1	Course Name:	Artifici	al Intelligenc	e								
	Course Code:	BMCS2	BMCS2003									
	Course Classification:	Major (core)										
2	Synopsis:	intellig and ma	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 requi 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 created technology.									
		1										
3	Name(s) of Academic Staff:	2										
		3										
4	Semester and Year offered:	Yea	r Offered		Semester		Remarks: Refer to programme structure					
5	Credit Value:		3									
6	Pre-requisite/ co-requisite (if any):	Nil										
7		CLO	D1 Analy:	se the	orinciples of e	existing	; intelligent systems and Artificial Intelligence (AI) techniques available in the areas of artificial intelligence (C4, PLO2)					
		CLO	Demo	nstrate	Al technique	es and :	strategies to solve a given problem (A3, PLO9).					
		CLO3 Produce AI application using programming language or other relevant technology (P4, PLO3).										
	Course Learning Outcomes											
	(CLO)											
	1											
8	Mapping of the Course Learn	ning Out	tcomes to th	e Progr	amme Learni	ing Out	tcomes, Teaching Methods and Assessment Methods					

		Programme Learning Outcomes (PLO)												
Course Learning Outcomes	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5	PLO 6	PLO 7	PLO 8	PLO 9	PLO 10	PLO 11		Teaching Methods	Assessment Methods
CLO1		٧											L,T,P,O,NF2F	Test, Examination
CLO2									٧				L,T,P,O,NF2F	Assignment
CLO3			٧										L,T,P,O,NF2F	Assignment
Mapping with		C2	СЗА						C4A					
MQF Cluster of Learning														
Outcomes														

Indicate the primary causal link between the CLO and PLO by ticking $\,^{\,\text{l}}\text{V}^{\,\text{l}}$ 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-e	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.

			Learning and Teaching Activities**									
	Course Content Outline and Subtopics		Face-to-Face (F2F)									TabelOIT
			Physical				Online/ Technology- mediated (Synchronous)				NF2F Independent Learning (Asynchronous)	Total SLT
	The nature of Artificial Intelligence (AI)		L	Т	Р	0	L	Т	Р	0		
1	Assessing AI - Turing Test	1	1	1	2						2	
2	Problem Definition	1	1	1	2						2	
3	Problem Solving Concept – Uninformed Search	1,2	1	1	2						2	
4	Problem Solving Concept – Informed Search	1,2	1	1	2						2	
5	Representing Knowledge- Frames and Semantic Network	1,2	1	1	2						2	
6	Natural Language Processing	1,2,3	1	1	2						2	
7	Machine Learning – Supervised learning	1,2,3	1	1	2						2	
8	Machine Learning – Unsupervised learning	1,2,3	1	1	2						2	
9	Artificial Neural Network	1,2,3	1	1	2						2	
10	Image Processing and Computer Vision	1,2,3	1	1	2						2	
11	Expert System and Recommender System	1,2,3	1	1	2						2	
12	Dealing with Uncertainty – Probability and Certainty Factor	2	1	1	2						2	
13	Dealing with Uncertainty – Fuzzy Logic	1,2,3	1	1	2						2	
14	Modelling and Simulation	2	1	1	2						2	
15												
16												
17												
18												
19												
20												
											SUB-TOTAL SLT:	84
					Fa	ace-to-	Face (F	2F)			NF2F	
	Continuous Assessment	%		Phy	sical			line/ Te ated (S			Independent Learning for Assessment (Asynchronous)	
1	Test	28	1								4	
2	Assignment	42			3						18	
3												
4												
5												

			Face-to-I	Face (F2F)	NF2F					
	Final Assessment	%	Physical	Online/ Technology- mediated (Synchronous)	Independent Learning for Assessment (Asynchronous)					
1	Examination	30	2		8					
2										
3										
4										
5										
	SUB-TOTAL SLT:									
	SLT for Assessment:									
	GRAND TOTAL SLT:									
Α		51.67								
В	B [Total F2F Physical /(Total F2F Physical + Total F2F Online + Total Independent Learning) x 100)] [Total F2F Physical /(Total F2F Physical + Total F2F Online + Total Independent Learning) x 100] [Total F2F Online + Total Independent Learning) / Total F2F Physical + Total F2F Online + Total Independent Learning) x 100]									
С	% SLT for All Practical Component:									
C1		23.33								
	[Total F2F Physical Practical / (Total F2F Physical + Total F2F Online + Total Independent Learning) x 100)] % SLT for F2F Online Practical Component									
C2	[Total	F2F Online Pr	actical / (Total F2F Physica	I + 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:

- $\ensuremath{^{*}}$ 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.

	Identify special requirement or resources to deliver the	
11	course (e.g., software, nursery, computer lab, simulation	Anaconda Distribution
	room etc)	
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.