SAVEETHA ENGINEERING COLLEGE
AUTONOMOUS
NAAC A GRADE
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REGULATIONS 2024
FLEXIBLE CHOICE BASED CREDIT SYSTEM
DEPARTMENT OF COMPUTER SCIENCE ENGINEERING
B.E., Computer Science and Engineering (Cyber Security)
CURRICULUM - For Learners admitted from Academic Year 2024 - 2025

S.No	Remarks	Category	Course Code R2024	Course Code R2019	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		HS	SH5624	NA	Japanese Language N5 Basic	-	0	2	2	CGPA	Practical (10 Expts)
11		HS	SH5625	NA	Japanese Language N5 Advanced	SH5624	0	2	2	CGPA	Practical (10 Expts)
12		HS	SH5626	NA	German Language A1 Basic	-	0	2	2	CGPA	Practical (10 Expts)
13		HS	SH5627	NA	German Language A1 Advanced	SH5626	0	2	2	CGPA	Practical (10 Expts)
14		BS	SH2222	19MA222	Probability and Queueing Models	-	3	1	4	CGPA	TIP (6 Expts)
15		BS	SH2212	19MA212	Algebra and Number Theory	19MA201	4	0	4	CGPA	Theory
16		BS	SH2220	19MA220	Mathematics for Artificial Intelligence	-	4	0	4	CGPA	Theory
17		BS	SH2221	19MA221	Linear Algebra Laboratory	-	0	2	2	CGPA	Practical (10 Expts)
18		BS	SH2211	19MA211	Statistics and Numerical Methods	-	3	1	4	CGPA	TIP (6 Expts)
19	Exempted for LE	BS	SH4205	19CY205	Principles of Chemistry in Engineering	-	3	1	4	CGPA	TIP (6 Expts)

20	Exempted for LE	BS	SH4801	NA	Environmental Sciences and Sustainability	-	2	0	2	CGPA	Theory
21	Exempted for LE	BS	SH3214	NA	Physics for Quantum Computing	-	2	1	3	CGPA	TIP (6 Expts)
22		ES	CS3301	19AI301	Python Programming	-	1	2	3	CGPA	Theory (Int Only) and Practical (10 Expts)
23	Exempted for LE	ES	CS3302	19AI302	Engineering Design and Modelling	-	0	3	3	CGPA	Practical (10 Expts)
24	Exempted for LE	ES	CS3303	19AI303	Engineering Mechanics and Product Development	-	2	1	3	CGPA	TIP (6 Expts)
25	Option 1	ES	CS3306	19AI306	Object Oriented Programming using C++	19AI304	2	1	3	CGPA	TIP (6 Expts)
26	Option 2	ES	CS3307	19AI307	Object Oriented Programming using Java	19AI304 / CS3304	1	2	3	CGPA	Theory (Int Only) and Practical (10 Expts)
27	Option 3	ES	CS3308	19AI308	Object Oriented Programming using C#	19AI304	2	1	3	CGPA	TIP (6 Expts)
28	Exempted for LE	ES	EC2404	19EE404	Digital Electronics	-	3	1	4	CGPA	TIP (6 Expts)
29	Exempted for LE	ES	EC2305	19EE305	Basic Electrical, Electronics and Measurement Engineering	-	2	1	3	CGPA	TIP (6 Expts)
30	Exempted for LE	ES	EC2309	19EE309	Programming Microcontrollers	-	2	1	3	CGPA	TIP (6 Expts)
31		ES	CS3304	19AI304	Fundamentals of C Programming	-	1	2	3	CGPA	Theory (Int Only) and Practical (10 Expts)
32		ES	CS3305	19AI305	Advanced C Programming	19AI304 / CS3304	1	2	3	CGPA	Theory (Int Only) and Practical (10 Expts)
