



REGULATIONS 2024
FLEXIBLE CHOICE BASED CREDIT SYSTEM
DEPARTMENT OF COMPUTER SCIENCE ENGINEERING
B.E. Computer Science and Engineering
CURRICULUM - For Learners admitted from Academic Year 2024 - 2025

S.No	Remarks	Category	Course Code R2024	Course Code R2019F1	Course Title	Prerequisite	Theory Credits	Practical Credits	Total Credits	CGPA / Non - CGPA	Course Type
1	Any 1	HS	SH1104	19EN104	Technical Writing	-	3	0	3	CGPA	Theory
2	Any 1	HS	SH1105	19EN105	Public Speaking	-	0	3	3	CGPA	Practical (10 Expts)
3	Any 1	HS	SH1101	19EN101	Communicative English	-	3	1	4	CGPA	TIP (6 Expts)
4	Exempted for LE, Any 2 for Regular	HS	SH9154	19MS154	Basic Financial Accounting	-	3	0	3	CGPA	Theory
5	Exempted for LE, Any 2 for Regular	HS	SH9156	19MS156	Human Resource Management and Team Building	-	3	0	3	CGPA	Theory
6	Exempted for LE, Any 2 for Regular	HS	SH9155	19MS155	Stock Market and Company Operations	-	3	0	3	CGPA	Theory
7	Exempted for LE	HS	SH7101	22HS101	தமிழர் மரபு/ Heritage of Tamils	-	1	0	1	CGPA	Theory (Int Only)
8	Exempted for LE	HS	SH7102	22HS102	தமிழரும் தொழில்நுட்பமும்/ Tamils and Technology	-	1	0	1	CGPA	Theory (Int Only)
9	Exempted for LE	HS	SH7801	NA	Human Values and Professional Ethics	-	2	0	2	CGPA	Theory
10	Exempted for LE	BS	SH2201	19MA201	Calculus and Matrix Algebra	-	4	0	4	CGPA	Theory
11	Exempted for LE	BS	SH2206	19MA206	Logic and Combinatorics	19MA201	4	0	4	CGPA	Theory
12		BS	SH2212	19MA212	Algebra and Number Theory	19MA201	4	0	4	CGPA	Theory
13		BS	SH2222	19MA222	Probability and Queueing Models	-	3	1	4	CGPA	TIP (6 Expts)
14	Exempted for LE	BS	SH3214	NA	Physics for Quantum Computing	-	2	1	3	CGPA	TIP (6 Expts)
15	Exempted for LE	BS	SH4205	19CY205	Principles of Chemistry in Engineering	-	3	1	4	CGPA	TIP (6 Expts)
16		BS	SH4801	NA	Environmental Sciences and Sustainability	-	2	0	2	CGPA	Theory
17		ES	CS3301	19AI301	Python Programming	-	2	1	3	CGPA	TIP (6 Expts)
18	Exempted for LE	ES	CS3302	19AI302	Engineering Design and Modelling	-	0	3	3	CGPA	Practical (10 Expts)
19	Exempted for LE	ES	EC2404	19EE404	Digital Electronics	-	3	1	4	CGPA	TIP (6 Expts)
20	Exempted for LE	ES	EC2305	19EE305	Basic Electrical, Electronics and Measurement Engineering	-	2	1	3	CGPA	TIP (6 Expts)
21	Exempted for LE	ES	EC2309	19EE309	Programming Microcontrollers	-	2	1	3	CGPA	TIP (6 Expts)
22		ES	CS3304	19AI304	Fundamentals of C Programming	-	2	1	3	CGPA	TIP (6 Expts)
23		ES	CS3305	19AI305	Advanced C Programming	19AI304 / CS3304	2	1	3	CGPA	TIP (6 Expts)
24		ES	CS1305	19CS305	Computer Architecture	-	3	0	3	CGPA	Theory

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25		PC	CS3307	19AI307	Object Oriented Programming using Java	19AI304	2	1	3	CGPA	TIP (6 Expts)
26		PC	CS3404	19AI404	Analysis of Algorithms	19AI301	2	1	3	CGPA	TIP (6 Expts)
