

VALIOR (M.P.), INDIA

Deemed University

(Declared under Distinct Category by Ministry of Education, Government of India)

NAAC ACCREDITED WITH A++ GRADE

### Centre for Artificial Intelligence

### Scheme of Evaluation

B. Tech. VI Semester (Information Technology (Artificial Intelligence and Robotics))

							Maximu	m Mark	s Allotted		batch adi				onta	_			
					Theor	y Slot			Practical S	lot	моо	Cs			ours week		**		
S. No.	Subject Code	Category Code	Subject Name	100000	nd Term aluation	12/5000000	tinuous luation	End	Contin Evalu				Total Marks				Total Credits	Mode of Teaching	Mod- of
				End Sem. Exam.	SProficiency in subject /course	Mid Sem. Exam.	Quiz/ Assignm ent	Sem. Exam.	Lab work & Sessional	skill Based Mini Project	Assignme nt	Exam		L	Т	P	Credits	reaching	Exam
1.	2240621	DC	AI for Robotics	50	10	20	20	-	-		-	-	100	3	-		3	Blended	PP
2.	2240622	DC	Image Processing	50	10	20	20	60	20	20	-	4	200	3		2	4	Blended	. bb
3.	2240623	DC	Artificial Intelligence & Machine Learning	50	10	20	20	60	20	20	-	2	200	3	2	2	4	Blended	PP
4.	DE	DE	Departmental Elective* (DE-1)			1181	*	-	-	-	25	75	100	3	5	-	3	Online	MCQ
5.	OC	OC	Open Category (OC-1)	50	10	20	20	-	-	-	-	¥	100	3	-	-	3	Blended	PP
6.	2240624	DLC	Minor Project-II**	-	-	(90)	H	60	40	-			100	-	_	4	2	Offline	SO
7.	200XXX	CLC	Novel Engaging Course (Informal Learning)	-	-			50		÷	-	-	50	2	2	2		Interactive	
8.	2270625	NSS	Natural Sciences & Skills <sup>#</sup>	200	40	80	80	120	40	40	-		600	ī		2	2#	-	-
		Total		400	80	160	160	350	120	80	25	75	1450	16	0	12	22	_	_
9.	1000007		Intellectual Property Rights (IPR)	50	10	20	20	-	-	-	-	-	100	2	-		GRADE	Online	MCQ

Additional Course for Honours or minor Specialization Permitted to opt for maximum two additional courses for the award of Honours or Minor specialization

\*Proficiency in course/subject – includes the weightage towards ability/ skill/ competency/knowledge level/expertise attained etc. in that particular course/subject

"("Natural Sciences & Damp; Skills" treated as Mandatory Audit Courses from first to fourth semester and cumulative marks converted as a cluster of credits and awarded in the VI semester)

\*All of these courses will run through SWAYAM/ NPTEL/ MOOC with credit transfer.

MCQ: Multiple Choice Question

AO: Assignment + Oral

PP: Pen Paper SC

SO: Submission + Ora

	Mode of	Teaching			· cacinitosion (	Mode of Exam	ination		
The	eory	Lab	NEC		Theory		Lab	NEC	Total Credits
Online	Blended	Offline '	Interactive	PP	AO	MCQ	so	so	Total Credits
3	14 .	2	1	14	-	3	2	1	22
13.63	71.43	9.09	4.54	63.63	^	13.63	9.09	4.54	Credits %

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### Centre for Artificial Intelligence

### B. Tech. VI Semester (Information Technology (Artificial Intelligence and Robotics))

		DE -1*
S. No.	Subject Code	Subject Name
1	2240631	Wheeled Mobile-Robots (8 weeks)
2	2240632	Collaborative Robots (COBOTS): Theory and Practice (8 weeks)
3	2240633	Compiler Design (12 weeks)

	OC-1								
S. No.	Subject Code	Subject Name							
1	OC-1	Information Security							
2	OC-1	Data Mining & Warehousing							

# List of courses to be opted for Honours in VI Semester

	Honous (to be opted by students of		ent)
Course Code	Course Name	Course Code	Course Name
160, 510, 41 WHALL 54, 60 12	Track 1: Information Security		Track 2: Internet of Things
H24062601	Secure Computation: Part I (12 weeks)	H24062603	Sensors and Actuators (12 weeks)
H24062602	Information Security-5-Secure Systems Engineering (8 weeks)	H24062604	Microprocessors and Microcontrollers (12 weeks)
8=3	-	H24052603	Introduction to Internet of Things (12 Weeks)
	Track 3: High Perform	nance Computing	
H24062605	Parallel Computer Architecture (12 weeks)		
H24062606	GPU Architectures and Programming (12 Weeks)		

<sup>\*</sup> Course run through SWAYAM/NPTEL/ MOOC Learning Based Platform

Note: In each semester (starting from V to VIII semester), it is required to opt for new subjects towards Honours Degree/ Minor

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# Centre for Artificial Intelligence