33		PC	CS3414	19AI414	Fundamentals of Web Application Development	-	3	2	5	CGPA	TIP (10 Expts)
34	Exempted for LE	PC	CS1405	19CS405	Operating System	-	3	1	4	CGPA	TIP (6 Expts)
35	Exempted for LE	PC	CS1406	19CS406	Computer Networks	-	3	1	4	CGPA	TIP (6 Expts)
36		PC	CS1404	19CS404	Database Management System and its Applications	19AI301/19AI304/19CS301/19CS302/19CS30	3	1	4	CGPA	TIP (6 Expts)
37		PC	CS3408	19AI408	Data Structures	19AI301 / 19AI304 / 19AI307	1	2	3	CGPA	Theory (Int Only) and Practical (10 Expts)
38		PC	CS3404	19AI404	Analysis of Algorithms	19AI301 / 19AI304 / 19AI307	1	2	3	CGPA	Theory (Int Only) and Practical (10 Expts)
39		PC	CS1407	19CS407	Theory of Computation	19MA206	3	0	3	CGPA	Theory
40		PC	CS1408	19CS408	Software Engineering	-	3	1	4	CGPA	TIP (6 Expts)
41		PC	CS3405	19AI405	Fundamentals of Artificial Intelligence	19CS301 / 19AI301 / CS3301	2	1	3	CGPA	TIP (6 Expts)
42		PC	CS3541	19AI541	Cloud Computing	19CS406	3	1	4	CGPA	TIP (6 Expts)
43		PC	CS1415	19CS415	Cryptography	-	2	1	3	CGPA	TIP (6 Expts)
44		PC	CS3547	19AI547	Blockchain for Business	19CS301	2	1	3	CGPA	TIP (6 Expts)
45		PC	CS1416	19CS416	Cloud Security	-	2	1	3	CGPA	TIP (6 Expts)

46		PC	CS1417	19CS417	Ethical Hacking Techniques	-	2	1	3	CGPA	TIP (6 Expts)
47		PC	CS1418	19CS418	Cyber Law and Compliance	-	3	0	3	CGPA	Theory
48		PC	CS1419	19CS419	Digital Forensics and Digital Investigations	-	2	1	3	CGPA	TIP (6 Expts)
49		PE	CS1504	19CS504	Software Project Management	19CS408	3	0	3	CGPA	Theory
50		PE	CS3562	19AI562	Oracle Cloud Infrastructure and Operation	-	2	1	3	CGPA	TIP (6 Expts)
51		PE	CS3563	19AI563	Oracle Cloud Infrastructure AI Foundations	-	2	1	3	CGPA	TIP (6 Expts)
52		PE	CS3565	19AI565	Oracle Autonomous Database and Oracle Machine Learning Essentials	-	2	1	3	CGPA	TIP (6 Expts)
53		PE	CS3565	19AI565	Oracle Autonomous Database and Oracle Machine Learning Essentials	-	2	1	3	CGPA	TIP (6 Expts)
54		PE	CS3566	19AI566	Business Intelligence on Oracle Cloud	-	2	1	3	CGPA	TIP (6 Expts)
55		PE	CS3567	19AI567	Database Developer on Oracle Cloud (APEX)	-	2	1	3	CGPA	TIP (6 Expts)
56		PE	CS3568	19AI568	Application Development on Oracle Cloud	-	2	1	3	CGPA	TIP (6 Expts)
57		PE	CS3569	19AI569	Java 11 Development on Oracle Cloud	-	2	1	3	CGPA	TIP (6 Expts)
58		PE	CS3570	19AI570	Java 17 Development on Oracle Cloud	-	2	1	3	CGPA	TIP (6 Expts)
59		PE	CS3571	19AI571	SQL on Oracle Cloud	-	2	1	3	CGPA	TIP (6 Expts)
60		PE	CS3572	19AI572	PL SQL on Oracle Cloud	-	2	1	3	CGPA	TIP (6 Expts)
61		PE	CS3573	19AI573	MySQL for Data Scientist	-	2	1	3	CGPA	TIP (6 Expts)
62		PE	CS3574	19AI574	Administer MySQL on Oracle Cloud	-	2	1	3	CGPA	TIP (6 Expts)
