETAC STANDARD 2019

- The SLT credit unit allocated shall be based on the Effective Learning Time (ELT) as described below, where the student is expected to spend at least 80% of the normal working time learning the various crafts in the industry, subject to a maximum of 38 SLT credits.

ETAC STANDARD 2020

SLT credit calculation for conventional industrial training

- ~~The SLT credit unit allocated shall be based on the Effective Learning Time (ELT) as described below, where the student is expected to spend at least 80% of the normal working time learning the various crafts in the industry, subject to a maximum of 38 SLT credits.~~
- **One (1) credit is allocated for every two (2) weeks of training.**

Additional statement

Deleted statement

Additional information

8.3

CRITERION 3: ACADEMIC CURRICULUM



ETAC STANDARD 2019

- The training shall be adequately structured, supervised and recorded in log books/report OR/AND;
- If any of the other courses comply with the BEM-ETAC Work-based Learning (WBL) Guidelines, the maximum total industrial placement period may be more than 1-year. The additional time allowable over the 1-year shall be total gross working time for every SLT credit (based on ELT) earned by WBL courses.

ETeAC STANDARD 2020

SLT credit calculation for WBL courses

- ~~• The training shall be adequately structured, supervised and recorded in log books/report OR/AND;~~
- ~~• If any of the other courses comply with the BEM-ETAC Work-based Learning (WBL) Guidelines, the maximum total industrial placement period may be more than 1-year. The additional time allowable over the 1-year shall be total gross working time for every SLT credit (based on ELT) earned by WBL courses.~~

Deleted statement

8.3

CRITERION 3: ACADEMIC CURRICULUM

ETAC STANDARD 2019

- The training shall be adequately structured, supervised and recorded in log books/report **OR/AND**;
- Work Based Learning (WBL): The total student learning hours allocated at the workplace is inclusive of the DL, IL, IG and assessment hours. The concept of ELT shall be given consideration in calculating the SLT and credits for WBL. It is estimated that about 80% of the time at work can be determined as ELT and the remains of 20% cannot be utilized for learning such as lunch breaks, socialising, work adjustments and travel time to work etc. Due to those considerations, SLT for WBL is calculated as described above.

ETAC STANDARD 2020

SLT credit calculation for WBL courses

- ~~• The training shall be adequately structured, supervised and recorded in log books/report **OR/AND**;~~
- ~~• Work Based Learning (WBL): The total student learning hours allocated at the workplace is inclusive of the DL, IL, IG and assessment hours. The concept of ELT shall be given consideration in calculating the SLT and credits for WBL. It is estimated that about 80% of the time at work can be determined as ELT and the remains of 20% cannot be utilized for learning such as lunch breaks, socialising, work adjustments and travel time to work etc. Due to those considerations, SLT for WBL is calculated as described above.~~

Deleted statement

8.3

CRITERION 3: ACADEMIC CURRICULUM

ETAC STANDARD 2019

- If any of the other courses comply with the BEM-ETAC Work-based Learning (WBL) Guidelines, the maximum total industrial placement period may be more than 1-year. The additional time allowable over the 1-year shall be total gross working time for every SLT credit (based on ELT) earned by WBL courses. This will effectively allow the total learning time based at the industry to be more than 1 year.

ETAC STANDARD 2020

- ~~• If any of the other courses comply with the BEM-ETAC Work-based Learning (WBL) Guidelines, the maximum total industrial placement period may be more than 1-year. The additional time allowable over the 1-year shall be total gross working time for every SLT credit (based on ELT) earned by WBL courses. This will effectively allow the total learning time based at the industry to be more than 1 year.~~

*Deleted
statement*

8.3

CRITERION 3: ACADEMIC CURRICULUM



ETAC STANDARD 2019

Practical Learning

- ▶ Engineering technician education programme shall ensure that at least 50% should be allocated for practice-oriented components. Students should be able to practise engineering skills to complement engineering theory that is learnt through lectures. Practice-oriented learning experiences should engage students with the use of facilities, equipment and instrumentation reflective of current industry practice which will help in developing competence in executing applied and experimental work. Students should work in groups, preferably not more than four in a group.

ETeAC STANDARD 2020

Practical Learning

- ▶ ~~Engineering technician education programme shall ensure that at least 50% should be allocated for practice-oriented components.~~ Students should be able to practise engineering skills to complement engineering theory that is learnt through lectures. Practice-oriented learning experiences should engage students with the use of facilities, equipment and instrumentation reflective of current industry practice which will help in developing competence in executing applied and experimental work. Students should work in groups, preferably not more than four in a group.

*Deleted
repetitive
statement*



8.3

CRITERION 3: ACADEMIC CURRICULUM

ETAC STANDARD 2019

Practical Learning

- ▶ About 40-50% time of total engineering technology core SLT should be allocated for practice-oriented components. Students should be able to practise engineering skills to complement engineering theory that is learnt through lectures. Practice-oriented learning experiences should engage students with the use of facilities, equipment and instrumentation reflective of current industry practice which will help in developing competence in executing applied and experimental work. Students should work in groups, preferably not more than five in a group.