27		PC	CS3405	19AI405	Fundamentals of Artificial Intelligence	19CS301	2	1	3	CGPA	TIP (6 Expts)
28		PC	CS3408	19AI408	Data Structures	19AI304 / CS3304	2	1	3	CGPA	TIP (6 Expts)
29		PC	CS3410	19AI410	Introduction to Machine Learning	-	2	1	3	CGPA	TIP (6 Expts)
30		PC	CS3414	19AI414	Fundamentals of Web Application Development	-	3	2	5	CGPA	TIP (10 Expts)
31		PC	CS3541	19AI541	Cloud Computing	19CS406	3	1	4	CGPA	TIP (6 Expts)
32	Any 1	PC	CS3553	19AI553	Advanced Java Web Applications	19AI307	2	1	3	CGPA	TIP (6 Expts)
33	Any 1	PC	CS1567	19CS567	Cloud Native App Development	-	2	1	3	CGPA	TIP (6 Expts)
34	Any 1	PC	CS3545	19AI545	Modern Web Application Development	19CS410	2	1	3	CGPA	TIP (6 Expts)
35		PC	CS3546	19AI546	Web Server Programming	19CS401	2	1	3	CGPA	TIP (6 Expts)
36		PC	CS4508	19AM508	Introduction to IoT	-	2	1	3	CGPA	TIP (6 Expts)
37		PC	CS1404	19CS404	Database Management System and its Applications	19AI301/19AI304/19CS301/19CS302/19CS202	3	1	4	CGPA	TIP (6 Expts)
38		PC	CS1405	19CS405	Operating System	-	3	1	4	CGPA	TIP (6 Expts)
39		PC	CS1406	19CS406	Computer Networks	-	3	1	4	CGPA	TIP (6 Expts)
40		PC	CS1407	19CS407	Theory of Computation	19MA206	3	0	3	CGPA	Theory
41		PC	CS1408	19CS408	Software Engineering	-	3	1	4	CGPA	TIP (6 Expts)
42		PC	CS1409	19CS409	Compiler Design	-	3	1	4	CGPA	TIP (6 Expts)
43		PC	CS1415	19CS415	Cryptography	-	2	1	3	CGPA	TIP (6 Expts)
44		PE	CS3303	19AI303	Engineering Mechanics and Product Development	-	2	1	3	CGPA	TIP (6 Expts)
45		PE	CS3306	19AI306	Object Oriented Programming using C++	-	2	1	3	CGPA	TIP (6 Expts)
46		PE	CS3308	19AI308	Object Oriented Programming using C#	-	2	1	3	CGPA	TIP (6 Expts)
47		PE	CS3403	19AI403	Introduction to Data Science	19CS301	2	1	3	CGPA	TIP (6 Expts)
48		PE	CS3406	19AI406	Digital Image Processing Techniques	-	2	1	3	CGPA	TIP (6 Expts)
49		PE	CS3407	19AI407	Parallel Computing Architecture	-	3	1	4	CGPA	TIP (6 Expts)
50		PE	CS3409	19AI409	Applied Artificial Intelligence	19AI405/19CS301	2	1	3	CGPA	TIP (6 Expts)
51		PE	CS3411	19AI411	Neural Networks	-	2	1	3	CGPA	TIP (6 Expts)
52		PE	CS3412	19AI412	Web Data Mining	-	3	1	4	CGPA	TIP (6 Expts)

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53		PE	CS3413	19AI413	Deep Learning and its Applications	-	2	1	3	CGPA	TIP (6 Expts)
54		PE	CS3501	19AI501	Applications of Artificial Intelligence	-	2	1	3	CGPA	TIP (6 Expts)
55		PE	CS3502	19AI502	Applied Natural Language Processing	-	2	1	3	CGPA	TIP (6 Expts)
56		PE	CS3503	19AI503	Computer Vision	19CS301	2	1	3	CGPA	TIP (6 Expts)
57		PE	CS3504	19AI504	Mobile Robotics	-	2	1	3	CGPA	TIP (6 Expts)
58		PE	CS3505	19AI505	Reinforcement Learning	19CS301	2	1	3	CGPA	TIP (6 Expts)
59		PE	CS3506	19AI506	Speech Analysis and Processing	-	2	1	3	CGPA	TIP (6 Expts)
