

**2025 onwards Curriculum for B. Tech. in Artificial Intelligence & Machine Learning**

**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	18B15GE112	Workshop	0	0	3	3	1.5
<b>Total</b>							<b>28</b>	<b>22.5</b>

**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	18B15GE111	Engineering Drawing & Design	0	0	3	3	1.5
8	HSC	15B11HS111	Universal Human Values (UHV)	2	1	0	3	3
<b>Total</b>							<b>24</b>	<b>18.5</b>

### THIRD SEMESTER

S. No.	Course			Contact Hours				Credits
	Category	Course Code	Course Title	L	T	P	Total	
1	BSC	24XXXXXX	Mathematical and Statistical Foundations for Computation Intelligence	3	1	0	4	4
2	PCC	XXXXXXXX	Artificial Intelligence	3	1	0	4	4
3	PCC	XXXXXXXX	Artificial Intelligence Lab	0	0	2	2	1
4	PCC	15B11CI311	Data Structures	3	1	0	4	4
5	PCC	15B17CI371	Data Structures Lab	0	0	2	2	1
6	PCC	24B11CS213	Database Management Systems	3	0	0	3	3
7	PCC	24B15CS213	Database Management Systems Lab	0	0	2	2	1
8	PCC	XXXXXXXX	Python Lab	0	0	2	2	1
9	HSC	15B11HS211	Economics	2	1	0	3	3
10	PRC	XXXXXXXX	Summer Training-I (4 weeks)	0	0	0	0	2
<b>Total</b>							<b>26</b>	<b>24</b>

### FOURTH SEMESTER

S. No.	Course			Contact Hours				Credits
	Category	Course Code	Course Title	L	T	P	Total	
1	HSC	XXXXXXXX	HSS Elective – 1	2	1	0	3	3
2	PCC	XXXXXXXX	Machine Learning Fundamentals	3	1	0	4	4
3	PCC	XXXXXXXX	Machine Learning Lab	0	0	2	2	1
4	PCC	24B11CS221	Design and Analysis of Algorithms	3	1	0	4	4
5	PCC	24B15CS221	Design and Analysis of Algorithms Lab	0	0	2	2	1
6	PCC	24B11CS321	Web Technology	3	0	0	3	3
7	PCC	24B15CS321	Web Technology Lab	0	0	2	2	1
8	PCC	24B11CS312	Operating Systems	3	0	0	3	3
9	PCC	24B15CS312	Operating Systems Lab	0	0	2	2	1
10	PEC	XXXXXXXX	Discipline Elective – 1	2	0	0	2	2
11	PEC	XXXXXXXX	Discipline Elective – 1 Lab	0	0	2	2	1
12	OMC	19B13BT211	Environmental Studies	3	0	0	3	Qualif Ying
<b>Total</b>							<b>32</b>	<b>24</b>

## FIFTH SEMESTER

S. No.	Course			Contact Hours				Credits
	Category	Course Code	Course Title	L	T	P	Total	
1	PCC	XXXXXXXX	Deep Learning Foundations	3	1	0	4	4
2	PCC	XXXXXXXX	Deep Learning Lab	0	0	2	2	1
3	PCC	XXXXXXXX	Natural Language Processing	3	1	0	4	4
4	PCC	XXXXXXXX	Natural Language Processing Lab	0	0	2	2	1
5	PEC	XXXXXXXX	Discipline Elective – 2	2	0	0	2	2
6	PEC	XXXXXXXX	Discipline Elective – 2 Lab	0	0	2	2	1
7	PEC	XXXXXXXX	Discipline Elective – 3	2	0	0	2	2
8	PEC	XXXXXXXX	Discipline Elective – 3 Lab	0	0	2	2	1
9	BSC	XXXXXXXX	Science Elective	3	0	0	3	3
10	OMC	18B12HS311	Indian Constitution & Traditional Knowledge	3	0	0	3	Qualif Ying
11	PRC	XXXXXXXX	Summer Training-II (6 weeks)	0	0	0	0	2
<b>Total</b>							<b>26</b>	<b>21</b>

