

# **Jaypee University Anoopshahr**

## **Faculty of Engineering**



## **Course Curriculum**

**B. Tech Computer Science & Engineering**

**Academic Batches: 2021 & 2022**

**Department of Computer Science and  
Engineering**

**For Batches admitted 2018 to 2022**  
**Curriculum for B.Tech. Programme (CSE)**

**I Semester (B1)**

Sr. No.	Category	Course		Contact Hours				Credits
		Code	Name	L	T	P	Total	
1	HSS	18B11HS111	English	2	0	0	2	2
2	Basic Sc.	18B11PH111	Physics	3	1	0	4	4
3	Basic Sc.	18B11MA111	Mathematics - I	3	1	0	4	4
4	Engg. Sc.	18B11EC111	Basic Electrical Engineering	3	1	0	4	4
5	HSS	18B17HS171	English Language Lab	0	0	2	2	1
6	Basic Sc.	18B17PH171	Physics Lab	0	0	2	2	1
7	Engg. Sc.	18B17EC171	Electrical Engineering Lab	0	0	2	2	1
8	Engg. Sc.	18B17ME171	Engineering Graphics & Design Lab#	0	1	4	5	3
<b>Total</b>				<b>12</b>	<b>3</b>	<b>10</b>	<b>25</b>	<b>20</b>

\*3 week Induction Training Program at the beginning of the Semester

#should be taken as Lab Course

**II Semester (B2)**

Sr. No.	Category	Course		Contact Hours				Credits
		Code	Name	L	T	P	Total	
1	HSS	18B11HS211	Organizational Behaviour	3	0	0	3	3
2	Basic Sc.	18B11CH211	Engineering Chemistry	3	1	0	4	4
3	Basic Sc.	18B11MA211	Mathematics - II	3	1	0	4	4
4	Engg. Sc.	18B11CI211	Programming for Problem Solving	3	0	0	3	3
5	Engg. Sc.	18B11ME211	Engineering Mechanics	3	1	0	4	4
6	Engg. Sc.	18B17ME271	Workshop Practices Lab	0	0	6	6	3
7	Basic Sc.	18B17CH271	Engineering Chemistry Lab	0	0	2	2	1
8	Engg. Sc.	18B17CI271	Computer Programming Lab	0	0	4	4	2
9	Mandatory	18B19GE291	Environmental Sciences	2	0	0	2	0(Qual)
<b>Total</b>				<b>17</b>	<b>3</b>	<b>12</b>	<b>32</b>	<b>24</b>

#1 hour Lecture and 4 hours of Lab

**III Semester (B3)**

Sr. No.	Category	Course		Contact Hours				Credits
		Code	Name	L	T	P	Total	
1	HSS	18B11HS311	Finance & Accounting	3	0	0	3	3
2	Basic Sc.	18B11MA311	Mathematics - III	3	1	0	4	4
3	Basic Sc.	18B11CH311	Biology for Engineers	3	0	0	3	3
4	Engg. Sc.	18B11EC311	Electronic Devices and Circuits	2	1	0	3	3
5	Core	18B11CI312	Computer Organization and Architecture	3	1	0	4	4
6	Core	18B11CI311	Data Structure & Algorithms	3	1	0	4	4
7	Engg. Sc.	18B17EC371	Devices & Circuits Lab	0	0	2	2	1
8	Core	18B17CI371	Data Structure & Algorithms Lab	0	0	2	2	1
9	Core	18B17CI372	Web Technology lab	0	0	2	2	1
10	Mandatory	18B19GE391	Indian Constitution	1	0	0	1	0(Qual)
<b>Total</b>				<b>18</b>	<b>4</b>	<b>6</b>	<b>28</b>	<b>24</b>

**IV Semester (B4)**

Sr. No.	Category	Course		Contact Hours				Credits
		Code	Name	L	T	P	Total	
1	HSS	18B11HS411	Professional Practice Law & Ethics	3	0	0	3	3
2	Core	18B11CI411	Database Management Systems	3	1	0	4	4
3	Core	18B11CI412	Design and Analysis of Algorithms	3	1	0	4	4
4	Core	18B11CI413	Object Oriented Programming	3	1	0	4	4
5	Core	18B11EC313	Digital Electronics	3	1	0	4	4
6	Core	18B17CI471	Database Systems Lab	0	0	2	2	1
7	Core	18B17CI472	Algorithms Lab	0	0	4	4	2
8	Core	18B17CI473	Object Oriented Programming Lab	0	0	2	2	1
9	Core	18B17EC373	Digital Electronics Lab	0	0	2	2	1
10	Mandatory	18B19GE491	Essence of Indian Traditional Knowledge	1	0	0	1	0(Qual)
<b>Total</b>				<b>16</b>	<b>4</b>	<b>10</b>	<b>30</b>	<b>24</b>

