JAYPEE UNIVERSITY OF ENGINEERING AND TECHNOLOGY, GUNA

Curriculum for B. Tech. (Computer Science and Engineering)

(From 2018 onwards)

SEMESTER - I							
S.No.	Couse Code	Subject	Contact Hours				
			L	T	P	Total	Credits
1	18B11MA111	Mathematics-1	3	1	-	4	4
2	18B11PH111	Physics-1	3	1	-	4	4
3	18B11HS111	English	2	-	2	4	3
4	18B11CI111	Software Development Fundamentals	3	1	-	4	4
5	18B17PH171	Physics Lab-1	-	-	2	2	1
6	18B17CI171	Software Development Lab	-	-	4	4	2
7	18B17ME171	Workshop	-	-	3	3	1.5
8	----	Value Added Course-1	2	-	-	2	-
		Total				**27**	**19.5**

SEMESTER - II							
S.No.	Course Code	Subject	L	T	P	Total	Credits
1	21B11HS211	Life Skills and Effective Communication	1	-	2	3	2
2	18B11MA211	Discrete Mathematics	3	1	-	4	4
3	18B11PH211	Physics-2	3	1	-	4	4
4	18B11EC211	Electrical Science	3	1	-	4	4
5	18B11CI211	Object Oriented Programming	3	1	-	4	4
6	18B17PH271	Physics Lab-2	-	-	2	2	1
7	18B17EC271	Electrical Science Lab	-	-	2	2	1
8	18B17CI271	Object Oriented Programming Lab	-	-	2	2	1
9	18B17ME272	Engineering Drawing Design Lab	-	-	3	3	1.5
		Total				**28**	**22.5**

SEMESTER - III							
S.No.	**Course Code**	**Subject**	**L**	**T**	**P**	**Total**	**Credits**
1	18B11HS312	Techniques for decision making	2	1	-	3	3
2	18B11CI311	Data Structures	3	1	-	4	4
3	18B11EC311	Digital Systems and Microprocessors	3	1	-	4	4
4	18B11CI312	Database Systems	3	-	-	3	3
5	18B19GE399	Environmental Science	2	0	0	2	2
6	18B17CI371	Data Structures lab	-	-	2	2	1
7	18B17EC371	Digital Systems and Microprocessor Lab	-	-	2	2	1
8	18B17CI372	Database Systems Lab	-	-	2	2	1
9	18B17CI307	UI/UX Lab	-	-	2	2	1
10	18B17CI373	Advanced Programming Lab-1	1	-	2	3	2
11	----	Value added course-2	2	-	-	2	-
		Total				**29**	**22**

SEMESTER - IV							
S.No.	**Course Code**	**Subject**	**L**	**T**	**P**	**Total**	**Credits**
1	----	HSS Elective-1	3	-	-	3	3
2	18B11CI411	Computer Networks	3	-	-	3	3
3	18B11CI412	Algorithms and Problem Solving	3	1	-	4	4
4	18B11CI413	Operating Systems	3	-	-	3	3
5	18B11CI415	Artificial Intelligence & Application	3	1	-	4	4
6	18B17CI472	Algorithms Lab	-	-	2	2	1
7	18B17CI473	Operating Systems Lab	-	-	2	2	1
8	18B17CI475	AI & Application Lab	-	-	2	2	1
9	18B17CI471	Computer Networks Lab	-	-	2	2	1
10	18B28CI408	Mobile and Application Development Lab	1	-	2	3	2
		Total				**30**	**23**

SEMESTER - V							
S.No.	**Course Code**	**Subject**	**L**	**T**	**P**	**Total**	**Credits**
1	----	HSS Elective - 2	2	1	-	3	3
2	18B11MA511	Probability Theory and Random Processes	3	1	-	4	4
3		CSE Elective -1	3	-	-	3	3
4	18B11CI511	Theory of Computation	3	1	-	4	4
5		**Science Elective**	3	-	-	3	3
6	18B19CI591	Minor Project – 1	-	-	6	6	3
7	18B17CI507	Open Source Software Lab	-	-	2	2	1
8	18B17CI573	Advanced Programming Lab-2	1	-	2	3	2
9	----	Value added course-3	2	-	-	2	-
		Total				**30**	**23**

