

Department of Computer Science & Engineering

**Curriculum
For
Computer Science & Technology**

1st Semester to 8th Semester

(Effective from 2021-22 Admission Batch)

Curriculum for B.Tech Under Autonomy
B.Tech. – Computer Science & Technology
 L – Lecture; T- Tutorial; P- Practical [1L=1Cr, 1T=1Cr, 1P =0.5 Cr]

CURRICULUM							
1 st Year 1 st Semester: 1 st Semester							
Sl. NO	Category	Course Code	Course Title	Hours per week			Credits
				T	P	Total	
A. THEORY							
1	Basic Science course	PH101	Physics-I	0	0	3	3
2	Basic Science course	M101	Mathematics –I	0	0	4	4
3	Humanities and Social Sciences including Management courses	HSMC 101	Professional Communication	0	0	2	2
B. PRACTICAL							
4	Basic Science course	PH191	Physics-I Lab	0	3	3	1.5
5	Engineering Science Courses	ME 191	Workshop & Manufacturing Practices Lab	0	3	3	1.5
6	PROJECT	PR191	Theme based Project I	0	1	1	0.5
7	PROJECT	PR192	Skill Development I: Soft Skill	0	1	1	0.5
C. MANDATORY ACTIVITIES / COURSES							
8	Mandatory Course	MC181	Induction Program	0	0	0	2Units
	TOTAL CREDIT						13

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CURRICULUM							
1 ST Year 2 nd Semester: 2nd Semester							
Sl.NO.	Category	Course Code	Course Title	Hours per week			Credits
				T	P	Total	
A. THEORY							
1	Basic Science courses	CH201	Chemistry-I	0	0	3	3
2	Basic Science courses	M201	Mathematics –II	0	0	4	4
3	Engineering Science Courses	EE201	Basic Electrical Engineering	0	0	3	3
4	Engineering Science Courses	CS201	Programming for Problem Solving	0	0	3	3
B. PRACTICAL							
5	Basic Science course	CH291	Chemistry-I Lab	0	3	3	1.5
6	Humanities and Social Sciences including Management courses	HSMC 291	Professional Communication LAB	0	2	2	1
7	Engineering Science Courses	EE291	Basic Electrical Engineering Lab	0	3	3	1.5
8	Engineering Science Courses	ME292	Engineering Graphics & Design Lab	0	3	3	1.5
9	Engineering Science Courses	CS291	Programming for Problem Solving Lab	0	3	3	1.5
10	PROJECT	PR291	Theme based Project II	0	1	1	0.5
11	PROJECT	PR292	Skill Development II: Life Skill	0	0	1	0.5

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C. MANDATORY ACTIVITIES / COURSES							
12	Mandatory Course	MC281	NSS/Physical Activities / Meditation & Yoga / Photography	0	3	3	3 Units
TOTAL CREDIT							21

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CURRICULUM								
2nd Year 1st Semester: 3rd Semester								
Sl.NO.	Category	Course Code	Course Title	Hours per week				Credits
				L	T	P	Total	
A. THEORY								
1	Basic Science course	M(CSE)301	Discrete Mathematics	3	0	0	3	3
2	Engineering Science Courses	ESC301	Analog Electronics	3	0	0	3	3
3	Engineering Science Courses	ESC302	Digital Electronics	3	0	0	3	3
4	Program Core Course	CT301	Programming in Python	3	0	0	3	3
5	Program Core Course	CS302	Data Structures	3	0	0	3	3
6	Humanities and Social Sciences including Management courses	HSMC303	Universal Human Values 2: Understanding Harmony	3	0	0	3	3
B. PRACTICAL								
7	Engineering Science Courses	M (CS)391	Numerical Methods Lab	1	0	3	3	2.5
8	Engineering Science Courses	ESC391	Digital and Analog Electronics Lab	0	0	3	3	1.5
9	Program Core Course	CT391	Programming in PythonLab	0	0	3	3	1.5
10	Program Core Course	CS392	Data Structures Lab	0	0	3	3	1.5

