Academic Curriculum (SA/DA)

24-25 Apr 2019

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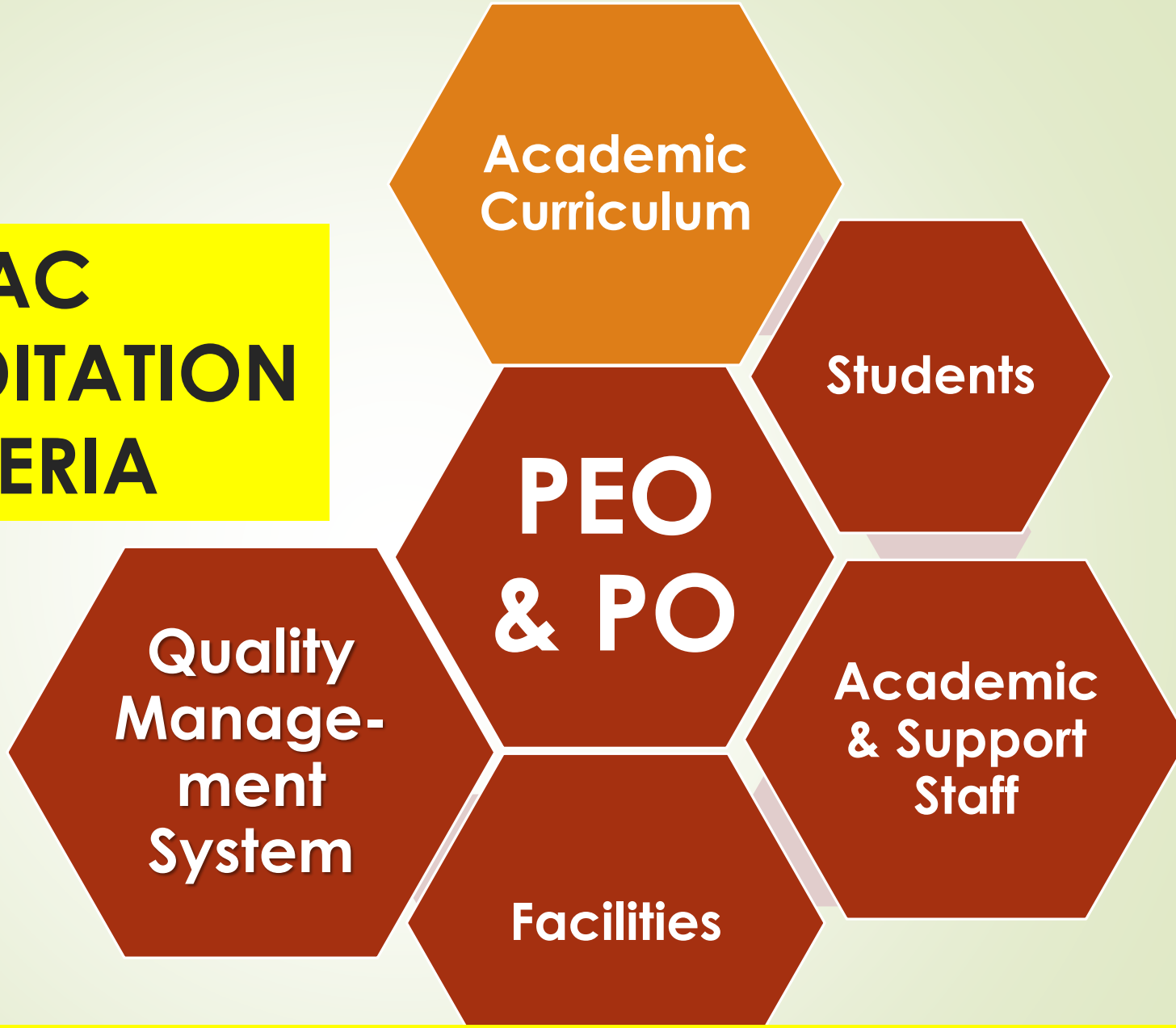
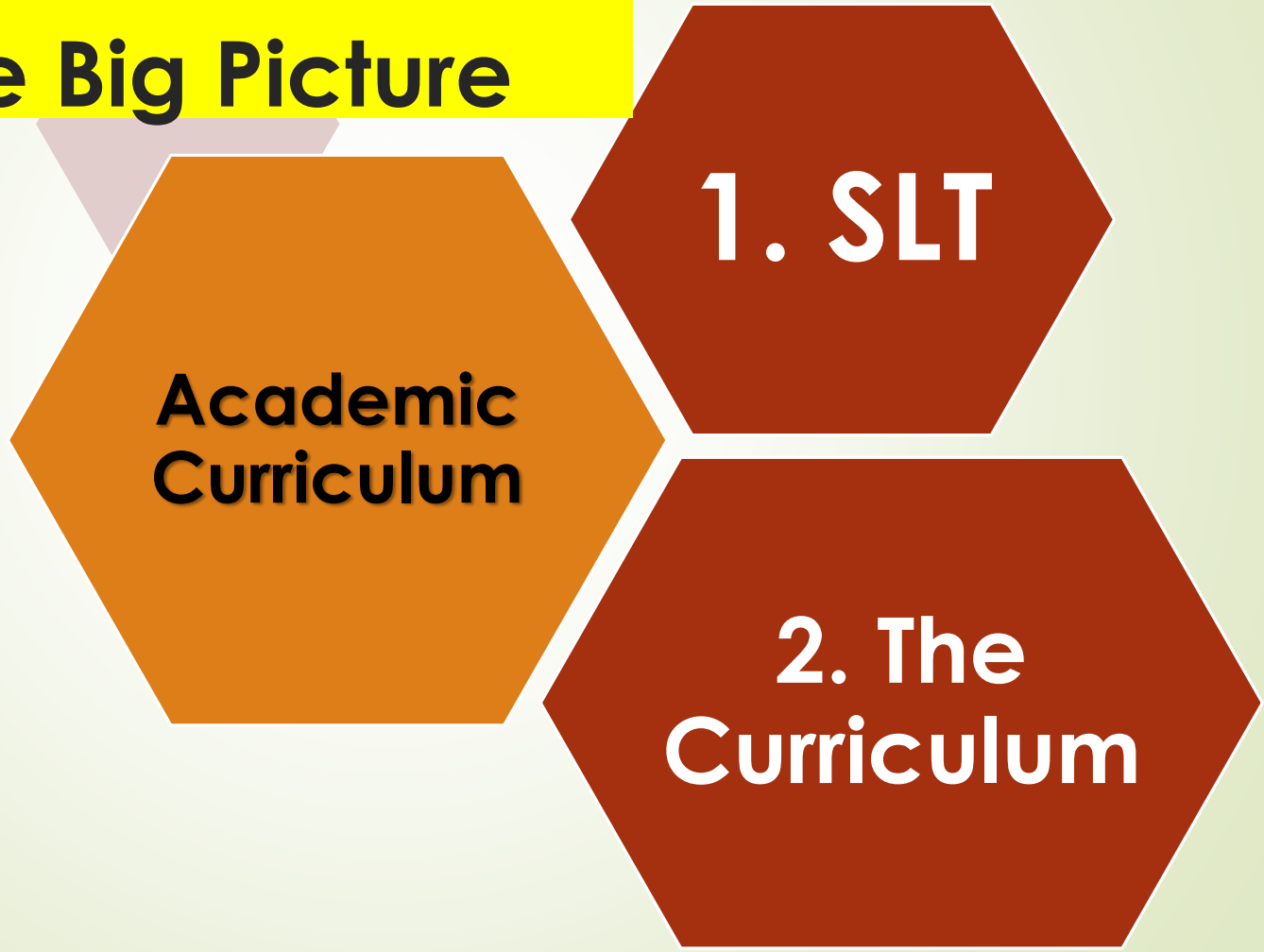
ETAC ACCREDITATION CRITERIA



