

Course Curriculum

Two-Year Full Time M. Tech. Programme in Computer Science & Engineering

With specialization in
Artificial Intelligence (AI)
Internet of Things (IoT)



Department of Computer Science & Engineering
Indian Institute of Technology (BHU), Varanasi,
Uttar Pradesh-221005, India

2022-2023

Semester Wise Courses

Semester I:						
S. No.	Subject Code	Title of the course	L-T-P			Credits
1	CSE501	Advanced Algorithms	3	0	2	11
2	CSE502	Computer Systems	3	0	2	11
3	CSE5XX	General Elective-I	3	0	0	09
4	CSE5XX	General Elective-II	3	0	0	09
5	CSE5XX	Specialization Elective-I	3	0	0	09
6	HU/LM	Humanities/Language & Management Course	3	0	0	09
7	CSE595	Scientific Computing Lab	0	0	4	04
		Total	18	0	8	62

Semester I (General Elective-I):				
S. No.	Subject Code	Title of the course	L-T-P	Credits
1	CSE511	Advanced Graph Theory	3-0-0	9
2	CSE512	Data Warehousing & Data Mining	3-0-0	9
3	CSE513	Optimization Theory	3-0-0	9
4	CSE514	Social Network Analysis	3-0-0	9
5	CSE516	Information Security	3-0-0	9

Semester I (General Elective-II):

S. No.	Subject Code	Title of the course	L-T-P	Credits
1	CSE517	Distributed Computing	3-0-0	9
2	CSE518	Advances in Compiler Construction	3-0-0	9
3	CSE519	Real-Time Systems	3-0-0	9
4	CSE520	Advanced Computer Communications	3-0-0	9
5	CSE521	Advanced Software Engineering	3-0-0	9

Semester I (Specialization Elective-I) for AI:

S. No.	Subject Code	Title of the course	L-T-P	Credits
1	CSE523	Intelligent Systems	3-0-0	9
2	CSE524	Natural Language Processing	3-0-0	9

Semester I (Specialization Elective-I) for IoT:

S. No.	Subject Code	Title of the course	L-T-P	Credits
1	CSE525	Affective Computing	3-0-0	9
2	CSE526	Advanced Topics in Wireless Networks	3-0-0	9
3	CSE548	Cloud Computing	3-0-0	9

Semester II:

S. No.	Subject Code	Title of the course	L-T-P			Credits
1	CSE503	Selected Topics in Artificial Intelligence	3	0	2	11
2	CSE504	Mathematics for Computer Science	3	0	2	11
3	CSE51XX	General Elective-III	3	0	0	9
4	CSE51XX	Specialization Core	3	0	0	9
5	CSE51XX	Specialization Elective-II	3	0	0	9
6	CSE596	Comprehensive Viva Voce & Seminar	0	0	3	3
7	CSE597	M. Tech. Dissertation (Thesis)	0	0	11	11
		Total	15	0	18	63

Semester II (General Elective-III):

S. No.	Subject Code	Title of the course	L-T-P	Credits
1	CSE531	Advanced Database Management Systems	3-0-0	9
2	CSE532	Computational Geometry	3-0-0	9
3	CSE533	Multimedia Systems	3-0-0	9
4	CSE534	High Performance Computing	3-0-0	9
5	CSE535	Network Security	3-0-0	9
6	CSE536	Reinforcement Learning	3-0-0	9
7	CSE522	Computer Vision	3-0-0	9

Semester II (Specialization Core) for AI:

S. No.	Subject Code	Title of the course	L-T-P	Credits
1	CSE540	Selected Topics in Machine Learning	3-0-0	9

Semester II (Specialization Elective-II) for AI:

S. No.	Subject Code	Title of the course	L-T-P	Credits
1	CSE541	Selected Topics in Information Retrieval	3-0-0	9
2	CSE542	Selected Topics in Bio-inspired Computation	3-0-0	9
3	CSE543	Introduction to Data Science	3-0-0	9

Semester II (Specialization Core) for IoT:

S. No.	Subject Code	Title of the course	L-T-P	Credits
1	CSE544	IoT Protocols and Standards	3-0-0	9

Semester II (Specialization Elective-II) for IoT:

S. No.	Subject Code	Title of the course	L-T-P	Credits
1	CSE547	Wireless Sensor Networks	3-0-0	9
2	CSE549	IoT Security	3-0-0	9

Semester III:

S. No.	Subject Code	Title of the course	L-T-P			Credits
1	CSE695	M. Tech. Dissertation (Thesis)	0	0	55	55
		Total	0	0	55	55

Semester IV:

S. No.	Subject Code	Title of the course	L-T-P			Credits
1	CSE696	M. Tech. Dissertation (Thesis)	0	0	55	55
		Total	0	0	55	55