SEMESTER - VI							
S.No.	**Course Code**	**Subject**	**L**	**T**	**P**	**Total**	**Credits**
1		HSS Elective - 3	3	-	-	3	3
2	18B11CI414	Computer Organization and Architecture	3	1	-	4	4
3	18B11CI612	Software Engineering	3	-	-	3	3
4		CSE Elective - 2	3	-	-	3	3
5	18B19CI691	Minor Project-2	-	-	6	6	3
6	18B17CI474	Computer Organization and Architecture Lab	-	-	2	2	1
7	18B17CI672	Software Engineering Lab	-	-	2	2	1
8	18B17CI673	Advanced Programming Lab-3	-	-	2	2	1
		Total				**25**	**19**
Note:	Students will undergo 6 weeks Industrial Training during Summer Vacation after 6th Semester. It will be evaluated in 7th semester.						

SEMESTER - VII							
S.No.	**Course Code**	**Subject**	**L**	**T**	**P**	**Total**	**Credits**
1		Open Elective -1	3	-	-	3	3
2		CSE Elective - 3	3	-	-	3	3
3		CSE Elective - 4	3	-	-	3	3
4		CSE Elective - 5	3	-	-	3	3
5	18B19CI791	Major Project Part-1	-	-	8	8	4
6	18B19CI792	Summer Training Viva	-	-	-	-	Qualifying

		Total				**20**	**16**

SEMESTER - VIII							
S.No.	**Course Code**	**Subject**	**L**	**T**	**P**	**Total**	**Credits**
1		Open Elective - 2	3	-	-	3	3
2		CSE Elective - 6	3	-	-	3	3
3		CSE Elective - 7	3	-	-	3	3
4	18B19CI891	Major Project Part-2	-	-	16	16	8
5		Value Added Course-4	2	-	-	2	-
		Total				**27**	**17**

Total Credits for B. Tech. –162

Value Added Courses							
S.No.	**Course Code**	**Subject**	**L**	**T**	**P**	**Total**	**Credits**
1	18B19HS491	Human Values and Professional Ethics	2	-	-	2	-
2	18B19HS492	Entrepreneurship and Startup Business	2	-	-	2	-
3	21B19HS399	Professional communication Practice	2	-	-	2	-
4	18B19HS599	Indian Constitution & Traditional Knowledge	2	-	-	2	-
5	21B19HS891	Concept of Project Management	2	-	-	2	-

List of Electives							
List of HSS Electives							
S.No.	**Course Code**	**Subject**	**L**	**T**	**P**	**Total**	**Credits**
1	18B14HS441	Concept of Digital Marketing	3	-	-	3	3
2	21B14HS547	Concept of Economics	2	1	-	3	3
3	18B14HS650	Logical & Quantitative Techniques	3	-	-	3	3
4	18B14HS741	Knowledge management	3	-	-	3	3
Science Elective							
S.No.	**Course Code**	**Subject**	**L**	**T**	**P**	**Total**	**Credits**
1	18B14MA541	Data Science	3	0	0	3	3
2	18B14MA542	Science of Web	3	0	0	3	3
3	18B14MA543	Number System and Cryptography	3	0	0	3	3
4	18B14MA544	Fuzzy Systems and Applications	3	0	0	3	3
5	18B14PH541	Introduction to Quantum Computing	3	0	0	3	3
7	18B14PH542	Nano Science	3	0	0	3	3
8	18B14PH543	Materials Science and Applications	3	0	0	3	3
9	18B14CL541	Biochemistry	3	0	0	3	3
CSE Electives -1,2,3,4,5,6,7							
S.No.	**Course Code**	**Subject**	**L**	**T**	**P**	**Total**	**Credits**