Engineering Technology Programme Accreditation Standard 2019 –
SECTION 8.3 – Academic Curriculum (pg10), sec 9.2.4, App G-6-10, G17-21

Panel Report Academic Curriculum – The Big Picture



Academic Curriculum

Panel Report
Academic Curriculum – The Big Picture

1. SLT

2. The Curriculum

- Programme structure, course content, balance curriculum
- Programme delivery, assessment methods
- Practice-oriented components
- FYP/Design project
- Industrial training / WBL
- Training in Engineering practice

SELF ASSESSMENT REPORT

Programme structure, course content - to support the development of the range of intellectual and practical skills – attainment of POs

Programme delivery, assessment methods – to support …

i. Courses to PO mapping, ii. distribution of technology courses (areas), general courses, iii. Distribution of courses according to semester

Academic Curriculum

1. SLT

2. The Curriculum

- Programme structure, √ course content, √ balance curriculum
- Programme delivery, √ assessment methods √
- Practice-oriented components
- FYP/Design project
- Industrial training / WBL
- Training in Engineering practice

8.3 Academic Curriculum

- The curricular approach, the educational and the **teaching-learning and assessment methods** shall be appropriate to, consistent with, and support the attainment or achievement of the POs

  Performance indicator: **Appropriate**; **Adequate time**

- A **balanced curriculum** shall include all technical and non technical attributes listed the POs

- Shall ensure **50%** of the face to face time should be allocated for **practice-oriented** components

  Technician: 50%

  Performance indicator: **Updated to keep up** with the scientific, technological and knowledge development (IR4.0)

- A variety of teaching-learning modes, assessment and evaluation methods – as required in the POs