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11	PROJECT	PR391	Theme based Project III	0	0	1	1	0.5
12	PROJECT	PR392	Skill Development III: Technical Seminar Presentation	1	0	0	1	0.5
C. MANDATORY ACTIVITIES / COURSES								
15	MC	MC301	Environmental Science	0	0	3	3	³ Units
TOTAL CREDIT WITHOUT MOOCS COURSES								26
D.MOOCs COURSES**								
16	MOOCS COURSES	HM301	MOOCS COURSE-I					

*MOOCS COURSES for MAJOR/MINOR Degree are Programme specific and to be taken from the specific curriculum of MAJOR/MINOR.

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CURRICULUM							
2nd Year 2 nd Semester: 4 th Semester							
Sl. No.	Category	Course Code	Course Title	Hours per week			Credits
				T	P	Total	
A. THEORY							
1	Program Core Course	CS401	Computer Organization and Architecture	0	0	3	3
2	Program Core Course	CS402	Design and Analysis of Algorithms	0	0	3	3
3	Program Core Course	CS403	Operating Systems	0	0	3	3
4	Program Core Course	CS404	Formal Language and Automata Theory	0	0	3	3
5	Humanities and Social Sciences including Management courses	HSMC 402	Gender Culture and Development	0	0	2	2
6	Basic Science course	M401	Probability and Statistics	0	0	3	3
B. PRACTICAL							
6	Program Core Course	CS491	Computer Organization and Architecture Lab	0	3	3	1.5
7	Program Core Course	CS492	Design and Analysis of Algorithms Lab	0	3	3	1.5
8	Program Core Course	CS493	Operating Systems Lab	0	3	3	1.5
9	Engineering Science Courses	ESC(CT)491	IT Workshop Lab (C++/python)	0	3	3	1.5
10	PROJECT	PR491	Theme based Project IV	0	1	1	0.5
11	PROJECT	PR492	Skill Development	0	0	1	0.5

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			IV: Soft Skill & Aptitude-I				
C. MANDATORY ACTIVITIES / COURSES							
15	MC	MC481	Learning an Art Form [vocal or instrumental, dance, painting, clay modelling, etc.] OR Environmental Protection Initiatives	0	0	3	3 Units
TOTAL CREDIT WITHOUT MOOCS COURSES							24
D. MOOCS COURSES							
16	MOOCS COURSES	HM401	MOOCS COURSE-II				

*MOOCS COURSES for MAJOR/MINOR Degree are Programme specific and to be taken from the specific curriculum of MAJOR/MINOR.

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CURRICULUM								
3 rd Year 1st Semester: 5 th Semester								
Sl. NO	Category	Course Code	Course Title	Hours per week				Credits
				L	T	P	Total	
A. THEORY								
1	Humanities and Social Sciences including Management courses	HSMC 505	Principles of Management	2	0	0	2	2
2	Program Core Course	CS501	Compiler Design	3	0	0	3	3
3	Program Core Course	CS502	Database Management Systems	3	0	0	3	3
4	Program Core Course	CS503	Object Oriented Programming using Java	3	0	0	3	3
5	Professional Elective courses	CT501	Microprocessors and Microcontrollers	3	0	0	3	3
		CS501S	Advanced Computer Architecture	3	0	0	3	3

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		CT501D	Artificial Intelligence	3	0	0	3	3
		CT501A	Computer Graphics	3	0	0	3	3
B. PRACTICAL								
6	Program Core Course	CS591	Compiler Design Lab	0	0	3	3	1.5
7	Program Core Course	CS592	Database Management Systems Lab	0	0	3	3	1.5
8	Program Core Course	CS593	Object Oriented Programming using Java Lab	0	0	3	3	1.5
9	Professional Elective courses	CT591T	Microprocessors and Microcontrollers Lab	0	0	3	3	1.5
		CS591S	Advanced Computer Architecture Lab	0	0	3	3	1.5
		CT591D	Artificial Intelligence Lab	0	0	3	3	1.5
		CT591A	Computer Graphics Lab	0	0	3	3	1.5
10	PROJECT	PR591	Minor Project I	0	0	3	2	1

