



## Centre for Artificial Intelligence

## Scheme of Evaluation

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

(for batch admitted in academic session 2022 – 23)

S. No.	Subject Code	Category Code	Subject Name	Maximum Marks Allotted									Total Marks	Contact Hours per week			Total Credits	Mode of Teaching	Mode of Exam
				Theory Slot				Practical Slot			MOOCs								
				End Term Evaluation		Continuous Evaluation		End Sem. Exam.	Continuous Evaluation		Assign- ment	Exam							
				End Sem. Exam.	Proficiency in subject /course	Mid Sem. Exam.	Quiz/ Assignm- ent		Lab work & Sessional	Skill Based Mini Project									
1.	DE	DE	*Departmental Elective (DE-2)	-	-	-	-	-	-	-	25	75	100	3	-	-	3	Blended	MCQ
2.	DE	DE	*Departmental Elective (DE-3)	-	-	-	-	-	-	-	25	75	100	3	-	-	3	Blended	MCQ
3.	OC	OC	#Open Category (OC-2)	50	10	20	20	-	-	-	-	-	100	3	-	-	3	Blended	MCQ
4.	2240721	DLC	AR-VR Lab	-	-	-	-	60	20	20	-	-	100	-	-	4	2	Offline	SO
5.	2240722	DLC	Creative Problem Solving	-	-	-	-	25	25	-	-	-	50	-	-	4	2	Offline	SO
6.	2240723	DLC	**Professional Skills & Competencies	-	-	-	-	40	60	-	-	-	100	-	-	4	2	Offline	SO
7.	2240724	DLC	Summer Internship Project-III (04 weeks) (Evaluation)	-	-	-	-	60	-	-	-	-	60	-	-	4	2	Interactive	SO
Total				50	10	20	20	185	105	20	50	150	610	9	-	16	17		
8.	1000008	MAC	Universal Human Values & Professional Ethics(UHVPE)	50	10	20	20	-	-	-	-	-	100	2	-	-	GRADE	Blended	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

\*\* Professional Skills & Competencies will include and prepare the students on coding skills, technical proficiency (industry readiness and higher studies), aptitude, communication & soft skill set, etc.

\*Course will run through SWAYAM/NPTEL platform with credit transfer

#Course will run through MITS MOOCs

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

Mode of Teaching			Mode of Examination		Total Credits
Offline	Blended	Interactive	MCQ	SO	
6	9	2	9	8	17
35.29	52.94	11.77	52.94	47.06	Credits %



Centre for Artificial Intelligence

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

(for batch admitted in academic session 2022 – 23)

DE -2*		
S. No.	Subject Code	Subject Name
1.	2240731	Reinforcement Learning (12 Weeks)
2.	2240732	Industrial Robotics: Theories for Implementation (12 Weeks)
3.	2240733	Software Testing (12 Weeks)

DE-3*		
S. No.	Subject Code	Subject Name
1.	2240734	Deep Learning for Computer Vision (12 Weeks)
2.	2240735	Big Data Computing (8 Weeks)
3.	2240736	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 Parent Department)			
Course Code	Course Name	Course Code	Course Name
Track 1: Information Security		Track 2: Internet of Things	
H24062601	Secure Computation Part-II (12 Weeks)	H24072602	Introduction to Industry 4.0 and Industrial IoT (12 Weeks)
H24072601	Practical Cyber Security for Cyber Security Practitioners (12 Weeks)	H24072603	Distributed Systems (8 Weeks)
H24052601	Cyber Security and Privacy (12 weeks)	H24052603	Introduction to Internet of Things (12 weeks)
H24052602	Ethical Hacking (12 weeks)	H24052604	Sensor Technology: Physics, Fabrication and Circuits (8 weeks)
Track 3: High Performance Computing			
H24072604	Advanced Distributed Systems (12 Weeks)		
H24072605	Computational Complexity (12 Weeks)		
H27052605	Multi-Core Computer Architecture (12 weeks)		
H27052606	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.



