

Deemed to be 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. VII Semester (Information Technology (Artificial Intelligence and Robotics))

S.	Subject	Category	Subject Name									(for ba	ten aa				THE NEW	sion 2021 -	(44)
No.	Code	Code	Subject Name		Theory	Clo4	Maximu	m Marks A			7.70	00-	{		tact Ho er weel				
			1 50 0						Practical Slo		MOOCs			- P			- 1		
	100 m	1 2 -			i Term luation	2.00	tinuous Iuation	End	Continuous Evaluation		Assign ment	Exam	Total	L	T	P	Total	Mode of	Mode
		128		End Sem. Exam.	SProficiency in subject /course	Mid Sem. Exam.	Quiz/ Assignm ent	Sem. Exam.	Lab work & Sessional	Skill Based Mini Project		+ .	Marks				Credits	Teaching	of Exam
1.	DE	DE	Departmental Elective (DE-2)	50	10	20	20	-	-	-			100	3	-		3	Blended	PP
2.	DE	DE	Departmental Elective* (DE-3)	- -		ş - ,-,	-	-	,	-	25	75	100	3	-	-	3	Blended	MCQ
3.	DE	DE	Departmental Elective* (DE-4)	-			-	-	-	-1	25	75	100	3	-	-	3	Blended	MCQ
4.	OC	OC	Open Category (OC-2)	50	10	20	20	-	-		-	-	100	3	-	-	3	Blended	PP
5.	240701	DLC	Departmental Lab (ROS Lab)	-	- , *		- to	60	20	20	-	-	100	-	-	4	2	Offline	so
6.	240702	DLC	Creative Problem Solving (Evaluation)	* ¥	- (-)	-		25	25	-	-	-	50	-	-	2	1	Offline	SO
7.	240702	DLC	Summer Internship Project-III (04 weeks) (Evaluation)	- 8 A	- : - : : : : : : : : : : : : : : : : :		•	60	-	-	-	-	60	-	-	4	2	Interactive	so
	Mg	Total		100	20	40	40	145	45	20	50	150	610	12	_	10	17		
8.	1000008		Universal Human Values & Professional Ethics(UHVPE)	50	10	20	20	-	-	-	-	-	100	2	-	-	GRADE	Blended	MCQ
Ad	ditional C	ourse for I Specializa	Honours or minor	416 pt 114-	Peri	mitted t	o opt for	maximun	n two addition	onal cour	ses for th	ne awar	d of Ho	nours	or Mi	nor s	l pecializat	ion	

SProficiency in course/subject - includes the weightage towards ability/ skill/ competency /knowledge level /expertise attained etc. in that particular course/subject MCQ: Multiple Choice Question AO: Assignment + Oral PP: Pen Paper SO: Submission + Oral

1	Mode of Teach			Mode of I	Examination		
Offline	Blended	Interactive	PP	AO	MCQ	SO	Total Credits
3	12	2	6	0	6	5	17
17.65	70.59	11.76	35.29	0	35.29	29.41	Credits %



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

(数数数数)		DE -2							
S. No.	Subject Code	Subject Name							
1.	240731	Robot Operating System							
2. 240732 Humanoid Robotics									
3.	240734	Augmented and Virtual Reality							
1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -		OC-2							
S. No.	Subject Code	Subject Name							
1.	OC2	Statistical Programming with R							
2.	OC2	Database Management System							

		DE-3*
S. No.	Subject Code	Subject Name
1.	240767	Reinforcement Learning (12 Weeks)
2.	240768	Industrial Robotics: Theories for Implementation (12 Weeks)
3.	240769	Software Testing (12 Weeks)
		DE-4*
S. No.	Subject Code	Subject Name
1.	240770	Deep Learning for Computer Vision (12 Weeks)
2.	240771	Big Data Computing (8 Weeks)
3.	240772	Mechanics and Control of Robotic Manipulators (8 Weeks)

List of courses to be opted for Honours in VII Semester

	Honours (to be opted by students of I		nent)
Course Code	Course Name	Course Code	Course Name
	Track 1: Information Security		Track 2: Internet of Things
H24072501	Secure Computation Part-II (12 Weeks)	H24072503	Introduction to Industry 4.0 and Industrial IoT (12 Weeks)
H24072502	Practical Cyber Security for Cyber Security Practitioners (12 Weeks)	H24052506	Distributed Systems (8 Weeks)
H24052501	Cyber Security and Privacy (12 weeks)	H24052503	Introduction to Internet of Things (12 weeks)
H24052502	Ethical Hacking (12 weeks)	H24052504	Sensor Technology: Physics, Fabrication and Circuits (8 weeks)
	Track 3: High Performa	nce Computing	
H24072504	Advanced Distributed Systems (12 Weeks)		
H24072505	Computational Complexity (12 Weeks)		
H24052505	Multi-Core Computer Architecture (12 weeks)	-	
H24052506	Distributed System (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.