60		PE	CS3507	19AI507	Special Topics in Artificial Intelligence	-	2	1	3	CGPA	TIP (6 Expts)
61		PE	CS3508	19AI508	Soft Computing Techniques	-	2	1	3	CGPA	TIP (6 Expts)
62		PE	CS3509	19AI509	Concepts of Virtual And Augmented Reality	-	2	1	3	CGPA	TIP (6 Expts)
63		PE	CS3510	19AI510	Mobile VR And AI In Unity	19AI410/19CS302	2	1	3	CGPA	TIP (6 Expts)
64		PE	CS3511	19AI511	Scientific and Engineering Data Visualization	-	2	1	3	CGPA	TIP (6 Expts)
65		PE	CS3512	19AI512	NoSQL Database Design	19CS301	2	1	3	CGPA	TIP (6 Expts)
66		PE	CS3513	19AI513	Game Programming	19CS401	2	2	4	CGPA	TIP (10 Expts)
67		PE	CS3514	19AI514	Self Driving Car	19CS301/19AI410	2	2	4	CGPA	TIP (10 Expts)
68		PE	CS3515	19AI515	Smart Manufacturing Technology	-	2	1	3	CGPA	TIP (6 Expts)
69		PE	CS1520	19CS520	Big Data Analytics	19CS411/19CS519	3	0	3	CGPA	Theory
70		PE	CS3517	19AI517	Business Analytics	-	2	1	3	CGPA	TIP (6 Expts)
71		PE	CS3518	19AI518	Cognitive Systems	-	3	0	3	CGPA	Theory
72		PE	CS3519	19AI519	Distributed Database	19CS404	3	0	3	CGPA	Theory
73		PE	CS1521	19CS521	Data Warehousing and Data Mining	19CS404	3	0	3	CGPA	Theory
74		PE	CS3521	19AI521	Expert Systems	-	3	0	3	CGPA	Theory
75		PE	CS3522	19AI522	Knowledge Engineering	19CS410	3	0	3	CGPA	Theory
76		PE	CS3523	19AI523	Mobile Database	-	3	0	3	CGPA	Theory
77		PE	CS3524	19AI524	Multimedia Database	19CS410	3	0	3	CGPA	Theory
78		PE	CS3525	19AI525	Video Processing	19CS301	2	1	3	CGPA	TIP (6 Expts)
79		PE	CS3526	19AI526	Information Security and Access Control	19AI527	2	1	3	CGPA	TIP (6 Expts)
80		PE	CS3527	19AI527	Security Assessment and Risk Analysis	-	3	1	4	CGPA	TIP (6 Expts)

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81		PE	CS3528	19AI528	Advanced Graph Theory and Applications	19CS402	2	1	3	CGPA	TIP (6 Expts)
82		PE	CS3529	19AI529	Advanced Data Structures	19CS401	2	1	3	CGPA	TIP (6 Expts)
83		PE	CS3530	19AI530	Control of Robotic Systems	-	2	1	3	CGPA	TIP (6 Expts)
84		PE	CS3531	19AI531	Cryptography and Security	-	2	1	3	CGPA	TIP (6 Expts)
85		PE	CS3532	19AI532	Information Theory for Cyber Security	-	2	1	3	CGPA	TIP (6 Expts)
86		PE	CS3533	19AI533	Introduction to Robotics	-	2	1	3	CGPA	TIP (6 Expts)
87		PE	CS3534	19AI534	Kinematics and Dynamics of Robots	-	2	1	3	CGPA	TIP (6 Expts)
88		PE	CS3535	19AI535	Robotic Sensors	-	2	1	3	CGPA	TIP (6 Expts)
89		PE	CS3536	19AI536	Steganography and Digital Watermarking	-	2	1	3	CGPA	TIP (6 Expts)
90		PE	CS3537	19AI537	Computer Graphics for Virtual Reality	-	2	1	3	CGPA	TIP (6 Expts)
91		PE	CS3538	19AI538	Mathematical Modelling and Computer Aided Engineering	-	2	1	3	CGPA	TIP (6 Expts)
92		PE	CS3539	19AI539	Mobile User Interface Development	19CS401	2	1	3	CGPA	TIP (6 Expts)
93		PE	CS3540	19AI540	Programming Mobile Devices	19CS401	2	1	3	CGPA	TIP (6 Expts)