### **Scheme of Evaluation**

B. Tech. VI Semester (Artificial Intelligence (AI) and Data Science) (for batch admitted in academic session 2022 - 23

						N	laximum	Marks	Allotted	(7)	or batch a			Co	ntac	et	104		
		9			Theory	Slot		1	Practical SI	ot	MOO	Cs			veek				Mode
š.	Subject	Category	Subject Name		Term luation	100000000000000000000000000000000000000	nuous iation	End	Contin Evalu	ation			Total Marks				Total Credits	Mode of Teaching	of Exam
0.	Code	Code	# 100 mm	End Sem.	SProficienc y in subject /course	Mid Sem. Exam.	Quiz/ Assign ment	Sem. Exam.	Lab work & Sessional	Skill Based Mini Project	Assignm	Exam		L	Т	P			•
1.	2270621	DC	Natural Language	50	10	20	20	-	-	-	+	126	100	3	=	7:	3	Blended	PP PP
		700.00	Processing	50	10	20	20	60	20	20	-	-	200	3	-	2	4	Blended	PP
2.	2270622	DC	Image Processing	50	10	20	20	60	20	20	-	-	200	3	-	2	4	Blended	PP
3.	2270623	DC	Deep Learning	30	10	20					25	75	100	3		_	3	Online	MCQ
4.	DE	DE	Departmental Elective* (DE-1)	12			.5.	-	*	-	25	13							PP
5.	ОС	OC	Open Category (OC-1)	50	10	20	20			-	-	-	100	3	*	4	2	Blended Offline	SO
-	2270/24	DLC	Minor Project-II**	_		-		60	40	-	-	-	100	-	-	**	-	Offinie	- 50
7.	2270624 200XXX		Novel Engaging Course (Informal Learning)	-		-		50	-	•	-	4	50	-	-	2	1	Interactive	e SO
8.	2270625	NSS	Natural Sciences & Skills <sup>6</sup>	200	40	80	80	120	40	40	•	-	600	1	-	2	2#	-	-
-		Tota		400	80	160	160	350	120	80	25	75	1450	16	0	12	22	O-F-	
9.	1000007	MAC	Intellectual Property Rights (IPR)	50	nship-III (C	20	20	-	-	-	-	-	100	2	*	-	GRADE	Online	MCQ

Permitted to opt for maximum two additional courses for the award of Honours or Minor specialization Additional Course for Honours or minor Specialization

SProficiency in course/subject - includes the weightage towards ability/ skill/ competency /knowledge level /expertise attained etc. in that particular course/subject "("Natural Sciences & Skills" treated as Mandatory Audit Courses from first to fourth semester and cumulative marks converted as a cluster of credits and awarded in the VI semester)

\*All of these courses will run through SWAYAM/ NPTEL/ MOOC with credit transfer.

PP: Pen Paper SO: Submission + Oral

MCQ: Multiple Choice Question AO: Assignment + Oral Mode of Examination Mode of Teaching . **Total Credits** NEC Lab Theory NEC Lab Theory SO SO MCQ AO PP Interactive Offline Blended 22 Online 2 14 14 Credits % 4.54 13.63 4.54 63.63 9.09 71.43

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## Centre for Artificial Intelligence

# B. Tech. VI Semester (Artificial Intelligence (AI) and Data Science)

	DE -1*							
S. No.	Subject Code	Subject Name						
1	2270631	Business Intelligence & Analytics (12 Weeks)						
2	2270632	Data Analytics with Python (12 Weeks)						
3	2270633	Compiler Design (12 weeks)						

OC-1							
S. No.	Subject Code	Subject Name					
1	OC-1	Information Security					
2	OC-1	Data Mining & Warehousing					

# List of courses to be opted for Honours or Minor specialization in VI Semester

	Honours (to be opted by students of I		ent)
Course Code	Course Name	Course Code	Course Name
	Track 1: Information Security		Track 2: Internet of Things
H27062601	Secure Computation: Part I (12 weeks)	H27062603	Sensors and Actuators (12 weeks)
H27062602	Information Security-5-Secure Systems Engineering (8 weeks)	H27062604	Microprocessors and Microcontrollers (12 weeks)
-	-	H27052603	Introduction to Internet of Things (12 Weeks)
	Track 3: High Performa	ince Computing	(K.A.)
H27062605	Parallel Computer Architecture (12 weeks)		
H27062606	GPU Architectures and Programming (12 Weeks)		

<sup>\*</sup> Course run through SWAYAM/NPTEL/ MOOC Learning Based Platform

Note: In each semester (starting from V to VIII semester), it is required to opt for new subjects towards Honours Degree/ Minor

Specialization.