8.3 Academic Curriculum

- The **teaching and learning processes** shall be **reviewed** from time to time (e.g. annual review, annual monitoring, major review)
- The teaching-learning methods shall enable students to take **full responsibility** (own learning, LLL)
- **140** SLT (not including remedial courses): **100** eng-tech courses

Performance indicator: **Adequate**

8.3 Academic Curriculum

- Curriculum content should cover:

The curriculum content should cover the following:

(i) Applied mathematics, applied science, applied engineering principles, skills and tools (computing, experimentation) appropriate to the discipline of study;

(ii) Engineering practical components; Technician: Eng & Eng Tech practical comp

(iii) Integrated training in professional engineering practice, including management and professional ethics;

(iv) Laboratory work to complement the science, computing and engineering theory;

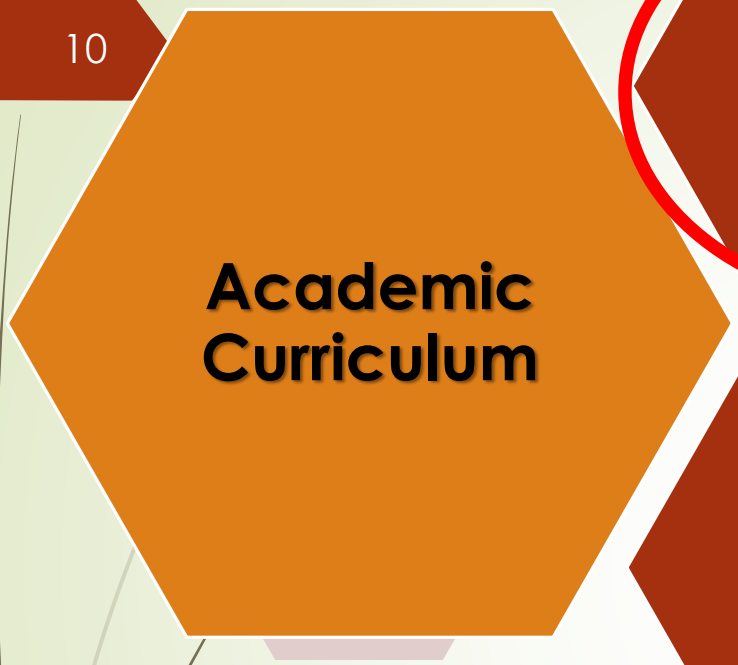
(v) Industrial training – training in engineering technology in a professional engineering-practice environment;

(vi) Industrial revolution-related skills, such as for Industry 4.0 needs– Artificial Intelligence, Internet of Things, Big Data Analytics, Augmented and Virtual Realities);

(vii) Exposure to engineering practice within the campus learning environment;

(viii) Relevant tutorial classes to complement the lectures; and

(ix) Final year project. Technician: Final project



1. SLT

2. The Curriculum

- Programme structure, √ course content, √ balance curriculum
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- FYP/Design project
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1. SLT

3.1 SLT Credit Units

(a) Total number of SLT credit units

	U	S	G

(b) Number of SLT credit units for engineering technician subjects

	U	S	G

D-3

(c) Number of SLT credit units for other related general education subjects

	U	S	G

SLT

Engineering	Eng Technology	Eng Technician
4 years	**4 years**	**3 years**
8 long semesters, excluding min 2-month IT	with 6-12 months IT	with 4-12 months IT

(Liew, 2018)

SLT

No.	Item	Engineering Technology	Engineering Technician
a.	Min. TOTAL of SLT credit units (not including units for remedial courses)	**140** (40-50% time for practice-oriented components)	**90** (50% time for practice-oriented components in technical and specialist areas)

SLT

No.	Item	Engineering Technology	Engineering Technician
b.	Min. of SLT credit units	**100** Engineering technology courses consisting of engineering sciences, discipline core courses, design/projects, and industrial training	**60** **Engineering or engineering technology** courses consisting of basics technical courses, discipline core courses, design/projects, and industrial training

SLT

Jadual 1.2: Cadangan peruntukan jam pembelajaran kendiri berdasarkan jam pertemuan bersemuka bagi pelbagai aktiviti pembelajaran

Aktiviti Pembelajaran	Jam Pertemuan Bersemuka	Jam Pembelajaran Kendiri
Kuliah	1	1 – 2
Tutorial	1	1
Amali dan praktikum	3	3
Kerja studio	2	2
Pembelajaran berasaskan masalah (PBL)	2	4
Perbincangan kumpulan kecil	1 – 2	1
Pembentangan	1	3 – 4
Penaksiran sumatif	3	3
Tugasan bertulis sebanyak 2000 perkataan		10 – 12
Projek tahun akhir sarjana muda 6 – 10 kredit	240 – 400	
Latihan industri* 4 – 12 kredit	160 – 480	