63		PE	CS3575	19AI575	Build MySQL Database for Applications on Oracle Cloud	-	2	1	3	CGPA	TIP (6 Expts)
64		PE	CS3509	19AI509	Concepts of Virtual And Augmented Reality	-	2	1	3	CGPA	TIP (6 Expts)
65		PE	CS3602	19AI602	CISCO Networking Certifications	-	2	1	3	CGPA	TIP (6 Expts)
66		PE	CS3603	19AI603	Pega Platform	-	2	1	3	CGPA	TIP (6 Expts)
67		PE	CS3604	19AI604	Rust Programming Language	-	2	1	3	CGPA	TIP (6 Expts)
68	Any 1	PE	CS1580	19CS580	Enterprise Cyber Security and Threat Detection	-	2	1	3	CGPA	TIP (6 Expts)
	Any 1	PE	CS3589	19CS589	Enterprise Security and Cyber Threat Management	19CS417 / CS1417	2	1	3	CGPA	TIP (6 Expts)
69		PE	CS1581	19CS581	Network Infrastructure and Protocols	-	2	1	3	CGPA	TIP (6 Expts)
70		PE	CS1582	19CS582	Enterprise Networking and Network Security	19CS581 / CS1581	2	1	3	CGPA	TIP (6 Expts)

71		PE	CS1583	19CS583	Network Switching, Routing and Wireless Technologies	19CS581 / CS1581	2	1	3	CGPA	TIP (6 Expts)
72		PE (Honours - Vertical 1)	CS1566	19CS566	Software Project Management and Version Control	-	3	0	3	CGPA	Theory
73		PE (Honours - Vertical 1)	CS1579	19CS579	Generative AI Application Development	-	2	1	3	CGPA	TIP (6 Expts)
74		PE (Honours - Vertical 1)	CS1568	19CS568	Fine Tuning Large Language Models	-	3	0	3	CGPA	Theory
75		PE (Honours - Vertical 1)	CS1570	19CS570	Entrepreneurship and Small Business Development	-	2	1	3	CGPA	TIP (6 Expts)
76		PE (Honours - Vertical 1)	CS1571	19CS571	Software Development and Operations	-	3	0	3	CGPA	Theory
77		PE (Honours - Vertical 1)	CS1572	19CS572	Serverless App Development	-	3	0	3	CGPA	Theory
78		PE (Honours - Vertical 1)	CS1573	19CS573	Enterprise Cloud Architecture	-	3	0	3	CGPA	Theory
79		PE (Honours - Vertical 1)	CS1575	19CS575	Low-Code App Development	-	3	0	3	CGPA	Theory
80		PE (Honours - Vertical 1)	CS1577	19CS577	Cloud System Administration	-	3	0	3	CGPA	Theory
81		PE (Honours - Vertical 1)	CS3545	19AI545	Modern Web Application Development	19CS410 / 19AI401 / 19AI414 / 19IT404	2	1	3	CGPA	TIP (6 Expts)
82		PE (Honours - Vertical 1)	CS3412	19AI412	Web Data Mining	-	3	1	4	CGPA	TIP (6 Expts)
83		PE (Honours - Vertical 2)	CS1529	19CS529	Quantum Computing	19CS301/19CS303	3	0	3	CGPA	Theory
84		PE (Honours - Vertical 2)	CS3501	19AI501	Applications of Artificial Intelligence	-	2	1	3	CGPA	TIP (6 Expts)
85		PE (Honours - Vertical 2)	CS3506	19AI506	Speech Analysis and Processing	-	2	1	3	CGPA	TIP (6 Expts)
86		PE (Honours - Vertical 2)	CS3516	19AI516	Big Data Mining and Analysis	19AI408/ 19CS410/19IT405/19AI401 /	2	1	3	CGPA	TIP (6 Expts)
87		PE (Honours - Vertical 2)	CS3517	19AI517	Business Analytics	-	2	1	3	CGPA	TIP (6 Expts)
