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.	C1101	Matrices and Calculus	3	1	0	4
2.	C1102	Engineering Chemistry	3	1	0	4
3.	C1103	Programming for Problem Solving	3	0	0	3
4.	C1104	Basic Electrical Engineering	2	0	0	2
5.	C1105	Computer Aided Engineering Graphics	1	0	4	3
6.	C1106	Elements of Computer Science & Engineering	0	0	2	1
7.	C1107	Data Analysis using Excel Laboratory	0	0	2	1
8.	C1108	Programming for Problem Solving Laboratory	0	0	2	1
9.	C1109	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.	C1201	Ordinary Differential Equations and Vector Calculus	3	1	0	4
2.	C1202	Applied Physics	3	1	0	4
3.	C1203	Engineering Workshop	0	1	3	2.5
4.	C1204	English for Skill Enhancement	2	0	0	2
5.	C1205	Electronic Devices and Circuits	2	0	0	2
6.	C1206	Applied Physics Laboratory	0	0	3	1.5
7.	C1207	Python Programming Laboratory	0	1	2	2
8.	C1208	English Language and Communication Skills Laboratory	0	0	2	1
9.	C1209	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	C2101	Digital Electronics	3	0	0	3
2	C2102	Data Structures	3	0	0	3
3	C2103	Computer Oriented Statistical Methods	3	1	0	4
4	C2104	Computer Organization and Architecture	3	0	0	3
5	C2105	Object Oriented Programming through Java	3	0	0	3
6	C2106	Data Structures Lab	0	0	3	1.5
7	C2107	Object Oriented Programming through Java Lab	0	0	3	1.5
8	C2108	Gender Sensitization Lab	0	0	2	0
9	C2109	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	C2201	Discrete Mathematics	3	0	0	3
2	C2202	Business Economics & Financial Analysis	3	0	0	3
3	C2203	Operating Systems	3	0	0	3
4	C2204	Database Management Systems	3	0	0	3
5	C2205	Software Engineering	3	0	0	3
6	C2206	Operating Systems Lab	0	0	2	1
7	C2207	Database Management Systems Lab	0	0	2	1
8	C2208	Real-time Research Project/ Societal Related Project	0	0	4	2
9	C2209	Constitution of India	3	0	0	0
10	C2210	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

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