JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
B.Tech. in Computer Science and Design
Applicable from AY 2025-26 Batch

I Year I Semester

S. No.	Course Code	Course Title	L	T	P	Credits
1	BSC	Matrices and Calculus	3	1	0	4
2	BSC	Advanced Engineering Physics	3	0	0	3
	MEC	Computer Aided Engineering Graphics	2	0	2	3
		Basic Electrical Engineering	3	0	0	3
3	CSC	Programming for Problem Solving	3	0	0	3
6	BSC	Advanced Engineering Physics Lab	0	0	2	1
7	CSC	Programming for Problem Solving Lab	0	0	2	1
		IT Workshop	0	0	2	1
8	HSC	Basic Electrical Engineering Lab	0	0	2	1
9		Induction Program				
		Total Credits	14	1	10	20

I Year II Semester

S. No.	Course Code	Course Title	L	T	P	Credits
1	BSC	Ordinary Differential Equations and Vector Calculus	3	0	0	3
2	BSC	Engineering Chemistry	3	0	0	3
3	HSC	English for Skill Enhancement	3	0	0	3
4		Electronic Devices and Circuits	3	0	0	3
5		Data Structures	3	0	0	3
6	BSC	Chemistry Lab	0	0	2	1
7		Data Structures Lab	0	0	2	1
8	HSC	English Language and Communication Skills Lab	0	0	2	1
9	MEC	Engineering Workshop	0	0	2	1
		Python Programming Lab	0	0	2	1
		Total Credits	15	0	10	20

II YEAR I SEMESTER

S. No.	Course Code	Course Title	L	T	P	Credits
1	BSC	Mathematical and Statistical Foundations	3	0	0	3
2		Computer Organization and Architecture	3	0	0	3
3		Object Oriented Programming through java	3	0	0	3
4		Software Engineering	3	0	0	3
5		Data Base Management System	3	0	0	3
	BSC	Computational Mathematics Lab	0	0	2	1
6		Object Oriented Programming through java Lab	0	0	2	1
7		Software Engineering Lab	0	0	2	1
8		Data Base Management Systems Lab	0	0	2	1
9	SDC	Skill Development Course – 1 (Node Js/React JS/Django)	0	0	2	1
		Total Credits	15	0	10	20

II YEAR II SEMESTER

S. No.	Course Code	Course Title	L	T	P	Credits
1		Discrete Mathematics	3	0	0	3
2		Operating Systems	3	0	0	3
3		Computer Networks	3	0	0	3
4		Design and Analysis of Algorithms	3	0	0	3
5		Machine Learning	3	0	0	3
		Innovation and Entrepreneurship	2	0	0	2
6		Operating Systems Lab	0	0	2	1
7		Computer networks lab	0	0	2	1
8		Machine Learning Lab	0	0	2	1
9	SDC	Skill Development Course – 2(Data Visualization- R/ Python/ Power BI)	0	0	2	1
10	*MC	Indian Knowledge System	1	0	0	1
		Total Credits	18	0	08	22

*Note: Students who wish to exit after II Year II Semester has to register for this optional course and acquire the credits allotted by doing 6 weeks Work-based Vocational Course/ Internship or Apprenticeship. Please refer R25 Academic Regulations for more information.

III YEAR I SEMESTER

S. No.	Course Code	Course Title	L	T	P	Credits
1		Web Technologies	3	0	0	3
2		Automata Theory and Compiler Design	3	0	0	3
3		Design of Interactive Systems	3	0	0	3
4		Professional Elective-I	3	0	0	3
5		Open Elective-I	2	0	0	2
6		Chatbots Lab	0	0	2	1
7		Compiler Design Lab	0	0	2	1
8		Web Technologies Lab	0	0	2	1
		Field Based project	0	0	4	2
9	SDC	Skill Development Course – 3 (UI design – Flutter Lab)	0	0	2	1
10	MC*	Gender Sensitization /Human values and Professional Ethics	0	0	1	1
		Total Credits	15	0	10	21

*Note: For the courses Gender Sensitization Lab and Human Values and Professional Ethics - one hour of instruction will be conducted on alternate weeks. For example, if a one-hour class for Gender Sensitization Lab is conducted this week, then a one-hour class for Human Values and Professional Ethics will be conducted in the following week.

III YEAR II SEMESTER

S. No	Course Code	Course Title	L	T	P	Credits
1		Full Stack Development	3	0	0	3
2		DevOps	3	0	0	3
3		Business Economics and Financial Analysis	3	0	0	3
4		Professional Elective-II	3	0	0	3

5		Open Elective – II	2	0	0	2
6		Full Stack Development Lab	0	0	2	1
7		DevOps Lab	0	0	2	1
8		Advanced Data Structures Lab	0	0	2	1
9	HSC	Advanced English Communication Skills Laboratory	0	0	2	1
10	SDC	Skill Development Course – 4 (Node JS/ React JS/ Django Lab)	0	0	2	1
11	MC*	Environmental Science	1	0	0	1
		Total Credits	14	0	14	20

IV YEAR I SEMESTER

S. No.	Course Code	Course Title	L	T	P	Credits
1		Cryptography and Network Security	3	0	0	3
2		Computer Graphics	3	0	0	3
3		Fundamentals of Management for Engineers	3	0	0	3
4		Professional Elective-III	3	0	0	3
5		Professional Elective – IV	3	0	0	3
6		Open Elective – III	2	0	0	2
7		Cryptography and Network Security Lab	0	0	2	1
8		Computer Graphics Lab	0	0	2	1
9		Industry Oriented Mini Project/ Summer Internship	0	0	4	2
		Total Credits	17	0	08	21

IV YEAR II SEMESTER

S. No.	Course Code	Course Title	L	T	P	Credits
1		Professional Elective – V	3	0	0	3
2		Professional Elective – VI	3	0	0	3
3		Project Work	0	0	28	14
		Total Credits	6	0	28	20

Professional Elective - I

1	Scripting Languages
2	Design Process and Practices
3	Data Mining
4	Image Processing
5	Blockchain Technology

Professional Elective - II

1	Cloud Computing
2	Information Retrieval Systems
3	Graph Theory
4	Artificial Intelligence
5	Design Drawing and Visualization

Professional Elective-III

1	Natural Language Processing
2	Internet of Things
3	Distributed Databases
4	Mobile Application Development
5	Software Testing Methodologies

Professional Elective-IV

1	Quantum Computing
2	Agile Methodology
3	Soft Computing
4	Adhoc Sensor Networks
5	Augmented Reality and Virtual Reality

Professional Elective-V

1	Human Computer Interaction
2	Visual Design and Communications
3	Computer Game Design and Programming
4	Deep Learning
5	Robotic Process Automation

Professional Elective-VI

1	UI /UX Design
2	VFX Animation
3	Computer Aided Geometric design
4	Edge Computing
5	Cyber Forensics

OPEN ELECTIVES

Open Elective-I:

1	Computer Graphics
2	Augmented Reality and Virtual Reality

Open Elective-II:

1	Image Processing
2	UI and UX Design

Open Elective-III:

1	Computer Vision and Robotics
2	Human Computer Interaction