

**B.Tech. in COMPUTER SCIENCE AND ENGINEERING (NETWORKS) COURSE
STRUCTURE & SYLLABUS (R22 Regulations)
Applicable from AY2022-23 Batch**

I Year I Semester

S. No.	Course Code	Course	L	T	P	Credits
1.		Matrices and Calculus	3	1	0	4
2.		Engineering Chemistry	3	1	0	4
3.		Programming for Problem Solving	3	0	0	3
4.		Basic Electrical Engineering	2	0	0	2
5.		Computer Aided Engineering Graphics	1	0	4	3
6.		Elements of Computer Science & Engineering	0	0	2	1
7.		Data Analysis using Excel Laboratory	0	0	2	1
8.		Programming for Problem Solving Laboratory	0	0	2	1
9.		Basic Electrical Engineering Laboratory	0	0	2	1
		Induction Program				
Total			12	2	12	20

I Year II Semester

S. No.	Course Code	Course	L	T	P	Credits
1.		Ordinary Differential Equations and Vector Calculus	3	1	0	4
2.		Applied Physics	3	1	0	4
3.		Engineering Workshop	0	1	3	2.5
4.		English for Skill Enhancement	2	0	0	2
5.		Electronic Devices and Circuits	2	0	0	2
6.		Python Programming Laboratory	0	1	2	2
7.		Applied Physics Laboratory	0	0	3	1.5
8.		English Language and Communication Skills Laboratory	0	0	2	1
9.		IT Workshop	0	0	2	1
10.		Environmental Science	3	0	0	0
Total			13	4	12	20

II YEAR I SEMESTER

S.No.	Course Code	Course Title	L	T	P	Credits
1		Digital Electronics	3	0	0	3
2		Data Structures	3	0	0	3
3		Computer Oriented Statistical Methods	3	1	0	4
4		Computer Organization and Architecture	3	0	0	3
5		Object Oriented Programming through Java	3	0	0	3
6		Data Structures Lab	0	0	3	1.5
7		Object Oriented Programming through Java Lab	0	0	3	1.5
8		Data visualization –R Programming/Power BI	0	0	2	1
9		Gender Sensitization Lab	0	0	2	0
Total			15	1	10	20

IIYEARISEMESTER

S.No.	Course Code	Course Title	L	T	P	Credits
1		Discrete Mathematics	3	0	0	3
2		Business Economics & Financial Analysis	3	0	0	3
3		Operating Systems	3	0	0	3
4		Database Management Systems	3	0	0	3
5		Automata Theory and Compiler Design	3	0	0	3
6		Operating Systems Lab	0	0	2	1
7		Database Management Systems Lab	0	0	2	1
8		Real-time Research Project/ Field Based Research Project	0	0	4	2
9		Node JS/ React JS/ Django	0	0	2	1
10		Constitution of India	3	0	0	0
Total			18	0	10	20

IIIYEARISEMESTER

S.No.	Course Code	CourseTitle	L	T	P	Credits
1		Network Programming	3	0	0	3
2		Data Communications and Computer Networks	3	1	0	4
3		Algorithms Design and Analysis	3	0	0	3
4		Professional Elective- I	3	0	0	3
5		Professional Elective-II	3	0	0	3
6		Computer Networks Lab	0	0	2	1
7		Network Programming Lab	0	0	2	1
8		Advanced English Communication Skills Lab	0	0	2	1
9		UI design-Flutter	0	0	2	1
10		Intellectual Property Rights	3	0	0	0
Total			18	1	8	20

III YEARISEMESTER

S.No.	Course Code	Course Title	L	T	P	Credits
1		Software Engineering	3	0	0	3
2		Internetworking with TCP/IP	3	0	0	3
3		Web Programming	3	0	0	3
4		Professional Elective–III	3	0	0	3
5		Open Elective-I	3	0	0	3
6		Professional Elective–IIILab	0	0	2	1
7		Internetworking with TCP/IPLab	0	0	2	1
8		Web Programming Lab	0	0	2	1
9		Industrial Oriented Mini Project/ Internship/ Skill Development Course(Big Data-Spark)	0	0	4	2
10		Environmental Science	3	0	0	0
Total			18	0	10	20

Environmental Science in III Yr II Sem Should be Registered by Lateral Entry Students Only.

IV YEARISEMESTER

S.No.	Course Code	Course Title	L	T	P	Credits
1		Blockchain Technology	3	0	0	3
2		Cryptography and Network Security	3	0	0	3
3		Professional Elective-IV	3	0	0	3
4		Professional Elective-V	3	0	0	3
5		Open Elective-II	3	0	0	3
6		Cryptography and Network Security Lab	0	0	2	1
7		Blockchain Technology Lab	0	0	2	1
8		Project Stage-I	0	0	6	3
		Total Credits	15	0	10	20

IVYEARIISEMESTER

S.No.	Course Code	Course Title	L	T	P	Credits
1		Organizational Behavior	3	0	0	3
2		Professional Elective-VI	3	0	0	3
3		Open Elective-III	3	0	0	3
4		Project Stage-II including Seminar	0	0	22	11
		Total Credits	9	0	22	20

***MC – Satisfactory/Unsatisfactory**

Professional Elective - I

Professional Elective-II

	Image Processing
	Advanced Computer Networks
	Data Analytics
	Mobile Application Security
	Game Theory

Professional Elective-III

	Mobile Application Development
	Network Administration
	Cloud Computing
	Cyber Security
	Machine Learning

***Courses in PE-III and PE-III Lab must be in 1-1correspondence.**

Professional Elective - IV

	Wireless Ad-Hoc Networks
	Information Retrieval Systems
	Wireless Security
	Network Management Systems and Operations

Professional Elective-V

	Real Time Systems
	Ad-hoc & Sensor Networks
	Distributed Storage Networks
	Quantum Computing
	Software Process & Project Management

Professional Elective-VI

	Parallel and Distributed Computing
	Internet of Things
	5G Technologies
	Cyber Laws & Ethics
	Network Protocols