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11	PROJECT	PR592	Skill Development V: Soft Skill & Aptitude-II	1	0	0	1	0.5
C. MANDATORY ACTIVITIES / COURSES								
12	MC	MC501	Constitution of India	2	0	0	3	
	TOTAL CREDIT TOTAL CREDIT WITHOUT MOOCS COURSES							21.5
D. MOOCS COURSES**								
13	MOOCS COURSES	HM501	MOOCS COURSE-III					

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CURRICULUM								
3 rd Year 2nd Semester: 6 th Semester								
Sl. NO	Category	Course Code	Course Title	Hours per week				Credits
				L	T	P	Total	
A. THEORY								
1	Humanities and Social Sciences including Management courses	HSMC 604	Economics for Engineers	2	0	0	2	2
2	Program Core Course	CS601	Computer Networks	3	0	0	3	3
3	Program Core Course	CS602	Software Engineering	3	0	0	3	3
4	Professional Elective courses	CT601T	Advanced Algorithms	3	0	0	3	3
		CS601S	Advanced Operating Systems	3	0	0	3	3
		CS601D	Machine Learning	3	0	0	3	3
		CS601A	Web and Internet Technology	3	0	0	3	3
5	Professional Elective courses	CS602T	Parallel and Distributed Algorithms	3	0	0	3	3

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		CS602S	Embedded Systems	3	0	0	3	3
		CS602D	Soft Computing	3	0	0	3	3
		CS602A	Human Computer Interaction	3	0	0	3	3
6	Open Elective courses	CS601A	Introduction to Internet of Things	3	0	0	3	3
		CS601B	Bio-informatics	3	0	0	3	3
		CS601C	Robotics	3	0	0	3	3
B. PRACTICAL								
7	Program Core Course	CS691	Computer Networks Lab	0	0	3	3	1.5
8	Program Core Course	CS692	Software Engineering Lab	0	0	3	3	1.5
9	Professional Elective courses	CT691T	Advanced Algorithms Lab	0	0	3	3	1.5
		CS691S	Advanced Operating Systems Lab	0	0	3	3	1.5
		CS691D	Machine Learning Lab	0	0	3	3	1.5

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		CS691A	Web and Internet Technology Lab	0	0	3	3	1.5
10	PROJECT	PR691	Minor Project II	0	0	3	2	1
11	PROJECT	PR692	Skill Development VI:	1	0	0	1	0.5
			Soft Skill & Aptitude-III					
C. MANDATORY ACTIVITIES / COURSES								
12	MC	MC601	Intellectual Property Right	2	0	0	2	
	TOTAL CREDIT TOTAL CREDIT WITHOUT MOOCS COURSES							23
D. MOOCS COURSES**								
13	MOOCS COURSES	HM601	MOOCS COURSE-IV					

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CURRICULUM								
4 th Year 1st Semester: 7 th Semester								
Sl. NO	Category	Course Code	Course Title	Hours per week				Credits
				L	T	P	Total	
A. THEORY								
1	Professional Elective courses	CS701T	Information Theory and Coding	3	0	0	3	3
		CS701S	Ad-Hoc and Sensor Networks	3	0	0	3	3
		CS701D	Data Mining and Data Warehousing	3	0	0	3	3
		CS701A	Cloud Computing	3	0	0	3	3
2	Professional Elective courses	CS702T	Quantum Computing	3	0	0	3	3
		CS702S	Mobile Computing	3	0	0	3	3
		CS702D	Natural Language Processing	3	0	0	3	3
		CS702A	Cryptography and Network Security	3	0	0	3	3
3	Open Elective courses	CS701A	High Performance Computing	3	0	0	3	3
		CT701B	VLSI	3	0	0	3	3