1	18B14CI541	Compiler Design	3	0	0	3	3
2	18B14CI542	Object Oriented Computing	3	0	0	3	3
3	18B14CI543	Real Time Systems	3	0	0	3	3
4	18B14CI544	Embedded Systems	3	0	0	3	3
5	18B14CI545	Logic in Computer Science	3	0	0	3	3
7	18B14CI546	E-Commerce	3	0	0	3	3
8	18B14CI547	Advanced Concepts in DBMS	3	0	0	3	3
9	18B14CI549	System Programming	3	0	0	3	3
10	18B14CI550	Information Security	3	0	0	3	3
11	18B14CI641	Concurrency Control and Security of Databases	3	0	0	3	3
12	18B14CI642	Computer Graphics	3	0	0	3	3
13	18B14CI643	Computer Systems Security	3	0	0	3	3
14	18B14CI644	Human Aspects of Information Technology	3	0	0	3	3
15	18B14CI645	Graph Algorithms and Applications	3	0	0	3	3
16	18B14CI647	Image Processing	3	0	0	3	3
17	18B14CI741	Soft Computing	3	0	0	3	3
18	18B14CI742	Network Management	3	0	0	3	3
19	18B14CI743	Fault Tolerant Computing Systems	3	0	0	3	3
20	18B14CI744	Ad-hoc and Wireless Networks	3	0	0	3	3
21	18B14CI745	Modelling For Computer Networks	3	0	0	3	3
22	18B14CI746	Design Pattern	3	0	0	3	3
23	18B14CI747	Internet of Things	3	0	0	3	3
24	18B14CI748	Network Security	3	0	0	3	3
25	18B14CI749	Introduction to Software Architecture	3	0	0	3	3
26	18B14CI750	Software Engineering & Management	3	0	0	3	3
27	18B14CI751	Introduction to Service Oriented Architecture	3	0	0	3	3
28	18B14CI752	Information Retrieval & Data Mining	3	0	0	3	3
29	18B14CI753	Computation Complexity	3	0	0	3	3
30	18B14CI754	Introduction to Queueing Networks	3	0	0	3	3
31	18B14CI755	Data and Information Fusion	3	0	0	3	3
32	18B14CI756	Component Based Software Engineering	3	0	0	3	3
33	18B14CI757	Introduction to Grid Computing	3	0	0	3	3
34	18B14CI758	Parallel Computing	3	0	0	3	3
35	18B14CI759	Data Mining Tools and Applications	3	0	0	3	3
36	18B14CI760	Distributed Systems	3	0	0	3	3
37	18B14CI761	Multimedia Security	3	0	0	3	3
38	18B14CI762	Logic and Function Programming	3	0	0	3	3
39	18B14CI763	Big Data Analytics	3	0	0	3	3
40	18B14CI764	Software Testing	3	0	0	3	3
41	18B14CI841	Cryptography Systems	3	0	0	3	3
42	18B14CI842	Mobile Computing	3	0	0	3	3
43	18B11CI918	Machine Learning	3	0	0	3	3
44	18B14CI844	Algorithms Analysis and Design	3	0	0	3	3
45	18B14CI845	Introduction to Natural Language Processing	3	0	0	3	3

46	18B14CI846	Introduction to Digital Forensics	3	0	0	3	3
47	18B14CI847	Cloud Computing	3	0	0	3	3
48	18B14CI848	Client-Server Computing	3	0	0	3	3
49	18B14CI849	Fog Computing	3	0	0	3	3
50	18B14CI850	Software Quality Management	3	0	0	3	3
51	18B14CI851	Storage Area Networks	3	0	0	3	3
52	19B14CI852	Neural Network & Applications	3	0	0	3	3
53	18B14CI853	Reinforcement Learning	3	0	0	3	3
54	18B14CI854	Green Computing	3	0	0	3	3
55	18B14CI855	Introduction to Swarm Intelligence	3	0	0	3	3
56	18B14CI858	Web Engineering	3	0	0	3	3
57	19B14CI749	Information Retrieval and Opinion Mining	3	0	0	3	3
58	21B14CI741	Augmented and Virtual Reality	3	0	0	3	3
59	21B14CI742	Full Stack Development	3	0	0	3	3
60	21B14CI743	DevOps	3	0	0	3	3
61	18B11CI917	Data Analytics Systems & Algorithms	3	0	0	3	3
62	18B11CI933	Deep Learning	3	0	0	3	3

Note: - List of electives and value added courses can be updated time to time.