## SIXTH SEMESTER

S. No.	Course			Contact Hours				Credits
	Category	Course Code	Course Title	L	T	P	Total	
1	PCC	XXXXXXXX	Big Data Analytics	3	0	0	3	3
2	PCC	XXXXXXXX	Software Engineering	3	0	0	3	3
3	PCC	XXXXXXXX	Software Engineering Lab	0	0	2	2	1
4	PCC	XXXXXXXX	Generative AI and Emerging Trends	3	0	0	3	3
5	PCC	XXXXXXXX	Generative AI Lab	0	0	2	2	1
6	PEC	XXXXXXXX	Discipline Elective – 4	3	0	0	3	3
7	PEC	XXXXXXXX	Discipline Elective – 5	3	0	0	3	3
8	OEC	XXXXXXXX	Open Elective – 1	2	0	0	2	2
9	Value Added	XXXXXXXX	Selected Value-Added Course	2	0	0	2	Audit
10	HSC	24B15HS311	Soft Skill For Employability	0	0	2	2	1
11	PRC	XXXXXXXX	Minor Project	0	0	4	4	2
<b>Total</b>							<b>29</b>	<b>22</b>

## SEVENTH SEMESTER

S. No.	Course			Contact Hours				Credits
	Category	Course Code	Course Title	L	T	P	Total	
1	PEC	XXXXXXXX	Discipline Elective – 6	3	0	0	3	3
2	OEC	XXXXXXXX	Open Elective – 2	3	0	0	3	3
3	PRC	XXXXXXXX	Major Project Part – 1	0	0	0	8	4
4	PRC	XXXXXXXX	Summer Training - III (6 weeks)	0	0	0	0	4
<b>Total</b>							<b>14</b>	<b>14</b>

## EIGHTH SEMESTER

S. No.	Course			Contact Hours				Credits
	Category	Course Code	Course Title	L	T	P	Total	
1	PEC	XXXXXXXX	Discipline Elective – 7	3	0	0	3	3
2	OEC	XXXXXXXX	Open Elective – 3	3	0	0	3	3
3	PRC	XXXXXXXX	Major Project Part – 2	0	0	0	16	8
<b>Total</b>							<b>22</b>	<b>14</b>

**Total Program Credits:** 22.5 + 18.5 + 24 + 24 + 21 + 12 + 14 + 14 = 160

**Tentative List of Electives (To be updated time to time)**

Course Code	Course Name	Course Code	Course Name
XXXXXXXX	Blockchain Technology	XXXXXXXX	Deep Learning for Sequence Data
XXXXXXXX	Data Science	XXXXXXXX	Computer Vision
XXXXXXXX	Image and Video Processing	XXXXXXXX	Societal Impacts of AI
XXXXXXXX	Explainable AI	XXXXXXXX	Edge and Federated Learning
XXXXXXXX	Cloud Computing and Essentials	XXXXXXXX	NLP with Transformers
XXXXXXXX	Web AI Frameworks and Libraries	XXXXXXXX	Speech Processing and Recognition
XXXXXXXX	Cyber Security	XXXXXXXX	Internet of Things (IoT) with AI
XXXXXXXX	Mobile App Development	XXXXXXXX	Reinforcement Learning
XXXXXXXX	Scalable AI Deployment on Cloud Platforms	XXXXXXXX	Data Visualization
XXXXXXXX	Building Intelligent Web Applications	XXXXXXXX	Introduction to Devops
XXXXXXXX	Advanced Machine Learning Techniques	XXXXXXXX	Legal and Policy Frameworks in AI
XXXXXXXX	Sentiment Analysis and Opinion Mining	XXXXXXXX	Generative Adversarial Networks (GANs)
XXXXXXXX	AI Ethics and Governance	XXXXXXXX	Social Network Analysis
XXXXXXXX	Quantum Computing and AI	XXXXXXXX	Distributed AI