



**JEPPIAAR**  
— UNIVERSITY —



**Curriculum and Syllabus**  
(Regulations 2024)

**School of Engineering &  
Technology**

**B.Tech.**  
**Computer Science  
and Engineering (Data Science)**

**B.Tech Computer Science and Engineering (Data Science)****SUMMARY OF CREDITS**

<b>SNO</b>	<b>YEAR</b>	<b>SEMESTER</b>	<b>CREDITS</b>
1	Year I	Semester 1	23
2	Year I	Semester 2	25
3	Year II	Semester 3	23
4	Year II	Semester 4	25
5	Year III	Semester 5	22
6	Year III	Semester 6	22
7	Year IV	Semester 7	18
8	Year IV	Semester 8	12
		<b>TOTAL CREDITS</b>	<b>170</b>

**B.TECH COMPUTER SCIENCE AND ENGINEERING (DATA SCIENCE)****S E M E S T E R I**

Sl. No.	Category	Course Code	Course Title	L	T	P	C
1	HS	24EEN1001	Professional English- I	3	0	0	3
2	BS	24EMA100 1	Engineering Mathematics- I	3	1	0	4
3	BS	24EEV1001	Environmental Sciences and Sustainability	2	0	0	2
4	ES	24ECS1100 1	Programming in C	3	0	0	3
5	ES	24EEC1100 1	Basic Digital Electronics	3	1	0	4
6	ES	24ELT1001	IT Primer	3	0	0	3
7	ES	24ECS4100 1	Programming in C Laboratory	0	0	4	2
8	ES	24ECS4100 2	Basic Digital Electronics Laboratory	0	0	2	1
9	AEA	24ESP5101	Soft Skills- Personality Development	0	0	2	1
			<b>Total</b>	19	2	8	<b>23</b>

## SEMESTER 2

Sl. No.	Category	Course Code	Course Title	L	T	P	C
1	HS	24EEN2002	Professional English - II	3	0	0	3
2	BS	24EMA2002	Engineering Mathematics - II	3	1	0	4
3	BS	24EPH2001	Engineering Physics	3	0	0	3
4	ES	24ECS2102	Problem Solving and Python Programming	3	1	0	4
5	ES	24EEC2102	Basics of Electrical and Electronics Engineering	3	1	0	4
6	BS	24ELT2103	Critical Thinking, Design Thinking and Leader Team Work	3	0	0	3
7	ES	24ECS2402	Python Programming Laboratory	0	0	4	2
8	AEA	24ECP2502	Computer Practices Laboratory	0	0	2	1
	EAA		Extra-Curricular Activity	0	0	2	1
			<b>Total</b>	<b>18</b>	<b>3</b>	<b>8</b>	<b>25</b>

### SEMESTER 3

Sl. No.	Category	Course Code	Course Title	L	T	P	C
1	BS	24EMA3003	Discrete Mathematics	3	1	0	4
2	PC	24ECS3106	Computer Architecture & Organisation	3	0	0	3
3	PC	24ECS3108	Foundations of Data Science	3	0	0	3
4	PC	24ECS3104	Object oriented Programming	3	0	0	3
5	PC	24ECS3105	Data Structures	3	0	0	3
6	PC	24EAI3107	Hadoop Ecosystem with HDFS & MapReduce	3	0	0	3
7	PC	24ECS3403	Object oriented Programming Laboratory	0	0	4	2
8	PC	24ECS3404	Data Structures Laboratory	0	0	4	2
			<b>Total</b>	18	1	8	<b>23</b>

### SEMESTER 4

Sl. No.	Category	Course Code	Course Title	L	T	P	C
1	PC	24EDS4109	Design and Analysis of Algorithms	3	1	0	4
2	PC	24ECS4111	Operating Systems	3	0	0	3
3	PC	24ECS4112	Database Management Systems	3	0	0	3
4	PC	24ECS4110	Theory of Computation	3	1	0	4
5	PC	24EAI4113	Data processing with Hive and Pig Latin	3	0	0	3
6	PC	24EAI4114	External data handling with sqoop and flume	3	0	0	3
7	PC	24ECS4405	Operating Systems Laboratory	0	0	4	2
8	PC	24ECS4406	Database Management Systems Laboratory	0	0	4	2
9	EAA		Extra-Curricular Activity	0	0	2	1
			<b>Total</b>	<b>18</b>	<b>1</b>	<b>10</b>	<b>25</b>

### SEMESTER 5

Sl. No.	Category	Course Code	Course Title	L	T	P	C
1	PC	24ECS5115	Compiler Design	3	1	0	4
2	PC	24EAI5117	Machine Learning	3	0	0	3
3	PC	24ECS5116	Computer Networks	3	0	0	3
4	PE		Professional Elective I	3	0	0	3
5	PE		Professional Elective II	3	0	0	3
6	OE		Open Elective I	3	0	0	3
7	PC	24ECS5407	Compiler Design Laboratory	0	0	4	2
8	AEA	24EPT5504	Professional Training - I	0	0	2	1
			<b>Total</b>	<b>18</b>	<b>1</b>	<b>6</b>	<b>22</b>

## SEMESTER 6

Sl. SNo.	Category	Course Code	Course Title	L	T	P	C
1	PC	24ECS6117	Cryptography and Cyber Security	3	0	0	3
2	PC	24EDS6118	Cloud Computing	3	0	0	3
3	PC	24ECY6119	Cyber Forensics	3	0	0	0
4	PE		Professional Elective III	3	0	0	3
5	PE		Professional Elective IV	3	0	0	3
6	OE		Open Elective II	3	0	0	3
7	PC	24ECS6408	Security Laboratory	0	0	4	2
8	AEA	24EIP6505	Independent Project	0	0	2	1
9	EEA		Extra-Curricular Activity	0	0	2	1
			<b>Total</b>	<b>18</b>	<b>1</b>	<b>8</b>	<b>23</b>



### SEMESTER 7

Sl. No.	Category	Course Code	Course Title	L	T	P	C
1	HS	24ECS7120	Human Values and Ethics	3	0	0	3
2	PC	24ECS7121	Big Data Analytics	3	0	0	3
3	PE		Professional Elective V	3	0	0	3
4	PE		Professional Elective VI	3	0	0	3
5	OE		Open Elective III	3	0	0	3
6	PC	24ECS7409	Data Analytics Laboratory	0	0	4	2
7	AEA	24EPT5505	Professional Training - II	0	0	2	1
			<b>Total</b>	<b>15</b>	<b>0</b>	<b>6</b>	<b>18</b>

### SEMESTER 8

Sl. No.	Category	Course Code	Course Title	L	T	P	C
1	AEA	24EPW8506	Project Work / Internship	0	0	24	12
			<b>Total</b>	<b>0</b>	<b>0</b>	<b>24</b>	<b>12</b>