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		CS701C	Optimization Techniques	3	0	0	3	3
4	Open Elective courses	CS702A	Cyber Law and Ethics	3	0	0	3	3
		CS702B	Soft Skills and Interpersonal Communication	3	0	0	3	3
		CS702C	Foreign Language	3	0	0	3	3
B. PRACTICAL								
5	Professional Elective courses	CS791T	Information Theory and Coding Lab	0	0	3	3	1.5
		CS791S	Ad-Hoc and Sensor Networks Lab	0	0	3	3	1.5
		CS791D	Data Mining and Data Warehousing Lab	0	0	3	3	1.5
		CS791A	Cloud Computing Lab	0	0	3	3	1.5
6	Open Elective courses	CS791A	High Performance Computing Lab	0	0	3	3	1.5
		CT791B	VLSI Lab	0	0	3	3	1.5
		CS791C	Optimization Techniques Lab	0	0	3	3	1.5
7	PROJECT	PR791	Major Project-I	0	0	0	4	2

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8	PROJECT	PR792*	Industrial Training / Internship	0	0	0	0	1
9	PROJECT	PR793	Skill Development VII: Seminar & Group Discussion	1	0	0	1	0.5
C. MANDATORY ACTIVITIES / COURSES								
10	MC	MC781	Entrepreneurship & Innovation Skill	2	0	0	2	
	TOTAL CREDIT TOTAL CREDIT WITHOUT MOOCS COURSES							18.5
D. MOOCS COURSES**								
11	MOOCS COURSES	HM701	MOOCS COURSE-V					

*MOOCS COURSES for MAJOR/MINOR Degree are Programme specific and to be taken from the specific curriculum of MAJOR/MINOR.

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CURRICULUM								
4 th Year 2nd Semester: 8 th Semester								
Sl. NO	Category	Course Code	Course Title	Hours per week				Credits
				L	T	P	Total	
A. THEORY								
1	Professional Elective courses	CS801T	Advance Graph Algorithms	3	0	0	3	3
		CS801S	Real Time Systems	3	0	0	3	3
		CS801D	Data Analytics	3	0	0	3	3
		CT801A	Image Processing	3	0	0	3	3
2	Open Elective courses	CS801A	Human Resource Development and organizational behaviour	3	0	0	3	3
		CS801A	Block Chain	3	0	0	3	3

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		CS801C	Simulation and Modelling	3	0	0	3	3
3	Open Elective courses	CS802A	Values and Ethics in Profession	3	0	0	3	3
		CS802B	History of Science	3	0	0	3	3
		CS802C	Economic Policies in India	3	0	0	3	3
B. PRACTICAL								
7	PROJECT	PR891	Major Project-II	0	0	0	12	6
8	PROJECT	PR892	Grand Viva	0	0	0	0	1
C. MANDATORY ACTIVITIES / COURSES								
12	MC	MC801	Essence of Indian Knowledge Tradition	0	0	3	3	3 Units
	TOTAL CREDIT							16

R23 (B. Tech CST)

Curriculum & Syllabus for B. Tech
under Autonomy (NEP 2020 Implemented)

Computer Science and Technology

(Effective from 2023-24 admission batch)

Department: Computer Science & Technology
Curriculum Structure & Syllabus
(Effective from 2023-24 admission batch)