ETAC STANDARD 2020

Practical Learning

- ▶ ~~About 40-50% time of total engineering technology core SLT should be allocated for practice-oriented components. Students should be able to practise engineering skills to complement engineering theory that is learnt through lectures. Practice-oriented learning experiences should engage students with the use of facilities, equipment and instrumentation reflective of current industry practice which will help in developing competence in executing applied and experimental work. Students should work in groups, preferably not more than five in a group.~~

*Deleted
repetitive
statement*



8.3

CRITERION 3: ACADEMIC CURRICULUM

ETAC STANDARD 2019

Training of Engineering Technician

- ▶ Training in engineering or engineering technology practice shall also be integrated throughout the curriculum as it is a key. In addition, exposure to professional engineering technology practice may also be obtained through a combination of the following:

ETeAC STANDARD 2020

Training of Engineering Technician

- ▶ Training in engineering or engineering technology practice shall also be integrated throughout the curriculum as it is a key. In addition, exposure to ~~professional engineering technology~~ **technician** practice may also be obtained through a combination of the following:

Replace
"technology"
with
"technician"

8.3

CRITERION 3: ACADEMIC CURRICULUM



ETAC STANDARD 2019

Industrial Training

- ▶ Industrial training is a key component of learning in an integrated academic curriculum. Due to its importance, the programme shall have a minimum of 6-months and a maximum of 1-year industrial training for each student. IHL shall put a strenuous effort to assist all students to gain placements of suitable quality.

Training in Engineering Practice

- (ix) interviewing engineering practitioners;

ETAC STANDARD 2020

Industrial Training

- ▶ Industrial training is a key component of learning in an integrated academic curriculum. Due to its importance, the programme shall have a minimum of ~~6-months~~ **24 weeks** and a maximum of 1 year industrial training for each student. IHL shall put a strenuous effort to assist all students to gain placements of suitable quality.

Training in Engineering Practice

- (ix) interviewing engineering **and engineering technology** practitioners;

Replaced "6-months" with "24 weeks"

Added "...and engineering technology"

8.4

CRITERION 4:
STUDENTS

8.4

CRITERION 4: STUDENTS

ETAC STANDARD 2019

- ▶ SPM or equivalent with at least credit in three subjects, including mathematics and, science or technical based subjects.

OR

- ▶ Accredited Certificate in Engineering, Engineering Technology, Technical or Malaysian Skills Certificate Level 3.

▶ Note:

- ▶ 1. Technical Certificate refers to certificates in an engineering field without 'engineering' in the programme's name.
- ▶ 2. Malaysian Skills Certificate Level 3 programmes are accredited by the Skills Development Division (SDD) under the Ministry of Human Resource. These programmes are at Level 3 in the Malaysian Qualifications Framework.

ETeAC STANDARD 2020

- ▶ SPM or equivalent with at least credit in ~~three~~ **two** subjects, ~~including~~ mathematics and, **natural** sciences or technical based subjects.

OR

- ▶ Accredited Certificate in Engineering, Engineering Technology, Technical or Malaysian Skills Certificate Level 3 **with PT3₂ or equivalent**

~~▶ Note:~~

- ~~▶ 1. Technical Certificate refers to certificates in an engineering field without 'engineering' in the programme's name.~~
- ~~▶ 2. Malaysian Skills Certificate Level 3 programmes are accredited by the Department of Skills Development (DSD) under the Ministry of Human Resource. These programmes are at Level 3 in the Malaysian Qualifications Framework.~~



**New
information
on entry
requirements**

**Deleted
statement**



8.4

CRITERION 4: STUDENTS

ETAC STANDARD 2019

OR

- ▶ Recognised related Technical/Vocational/Skills qualifications AND an adequate and relevant bridging programme
- ▶ Note:
 - ▶ 1. These are certificate level programmes recognized by the ETAC which are not accredited as Level 3 in the MQF either by the MQA or SDD.
 - ▶ 2. A bridging programme is full -time programme to improve students' understanding in subjects that relate to the diploma programme. The programme itself does not contribute any credit towards the diploma.
 - ▶ 3. Adequacy and relevancy of the bridging programme offered by the IHL would be determined by the ETAC in terms of content coverage and duration of study.

