



**UPM**  
UNIVERSITI PUTRA MALAYSIA  
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# PROGRAMME EDUCATIONAL OBJECTIVES, PROGRAMME OUTCOMES AND LEARNING OUTCOME MAPPING AND ASSESSMENT RUBRIC BY COURSEWORK



School of Graduate Studies

**TABLE 1 : MAPPING PROGRAMME AIMS TO PROGRAMME OUTCOMES**

NO.	STANDARD PROGRAMME OUTCOMES (PEO)	LEARNING OUTCOME (PO)						
		Demonstrate mastery of knowledge in the relevant field	Apply practical skills in the relevant field	Generate solutions to problems using scientific and critical thinking skills; and	Demonstrate leadership qualities through communicating and working effectively with peers and stakeholders	Relate ideas to societal issues in the relevant field.	Conduct research with minimal supervision and adhere to legal, ethical and professional codes of practice	Manage information for lifelong learning
		PO1	PO2	PO3	PO4	PO5	PO6	PO7
1.	Development of knowledge, research and communication skills and competency based on the scientific / enquiry process and its outcomes;							
2.	Enhancement of generic skills form societal advancement within the framework of the national vision							
3.	Utilisation of analytical and problem solving skills in order to evaluate and make decisions critically and creatively based on research evidence and / or experience							
4.	Enhancement of the quest for knowledge and lifelong learning skills in line with the advancement of global development							
5.	Research outcomes that are relevant to the national and international context; and							
6.	Dissemination of research outcomes through publications							

**NOTE : This is a standard template and mapping of PEO and PO is specific to specific programme. For this purpose and further information, please refer to respective faculty's web page if applicable.**

**TABLE 2 : MATRIX OF COURSE TO PROGRAMME OUTCOMES (PROGRAMME OUTCOMES)**

- ( i ) Overall, the Learning Outcomes ( PO ) includes seven seventh element of learning outcomes PO1 to PO7 .
- ( ii ) PO1 is mandatory. Each course must have at least three ( 3 ) elements of the PO including PO1 .
- ( iii ) Tick ( ✓ ) PO associated with the course.
- ( iv ) The total number of courses that contributed to each element of the Programme learning outcomes For elective courses, regardless of the number of courses available based on popular among students to meet the credit requirements.

NO.	CODE COURSES	NANE OF COURSES	CREDIT	Learning Outcome Programme							
				Demonstrate mastery of knowledge in the relevant field	Apply practical skills in the relevant field	Generate solutions to problems using scientific and critical thinking skills; and	Demonstrate leadership qualities through communicating and working effectively with peers and stakeholders	Relate ideas to societal issues in the relevant field.	Conduct research with minimal supervision and adhere to legal, ethical and professional codes of practice	Manage information for lifelong learning	
				PO1	PO2	PO3	PO4	PO5	PO6	PO7	
<b>CORE COURSE</b>											
<b>ELECTIVE COURSE*</b>											
<b>TOTAL</b>											

\* For purposes of the calculation, select the course students will be expected to take.

**TABLE 3 : LIST OF LEARNING PROGRAMME**

<b>No.</b>	<b>Programme Learning Outcomes</b>	<b>Examples of Learning Outcome Generic Programme</b>
1.	<b>PO1</b>	<b>Demonstrate mastery of knowledge in the relevant field</b>
2.	<b>PO2</b>	<b>Apply practical skills in the relevant field</b>
3.	<b>PO3</b>	<b>Generate solutions to problems using scientific and critical thinking skills; and</b>
4.	<b>PO4</b>	<b>Demonstrate leadership qualities through communicating and working effectively with peers and stakeholders</b>
5.	<b>PO5</b>	<b>Relate ideas to societal issues in the relevant field.</b>
6.	<b>PO6</b>	<b>Conduct research with minimal supervision and adhere to legal, ethical and professional codes of practice</b>
7.	<b>PO7</b>	<b>Manage information for lifelong learning</b>

\* Note : Outcomes UPM is a combination of learning domain MQA and Soft Skills JPT and the learning outcomes set for the Programme to enrich Standard Programme .

