

# Unbundling Hours Turning your University Courses into Micro-credentials

## Micro-credential Symposium 2020

Go to [www.menti.com](https://www.menti.com) and use the code 53 37 91 5

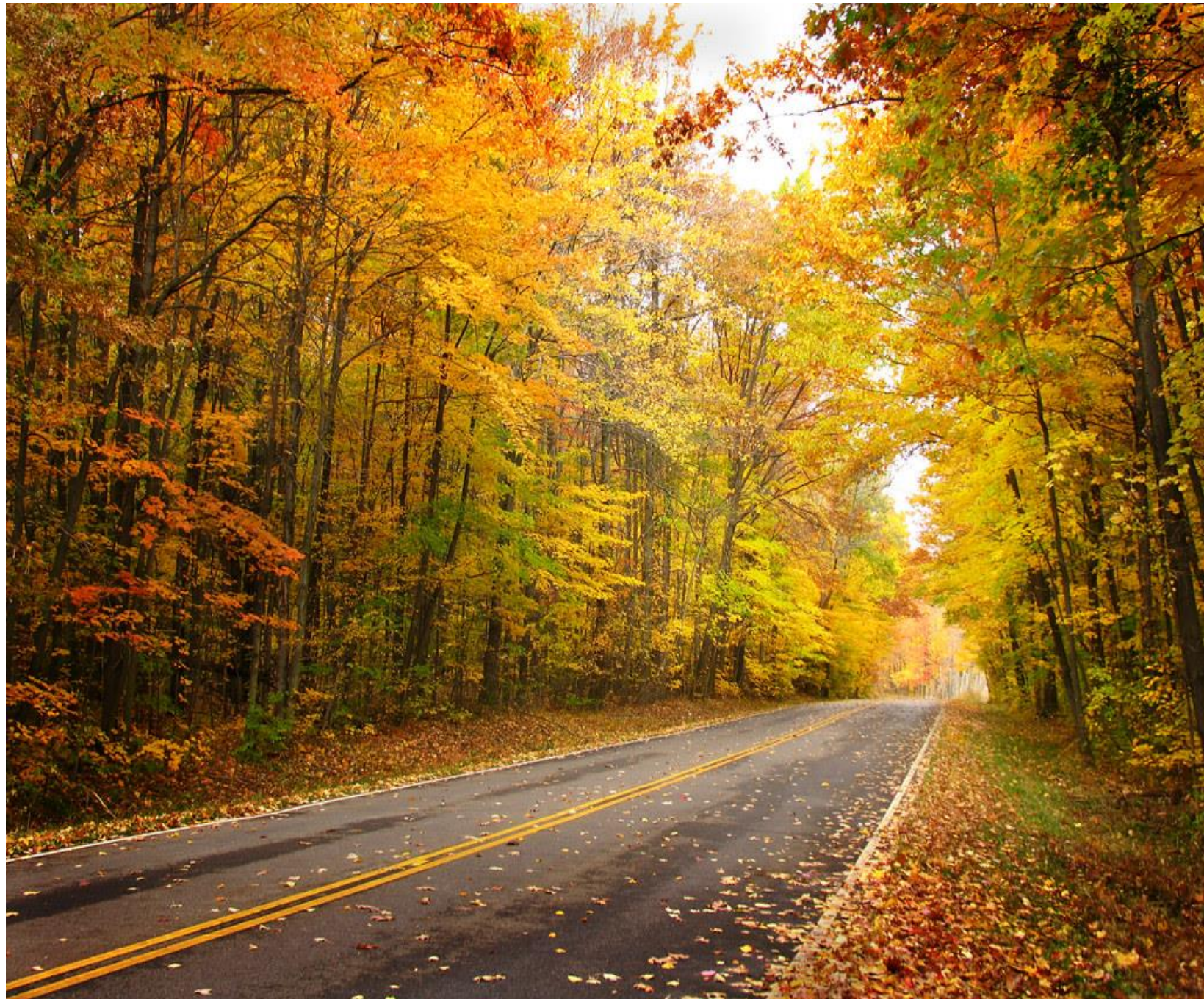
# Why are you here







# The chosen one







# Me and my Course

Lets have a look at a typical  
Course Information  
As In COPPA 2 - Table 4, Item 8  
and 10

## Learning Outcome Weekly schedule

How do we start from here

(d) Provide information for each course, where applicable in Table 4.

**Table 4.** Course information

COPPA 2nd Ed (2017) – updated Nov 2017

8.	Mapping of the Course Learning Outcomes to the Programme Learning Outcomes, Teaching Methods and Assessment Methods:											
	Course Learning Outcomes (CLO)	Programme Learning Outcomes (PLO)								Teaching Methods	Assessment Methods	
		PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9		
	CLO 1											
	CLO 2											
	CLO 3											
	Indicate the primary causal link between the CLO and PLO by ticking "✓" the appropriate box. (This description must be read together with Standard 2.1.2, 2.2.1 and 2.2.2 in Area 2)											
9.	Transferable Skills (if applicable): (Skills learned in the course of study which can be useful and utilised in other settings.)											
10.	Distribution of Student Learning Time (SLT):											
	Course Content Outline	CLO*	Learning and Teaching Activities							Total SLT		
Guided Learning (F2F)				Guided Learning (NF2F) e.g. e-Learning	Independent Learning (NF2F)							
L			T			P	O					
	1.											
	2.											
	3.											
	4.											
	Continuous Assessment		Percentage (%)		F2F		NF2F		Total SLT			
	1.											
	2.											
	Final Assessment		Percentage (%)		F2F		NF2F		Total SLT			
	1.											
	2.											
	GRAND TOTAL SLT											
	L = Lecture, T = Tutorial, P = Practical, O = Others, F2F = Face to Face, NF2F = Non Face to Face *Indicate the CLO based on the CLO's numbering in Item 8.											
11.	Identify special requirement or resources to deliver the course (e.g., software, nursery, computer lab, simulation room):											
12.	References (include required and further readings, and should be the most current):											
13.	Other additional information:											

