

# MALYSIAN QUALIFICATIONS FRAMEWORK Second Edition (2017) (updated 2024)

MQF CLUSTERS OF LEARNING OUTCOMES	SUSTAINABILITY COMPETENCIES
<p><b>Cluster 1:</b> C1 - Knowledge &amp; Understanding</p> <p><b>Cluster 2:</b> C2 - Cognitive Skills</p> <p><b>Cluster 3:</b> C3A - Practical Skills C3B - Interpersonal Skills C3C - Communication Skills C3D - Digital Skills C3E - Numeracy Skills C3F - Leadership, Responsibility and Autonomy</p> <p><b>Cluster 5:</b> C5 - Ethics &amp; Professionalism</p>	<p>System Thinking (ST) Anticipatory Thinking (AT) Normative (N) Strategic Thinking (STT) Collaboration (C) Critical Thinking (CT) Self-Awareness (SA) Integrated Problem Solving (IPS)</p>
<p><b>Cluster 4:</b> C4A - Personal Skills C4B - Entrepreneurial Skills</p>	<p>Adaptability (A) Flexibility (F)</p>

*HEPs ARE FREE TO DETERMINE HOW TO MIX & MATCH THE 5-CLUSTERS OF LEARNING OUTCOMES, THE ESD COMPETENCIES, FLEXIBILITY AND ADAPTABILITY.*

**Education for Sustainable Development (ESD) Competencies may be treated as sub-attributes of the MQF Learning Outcomes. They are to be assessed at course levels (CLO) and will collectively contribute to the PLOs which they support.**

# EXAMPLES TO MIX & MATCH THE 5- CLUSTERS OF LEARNING OUTCOMES AND THE ESD COMPETENCIES

MQF CLUSTERS OF LEARNING OUTCOMES	COMPETENCIES
<b>Cluster 1: Knowledge &amp; Understanding</b>	<ul style="list-style-type: none"> <li>• System Thinking: Understanding complex systems in environmental science.</li> <li>• Anticipatory Thinking: Predicting future trends in technology.</li> </ul>
<b>Cluster 2: Cognitive Skills</b>	<ul style="list-style-type: none"> <li>• Critical Thinking: Analyzing case studies in business ethics.</li> <li>• Strategic Thinking: Developing strategic plans for sustainable business practices.</li> </ul>
<b>Cluster 3:</b> <ul style="list-style-type: none"> <li>▶ <b>Practical Skills (C3A):</b></li> <li>▶ <b>Interpersonal Skills (C3B):</b></li> <li>▶ <b>Communication Skills (C3C):</b></li> <li>▶ <b>Digital Skills (C3D):</b></li> <li>▶ <b>Numeracy Skills (C3E):</b></li> <li>▶ <b>Leadership, Responsibility, and</b></li> </ul>	<ul style="list-style-type: none"> <li>• Integrated Problem Solving: Applying engineering skills to solve environmental.</li> <li>• Collaboration: Working in teams to develop community projects.</li> <li>• Self-Awareness: Reflecting on personal communication styles in diverse groups.</li> <li>• System Thinking: Using software to model ecological systems.</li> <li>• Critical Thinking: Interpreting statistical data in research.</li> <li>• Collaboration: Leading a team in a sustainability initiative.</li> </ul>
<b>Cluster 4:</b> <ul style="list-style-type: none"> <li>▶ <b>Personal Skills (C4A):</b></li> <li>▶ <b>Entrepreneurial Skills (C4B):</b></li> </ul>	<ul style="list-style-type: none"> <li>• Self-Awareness: Developing personal growth plans.</li> <li>• Flexibility and Adaptability: Demonstrating the ability to adjust to new challenges and environments while maintaining effectiveness and productivity.</li> <li>• Normative: Creating business models that align with ethical standards.</li> </ul>
<b>Cluster 5: Ethics &amp; Professionalism</b>	<ul style="list-style-type: none"> <li>• Normative: Upholding ethical standards in professional practices.</li> </ul>

# EXAMPLES: PLO (MQF CLUSTER CODES) - ESD/ADAPTABILITY/ FLEXIBILITY MAPPING

PLO (MQF Cluster Codes)	ST	AT	N	STT	C	CT	SA	IPS	A	F
PLO1 (C1)	✓	✓								
PLO2 (C2)				✓		✓				
PLO3 (C3A)								✓		
PLO4 (C3B)					✓					
PLO5 (C3C)							✓			
PLO6 (C3D)	✓									
PLO7 (C3E)							✓			
PLO8 (C3F)					✓					
PLO9 (C4A)							✓		✓	✓
PLO10 (C4B)			✓							
PLO11 (C5)			✓							

# EXAMPLES: COURSES - ESD/ADAPTABILITY/FLEXIBILITY MAPPING

YEAR	SEMESTER	COURSE CODES	ST	AT	N	STT	C	CT	SA	IPS	A	F	
1	1	SEMM1XX2	✓	✓									
		SEMM1XX3	✓	✓		✓		✓					
		SEMM1XX3	✓	✓							✓		
		SEMM1XX2	✓	✓				✓					
		SEMM1XX3	✓	✓								✓	
		SEMM1XX3	✓	✓									
	2	SEMM1XX2	✓	✓									✓
		SEMM1XX3	✓	✓				✓					
		SEMM1XX3	✓	✓						✓			
		SEMM1XX2	✓	✓	✓								
		SEMM1XX3	✓	✓	✓								
		SEMM1XX3	✓	✓									

# COMPETENCIES FOR SUSTAINABILITY

Competency	A student who displays this competency can:		
<b>Systems thinking competency</b>	<ul style="list-style-type: none"> <li>recognise and understand relationships</li> <li>analyse complex systems</li> <li>consider how systems are embedded within different domains and scales</li> <li>deal with uncertainty</li> </ul>	<b>Collaboration competency</b>	<ul style="list-style-type: none"> <li>learn from others (including peers, and others inside and outside of their institution)</li> <li>understand and respect the needs, perspectives and actions of others</li> <li>deal with conflicts in a group</li> <li>facilitate collaborative and participatory problem solving</li> </ul>
<b>Anticipatory competency</b>	<ul style="list-style-type: none"> <li>understand and evaluate multiple outcomes</li> <li>create their own visions for the future</li> <li>apply the precautionary principle</li> <li>assess the consequences of actions</li> <li>deal with risks and changes</li> </ul>	<b>Critical thinking competency</b>	<ul style="list-style-type: none"> <li>question norms, practices and opinions</li> <li>reflect on own one's values, perceptions and actions</li> <li>take a position in the sustainable development discourse</li> </ul>
<b>Normative competency</b>	<ul style="list-style-type: none"> <li>understand and reflect on the norms and values that underlie one's actions</li> <li>negotiate sustainable development values, principles, goals and targets, in a context of conflicts of interests and trade-offs, uncertain knowledge and contradictions</li> </ul>	<b>Self-awareness competency</b>	<ul style="list-style-type: none"> <li>reflect on their own values, perceptions and actions</li> <li>reflect on their own role in the local community and (global) society</li> <li>continually evaluate and further motivate their actions</li> <li>deal with their feelings and desires</li> </ul>
<b>Strategic competency</b>	<ul style="list-style-type: none"> <li>develop and implement innovative actions that further sustainable development at the local level and further afield</li> </ul>	<b>Integrated problem-solving competency</b>	<ul style="list-style-type: none"> <li>apply different problem-solving frameworks to complex sustainable development problems</li> <li>develop viable, inclusive and equitable solutions</li> <li>utilise appropriate competencies to solve problems</li> </ul>