**V Semester (B5)**

Sr. No.	Category	Course		Contact Hours				Credits
		Code	Name	L	T	P	Total	
1	OE - I			3	0	0	3	3
2	DE - I			3	0	0	3	3
3	DE -II			3	0	0	3	3
4	Core	18B11CI511	Operating Systems	3	1	0	4	4
5	Core	18B11CI512	Theory of Computation	3	1	0	4	4
6	Core	18B17CI571	Operating Systems Lab	0	0	2	2	1
7	Core	18B17CI572	Advance Programming Lab	0	0	2	2	1
8	Project	18B19CI591	Minor Project-I	0	0	2	2	1
<b>Total</b>				<b>15</b>	<b>2</b>	<b>6</b>	<b>23</b>	<b>20</b>

**VI Semester (B6)**

Sr. No.	Category	Course		Contact Hours				Credits
		Code	Name	L	T	P	Total	
1	OE - II			3	0	0	3	3
2	DE - III			3	0	0	3	3
3	DE - IV			3	0	0	3	3
4	Core	18B11CI611	Computer Networks	3	1	0	4	4
5	Core	18B11CI612	Compiler Design	3	1	0	4	4
6	Core	18B17CI671	Computer Networks Lab	0	0	2	2	1
7	Core	18B17CI672	Compiler Design Lab	0	0	2	2	1
8	Project	18B19CI691	Minor project-II	0	0	2	2	1
9	Mandatory	18B19GE691	Industrial Training (\$)	0	0	0	0	0(Qual)
<b>Total</b>				<b>15</b>	<b>2</b>	<b>6</b>	<b>23</b>	<b>20</b>

\$ 6 weeks Industrial Training during summer break after VIth Semester. Evaluation will be done at the start of VIIth Semester.

**VII Semester (B7)**

Sr. No.	Category	Course		Contact Hours				Credits
		Code	Name	L	T	P	Total	
1	OE - III			3	0	0	3	3
2	DE - V			3	0	0	3	3
3	DE - VI			3	0	0	3	3
5	Project	18B19CI791	Project Part I	0	0	10	10	5
<b>Total</b>				<b>9</b>	<b>0</b>	<b>10</b>	<b>19</b>	<b>14</b>

**VIII Semester (B8)**

Sr. No.	Category	Course		Contact Hours				Credits
		Code	Name	L	T	P	Total	
1	OE - IV			3	0	0	3	3
2	DE - VII			3	0	0	3	3
3	Project	18B19CI891	Project Part II	0	0	16	16	8
<b>Total</b>				<b>6</b>	<b>0</b>	<b>16</b>	<b>22</b>	<b>14</b>

Sr. No.	Category	Credits	Definitions
1	HSS	12	Humanities and Social Sciences
2	Basic Sc.	25	Basic Science Courses
3	Engg. Sc.	24	Engineering Science Courses
4	Core	51	Professional Core Courses
5	OE	12	Open Elective Courses
6	DE	21	Departmental Electctive Courses
7	Project	15	Project Work, Seminar, Term Paper, Internship
	<b>Total</b>	<b>160</b>	

<b>S.No.</b>	<b>Open Electove(OE)</b>	<b>Code</b>
1	Numerical Methods	18B1AMA531
2	Communication Systems	18B1AEC735
3	Analysis of Signal & Systems	18B1AEC635
4	Netwok and Signals	18B1AEC534
5	Discrete Mathematics	18B1AMA431
6	Digital Hardware Design	18B1AEC532
7	Material Science	18B1APH631
8	Embedded System and IOT	18B1AEC636

<b>S.No</b>	<b>Departmental Elective (DE)</b>	<b>Code</b>
1	Information Retrieval and Data ining	18B1ACI531
2	Principle of Programming Languages	18B1ACI532
3	Software Engineering	18B1ACI533
4	Cloud Computing	18B1ACI534
5	Advance Computer Architecture	18B1ACI535
6	Soft Computing	18B1ACI631
7	Microprocessors and Controllers	18B1ACI632
8	Distributed and Parallel Computing	18B1ACI633
9	Artificial Intelligence	18B1ACI634
10	Embedded Systems & Design	18B1ACI635
11	Cryptography and Network Security	18B1ACI636
12	Mobile Computing	18B1ACI731
13	Machine Learning	18B1ACI732
14	Image Processing	18B1ACI733
15	Graph Algorithms and Applications	18B1ACI734
16	Computer Graphics and Applications	18B1ACI735
17	Software Construction	18B1ACI736
18	Natural Language Processing	18B1ACI831
19	Advance Data Structure and Algorithms	18B1ACI832
20	Internet of Things	18B1ACI833
21	Introduction to Data Science	18B1ACI834
22	Big data and analytics	18B1ACI835

- **Total program credits are 160**

**HOD**

**Faculty Incharge**

**Vice Chancellor**