Maulana Abul Kalam Azad University of Technology, West Bengal
(Formerly West Bengal University of Technology)
Syllabus of B. Tech. in Computer Science and Business Systems
(Applicable from the Academic Session 2020-2021)

Curriculum Structure
First Year First Semester

Mandatory Induction Program- 3 week's duration

Sl No.	Category	Subject Code	Subject Name	Total Number of Contact hours			Credits
				L	T	P	
Theory							
1	Basic Science Course	BS-PH101/ BS-CH101	Physics-I (Gr-A)/ Chemistry-I(Gr-B)	3	1	0	4
2	Basic Science Course	BS-M101/ BS-M102	Mathematics –IA*/ Mathematics –IB *	3	1	0	4
3	Engineering Science Courses	ES-EE101	Basic Electrical Engineering	3	1	0	4
		Total Theory		9	3	0	12
Practical							
1	Basic Science Course	BS-PH191/ BS-CH191	Physics-I Laboratory(Gr-A) / Chemistry-I Laboratory (Gr-B)	0	0	3	1.5
2	Engineering Science Courses	ES-EE191	Basic Electrical Engineering Laboratory	0	0	2	1
3	Engineering Science Courses	ES-ME191/ ES-ME192	Engineering Graphics & Design(Gr-B)/ Workshop/Manufacturing Practices(Gr-A)	1	0	4	3
		Total Practical		1	3	9	5.5
		Total credit for First Semester		10	3	9	17.5

* **Mathematics –IA (BS-M101) - CSE, IT, AI&ML, CSBS and DS**
Mathematics –IB (BS-M102) - All stream except CSE, IT, AI&ML, CSBS and DS

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Sl No.	Category	Subject Code	Subject Name	Total Number of Contact hours			Credits
				L	T	P	
Second Semester							
Theory							
1	Basic Science Course	BS-PH201/ BS-CH201	Physics-I (Gr-B)/ Chemistry-I (Gr-A)	3	1	0	4
2	Basic Science Course	BS-M201/ BS-M202	Mathematics –IIA#/ Mathematics –IIB #	3	1	0	4
3	Engineering Science Courses	ES-CS201	Programming for Problem Solving	3	0	0	3
4	Humanities and Social Sciences including Management Courses	HM-HU201	English	2	0	0	2
		Total Theory		11	2	0	13
Practical							
1	Basic Science courses	BS-PH291/ BS-CH291	Physics-I Laboratory (Gr-B)/ Chemistry-I Laboratory (Gr-A)	0	0	3	1.5
2	Engineering Science Courses	ES-CS291	Programming for Problem Solving	0	0	4	2
3	Engineering Science Courses	ES-ME291 / ES-ME292	Engineering Graphics & Design(Gr-A)/ Workshop/Manufacturing Practices(Gr-B)	1	0	4	3
4	Humanities and Social Sciences including Management courses	HM-HU291	Language Laboratory	0	0	2	1
		Total Practical		1	0	13	7.5
		Total of Second Semester		12	2	13	20.5

 # Mathematics –II (BS-M201) - CSE , IT, AI&ML and DS
Mathematics –II (BS-M202) - All stream except CSE, IT, AI&ML and DS

	Group-A	Group-B
1st Year 1st Semester	Physics-I (BS-PH101); Workshop/Manufacturing Practices(ES-ME192)	Chemistry-I (BS-CH101); Engineering Graphics & Design (ES-ME191)
1stYear 2nd Semester	Chemistry-I (BS-CH201); Engineering Graphics & Design(ES-ME291)	Physics-I (BS-PH201); Workshop/Manufacturing Practices(ES-ME292)

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Semester III (Second year)

Theory

Sl. No.	Type of course	Code	Course Title	Hours per week			Credits
				Lecture	Tutorial	Practical	
1	Engineering Science Course	ESC-301	Digital Electronics	3	0	0	3
2	Professional Core Courses	PCC-CSBS301	Data Structure & Algorithms	3	0	0	3
3	Professional Core Courses	PCC-CSBS302	Discrete Mathematics	3	1	0	4
4	Humanities & Social Sciences including Management courses	HSMC-301	Economics for Engineers	3	0	0	3
5	Basic Science course	BSC-301	Computational Statistics	3	0	0	3
				15	1	0	
						Total credits	**16**

Practical

Sl. No.	Type of course	Code	Course Title	Hours per week			Credits
				Lecture	Tutorial	Practical	
1	Engineering Science Course	ESC-391	Digital Electronics Lab	0	0	2	1.5
2	Professional Core Courses	PCC-CSBS391	Data Structure & Algorithms Lab	0	0	4	3
3	Basic Science course	BSC-391	Computational Statistics Lab	0	0	2	1.5
				0	0	8	
						Total credits	**6**
			TOTAL CREDITS(Theory+Practical)				**22**

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Semester IV(Second year)

Sl. No.	Type of course	Code	Course Title	Hours per week			Credits
				L	T	P	
1		HSMC-401	Introduction to Innovation, IP Management & Entrepreneurship	2	1	0	3
2	Professional Core Courses	PCC-CSBS401	FORMAL LANGUAGE & AUTOMATA THEORY	2	1	0	3
3	Professional Core Courses	PCC-CSBS402	OBJECT ORIENTED PROGRAMMING	2	1	0	3
4	Professional Core Courses	PCC-CSBS403	COMPUTER ORGANIZATION & ARCHITECHTURE	2	1	0	3
5	Basic Science course	BSC 401	Biology	2	1	0	3
6	Mandatory Course	MC 401	Environmental Science	1	0	0	1
							16

Practical

Sl. No.	Type of course	Code	Course Title	Hours per week			Credits
				Lecture	Tutorial	Practical	
1		ESC-481	DESIGN THINKING	0	1	3	2.5
2		PCC -492	Object Oriented Programming with C++ Lab	0	0	4	2
3		PCC- 493	COMPUTER ORGANIZATION & ARCHITECHTURE	0	0	3	1.5
					Total credits		6
				TOTAL CREDITS(Theory+Practical)			22

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Semester V(Third year)

Sl No	Types of Course	Code	Course Title	Title Hours per week			Credit
				L	T	P	
1	Professional Core Courses	PCC-CSBS 501	Computer Networks	3	1	0	4
2	Engineering Science Course	ESC(CSBS) 501	Software Engineering	3	1	0	3
3	Professional Core Courses	PCC-CSBS 502	Database Management Systems	3	1	0	3
4	Humanities &Social Sciences including Management courses	HSMC (CSBS)-501	Business Strategy	3	0	0	3
5	Engineering Science Course	ESC(CSBS) 502	Machine Learning	2	0	0	2
6	Professional Elective – I	PEC-CSBS- 501 A/B/C	Computer Graphics / Artificial Intelligence /E-Commerce and ERP	3	1	0	3
7	Mandatory Courses	MC- CSBS 501	Constitution of India/ Essence of Indian Knowledge Tradition	1	0	0	0
				16	3	0	18
Practical							
	Professional Core Courses	PCC-CSBS 591	Computer Networks	0	0	3	2
	Professional Core Courses	PCC-CSBS 592	Database Management Systems	0	0	3	2
	Engineering Science Course	ESC 591	Software Engineering	0	0	3	2
				0	0	2	6