

Jaypee University Anoopshahr

Faculty of Engineering



Course Curriculum

B. Tech Computer Science & Engineering

Academic Batches: 2023 Onwards

**Department of Computer Science and
Engineering**

JAYPEE UNIVERSITY ANOOPSHAHR

4 year B. Tech. degree Course - CSE w.e.f. 2023-24 Batch

First Semester							
Sr. No.	Course		Contact Hours				Credits
	Code	Name	L	T	P	Total	
1	23B11MA111	Mathematics I	3	1	0	4	4
2	23B11PH111	Physics-I	3	1	0	4	4
3	23B11CI111	Software Development Fundamentals-I	3	1	0	4	4
4	23B11HS111	English*	2	0	0	2	2
5	23B17PH171	Physics Lab-1	0	0	2	2	1
6	23B17CI171	Software Development Lab-I	0	0	4	4	2
7	23B17ME111	Engineering Drawing and Design	0	0	3	3	1.5
Total						23	18.5
*English Literature content will be given as suggestive reading							
Second Semester							
Sr. No.	Course		Contact Hours				Credits
	Code	Name	L	T	P	Total	
1	23B11MA211	Mathematics-II	3	1	0	4	4
2	23B11PH 201	Physics-II	3	1	0	4	4
3	23B11CI 212	Electrical Science- I	3	1	0	4	4
4	23B11CI 213	Software Development Fundamentals- II	3	1	0	4	4
5	23B17PH 271	Physics Lab-II	0	0	2	2	1
6	23B17CI 271	Electrical Science Lab-I	0	0	2	2	1
7	23B17CI 272	Software Development Lab-II	0	0	2	2	1

8	23B17HS 211	Life Skills & Professional Communication Lab*	0	0	2	2	0
9	23B17ME 212	Workshop	0	0	3	3	1.5
		Total				27	20.5

*Life Skills & Effective Communication dropped and content has been merged with Professional Communication Lab. It will run as audit course with nomenclature Life Skills & Professional Communication Lab

Third Semester

Sr. No.	Course		Contact Hours				Credits
	Code	Name	L	T	P	Total	
1	23B11CI 311	Theoretical Foundations of Computer Science	3	1	0	4	4
2	23B11CI 312	Database Systems and Web	3	1	0	4	4
3	23B11CI 313	Data Structures	3	1	0	4	4
4	23B17CI 371	Data Structures Lab	0	0	4	4	2
5	23B17CI 372	Database Systems and Web Lab	0	0	2	2	1
6	23B11CI 314	Electrical Science -II	3	1	0	4	4
7	23B17CI 373	Electrical Science Lab -II	0	0	2	2	1
8	2311HS 311	Economics	2	1	0	3	3
		Total				27	23

Fourth Semester

Sr.No	Course		Contact Hours				Credits
	Code	Name	L	T	P	Total	
1	XXXX	HSS Elective - 1	2	1	0	3	3
2	23B11CI 412	Probability and Random Processes	3	1	0	4	4
3	23B11CI413	Digital Systems	3	1	0	4	4
4	23B11CI414	Algorithm & Problem Solving	3	0	0	3	3
5	23B11GE411	Environmental Science	3	0	0	3	Qualifying
6	23B17CI 471	Digital Systems Lab	0	0	2	2	1

7	23B17CI 472	Algorithms and Problem Solving Lab	0	0	2	2	1
8	23B11HS 411	Universal Human Values*	2	1	0	3	3
Total						24	19

Fifth Semester

Sr. No	Course		Contact Hours				Credits
	Code	Name	L	T	P	Total	
1	XXXX	HSS Elective-2	3	0	0	3	3
2	23B11CI 511	Computer Organisation and Architecture	3	1	0	4	4
3	XXXX	Discipline Elective -1(#)	3	0	0	3	3
4	XXXX	Science Elective	3	0	0	3	3
5	23B19CI 591	Minor Project – 1	0	0	4	4	2
6	23B17CI 571	Computer Organisation and Architecture Lab	0	0	2	2	1
7	23B17CI 572	Operating Systems and Systems Programming Lab	0	0	2	2	1
8	23B17CI 573	Open Source Software lab	0	0	2	2	1
9	23B11CI 512	Operating Systems and Systems Programming	3	1	0	4	4
10	23B17CI 574	Information Security Lab	0	0	2	2	1
11	23B11GE 511	Indian Constitution & Traditional Knowledge	3	0	0	3	Qualifying
Total						32	23

Sixth Semester

Sr. No	Course		Contact Hours				Credits
	Code	Name	L	T	P	Total	
1	23B11CI 611	Computer Networks and Internet of Things	3	0	0	3	3
2	XXXX	Discipline Elective – 2(##)	3	0	0	3	3
3	XXXX	Discipline Elective – 3(###)	3	0	0	3	3
4	XXXX	Open Elective - 1	3	0	0	3	3

	XXXX	Selected Value Added Course (*)	2	0	0	2	Audit
5	23B17CI 671	Computer Networks and Internet of Things Lab	-	-	2	2	1
6	23B19CI 691	Minor Project-2			4	4	2
7	23B11C 612	Software Engineering OR Artificial Intelligence	3	1		4	4
8	23B17CI 672	Software Engineering Lab OR Artificial Intelligence Lab	0	0	2	2	1
9	XXXX	HSS Elective - 3	2	1		3	3
	Total					29	23

1. Students may opt to study Selected Foreign Language during 5th semester as an additional course of 2 credits not to be counted towards CGPA calculation. Those who qualify will be provided with additional certificate.