ETeAC STANDARD 2020

OR

- ▶ Recognised related Technical/Vocational/Skills qualifications AND an adequate and relevant bridging programme
- ▶ ~~Note:
 - ▶ 1. These are certificate level programmes recognized by the ETAC which are not accredited as Level 3 in the MQF either by the MQA or DSD.
 - ▶ 2. A bridging programme is full -time programme to improve students' understanding in subjects that relate to the diploma programme. The programme itself does not contribute any credit towards the diploma.
 - ▶ 3. Adequacy and relevancy of the bridging programme offered by the IHL would be determined by the ETAC in terms of content coverage and duration of study.~~

Deleted statement



8.4

CRITERION 4: STUDENTS

ETAC STANDARD 2019

- ▶ A programme shall have clear policies on credit transfer. IHLs must put in place the mechanism for credit transfer or exemptions to allow alternative educational pathways. A maximum of 50% of the total credit units is allowed for lateral (horizontal) credit transfer from a similar level accredited programme.
- ▶ A maximum of 50% of the total credit units is allowed for lateral (horizontal) credit transfer from a similar level accredited programme. A maximum 30% of total credit units is allowed for vertical credit exemption from level 3 to level 4 of MQF. If the IHL, or IHLs in formal collaboration, have designed both programme curricula together to ensure continuity, coherence and completeness, the maximum transfer allowed is 50%.

ETeAC STANDARD 2020

- ▶ A programme shall have clear policies on credit transfer. IHLs must put in place the mechanism for credit transfer or exemptions to allow alternative educational pathways. ~~A maximum of 50% of the total credit units is allowed for lateral (horizontal) credit transfer from a similar level accredited programme.~~
- ▶ A maximum of 50% of the total credit units is allowed for lateral (horizontal) credit transfer from a similar level accredited programme. A maximum 30% of total credit units is allowed for vertical credit exemption ~~from level 3 to level 4 of MQF.~~ **credit transfer**. If the IHL, or IHLs in formal collaboration, have designed both programme curricula together to ensure continuity, coherence and completeness, the maximum transfer allowed is 50%.
- ▶ **Credit transfer as described above, may include APEL C components as prescribed by MQA based on appropriate justifications by the IHL**

*Deleted
repetitive
statement*

*Added
"credit
transfer"*

*Additional
statement*



8.4

CRITERION 4: STUDENTS

ETAC STANDARD 2019

- ▶ Students intending to pursue engineering technology programmes shall have a good understanding of mathematics and physical sciences.
- ▶ A maximum of 50% of the total credit units is allowed for lateral (horizontal) credit transfer from a similar level accredited programme. However only 30% is allowed for credit transfer from diploma level to degree level.

ETAC STANDARD 2020

- ▶ Students intending to pursue engineering technology programmes shall have a good understanding of mathematics and **physical** **natural** sciences.
- ▶ **IHLs shall ensure that students, who do not meet the above criteria, undertake suitable remedial programmes in order to attain the equivalent entry qualification.**
- ▶ A maximum of 50% of the total credit units is allowed for lateral (horizontal) credit transfer from a similar level accredited programme. **However only A maximum 30% of total credit units** is allowed for **vertical** credit transfer from diploma level to degree level.

Replaced
"physical"
with
"natural"

Additional
statement

Additional
words

8.5

CRITERION 5:
TEACHING AND
SUPPORT STAFF

8.5

CRITERION 5: TEACHING AND SUPPORT STAFF



ETAC STANDARD 2019

- ▶ It must be demonstrated that the teaching staff have the competencies to cover all areas of the programme, and are fully aware of the outcome-based approach to education. In addition, teaching staff shall be sufficient in number and capability to accommodate student-staff interaction, advising and counselling, service activities, professional development, and interaction with practitioners and employers. This is to ensure the quality of the engineering technician programme and the attainment of its stated outcomes. As a guide, a viable engineering technology department would be expected to have a minimum of 6 full-time Teaching staff in the particular engineering discipline.

ETeAC STANDARD 2020

- ▶ It must be demonstrated that the teaching staff have the competencies to cover all areas of the programme, and are fully aware of the outcome-based approach to education. In addition, teaching staff shall be sufficient in number and capability to accommodate student-staff interaction, advising and counselling, service activities, professional development, and interaction with practitioners and employers. This is to ensure the quality of the engineering technician programme and the attainment of its stated outcomes. As a guide, a viable engineering/**engineering** technology department would be expected to have a minimum of 6 full-time teaching staff in the particular engineering discipline.

**Additional
word**

8.5

CRITERION 5: TEACHING AND SUPPORT STAFF



ETAC STANDARD 2019

- ▶ Teaching staff shall have bachelor degrees or higher. However, a staff member with accredited diploma and 5-year industrial/specialist experience with acceptable professional qualifications may be considered. 30% of the lecturers/instructors must have a professional certification or at least TWO (2) years of relevant industrial work experience. If this is not met, the institution should have a staff industrial attachment scheme in place.

ETeAC STANDARD 2020

- ▶ Teaching staff shall have bachelor degrees or higher. However, a staff member with accredited diploma and 5-year industrial/specialist experience with acceptable professional qualifications may be considered. 30% of the lecturers/instructors must have a professional/**industrial/specialist** certification or at least TWO (2) years of relevant industrial work experience. If this is not met, the institution should have a staff industrial attachment scheme in place.

