

CENTRAL UNIVERSITY OF KASHMIR

Tulmulla, Ganderbal, Jammu and Kashmir, 191131



Masters in Technology (M. Tech)

Artificial Intelligence & Machine Learning (AI&ML)

COURSE STRUCTURE

AICTE and NEP 2020

[BoS – 16/04/2026]

School of Engineering & Technology

Department of Information Technology

Course Structure for M.Tech. Artificial Intelligence & Machine Learning

Semester I								
S.No.	Course Code	Course Title	Hours per Week			Total Credits	CIA	ESE
			L	T	P			
1.	TAA.61.506	Introduction to Artificial Intelligence	4	0	0	4	50	50
2.	TAA.61.507	Mathematical Foundations for AI & Machine Learning (Algebra, Prob. Stats, Multivariate calculus)	4	0	0	4	50	50
3.	TAA.61.508	Advanced Data Structure and Algorithm	3	0	2	4	50	50
4.	TAA.61.509	Computer Systems	3	0	2	4	50	50
5.	TAA.61.510	Software Lab	0	0	4	2	50	50
6.	TAA.61.511	Research Methodology, Ethics and IPR	2	0	0	2	50	50
		Total				20		

Semester II								
S.No.	Course Code	Course Title	Hours per Week			Total Credits	CIA	ESE
			L	T	P			
1.	TAA.61.555	Machine Learning	3	0	2	4	50	50
2.	TAA.61.556	Computer Vision	3	0	2	4	50	50
3.	TAA.61.557	Optimization Techniques	4	0	0	4	50	50
4.	TAA.61.558	Natural Language Processing	3	0	2	4	50	50
5.		Elective I	4	0	0	4	50	50
		Total				20		

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Semester III								
S.No.	Course Code	Course Title	Hours per Week			Total Credits	CIA	ESE
			L	T	P			
1.	TAA.61.606	Advanced Deep Learning and Neural Architectures	3	0	2	4	50	50
2.	TAA.61.607	Seminar	2	0	0	2	50	50
3.	TAA.68.605	Research Project phase I	4	0	0	4	100	0
4.		Elective course via MOOCs course via Blended Learning **	2	0	0	2	100	0
5.		ELECTIVE II	4	0	0	4	50	50
6.		Elective III	4	0	0	4	50	50
		Total				20		

Semester IV								
S.No.	Course Code	Course Title	Hours per Week			Total Credits	CIA	ESE
			L	T	P			
1.	TAA.68.651	Research Project Phase II (Dissertation)	18	0	0	18	50	50
2.		Elective/Experiential Learning	2	0	0	2	50	50
		Total				20		

Total Credits	80
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Course Structure for M.Tech. Artificial Intelligence & Machine Learning

Elective Basket for Semester II

S.No.	Course Code	Course Title	L	T	P	Total Credits	CIA	ESE
1.	TAA.61.572	Elective on Special Topics	4	0	0	4	50	50
2.	TAA.61.577	Internet of Things	4	0	0	4	50	50
3.	TAA.61.578	Data Mining	4	0	0	4	50	50
4.	TAA.61.579	Reinforcement Learning	4	0	0	4	50	50
5.	TAA.61.580	Big Data Analytics	4	0	0	4	50	50
6.	TAA.61.581	Evolutionary Computing	4	0	0	4	50	50
7.		**MOOCs	4	0	0	4		

Elective Basket for Semester III

S.No.	Course Code	Course Title	L	T	P	Total Credits	CIA	ESE
1.	TAA.61.623	Foundations of LLM and Agentic AI	4	0	0	4	50	50
2.	TAA.61.624	Cloud Computing	4	0	0	4	50	50
3.	TAA.61.625	Robotics	4	0	0	4	50	50
4.	TAA.61.626	Blockchain Technologies	4	0	0	4	50	50
5.	TAA.61.627	Game Theory	4	0	0	4	50	50
6.	TAA.61.628	Biomedical Image Processing and Analysis	4	0	0	4	50	50
7.	TAA.61.629	Advanced Computer Vision	4	0	0	4	50	50
8.	TAA.61.630	Edge AI / TinyML	4	0	0	4	50	50
9.		**MOOCs	4	0	0	4		

Elective Basket for Semester IV

S.No.	Course Code	Course Title	L	T	P	Total Credits	CIA	ESE
1.	TAA.61.671	Soft Computing	4	0	0	4	50	50
2.	TAA.61.672	Evolutionary Computing	4	0	0	4	50	50
3.	TAA.61.673	AI in Healthcare	4	0	0	4	50	50
4.	TAA.61.674	DevOps for AI	4	0	0	4	50	50
5.		**MOOCs	4	0	0	4		

****** Students may opt for MOOC (Massive Open Online Courses) as per the curriculum provisions, subject to the following conditions:

- i. Students may choose MOOC courses only with prior approval from the concerned department.

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- ii. The selection of MOOC courses must comply with the maximum credit limit prescribed for MOOC courses under the programme regulations.
- iii. The department reserves the right to verify the academic relevance, equivalence, and suitability of the MOOC course before granting approval.
- iv. The decision of the department regarding approval or rejection of a MOOC course shall be final and binding.