JAYPEE UNIVERSITY OF ENGINEERING AND TECHNOLOGY, GUNA
Department of Computer Science
Course Curriculum for M. Tech. Program

2 year M. Tech. Course Curricula for Computer Science and Engineering							
M. Tech. I semester (M1)							
S. No.	**Subject Code**	**Subject**	**Core/Elective**	**L**	**T**	**P**	**Credits**
1	CS501	Advanced Computer Networks	Core	3	0	0	3
2	CS502	Advanced Database Systems	Core	3	0	0	3
3		Departmental Elective-I	Elective	3	0	0	3
4		Departmental Elective-II	Elective	3	0	0	3
5	HS520	Research Methodology and IPR	Core	2	0	0	2
6	CS601	Software Systems Lab - I	Core	0	0	2	1
		Departmental Elective Lab-I		0	0	2	1
		Departmental Elective Lab-II		0	0	2	1
		Total		**14**	**0**	**6**	**17**

2 year M. Tech. Course Curricula for Computer Science and Engineering							
M. Tech. II semester (M2)							
S. No.	**Subject Code**	**Subject**	**Core/Elective**	**L**	**T**	**P**	**Credits**
1	CS505	Advanced Operating Systems	Core	3	0	0	3
2	CS506	Advanced Software Engineering	Core	3	0	0	3
3		Departmental Elective-III	Core	3	0	0	3
4		Departmental Elective-IV	Core	3	0	0	3
5		Departmental Elective-V	Core	3	0	0	3
6	CS602	Software Systems Lab - II	Core	0	0	2	1
7	CS604	Minor Project		0	0	6	3
8		Departmental Elective Lab-III		0	0	2	1
9		Audit Course-I		2	0	0	Qualifying
		Total		17		10	20

2 year M. Tech. Course Curricula for Computer Science and Engineering							
M. Tech. III semester (M3)							
S. No.	**Subject Code**	**Subject**	**Core/Elective**	**L**	**T**	**P**	**Credits**
1		Open Elective	Elective	3	0	0	3
2		Departmental Elective-VI	Elective	3	0	0	3
3	CS603	Seminar and Term Paper	Core	0	0	4	2
4	CS605	Project Based Learning		0	0	8	4
5	CS606	Dissertation-I	Core	0	0	8	4
6		Audit Course-II		2	0	0	Qualifying
		Total					**16**

2 year M. Tech. Course Curricula for Computer Science and Engineering							
M. Tech. IV semester (M4)							
S. No.	**Subject Code**	**Subject**	**Core/Elective**	**L**	**T**	**P**	**Credits**
1	CS607	Dissertation-II/ Industrial Project	Core	0	0	30	15
		Total		0	0	30	15

List of Electives common for all			L	T	P	Credits
	CS705	Data Mining & Warehousing Techniques	3	0	0	3
	CS706	Enterprise Information Systems	3	0	0	3
	CS707	Advanced Computer Graphics	3	0	0	3
	CS708	Human Aspects of Software Development	3	0	0	3
	CS709	Information System and Security	3	0	0	3
	CS710	Analysis and Design of Algorithms	3	0	0	3
	CS507	Multimedia Systems	3	0	0	3
	CS508	Computer System Performance Analysis	3	0	0	3
	CS704	Process Modelling and Simulation of Semiconductor Devices	3	0	0	3
	CS503	High Performance Computer Architecture	3	0	0	3
	CS504	Advanced Algorithms	3	0	0	3
	CS712	Advanced Network Management	3	0	0	3
	CS713	Image Processing & Applications	3	0	0	3
	CS714	Real Time Operating System	3	0	0	3
	CS715	Computation Theory and Applications	3	0	0	3
	CS720	Service Oriented Architecture	3	0	0	3
	CS721	Cognitive Sciences	3	0	0	3
	CS722	Software Quality Assurance & Testing	3	0	0	3
	CS717	Quantum Computation & Quantum Cryptography	3	0	0	3
	CS729	Software Architecture	3	0	0	3
	CS733	Formal Language and Compilation	3	0	0	3
	CS734	Voice over IP	3	0	0	3
	CS736	Digital Forensics and Cyber Crime	3	0	0	3
	CS735	Wireless Sensor Network	3	0	0	3
	CS701	Artificial Intelligence in Manufacturing[#]	3	0	0	3
	CS718	Computational Intelligence[#]	3	0	0	3
	CS724	Computer Vision[#]	3	0	0	3
	CS711	Machine Learning And Applications[#]	3	0	0	3
	CS725	Machine Learning[#]	3	0	0	3
	CS727	Swarm Intelligence & Applications[#]	3	0	0	3
	CS731	Storage Networks[#]	3	0	0	3
	CS732	Natural Language Processing[#]	3	0	0	3
	CS740	Deep Learning And Applications[#]	3	0	0	3
	CS737	Fuzzy Sets and Fuzzy Systems[#]	3	0	0	3
	CS738	Fuzzy Logic and Applications[#]	3	0	0	3
	CS702	Modern Cryptography*	3	0	0	3
	CS703	Advance Numerical Techniques*	3	0	0	3
	CS716	Mathematical Modelling & Simulations*	3	0	0	3
	CS719	Queuing Networks*	3	0	0	3
	CS723	Web Engineering And Applications*	3	0	0	3
	CS726	Grid Computing*	3	0	0	3
	CS728	High Performance Parallel Computing*	3	0	0	3
	CS730	Big Data Analytics*	3	0	0	3
	CS731	Storage Networks*	3	0	0	3
	CS739	Data Science And Modelling*	3	0	0	3
	CS740	Deep Learning And Applications*	3	0	0	3

List of Departmental Electives Lab			L	T	P	Credits
	CS801	Machine Learning Lab	0	0	2	1
	CS802	Advanced Computer Networks Lab	0	0	2	1
	CS803	Advanced Database Systems Lab	0	0	2	1
	CS804	Advanced Operating Systems Lab	0	0	2	1
	CS805	Advanced Algorithms Lab	0	0	2	1
	CS806	Big Data Analytics Lab	0	0	2	1
	CS807	Data Science Lab	0	0	2	1
	CS808	Deep Learning Lab	0	0	2	1
	CS809	Computer Vision Lab	0	0	2	1
	CS810	Web Engineering Lab	0	0	2	1

Note: -

1. **List of Electives courses will be updated from time to time**
2. **Minimum four '#' marks electives to be taken by the students opted for AIML specialization**
3. **Minimum four '$*$' marks electives to be taken by the students opted for AIDS specialization**