1	Course Code	BET1263									
2	Course Name	GEOLOGY AND GEOMECHANICS									
3	Version										
4	Name(s) of Academic Staff	Aishah Binti Abu Bakar									
5	Program Level	Bachelor'S Degree									
6	Credit Hours	3									
7	Student Learning Time (SLT)	Face-to-Face	Normal Teaching & Learning				Online Teaching & Learning				Total SLT
			Non Face-to-Face			Formal Assessment	Online Learning	Online Activities	Online Assessment	Online Self Learning	
			Guided	Non-Guided	Assessment Preparation						
			0	0	58	17	7	17.5	19.5	1	
		82 (68%)					(%)				
8	Prerequisite Course										
9	Contact Hours:	Face-to-face Session		Total Hours per semester			Hours per Week				
		Lecture					0				
		Tutorial		0			0				
		Laboratory					0				
		Supervision		0							
		Online Learning		38							
		Others		0							
10	Course Synopsis	This course introduces the basic mechanics of geomaterials for geotechnical engineering purposes. It covers basic geomaterials formation and its characteristics. The engineering behaviour soil in relation to compaction, seepage, consolidation, settlement and stability of slope are covered in this course.									
11	Course Outcome	By the end of semester, student should be able to:									
			CO Statements			Domain	Keyword	Level (Bloom)	Sub Keyword (if any)		
		CO1	Describe the formation of geomaterials and its characteristics which influence their engineering technology application.			COGNITIVE	Knowledge	2			
		CO2	Use principles of mechanics in solving problems related to soil compaction, seepage, consolidation and effective stress.			COGNITIVE	Design/Development Of Solution	3			
		CO3	Analyse settlement magnitude and stability related to loading condition of shallow foundation and slope in engineering work			PSYCHMOTOR	Investigation	4			
12	Rationale	Category : Core Programme Note:									
13	Transferable Skills										
14	Teaching - learning and Assessment Strategy	Online learning Interactive videos Guided Tutorial									
15	Assessment Methods	Methods		Weighting	CO1	CO2	CO3				
		ASSIGNMENT1	10 %	10							
		ASSIGNMENT2	20 %				20				
		FINAL EXAM	40 %			30	10				
		GRADED TUTORIAL	15 %			15					
		TEST	15 %	15							
			100%	25	45	30					

As In COPPA 2 - Table 4,  
Item 8

## Learning Outcome and Constructive Alignment

Go to [www.menti.com](https://www.menti.com) and use the code 49 04 01 3

# How fit / ready is my course to be unbundled



Week	Topic No	CO	Topic	Sub Topic
1	1	CO01	Introduction to Engineering Geology	-Rock material strength and mass structure affecting engineering application of rock -Geological rock formation and cycle
2	2	CO01	Soil Formation and its characteristics	1-Formation of various types of soil and its characteristics 2-Coarse and Fine-grained soil, Residual and Transported Soil
3	3	CO01	Soil Testing and Classification	1-Soil Testing for classification purposes 2-Engineering Soil Classification - British and Unified Soil Classification System 3-Soil Description
4	4	CO02	Phase Diagram and Phase Relationship	1-Phase Diagram and Relationship 2-Phase Relationship problem solving
5	5	CO02	Soil Compaction	1-Compaction principles and laboratory tests 2-Field compaction - methods, techniques, specifications and control on site
6	6	CO02	Permeability and Seepage	1-Concept of permeability, laboratory and site testing on permeability 2-Seepage - Flownet and seepage basic concept
7	6	CO02	Seepage	1-Flownet and seepage problem solving
8	7	CO02	Effective Stress	1-Effect of capillary action, applied load and seepage on effective stress
9	8	CO03	Consolidation and Settlement	1-One-dimensional primary consolidation 2-Determination of coefficient of consolidation 3-Correction for construction period
10	9	CO03	Compressibility and Settlement of Soil	1-Elastic settlement of soil- shallow foundation
11	9	CO03	Shallow Foundation	1-Factor of safety and bearing capacity 2-Eccentric loading on shallow foundation
12	10	CO03	Slope Stability	1-Slope failure mode 2-Determination of factor of safety
13	10	CO03	Slope Stability	1-The method of slices

## COPPA 2 - Table 4, Item 10

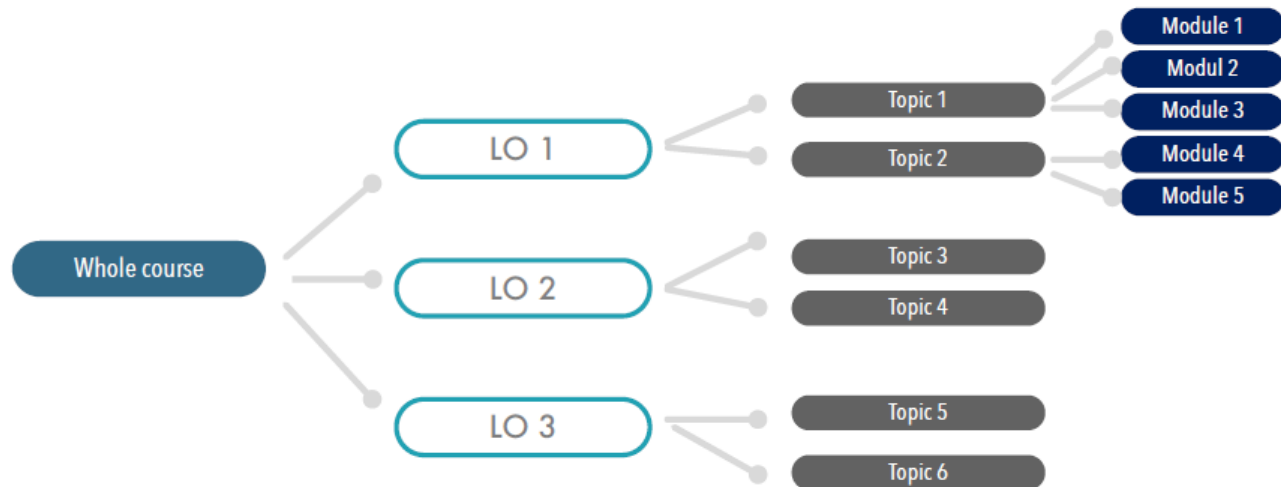
### Distribution of Student Learning Time