94		PE	CS3542	19AI542	Agile Software Development	19CS301	3	1	4	CGPA	TIP (6 Expts)
95		PE	CS3543	19AI543	Software Testing	19CS301	2	1	3	CGPA	TIP (6 Expts)
96		PE	CS3544	19AI544	Virtualization and Containerization	19CS405/19CS406	2	1	3	CGPA	TIP (6 Expts)
97		PE	CS3547	19AI547	Blockchain for Business	19CS301	2	1	3	CGPA	TIP (6 Expts)
98		PE	CS3548	19AI548	Robot Programming	-	2	1	3	CGPA	TIP (6 Expts)
99		PE	CS3549	19AI549	Drone Assembly and Applications	-	2	1	3	CGPA	TIP (6 Expts)
100		PE	CS3550	19AI550	Artificial Intelligence for Games	-	2	1	3	CGPA	TIP (6 Expts)
101		PE	CS3551	19AI551	Drone Design and Control	-	2	1	3	CGPA	TIP (6 Expts)
102		PE	CS3552	19AI552	Web Application User Interface Development	-	2	1	3	CGPA	TIP (6 Expts)
103		PE	CS3554	19AI554	Fundamentals of Large Language Models	-	2	1	3	CGPA	TIP (6 Expts)
104		PE	CS3555	19AI555	Exploratory Data Analysis	-	2	1	3	CGPA	TIP (6 Expts)
105		PE	CS3556	19AI556	Recommender Systems	-	2	1	3	CGPA	TIP (6 Expts)
106		PE	CS3557	19AI557	Neural Networks and Deep Learning	-	2	1	3	CGPA	TIP (6 Expts)
107		PE	CS3558	19AI558	Text and Speech Analysis	-	2	1	3	CGPA	TIP (6 Expts)
108		PE	CS3559	19AI559	Image and Video Analytics	-	2	1	3	CGPA	TIP (6 Expts)

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109		PE	CS3560	19AI560	Augmented Reality and ARCore	-	2	1	3	CGPA	TIP (6 Expts)
110		PE	CS3561	19AI561	Extended Reality	CS3307	2	1	3	CGPA	TIP (6 Expts)
111		PE	CS4401	19AM401	Time Series Analysis and Forecasting	-	3	1	4	CGPA	TIP (6 Expts)
112		PE	CS4406	19AM406	Blockchain and Cryptocurrency	-	3	0	3	CGPA	Theory
113		PE	CS4407	19AM407	Cyber Forensics	-	3	0	3	CGPA	Theory
114		PE	CS4501	19AM501	Machine Learning for Bioinformatics	-	3	0	3	CGPA	Theory
115		PE	CS4502	19AM502	Genetic Algorithms	-	2	1	3	CGPA	TIP (6 Expts)
116		PE	CS4503	19AM503	Data Modeling	-	3	0	3	CGPA	Theory
117		PE	CS4504	19AM504	Brain Computer Interaction	-	3	0	3	CGPA	Theory
118		PE	CS4505	19AM505	Statistical Learning Theory	-	2	1	3	CGPA	TIP (6 Expts)
119		PE	CS4506	19AM506	Sensors and Actuators for IoT	-	2	1	3	CGPA	TIP (6 Expts)
120		PE	CS4507	19AM507	Security and Trust in IoT	-	2	1	3	CGPA	TIP (6 Expts)
121		PE	CS4509	19AM509	Industrial Internet of Things	-	2	1	3	CGPA	TIP (6 Expts)
122		PE	CS4510	19AM510	Software for Embedded Systems	-	2	1	3	CGPA	TIP (6 Expts)
123		PE	CS4511	19AM511	IoT Architecture and Protocols	-	3	0	3	CGPA	Theory
124		PE	CS4512	19AM512	Arduino for IoT	-	2	1	3	CGPA	TIP (6 Expts)
125		PE	CS4513	19AM513	Raspberry Pi for IoT	-	2	1	3	CGPA	TIP (6 Expts)
126		PE	CS4514	19AM514	Motion Planning Techniques	-	2	1	3	CGPA	TIP (6 Expts)
127		PE	CS4515	19AM515	Advanced Java Programming	-	2	1	3	CGPA	TIP (6 Expts)
128		PE	CS4516	19AM516	Python Programming for IoT	-	3	0	3	CGPA	Theory
