

Indian Institute of Technology Bhubaneswar
Curriculum(M.Tech. CSE)

	Subject Name	Subject Code	L-T-P	Credit	Contact Hours
Semester I	Mathematical Foundations of Computer Science	CS6L015	3-0-0	3	3
	Advanced Algorithms	CS6L007	4-0-0	4	4
	Advanced Computer Architecture	CS6L047	4-0-0	4	4
	Elective-1		3-0-0	3	3
	Elective-2 / Open Elective		3-0-0	3	3
	Advanced Algorithms Lab	CS6P010	0-0-3	2	3
	Advanced Computer Architecture Lab	CS6P011	0-0-3	2	3
Semester II	Advanced Computer Networks	CS6L048	3-0-0	3	3
	Elective-3		3-0-0	3	3
	Elective-4		3-0-0	3	3
	Elective-5 / Open Elective		3-0-0	3	3
	Advanced Computer Networks Lab	CS6P012	0-0-3	2	3
	Object Oriented Programming Lab	CS6P013	0-0-3	2	3
	Thesis Part-1	CS6D008		2	
Semester III	Thesis Part-2	CS6D009		14	
Semester IV	Thesis Part-3	CS6D010		14	
Total				67	41

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List of Electives:

Subject Code	Subject Name	L-T-P-C	Hours
CS6L029	Mathematical Foundations of Artificial Intelligence	3-0-0-3	3
CS6L004	Machine Learning	3-0-0-3	3
CS6L019	Artificial Intelligence	4-0-0-4	4
CS6L038	Deep Learning	3-0-0-3	3
CS6L050	Graph Theory	3-0-0-3	3
CS6L051	Advanced Data Structures	3-0-0-3	3
CS6L052	Mathematical Tools for Theoretical Computer Science	3-0-0-3	3
CS6L053	Approximation Algorithms	3-0-0-3	3
CS6L054	Randomized Algorithms	3-0-0-3	3
CS6L055	Parameterized Algorithms	3-0-0-3	3
CS6L056	Parallel Algorithms	3-0-0-3	3
CS6L057	Distributed Algorithms	3-0-0-3	3
CS6L031	Game Theory	3-0-0-3	3
CS6L012	Complexity Theory	3-0-0-3	3
CS6L058	Extremal Combinatorics	3-0-0-3	3
CS6L059	Combinatorial Optimization	3-0-0-3	3
CS6L060	Selected Topics in Theoretical Computer Science	3-0-0-3	3
CS6L061	Computational Geometry	3-0-0-3	3
CS6L062	Computer Graphics	3-0-0-3	3
CS6L025	Object Oriented System Design	3-0-0-3	3
CS6L063	Number Theory	3-0-0-3	3
CS6L064	Symbolic Logic and Automated Reasoning	3-0-0-3	3
CS6L022	Complex Networks	3-0-0-3	3
CS6L065	Advanced Compiler Design	3-0-0-3	3
CS6L066	Advanced Database Management Systems	3-0-0-3	3
CS6L067	Advanced Operating Systems	3-0-0-3	3
CS6L068	Wireless Networks	3-0-0-3	3
CS6L026	Wireless Sensor Networks	3-0-0-3	3
CS6L069	Software-Defined Networking	3-0-0-3	3
CS6L070	Cyber-Physical Systems	3-0-0-3	3
CS6L071	Performance Evaluation of Computing Systems	3-0-0-3	3
CS6L011	Web Technology	3-0-0-3	3
CS6L072	Digital Design Verification and Testable Systems	3-0-0-3	3
CS6L073	Parallel Computer Architecture	3-0-0-3	3
CS6L074	Memory Systems	3-0-0-3	3
CS6L075	GPU Programming and Architecture	3-0-0-3	3
CS6L008	Cloud Computing	3-0-0-3	3
CS6L002	Networks and Systems Security	3-0-0-3	3
CS6L005	Cryptography	3-0-0-3	3
CS6L076	Quantum Cryptography	3-0-0-3	3

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CS6L077	Blockchain and Access Control	3-0-0-3	3
CS6L030	Data Intensive Computations	3-0-0-3	3
CS6L024	Internet-of-Things	3-0-0-3	3
CS6L006	Fault Tolerant Systems	3-0-0-3	3
CS6L081	Selected Topics in Systems	3-0-0-3	3
CS6L078	Data Mining	3-0-0-3	3
CS6L079	Reinforcement Learning	3-0-0-3	3
CS6L038	Information Retrieval	3-0-0-3	3
CS6L027	Natural Language Processing	3-0-0-3	3
CS6L080	Large Language Models	3-0-0-3	3
CS6L040	Machine Learning and Cyber Security	3-0-0-3	3
CS6L013	Multimedia Systems	3-0-0-3	3
CS6L045	Computer Vision	3-0-0-3	3
CS6L046	Pattern Recognition	3-0-0-3	3
CS6L043	Current Topics in AI & ML	3-0-0-3	3
CS6L082	AI and Computer Vision for Autonomous Vehicles	3-0-0-3	3
CS6L083	Robot Vision	3-0-0-3	3
CS6L084	Image Processing	3-0-0-3	3
CS6L085	Deep Learning for Computer Vision	3-0-0-3	3
CS6L086	Spatio-Temporal Data Mining	3-0-0-3	3
CS6L087	Social Media Data Analytics	3-0-0-3	3
CS6L088	Ethical and Responsible Artificial Intelligence	3-0-0-3	3
CS6L044	Advanced Topics in AI & Architecture	3-0-0-3	3
CS6L034	Software Engineering	3-0-0-3	3
CS6L023	Software Testing and Verification	3-0-0-3	3
CS6L003	Software Reliability	3-0-0-3	3
CS6L049	Principles of Programming Languages	3-0-0-3	3