

B.E. – Computer Science and Engineering
2019 Regulation: Full Time Curriculum and Syllabus

Total Credits to be earned for the award of the Degree (Regular): 160

Total Credits to be earned for the award of the Degree (Lateral Entry): 124

SEMESTER I									
Course Code	Course Name	L	T	P	C	Maximum Marks			Category
						CA	ES	Total	
Theory Course									
1901MA102	Engineering Mathematics –I (Calculus and Linear Algebra)	3	2	0	4	40	60	100	BS
1901CH104	Applied Chemistry in Informatics	3	0	0	3	40	60	100	BS
1901GEX03	Programming for Problem Solving	3	0	0	3	40	60	100	ES
1901ENX01	English for Engineers	2	0	0	2	40	60	100	BS
Laboratory Course									
1901GEX52	Computer Programming Laboratory	0	0	2	1	50	50	100	ES
1901GE151	Engineering Intelligence I	0	0	2	1	100	0	100	HSS
1901CHX51	Engineering Chemistry Laboratory	0	0	2	1	50	50	100	BS
1901HSX51	Communication Skill Laboratory	0	0	2	1	50	50	100	BS
Total		11	2	8	16	410	390	800	

SEMESTER II									
Course Code	Course Name	L	T	P	C	Maximum Marks			Category
						CA	ES	Total	
Theory Course									
1901MA202	Engineering Mathematics –II (Probability and Statistics)	3	2	0	4	40	60	100	BS
1901PH201	Physics for Information Science	3	0	0	3	40	60	100	BS
1901GEX01	Basic Electrical and Electronics Engineering	3	0	0	3	40	60	100	ES
1901GEX02	Engineering Graphics	2	0	2	3	50	50	100	ES
1901GE201	Engineering Exploration	2	0	0	2	100	0	100	ES
Laboratory Course									
1901GE254	Computer Hardware and IT Essentials Laboratory	0	0	2	1	50	50	100	ES
1901GE252	Engineering Intelligence - II	0	0	2	1	100	0	100	HSS
1901GEX51	CAD Laboratory	0	0	2	1	50	50	100	ES
1901GEX53	Basic Electrical and Electronics Engineering Laboratory	0	0	2	1	50	50	100	ES
1901PHX51	Engineering Physics Laboratory	0	0	2	1	50	50	100	BS
Total		13	2	12	20	570	430	1000	

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SEMESTER III									
Course Code	Course Name	L	T	P	C	Maximum Marks			Category
						CA	ES	Total	
Theory Course									
1901MA302	Engineering Mathematics III	3	2	0	4	40	60	100	BS
1902CS301	Data Structures	3	2	0	4	40	60	100	PC
1902CS302	Object Oriented Programming	3	0	0	3	40	60	100	PC
1902CS303	Computer Organization and Architecture	3	0	0	3	40	60	100	PC
1902CS304	Digital Logic and Microprocessors	3	0	2	4	40	60	100	ES
1901MCX02	Constitution of India	2	0	0	0	100	0	100	MC
Laboratory Course									
1902CS351	Data Structures Laboratory	0	0	2	1	50	50	100	PC
1902CS352	Object Oriented Programming Laboratory	0	0	2	1	50	50	100	PC
1904GE351	Life Skills: Soft Skills	0	0	2	1	100	-	100	EEC
Total		17	4	8	21	500	400	900	

SEMESTER IV									
Course Code	Course Name	L	T	P	C	Maximum Marks			Category
						CA	ES	Total	
Theory Course									
1902CS401	Software Engineering	3	0	0	3	40	60	100	PC
1902CS402	Operating System	3	0	0	3	40	60	100	PC
1902CS403	Computer Networks	3	0	0	3	40	60	100	PC
1902CS404	Design and Analysis of Algorithms	3	0	0	3	40	60	100	PC
1902CS406	Database Management Systems	3	0	0	3	40	60	100	PC
1901GEX04	Biology for Engineers	3	0	0	3	50	50	100	BS
1901MCX01	Environmental Science	2	0	0	0	100	0	100	MC
Laboratory Course									
1902CS451	Networks Laboratory	0	0	2	1	50	50	100	PC
1902CS452	Operating System Laboratory	0	0	2	1	50	50	100	PC
1902CS453	Database Management Systems Laboratory	0	0	2	1	50	50	100	PC
1904GE451	Life Skills: Verbal Ability	0	0	2	1	100	-	100	EEC
Total		20	0	8	22	600	500	1100	

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SEMESTER V									
Course Code	Course Name	L	T	P	C	Maximum Marks			Category
						CA	ES	Total	
Theory Course									
1901MA501	Discrete Mathematics	3	2	0	4	40	60	100	BS
1902CS501	Object Oriented Analysis and Design	3	0	0	3	40	60	100	PC
1902CS502	Theory of Computation	3	2	0	4	40	60	100	PC
	PC Elective I	3	0	0	3	40	60	100	PE
	HSS Elective I	3	0	0	3	40	60	100	HSSE
1901MCX03	Essence of Indian Traditional Knowledge	2	0	0	0	100	0	100	MC
Laboratory Course									
1902CS551	CASE Tools Laboratory	0	0	2	1	50	50	100	PC
1902CS552	Mobile Application Development Laboratory	0	0	2	1	50	50	100	PC
1904GE551	Life Skills: Aptitude I	0	0	2	1	100	-	100	EEC
Total		17	4	6	20	500	400	900	