129		PE	CS4517	19AM517	Applications of IoT in Robotics	-	3	0	3	CGPA	Theory
130		PE	CS4518	19AM518	Programming for IoT Boards	-	3	0	3	CGPA	Theory
131		PE	CS4519	19AM519	Design of Smart Cities	-	3	0	3	CGPA	Theory
132		PE	CS4520	19AM520	IoT and Multimedia Technology	-	3	0	3	CGPA	Theory
133		PE	CS4521	19AM521	Mobile Application Development for IoT	-	3	0	3	CGPA	Theory
134		PE	CS4522	19AM522	Open Source Programming for IoT	-	3	0	3	CGPA	Theory
135		PE	CS1416	19CS416	Cloud Security	-	2	1	3	CGPA	TIP (6 Expts)
136		PE	CS1417	19CS417	Ethical Hacking Techniques	-	2	1	3	CGPA	TIP (6 Expts)

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137		PE	CS1418	19CS418	Cyber Law and Compliance	-	3	0	3	CGPA	Theory
138		PE	CS1419	19CS419	Digital Forensics and Digital Investigations	-	2	1	3	CGPA	TIP (6 Expts)
139		PE	CS1420	19CS420	Prototyping of IoT Systems	-	2	1	3	CGPA	TIP (6 Expts)
140		PE	CS1421	19CS421	Edge Computing	-	2	1	3	CGPA	TIP (6 Expts)
141		PE	CS1422	19CS422	Security for IoT Systems	-	3	0	3	CGPA	Theory
142		PE	CS1502	19CS502	Computer Graphics and Multimedia	19CS401	3	0	3	CGPA	Theory
143		PE	CS1503	19CS503	Developing Web Application in .Net	19CS404/19CS410	3	0	3	CGPA	Theory
144		PE	CS1504	19CS504	Software Project Management	19CS408	3	0	3	CGPA	Theory
145		PE	CS1505	19CS505	Service Oriented Architecture	-	3	0	3	CGPA	Theory
146		PE	CS1506	19CS506	Multicore Architecture	19CS305	3	0	3	CGPA	Theory
147		PE	CS1507	19CS507	Human Computer Interaction	19CS502/19CS408	3	0	3	CGPA	Theory
148		PE	CS1508	19CS508	Parallel and Distributed Systems	19CS305/19CS401	3	0	3	CGPA	Theory
149		PE	CS1509	19CS509	Graph Theory and Applications	19MA206	3	0	3	CGPA	Theory
150		PE	CS1510	19CS510	Social Network Analysis	19CS501/19CS413	3	0	3	CGPA	Theory
151		PE	CS1511	19CS511	Natural Language Processing	19MA201	3	0	3	CGPA	Theory
152		PE	CS1512	19CS512	Soft Computing	19CS501/19AI410	3	0	3	CGPA	Theory
153		PE	CS1513	19CS513	Green Computing	-	3	0	3	CGPA	Theory
154		PE	CS1514	19CS514	Network Management Systems	19CS406	3	0	3	CGPA	Theory
155		PE	CS1515	19CS515	Block Chain Architecture and its Use Cases	19CS412	3	0	3	CGPA	Theory
156		PE	CS1516	19CS516	Software Testing and Quality Assurance	-	3	0	3	CGPA	Theory
157		PE	CS1517	19CS517	Mobile Computing	19CS406	3	0	3	CGPA	Theory
158		PE	CS1518	19CS518	Game Design and Development	19CS502	3	0	3	CGPA	Theory
159		PE	CS1520	19CS520	Big Data Analytics	19CS411/19CS519	3	0	3	CGPA	Theory
160		PE	CS1521	19CS521	Data Warehousing and Data Mining	19CS404	3	0	3	CGPA	Theory
161		PE	CS1522	19CS522	Advanced Database Management System	19CS404	3	1	4	CGPA	TIP (6 Expts)
162		PE	CS1523	19CS523	Information Retrieval	19AI410/19CS501/19CS413	3	0	3	CGPA	Theory
163		PE	CS1524	19CS524	Deep Learning	19CS501	3	0	3	CGPA	Theory