88		PE (Honours - Vertical 2)	CS4503	19AM503	Data Modeling	-	3	0	3	CGPA	Theory
89		PE (Honours - Vertical 2)	CS4508	19AM508	Introduction to IoT	-	2	1	3	CGPA	TIP (6 Expts)
90		PE (Honours - Vertical 2)	NA	19EC508	Ad hoc and Wireless Sensor Networks	19EC412	3	0	3	CGPA	Theory
91		PE (Honours - Vertical 2)	CS3528	19AI528	Advanced Graph Theory and Applications	19CS402	2	1	3	CGPA	TIP (6 Expts)
92		PE (Honours - Vertical 2)	CS3518	19AI518	Cognitive Systems	-	3	0	3	CGPA	Theory
93		PE (Honours - Vertical 2)	CS3406	19AI406	Digital Image Processing Techniques	-	2	1	3	CGPA	TIP (6 Expts)
94		PE (Honours - Vertical 2)	CS3407	19AI407	Parallel Computing Architecture	-	3	1	4	CGPA	TIP (6 Expts)
95		PE (Honours - Vertical 3)	CS1574	19CS574	Advanced Class Design and Object-Oriented Techniques	-	3	0	3	CGPA	Theory
96		PE (Honours - Vertical 3)	CS1420	19CS420	Prototyping of IoT Systems	-	2	1	3	CGPA	TIP (6 Expts)

97		PE (Honours - Vertical 3)	CS1421	19CS421	Edge Computing	-	2	1	3	CGPA	TIP (6 Expts)
98		PE (Honours - Vertical 3)	CS3519	19AI519	Distributed Database	19CS404	3	0	3	CGPA	Theory
99		PE (Honours - Vertical 3)	CS3524	19AI524	Multimedia Database	19CS410 / 19AI401 / 19AI414 / 19IT404	3	0	3	CGPA	Theory
100		PE (Honours - Vertical 4)	CS1569	19CS569	Applied Data Science	-	2	1	3	CGPA	TIP (6 Expts)
101		PE (Honours - Vertical 4)	CS3410	19AI410	Introduction to Machine Learning	-	2	1	3	CGPA	TIP (6 Expts)
102		PE (Honours - Vertical 4)	CS3411	19AI411	Neural Networks	-	2	1	3	CGPA	TIP (6 Expts)
103		PE (Honours - Vertical 4)	CS3413	19AI413	Deep Learning and its Applications	-	2	1	3	CGPA	TIP (6 Expts)
104		PE (Honours - Vertical 4)	CS3533	19AI533	Introduction to Robotics	-	2	1	3	CGPA	TIP (6 Expts)
105		PE (Honours - Vertical 4)	CS3534	19AI534	Kinematics and Dynamics of Robots	-	2	1	3	CGPA	TIP (6 Expts)
106		PE (Honours - Vertical 4)	CS3535	19AI535	Robotic Sensors	-	2	1	3	CGPA	TIP (6 Expts)
107		PE (Honours - Vertical 4)	CS3530	19AI530	Control of Robotic Systems	-	2	1	3	CGPA	TIP (6 Expts)
108		PE (Honours - Vertical 4)	CS3509	19AI509	Concepts of Virtual And Augmented Reality	-	2	1	3	CGPA	TIP (6 Expts)
109		PE (Honours - Vertical 4)	CS3510	19AI510	Mobile VR And AI In Unity	19AI410/19CS302 / 19IT404 / 19AI414	2	1	3	CGPA	TIP (6 Expts)
110		PE (Honours - Vertical 4)	CS3537	19AI537	Computer Graphics for Virtual Reality	-	2	1	3	CGPA	TIP (6 Expts)
111		PE (Honours - Vertical 4)	CS4514	19AM514	Motion Planning Techniques	-	2	1	3	CGPA	TIP (6 Expts)
112		PE (Honours - Vertical 4)	CS3548	19AI548	Robot Programming	-	2	1	3	CGPA	TIP (6 Expts)