SEMESTER VI									
Course Code	Course Name	L	T	P	C	Maximum Marks			Category
						CA	ES	Total	
Theory Course									
1902CS601	Compiler Design	3	0	0	3	40	60	100	PC
1902CS602	Web Technology	3	2	0	4	40	60	100	PC
1902CS603	Artificial Intelligence	3	0	0	3	40	60	100	PC
	PC Elective II	3	0	0	3	40	60	100	PE
	HSS Elective II	3	0	0	3	40	60	100	HSSE
	Open Elective I	3	0	0	3	40	60	100	OE
Laboratory Course									
1902CS651	Compiler Laboratory	0	0	2	1	50	50	100	PC
1902CS652	Web Technology Laboratory	0	0	2	1	50	50	100	PC
1904CS653	Software Prototype development Lab (Mini Project 1)	0	0	2	1	50	50	100	PC
1904CS654	Industrial Visit Presentation	0	0	0	1	100	-	100	EEC
1904GE651	Life Skills: Aptitude II	0	0	2	1	100	-	100	EEC
Total		18	2	8	24	590	510	1100	

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PC ELECTIVE COURSES

Sl. No.	Course Code	Name of the Course	Number of Hours / Week			Credit
			L	T	P	
Elective I						
1	1903CS001	Mobile Computing	3	0	0	3
2	1903CS002	Computer Graphics and Multimedia	3	0	0	3
3	1903CS003	Data Warehousing and Data Mining	3	0	0	3
4	1903CS004	Software Testing	3	0	0	3
Elective II						
5	1903CS005	Distributed systems	3	0	0	3
6	1903CS006	Open Source Programming	3	0	0	3
7	1903CS007	Adhoc and sensor networks	3	0	0	3
8	1903CS008	Multicore Architecture	3	0	0	3
Elective III						
9	1903CS009	Embedded and Real Time Systems	3	0	0	3
10	1903CS010	Internet of things	3	0	0	3
11	1903CS011	Digital image processing	3	0	0	3
12	1903CS012	C# and .Net Framework	3	0	0	3
Elective IV						
13	1903CS013	Big data Analytics	3	0	0	3
14	1903CS014	Service oriented Architecture	3	0	0	3
15	1903CS015	Machine learning techniques	3	0	0	3
16	1903CS016	Natural Language Processing	3	0	0	3
Elective V						
17	1903CS017	Information Retrieval	3	0	0	3
18	1903CS018	Cyber forensics	3	0	0	3
19	1903CS019	Data Centre and Virtualization	3	0	0	3
20	1903CS020	Bio Informatics	3	0	0	3

S.No.	Course Code	Name of the Course	Number of Hours / Week			Credit
			L	T	P	
OPEN ELECTIVE COURSES						
21	1903CS021	Computer Networks	3	0	0	3
22	1903CS022	Artificial Intelligence	3	0	0	3
23	1903CS023	Database Management Systems	3	0	0	3
24	1903CS024	Web Technology	3	0	0	3
25	1903CS025	Data Structures	3	0	0	3
26	1903CS026	Object oriented Programming	3	0	0	3
27	1903CS027	Cloud Computing	3	0	0	3
28	1903CS028	Mobile Computing	3	0	0	3

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ONE CREDIT COURSES						
29	1904CS001	Hardware and troubleshooting	-	-	-	1
30	1904CS002	Networking Course	-	-	-	1
31	1904CS003	Industrial Safety for Engineers	-	-	-	1
32	1904CS004	Introduction to Fisheries Engineering	-	-	-	1
33	1904CS005	Transport and Tourism	-	-	-	1
VALUE ADDED COURSES						
34	1904CS006	Introduction to Data Centre Virtualization and Cloud Computing				
35	1904CS007	Python Programming				
36	1904CS008	Introduction to R				
37	1904CS009	Python for Data Science				

HUMANITIES, SOCIAL SCIENCE AND MANAGEMENT ELECTIVES COURSES

S.No.	Course Code	Name of the Course	Number of Hours / Week			Credit
			L	T	P	
Elective I						
1.	1901MGX01	Total Quality Management	3	-	-	3
2.	1901MGX02	Project Management and Finance	3	-	-	3
3.	1901MGX03	Operations Research	3	-	-	3
4.	1901MGX04	Principles of Management	3	-	-	3
Elective II						
1.	1901HS001	Innovation & Entrepreneurship fundamentals	3	-	-	3
2.	1901HS002	Intellectual Property Rights for Engineers	3	-	-	3
3.	1901HS003	Startup Entrepreneurship	3	-	-	3
4.	1901HS004	Business Model Innovation	3	-	-	3
Elective III						
1.	1901HS005	Social Entrepreneurship	3	-	-	3
2.	1901HS006	Design Thinking for Innovation	3	-	-	3
3.	1901HS007	Indian Patent Law & Patent Drafting	3	-	-	3
4.	1901HS008	IP Management & Commercialization	3	-	-	3

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