



BEM POLICY ON NAMING OF ENGINEERING TECHNOLOGY PROGRAMMES AT BACHELOR & DIPLOMA LEVELS

1. Preamble

The policy is intended to:

- 1.1. Ensure that programme names are consistent with existing MQA guidelines, BEM registration categories, and the ETAC Manual.
- 1.2. Provide clarity to the public, particularly to avoid misleading programme names.

2. Scope

The scope of the Policy covers the following:

- 2.1. New programmes seeking approval.
- 2.2. Current ongoing programmes requesting for change of programme name.
- 2.3. Programmes at both bachelor and diploma levels.
(Although the examples given below are for bachelor level engineering technology programmes, they are also valid for diploma level programmes for engineering technicians.)

3. Definitions

3.1. Definitions as per MQA Guidelines on programme names.

3.1.1. Major

A **major** is the primary focus area of study in the programme. The **major** in programme naming must represent at least 70% of engineering technology content in curriculum.

3.1.2. Specialisation

A **specialisation** is a sub-area within the **major** area of study. A specialisation in programme naming must represent between 25-30% of engineering technology content in curriculum. The specialisation, if present within a programme, is indicated within brackets in the programme name.

3.2. Definitions as per BEM Guidelines on registration.

3.2.1. Main branch

The approved main engineering technology branches for BEM registration, namely civil, electrical, mechanical and chemical.

3.2.2. Sub-set branch.

The approved sub-set engineering technology branches under any of the four (4) main branches for BEM registration.

3.3. Definitions as per ETAC Manual.

3.3.1. **Engineering Technology content**

The minimum core Credits for engineering technology content as specified in the ETAC Manuals.

3.4. Degrees with Honours.

All engineering technology degree programmes which adhere to the ETAC Manual will meet both the following characteristic:-

- Four (4) years minimum duration; and
- Have a research component in the form of Final Year Project.

In meeting both of these two characteristics, ETAC-accredited degree programmes will meet the generally accepted guideline for Degrees with Honours.

Diploma level programmes do not have the phrase “With Honours” attached.

4. Programmes with a single major

4.1. The format of the naming shall be :-

- Bachelor of “*major*” Engineering Technology with Honours.

4.2. At least 70% of engineering technology content is in the major, and

4.3. The major must be either a main branch or sub-set branch of registration.

4.4. Example: **Bachelor of *Civil Engineering Technology* with Honours**

(Civil is a main branch of registration)

4.5. Example: **Bachelor of *Mechatronics Engineering Technology* with Honours**

(Mechatronics is a sub-set branch of registration)

4.6. Not allowed:-

- **Bachelor of *Instrumentation Engineering Technology* with Honours**, because “Instrumentation” is not a main or sub-set branch.

5. Programmes with a major with a specialisation.

5.1. The format of the naming shall be :-

Bachelor of “*major*” Engineering Technology (“*specialisation*”) with Honours.

5.2. A minimum of 70% of engineering technology content shall be within the major.

5.3. A range of 25-30% of engineering technology content shall be within the specialisation.

5.4. The major must be either a main branch or sub-set branch of registration.

5.5. The specialisation must be either a sub-set branch of registration or any other sub-discipline not in the BEM-approved list but deemed appropriate by the IHL. This “other sub-discipline” is normally a very new and/or specialised technology.

5.6. Example: **Bachelor of *Civil Engineering Technology (Highway)* with Honours**

(“Civil” is a main branch, and “Highway” is a sub-set branch)

5.7. Example: **Bachelor of Highway Engineering Technology (Pavement) with Honours**

(“Highway” is a sub-set branch, and “Pavement” is a very specialised technology)

5.8. Example: **Bachelor of Civil Engineering Technology (Pavement) with Honours**

(“Civil” is a main branch, and “Pavement” is a very specialised technology)

5.9. Example: **Bachelor of Petroleum Engineering Technology (Drilling) with Honours**

(“Petroleum” is a sub-set branch, and “Drilling” is a very specialised technology)

5.10. Not allowed:

- **Bachelor of Structural Engineering Technology (Building) with Honours**, because both “Structural” and “Building” are sub-set branches.

6. Multi-disciplinary (general) programmes with no major but with a specialisation

6.1. The format of the naming shall be :-

Bachelor of Engineering Technology (“specialisation”) with Honours.

6.2. A range of 25-30% of engineering technology content shall be in the specialisation.

6.3. The remainder range of 70-75% of engineering technology content is mixed such that it cannot be categorised under any of the main or sub-set branches.

6.4. The specialisation must be either a sub-set branch of registration or any other sub-discipline not in the BEM-approved list but deemed appropriate by the IHL, i.e. it cannot be a main branch.

6.5. Example: **Bachelor of Engineering Technology (Manufacturing) with Honour**

(“Manufacturing” is a sub-set branch)

6.6. Example: **Bachelor of Engineering Technology (Tool & Die) with Honours**

(“Tool & Die” is a very specialised sub-discipline)

6.7. The following is not allowed:

Bachelor of Engineering Technology (Mechanical) with Honours, because “Mechanical” is a main branch.

7. Multi-disciplinary or general programmes with no major or specialisation.

7.1. The naming shall be:

Bachelor of Engineering Technology with Honours.

7.2. The engineering technology content is mixed which cannot be categorised under any of the main or sub-set branches.

7.3. The engineering technology content nevertheless meets the minimum engineering technology core credits as per ETAC Manual and hence deserves accreditation (upon meeting other stipulated criteria).