113		PE (Honours - Vertical 4)	CS3549	19AI549	Drone Assembly and Applications	-	2	1	3	CGPA	TIP (6 Expts)
114		PE (Honours - Vertical 4)	CS3539	19AI539	Mobile User Interface Development	19CS401	2	1	3	CGPA	TIP (6 Expts)
115		PE (Honours - Vertical 4)	CS3546	19AI546	Web Server Programming	19CS401	2	1	3	CGPA	TIP (6 Expts)
116		PE (Honours - Vertical 4)	CS3552	19AI552	Web Application User Interface Development	-	2	1	3	CGPA	TIP (6 Expts)
117		PE (Honours - Vertical 4)	CS4509	19AM509	Industrial Internet of Things	-	2	1	3	CGPA	TIP (6 Expts)
118		PE (Honours - Vertical 4)	CS1542	19CS542	Embedded Board Design	-	2	1	3	CGPA	TIP (6 Expts)
119		PE (Honours - Vertical 4)	CS1543	19CS543	Embedded Board Manufacturing	-	2	1	3	CGPA	TIP (6 Expts)
120		PE (Honours - Vertical 4)	CS1545	19CS545	Open Source Operating System	-	2	1	3	CGPA	TIP (6 Expts)
121		PE (Honours - Vertical 4)	CS1546	19CS546	Kernel Programming	-	2	1	3	CGPA	TIP (6 Expts)
122		PE (Honours - Vertical 4)	CS3538	19AI538	Mathematical Modelling and Computer Aided Engineering	-	2	1	3	CGPA	TIP (6 Expts)

123		PE (Honours - Vertical 4)	CS3542	19AI542	Agile Software Development	19CS301	3	1	4	CGPA	TIP (6 Expts)
124		PE (Honours - Vertical 4)	CS3544	19AI544	Virtualization and Containerization	19CS405/19CS406	2	1	3	CGPA	TIP (6 Expts)
125		PE (Honours - Vertical 4)	CS3529	19AI529	Advanced Data Structures	19CS401	2	1	3	CGPA	TIP (6 Expts)
126		PE (Honours - Vertical 4)	CS1523	19CS523	Information Retrieval	19AI410/19CS501/19CS413 / 19AI414	3	0	3	CGPA	Theory
127		PE (Honours - Vertical 4)	CS3512	19AI512	NoSQL Database Design	19CS301	2	1	3	CGPA	TIP (6 Expts)
128		PE (Honours - Vertical 4)	CS3520	19AI520	Data Mining and Warehousing	-	2	1	3	CGPA	TIP (6 Expts)
129		PE (Honours - Vertical 4)	CS3523	19AI523	Mobile Database	-	3	0	3	CGPA	Theory
130		PE (Honours - Vertical 5)	CS1565	19CS565	Robotic Process Automation	-	2	1	3	CGPA	TIP (6 Expts)
131		PE (Honours - Vertical 5)	CS1534	19CS534	Prevention Methodology for Cybersecurity	-	2	1	3	CGPA	TIP (6 Expts)
132		PE (Honours - Vertical 5)	CS3503	19AI503	Computer Vision	19CS301	2	1	3	CGPA	TIP (6 Expts)
133		PE (Honours - Vertical 5)	CS3514	19AI514	Self Driving Car	19CS301/19AI410 / 19AI414	2	2	4	CGPA	TIP (10 Expts)
134		PE (Honours - Vertical 5)	CS3522	19AI522	Knowledge Engineering	19CS410 / 19AI401 / 19AI414 / 19IT404	3	0	3	CGPA	Theory
135		PE (Honours - Vertical 5)	CS3502	19AI502	Applied Natural Language Processing	-	2	1	3	CGPA	TIP (6 Expts)
136		PE (Honours - Vertical 5)	CS3521	19AI521	Expert Systems	-	3	0	3	CGPA	Theory
137		PE (Honours - Vertical 5)	CS3505	19AI505	Reinforcement Learning	19CS301	2	1	3	CGPA	TIP (6 Expts)