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### Centre for Artificial Intelligence

### **Scheme of Evaluation**

B. Tech. VI Semester (Artificial Intelligence (AI) and Machine Learning)

(for batch admitted in academic session 2022 - 23)

							Maximun	Marks	Allotted					40.00	onta				
					Theory	Slot		1	Practical SI	ot	MOO	Cs			week				
S.		Categor	Subject Name	5000000	Term uation		inuous uation	End	Contin Evalu				Total Marks				Total Credits	Mode of Teaching	Mode of
No.	Code	y Code	300	End Sem. Exam.	<sup>8</sup> Proficienc y in subject /course	Mid Sem. Exam.	Quiz/ Assign ment	Sem. Exam.	Lab work & Sessional	Skill Based Mini Project	Assignment	Exam		L	T	P			Exam.
1.	2280621	DC	Natural Language Processing	50	10	20	20	~	4		•	-	100	3	(0)	-	3	Blended -	PP
2.	2280622	DC	Image Processing	50	10	20	20	60	20	20	-	-	200	3	-	2	4	Blended	PP
3.	2280623	DC	Deep Learning	50	10	20	20	60	20	20	*	-	200	3	-	2	4	Blended	PP
4.	DE	DE	Departmental Elective* (DE-1)	æ	-		-	-	5		25	75	100	3	~	-	3	Online	MCQ
5.	OC	OC	Open Category (OC-1)	50	10	20	20	-	-		145		100	3		-	3	Blended	PP
6.	2280624	DLC	Minor Project-II**	-	-	-		60	40	-		15	100	-	-	4	2	Offline	SO
7.	200XXX		Novel Engaging Course (Informal Learning)	a.e.	*	•	•	50	-	8			50	-		2	1	Interactive	so
8.	2280625	NSS	Natural Sciences & Skills*	200	40	80	80	120	40	40	9#.	(2)	600	1 -	-	2	2"	-	-
		Tot	al	400	80	160	160	350	120	80	25	75	1450	16	0	12	22	-	-
9.	1000007	MAC	Intellectual Property Rights (IPR)	50	10	20	20	-	-	-	-	-	100	2		2	GRADE	Online	MCQ

Additional Course for Honours or minor Specialization

Permitted to opt for maximum two additional courses for the award of Honours or Minor specialization

Proficiency in course/subject – includes the weightage towards ability/ skill/ competency /knowledge level /expertise attained etc. in that particular course/subject

All of these courses will run through SWAYAM/ NPTEL/ MOOC with credit transfer.

MCQ: Multiple Choice Question AO: Assignment + Oral PP: Pen Paper SO: Submission + Oral

Mode of Examination Mode of Teaching NEC **Total Credits** Lab NEC Theory Lab Theory SO SO MCO PP Online Blended Offline Interactive 2 14 3 . 14 Credits % 9.09 4.54 4.54 63.63 13:63 9.09 13.63

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<sup>&</sup>quot;("Natural Sciences & amp; Skills" treated as Mandatory Audit Courses from first to fourth semester and cumulative marks converted as a cluster of credits and awarded in the VI semester)





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# Centre for Artificial Intelligence

B. Tech. VI Semester (Artificial Intelligence (AI) and Machine Learning)

		DE -1*
S. No.	Subject Code	Subject Name
1	2280631	Artificial Intelligence: Knowledge Representation and Reasoning (12 Weeks)
2	2280632	Blockchain and its Applications (12 Weeks)
3	2280633	Edge Computing (8 Weeks)
4	2280634	Compiler Design (12 Weeks)

	OC-1								
S. No.	Subject Code	Subject Name							
1	OC-1	Information Security .							
2	OC-1	Data Mining & Warehousing							

# List of courses to be opted for Honours or Minor specialization in VI Semester

Honours*  (to be opted by students of Parent Department)				
Course Code	Course Name	Course Code	Course Name	
	Track 1: Information Security		Track 2: Internet of Things	
H28062601	Secure Computation: Part I (12 weeks)	H28062603	Sensors and Actuators (12 weeks)	
H28062602	Information Security-5-Secure Systems Engineering (8 weeks)	H28062604	Microprocessors and Microcontrollers (12 weeks)	
-	-	H28052603	Introduction to Internet of Things (12 Weeks)	
	Track 3: High Perform	ance Computing	g B	
H28062605	Parallel Computer Architecture (12 weeks)			
H28062606	GPU Architectures and Programming (12 Weeks)			

<sup>\*</sup> Course run through SWAYAM/NPTEL/ MOOC Learning Based Platform

Note: In each semester (starting from V to VIII semester), it is required to opt for new subjects towards Honours Degree/ Minor

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# Centre for Artificial Intelligence

### B. Tech. VI Semester

Minor Specialization in Artificial Intelligence and Machine Learning*  (to be opted by students of other Department)				
S. No.	Course Name			
1	Introduction To Soft Computing - 8 weeks			
2	Artificial Intelligence: Knowledge Representation And Reasoning - 12 weeks			

\* Course run through SWAYAM/NPTEL/ MOOC Learning Based Platform

Note: In each semester (starting from V to VIII semester), it is required to opt for new subjects towards Honours Degree/ Minor Specialization.