Unbundling from Learning Outcome - Prof. Abd Karim Alias (USM)

[Planning and Designing a Micro-credential Program - YouTube](#)

<https://bit.ly/2vZYk38>

### From a complete (whole) course to modules

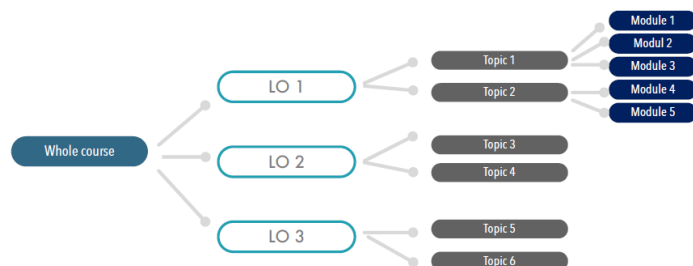


## MICRO-CREDENTIAL COURSE MAPPING [SAMPLE]

COURSE TITLE	ICT IN EDUCATION		
COURSE CODE	PGT436E	UNIT	3 (120 hour SLT)
INSTRUCTOR	AZIDAH ABU ZIDEN		
Course Synopsis	The course aims to provide students in exploring variety of interactive information communication technology tools by combining relevant and effective pedagogy across curricula. The design and development of all materials is based on the application of teaching design systems with creative and innovative teaching designs. Affirmation will be given to the 21st century learning approach by using the latest and relevant interactive technology. Hands-on learning activities are used to ensure the sustainability of learning among students.		
Course Learning Outcome (CLO):	At the end of the course student will be able to:  <ol style="list-style-type: none"><li>1. Demonstrate the used of ICT tools in teaching and learning. (PO2, C2)</li><li>2. Application of ICT based teaching strategies and methods in teaching and learning. (PO3, C3)</li><li>3. Evaluate existing teaching and learning session and propose latest technology tools and methods to be used to improve teaching and learning session. (PO7, C5, A4)</li><li>4. Design creative and innovative teaching and learning session by applying various instructional system design models. (PO6, C6, A5)</li></ol>		
COURSE MAPPING – CLO→Topics→Module→MLQ→Activities→Assessment			

COURSE MAPPING – CLO→Topics→ Module→MLQ →Activities →Assessment					
CLO	CHAPTER/TOPICS	MODULE	Module/Micro Learning Outcomes (MLO)	CONTENT/ DURATION	SCL ACTIVITIES/ ASSESSMENT
1	Introduction to ICT in Education	<b>Module 1</b> Title: Concept of ICT in Education	1. To explain what is <u>ICT in Education</u> 2. To discuss teachers' role as Instructional Designer	1 video (10 mins) – ICT in education  1 video (10 mins) applying ID in designing your lesson  <b>SLT: 2 hours</b>	Forum [What do you do before you go into a classroom?]   <b>SLT: 1 hour</b>

## From a complete (whole) course to modules

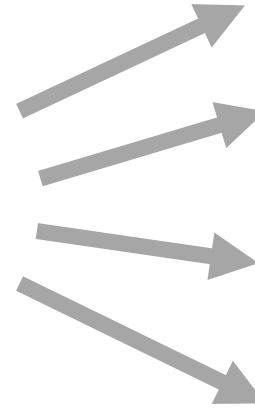


2	<b>21<sup>st</sup> Century Education Model</b>	<b>Module 2</b> Title: 21 <sup>st</sup> Century Skills	1. To discuss 21 <sup>st</sup> century skills in teaching and learning 2. To differentiate digital natives and digital immigrants	1 video (10 mins) – 21 <sup>st</sup> century models [a]  1 video (5 mins) – digital natives vs digital immigrants  1 video (15 mins) – 21 <sup>st</sup> century models [b]  <b>SLT: 3 hours</b>	Mind mapping activities – Applying 21 <sup>st</sup> century model to different subjects   <b>SLT: 1 hour</b>
		<b>Module 3</b> Title: Designing 21 <sup>st</sup> century Classroom	1. To differentiate different 21 <sup>st</sup> century teaching methods 2. To apply various 21 <sup>st</sup> century teaching methods	1 video (15 mins) –General 21 <sup>st</sup> century teaching methods  1 video (10 mins) – 21 <sup>st</sup> century teaching methods – Flipped Classroom  1 video (10 mins) – 21 <sup>st</sup> century teaching methods 3 – Gamification  1 video (10 mins) – 21 <sup>st</sup> century teaching methods  <b>SLT: 4.5 hours</b>	Forum: How to choose the right methods for your teaching activities.   Designing and Developing infographics for ONE of the 21 <sup>st</sup> Century teaching methods  <b>SLT: 2 hours</b>
2	<b>Bloom's Taxonomy &amp; Gagne's Nine Events of Instruction</b>	<b>Module 4</b> Title: Bloom Taxonomy	1. To differentiate each <u>levels</u> in Bloom Taxonomy 2. To write learning outcomes based on each <u>levels</u> in Bloom Taxonomy	1 video (10 mins) –Bloom Taxonomy  1 video (10 mins) –Applying Bloom Taxonomy in Learning Outcomes  1 video (10 mins) –Applying Bloom Taxonomy in Learning Outcomes  1 video (15 mins) – HOTS in Teaching and Learning  <b>SLT: 4.5 hours</b>	Online Quiz [10 questions – multiple choice]   <b>SLT: 1 hour</b>
		<b>Module 5</b> Title: Gagne Nine Events of Instruction	1. To identify each of the categories in Gagne Nine Events 2. To apply Gagne Nine Events in teaching and learning activities	1 video (10 mins) – Gagne Nine Events of Instruction  1 video (10 mins) – Using Gagne Nine Events of Instruction in Designing Instruction [1]  1 video (10 mins) – Using Gagne Nine Events of Instruction in Designing Instruction [2]  1 video (10 mins) – Applying Gagne Nine Events of Instruction in Blended learning [3]  <b>SLT: 4 hours</b>	Online Quiz [5 questions – open ended]  Forum [The difference between cognitive and affective domain]   <b>SLT: 2 hours</b>