Additional
“.../**industrial/
specialist**”



8.5

CRITERION 5: TEACHING AND SUPPORT STAFF

ETAC STANDARD 2019

- ▶ Teaching staff shall have postgraduate degrees (Masters level or higher). However, a staff member with first degree and 5-year industrial/specialist experience with acceptable professional qualifications may be considered. 30% of the lecturers/instructors must have a professional certification or at least at least TWO (2) years of relevant industrial work experience. If this is not met, the institution should have a staff industrial attachment scheme in place.

ETAC STANDARD 2020

- ▶ Teaching staff shall have postgraduate degrees (Masters level or higher). However, a staff member with first degree and 5-year industrial/specialist experience with acceptable professional qualifications may be considered. 30% of the lecturers/instructors must have a professional/**industrial/specialist** certification or ~~at least~~ at least TWO (2) years of relevant industrial work experience. If this is not met, the institution should have a staff industrial attachment scheme in place.

Added
“.../**industrial/
specialist**”

8.5

CRITERION 5: TEACHING AND SUPPORT STAFF



ETAC STANDARD 2019

- ▶ There shall also be sufficient, qualified and experienced technical and administrative staff to provide adequate support to the educational programme. It is recommended that each technical staff shall be in charge of not more than two laboratories.

ETeAC STANDARD 2020

- ▶ There shall also be sufficient, qualified and experienced technical and administrative staff to provide adequate support to the educational programme. It is recommended that each technical staff shall be in charge of not more than two laboratories.
- ▶ Sharing lecturer between programmes is allowed, and will count for staff-student ratio and minimum teaching staff calculations based on FTE guidelines.
- ▶ Part time staff from industry is encouraged, and will counted for staff-student ratio calculations based on FTE guidelines.

Additional information sharing of lecturers and FTE guidelines

8.7

**CRITERION 7:
QUALITY
MANAGEMENT
SYSTEM**

8.7 CRITERION 7: QUALITY MANAGEMENT SYSTEMS

8.7.2 Programme Quality Management and Planning



ETAC STANDARD 2019

- ▶ Programme(s) via various modes and at different locations, such as, full-time, franchised, twinning, part-time, distance learning, joint degree and multi campus may be conducted. The IHL awarding the diploma shall be responsible for ensuring the quality and management of these programmes.

ETeAC STANDARD 2020

- ▶ Programme(s) via various modes and at different locations, such as, full-time, franchised, twinning, part-time, distance learning, joint ~~degree~~ **programme** and multi campus may be conducted. The IHL awarding the diploma shall be responsible for ensuring the quality and management of these programmes.

*Replaced word
"degree" with
"programme"*

8.7 CRITERION 7: QUALITY MANAGEMENT SYSTEMS

8.7.3 External Assessment and Advisory System



ETAC STANDARD 2019

- ▶ The external examiner is a person of high academic standing in the relevant or engineering technician discipline and preferably with substantial industry experience. The external examiner is expected to carry out the overall assessment of the programme including staff as well as all courses and laboratory work undertaken by the students. Assessment is to be made at least once every two years.

ETeAC STANDARD 2020

- ▶ The external examiner is a person of high academic standing in the relevant or engineering technician discipline and preferably with substantial industry experience. The external examiner is expected to carry out the overall assessment of the programme including staff as well as all courses and laboratory work undertaken by the students. Assessment is to be made at least once every ~~two~~ **three** years.

*Changed to
"once every
three years"*



8.7 CRITERION 7: QUALITY MANAGEMENT SYSTEMS

8.7.3 EXTERNAL ASSESSMENT AND ADVISORY SYSTEM

ETAC STANDARD 2019

- ▶ The external examiner is a person of high academic standing in the relevant engineering discipline and preferably with substantial industry experience. The external examiner is expected to carry out the overall assessment of the programme including staff as well as all courses and laboratory work undertaken by the students. Assessment is to be made at least twice during the 6-year accreditation cycle, preferably once during the initial period of the accreditation cycle and another before the next accreditation visit.

ETAC STANDARD 2020

- ▶ The external examiner is a person of high academic standing in the relevant engineering discipline and preferably with substantial industry experience. The external examiner is expected to carry out the overall assessment of the programme including staff as well as all courses and laboratory work undertaken by the students. ~~Assessment is to be made at least twice during the 6-year accreditation cycle, preferably once during the initial period of the accreditation cycle and another before the next accreditation visit.~~ **Assessment is to be made at least once every two years.**

**Changed to
"once every
two years"**

9.0 ACCREDITATION DOCUMENTS



9.0 ACCREDITATION DOCUMENTS

9.1 INTRODUCTION

ETAC STANDARD 2019

- ▶ For each programme to be accredited, unless otherwise stated, the IHL shall submit the following documents:
 - i. Self-Assessment Report (as noted in Section 9.2 of this Standard) - Hardcopy

ETAC STANDARD 2020

- ▶ For each programme to be accredited, unless otherwise stated, the IHL shall submit the following documents:
 - i. Self-Assessment Report (as noted in Section 9.2 of this Standard) - ~~Hardcopy~~ **Digital Format**

Changed to
"Digital
Format"

9.0 ACCREDITATION DOCUMENTS

9.2.4 Academic Curriculum



ETAC STANDARD 2019

(iii) The information required in items (i) and (ii) should include but is not limited to the following:

- ▶ A matrix linking courses to Programme Outcomes to identify the contribution of each course to the Programme Outcomes.
- ▶ Distribution of the engineering technician courses according to broad areas specific to each programme
- ▶ Distribution of the related non-engineering (general education) courses.
- ▶ Distribution of the courses offered according to semester.

