Maulana Abul Kalam Azad University of Technology, West Bengal
(Formerly West Bengal University of Technology)
Syllabus for B. Tech in Computer Science & Engineering
(Applicable from the academic session 2018-2019)

Curriculum Structure

Sl. No.	Type of course	Code	Course Title	L	T	P	Credits
Semester III (Second year)							
				Hours per week			Credits
				L	T	P	
Theory							
1	Engineering Science Course	ESC 301	Analog and Digital Electronics	3	0	0	3
2	Professional Core Courses	PCC-CS301	Data Structure & Algorithms	3	0	0	3
3	Professional Core Courses	PCC-CS302	Computer Organisation	3	0	0	3
4	Basic Science course	BSC 301	Mathematics-III (Differential Calculus)	2	0	0	2
5	Humanities & Social Sciences including Management courses	HSMC 301	Economics for Engineers (Humanities-II)	3	0	0	3
Practical							
6	Professional Core Courses	PCC-CS393	IT Workshop (Sci Lab/MATLAB/Python/R)	0	0	4	2
7	Engineering Science Course	ESC 391	Analog and Digital Electronics	0	0	4	2
8	Professional Core Courses	PCC-CS391	Data Structure & Algorithms	0	0	4	2
9	Professional Core Courses	PCC-CS392	Computer Organisation	0	0	4	2
			Total credits				**22**
Semester IV (Second year)							
Sl. No.	Type of course	Code	Course Title	L	T	P	Credits
				Hours per week			Credits
				L	T	P	
Theory							
1	Professional Core Courses	PCC-CS401	Discrete Mathematics	3	1	0	4
2	Professional Core Courses	PCC-CS 402	Computer Architecture	3	0	0	3
3	Professional Core Courses	PCC-CS403	Formal Language & Automata Theory	3	0	0	3

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4	Professional Core Courses	PCC-CS404	Design & Analysis of Algorithms	3	0	0	3
5	Basic Science courses	BSC 401	Biology	2	1	0	3
6	Mandat ory Courses	MC401	Environmental Sciences	1	-	-	1
Practical							
7	Engineering Science Course	PCC-CS 492	Computer Architecture	0	0	4	2
8	Professional Core Courses	PCC-CS494	Design & Analysis of Algorithms	0	0	4	2
						Total credits	**21**

Semester V (Third year)							
Sl. No.	Type of course	Code	Course Title	Hours per week			Credits
				L	T	P	
1	Engineering Science Course	ESC501	Software Engineer ing	3	0	0	3
2	Professional Core Courses	PCC-CS501	Compiler Design	3	0	0	3
3	Professional Core Courses	PCC-CS502	Operating Systems	3	0	0	3
4	Professional Core Courses	PCC-CS503	Object Oriented Programming	3	0	0	3
5	Humanities &Social Sciences including Management courses	HSMC-501	Introduction to Industrial Management (Humanities III)	3	0	0	3
6	Professional Elective	PEC-IT 501A/B/C/D	(Elective-I) Theory of	3	0	0	3

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	courses		Computation/Artificial Intelligence/ Advanced Computer Architecture/ Computer Graphics				
7	Mandatory Courses	MC- CS501	Constitution of India/ Essence of Indian Knowledge Tradition	-	-	-	0
Practical							
8	Professional Core Courses	ESC-591	Software Engineering		0	4	2
9	Professional Core Courses	PCC-CS592	Operating Systems		0	4	2
10	Professional Core Courses	PCC-CS593	Object Oriented Programming		0	4	2
				Total credits			**24**

Semester VI (Third year)							
Sl. No.	**Type of course**	**Code**	**Course Title**	**Hours per week**			**Credits**
				L	**T**	**P**	
1	Professional Core Courses	PCC-CS601	Database Management Systems	3	0	0	3
2	Professional Core Courses	PCC-CS602	Computer Networks	3	0	0	3
3	Professional Elective courses	PEC-IT601A/B/C/D	(Elective-II) Advanced Algorithms/ Distributed Systems/ Signals & Systems / Image Processing	3	0	0	3
4	Professional Elective courses	PEC-IT602A/B/C/D	(Elective-III) Parallel and Distributed Algorithms/ Data Warehousing & Data Mining/Human Computer Interaction/Pattern Recognition	3	0	0	3

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5	Open Elective courses	OEC-IT601A/B	(Open Elective-) Numerical Methods/ Human Resource Development and Organizational Behavior	3	0	0	3
6	Project	PROJ-CS601	Research Methodology	3	0	0	3
Practical							
7	Professional Core Courses	PCC-CS691	Database Management Systems	0	0	4	2
8	Professional Core Courses	PCC-CS692	Computer Networks	0	0	4	2
			Total credits				**22**

Semester VII (Fourth year]							
Sl. No.	Type of course	Code	Course Title	Hours per week			Credits
				L	T	P	
1	Professional Elective courses	PEC-CS701A/B/C/D/E	(Elective-IV) Quantum Computing/ Cloud Computing/ Digital Signal Processing/Multi-agent Intelligent Systems/Machine learning	3	0	0	3
2	Professional Elective courses	PEC-CS702A/B/C/D/E	(Elective-V) Neural Networks and Deep Learning/ Soft Computing/ Ad-Hoc and Sensor Networks/Information Theory and Coding/Cyber Security	3	0	0	3
3	Open Elective courses	OEC-CS701A/B/C	(Open Elective-II) Operations Research/Multimedia Systems/Introduction to Philosophical Thoughts	3	0	0	3
4	Humanities &Social	HSM	Project Management and	2	1	0	3

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	Sciences including Management courses	C 701	Entrepreneurship				
5	Project	PROJ-CS781	Project-II	0	0	12	6
			Total credits				**18**

Semester VIII (Fourth year)							
[Summer Industry Internship]							
Sl. No.	Type of course	Code	Course Title	Hours per week			Credits
				L	T	P	
1	Professional Elective courses	PEC-CS801A/ B/C/D/E	(Elective-VI) Signals and Networks/Cryptography & Network Security/ Speech and Natural Language Processing/ Web and Internet Technology/Internet of Things	3	0	0	3
2	Open Elective courses	OEC-CS801A/B/ C/D/E	Open Elective-III Big Data Analysis/Cyber Law and Ethics/ Mobile Computing/Robotics/Soft Skill & Interpersonal Communication	3	0	0	3
3	Open Elective courses	OEC-CS802A/B/ C	(Open Elective-IV) E-Commerce and ERP/Micro-electronics and VLSI Design/Economic Policies in India	3	0	0	3
4	Project	PROJ-CS881	Project-III	0	0	12	6
			Total credits				**15**