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Centre for Artificial Intelligence

Scheme of Evaluation

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

(for batch admitted in academic session 2021 - 22)

Subject	Category	Subject Name				Maximun	Marks	Allotted					C	Contac	et			
Code	Code			Theory	Slot				ot	МО	OCs			_	er			
							End	1		Assign ment	Exam	Total	L	T	P	Total Credits	Mode of Teaching	Mode of
			End Sem. Exam.	⁵ Proficiency in subject /course		Quiz/ Assignme nt	Sem. Exam.	Lab work & Sessional	Skill Based Mini Project									Exam
DE	DE	Departmental Elective (DE-2)	50	10	20	20	-	-	-	-	-	100	3	-	-	3	Blended	PP
DE	1		-3. 1 . 8	Control of the	g E	-	-	-	-	25	75	100	3	-	-	3	Blended	MCQ
DE			-			ST. T	-	- -	· (=)	25	75	100	3	-	-	3	Blended	MCQ
oc	OC	Open Category (OC-2)	50	10	, 20	20	-	-	-	-	-	100	3	-	-	3	Blended	PP
270701			-	-	-		60	20	20	-	-	100	-	-	4	2	Offline	SO
270702	DLC	Creative Problem Solving (Evaluation)	-	-t	-		25	25	-	-	-	50	-	-	2	1	Offline	so
270703	DLC	Project-III (04 weeks)	-	-	•	WAD A	60	-	-	-	-	60	-	-	4	2	Interactive	SO
	Total		100	20	40	40	145	45	20	50	150	610	12	-	10	17	190	100
1000008	MAC	Values & Professional	50	10	20	20	·	-	-	-	-	100	2	-	- Component of the control of the co	GRADE	Blended	MCQ
	DE DE OC 270701 270702 270703	Code Code DE DE DE DE DE DE OC OC 270701 DLC 270702 DLC 270703 DLC Total 10000008 MAC	DE DE Departmental Elective (DE-2) Departmental Elective* (DE-3) Departmental Elective* (DE-3) Departmental Elective* (DE-4) OC OC OC Open Category (OC-2) 270701 DLC Departmental Lab (AR-VR Lab) 270702 DLC Creative Problem Solving (Evaluation) Summer Internship Project-III (04 weeks) (Evaluation) Total Universal Human	DE	DE	Code	Code	Code Code	Code	Code	Code	Code	Code	Code	Code	Code	Code	Code

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

⁵Proficiency in course/subject – includes the weightage towards ability/ skill/ competency /knowledge level /expertise attained etc. in that particular course/subject

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

٠,	Question AO	. Assignment	· Olal II.	cirraper 30	J. Submission -	+ Orai		
	124	Mode of Teach	ing		Mode of E	xamination		
	Offline	Blended	Interactive	PP	AO	MCQ	SO	Total Credits
L	3	12	2	6	0	6	5	17
L	17.65	70.59	11.76	35.29	0.	35.29	29.41	Credits %

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

	克萨· 索里	DE -2					
S. No.	Subject Code	Subject Name					
1.	270731	Generative AI					
2.	270732	Pattern Recognition					
3. 270733 Augmented and Virtual Reality							
157 PS.	i	OC-2					
S. No.	Subject Code	Subject Name					
∮ ≒1.	1. OC2 Statistical Programming with R						
2.	Database Management System						

		DE-3*
S. No.	Subject Code	Subject Name
1.	270761	Responsible and Safe AI Systems (12 Weeks)
2.	270762	Deep Learning for Computer Vision (12 Weeks)
3.	270763	Applied Accelerated AI (12 Weeks)
		DE-4*
S. No.	Subject Code	Subject Name
1.	270764	Big Data Computing (8 Weeks)
2.	270765	Software Testing (12 Weeks)
3.	270766	Artificial Intelligence for Economics (8 Weeks)

List of courses to be opted for Honours in VII Semester

	Honours (to be opted by students of F		nent)
Course Code	Course Name	Course Code	Course Name
	Track 1: Information Security		Track 2: Internet of Things
H27072501	Secure Computation Part-II (12 Weeks)	H27072503	Introduction to Industry 4.0 and Industrial IoT (12 Weeks)
H27072502	Practical Cyber Security for Cyber Security Practitioners (12 Weeks)	H27052506	Distributed Systems (8 Weeks)
H27052501	Cyber Security and Privacy (12 weeks)	H27052503	Introduction to Internet of Things (12 weeks)
H27052502	Ethical Hacking (12 weeks)	H27052504	Sensor Technology: Physics, Fabrication and Circuits (8 weeks)
5-	Track 3: High Performa	nce Computing	
H27072504	Advanced Distributed Systems (12 Weeks)		
H27072505	Computational Complexity (12 Weeks)		
H27052505	Multi-Core Computer Architecture (12 weeks)		
H27052506	Distributed System (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.