164		PE	CS1526	19CS526	R Programming	19CS301/19CS303	2	1	3	CGPA	TIP (6 Expts)

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165		PE	CS1528	19CS528	Robotics and its Applications	19CS302/19EC408	3	0	3	CGPA	Theory
166		PE	CS1529	19CS529	Quantum Computing	19CS301/19CS303	3	0	3	CGPA	Theory
167		PE	CS1530	19CS530	Cyber Security	19CS412	3	0	3	CGPA	Theory
168		PE	CS1531	19CS531	Virtual Reality	19CS401/19CS301	3	0	3	CGPA	Theory
169		PE	CS1532	19CS532	Professional Readiness for Innovation, Employability and Entrepreneurship	-	0	3	3	CGPA	Practical (10 Expts)
170		PE	CS1533	19CS533	Information Security Intelligence and Analytics using Big Data	-	2	1	3	CGPA	TIP (6 Expts)
171		PE	CS1534	19CS534	Prevention Methodology for Cybersecurity	-	2	1	3	CGPA	TIP (6 Expts)
172		PE	CS1535	19CS535	Trusted Network Systems	-	3	0	3	CGPA	Theory
173		PE	CS1536	19CS536	Firewalls and Intrusion Detection System	-	2	1	3	CGPA	TIP (6 Expts)
174		PE	CS1537	19CS537	Secure Software Engineering	-	2	1	3	CGPA	TIP (6 Expts)
175		PE	CS1538	19CS538	System Security	-	3	0	3	CGPA	Theory
176		PE	CS1539	19CS539	Hardware Security	-	3	0	3	CGPA	Theory
177		PE	CS1540	19CS540	Fog Computing	-	3	0	3	CGPA	Theory
178		PE	CS4506	19AM506	Sensors and Actuators for IoT	-	2	1	3	CGPA	TIP (6 Expts)
179		PE	CS1542	19CS542	Embedded Board Design	-	2	1	3	CGPA	TIP (6 Expts)
180		PE	CS1543	19CS543	Embedded Board Manufacturing	-	2	1	3	CGPA	TIP (6 Expts)
181		PE	CS1544	19CS544	Realtime Operating System	-	2	1	3	CGPA	TIP (6 Expts)
182		PE	CS1545	19CS545	Open Source Operating System	-	2	1	3	CGPA	TIP (6 Expts)
183		PE	CS1546	19CS546	Kernel Programming	-	2	1	3	CGPA	TIP (6 Expts)
184		PE	CS1547	19CS547	Fundamentals of Cryptocurrency	-	3	0	3	CGPA	Theory
185		PE	CS1548	19CS548	Cloud Services Management	-	2	1	3	CGPA	TIP (6 Expts)
186		PE	CS1549	19CS549	UI and UX Design	-	2	1	3	CGPA	TIP (6 Expts)
187		PE	CS1550	19CS550	AI and Ethics	-	3	0	3	CGPA	Theory
188		PE	CS1551	19CS551	Software Testing and Automation	-	2	1	3	CGPA	TIP (6 Expts)
189		PE	CS1552	19CS552	DevOps	-	2	1	3	CGPA	TIP (6 Expts)
190		PE	CS1553	19CS553	Web Application Security	-	2	1	3	CGPA	TIP (6 Expts)
191		PE	CS1554	19CS554	Stream Processing	-	2	1	3	CGPA	TIP (6 Expts)
192		PE	CS1557	19CS557	Software Defined Networks	-	2	1	3	CGPA	TIP (6 Expts)

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193		PE	CS1556	19CS556	Core Computing Concepts	-	2	1	3	CGPA	TIP (6 Expts)
194		PE	CS1558	19CS558	Data Privacy and Protection	-	2	1	3	CGPA	TIP (6 Expts)
195		PE	CS1559	19CS559	Blockchain Platforms and Its Use Cases	-	2	1	3	CGPA	TIP (6 Expts)
196		PE	CS1560	19CS560	Smart Contract and Solidity	-	2	1	3	CGPA	TIP (6 Expts)
197		PE	CS1561	19CS561	Blockchain and Fintech	-	2	1	3	CGPA	TIP (6 Expts)