2. All students will undergo Value Added Course, however it will not count for CGPA calculations and will not be reflected in transcript of those students who fail to qualify. Those who qualify will be provided with additional certificate.

3. Students will undergo 6 weeks Industrial Training during Summer Vacation after 6th Semester.

Seventh Semester

Sr. No.	Course		Contact Hours				Credits
	Code	Name	L	T	P	Total	
1	XXXX	Discipline Elective – 4	3	0	0	3	3
2	XXXX	Discipline Elective – 5	3	0	0	3	3
3	XXXX	Discipline Elective – 6	3	0	0	3	3
4	XXXX	Open Elective – 2	3	0	0	3	3
5	23B19CI 791	Major Project Part-1	0	-	8	8	4
Total						20	16

Students will submit summer training report and via at the end of semester.

Eighth Semester

Sr. No.	Course		Contact Hours				Credits
	Code	Name	L	T	P	Total	
1	XXXX	Discipline Elective – 7	3	0	0	3	3
2	XXXX	Discipline Elective – 8	3	0	0	3	3
3	XXXX	Open Elective -3	3	0	0	3	3
4	23B19CI 891	Major Project Part-2	3	0	0	3	3
			0	-	16	16	8
Total						25	17

Total Credits for B. Tech. –160

Discipline Elective -1(#)

- | | |
|----------------|------------------------------------------------|
| 1. 23B11ACI533 | Fundamentals of Machine learning |
| 2. 23B11ACI534 | Fundamentals of Computer security |
| 3. 23B11ACI535 | Introduction to Big data and Data Analytics |
| 4. 23B11ACI536 | Object Oriented Analysis and Design using Java |
| 5. 23B11ACI537 | Image Processing and Computer Vision |
| 6. 23B11ACI538 | Automata Theory and its applications |

Discipline Elective – 2(##)

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|----------------|-------------------------------------------------|
| 1. 23B11ACI633 | Sensor Technology & Android Programming |
| 2. 23B11ACI634 | Fundamentals of Distributed and Cloud Computing |
| 3. 23B11ACI635 | Introduction to Large Scale Database Systems |
| 4. 23B11ACI636 | Web Technology and Cyber Security |
| 5. 23B11ACI637 | Introduction to Compiler Design |

Discipline Elective – 3(###)

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|----------------|---------------------------------------------------------------------|
| 1. 23B11ACI733 | Cloud based Enterprise Systems (IT core offered to CSE as elective) |
| 2. 23B11ACI734 | Introduction to Blockchain Technology |
| 3. 23B11ACI735 | Big Data Ingestion |
| 4. 23B11ACI736 | Fundamentals of Soft Computing |
| 5. 23B11ACI737 | Open source software development |
| 6. 23B11ACI738 | Concepts of Graph theory |

Selected Value Added Course (*)

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|----------------|----------------------------------------------|
| 1. 23B11ACI433 | Java Programming |
| 2. 23B11ACI434 | Problem Solving using C and C++ |
| 3. 23B11ACI435 | Non-linear Data Structures & problem solving |
| 4. 23B11ACI436 | Game Development: Fundamentals and practices |
| 5. 23B11ACI437 | Front End Programming |

Discipline Elective – 4

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|----------------|---------------------------------------------|
| 1. 23B11ACI833 | Advanced Blockchain : A game theoretic view |
| 2. 23B11ACI834 | Big Data with Hadoop and Spark |
| 3. 23B11ACI835 | Introduction to Deep Learning |
| 4. 23B11ACI836 | Cryptography and its Applications |
| 5. 23B11ACI837 | Information Retrieval and Semantic Web |

HSS Electives(*) -4th Semester							
1 .	23B11AHS411	Organization & Marketing Management					
2	.23B11AHS412	Entrepreneurship & Small Business Management					
3 .	23B11AHS413	International Business					
HSS Electives(**) -5th Semester							
1.	23B11AHS511	Financial Management					
2..	23B11AHS512	Consumer Psychology					
3..	23B11AHS513	Industrial Psychology					
HSS Electives(***) -6th Semester							
1.	23B11AHS611	Human Resource Management					
2..	23B11AHS612	Financial Analysis & Portfolio Management					
3..	23B11AHS613	Project Management					

Assoc. Dean Academic

Vice Chancellor