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Centre for Artificial Intelligence

Scheme of Evaluation

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

(for batch admitted in academic session 2021 - 22) Subject Category Subject Name Maximum Marks Allotted Contact Hours No. Code Code per week Theory Slot Practical Slot MOOCs **End Term** Continuous Assign Exam P Continuous Mode of Mode Total Total Evaluation Evaluation Evaluation ment Teaching of End Marks Credits End Sem. Proficiency in Mid Quiz/ Lab work & Exam Skill Sem. subject /course Sem. Assignme Sessional Based Exam. Exam. Mini Project Departmental Elective 1. DE DE 50 10 20 20 3 100 3 DE-2) Blended PP Departmental Elective* 2. DE DE 25 75 100 3 (DE-3) Blended MCQ Departmental Elective* 3. DE DE 25 75 100 3 (DE-4) Blended MCQ 4. OC OC Open Category (OC-2) 50 20 10 20 100 3 3 Blended PP Departmental Lab 5. 280701 DLC 60 20 20 100 4 2 (AR-VR Lab) Offline SO Creative Problem Solving 6. 280702 DLC 25 25 50 2 (Evaluation) Offline SO Summer Internship 7. 280703 DLC Project-III (04 weeks) 60 4 2 SO Interactive (Evaluation) Total 100 20 40 40 145 45 20 50 150 610 12 10 17 Universal Human Values 1000008 & Professional 10 MAC 50 20 20 100 2 GRADE MCQ Blended Ethics(UHVPE) Additional Course for Honours or minor Permitted to opt for maximum two additional courses for the award of Honours or Minor specialization Specialization

⁵Proficiency in course/subject – includes the weightage towards ability/ skill/ competency /knowledge level /expertise attained etc. in that particular course/subject

MCO: Multiple Choice Question AO: Assignment + Oral

PP: Pen Paper SO: Submission + Oral

and the second	Mode of Teaching			Mode of Examination					
Offline	Blended	Interactive	PP	AO	MCQ	so	Total Credits		
3	12	2	6	0	6	5	17		
17.65	70.59	11.76	35.29	0 .	35.29	29.41	Credits %		

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

		DE -2				
S. No.	Subject Code	Subject Name				
1.	280731	Generative AI				
2.	280732	Pattern Recognition				
3.	280733	Augmented and Virtual Reality				
		OC-2				
S. No.	Subject Code	Subject Name				
1.	OC2	Statistical Programming with R				
2.	OC2	Database Management System				

DE-3*				
S. No.	Subject Code	t Code Subject Name		
1.	280761	Responsible and Safe AI Systems (12 Weeks)		
2.	280762	Deep Learning for Computer Vision (12 Weeks)		
3.	280763	Applied Accelerated AI (12 Weeks)		
		DE-4÷		
S. No.	Subject Code	Subject Name		
1.	280764	Big Data Computing (8 Weeks)		
2.	280765	Software Testing (12 Weeks)		
3.	280766	Artificial Intelligence for Economics (8 Weeks)		

List of courses to be opted for Honours in VII 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			
H28072501	Secure Computation Part-II (12 Weeks)	H28072503	Introduction to Industry 4.0 and Industrial IoT (12 Weeks)		
H28072502	Practical Cyber Security for Cyber Security Practitioners (12 Weeks)	H28052506	Distributed Systems (8 Weeks)		
H28052501	Cyber Security and Privacy (12 weeks)	H28052503	Introduction to Internet of Things (12 weeks)		
H28052502	Ethical Hacking (12 weeks)	H28052504	Sensor Technology: Physics, Fabrication and Circuits (8 weeks)		
Track 3: High Performance Computing					
H28072504	Advanced Distributed Systems (12 Weeks)				
H28072505	Computational Complexity (12 Weeks)				
H28052505	Multi-Core Computer Architecture (12 weeks)				
H28052506	Distributed System (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.

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