198		PE	CS1562	19CS562	Public Key Infrastructure and Trust Management	-	2	1	3	CGPA	TIP (6 Expts)
199		PE	CS1563	19CS563	Bitcoin Mining	-	2	1	3	CGPA	TIP (6 Expts)
200		PE	CS1565	19CS565	Robotic Process Automation	-	2	1	3	CGPA	TIP (6 Expts)
201		PE	CS1566	19CS566	Software Project Management and Version Control	-	3	0	3	CGPA	Theory
202		PE	CS1579	19CS579	Generative AI Application Development	-	2	1	3	CGPA	TIP (6 Expts)
203		PE	CS1568	19CS568	Fine Tuning Large Language Models	-	3	0	3	CGPA	Theory
204		PE	CS1569	19CS569	Applied Data Science	-	2	1	3	CGPA	TIP (6 Expts)
205		PE	CS1570	19CS570	Entrepreneurship and Small Business Development	-	2	1	3	CGPA	TIP (6 Expts)
206		PE	CS1571	19CS571	Software Development and Operations	-	3	0	3	CGPA	Theory
207		PE	CS1572	19CS572	Serverless App Development	-	3	0	3	CGPA	Theory
208		PE	CS1573	19CS573	Enterprise Cloud Architecture	-	3	0	3	CGPA	Theory
209		PE	CS1574	19CS574	Advanced Class Design and Object-Oriented Techniques	-	3	0	3	CGPA	Theory
210		PE	CS1575	19CS575	Low-Code App Development	-	3	0	3	CGPA	Theory
211		PE	CS1577	19CS577	Cloud System Administration	-	3	0	3	CGPA	Theory
212		PE	CS1578	19CS578	Machine Learning Operations	-	3	0	3	CGPA	Theory
213		PE	NA	19EC414	Embedded Systems	19EC408	2	1	3	CGPA	TIP (6 Expts)
214		PE	NA	19EC416	Principles of Digital Signal Processing	19EC307	3	0	3	CGPA	Theory
215		PE	EC1503	19EC503	Digital Image Processing	19EC409 / EC1409	3	0	3	CGPA	Theory
216		PE	NA	19EC508	Ad Hoc and Wireless Sensor Networks	19EC412	3	0	3	CGPA	Theory
217		PE	CS2401	19IT401	Information Technology Essentials	-	3	1	4	CGPA	TIP (6 Expts)
218		PE	CS2402	19IT402	Game Development Technologies	-	3	1	4	CGPA	TIP (6 Expts)
219		PE	CS2405	19IT405	Data Structures using Python	-	3	1	4	CGPA	TIP (6 Expts)
220		PE	CS2406	19IT406	Grid and Cloud Computing	-	3	1	4	CGPA	TIP (6 Expts)

S.No	Remarks	Category	Course Code R2024	Course Code R2019F1	Course Title	Prerequisite	Theory Credits	Practical Credits	Total Credits	CGPA / Non - CGPA	Course Type
221		PE	CS2408	19IT408	Distributed Computing	-	3	0	3	CGPA	Theory
222		PE	CS2501	19IT501	Information Theory and Coding Techniques	-	3	0	3	CGPA	Theory
223		PE	CS2502	19IT502	Enterprise Resource Planning	-	3	0	3	CGPA	Theory
224		PE	CS2503	19IT503	User Interface Design	-	3	0	3	CGPA	Theory
225		PE	CS2504	19IT504	Information Storage Management	-	3	0	3	CGPA	Theory
226		PE	CS2505	19IT505	Software Design Patterns	-	3	0	3	CGPA	Theory
227		PE	CS2506	19IT506	E-Learning Techniques	-	3	0	3	CGPA	Theory
228		PE	CS2508	19IT508	TCP/IP Design and Implementation	-	3	0	3	CGPA	Theory
229		PE	CS2509	19IT509	Advanced Algorithms	-	3	0	3	CGPA	Theory
230		PE	CS2510	19IT510	Ethical Hacking	-	3	0	3	CGPA	Theory
231		PE	CS2511	19IT511	DHTML and XML	-	3	0	3	CGPA	Theory