# Approach 1 :

Inside  Out



## Inside

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## Out

- 1 Basic characteristics of soils
  - 1.1 The nature of soils
  - 1.2 Particle size analysis
  - 1.3 Plasticity of fine soils
  - 1.4 Soil description and classification
  - 1.5 Phase relationships

1.6 Soil compaction

Problems

References

### 2 Seepage

- 2.1 Soil water
- 2.2 Permeability
- 2.3 Seepage theory
- 2.4 Flow nets
- 2.5 Anisotropic soil conditions
- 2.6 Non-homogeneous soil conditions
- 2.7 Transfer condition
- 2.8 Seepage through embankment dams
- 2.9 Grouting
- 2.10 Frost heave

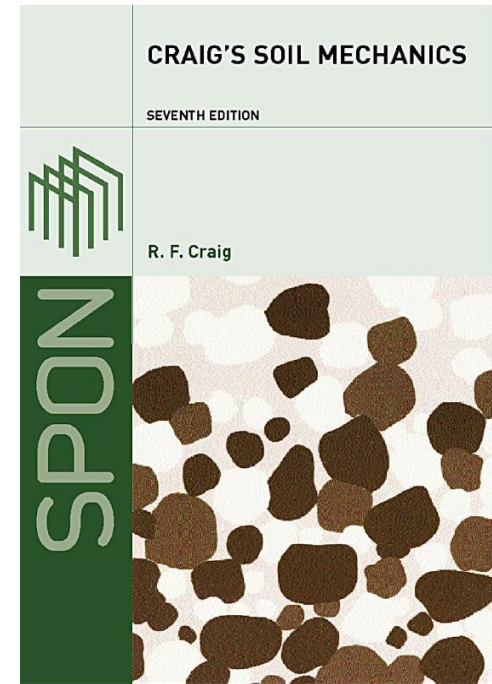
Problems

References

SI Company

Contractor

Soil Improvement Company



Identifying theme or category  
 Apart from being part of the subject  
 Identify purpose - job scope / company  
 Who else has been offering such module?  
 In what way your module will be different?

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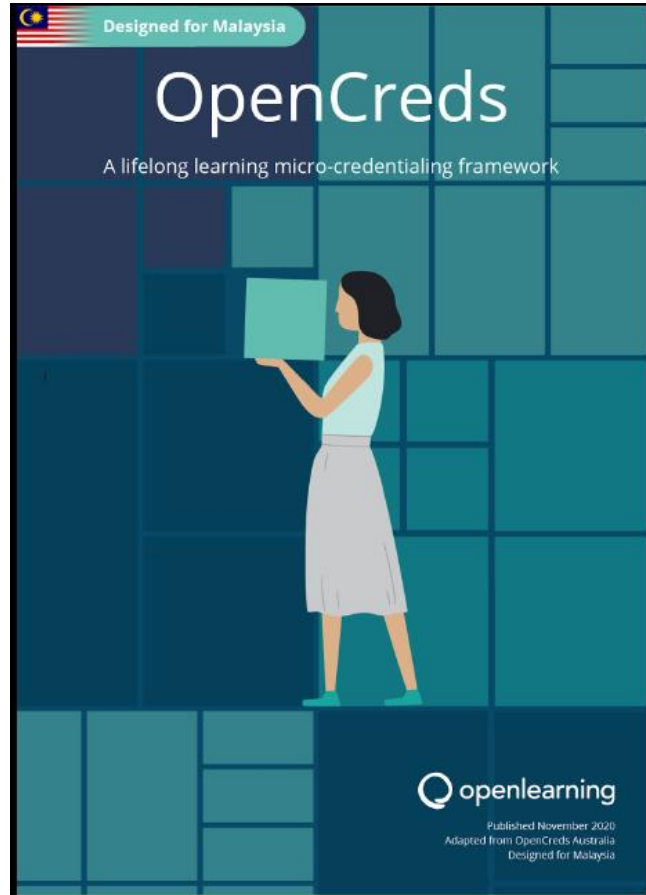
Three colours have been chosen to assist in identifying the type of learning to potential learners:

<p><b>DARK TEAL</b>  <b>#1EA69E</b>  <b>RGB: 30, 166, 158</b>  <b>CMYK: 77, 12, 44, 0</b>  <b>PMS: 3272C</b></p>	<p><b>Professional Learning (PL)</b> is the broad term used to encapsulate the variety of learning delivered by providers such as membership associations, employers, industry, CPD providers, and social organisations. It is important to note that Accredited Education Providers may also deliver Professional Learning.</p>
<p><b>DARK NAVY</b>  <b>#05374D</b>  <b>RGB: 5, 55, 77</b>  <b>CMYK: 98, 72, 47, 41</b>  <b>PMS: 7722C</b></p>	<p><b>Vocational Education and Training (VET)</b> is the broad term used to encapsulate the variety of learning delivered by accredited education providers that deliver workplace-specific skills and knowledge.</p>
<p><b>PURPLE</b>  <b>#4D2847</b>  <b>RGB: 77, 40, 71</b>  <b>CMYK: 66, 87, 44, 42</b>  <b>PMS: 5115C</b></p>	<p><b>Higher Education (HE)</b> is the term used to recognise the range of Higher Education Providers in Australia:</p> <ul style="list-style-type: none"> <li>- Higher Education Provider</li> <li>- Australian University</li> <li>- Australian University College</li> <li>- Australian University of Specialisation</li> <li>- Overseas University</li> </ul>



**Table 1:** OpenCred identification colours

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Reflective Practitioner?

Table 1: Types of learning for an OpenCred.

