

CURRICULA AND SYLLABI

Bachelor of Technology Artificial Intelligence and Data Science

1 Credit Distribution

Category	Course Description	Credits	Percentage
BSC	Basic Science Courses (BSC)	12	8%
BEC	Basic Engineering Courses (BEC)	12	8%
DMC	Design and Manufacturing Courses (DMC)	12	8%
PMC	Professional Engineering Core Courses (PEC)	60	60%
	Professional Engineering Elective Courses (PEE)	10	
	Professional Major Project (PRC)	6	
	Internship and Seminar Courses (ISC)	10	
	Skill Development Courses (PCD)	4	
OEC	Open/Free Elective Courses (OEC)	12	8%
HMC	Entrepreneurship and Management Courses	3	8%
	Financial Awareness and Management	2	
	Professional and Technical Communication	2	
	Constitution of India	1	
	Self Improvement Course	4	
	NCC/NSS/NSO (audit)	0	
		150	100%

2 Semester-wise Credit Distribution

2.1 First Semester

Sl#	Course Code	Course Name	Category code	I	P	C
1	DS101	Differential and Integral Calculus	BSC	3	0	3
2	DS103	Engineering Physics	BSC	2	2	3
3	ME101	Engineering Mechanics	BEC	3	0	3
	EC101	Basic Electrical and Electronics Engineering				
4	AD101	Problem Solving and Computer Programming	BEC	3	0	3
5	DS105	Professional and Technical Communication	HMC	1	2	2
6	CS103	Problem Solving and Computer Programming Practice	BEC	0	3	2
7	ME103	Engineering Skills Practice	BEC	0	2	1
8	DS107	Constitution of India	HMC	1	0	1
9	DS171	NSS/NSO/NCC	HMC	0	0	0
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2.2 Second Semester

Sl#	Course Code	Course Name	Category code	I	P	C
1	DS102	Linear Algebra	BSC	3	0	3
2	DM102	Concepts in Engineering Design	DMC	3	0	3
3	ME101	Engineering Mechanics	BEC	3	0	3
	EC101	Basic Electrical and Electronics Engineering				
4	DM104	Design Realization Practice	DMC	0	3	2
5	AD102	Digital Logic Design	PEC	3	0	3
6	AD102	Fundamentals of Artificial Intelligence	PEC	1	2	2
7	AD152	Digital Logic Design Practice	PEC	0	3	2
8	DS172	NSS/NSO/NCC	HMC	0	0	0
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2.3 Third Semester

Sl#	Course Code	Course Name	Category code	I	P	C
1	DS201	Probability and Statistics	BSC	3	0	3
2	DM202	Smart Manufacturing	DMC	3	0	3
3	AD201	Discrete Mathematics	PEC	3	0	3
4	AD202	Data Structures	PEC	3	0	3
5	AD203	Artificial Intelligence	PEC	3	0	3
6	AD252	Data Structures Practice	PEC	0	3	2
7	AD253	Data Analysis and Visualization	PEC	1	2	2
8	AD254	Object Oriented Programming Concepts	PEC	1	2	2
9	DS21X	Self Improvement Course	HMC	0	0	1
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2.4 Fourth Semester

Sl#	Course Code	Course Name	Category code	I	P	C
1	DS202	Entrepreneurship, Management and Incubation	HMC	3	0	3
2	AD204	Data Science	PEC	2	2	3
3	AD205	Machine Learning	PEC	3	0	3
4	AD206	Design and Analysis of Algorithms	PEC	3	0	3
5	AD207	Theory of Computation	PEC	3	0	3
6	AD255	Machine Learning Practice	PEC	0	3	2
7	AD256	Design and Analysis of Algorithms Practice	PEC	0	3	2
8	AD29X	Skill Development Course - I	PCD	0	3	2
9	DS21X	Self Improvement Course	HMC	0	0	1
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2.5 Fifth Semester

Sl#	Course Code	Course Name	Category code	I	P	C
1	AD301	Database Management Systems	PEC	3	0	3
2	AD302	Deep Learning	PEC	3	0	3
3	AD303	Operating Systems	PEC	3	0	3
4	AD31X	Professional Engineering Elective - I	PEE	3	0	3
5	AD37X	Open Elective - I	OEC	3	0	3
6	AD351	Database Management Systems Practice	PEC	0	3	2
7	AD352	Deep Learning Practice	PEC	0	3	2
8	AD353	Operating Systems Practice	PEC	0	3	2
9	DS31X	Self Improvement Course	HMC	0	0	1
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2.6 Sixth Semester

Sl#	Course Code	Course Name	Category code	I	P	C
1	DM302	Product Design and Manufacturing	DMC	0	6	4
2	AD304	Big Data Analytics	PEC	3	0	3
3	AD32X	Professional Engineering Elective - II	PEE	3	0	3
4	AD33X	Professional Engineering Elective - III	PEE	2	0	2
5	AD38X	Open Elective - II	OEC	3	0	3
6	AD354	Big Data Analytics Practice	PEC	0	3	2
7	AD355	High Performance and GPU Computing Practice	PEC	1	2	2
8	AD39X	Skill Development Course - II	PCD	0	3	2
9	DS31X	Self Improvement Course	HMC	0	0	1
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2.7 Seventh Semester

Sl#	Course Code	Course Name	Category code	I	P	C
1	AD491	Project	PRC	0	9	6
2	AD41X	Professional Engineering Elective - IV	PEE	2	0	2
3	AD47X	Open Elective - III	OEC	3	0	3
4	AD48X	Open Elective - IV	OEC	3	0	3
5	DS401	Financial Awareness and Management	HMC	2	0	2
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2.8 Eighth Semester

Sl#	Course Code	Course Name	Category code	I	P	C
1	AD492	Internship	ISC	0	0	9
2	AD493	Seminar	ISC	0	0	1
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