ETeAC STANDARD 2020

(iii) The information required in items (i) and (ii) should include but is not limited to the following:

- ▶ A matrix linking courses to Programme Outcomes to identify the contribution of each course to the Programme Outcomes.
- ▶ Distribution of the engineering technician courses ~~according to broad areas specific to each programme~~ (with industrial training and WBL courses).
- ▶ Distribution of the ~~related non-engineering (general education)~~ courses.
- ▶ Distribution of the courses offered according to semester.

*Replaced with
" (with
industrial
training and
WBL courses)*



9.0 ACCREDITATION DOCUMENTS

9.2.4 ACADEMIC CURRICULUM

ETAC STANDARD 2019

(iii) The information required in items (i) and (ii) should include but is not limited to the following:

- A matrix linking courses to Programme Outcomes to identify the contribution of each course to the Programme Outcomes.
- Distribution of the engineering technology courses according to areas specific to each programme.
- Distribution of the related non-engineering (general education) courses.
- Distribution of the courses offered according to semester.

ETAC STANDARD 2020

(iii) The information required in items (i) and (ii) should include but is not limited to the following:

- A matrix linking courses to Programme Outcomes to identify the contribution of each course to the Programme Outcomes.
- Distribution of the engineering technology courses according to areas specific to each programme (**with industrial training and WBL courses**).
- Distribution of the ~~related non-engineering (general education)~~ courses.
- Distribution of the courses offered according to semester.

*Replaced with
" (with
industrial
training and
WBL courses)*

Deleted

9.0 ACCREDITATION DOCUMENTS

9.2.5 Students

ETAC STANDARD

2019

(iv) The information required in items (i) to (v) should include but is not limited to the following:

- The distribution of students' enrolment for all academic years for the past four years (Table 6 in Appendix G).
- The entry qualifications of final year students of the current semester (Table 7 in Appendix G).

ETeAC STANDARD 2020

(iv) The information required in items (i) to (v) should include but is not limited to the following:

- The distribution of students' enrolment for all academic years for the past ~~four~~ **three** years (Table 6 in Appendix G).
- The entry qualifications of final year students of the current semester (Table 7 in Appendix G).

Replaced "four" with
"three"





9.0 ACCREDITATION DOCUMENTS

9.2.6 Teaching and Support Staff

ETAC STANDARD 2019

- (iv) The information required in items (i) to (iii) should include but is not limited to the following:
- A breakdown in terms of numbers of teaching staff (full-time, part-time and inter-programme) by year for the past four years (Table 8 in Appendix G).
 - A summary of the professional qualifications and membership in professional bodies/societies of teaching staff (Table 11 in Appendix G).
 - The staff: student ratio by year for all academic years for the past four years (Table 16 in Appendix G).

ETeAC STANDARD 2020

- (iv) The information required in items (i) to (iii) should include but is not limited to the following:
- A breakdown in terms of numbers of teaching staff (full-time, part-time and inter-programme) by year for the past ~~four~~ **three** years (Table 8 in Appendix G).
 - A summary of the professional/**industrial/specialist** qualifications **certifications** and membership in professional bodies/societies of teaching staff (Table 11 in Appendix G).
 - The staff: student ratio by year for all academic years for the past ~~four~~ **three** years (Table 16 in Appendix G).

Replaced "four" with "three"

Added
"/industrial/
specialist"

Added
"certifications
" to replace
qualifications"

Replaced "four" with "three"



9.0 ACCREDITATION DOCUMENTS

9.2.6 TEACHING AND SUPPORT STAFF

ETAC STANDARD 2019

(iv) The information required in items (i) to (iii) should include but is not limited to the following:

- A summary of the professional qualifications and membership in professional bodies/societies of teaching staff (Table 11 in Appendix G).

ETAC STANDARD 2020

(iv) The information required in items (i) to (iii) should include but is not limited to the following:

- A summary of the professional ~~qualifications~~ **certifications** and membership in professional bodies/societies of teaching staff (Table 11 in Appendix G).