## Centre for Artificial Intelligence

### Scheme of Evaluation

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

(for batch admitted in academic session 2022 – 23)

S. No.	Subject Code	Category Code	Subject Name	Maximum Marks Allotted								Total Marks	Contact Hours per week			Total Credits	Mode of Teaching	Mode of Exam	
				Theory Slot				Practical Slot			MOOCs		L	T	P				
				End Term Evaluation		Continuous Evaluation		End Sem. Exam.	Continuous Evaluation		Assign ment								Exam
				End Sem. Exam.	Proficiency in subject /course	Mid Sem. Exam.	Quiz/ Assignme nt		Lab work & Sessional	Skill Based Mini Project									
1.	DE	DE	* Departmental Elective(DE-2)	-	-	-	-	-	-	-	25	75	100	4	-	-	4	Blended	MCQ
2.	DE	DE	* Departmental Elective (DE-3)	-	-	-	-	-	-	-	25	75	100	3	-	-	3	Blended	MCQ
3.	OC	OC	# Open Category (OC-2)	50	10	20	20	-	-	-	-	-	100	3	-	-	3	Blended	MCQ
4.	2270721	DLC	AR-VR Lab	-	-	-	-	60	20	20	-	-	100	-	-	4	2	Offline	SO
5.	2270722	DLC	Creative Problem Solving	-	-	-	-	25	25	-	-	-	50	-	-	4	2	Offline	SO
6.	2270723	DLC	** Professional Skills & Competencies	-	-	-	-	40	60	-	-	-	100	-	-	4	2	Offline	SO
7.	2270724	DLC	Summer Internship Project-III (04 weeks) (Evaluation)	-	-	-	-	60	-	-	-	-	60	-	-	4	2	Interactive	SO
Total				50	10	20	20	185	105	20	50	150	610	10	-	16	18		
8.	1000008	MAC	Universal Human Values & Professional Ethics (UHVPE)	50	10	20	20	-	-	-	-	-	100	2	-	-	GRADE	Blended	MCQ
Additional Course for Honours or minor Specialization				Permitted to opt for maximum two additional courses for the award of Honours or Minor specialization															

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#Course will run through MITS MOOCs

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

Mode of Teaching			Mode of Examination		Total Credits
Offline	Blended	Interactive	MCQ	SO	
6	10	2	10	8	18
33.33	55.56	11.11	55.56	44.44	Credits %



Centre for Artificial Intelligence

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

(for batch admitted in academic session 2022 – 23)

DE -2*		
S. No.	Subject Code	Subject Name
1	2270731	Responsible and Safe AI Systems (12 Weeks)
2	2270732	Deep Learning for Computer Vision (12 Weeks)
3	2270733	Applied Accelerated AI (12 Weeks)

DE-3*		
S. No.	Subject Code	Subject Name
1.	2270734	Big Data Computing (8 Weeks)
2.	2270735	Software Testing (12 Weeks)
3.	2270736	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
<b>Track 1: Information Security</b>		<b>Track 2: Internet of Things</b>	
H24062601	Secure Computation Part-II (12 Weeks)	H24072602	Introduction to Industry 4.0 and Industrial IoT (12 Weeks)
H24072601	Practical Cyber Security for Cyber Security Practitioners (12 Weeks)	H24072603	Distributed Systems (8 Weeks)
H24052601	Cyber Security and Privacy (12 weeks)	H24052603	Introduction to Internet of Things (12 weeks)
H24052602	Ethical Hacking (12 weeks)	H24052604	Sensor Technology: Physics, Fabrication and Circuits (8 weeks)
<b>Track 3: High Performance Computing</b>			
H24072604	Advanced Distributed Systems (12 Weeks)		
H24072605	Computational Complexity (12 Weeks)		
H27052605	Multi-Core Computer Architecture (12 weeks)		
H27052606	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.



