1	Course Name:	Artificial Intelligence	
	Course Code:	BACS3074	
	Course Classification:	Major (core)	
2	Synopsis:	This course provides students with knowledge of the methods and techniques by which computers may be made to perform tasks that are normally thought to require intelligence, for instance intelligent searching, knowledge representations and processing, uncertainty management, expert system, natural language and image processing, and machine learning. Students will also be equipped with the knowledge and skills to develop artificial intelligent programs using Python programming language or other related technology.	
3	Name(s) of Academic Staff:	1	
		2	
		3	
4	Semester and Year offered:	Year Offered	Semester / *Remarks: Refer to programme structure*
5	Credit Value:	4	
6	Pre-requisite/ co-requisite (if any):	Nil	

7 Course Learning Outcomes (CLO)

CLO1	Analyse the principles of existing intelligent systems and Artificial Intelligence (AI) techniques available in the areas of artificial intelligence (C4, PLO2)
CLO2	Demonstrate AI techniques and strategies to solve a given problem (A3, PLO9).
CLO3	Produce AI application using programming language or other relevant technology (P4, PLO3).

8 Mapping of the Course Learning Outcomes to the Programme Learning Outcomes, Teaching Methods and Assessment Methods

Course Learning Outcomes	Programme Learning Outcomes (PLO)												Teaching Methods	Assessment Methods
	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5	PLO 6	PLO 7	PLO 8	PLO 9	PLO 10	PLO 11			
CLO1		√											L,T,P,O,NF2F	Test, Examination
CLO2									√				L,T,P,O,NF2F	Assignment
CLO3			√										L,T,P,O,NF2F	Assignment
Mapping with MQF Cluster of Learning Outcomes		C2	C3A						C4A					

Indicate the primary causal link between the CLO and PLO by ticking 'v' in the appropriate box.

C1 = Knowledge & Understanding, **C2** = Cognitive Skills, **C3A** = Practical Skills, **C3B** = Interpersonal Skills, **C3C** = Communication Skills, **C3D** = Digital Skills, **C3E =** Numeracy Skills**, C3F** = Leadership, Autonomy & Responsibility, **C4A** = Personal Skills, **C4B** = Entrepreneurial Skills, **C5** = Ethics & Professionalism

9 Transferable Skills (if applicable)

(Skills learned in the course of study which can be useful and utilized in other settings)

1	Cognitive skills
2	Personal Skills
3	

Open-ended response (if any)

4	Practical skills

10 Distribution of Student Learning Time (SLT)

Note: This SLT calculation is designed for home grown programme only.

	Course Content Outline and Subtopics	CLO*	Learning and Teaching Activities**									Total SLT
			Face-to-Face (F2F)								NF2F Independent Learning (Asynchronous)	
			Physical				Online/ Technology-mediated (Synchronous)					
			L	T	P	O	L	T	P	O		
1	The nature of Artificial Intelligence (AI) Assessing AI - Turing Test	1	2	1	2						3	
2	Problem Definition	1	2	1	2						3	
3	Problem Solving Concept – Uninformed Search	1,2	2	1	2						3	
4	Problem Solving Concept – Informed Search	1,2	2	1	2						3	
5	Representing Knowledge- Frames and Semantic Network	1,2	2	1	2						3	
6	Natural Language Processing	1,2,3	2	1	2						3	
7	Machine Learning – Supervised learning	1,2,3	2	1	2						3	
8	Machine Learning – Unsupervised learning	1,2,3	2	1	2						3	
9	Artificial Neural Network	1,2,3	2	1	2						3	
10	Image Processing and Computer Vision	1,2,3	2	1	2						4	
11	Expert System and Recommender System	1,2,3	2	1	2						3	
12	Dealing with Uncertainty – Probability and Certainty Factor	2	2	1	2						3	
13	Dealing with Uncertainty – Fuzzy Logic	1,2,3	2	1	2						3	
14	Modelling and Simulation	2	2	1	2						3	
15												
16												
17												
18												
19												
20												
											SUB-TOTAL SLT:	**113**

	Continuous Assessment	%	Face-to-Face (F2F)		NF2F Independent Learning for Assessment (Asynchronous)
			Physical	Online/ Technology-mediated (Synchronous)	
1	Test	24	2		9
2	Assignment	36	5		21
3					
4					

5						
					SUB-TOTAL SLT:	**37**

Final Assessment		%	Face-to-Face (F2F)		NF2F Independent Learning for Assessment (Asynchronous)	
			Physical	Online/ Technology-mediated (Synchronous)		
1	Examination	40	2		8	
2						
3						
4						
5						
					SUB-TOTAL SLT:	**10**

	SLT for Assessment:	47
	GRAND TOTAL SLT:	160
A	% SLT for F2F Physical Component: *[Total F2F Physical /(Total F2F Physical + Total F2F Online + Total Independent Learning) x 100)]*	49.38
B	% SLT for Online & Independent Learning Component: *[(Total F2F Online + Total Independent Learning) /(Total F2F Physical + Total F2F Online + Total Independent Learning) x 100]*	**50.63**
C	% SLT for All Practical Component: *[% F2F Physical Practical + % F2F Online Practical]*	**17.50**
C1	% SLT for F2F Physical Practical Component *[Total F2F Physical Practical /(Total F2F Physical + Total F2F Online + Total Independent Learning) x 100)]*	**17.50**
C2	*% SLT for F2F Online Practical Component* *[Total F2F Online Practical / (Total F2F Physical + Total F2F Online + Total Independent Learning) x 100]*	**0.00**

Please tick (V) if this course is **Industrial Training/ Clinical Placement/ Practicum** using 50% of Effective Learning Time (ELT)

Note:

* Indicate the CLO based on the CLO's numbering in Item 8

** For ODL programme: Courses with mandatory practical requiremnets imposed by the programme standards or any related standards can be exempted from complying to the minimum 80% ODL delivery rule in the SLT.

11	Identify special requirement or resources to deliver the course (e.g., software, nursery, computer lab, simulation room etc)	Anaconda Distribution
12	References (include required and further readings, and should be the most current)	**Main references supporting the course** 1. Stephen, L., et al. (2022). *Artificial intelligence in the 21st century* (3rd ed.). Mercury Learning and Information. https://tarcez.tarc.edu.my/login?url=https://ebookcentral.proquest.com/lib/tarc-ebooks/detail.action?docID=7025176. 2. Stuart J. R., et al. (2022). *Artificial intelligence: a modern approach* (4th ed.). Pearson. https://tarcez.tarc.edu.my/login?url=https://ebookcentral.proquest.com/lib/tarc-ebooks/detail.action?docID=6805255. 3. Roshani R., et al. (2022). *Green Internet of Things and machine learning* . John Wiley. https://tarcez.tarc.edu.my/login?url=https://search.ebscohost.com/login.aspx?direct=true&scope=site&db=nlebk&db=nlabk&AN=3139480. 4. Wes M. (2022). *Python for data analysis: data wrangling with Pandas, NumPy, and IPython* (3rd ed.). O'Reilly Media. https://tarcez.tarc.edu.my/login?url=https://search.ebscohost.com/login.aspx?direct=true&scope=site&db=nlebk&db=nlabk&AN=3360238.
13	Other additional information (if applicable)	Nil

Note: Number of PLO indicated is purely for illustration purposes only and the number is subjected to the curriculum design.