JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY GURJADA VIZIANAGARAM
VIZIANAGARAM – 535 003, Andhra Pradesh, India

B. Tech (AI & ML)

(R23-COURSE STRUCTURE)

(Applicable from the academic year 2023-24 and onwards)

B.Tech.–I Year I Semester

S.No.	Course Code	Course Name	L	T	P	Credits
1.	R23BS01	Linear Algebra & Calculus	3	0	0	3
2.	R23BS03	Engineering Physics	3	0	0	3
3.	R23HS01	Communicative English	2	0	0	2
4.	R23ES01	Basic Civil &Mechanical Engineering	3	0	0	3
5.	R23ES07	Introduction to Programming	3	0	0	3
6.	R23HS01	Communicative English Lab	0	0	2	1
7.	R23BS03	Engineering Physics Lab	0	0	2	1
8.	R23ES02	Engineering Workshop	0	0	3	1.5
9.	R23ES06	IT Workshop	0	0	2	1
10.	R23ES07	Computer Programming Lab	0	0	3	1.5
11.	R23MC01	Health and Wellness, Yoga and Sports	0	0	1	0.5
		Total				**20.5**

B.Tech –I Year II Semester

S.No.	Course Code	Course Name	L	T	P	Credits
1.	R23BS02	Differential Equations and Vector calculus	3	0	0	3
2.	R23BS05	Chemistry	3	0	0	3
3.	R23ES03	Engineering Graphics	1	0	4	3
4.	R23ES04	Basic Electrical &Electronics Engineering	3	0	0	3
5.	R23PC04	Data Structures	3	0	0	3
6.	R23BS05	Chemistry Lab	0	0	2	1
7.	R23ES05	Electrical & Electronics Engineering workshop	0	0	3	1.5
8.	R23PC04	Data Structures Lab	0	0	3	1.5
9.	R23MC02	NSS/NCC/Scouts &Guides/Community Service	0	0	1	0.5
		Total				**19.5**

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY GURJADA VIZIANAGARAM
VIZIANAGARAM – 535 003, Andhra Pradesh, India

B. Tech (AI & ML)

(R23-COURSE STRUCTURE)

(Applicable from the academic year 2023-24 and onwards)

B.Tech.– II Year I Semester

S.No.	Category	Title	L	T	P	Credits
1	BS	Discrete Mathematics & Graph Theory	3	0	0	3
2	HSMC	UniversalHumanValues 2-UnderstandingHarmony& Ethical Human Conduct	2	1	0	3
3	Engineering Science	Principles of Artificial Intelligence	3	0	0	3
4	Professional Core	Advanced Data Structures & Algorithms Analysis	3	0	0	3
5	Professional Core	Object Oriented Programming Through Java	3	0	0	3
6	Professional Core	Advanced Data Structures and Algorithms Lab	0	0	3	1.5
7	Professional Core	Object Oriented Programming Through Java Lab	0	0	3	1.5
8	Skill Enhancement course	Python programming	0	1	2	2
9	Audit Course	Environmental Science	2	0	0	-
Total			**16**	**2**	**8**	**20**

B.Tech.– II Year II Semester

S.No.	Category	Title	L	T	P	Credits
1	Management Elective - II	Managerial Economics & Financial Analysis	2	0	0	2
2	Basic Science	Probability & Statistics	3	0	0	3
3	Professional Core	Machine Learning	3	0	0	3
4	Professional Core	Database Management Systems	3	0	0	3
5	Professional Core	Digital Logic & Computer Organization	3	0	0	3
6	Professional Core	Machine Learning Lab	0	0	3	1.5
7	Professional Core	Database Management Systems Lab	0	0	3	1.5
8	Skill Enhancement course	Full Stack development -1	0	1	2	2
9	ES	Design Thinking &Innovation	1	0	2	2
Total			**15**	**1**	**12**	**21**
Mandatory Community Service Project Internship of 08weeksduration during summer vacation						

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY GURJADA VIZIANAGARAM
VIZIANAGARAM – 535 003, Andhra Pradesh, India

B. Tech (AI & ML)

(R23-COURSE STRUCTURE)

(Applicable from the academic year 2023-24 and onwards)