<b>DARK TEAL</b> <b>#1EA69E</b> <b>RGB: 30, 166, 158</b> <b>CMYK: 77, 12, 44, 0</b> <b>PMS: 3272C</b>	<b>Professional Learning (PL)</b> is the broad term used to encapsulate the variety of learning delivered by providers such as membership associations, employers, industry, CPD providers, and social organisations. It is important to note that HEPs may also deliver Professional Learning.
<b>DARK NAVY</b> <b>#05374D</b> <b>RGB: 5, 55, 77</b> <b>CMYK: 98, 72, 47, 41</b> <b>PMS: 7722C</b>	<b>Technical and Vocational Education and Training (TVET)</b> is the broad term used to encapsulate the variety of learning delivered by accredited education providers that deliver workplace-specific skills and knowledge.  It is important to note that, there are two main TVET education providers in Malaysia: <ul style="list-style-type: none"> <li>a. HEPs, Polytechnics and Community Colleges under the Ministry of Higher Education where the qualifications offered by these institutions are accredited by the Malaysian Qualifications Agency</li> <li>b. Accreditation Centres recognised by the Department for Skill Development (DSD) of the Ministry of Human Resources</li> </ul>
<b>PURPLE</b> <b>#4D2847</b> <b>RGB: 77, 40, 71</b> <b>CMYK: 66, 87, 44, 42</b> <b>PMS: 5115C</b>	<b>Higher Education (HE)</b> is the term used to recognise the accredited programmes offered by Higher Education Providers (HEP) in Malaysia: <ul style="list-style-type: none"> <li>c. Public Institutions</li> <li>d. Private Universities</li> <li>e. University Colleges</li> <li>f. Accredited Training Centres</li> <li>g. Language Centres</li> <li>h. International Branch Campuses</li> <li>i. College</li> </ul>





Credit-bearing OpenCred	Pathway OpenCred	Industry-recognised
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# Micro-credential Symposium 2020

SIARAN LANGSUNG
54



**AeU** Microdegree
 

Powered by
  iTrainAsia




### 160 Hours of Face-to-Face or Virtual Class

Classes will be conducted over 4 weeks, 8 weeks, or 12 weeks with 160 hours of teaching hours, tutorial and projects.




### Real-World Projects

You will be doing one to multiple projects throughout the class. You may also be involved with actual project the company is doing.




### Career Support


Offered for candidates when they are transitioning to the job market, when they are changing careers or during periods of unemployment.




### Micro-credentials Certificate by AeU

Certificate and digital badge will be awarded to you upon completion of the course and projects with acceptable quality.





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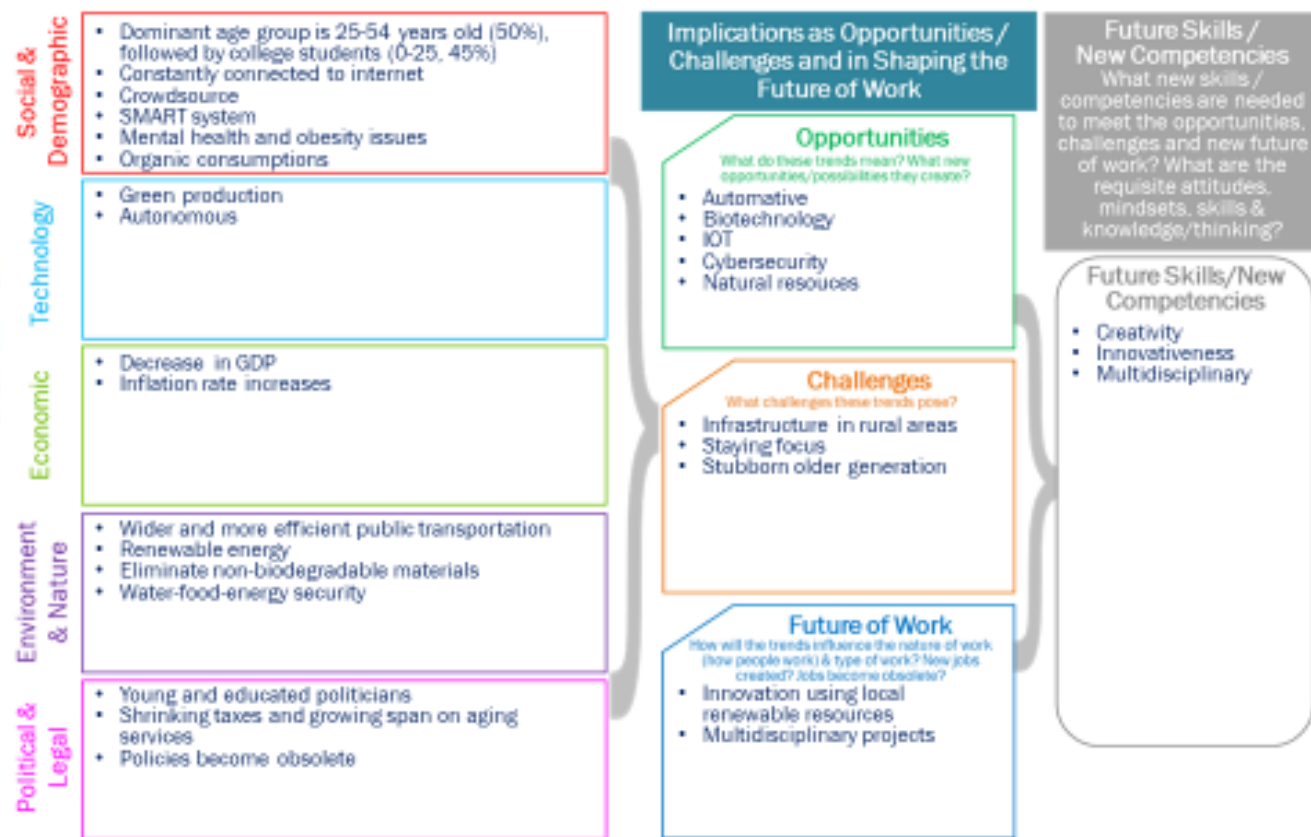
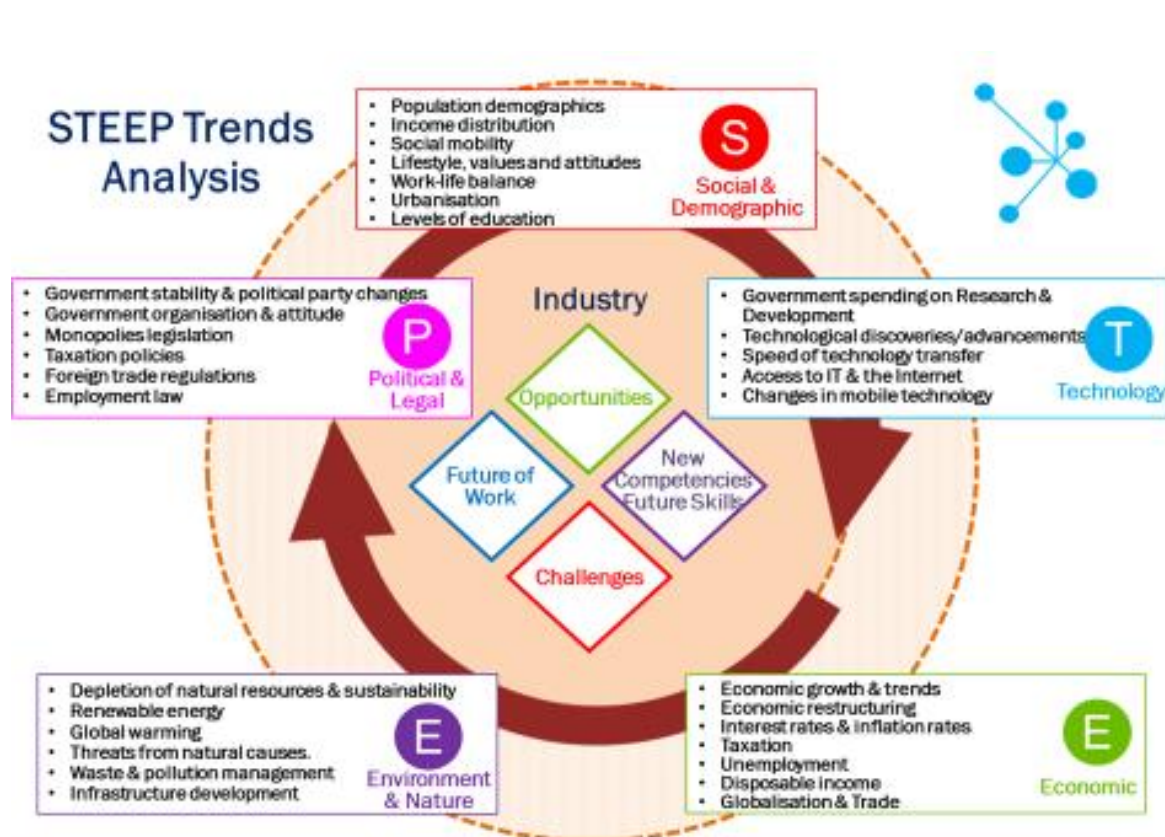
# Unbundling my course – Planning Stage

