

GURU NANAK INSTITUTIONS TECHNICAL CAMPUS

(An UGC Autonomous Institution - Affiliated to JNTUH)

Ibrahimpattanam, Ranga Reddy (District), Hyderabad - 501 506.

School of Engineering & Technology

Department of Computer Science & Engineering

Regulation - R22



COURSE STRUCTURE

(Applicable for the Batch admitted from 2022-23)

III YEAR I SEMESTER

S. No.	Course Code	Course Title	L	T	P	Credits
1	22PC0CS13	Design and Analysis of Algorithms	3	1	0	4
2	22PC0CS14	Computer Networks	3	0	0	3
3	22PC0CS15	DevOps	3	0	0	3
4		Professional Elective-I	3	0	0	3
5		Professional Elective -II	3	0	0	3
6	22PC0CS16	Computer Networks Lab	0	0	2	1
7	22PC0CS17	DevOps Lab	0	0	2	1
8	22HS0EN03	Advanced English Communication Skills Lab	0	0	2	1
9	22SD0CS03	UI design- Flutter	0	0	2	1
10	22MCOMB03	Intellectual Property Rights	3	0	0	0
		Total	18	1	8	20

III YEAR II SEMESTER

S. No.	Course Code	Course Title	L	T	P	Credits
1	22PC0CS18	Machine Learning	3	0	0	3
2	22PC0CS19	Formal Languages and Automata Theory	3	0	0	3
3	22PC0CS20	Artificial Intelligence	3	0	0	3
4		Professional Elective – III	3	0	0	3
5		Open Elective-I	3	0	0	3
6	22PC0CS21	Machine Learning Lab	0	0	2	1
7	22PC0CS22	Artificial Intelligence Laboratory	0	0	2	1
8		Professional Elective-III Lab	0	0	2	1
9	22PR0CS02/ 22SD0CS04	Industrial Oriented Mini Project/ Internship/ Skill Development Course (Big data-Spark)	0	0	4	2
10	22MCOCH03	Environmental Science	3	0	0	0
		Total	18	0	10	20

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IV YEAR I SEMESTER

S. No.	Course Code	Course Title	L	T	P	Credits
1	22PC0CS23	Cryptography and Network Security	3	0	0	3
2	22PC0CS24	Compiler Design	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	22PC0CS25	Cryptography and Network Security Lab	0	0	2	1
7	22PC0CS26	Compiler Design Lab	0	0	2	1
8	22PR0CS03	Project Stage - I	0	0	6	3
		Total Credits	15	0	10	20

IV YEAR II SEMESTER

S. No.	Course Code	Course Title	L	T	P	Credits
1	22SS0MB17	Organizational Behavior	3	0	0	3
2		Professional Elective – VI	3	0	0	3
3		Open Elective – III	3	0	0	3
4	22PR0CS04	Project Stage – II including Seminar	0	0	22	11
		Total Credits	9	0	22	20

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List of professional Electives

Professional Elective - I

22PE0CS01	Quantum Computing
22PE0CS02	Advanced Computer Architecture
22PE0CS03	Data Analytics
22PE0CS04	Image Processing
22PE0CS05	Principles of Programming Languages

Professional Elective – II

22PE0CS06	Computer Graphics
22PE0CS07	Embedded Systems
22PE0CS08	Information Retrieval Systems
22PE0CS09	Distributed Databases
22PE0CS10	Natural Language Processing

Professional Elective – III

22PE0CS11	Full Stack Development
22PE0CS12	Internet of Things
22PE0CS13	Scripting Languages
22PE0CS14	Mobile Application Development
22PE0CS15	Software Testing Methodologies

Professional Elective – III Labs

22PE0CS16	Full Stack Development Lab
22PE0CS17	Internet of Things Lab
22PE0CS18	Scripting Languages Lab
22PE0CS19	Mobile Application Development Lab
22PE0CS20	Software Testing Methodologies Lab

Professional Elective –IV

22PE0CS21	Graph Theory
22PE0CS22	Cyber Security
22PE0CS23	Soft Computing
22PE0CS24	Cloud Computing
22PE0CS25	Ad hoc & Sensor Networks

Professional Elective –V

22PE0CS26	Advanced Algorithms
22PE0CS27	Agile Methodology
22PE0CS28	Robotic Process Automation
22PE0CS29	Blockchain Technology
22PE0CS30	Software Process & Project Management

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Professional Elective – VI

22PE0CS31	Computational Complexity
22PE0CS32	Distributed Systems
22PE0CS33	Deep Learning
22PE0CS34	Human Computer Interaction
22PE0CS35	Cyber Forensics

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LIST OF OPEN ELECTIVES OFFERED FROM COMPUTER SCIENCE & ENGINEERING

Open Elective -1:

1. 22OE0CS01 : Data Structures
2. 22OE0CS02 : Database Management Systems

Open Elective -2:

1. 22OE0CS03 : Operating Systems
2. 22OE0CS04 : Software Engineering

Open Elective -3:

1. 22OE0CS05 : Algorithms Design and Analysis
2. 22OE0CS06 : Introduction to Computer Networks