1 st Year 1 st Semester									
Sl.No.	Broad Category	Category	Course Code	Course Title	Hours per week				Credits
					L	T	P	Total	
A.THEORY									
1	ENGG	Major	CT101	Programming for Problem Solving	3	0	0	3	3
2	SCI	Multidisciplinary	CH(CT)101	Engineering Chemistry	2	0	0	2	2
3	SCI	Multidisciplinary	M(CT)101	Engineering Mathematics –I	3	0	0	3	3
4	HUM	Ability Enhancement Course	HU101	Professional Communication	2	0	0	2	2
5	HUM	Value added course	HU102	Values and Ethics	2	0	0	2	2
6	HUM	Value added course	HU103	Constitution of India	1	0	0	1	1
B.PRACTICAL									
1	ENGG	Major	CT191	Programming for Problem Solving Lab	0	0	3	3	1.5
2	HUM	Ability Enhancement Course	HU191	Professional Communication Lab	0	0	2	2	1
3	SCI	Skill enhancement course	CH(CT)191	Engineering Chemistry Lab	0	0	2	2	1
4	ENGG	Skill enhancement course	ME(CT)191	Workshop & Manufacturing Practices Lab	0	0	3	3	1.5
Total of Theory & Practical								23	18

*HUM: Humanities; ENGG: Engineering; SCI: Science; PRJ: Project;

1 st Year 2 nd Semester									
Sl. No.	Broad Category	Category	Course Code	Course Title	Hours per week				Credits
					L	T	P	Total	
A.THEORY									
1	ENGG	Major	CT201	Data Structures	3	0	0	3	3
2	ENGG	Minor	EE(CT)201	Basic Electrical & Electronics Engineering	3	0	0	3	3
3	SCI	Multidisciplinary	PH(CT)201	Engineering Physics	3	0	0	3	3
4	SCI	Multidisciplinary	M(CT)201	Engineering Mathematics –II	3	0	0	3	3
5	HUM	Value added course	HU204	Environmental Science	2	0	0	2	2
6	HUM	Value added course	HU205	Indian Knowledge System	1	0	0	1	1
B.PRACTICAL									
1	ENGG	Major	CT291	Data Structures Lab	0	0	3	3	1.5
2	ENGG	Minor	EE(CT)291	Basic Electrical & Electronics Engineering Lab	0	0	3	3	1.5
3	HUM	Ability Enhancement Course	HU292	Design Thinking Lab	0	0	2	2	1
4	SCI	Skill enhancement course	PH(CT)291	Engineering Physics Lab	0	0	3	3	1.5
5	ENGG	Skill enhancement course	ME(CT)291	Engineering Graphics & Design Lab	0	0	3	3	1.5
Total of Theory & Practical								29	22

2nd Year 4th Semester									
Sl. No.	Broad Category	Category	Course Code	Course Title	Hours per week				Credits
					L	T	P	Total	
A.THEORY									
1	ENGG	Major	CT401	Operating Systems	3	0	0	3	3
3	ENGG	Major	CT402	Computer Networks	3	0	0	3	3
	ENGG	Major	CT403	Formal Language and Automata Theory	3	0	0	3	3
4	SCI	Minor	M(CT)401	Probability and Statistics	3	0	0	3	3
5	HUM	Ability Enhancement Course	HU(CT)401	Principles of Management	2	0	0	2	2
B.PRACTICAL									
1	ENGG	Major	CT491	Operating Systems Lab	0	0	3	3	1.5
2	ENGG	Major	CT492	Computer Networks Lab	0	0	3	3	1.5
3	ENGG	Major	CT493	Programming lab using Python	0	0	3	3	1.5
4	ENGG	Minor	M(CT)491	Numerical Methods Lab	0	0	3	3	1.5
5	HUM	Ability Enhancement Course	HU(CT)491	Soft Skill & Aptitude	2	0	0	2	1
Total of Theory & Practical								27	21