Points to consider – needs analysis

1. Purpose – What is the problem out there
2. Trend
3. Target Audience
4. Overlapping Initiatives
5. Category – Professional Learning, TVET, Higher Education

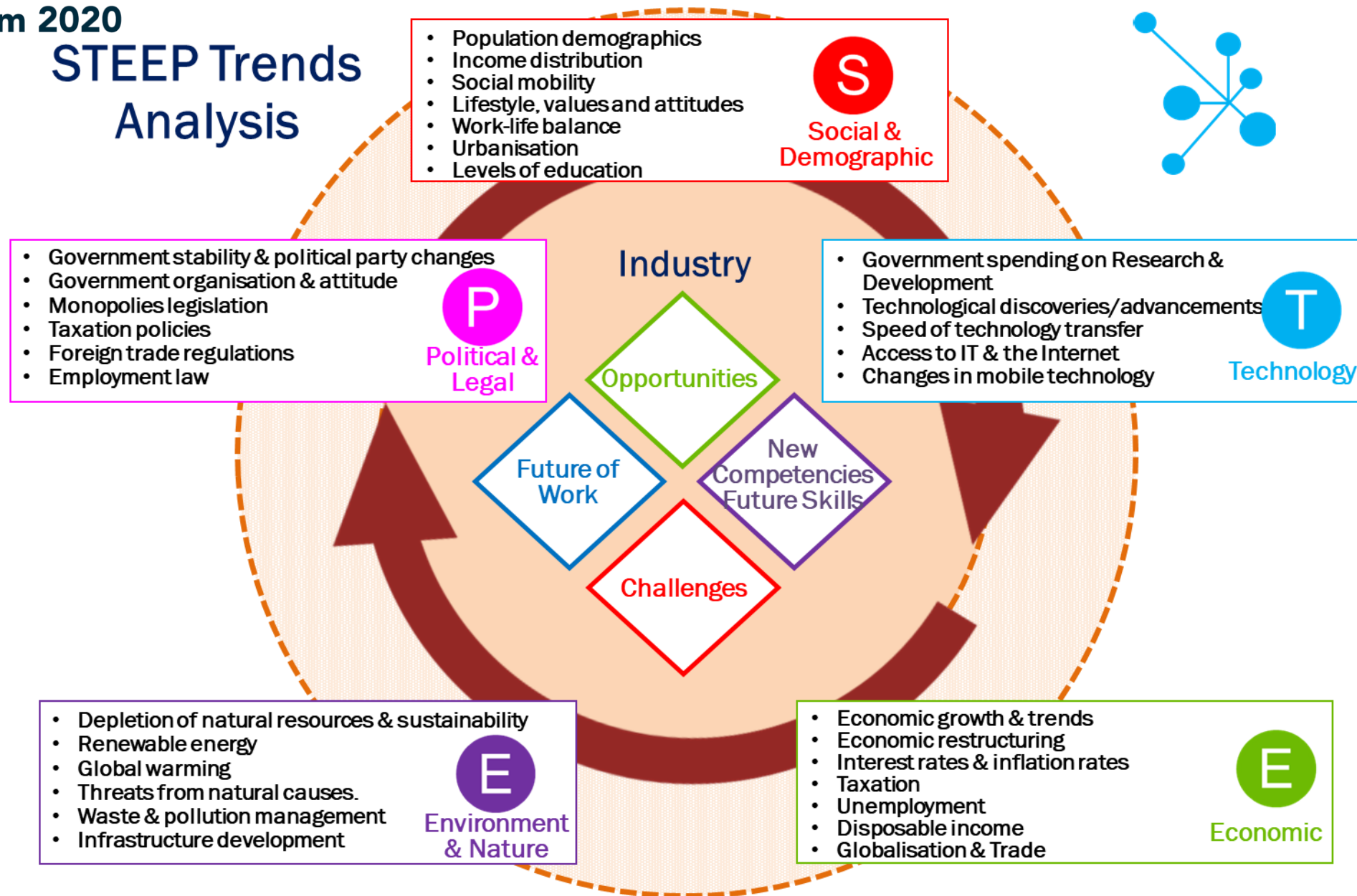
Needs Analysis – STEEP Analysis Tools

# What TOOL can you use to assess needs and issues - STEEP Analysis

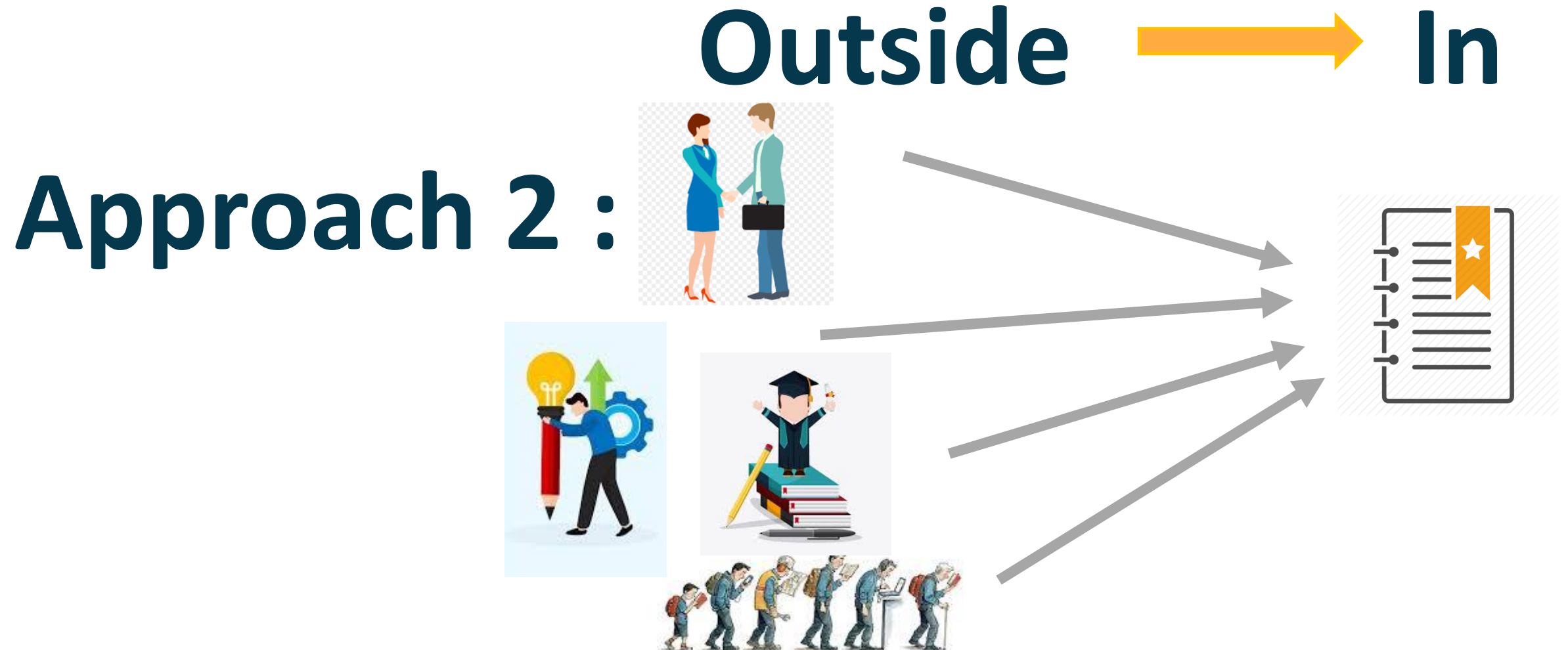


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## STEEP Trends Analysis







# Outside



Real World of Work Environment –  
Real Job scope

To meet the job expectation – **job embedded** module  
Working / performing collaboratively in real job setting

**Competency-based Module**

# Teacher

## Assessment

Knowledge - Theory, Principles

**Practice** - Produce Assessment Plan,  
Assessment Instruction Document,  
Exam questions, Rubric, Marking  
scheme, Vetting, Supporting students in  
assessment, Feedback, Marking and  
Awarding



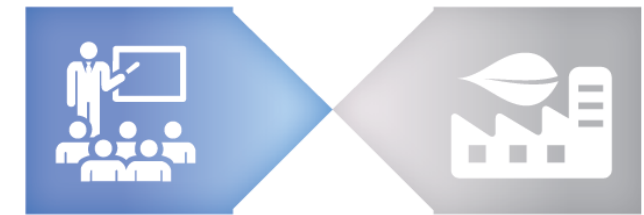
# Competency-based



**Teaching and Learning Online**



**Industry Collaborator**



HLI:  
basic principles and skills in  
the field of study

The Industry:  
knowledge and skill  
application in a real work  
environment relevant to the  
field of study