*Pengiraan jam pembelajaran untuk latihan industri dikira berdasarkan bilangan jam pembelajaran berkesan (*effective learning*) bagi satu hari (4 jam sehari) didarab dengan bilangan hari bagi satu minggu (5 hari) dan bilangan minggu latihan industri (Contoh: 4 jam x 5 hari x 2 minggu = 40 jam)

SLT Industrial Training

- **6 months – 1 year**; max **38 SLT** credit units
- Effective learning time (ELT) = 80% of the normal working time Technician: 16 wk – 1 yr
- **ELT = [Theory (DL + IL) + Industrial Guidance (IG) + Assessment] x 80%**
- SLT = ELT / 40

Technician: 1 credit = 60hrs
2/3 (=40 hrs) learning craft skills
Max 38 SLT

Performance indicator: adequately structured, supervised, recorded in log book/report

SLT WBL

- Effective learning time (ELT) = 80% of the normal working time
- Same formula as IT
- FYP / Design project are encouraged to **be implemented as WBL**
- So, total industrial placement (IT + WBL) can be > 1 yr

Technician: same as Technology WBL

Performance indicator: adequately structured, supervised, recorded in log book/report

SLT FYP

- Min 8 SLT credits max 12 SLT credit units

Technician: Min 4, Max 6

Performance indicator: adequately structured, supervised, recorded in log book/report

SLT

TABLE 2 Distributions of Engineering Technology Courses for an Engineering Technology Programme (SAMPLE)

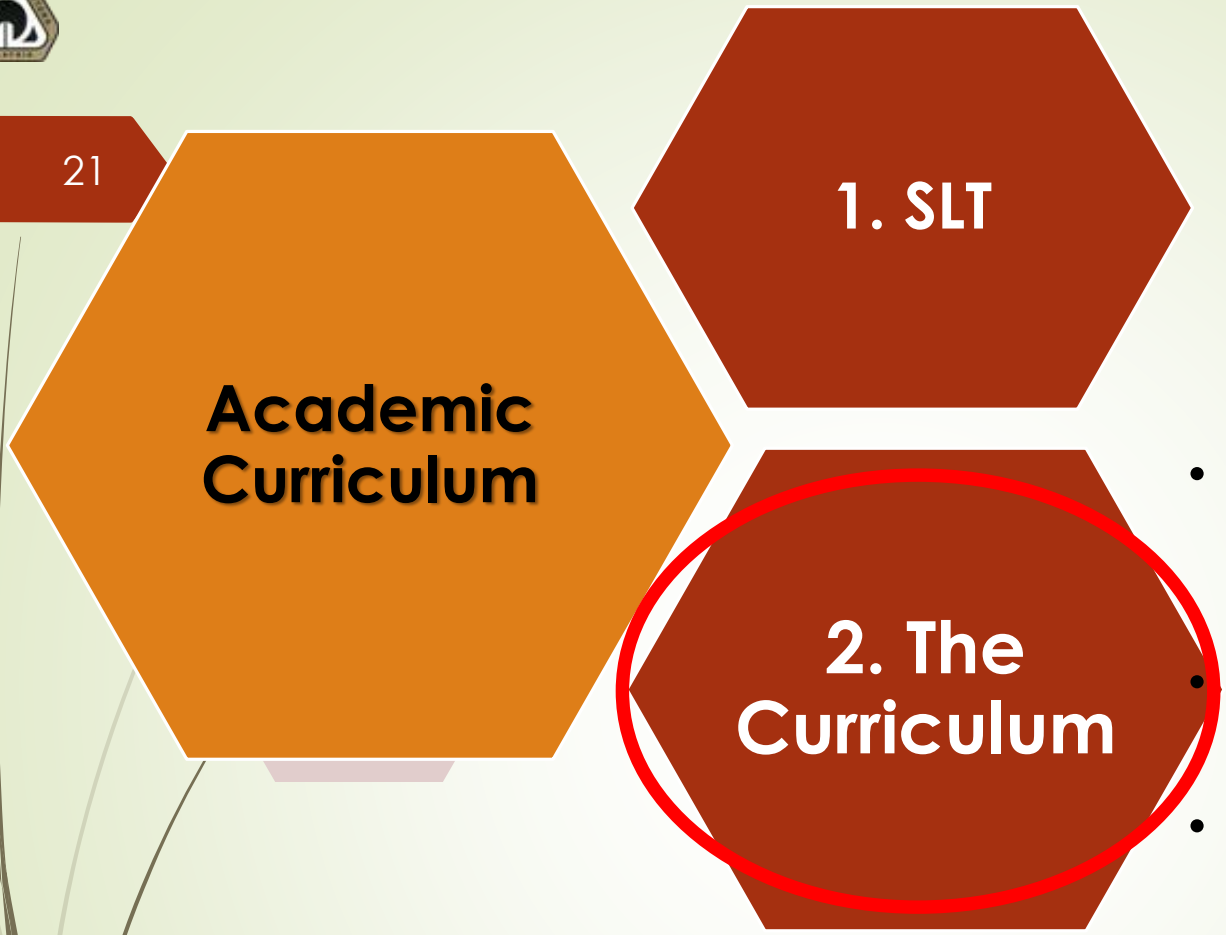
Areas	Course Code	Course	Course Type	Hours					WBL Component			ETAC Equiva-lent Total Credits
				Lecture	Lab/ Work-shop/	Project	PBL*/ Design	Tutorial	DL	IG	IL	
Broad Area 1	ENGXXA	Subject 1	Core	36	0	0	0	9	0	0	9	3
	ENGXXB	Subject 2	Core	36	0	0	0	9	0	0	9	3
	ENGXXC	Subject 3	Core	36	0	0	0	9	0	0	9	3
	ENGXXD	Subject 4	Core	36	0	0	0	9	0	0	9	3
Broad Area 2	ENGXXE	Subject 5	CE Core	30	8	0	0	12	0		12	3
	ENGXXF	Subject 6	CE core	28	8	0	0	15	0		15	3
	ENGXXG	Subject 7	CE core	28	8	0	0	15	0		15	3
	ENGXXH	Subject 8	Elective	28	0	0	0	21	0		21	3
	ENGXXJ	Subject 9	Elective	32	8	0	0	9	0		9	3
Broad Area 3	ENGXXL	Subject 10	Core	14	56	0	0	0	0		0	4
Broad Area 4	ENGXXM	Subject 11	Core	28	0	0	0	21	0		21	3
	ENGXXN	Subject 12	Core	28	0	0	0	21	0		21	3
	ENGXXP	Subject 13	Elective	28	0	0	0	21	0		21	3
Electives	ENGXXQ	Subject 14	Elective	22	40	0	0	0	0		0	3
Total Contact Hours				**525**	**206**	**0**	**0**	**255**			**255**	**120**
Total Equivalent ALT Credit Units												
Industrial Training	ENG111A	Industrial Training	Core	8 Weeks								5
Final Year Project	ENG111B	Final Year Engineering Project 1	Core	Thesis								6
	ENG111C	Final Year Engineering Project 2	Core	Thesis								6
TOTAL CREDIT HOURS ENGINEERING TECHNOLOGY COURSES												**137**