4 th Year 7 th Semester									
Sl. No.	Broad Category	Category	Course Code	Course Title	Hours per week				Credits
					L	T	P	Total	
A.THEORY									
1	ENGG	Major	CT701	Artificial Neural Networks &Deep Learning	3	0	0	3	3
2	ENGG	Major	CT702A	Advanced Computer Architecture	3	0	0	3	3
			CT702B	Advanced Operating systems					
			CT702C	Advanced Algorithms					
3	ENGG	Major	CT703A	Data mining and warehousing	3	0	0	3	3
			CT703B	Ad-Hoc Sensor Networks					
			CT703C	Information Theory and Coding					
4	HUM	Minor	HU(CT)701	Human Resource Develop- ment and Organizational Behavior	2	0	0	2	2
B.PRACTICAL									
1	ENGG	Major	CT791	Artificial Neural Networks and Deep Learning Lab	0	0	3	3	1.5
2	ENGG	Major	CT792A	Advanced Computer Architecture Lab	0	0	3	3	1.5
			CT792B	Advanced Operating Systems Lab					
			CT792C	Advanced Algorithms Lab					
3	PRJ	Project	CT781	Major Project-I	0	0	12	12	6
Total of Theory & Practical								29	20

4 th Year8 th Semester									
Sl No.	Broad Category	Category	Course Code	Course Title	Hours per week				Credits
					L	T	P	Total	
A.THEORY									
1	ENGG	Major	CT801A	Soft Computing	3	1	0	4	4
			CT801B	Real-Time Systems					
			CT801C	Data Analytics					
2	ENGG	Major	CT802A	Bio-informatics	3	1	0	4	4
			CT802B	Robotics					
			CT802C	VLSI Design and Applications					
3	ENGG	Minor	CS(CT)803A	Image Processing	3	0	0	3	3
			M(CT)803B	Optimization Techniques					
			EC(CT)803C	Introduction to Internet of Things					
B.PRACTICAL									
1	ENGG	Minor	CS(CT)893A	Image Processing Lab	0	0	3	3	1.5
			M(CT)893B	Optimization Techniques Lab					
			EC(CT)893C	Internet of Things Lab					
2			CT881	Grand Viva	0	0	0	0	1.5
3	PRJ	Project	CT882	Major Project-II	0	0	12	12	6
Total of Theory & Practical								26	20

Total Credit = 162

R23 [B. Tech CSE (AI & ML)]

Curriculum & Syllabus for B. Tech UnderAutonomy (NEP-2020 Implemented)

CSE (AI & ML)

(Effective from 2023-24 admission batch)

Department: CSE (AI & ML)
Curriculum Structure & Syllabus (Effective from 2023-24 admission batch)

		1st Year 1st Semester							
Sl. No.	Broad Category	Category	Course Code	Course Title	Hours per week				Credits
					L	T	P	Total	
A. THEORY									
1	ENGG	Major	AM101	Programming for Problem Solving	3	0	0	3	3
2	SCI	Multidisciplinary	M(AM)101	Engineering Mathematics –I	3	0	0	3	3
3	SCI	Multidisciplinary	CH(AM)101	Engineering Chemistry	2	0	0	2	2
4	HUM	Ability Enhancement Course	HU101	Professional Communication	2	0	0	2	2
5	HUM	Value Added Course	HU102	Value and Ethics	2	0	0	2	2
6	HUM	Value Added Course	HU103	Constitution of India	1	0	0	1	1
B. PRACTICAL									
1	ENGG	Major	AM191	Programming for Problem Solving Lab	0	0	3	3	1.5
2	HUM	Ability Enhancement Course	HU191	Professional Communication Lab	0	0	2	2	1
3	SCI	Skill enhancement Course	CH(AM)191	Engineering Chemistry Lab	0	0	2	2	1
4	ENGG	Skill Enhancement Course	ME(AM)191	Workshop & Manufacturing Practices Lab	0	0	3	3	1.5
Total of Theory and Practical								23	18