232		PE	CS2512	19IT512	E-Commerce	-	3	0	3	CGPA	Theory
233		PE	CS2513	19IT513	Free Open Source Software	-	3	0	3	CGPA	Theory
234		PE	CS2514	19IT514	Real Time Operating Systems	-	3	0	3	CGPA	Theory
235		PE	CS2515	19IT515	Software Agents	-	3	0	3	CGPA	Theory
236		PE	CS2516	19IT516	Business Intelligence and Analytics	-	3	0	3	CGPA	Theory
237		PE	SH2220	19MA220	Mathematics for Artificial Intelligence	-	4	0	4	CGPA	Theory
238		PE	SH2211	19MA211	Statistics and Numerical Methods	-	3	1	4	CGPA	TIP (6 Expts)
239		OE	XXXXXX	19XXXXX	Open Electives	-	0	0	0	CGPA	Theory
240		OE	XXXXXX	19XXXXX	Online Courses	-	0	0	0	CGPA	Experiential Learning
241		EEC	CS1701	19CS701	Mini Project	-	0	2	2	CGPA	Project (Int Only)
242	Option 1	EEC	CS1702	19CS702	Project Work Phase I	-	0	2	2	CGPA	Project (Int Only)
243	Option 1	EEC	CS1703	19CS703	Project Work Phase II	19CS702	0	6	6	CGPA	Project
244	Option 2	EEC	SH6802	NA	Start Up	-	0	8	8	CGPA	Project
245		EEC	SH6708	19EY708	Career Development Skills	NIL	1	0	1	CGPA	Theory (Int Only)
246		EEC	SH6709	19EY709	Reasoning Ability	NIL	1	0	1	CGPA	Theory (Int Only)
247		EEC	SH6710	19EY710	Quantitative Ability I	NIL	1	0	1	CGPA	Theory (Int Only)
248		EEC	SH6711	19EY711	Quantitative Ability II	SH6710 /19EY710	1	0	1	CGPA	Theory (Int Only)

S.No	Remarks	Category	Course Code R2024	Course Code R2019F1	Course Title	Prerequisite	Theory Credits	Practical Credits	Total Credits	CGPA / Non - CGPA	Course Type
249		EEC	SH6712	19EY712	Employment Enrichment Skills	19EY702 / 19EY709 / SH6709	1	0	1	CGPA	Theory (Int Only)
250	Any 1	EEC	NA	19EY706	Company Specific Assessments For Employability	-	0	1	1	CGPA	Practical (6 Expts)
251	Any 1		SH6713	19EY713	Placement Readiness Assessment	19EY704 / 19EY711/SH6711	1	0	1	CGPA	Theory (Int Only)
252		EEC	SH6707	19EY707	Paper Publication	-	0	0	1	NON-CGPA	Experiential Learning (Int Only)
253		MC	SH8801	NA	Constitutionalism and Artificial Intelligence Policies in India	-	1	0	1	NON-CGPA	Theory (Int Only)
254	Any 1	MC	SH8802	NA	Internship	-	0	0	2	NON-CGPA	Experiential Learning (Int Only)
255	Any 1	MC	SH8803	NA	Entrepreneurship	-	0	0	2	NON-CGPA	Experiential Learning (Int Only)
256	Any 1	MC	SH6803	19MC807	National Service Scheme	-	0	0	0	NON-CGPA	Experiential Learning (Int Only)
257	Any 1	MC	SH8807	19MC808	National Sports Organization	-	0	0	0	NON-CGPA	Experiential Learning (Int Only)
258	Any 1	MC	SH8808	19MC809	Youth Red Cross	-	0	0	0	NON-CGPA	Experiential Learning (Int Only)

BATCH: 2024- 2028 Onwards		
Category	Credits to be Earned (Regular)	Credits to be Earned (Lateral Entry)
Humanities and Science	13	3
Basic Science	25	10
Engineering Science	25	12
Professional Core	56	56
Professional Electives	16	16
Open Electives	12	12
Employability Enhancement Courses	16	16
Mandatory Courses	4	4
TOTAL	167	129