DL: Dependent Learning, IG: Industrial Guidance, IL: Independent Learning (DL, IG & IL represent the contact hours per semester)

SLT

TABLE 5 Courses Offered (Programme Structure) According to Semester and Total Credit Hours (SAMPLE)

Semester	Code	Courses	Course Type	IHL Credits		SLT Credit Units	
				Engr Tech Courses	Related Courses	Engr Tech Courses	Related Courses
1	ENG11A	Subject1	Core	3		3	
	ENG12B	Subject2	Core	3		3	
	ENG12C	Subject3	Core	3		3	
	ENG15C	Subject4	Core	3		3	
II	ENG11X	Subjet5	Core	3		3	
	ENG12Y	SubjectA	Core	3		3	
	ENG12Z	SubjectB	Core	3		3	
	ENG13X	SubjectC	Core	3		3	
	MPW21	SubjectD	LAN		3		3
III	ENG21A	SubjectA	Core	3		3	
	ENG22X	SubjectB	Core	3		3	
	ENG23Y	SubjectC	Core	3		3	
IV							
V							
VI							
INTER SESSION	ENG38A	Industrial Training	Core	5		5	
VII							
VIII							
TOTAL SLT CREDIT UNITS							



- Programme structure, √ course content, √ balance curriculum
- Programme delivery, √ assessment methods √
- Practice-oriented components
- FYP/Design project
- Industrial training / WBL
- Training in Engineering practice

2.22 Academic Curriculum

3.2 The Curriculum

(a) Programme Structure, Course Contents, and Balanced Curriculum
(b) Programme Delivery and Assessment Methods
(c) Practice –oriented components
(d) Final-Year Project/Design Project
(e) Industrial Training
(f) Training in Engineering Practice

Observation	Performance		
	U	S	G
(a)			
(b)			

2d[23] Programme structure, course content

- Course structure and sequence of content shall be appropriate
  - Adequate time shall be allocated for each component of the content/course
- Contents are being updated to keep up with the scientific, technological and knowledge development in the field, and to meet the needs of society (eg. 4th IR)

Performance indicator: Adequate

2a

TABLE 1 Course to PO Matrix (SAMPLE)