**TABLE 4 : MATRIX COURSE PROGRAMME WITH LEARNING TAXONOMY**

- (I) Overall, the programme must meet at least two (2) domains of cognitive domain and one of psychomotor or affective domain. The emphasis on psychomotor or affective domain is in accordance with the requirements of a course.
- (II) Mark / select domain taxonomy with reference to the writing of learning outcomes in the framework of the course. To reach a level of psychomotor P5 and above, it is proposed that cognitive level is at a level at least C5.
- (III) Level of Learning Taxonomy for the cognitive domain must be appropriate to the level of the course.
- (IV) Taxonomy Level achieved for an advanced course in the same field (example: Calculus and Calculus Continued) must not be less than level taxonomy previous courses.
- (V) The entire PROGRAMME is offered on average \* (to be  $\pm 0.05$ ) achieved C5, Q5, A4 (see sample calculations below).
- (VI) If the entire course of writing the learning outcomes achieved C5, Q5 and A4, the level should be marked in the schedule matrix are:
  - ♣ C1, C2, C3, C4, C5
  - ♣ P1, P2, P3, P4, P5
  - ♣ A1, A2, A3, A4
- (VII) The total number of courses that contribute to the highest level for each domain. For elective courses, a number based on popular courses among students to meet the credit requirements.

No.	Code of Courses	Name of Courses	Credit	TAXANOMY LEVEL OF LEARNING																	
				COGNITIVE DOMAIN						PSYCHOMOTOR DOMAIN							AFFECTIVE DOMAIN				
				Memorize	Understand	Apply	Analyzing	Judging	Creating	Perception	Set	Guided Response	Mechanism	Significant Response Complex	Adaptation	Acting Pure	Receive	Provide Feedback	Judging	Organize	Appreciating
C1	C2	C3	C4	C5	C6	P1	P2	P3	P4	P5	P6	P7	A1	A2	A3	A4	A5				
<b>CORE COURSE</b>																					
<b>ELECTIVE COURSES (Select <math>\chi</math> credit of <math>\gamma</math>)</b>																					
<b>The number of courses that achieve the Highest Level for Each Domain<sup>#</sup></b>				0	0	15	17	11	2	0	2	7	10	10	5	1	0	8	16	5	1
<b>The percentage of courses according to domain</b>				<b>45/45 (100%)</b>						<b>35/45 (77.8%)</b>							<b>30/45 (66.7%)</b>				
<b>Average Achievement Domain</b>				<b>4.00</b>						<b>4.34</b>							<b>2.97</b>				

# Example Programme XY

**EXAMPLE OF ASSESSMENT FORM FOR COURSE**

**PROGRAMME NAME:**

**COURSE**

**CODE:**

**COURSE**

**NAME:**

**COHORT (INTAKE):**

**LECTURER'S NAME:**

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50% of students in this class achieve minimum  
65% marks for

**PO Achievement Indicator:**

the assigned PO

COURSE ASSESSMENT SUMMARY			
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**Please Map Between CO-PO (tick X for the appropriate mapping):**

	PO1	PO2	PO3	PO4	PO5	PO6	PO7
CO1							
CO2							
CO3							
CO4							
CO5							

**Please Enter the Percentage of Attainment for Each POs**

	% of attainment	Able to address the PO? (Y/N)	Types of Assessment
PO1			
PO2			
PO3			
PO4			
PO5			
PO6			

Conclusions:

- 1 Based on CO-PO mapping, is there any CO that has not been achieved? (Yes/No)
- 2 Based on the CO & PO attainment, is there any change needs to be done? (Yes/No)
- 3 If yes, please provide suggestions to improve the course delivery and assessment

**EXAMPLE OF ASSESSMENT FORM FOR PROGRAMME OUTCOME**

**PROGRAMME NAME:**

**PROGRAMME COORDINATOR:**

**COHORT (INTAKE):**

PROGRAMME OUTCOMES SUMMARY EVALUATION								
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Course Code	Course Name	Percentage of Attainment						
		PO1	PO2	PO3	PO4	PO5	PO6	PO7
Semester 1								
Semester 2								
Semester 3								

The Highest Percentage of Attainment: 

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**A SAMPLE OF PROGRAMME EDUCATIONAL OBJECTIVES, PROGRAMME OUTCOMES AND COURSE OUTCOME MAPPING AND ASSESSMENT FOR MASTER BY COURSEWORK**