Added
"/industrial/
specialist
Added
"certifications
" to replace
qualifications"

**10.0 APPROVAL
PROCEDURE FOR A
NEW ENGINEERING
TECHNICIAN
EDUCATION &
TECHNOLOGY
PROGRAMMES**

10.0 APPROVAL PROCEDURE FOR A NEW ENGINEERING TECHNICIAN EDUCATION PROGRAMME

10.1 ETeAC's Initial Evaluation



ETAC STANDARD 2019

(a) Application for Approval to Conduct a New Engineering Technician Education programme

- ▶ The IHL should submit the complete set of documents (refer to Section 9 and Appendix G) to ETAC and MQA (refer to Appendix C for process) for initial evaluation by ETAC. The recommendation from ETAC will be forwarded to the relevant authorities.

ETeAC STANDARD 2020

(a) Application for Approval to Conduct a New Engineering Technician Education programme

- ▶ The IHL should submit the complete set of documents (refer to Section 9 and Appendix G) to **MQA and** ETAC ~~and MQA~~ (refer to Appendix C for process) for initial evaluation by ETAC. The recommendation from ETAC will be forwarded to the relevant authorities.

Switched place
"MQA and
ETAC"



10.0 APPROVAL PROCEDURE FOR A NEW ENGINEERING TECHNOLOGY PROGRAMME

10.1 ETAC'S INITIAL EVALUATION

ETAC STANDARD 2019

- (a) Application for Approval to Conduct a New Degree Programme
- ▶ The IHL should submit the complete set of documents (refer to Section 9 and Appendix G) through MQA (as appropriate) (refer to Appendix D for process) for initial evaluation by ETAC. The recommendation from ETAC will be forwarded to the relevant authorities.

ETAC STANDARD 2020

- (a) Application for Approval to Conduct a New Degree Programme
- ▶ The IHL should submit the complete set of documents (refer to Section 9 and Appendix G) **to MQA and ETAC** through MQA (as appropriate) (refer to **Appendix C** for process) for initial evaluation by ETAC. The recommendation from ETAC will be forwarded to the relevant authorities.

Switched place
"MQA and
ETAC"

Replaced
"Appendix D"
with
"Appendix C"

10.0 APPROVAL PROCEDURE FOR A NEW ENGINEERING TECHNICIAN EDUCATION PROGRAMME

10.1 ETAC's Initial Evaluation



ETAC STANDARD 2019

(b) Initial Evaluation

- ▶ ETAC shall appoint an Evaluation Panel to evaluate the proposed programme.
- ▶ The evaluation shall cover the following areas:
 - (i) general awareness of current development in engineering education and engineering practice;

ETeAC STANDARD 2020

(b) Initial Evaluation

- ▶ ETAC shall appoint an Evaluation Panel to evaluate the proposed programme.
- ▶ The evaluation shall cover the following areas:
 - (i) general awareness of current development in engineering **technician** education and engineering practice;

Added word
"technician"

LIST OF APPENDICES



LIST OF APPENDICES

ETAC STANDARD 2019

Appendix C - Flow chart on Application for Accreditation and Approval of Engineering Technician Programmes

ETeAC STANDARD 2020

Appendix C - Flow chart on Application for Accreditation and Approval of Engineering Technician **Education** Programmes

*Added word
"Education"*



*Changes are the same
for both ETAC and
ETeAC Standards*

APPENDIX A

1.0 ENGINEERING TECHNOLOGY ACCREDITATION COUNCIL

ETAC STANDARD 2019

ETAC STANDARD 2019

- ▶ Members of ETAC shall be appointed by BEM as follows:
 - a) A Chairman (nominated by BEM)
 - b) A Deputy Chairman (nominated by BEM from IHL producing Engineering Technologists and Engineering Technicians or any related body)
 - c) 19 members representing each of major branches of engineering technology (e.g. Civil, Mechanical, Electrical, Chemical and Electronics) and each of the constituent organisations nominated by BEM, learned societies and any related body.

ETAC STANDARD 2020

ETeAC STANDARD 2020

- ▶ Members of ETAC shall be appointed by BEM as follows:
 - a) A Chairman (nominated by BEM)
 - b) A Deputy Chairman (nominated by BEM from IHL producing Engineering Technologists and Engineering Technicians or any related body)
 - c) **1 MQA representative**
 - d) ~~19~~ **18** members representing each of major branches of engineering technology (e.g. Civil, Mechanical, Electrical, Chemical and Electronics) and each of the constituent organisations nominated by BEM, learned societies and any related body.

APPENDIX A

1.0 ENGINEERING TECHNOLOGY ACCREDITATION COUNCIL



ETAC STANDARD 2019

ETAC STANDARD 2019

- a. members nominated by BEM, of which minimum 2 from IHLs producing Engineering Technologist
- b. members from relevant learned societies
- c. members from related Ministries
- d. member from related government agency
- e. members from the industry employers of Engineering Technologists and Engineering Technicians in Malaysia
- f. public representative

d) Ex-Officio: Registrar of BEM
Secretary of BEM

ETAC STANDARD 2020

ETeAC STANDARD 2020

- (i) member(s) nominated by BEM, of which minimum 2 from IHLs producing Engineering Technologists and/or Engineering Technicians
- (ii) member(s) from relevant learned societies
- (iii) member(s) from related Ministries
- (iv) member(s) from related government agency
- (v) member(s) from the industry employers of Engineering Technologists and Engineering Technicians in Malaysia
- (vi) public representative(s)

e) Ex-Officio: Registrar of BEM
Secretary of BEM

Changes are the same for both ETAC and ETeAC Standards

APPENDIX A

1.0 ENGINEERING TECHNOLOGY ACCREDITATION COUNCIL



ETAC STANDARD 2019

ETAC STANDARD 2019

The terms of reference of the ETAC shall be as follows:

- Advise the Board on public statements or representations that should be made in relation to engineering technician education.
- Hold consultation meetings with IHLs as and when necessary.
- Hold meetings at least 6 times per year.
- Expand the existing ETAC Standard so as to cover diploma programmes for engineering technician.
- Propose additional ETAC members if necessary.

ETAC STANDARD 2020

ETeAC STANDARD 2020

The terms of reference of the ETAC shall be as follows:

10. Advise the Board on public statements or representations that should be made in relation to engineering technician education.
11. Hold consultation meetings with IHLs as and when necessary.
12. Hold meetings at least 6 times per year.
13. ~~Expand the existing ETAC Standard so as to cover diploma programmes for engineering technician.~~
14. Propose additional ETAC members if necessary.

Changes are the same for both ETAC and ETeAC Standards

Deleted



APPENDIX A

2.0 EVALUATION FOR APPROVAL TO CONDUCT A NEW PROGRAMME

ETAC STANDARD 2019

ETAC STANDARD 2019

- ▶ The ETAC shall appoint an evaluator to assess the application. The person should have extensive academic experience and/or industrial experience.

ETAC STANDARD 2020

ETeAC STANDARD 2020

- ▶ The ETAC shall appoint an evaluator **evaluation panel** to assess the application. The person should have extensive academic experience and/or industrial experience.

*Same for both ETAC
and ETeAC
Standards*

APPENDIX A

3.0 EVALUATION PANEL FOR ACCREDITATION



Same for both ETAC
and ETeAC
Standards

ETAC STANDARD 2019

ETAC STANDARD 2019

- ▶ The Evaluation Panel shall be appointed by ETAC and normally consists of:
 - A Chairperson; and
 - two members.
- ▶ All three members are typically chosen for their broad experience in engineering/engineering technology and their ability to evaluate the generic programme outcomes and quality systems. The Evaluation Panel should include at least one member with extensive academic experience, and one member with extensive industry experience. All members must be chosen from fields related to the programme being evaluated.

ETAC STANDARD 2020

E**T**eAC STANDARD 2020

- ▶ The Evaluation Panel shall be appointed by ETAC and normally consists of:
 - A Chairperson; and
 - **One or** two members.
- ▶ All ~~three~~ members are typically chosen for their broad experience in engineering/engineering technology/**technician** education and their ability to evaluate the generic programme outcomes and quality systems. The Evaluation Panel should include at least one member with extensive academic experience, and one member with extensive industry experience. All members must be chosen from fields related to the programme being evaluated.

APPENDIX C: Process Flow Chart for Application of Accreditation and Approval



Same for both ETAC
and ETeAC
Standards
and aligned with
EAC Standard

ETAC STANDARD 2019

ETAC STANDARD 2019

ETAC STANDARD 2020

ETeAC STANDARD 2020

- ▶ Refer [Appendix C](#)

- ▶ Amendment has been made to be aligned with EAC Standard and current practice
- ▶ Refer [Appendix C](#)



APPENDIX D: Evaluation Panel Report

ETAC STANDARD 2019

ETAC STANDARD 2019

ETAC STANDARD 2020

ETeAC STANDARD 2020

- ▶ Refer [Appendix D](#)

- ▶ Amendment has been made to be aligned with EAC Standard
- ▶ Refer [Appendix D](#)

*Same for both ETAC
and ETeAC
Standards and
aligned with EAC
Standard 2020*



Appendix D - Evaluation Panel Report

Simplified to “Yes/No” for Criterion 1: Programme Educational Objectives and from Criterion 4: Students to Criterion 7: QMS

Same for both ETAC and ETeAC Standards and aligned with EAC Standard 2020

1 CRITERION 1: PROGRAMME EDUCATIONAL OBJECTIVES

Comments/Remarks on Programme Educational Objectives: The Evaluation Panel shall comment on the appropriateness of the Programme Educational Objectives as required by Section 4.0 and 8.1 of the Standard.