Code:	Course:	Link to the PO													
		1	2	3	4	5	6	7	8	9	10	11	12	13	14
ENGXXA	Subject1	X			X						X				
ENGXXB	Subject2		X	X	X										
ENGXXC	Subject3	X			X	X	X								
ENGXXD	Subject4	X		X							X	X	X		
ENGXXE															
ENGXXF															
ENGXXG															
ENGXXH															
ENGXXI															
ENGXXJ															
ENGXXK															
ENGXXL															

2a

TABLE 3 List of Elective Courses according to Areas of Field of Specialisation (if applicable)

AREAS	CODE	ELECTIVE COURSES
Broad Area 1		
Broad Area 2		
Broad Area 3		
Broad Area 4		

2a

TABLE 4 Distributions of General Education Courses for an Engineering Technology Programme (SAMPLE)

Areas (ETAC)	Code	Course	Course Type	Hours			ETAC Equivalent Total
				Lecture	Lab/Workshop/ Project	Tutorial	
Applied Science/Maths/ Computer	ENG11A	Subject1	Core	28	0	28	3
	ENG11B	Subject2	Core	28	0	28	3
	ENG21A	Subject3	Core	28	0	28	3
	ENG21B	Subject4	Core	28	0	28	3
	ENG23A	Subjet5	Core	28	56	0	4
	TOTAL CREDITS HOURS						**16**
Management/Law/ Accountancy	ENG241A	SubjectA	Core	28	0	28	3
	ENG341B	SubjectB	Elective	28	0	28	3
	ENG441C	SubjectC	Elective	28	0	28	3
	ENG461X	SubjectD	Elective	28	0	28	3
	TOTAL CREDIT HOURS						**12**
Communication Skills/Humanities/Ethics	MPW211Y	SubjectX	MQA	42	0	0	3
	MPW213Z	SubjectY	MQA	42	0	0	3
	MPW214X	SubjectZ	MQA	42	0	0	3
	TOTAL CREDIT HOURS						**18**
TOTAL CREDIT HOURS FOR GENERAL EDUCATION COURSES							**43**

2a

- Balanced curriculum
  - Technical and non-technical attributes listed in the Programme Outcomes
  - The essential elements forming the core of the programme and additional specialist

Performance indicator: 50% face to face for practice-oriented components

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2b[29] Delivery and assessment methods

- **Shall be appropriate and support the attainment of POs**
- Traditional methods, other varieties of teaching/learning (delivery) modes, WBL, assessment and evaluation methods
  - To develop the skills, knowledge and attitude as per the POs
- **The assessment to evaluate the achievement of the POs shall be done both at the programme and course levels**

2b[30] Delivery and assessment methods

- The teaching-learning methods shall enable students to take full responsibility for their **own learning** and prepare them for **life-long learning**
- Tutorials, group learning, interaction and innovative educational experience are designed to complement lectures
  - Part and parcel of the programme
  - A tutorial session should preferably not exceed **30** students

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2c Practical Learning

- Practice engineering skills to **complement engineering theory** that is learnt through lectures
- Engage with the use of **facilities, equipment and instrumentation reflective of current industry practice**
  - Help in developing competence in executing applied and experimental work

Performance indicator: Adequate

2c Practical Learning

- 40-50% (50% for diploma) of Total eng technology core SLT should be allocated for practice-oriented components
- Use of facilities, equipment, instrumentation
- Students work in group, not more than 5 (4 for diploma) in a group
- Adequate provision for lab / investigative work

Performance indicator: 40-50% core SLT

Academic Curriculum

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2d FYP

- Industry-based or practice-oriented projects
- Supervisors - teaching staff or qualified Engineers from the industry
- Should have the facilities to support the projects
- Compulsory and demand individual analysis and judgement, and be assessed independently
- Student is expected to develop techniques in literature review and information processing
- Utilise appropriate modern technology

2d Design project

ENGINEERING TECHNOLOGIST

- **Design Projects**

Design projects shall include broadly-defined applied engineering problems and design systems, components or processes integrating core areas and meeting specified needs with appropriate consideration for public health and safety, cultural, societal, and environmental considerations.

ENGINEERING TECHNICIAN

Design projects shall include well-defined applied engineering problems and design systems, components or processes integrating core areas and meeting specified needs with appropriate consideration for public health and safety, cultural, societal, and environmental considerations.

2d

- What should we look for in design project?