**HUM: Humanities; ENGG: Engineering; SCI: Science; PRJ: Project*

1 st Year 2 nd Semester									
Sl. No.	Broad Category	Category	Course Code	Course Title	Hours per week				Credits
					L	T	P	Total	
A. THEORY									
1	ENGG	Major	AM201	Data Structures	3	0	0	3	3
2	ENGG	Minor	EE(AM)201	Basic Electrical and Electronics Engineering	3	0	0	3	3
3	SCI	Multidisciplinary	PH(AM)201	Engineering Physics	3	0	0	3	3
4	SCI	Multidisciplinary	M(AM)201	Engineering Mathematics – II	3	0	0	3	3
5	HUM	Value Added Course	HU204	Environmental Science	2	0	0	2	2
6	HUM	Value Added Course	HU205	Indian Knowledge System	1	0	0	1	1
B. PRACTICAL									
1	ENGG	Major	AM291	Data Structures Lab	0	0	3	3	1.5
2	ENGG	Minor	EE(AM)291	Basic Electrical and Electronics Engineering Lab.	0	0	3	3	1.5
3	HUM	Ability Enhancement Course	HU292	Design Thinking	0	0	2	2	1
4	SCI	Skill enhancement course	PH(AM)291	Engineering Physics Lab	0	0	3	3	1.5
5	ENGG	Skill Enhancement Course	ME(AM)291	Engineering Graphics & Design Lab	0	0	3	3	1.5
Total of Theory and Practical								29	22

2 nd Year 3 rd Semester									
Sl. No.	Broad Category	Category	Course Code	Course Title	Hours per week				Credits
					L	T	P	Total	
A. THEORY									
1	ENGG	Major	AM301	Computer Organization and Architecture	3	0	0	3	3
2	ENGG	Major	AM302	Design and Analysis of Algorithms	3	0	0	3	3
3	SCI	Minor	M(AM)301	Discrete Mathematics	3	0	0	3	3
4	ENGG	Minor	EC(AM)301	Analog and Digital Electronics	3	0	0	3	3
		B. PRACTICAL							
1	ENGG	Major	AM391	Computer Organization and Architecture Lab	0	0	3	3	1.5
2	ENGG	Major	AM392	Design and Analysis of Algorithms Lab	0	0	3	3	1.5
3	ENGG	Minor	EC(AM)391	Analog and Digital Electronics Lab	0	0	3	3	1.5
5	ENGG	Skill Enhancement Course	AM393	IT Workshop Lab (SciLab/MATLAB/C++)	0	1	3	4	2.5
Total of Theory and Practical								26	19

2nd Year 4th Semester									
Sl. No.	Broad Category	Category	Course Code	Course Title	Hours per week				Credits
					L	T	P	Total	
A. THEORY									
1	ENGG	Major	AM401	Operating Systems	3	0	0	3	3
2	ENGG	Major	AM402	Formal Language and Automata Theory	3	0	0	3	3
3	ENGG	Major	AM403	Object Oriented Programming using Java	3	1	0	3	4
4	SCI	Minor	M(AM)401	Probability and Statistics	3	0	0	3	3
5	HUM	Ability Enhancement Course	HU(AM)401	Principles of Management	2	0	0	2	2
B. PRACTICAL									
1	ENGG	Major	AM491	Operating Systems Lab	0	0	3	3	1.5
2	ENGG	Minor	M(AM) 492	Numerical Methods Lab	0	0	3	3	1.5
3	ENGG	Major	AM493	Object Oriented Programming Lab using Java	0	0	3	3	1.5
4	ENGG	Major	AM494	Programming Using Python	0	0	3	3	1.5
5	HUM	Ability Enhancement Course	HU(AM)491	Soft Skill & Aptitude	2	0	0	2	1
Total of Theory and Practical								27	22

3 rd Year 5 th Semester									
Sl. No.	Broad Category	Category	Course Code	Course Title	Hours per week				Credits
					L	T	P	Total	
A. THEORY									
1	ENGG	Major	AM501	Artificial Intelligence	3	0	0	3	3
2	ENGG	Major	AM502	Database Management Systems	3	0	0	3	3
3	ENGG	Major	AM503	Computer Networks	3	0	0	3	3
4	ENGG	Major	AM504A	Compiler Design	3	0	0	3	3
			AM504B	Cryptography and Network Security					
			AM504C	Computer Graphics					
5	HUM	Minor	HU(AM)501	Economics for Engineers	2	0	0	2	2
B. PRACTICAL									
1	ENGG	Major	AM591	Artificial Intelligence Lab	0	0	3	3	1.5
2	ENGG	Major	AM592	Database Management Systems Lab	0	0	3	3	1.5
3	ENGG	Major	AM593	Computer Networks Lab	0	0	3	3	1.5
4		Internship	AM581	Internship/Industrial Training	0	0	2	2	2
Total of Theory and Practical								25	20.5