138		PE (Honours - Vertical 5)	CS4501	19AM501	Machine Learning for Bioinformatics	-	3	0	3	CGPA	Theory
139		PE (Honours - Vertical 5)	CS4505	19AM505	Statistical Learning Theory	-	2	1	3	CGPA	TIP (6 Expts)
140		PE (Honours - Vertical 5)	CS3550	19AI550	Artificial Intelligence for Games	-	2	1	3	CGPA	TIP (6 Expts)
141		PE (Honours - Vertical 5)	CS3551	19AI551	Drone Design and Control	-	2	1	3	CGPA	TIP (6 Expts)
142		PE (Honours - Vertical 5)	CS3540	19AI540	Programming Mobile Devices	19CS401	2	1	3	CGPA	TIP (6 Expts)
143		PE (Honours - Vertical 5)	CS3553	19AI553	Advanced Java Web Applications	19AI307	2	1	3	CGPA	TIP (6 Expts)
144		PE (Honours - Vertical 5)	CS3403	19AI403	Introduction to Data Science	19CS301	2	1	3	CGPA	TIP (6 Expts)
145		PE (Honours - Vertical 5)	CS3511	19AI511	Scientific and Engineering Data Visualization	-	2	1	3	CGPA	TIP (6 Expts)
146		PE (Honours - Vertical 5)	CS3508	19AI508	Soft Computing Techniques	-	2	1	3	CGPA	TIP (6 Expts)
147		PE (Honours - Vertical 5)	CS3515	19AI515	Smart Manufacturing Technology	-	2	1	3	CGPA	TIP (6 Expts)
148		PE (Honours - Vertical 5)	CS3525	19AI525	Video Processing	19CS301	2	1	3	CGPA	TIP (6 Expts)

149		PE (Honours - Vertical 6)	CS1578	19CS578	Machine Learning Operations	-	3	0	3	CGPA	Theory
150		PE (Honours - Vertical 6)	CS1547	19CS547	Fundamentals of Cryptocurrency	-	3	0	3	CGPA	Theory
151		PE (Honours - Vertical 6)	CS1305	19CS305	Computer Architecture	-	3	0	3	CGPA	Theory
152		PE (Honours - Vertical 6)	CS1533	19CS533	Information Security Intelligence and Analytics using Big Data	-	2	1	3	CGPA	TIP (6 Expts)
153		PE (Honours - Vertical 6)	CS1535	19CS535	Trusted Network Systems	-	3	0	3	CGPA	Theory
154		PE (Honours - Vertical 6)	CS3526	19AI526	Information Security and Access Control	19AI527	2	1	3	CGPA	TIP (6 Expts)
155		PE (Honours - Vertical 6)	CS1536	19CS536	Firewalls and Intrusion Detection System	-	2	1	3	CGPA	TIP (6 Expts)
156		PE (Honours - Vertical 6)	CS3527	19AI527	Security Assessment and Risk Analysis	-	3	1	4	CGPA	TIP (6 Expts)
157		PE (Honours - Vertical 6)	CS3536	19AI536	Steganography and Digital Watermarking	-	2	1	3	CGPA	TIP (6 Expts)
158		PE (Honours - Vertical 6)	CS1537	19CS537	Secure Software Engineering	-	2	1	3	CGPA	TIP (6 Expts)
159		PE (Honours - Vertical 6)	CS1538	19CS538	System Security	-	3	0	3	CGPA	Theory
160		PE (Honours - Vertical 6)	CS1539	19CS539	Hardware Security	-	3	0	3	CGPA	Theory
161		PE (Honours - Vertical 6)	CS3409	19AI409	Applied Artificial Intelligence	19AI405/19CS301	2	1	3	CGPA	TIP (6 Expts)
162		PE (Honours - Vertical 6)	CS3507	19AI507	Special Topics in Artificial Intelligence	-	2	1	3	CGPA	TIP (6 Expts)