- Identify problems and constraints (health, safety, environmental, societal)
- Identify user/client/customer needs
- Compare solutions against problem objective to select best concept
- Create and test simulation/model/prototype
- Assess design performance based on

2d

- Panel should check FYP report samples (9 reports)
- Assessment shall be done through systematic manner (rubrics)
- Appropriateness of project topics in relation to the programme is to be monitored

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2e IT

- Aim: acquire craft skills
- IHL shall put a strenuous effort to assist all students to gain placements

Performance indicator: min 6 months, max 1 year, max 38 SLT

2e WBL

- Provides students with authentic context for learning and real-life work experiences
- Integrates theory and industrial practices in the workplace
- 4 components: DL, IL, IG, assessment

2e WBL

- Panel should assess the IHL WBL courses (which integrates the curriculum with the workplace
- IHL and partner should agree on the quality of WBL, review and CQI, aware of specific needs of learners
- Ensure industry based staff are well prepared

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2f[44] Training in Eng Practice

(i) lectures/talks by guest lecturers from industry;
(ii) Teaching staff with industrial experience;
(iii) courses on professional ethics and conduct;
(iv) industry visits;
(v) an industry-based final year project;
(vi) regular use of a logbook in which industrial experiences are recorded;
(vii) industry research for feasibility studies; Technician: no (vii)
(viii) study of industry policies, processes, practices and benchmarks;
(ix) interviewing engineering practitioners; Technician: plus eng lab practitioners
(x) industry based investigatory assignments;
(xi) direct industry input and advice to problem solving and projects assessment and
(xii) industrial case studies.

2f Teaching staff

- All teaching staff acquire exposure to such experience, and make effort to assist all students gain placements of suitable quality

- Professional certificate or
- 2 years industry experience

Knowledge Profile

Graduate Attributes (SA)

Knowledge Profile (SK)

- **WA1** Engineering Knowledge (**SK1-4**)
- **WA2** Problem Analysis (**SK1-4**)
- **WA3** Design (**SK5**)
- **WA4** Investigation (**SK8**)
- **WA5** Modern Tools (**SK6**)

Analysis of problems & synthesis of solutions

- **WA6** Engineers & Society (**SK7**)
- **WA7** Environment & Sustainability (**SK7**)
- **WA8** Ethics (**SK7**)

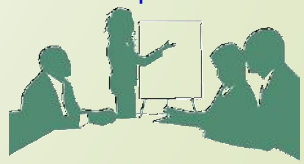
Responsibilities

Broadly-defined Engineering Problem Solving (**SP**)

Broadly-defined Engineering Activities (**TA**)

- **WA9** Teamwork
- **WA10** Communication
- **WA11** Project Management & Finance
- **WA12** Lifelong Learning

Required in workplace



In a given discipline, the quantum of knowledge and the way it is used varies across the roles:

- **Engineers** have a **broad base (fundamentals)** and are competent to address **complex, unfamiliar problems** using a principles-based approach
- **Engineering technologists** have a **narrower base (fundamentals)** but are **masters of particular technologies and their application**
- **Engineering technicians** support the above in design, construction and operations. They have a **'need to know' knowledge base** and perform functions using established methods

Source: (Hanrahan, 2014)

IEA Knowledge Profiles (IEA, 2013) - Page 9

5.1 Knowledge profile

A Washington Accord programme provides:	**A Sydney Accord programme** provides:	**A Dublin Accord programme** provides:
WK1: A systematic, theory-based understanding of the **natural sciences** applicable to the discipline	**SK1:** A systematic, theory-based understanding of the **natural sciences** applicable to the sub-discipline	**DK1:** A descriptive, formula-based understanding of the **natural sciences** applicable in a sub-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	**SK2:** Conceptually-based **mathematics**, numerical analysis, statistics and aspects of computer and information science to support analysis and use of models applicable to the sub-discipline	**DK2:** Procedural **mathematics**, numerical analysis, statistics applicable in a sub-discipline
WK3: A systematic, theory-based formulation of **engineering fundamentals** required in the engineering discipline	**SK3:** A systematic , theory-based formulation of **engineering fundamentals** required in an accepted sub-discipline	**DK3:** A coherent procedural formulation of **engineering fundamentals** required in an accepted sub-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.	**SK4:** Engineering **specialist knowledge** that provides theoretical frameworks and bodies of knowledge for an accepted sub-discipline	**DK4:** Engineering **specialist knowledge** that provides the body of knowledge for an accepted sub-discipline
WK5: Knowledge that supports **engineering design** in a practice area	**SK5:** Knowledge that supports **engineering design** using the technologies of a practice area	**DK5:** Knowledge that supports **engineering design** based on the techniques and procedures of a practice area
WK6: Knowledge of **engineering practice** (technology) in the practice areas in the engineering discipline	**SK6:** Knowledge of **engineering technologies** applicable in the sub-discipline	**DK6:** Codified **practical engineering knowledge** in recognised practice area.
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	**SK7: Comprehension of** the role of technology in society and identified issues in applying engineering technology: ethics and impacts: economic, social, environmental and sustainability	**DK7: Knowledge** of issues and approaches in engineering technician practice: ethics, financial, cultural, environmental and sustainability impacts
WK8: Engagement with selected knowledge in the **research literature** of the discipline	**SK8:** Engagement with the **technological literature** of the discipline	