B.Tech. – III Year I Semester

S.No.	Category	Title	L	T	P	Credits
1	Professional Core	Information Retrieval Systems	3	0	0	3
2	Professional Core	Computer Networks	3	0	0	3
3	Professional Core	Deep Learning with Applications	3	0	0	3
4	Professional Elective-I	Software Engineering Digital Twin Mobile Edge Computing Optimization Techniques Any of the 12-Week SWAYAM /NPTEL Course suggested by the BoS	3	0	0	3
5	Open Elective- I	**Open elective offered by other department**	3	0	0	3
6	Professional Core	Information Retrieval &Deep Learning Lab	0	0	3	1.5
7	Professional Core	Computer Networks Lab	0	0	3	1.5
8	Skill Enhancement course	NodesJS	0	1	2	2
9	ES	Tinkering Lab	0	0	2	1
10	Evaluation of Community Service Internship		-	-	-	2
Total			**14**	**1**	**10**	**23**

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY GURJADA VIZIANAGARAM
VIZIANAGARAM – 535 003, Andhra Pradesh, India

B. Tech (AI & ML)

(R23-COURSE STRUCTURE)

(Applicable from the academic year 2023-24 and onwards)

B.Tech.– III Year II Semester

S.No.	Category	Title	L	T	P	Credits
1	Professional Core	Operating System	3	0	0	3
2	Professional Core	Automata Theory & Compiler Design	3	0	0	3
3	Professional Core	Computer Vision	3	0	0	3
4	Professional Elective-II	1. Software Testing Methodology 2. Cryptography & Network Security 3. Internet of Things 4. Recommender Systems 5. Any of the 12-Week SWAYAM /NPTEL Course suggested by the BoS	3	0	0	3
5	Professional Elective-III	1. Software Project Management 2. Ethical AI 3. Data Visualization 4. Soft computing 5. Any of the 12-Week SWAYAM /NPTEL Course suggested by the BoS	3	0	0	3
6	Open Elective - III	**Open elective offered by other department**	3	0	0	3
7	Professional Core	Computer Vision Lab	0	0	3	1.5
8	Professional Core	Operating System lab	0	0	3	1.5
9	Skill Enhancement course	Soft skills	0	1	2	2
10	Audit Course	**Technical Paper Writing & IPR**	2	0	0	-
Total			**20**	**1**	**8**	**23**
Mandatory Industry Internship of 08 weeks duration summer vacation						

B. Tech (AI & ML)

(R23-COURSE STRUCTURE)

(Applicable from the academic year 2023-24 and onwards)

B.Tech. – IV Year I Semester

S.No.	Category	Title	L	T	P	Credits
1	Professional Core	Natural Language Programming	3	0	0	3
2	Management Course- II	Management Science Human resource Management Entrepreneurship &Incubation	2	0	0	2
3	Professional Elective-IV	1. Federated Learning 2. NoSQL databases 3. Quantum Computing 4. Computational Neuroscience 5. Any of the 12-Week SWAYAM /NPTEL Course suggested by the BoS	3	0	0	3
4	Professional Elective-V	1. Agile methodologies 2. Big Data Analytics 3. Reinforcement Learning 4.High-performance Computing (HPC) 5. Any of the 12-Week SWAYAM /NPTEL Course suggested by the BoS	3	0	0	3
5	Open Elective-III	**Open elective offered by other department**	3	0	0	3
6	Open Elective-IV	**Open elective offered by other department**	3	0	0	3
7	Skill Enhancement Course	Prompt Engineering	0	1	2	2
8	Audit Course	Gender Sensitization	2	0	0	-
9	Internship	Evaluation of Industry Internship	-	-	-	2
		Total	**19**	**1**	**02**	**21**

B.Tech.– IV Year II Semester

S.No.	Category	Title	L	T	P	Credits
1	Internship & Project Work	Full semester Internship & Project Work	0	0	24	12

OPEN ELECTIVES OFFERED BY (AI &ML) TO OTHER BRANCHES:

OPEN ELECTIVE -I	**OPEN ELECTIVE -II**
1. Introduction to Artificial Intelligence 2. Exploratory Data Analysis with Python 3. Web Technologies	1. Fundamentals of Data Base Management System 2. JAVA Programming 3. Social Media Analytics
OPEN ELECTIVE -III	**OPEN ELECTIVE -IV**
1. Introduction to Machine Learning 2. Data Wrangling and Pre-processing 3. Block Chain Technologies	1. Internet of Things 2. Fundamentals of Cloud Computing 3. Cyber Security