163		PE (Honours - Vertical 6)	CS4502	19AM502	Genetic Algorithms	-	2	1	3	CGPA	TIP (6 Expts)
164		PE (Honours - Vertical 6)	CS3513	19AI513	Game Programming	19CS401	2	2	4	CGPA	TIP (10 Expts)
165		PE (Honours - Vertical 6)	CS1422	19CS422	Security for IoT Systems	-	3	0	3	CGPA	Theory
166		PE (Honours - Vertical 6)	CS1540	19CS540	Fog Computing	-	3	0	3	CGPA	Theory
167		PE (Honours - Vertical 6)	CS4506	19AM506	Sensors and Actuators for IoT	-	2	1	3	CGPA	TIP (6 Expts)
168		PE (Honours - Vertical 6)	CS1544	19CS544	Realtime Operating System	-	2	1	3	CGPA	TIP (6 Expts)
169		PE (Honours - Vertical 6)	CS3543	19AI543	Software Testing	19CS301	2	1	3	CGPA	TIP (6 Expts)
170		OE	XXXXXX	19XXXXX	Open Electives	-	0	0	0	CGPA	Theory
171		OE	XXXXXX	19XXXXX	Online Courses	-	0	0	0	CGPA	Experiential Learning
172		EEC	CS3701	19AI701	Mini Project	-	0	1	1	CGPA	Project
173	Option 1	EEC	CS3702	19AI702	Project Work I	-	0	3	3	CGPA	Project (Int Only)
174	Option 1	EEC	CS3703	19AI703	Project Work II	19AI702	0	6	6	CGPA	Project

175	Option 2	EEC	SH6802	NA	Start Up	-	0	8	8	CGPA	Project
176		EEC	SH6708	19EY708	Career Development Skills	NIL	1	0	1	CGPA	Theory (Int Only)
177		EEC	SH6709	19EY709	Reasoning Ability	NIL	1	0	1	CGPA	Theory (Int Only)
178		EEC	SH6710	19EY710	Quantitative Ability I	NIL	1	0	1	CGPA	Theory (Int Only)
179		EEC	SH6711	19EY711	Quantitative Ability II	SH6710 /19EY710	1	0	1	CGPA	Theory (Int Only)
180		EEC	SH6712	19EY712	Employment Enrichment Skills	19EY702 / 19EY709 / SH6709	1	0	1	CGPA	Theory (Int Only)
181	Any 1	EEC	NA	19EY706	Company Specific Assessments For Employability	-	0	1	1	CGPA	Practical (6 Expts)
182	Any 1	EEC	SH6713	19EY713	Placement Readiness Assessment	19EY704 / 19EY711/SH6711	1	0	1	CGPA	Theory (Int Only)
183		EEC	SH6707	19EY707	Paper Publication	-	0	0	1	NON-CGPA	Experiential Learning (Int Only)
184		MC	SH8801	NA	Constitutionalism and Artificial Intelligence Policies in India	-	1	0	1	NON-CGPA	Theory (Int Only)
185	Any 1	MC	SH8802	NA	Internship	-	0	0	2	NON-CGPA	Experiential Learning (Int Only)
186	Any 1	MC	SH8803	NA	Entrepreneurship	-	0	0	2	NON-CGPA	Experiential Learning (Int Only)
187	Any 1	MC	SH6803	19MC807	National Service Scheme	-	0	0	0	NON-CGPA	Experiential Learning (Int Only)
188	Any 1	MC	SH8807	19MC808	National Sports Organization	-	0	0	0	NON-CGPA	Experiential Learning (Int Only)
189	Any 1	MC	SH8808	19MC809	Youth Red Cross	-	0	0	0	NON-CGPA	Experiential Learning (Int Only)

CREDIT SUMMARY		
Category	**Credits to be Earned (Regular)**	**Credits to be Earned (Lateral Entry)**
HS	14	3
BS	25	18
ES	28	12
PC	55	47
PE	17	16
OE	12	12
EEC	16	16
MC	3	3
TOTAL	**170**	**127**