Knowledge Profile - Category

SK1	Natural science	DK1	Natural sciences	Knowledge
SK2	Mathematics	DK2	Mathematics	
SK3	Engineering fundamentals	DK3	Engineering fundamentals	
SK4	Specialist knowledge	DK4	Specialist knowledge	
SK5	Engineering design	DK5	Engineering design	Application of Knowledge
SK6	Engineering technologies	DK6	Practical engineering knowledge	
SK7	Comprehension of the role of technology	DK7	Knowledge of issues and approaches	
SK8	Technological literature			Sourcing of Knowledge

(Liew, 2018)

Knowledge Profile & Programme Outcomes Map

APPENDIX G

K5 K6 K1-K4 K8 K7

TABLE ... Course t... Matrix (SAMPLE)

Code	Course	Core/ Elective	Programme Outcomes											
			1	2	3	4	5	6	7	8	9	10	11	12
XX1A	Subject 1	Core	/											
XX1B	Subject 2	Core	/											
XX1C	Subject 3	Core	/	/										
XX1D	Subject 4	Core	/		/			/						
XX1E	Subject 5	Core						/		/				
XX1F	Subject 6	Core	/								/			
XX1G	Subject 7	Core	/	/										
XX1H	Subject 8	Core	/											
XX1I	Subject 9	Core		/		/								
XX1J	Subject 10	Core		/	/			/			/	/		/
XX2A	Subject 1	Core									/	/		/

(Liew, 2018)

IEA Graduate Attributes and Professional Competency Profiles (Page 7)

4.1 Range of Problem Solving

References to the Knowledge Profile are shown thus: (WK3, WK4 …)

In the context of both Graduate Attributes and Professional Competencies:			
Attribute	***Complex Engineering Problems*** have characteristic WP1 and some or all of WP2 to WP7:	***Broadly-defined Engineering Problems*** **have characteristic SP1 and some or all of SP2 to SP7:**	***Well-defined Engineering Problems*** have characteristic DP1 and some or all of DP2 to DP7:
Depth of Knowledge Required	**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	**SP1:** Cannot be resolved without engineering knowledge at the level of one or more of SK 4, SK5, and SK6 supported by SK3 with a strong emphasis on the application of developed technology	**DP1:** Cannot be resolved without extensive practical knowledge as reflected in DK5 and DK6 supported by theoretical knowledge defined in DK3 and DK4
Range of conflicting requirements	**WP2:** Involve wide-ranging or conflicting technical, engineering and other issues	**SP2:** Involve a variety of factors which may impose conflicting constraints	**DP2:** Involve several issues, but with few of these exerting conflicting constraints
Depth of analysis required	**WP3:** Have no obvious solution and require abstract thinking, originality in analysis to formulate suitable models	**SP3:** Can be solved by application of well-proven analysis techniques	**DP3:** Can be solved in standardised ways
Familiarity of issues	**WP4:** Involve infrequently encountered issues	**SP4:** Belong to families of familiar problems which are solved in well-accepted ways	**DP4:** Are frequently encountered and thus familiar to most practitioners in the practice area
Extent of applicable codes	**WP5:** Are outside problems encompassed by standards and codes of practice for professional engineering	**SP5:** May be partially outside those encompassed by standards or codes of practice	**DP5:** Are encompassed by standards and/or documented codes of practice
Extent of stakeholder involvement and conflicting requirements	**WP6:** Involve diverse groups of stakeholders with widely varying needs	**SP6:** Involve several groups of stakeholders with differing and occasionally conflicting needs	**DP6:** Involve a limited range of stakeholders with differing needs
Interdependence	**WP 7:** Are high level problems including many component parts or sub-problems	**SP7:** Are parts of, or systems within complex engineering problems	**DP7:** Are discrete components of engineering systems

Broadly-defined and Well-defined Engineering Problems

(P1 and some or all of P2 to P7)

P1	Depth of knowledge required
P2	Range of conflicting requirements
P3	Depth of analysis required
P4	Familiarity of issues
P5	Extent of applicable codes
P6	Extent of stakeholder involvement and level of conflicting requirements
P7	Interdependence

COMPULSORY ATTRIBUTE

DEPTH OF KNOWLEDGE REQUIRED

SP1	DP1
Cannot be resolved without engineering knowledge at the level of one or more of SK4, SK5, and SK6 supported by SK3 with a strong emphasis on the application of developed technology	Cannot be resolved without extensive practical knowledge as reflected in DK5 and DK6 supported by theoretical knowledge defined in DK3 and DK4

To what extent did student rely on practice experience or theoretical knowledge to develop a solution or design?

(Liew, 2018)

Thank you

- Engineering Technology Programme Accreditation Standard 2019

- Engineering Technology Programme Accreditation Standard 2019
- IEA Graduate Attributes and Professional Competency Profiles, Version 3: 21 June 2013

POINTS FOR CLARIFICATIONS

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