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

B. Tech CSE (Artificial Intelligence)

(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**

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B.Tech.– II Year I Semester

S.No.	Category	Title	L	T	P	Credits
1	BS	Discrete Mathematics Structures	3	0	0	3
2	HSMC	Universal Human Values 2- Understanding Harmony & Ethical Human Conduct	2	1	0	3
3	Engineering Science	Operating Systems	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 Analysis Lab	0	0	3	1.5
7	Professional Core	Object Oriented Programming Through Java Lab	0	0	3	1.5
8	Skill Enhancement Course-I	Python programming	0	1	2	2
9	Audit Course-I	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 And Financial Analysis	2	0	0	2
2	Basic Science	Probability & Statistics	3	0	0	3
3	Professional Core	Principals of Artificial Intelligence	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	Artificial Intelligence Lab	0	0	3	1.5
7	Professional Core	Database Management Systems Lab	0	0	3	1.5
8	Skill Enhancement course-I	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 08 weeks duration during summer vacation						

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B.Tech. – III Year I Semester

S. No.	Category	Title	L	T	P	Credits
1	Professional Core	Machine Learning	3	0	0	3
2	Professional Core	Computer Networks	3	0	0	3
3	Professional Core	Natural Language Processing	3	0	0	3
4	Professional Elective-I	1. Soft Computing 2. Software Engineering 3. Recommender Systems 4. Social Media Analytics 5. 12-Week SWAYAM /NPTEL Course suggested by the BoS	3	0	0	3
5	Open Elective- I	**Open Electives offered by other departments**	3	0	0	3
6	Professional Core	Machine Learning Lab	0	0	3	1.5
7	Professional Core	Natural Language Processing Lab	0	0	3	1.5
8	Skill Enhancement course	Sales Force				
9	ES	Tinkering Lab	0	0	2	1
10	Evaluation of Community Service Internship		-	-	-	2
Total			14	1	10	23

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B.Tech.– III Year II Semester

S. No.	Category	Title	L	T	P	Credits
1	Professional Core	Generative AI	3	0	0	3
2	Professional Core	Big Data Analytics	3	0	0	3
3	Professional Core	Automata Theory & Compiler Design	3	0	0	3
4	Professional Elective-II	1. Cloud Computing 2. Cryptography & Network Security 3. Predictive Analysis 4. Internet of Things 5. 12-Week SWAYAM /NPTEL Course suggested by the BoS	3	0	0	3
5	Professional Elective-III	1. Blockchain Technology 2. Digital Twin 3. Expert System 4. AI Chatbots 5. 12-Week SWAYAM /NPTEL Course suggested by the BoS	3	0	0	3
6	Open Elective - III	**Open Electives offered by other departments**	3	0	0	3
7	Professional Core	Big Data Analytics using Apache Spark Lab	0	0	3	1.5
8	Professional Core	Generative AI Lab	0	0	3	1.5
9	Skill Enhancement course-III	Soft skills OR IELTS	0	1	2	2
10	Audit Course-III	Technical Paper Writing & IPR	2	0	0	-
Total			**20**	**1**	**8**	**23**
Mandatory Industry Internship of 08 weeks duration during summer vacation						

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B.Tech. – IV Year I Semester

S.No.	Category	Title	L	T	P	Credits
1	Professional Core	Computer Vision	3	0	0	3
2	Management Course- II	Human Resource Management	2	0	0	2
3	Professional Elective-IV	1. Software Project Management 1. Quantum Computing 2. NoSQL databases 3. Speech Recognition and Synthesis 4. 12-week MOOC Swayam/NPTEL course recommended by the BoS	3	0	0	3
4	Professional Elective-V	1. Agile methodologies 2. High Performance Computing 3. Semantic Web 4. Deep Learning 5. 12-week MOOC Swayam/NPTEL course recommended by the BoS	3	0	0	3
5	Open Elective-III	**Open Electives offered by other departments**	3	0	0	3
6	Open Elective-IV	**Open Electives offered by other departments**	3	0	0	3
7	Skill Enhancement Course-V	MEAN Stack Technologies	0	1	2	2
8	Audit Course-III	Constitution of India	2	0	0	-
9	Internship	Evaluation of Industry Internship	-	-	-	2
10	**Total**		**19**	**1**	**2**	**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 CSE (AI) TO OTHER BRANCHES:

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