## Centre for Artificial Intelligence

### Scheme of Evaluation

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

(for batch admitted in academic session 2022 – 23)

S. No.	Subject Code	Category Code	Subject Name	Maximum Marks Allotted									Total Marks	Contact Hours per week			Total Credits	Mode of Teaching	Mode of Exam
				Theory Slot				Practical Slot			MOOCs								
				End Term Evaluation		Continuous Evaluation		End Sem. Exam.	Continuous Evaluation		Assignment	Exam		L	T	P			
				End Sem. Exam.	<sup>S</sup> Proficiency in subject /course	Mid Sem. Exam	Quiz/ Assignment		Lab work & Sessional	Skill Based Mini Project									
1.	DE	DE	* Departmental Elective(DE-2)	-	-	-	-	-	-	-	25	75	100	4	-	-	4	Blended	MCQ
2.	DE	DE	* Departmental Elective (DE-3)	-	-	-	-	-	-	-	25	75	100	3	-	-	3	Blended	MCQ
3.	OC	OC	# Open Category (OC-2)	50	10	20	20	-	-	-	-	-	100	3	-	-	3	Blended	MCQ
4.	2280721	DLC	AR-VR Lab	-	-	-	-	60	20	20	-	-	100	-	-	4	2	Offline	SO
5.	2280722	DLC	Creative Problem Solving	-	-	-	-	25	25	-	-	-	50	-	-	4	2	Offline	SO
6.	2280723	DLC	** Professional Skills & Competencies	-	-	-	-	40	60	-	-	-	100	-	-	4	2	Offline	SO
7.	2280724	DLC	Summer Internship Project-III (04 weeks) (Evaluation)	-	-	-	-	60	-	-	-	-	60	-	-	4	2	Interactive	SO
Total				50	10	20	20	185	105	20	50	150	610	10	-	16	18		
8.	1000008	MAC	Universal Human Values & Professional Ethics(UHVPE)	50	10	20	20	-	-	-	-	-	100	2	-	-	GRADE	Blended	MCQ
Additional Course for Honours or minor Specialization				Permitted to opt for maximum two additional courses for the award of Honours or Minor specialization															

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33.33	55.56	11.11	55.56	44.44	Credits %



Centre for Artificial Intelligence

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

(for batch admitted in academic session 2022 – 23)

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S. No.	Subject Code	Subject Name
1	2280731	Responsible and Safe AI Systems (12 Weeks)
2	2280732	Deep Learning for Computer Vision (12 Weeks)
3	2280733	Applied Accelerated AI (12 Weeks)

DE-3*		
S. No.	Subject Code	Subject Name
1.	2280734	Big Data Computing (8 Weeks)
2.	2280735	Software Testing (12 Weeks)
3.	2280736	Artificial Intelligence for Economics (8 Weeks)

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**Honours\***

(to be opted by students of Parent Department)

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H24052601	Cyber Security and Privacy (12 weeks)	H24052603	Introduction to Internet of Things (12 weeks)
H24052602	Ethical Hacking (12 weeks)	H24052604	Sensor Technology: Physics, Fabrication and Circuits (8 weeks)
Track 3: High Performance Computing			
H24072604	Advanced Distributed Systems (12 Weeks)		
H24072605	Computational Complexity (12 Weeks)		
H27052605	Multi-Core Computer Architecture (12 weeks)		
H27052606	Distributed System (12 weeks)		

\* Course run through SWAYAM/NPTTEL/ 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.



Centre for Artificial Intelligence

B. Tech. VII Semester

*(for batch admitted in academic session 2022 – 23)*

OC-2 <sup>#</sup> (to be selected by students of other department)		
S. No.	Subject Code	Subject Name
1.	OC2	Social Networks

<sup>#</sup>Course will run through MITS MOOCs

B. Tech. VII Semester

*(for batch admitted in academic session 2022 – 23)*

Minor Specialization in Artificial Intelligence and Machine Learning*	
<i>(to be opted by students of other Department)</i>	
S. No.	Course Name
1	Deep Learning - IIT Ropar
2	Computer Vision

\* 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.