7.4. It is recognised that IHLs should have the flexibility and freedom to innovate new engineering technology programmes which address pioneering frontier areas of engineering technology knowledge outside the current scope of registration

branch recognised by the Board. This provision allows for such flexibility and freedom.

8. Engineering Technology programmes with additional non-engineering technology major

8.1. For additional non-engineering technology major such as Law, Business or IT, the additional components must be over and above minimum required total ETAC credits.

8.2. Example 5: **Bachelor of Civil Engineering Technology and Law with Honours**
(Law discipline contents should meet the relevant standards for the law profession, over and above the minimum required total ETAC credits. Engineering Technology contents must meet the preceding provisions).

9. Determination of Branch for Registration of Graduate Engineering Technologist with BEM

9.1. The branch for registration of Graduate Engineering Technologist with BEM is recommended to be based on the major in the name of the programme.

Examples:-

NAME OF PROGRAMME	BRANCH OF REGISTRATION
<i>Bachelor of Civil Engineering Technology with Honours</i>	Civil
<i>Bachelor of Mechanical Engineering Technology with Honours</i>	Mechanical
<i>Bachelor of Electrical Engineering Technology with Honours</i>	Electrical
<i>Bachelor of Chemical Engineering Technology with Honours</i>	Chemical
<i>Bachelor of Mechatronics Engineering Technology with Honours</i>	Mechatronics
<i>Bachelor of Civil Engineering Technology (Environment) with Honours</i>	Civil
<i>Bachelor of Mechanical Engineering Technology (Materials) with Honours</i>	Mechanical
<i>Bachelor of Computer Engineering Technology with Honours</i>	Computer
<i>Bachelor of Computer Engineering Technology (Microelectronics) with Honours</i>	Computer
<i>Bachelor of Engineering Technology with Honours Bachelor of Engineering Technology (Computer) with Honours Bachelor of Engineering Technology (Pavement) with Honours Bachelor of Engineering Technology (Tool&Die) with Honours</i>	General <i>(as <u>approved by the Board as per Board Meeting 319, 27/6/2016</u>)</i>

9.2. If IHLs feel that any programme deserves a new name outside the current list of registration branches as approved by the Board, they are at liberty to argue their case and present it as an exemption request as per (10) below. This provision allows for IHLs to innovate new pioneering frontiers of engineering technology disciplines.

9.2.1. Note: Some IEA jurisdictions have among their IHLs programmes under the general engineering/engineering technology category, and a number of their graduates are Malaysians who have problems applying for registration because the category “Others” had been removed from the BEM list. Provision 9.2 addresses this issue.

10. Exemptions

10.1. Exemptions from the provisions of this policy may be considered on a case-to-case basis based on individual merit.

10.2. Exemption 1:

10.2.1. The phrase “Electrical & Electronics” be accepted as an alternative as to represent the programme major “Electrical” in programming naming.

10.2.2. The justification is its historical usage, and that it is widely accepted especially among the non-engineering technology stakeholders (e.g. the use of E&E in international trade negotiations).

10.2.3. Example: “Bachelor of **Electrical & Electronics** Engineering Technology with Honours” is a programme with major in electrical engineering technology.

10.2.4. The recommended branch of registration for its graduates will be “electrical”.

11. Name option for Diploma level programme

11.1. The normal Diploma programme name would utilise the phrase “Engineering Technology”, but due to historical and common-usage reasons, the phrase “Engineering” may also be used.

11.2. The phrase “with Honours” will not be used in the programme name.

11.3. Example:

Diploma of Civil Engineering Technology

Diploma of Civil Engineering

Either one of the above names can be adopted by the IHL.

12. Effective Date and Revision of Policy

12.1. The effective date for this policy is 1st of July 2017.

12.2. The Board reserves the right to review this policy from time to time.

13. References (attached)

13.1. MQA Guidelines on Programme Naming.

13.2. BEM’s Main and Sub-Sets – Main and sub-sets of field or discipline for BEM’s registration (below).

Main and Sub-Set Branches for BEM Registration

*Main and Sub-Sets Branches for BEM Registration as per March 2016.
(BEM may review this classifications from time to time – refer to BEM’s website for the latest updates)*

Civil	Mechanical	Electrical	Chemical
1. Building	1. Aeronautical	1. Computer	1. Bio-Chemical
2. Construction	2. Agricultural	2. Electronics	2. Bio-Engineering Technology
3. Environmental	3. Automotive	3. Telecom- munication	3. Energy (Fuel, Natural Gas)
4. Geotechnical	4. Building Services		4. Environmental
5. Highway	5. Manufacturing		5. Petroleum
6. Hydraulic	6. Marine		6. Process (Polymer, Textile, Pharmaceutical, Food)
7. Mining	7. Material		
8. Municipal	8. Mechatronic		
9. Structure	9. Metallurgy		
10. Transport	10. Mining		
11. Water Resources	11. Naval Architecture		
	12. Nuclear		

The registration branch of “**General**” has been approved by the Board as per Board Meeting No.319, 27/6/2016), item 6.0 page 9.

This is to replace the original “Others” category for programmes that meet the minimum engineering content but does not fit into any of the main or sub-set branches in the table above.

This will also address the following issues:-

1. Some IEA jurisdictions have among their IHLs programmes under the general branch category, and a number of their graduates are Malaysians who have problems applying for registration because the category “Others” had been removed from the BEM list.
2. Some Malaysian IHLs may commence engineering programmes which are either very specialised or very novel such that the engineering content, though meeting the minimum engineering credit requirement, do not fit into any of the 36 existing categories.