



B.Tech. – III Year I Semester

S.No	Category	Title	L	T	P	Credits
1	Professional Core	Data Warehousing and Data Mining	3	0	0	3
2	Professional Core	Compiler Design	3	0	0	3
3	Professional Core	Design and Analysis of Algorithms	3	0	0	3
4	Professional Elective-I	1. Object Oriented Analysis and Design 2. Software Testing Methodologies 3. Advanced Computer Architecture 4. Computer Graphics 5. 12 week MOOC Swayam/ NPTEL course recommended by the BoS	3	0	0	3
5	Open Elective-I	1. Data Structures 2. Database Management Systems 3. Computer Organization 4. Scripting Languages 5. Operating Systems	3	0	0	3
6	Professional Core	Data Mining Lab	0	0	3	1.5
7	Professional Core	Compiler Design Lab	0	0	3	1.5
8	Skill Enhancement course	Full Stack development-2	0	1	2	2
9	Engineering Science	Tinkering Lab/ SWAYAM Plus - Android Application Development (with Flutter)	0	0	2	1
10	Evaluation of Community Service Project		-	-	-	2
Total			15	1	10	23





B.Tech. III Year II Semester

S.No.	Category	Title	L	T	P	Credits
1	Professional Core	Computer Networks	3	0	0	3
2	Professional Core	Artificial Intelligence	3	0	0	3
3	Professional Core	Cryptography & Network Security	3	0	0	3
4	Professional Elective-II	1. Cloud Computing 2. Cyber Security 3. DevOps 4. No SQL Databases 5. 12 week MOOC Swayam/NPTEL course recommended by the BoS	3	0	0	3
5	Professional Elective-III	1. Software Project Management 2. Human Computer Interaction 3. Big Data Analytics 4. Distributed Systems 5. 12-week MOOC Swayam/NPTEL course recommended by the BoS	3	0	0	3
6	Open Elective – II	1. Web services 2. Computer Networks 3. OOPS through Java 4. Fundamentals of Cloud Computing 5. Fundamentals of Information Security	3	0	0	3
7	Professional Core	AI Tools Lab	0	0	3	1.5
8	Professional Core	Computer Network Lab	0	0	3	1.5
9	Skill Enhancement course	Soft skills // SWAYAM Plus - 21st Century Employability Skills	0	1	2	2
10	Audit Course	Technical Paper Writing & IPR	2	0	0	-
Total			20	01	08	23



JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY GURJADA VIZIANAGARAM
VIZIANAGARAM – 535 003, Andhra Pradesh, India
B.Tech CSE (R23-COURSE STRUCTURE & SYLLABUS)

B.Tech. IV Year I Semester

S.No.	Category	Title	L	T	P	Credits
1	Professional Core	Machine Learning	2	1	0	3
2	Management Course- II	Human Resources & Project Management	2	0	0	2
3	Professional Elective-IV	1. Software Architecture & Design Patterns 2. Blockchain Technology 3. Internet of Things 4. Quantum Computing 5. 12 week MOOC Swayam/NPTEL course recommended by the BoS	3	0	0	3
4	Professional Elective-V	1. Soft Computing 2. Digital Image Processing 3. Natural Language Processing 4. Mobile Adhoc Networks 5. 12 week MOOC Swayam/NPTEL course recommended by the BoS	3	0	0	3
5	Open Elective-III	1.Big Data Analytics 2. Block Chain Technologies 3.CyberSecurity 4.Devops 5. Quantum Computing	3	0	0	3
6	Open Elective-IV	1.Fundamentals of Optimization Techniques 2.Computer Forensics and Law Protection 3.Ethical Hacking 4.Augmented Reality &Virtual Reality 5.Biometrics	3	0	0	3
7	Skill Enhancement Course	Prompt Engineering/ SWAYAM Plus - Certificate program in Prompt Engineering and ChatGPT	0	1	2	2
8	Audit Course	Constitution of India	2	0	0	-
9	Internship	Evaluation of Industry Internship	-	-	-	2
Total			18	2	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

Note : Student need to do at least ONE MOOC/NPTEL Course (of 3 credits out of 160 credits) to meet the mandatory requirement (11th criteria, as per R23 Regulations); they are allowed to register one semester in advance