

Department of CS&E and IT, IIIT Noida

2026 onwards Curriculum for B. Tech. in Artificial Intelligence and Machine Learning

Category – BSC: Basic Science Courses, **ESC:** Engineering Science Courses including Workshop, Drawing, etc., **HSC:** Humanities & Social Sciences including Management Courses, **OEC:** Open Subjects–Electives, **OMC:** Mandatory Courses, **PCC:** Professional Core Courses, **PEC:** Professional Elective Courses Relevant to Chosen Specialization/Branch, **PRC:** Project Work, Seminar & Internship, **VAC:** Value Added Course

First Semester

S. No	Course			Contact Hours				Credits
	Category	Course Code	Course Title	L	T	P	Total	
1	BSC	15B11MA111	Mathematics-1	3	1	0	4	4
2	BSC	15B11PH111	Physics-1	3	1	0	4	4
3	BSC	15B17PH171	Physics Lab-1	0	0	2	2	1
4	ESC	15B11CI111	Software Development Fundamentals-I	3	1	0	4	4
5	ESC	24B15CS111	Software Development Fundamentals Lab-I	0	0	2	2	1
6	ESC	24B11EC111	Basic Electronics	3	1	0	4	4
7	ESC	24B15EC111	Basic Electronics Lab	0	0	2	2	1
8	HSC	15B11HS112	English	1	0	2	3	2
9	ESC	18B15GE111	Engineering Drawing & Design	0	0	3	3	1.5
Total							28	22.5

Second Semester

S. No	Course			Contact Hours				Credits
	Category	Course Code	Course Title	L	T	P	Total	
1	BSC	15B11MA211	Mathematics-2	3	1	0	4	4
2	BSC	15B11PH211	Physics-2	3	1	0	4	4
3	BSC	15B17PH271	Physics Lab-2	0	0	2	2	1
4	ESC	15B11CI121	Software Development Fundamentals-II	3	1	0	4	4
5	ESC	24B15CS121	Software Development Fundamentals Lab-II	0	0	2	2	1
6	HSC	24B16HS111	Life Skills & Professional Communication Lab	0	0	2	2	Qualifying
7	ESC	18B15GE112	Workshop	0	0	3	3	1.5
8	HSC	15B11HS111	Universal Human Values (UHV)	2	1	0	3	3
Total							24	18.5

Third Semester

S. No	Course			Contact Hours				Credits
	Category	Course Code	Course Title	L	T	P	Total	
1	PCC	15B11CI311	Data Structures and Algorithms	3	1	0	4	4
2	PCC	15B17CI371	Data Structures and Algorithms Lab	0	0	2	2	1
3	PCC	24B11CS213	Database Management Systems	3	0	0	3	3
4	PCC	24B15CS213	Database Management Systems Lab	0	0	2	2	1
5	PCC	XXXXXXX	Software Engineering	3	0	0	3	3
6	PCC	XXXXXXX	Software Engineering Lab	0	0	2	2	1
7	PCC	XXXXXXX	Object Oriented Programming using Python	2	0	2	4	3
8	HSC	15B11HS211	Economics	2	1	0	3	3
9	PRC	XXXXXXX	Summer Training-I (4 weeks)	0	0	0	0	4
Total							23	23

Fourth Semester

S. No	Course			Contact Hours				Credits
	Category	Course Code	Course Title	L	T	P	Total	
1	HSC	XXXXXXX	HSS Elective – 1	2	1	0	3	3
2	PCC	XXXXXXX	Machine Learning Fundamentals	3	1	0	4	4
3	PCC	XXXXXXX	Machine Learning Lab	0	0	2	2	1
4	BSC	24XXXXX	Mathematical and Statistical Foundations for Computation Intelligence	3	1	0	4	4
5	PCC	XXXXXXX	Artificial Intelligence	3	1	0	4	4
6	PCC	XXXXXXX	Artificial Intelligence Lab	0	0	2	2	1
7	PCC	24B11CS312	Operating Systems	3	0	0	3	3
8	PCC	24B15CS312	Operating Systems Lab	0	0	2	2	1
9	OMC	19B13BT211	Environmental Studies	3	0	0	3	Qualifying
Total							27	21