1.1 General Observations:

Performance Indicators									
Statements are well-defined, measurable and achievable	<table border="1"> <tr> <td>YES</td> <td><input type="checkbox"/></td> <td>NO</td> <td><input type="checkbox"/></td> </tr> <tr> <td colspan="4">Remarks:</td> </tr> </table>	YES	<input type="checkbox"/>	NO	<input type="checkbox"/>	Remarks:			
YES	<input type="checkbox"/>	NO	<input type="checkbox"/>						
Remarks:									
Statements are well published and publicised	<table border="1"> <tr> <td>YES</td> <td><input type="checkbox"/></td> <td>NO</td> <td><input type="checkbox"/></td> </tr> <tr> <td colspan="4">Remarks:</td> </tr> </table>	YES	<input type="checkbox"/>	NO	<input type="checkbox"/>	Remarks:			
YES	<input type="checkbox"/>	NO	<input type="checkbox"/>						
Remarks:									
Clear linkage between Programme Educational Objectives and Programme Outcomes	<table border="1"> <tr> <td>YES</td> <td><input type="checkbox"/></td> <td>NO</td> <td><input type="checkbox"/></td> </tr> <tr> <td colspan="4">Remarks:</td> </tr> </table>	YES	<input type="checkbox"/>	NO	<input type="checkbox"/>	Remarks:			
YES	<input type="checkbox"/>	NO	<input type="checkbox"/>						
Remarks:									

4 CRITERION 4: STUDENT

4.1 Student Admission

(a) Entry requirements (Academic)

Students entering (entry requirements) the programme have GOOD PRINCIPAL PASSES in mathematics and physical sciences or their

YES	<input type="checkbox"/>
-----	--------------------------

NO	<input type="checkbox"/>
----	--------------------------

Remarks:

7 CRITERION 7: QUALITY MANAGEMENT SYSTEMS

7.1 Institutional Support, Operating Environment, and Financial Resources

(a) Sufficient to assure quality and continuity of the programme

The institutional support and financial resources are sufficient to ensure programme quality and continuity. Support from external bodies is observed.

YES	<input type="checkbox"/>
-----	--------------------------

NO	<input type="checkbox"/>
----	--------------------------

Explain:

YES	<input type="checkbox"/>
-----	--------------------------

NO	<input type="checkbox"/>
----	--------------------------

Remarks:

(b) Sufficient to attract and retain well-qualified teaching and support staff

The institutional support and financial resources are sufficient for the programme to attract and retain well-qualified academic (take note of employing international academic staff, to comply with BEM regulation to register) and support staff.

YES	<input type="checkbox"/>
-----	--------------------------

NO	<input type="checkbox"/>
----	--------------------------

Explain:



APPENDIX F: Checklist of Documents

ETAC STANDARD 2019

A QUALIFYING REQUIREMENTS

1 Minimum 90 SLT credit units of which 60 SLT credit units must be engineering or engineering technology subjects

YES/NO

ETeAC STANDARD 2020

A QUALIFYING REQUIREMENTS

1 Minimum 90 SLT credit units of which 60 SLT credit units must be engineering or engineering technology subjects **courses**

YES/NO

*Replaced word
"subjects" with
"courses"*



Appendix F: Checklist of Documents

ETAC STANDARD 2019

A QUALIFYING REQUIREMENTS

- | | | |
|---|--|--------|
| 1 | Minimum 140 SLT credit units of which 100 SLT credit units must be engineering technology subjects | YES/NO |
| 2 | Final year project | YES/NO |
| 3 | Industrial training / WBL | YES/NO |

ETAC STANDARD 2020

A QUALIFYING REQUIREMENTS

- | | | |
|---|--|--------|
| 1 | Minimum 140 SLT credit units of which 100 SLT credit units must be engineering technology subjects courses | YES/NO |
| 2 | Final year project (8 - 12 SLT credit units) | YES/NO |
| 3 | Industrial training / WBL (minimum of 24 weeks) | YES/NO |

**Additional
information**



APPENDIX F: Checklist of Documents

ETAC STANDARD 2019

ETAC STANDARD 2019

D OTHER SUPPORTING DOCUMENTS

In the Table below, provide a list of supporting documents available in digital format (in a CD) as per Section 9.3 in the standard.

List of supporting documents available in digital format (in a CD)	Confirmation by ETAC Secretariat
	YES/NO

ETAC STANDARD 2020

ETeAC STANDARD 2020

D OTHER SUPPORTING DOCUMENTS

In the Table below, provide a list of supporting documents available in digital format ~~(in a CD)~~ as per Section 9.3 in the standard.

List of supporting documents available in digital format (in a CD)	Confirmation by ETAC Secretariat
	YES/NO

Same for both ETAC
and ETeAC
Standards



APPENDIX G: Guidelines for Evaluation Panel Samples and Format for Submission of Information

ETAC STANDARD 2019

ETAC STANDARD 2019

- ▶ Amendment as per [Appendix G](#)

ETAC STANDARD 2020

ETeAC STANDARD 2020

- ▶ Amendment as per [Appendix G](#)

*Same for both ETAC
and ETeAC
Standards*



References

- ▶ EAC Standard 2020, BEM
- ▶ ETAC Standard 2020, BEM
- ▶ ETeAC Standard 2020, BEM
- ▶ IEA Graduate Attributes and Professional Competency Profiles, Version 3: 21 June 2013

Points for Clarifications

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