



**C R RAO Advanced Institute of Mathematics,
Statistics and Computer Science (AIMSCS) in
Collaboration with Jawaharlal Nehru
Technological University Hyderabad**



Applicable from AY 2022-23 Batch

I Year I Semester

S. No.	Course Code	Course	L	T	P	Credits
1.	R22BS1MT01	Matrices and Calculus	3	1	0	4
2.	R22BS1CH01	Engineering Chemistry	3	1	0	4
3.	R22ES1CS01	Programming for Problem Solving	3	0	0	3
4.	R22EE1EE01	Basic Electrical Engineering	2	0	0	2
5.	R22ES2ME01	Computer Aided Engineering Graphics	1	0	4	3
6.	R22ES2CS02	Elements of Computer Science & Engineering	0	0	2	1
7.	R22BS2CH01	Data Analysis using Excel Laboratory	0	0	2	1
8.	R22ES2CS01	Programming for Problem Solving Laboratory	0	0	2	1
9.	R22EE2EE01	Basic Electrical Engineering Laboratory	0	0	2	1
Total			12	2	12	20

I Year II Semester

S. No.	Course Code	Course	L	T	P	Credits
1.	22BS1MT102	Ordinary Differential Equations and Vector Calculus	3	1	0	4
2.	22BS1PH102	Applied Physics	3	1	0	4
3.	22ES2ME102	Engineering Workshop	0	1	3	2.5
4.	22HS1EN101	English for Skill Enhancement	2	0	0	2
5.	22PC1EC101	Electronic Devices and Circuits	2	0	0	2
6.	22BS2PH102	Applied Physics Laboratory	0	0	3	1.5
7.	22ES2CS101	Python Programming Laboratory	0	1	2	2
8.	22HS2EN101	English Language and Communication Skills Laboratory	0	0	2	1
9.	R22PC2CS02	IT Workshop	0	0	2	1
Total			10	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		Gender Sensitization Lab	0	0	2	0
9		Skill Development Course (Data visualization- R Programming/ Power BI)	0	0	2	1
Total			15	1	10	20

II YEAR II SEMESTER

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		Software Engineering	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/ Societal Related Project	0	0	4	2
9		Constitution of India	3	0	0	0
10		Skill Development Course (Node JS/ React JS/ Django)	0	0	2	1
		Total	18	0	10	20

III YEAR I SEMESTER

S. No.	Course Code	Course Title	L	T	P	Credits
1		Algorithm Design and Analysis	3	0	0	3
2		Introduction to Data Science	3	1	0	4
3		Computer Networks	3	0	0	3
4		Professional Elective - I	3	0	0	3
5		Professional Elective - II	3	0	0	3
6		R Programming Lab	0	0	2	1
7		Computer Networks Lab	0	0	2	1
8		Advanced Communication Skills Lab	0	0	2	1
9		Intellectual Property Rights	3	0	0	0
10		Skill Development Course (ETL-Kafka/Talend)	0	0	2	1
		Total	18	1	12	20

III YEAR II SEMESTER

S. No.	Course Code	Course Title	L	T	P	Credits
1		Automata Theory and Compiler Design	3	0	0	3
2		Machine Learning	3	0	0	3
3		Big Data Analytics	3	0	0	3
4		Professional Elective – III	3	0	0	3
5		Open Elective - I	3	0	0	3
6		Machine Learning Lab	0	0	2	1
7		Big Data Analytics Lab	0	0	2	1
8		Professional Elective - III Lab	0	0	2	1
9		Environmental Science	3	0	0	0
10		Industrial Oriented Mini Project/ Summer Internship/ Skill Development Course (UI design- Flutter)	0	0	4	2
		Total	18	0	10	20

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

IV YEAR I SEMESTER

S. No.	Course Code	Course Title	L	T	P	Credits
1		Predictive Analytics	3	0	0	3
2		Web and Social Media Analytics	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		Web and Social Media Analytics Lab	0	0	2	1
7		Predictive Analytics Lab	0	0	2	1
8		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		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	9+2
		Total Credits	9	0	22	20

*MC – Satisfactory/Unsatisfactory

#Skill Course - 1 credit with 2 Practical Hours

Professional Elective - I

	Data Warehousing and Business Intelligence
	Artificial Intelligence
	Web Programming
	Image Processing
	Computer Graphics

Professional Elective - II

	Spatial and Multimedia Databases
	Information Retrieval Systems
	Software Project Management
	DevOps
	Computer Vision and Robotics

Professional Elective - III

	Software Testing Methodologies
	Data Visualization Techniques
	Scripting Languages
	Mobile Application Development
	Cryptography and Network Security

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

Professional Elective -IV

	Quantum Computing
	Database Security
	Natural Language Processing
	Information Storage Management
	Internet of Things

Professional Elective -V

	Privacy Preserving in Data Mining
	Cloud Computing
	Data Science Applications
	Mining Massive Datasets
	Exploratory Data Analysis

Professional Elective – VI

	Data Stream Mining
	Web Security
	Video Analytics
	Blockchain Technology
	Parallel and Distributed Computing

Note: Some courses can be taught as mandatory courses based on the industry needs

