

Maulana Abul Kalam Azad University of Technology, WB
Syllabus for M.Tech in Artificial Intelligence & Data Science (AI & DS)
Effective from academic session 2022-23)

Curriculum Structure
Semester -I

Code	Course Title	Hours per week			Credits
		L	T	P	
PGCS (AI& DS)101	Program Core I- Mathematical Foundations of Computer Science	3	0	0	3
PGCS (AI& DS)102	Program Core II- Advanced Data Structure and Algorithms	3	0	0	3
PGCS (AI&DS)103A/B/C	Program Elective I- Soft Computing/ Pattern Recognition /Machine Learning	3	0	0	3
PGCS (AI&DS)104A/B/C	Program Elective II- Data Mining/ / Computational Intelligence/ Natural Language Processing	3	0	0	3
PGCS (AI & DS)105	Research Methodology and IPR	2	0	0	2
PGCS (AI&DS)106A/B/C/D	Audit Course – English for Research Paper Writing/ Disaster Management/ Sanskrit for Technical Knowledge/ Value Education	2	0	0	0
PGCS (AI & DS)192	Laboratory 1 (Advanced Data Structure and Algorithms Lab)	0	0	4	2
PGCS (AI & DS)193A/B/C	Laboratory 2 (Elective-I)	0	0	4	2
Total Credits: 18					

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Semester -II

Code	Course Title	Hours per week			Credits
		L	T	P	
PGCS (AI & DS)201	Program Core III- Data Science	3	0	0	3
PGCS (AI & DS) 202	Program Core IV – Artificial Intelligence	3	0	0	3
PGCS (AI & DS)203A/B/C	Program Elective III – Web Analytics and Development/ Big Data Analytics/ Data Visualization	3	0	0	3
PGCS (AI & DS) 204A/B/C	Program Elective IV– Cloud and Edge Computing/ Expert Systems / Knowledge Discovery	3	0	0	3
PGCS (AI & DS) 205 A/B/C/D	Audit Course – Constitution of India/ Pedagogy Studies/ Stress Management by Yoga/ Personality Development through Life Enlightenment Skills	2	0	0	0
PGCS (AI & DS) 292	Laboratory 3 (Artificial Intelligence Lab)	0	0	4	2
PGCS (AI & DS) 293A/B/C	Laboratory 4 (Elective III Lab)	0	0	4	2
PGCS (AI & DS) 281	Term Paper with Seminar	4	0	0	2
Total Credits: 18					

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*Students be encouraged to go to Industrial Training/Internship for at least 2-3 months during semester break.

Semester -III*

Code	Course Title	Hours per week			Credits
		L	T	P	
PGCS (AI & DS)301A/B/C	Computer Vision/ Digital Image Processing/ Neural Network and Deep Learning	3	0	0	3
PGCS (AI & DS)302A/B/C/D/E/F	Open Elective <ul style="list-style-type: none"> ● Business Analytics ● Project Management and Entrepreneurship ● Industrial Safety ● Cost Management of Engineering Projects ● Composite Materials ● Waste to Energy 	3	0	0	3
PGCS (AI & DS)391 A/B/C/D	Laboratory 5 (Computer Vision/ Digital Image Processing/ Neural Network and Deep Learning)	0	0	4	2
PGCS (AI & DS) 381	Dissertation-I /Industrial Project**	0	0	20	10
Total Credits: 18					

**Students going for Industrial Project/Thesis will complete these courses through MOOCs.

Semester -IV

	Course Title	Hours per week			Credits
		L	T	P	
PGCS(AI & DS)481	Dissertation II /Industrial Project	0	0	32	16
Total Credits: 16					