**Integration between University and Industry Needs – Endorsement  
Bite- size, stackable**

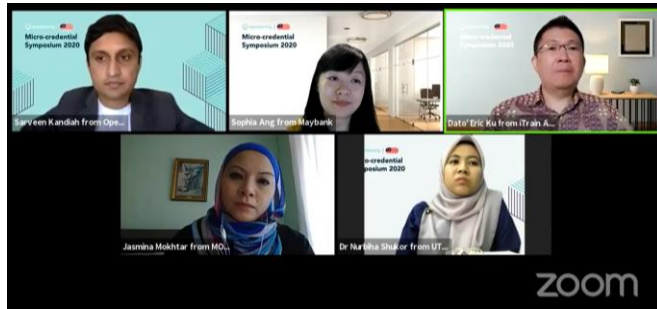
**Similar concept – bite size**

## Micro-credential Symposium 2020

Inline with MOHE New Deals  
Initiatives towards Flexible Education

- Competency Based Education
- Micro-Credential

Director General (MOHE)







“Its not about I am 4.0 CGPA holder  
but its about what is your skills and  
able to do “ – Sophie Ang (Maybank)

“How MC address career pathways...  
where can you work after you  
complete MC / programmes” –  
Jasmina (MOF)

KPT  
Penjana  
CAP

# Competency-based

				
	TRADITIONAL Instruction		COMPETENCY-BASED Instruction	
Structure	Time-based		Learner-centered	
Teaching mode	Group learning		Individualized	
Assessment Method	Summative, high stakes		Mastery-learning, performance-based	
Pace	Faculty-paced		Self-paced	
Program completion	Finish when required courses are passed		Finish when mastery of courses is demonstrated	



Go to [www.menti.com](https://www.menti.com) and use the code 81 97 04 6

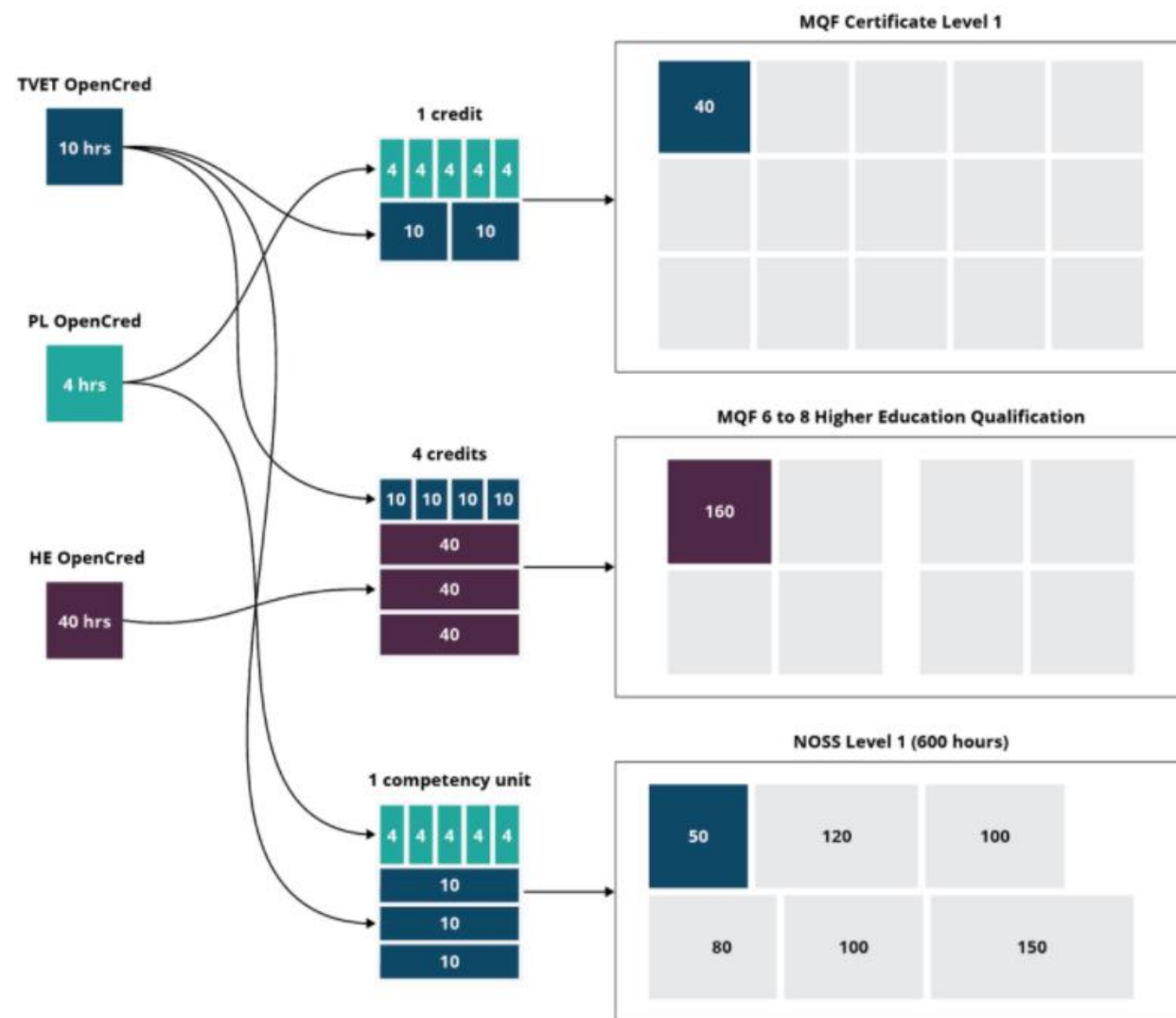
**How can you add value(s)  
to your micro-credential  
course?**

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## OpenCreds for Malaysia Framework

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# How you can put values

1. Certification
2. Society / consortium of industries
3. Recognized open distance learning providers
4. Consortium of public / private universities  
experts
5. Collaboration training divisions of company/  
industry – link up with their recognized  
training providers
6. Part of policy / SOPs etc

# Unbundling Principles

1. OBE\* — needs analysis and issues, trend, target audience / feeder, overlapping initiatives
2. Personalized\*
3. On-Demand / Industry driven\*
4. Value – Pathways - Career (PENJANA – MOF)
3. Purpose

\* MQA GGP Micro-credentials pg 6



# Thank You