Fifth Semester

S. No	Course			Contact Hours				Credits
	Category	Course Code	Course Title	L	T	P	Total	
1	PCC	XXXXXXX	Deep Learning Foundations	3	1	0	4	4
2	PCC	XXXXXXX	Deep Learning Lab	0	0	2	2	1
3	PCC	XXXXXXX	Natural Language Processing	3	1	0	4	4
4	PCC	XXXXXXX	Natural Language Processing Lab	0	0	2	2	1
5	PCC	XXXXXXX	Big Data Analytics	3	0	0	3	3
6	PEC	XXXXXXX	Discipline Elective – 1	2	0	2	4	3
7	BSC	XXXXXXX	Science Elective	3	0	0	3	3
8	OMC	20B13HS311	Indian Constitution & Traditional Knowledge	3	0	0	3	Qualifying
9	PRC	XXXXXXX	Summer Training-II (6 weeks)	0	0	0	0	4
Total							25	23

Sixth Semester

S. No	Course			Contact Hours				Credits
	Category	Course Code	Course Title	L	T	P	Total	
1	PCC	XXXXXXX	Generative AI and Emerging Trends	3	0	0	3	3
2	PCC	XXXXXXX	Generative AI Lab	0	0	2	2	1
3	PCC	24B11CS322	Advanced Data Structures and Algorithms	3	0	0	3	3
4	PCC	24B15CS322	Advanced Data Structures and Algorithms Lab	0	0	2	2	1
5	PCC	XXXXXXX	Computer Vision Foundations	2	0	2	4	3
6	PEC	XXXXXXX	Discipline Elective – 2	2	0	2	4	3
7	OEC	XXXXXXX	Open Elective – 1	2	0	0	2	2
8	VAC	XXXXXXX	Selected Value-Added Course	1	0	2	3	Audit
9	HSC	24B15HS311	Soft Skill For Employability	0	0	2	2	1
10	PRC	XXXXXXX	Minor Project	0	0	4	4	2
Total							29	19

Seventh Semester

S. No	Course			Contact Hours				Credits
	Category	Course Code	Course Title	L	T	P	Total	
1	PEC	XXXXXXX	Discipline Elective – 3	3	0	0	3	3
2	PEC	XXXXXXX	Discipline Elective – 4	3	0	0	3	3
3	PEC	XXXXXXX	Discipline Elective – 5	3	0	0	3	3
4	OEC	XXXXXXX	Open Elective – 2	3	0	0	3	3
5	PRC	XXXXXXX	Major Project Part – 1	0	0	8	8	4
6	PRC	XXXXXXX	Summer Training - III (6 weeks)	0	0	0	0	4
Total							20	20

Eighth Semester

S. No	Course			Contact Hours				Credits
	Category	Course Code	Course Title	L	T	P	Total	
1	PEC	XXXXXXX	Discipline Elective – 6	3	0	0	3	3
2	PEC	XXXXXXX	Discipline Elective – 7	3	0	0	3	3
3	OEC	XXXXXXX	Open Elective – 3	3	0	0	3	3
4	PRC	XXXXXXX	Major Project Part – 2	0	0	16	16	8
Total							25	17

Total Credits = 22.5 + 18.5 + 23 + 21 + 23 + 19 + 20 + 17 = 164

General Statistics

Semester	Subject Count; Total Hours; and Total Credits
First	Subject Count = 9; Total Weekly Hours = 28; and Total Credits = 22.5
Second	Subject Count = 8; Total Weekly Hours = 24; and Total Credits = 18.5
Third	Subject Count = 9; Total Weekly Hours = 23; and Total Credits = 23
Fourth	Subject Count = 9; Total Weekly Hours = 27; and Total Credits = 21
Fifth	Subject Count = 9; Total Weekly Hours = 25; and Total Credits = 23
Sixth	Subject Count = 10; Total Weekly Hours = 29; and Total Credits = 19
Seventh	Subject Count = 6; Total Weekly Hours = 20; and Total Credits = 20
Eighth	Subject Count = 4; Total Weekly Hours = 25; and Total Credits = 17
Total	Subject Count = 64; Total Weekly Hours = 201; and Total Credits = 164

Category	Subject Count; Total Hours; and Total Credits
BSC	Subject Count = 8; Total Weekly Hours = 27; and Total Credits = 25
ESC	Subject Count = 8; Total Weekly Hours = 24; and Total Credits = 18
HSC	Subject Count = 6; Total Weekly Hours = 16; and Total Credits = 12
OEC	Subject Count = 3; Total Weekly Hours = 8; and Total Credits = 8
OMC	Subject Count = 2; Total Weekly Hours = 6; and Total Credits = 0
PCC	Subject Count = 23; Total Weekly Hours = 66; and Total Credits = 54
PEC	Subject Count = 7; Total Weekly Hours = 23; and Total Credits = 21
PRC	Subject Count = 6; Total Weekly Hours = 28; and Total Credits = 26
VAC	Subject Count = 1; Total Weekly Hours = 3; and Total Credits = 0