3 rd Year 6 th Semester									
Sl. No.	Broad Category	Category	Course Code	Course Title	Hours per week				Credits
					L	T	P	Total	
A. THEORY									
1	ENGG	Major	AM601	Machine Learning	3	1	0	4	4
2	ENGG	Major	AM602	Digital Image Processing	3	0	0	3	3
3	ENGG	Major	AM603	Natural Language Processing	3	0	0	3	3
4	ENGG	Major	AM604A	Mobile Computing	3	0	0	3	3
			AM604B	Quantum Computing					
			AM604C	Cloud Computing					
5	HUM	Minor	HU(AM)605	Cyber Law and Ethics	3	0	0	3	3
B. PRACTICAL									
1	ENGG	Major	AM691	Machine Learning Lab	0	0	3	3	1.5
2	ENGG	Major	AM692	Digital Image Processing Lab	0	0	3	3	1.5
3	ENGG	Major	AM693	Natural Language Processing Lab	0	0	3	3	1.5
Total of Theory and Practical								25	20.5

4 th Year 7 th Semester									
Sl. No.	Broad Category	Category	Course Code	Course Title	Hours per week				Credits
					L	T	P	Total	
A. THEORY									
1	ENGG	Major	AM701	Neural Networks and Deep Learning	3	0	0	3	3
2	ENGG	Major	AM702A	Computer Vision	3	0	0	3	3
			AM702B	Parallel Computing					
			AM702C	Web Technology					
3	ENGG	Major	AM703A	Information Retrieval and Data Mining	3	0	0	3	3
			AM703B	Soft Computing					
			AM703C	Software Engineering					
4	HUM	Minor	HU(AM)701	Human Resource Development and Organizational Behavior	2	0	0	2	2
B. PRACTICAL									
1	ENGG	Major	AM791	Neural Networks and Deep Learning Lab	0	0	3	3	1.5
2	ENGG	Major	AM792A	Computer Vision Lab	0	0	3	3	1.5
			AM792B	Parallel Computing Lab					
			AM792C	Web Technology Lab					
3	ENGG	PRJ	AM781	Major Project-I	0	0	12	12	6
Total of Theory and Practical								29	20

4 th Year 8 th Semester									
Sl. No.	Broad Category	Category	Course Code	Course Title	Hours per week				Credits
					L	T	P	Total	
A. THEORY									
1	ENGG	Major	AM801A	Big Data Analytics	3	1	0	4	4
			AM801B	Block Chain and Crypto Currency Technologies					
			AM801C	Cyber Security					
2	ENGG	Major	AM802A	VLSI Design and Application	3	1	0	4	4
			AM802B	Bioinformatics					
			AM802C	Robotics					
3	ENGG	Minor	CS(AM)803A	Wireless Sensor Network and IoT	3	0	0	3	3
			CS(AM)803B	Information Theory and Coding					
			CS(AM)804C	Optimization Techniques					
B. PRACTICAL									
1	ENGG	Minor	CS(AM)893A	Wireless Sensor Network and IoT Lab	0	0	3	3	1.5
			CS(AM)893B	Information Theory and Coding Lab					
			CS(AM)893C	Optimization Techniques Lab					
2	ENGG	PRJ	PR(AM)881	Major Project-II	0	0	12	12	06
3			AM882	Grand Viva	0	0	0	0	1.5
Total of Theory and Practical								26	20

Total Credit = 162