

Maulana Abul Kalam Azad University of Technology, WB
(Formerly known as West Bengal University of Technology)
Syllabus of B.Sc. in Computer Science
Effective from academic session 2023-24

Graduate Attribute:

Computer science is one of the most useful and booming discipline of study in today's world. Applications of computer science exist in almost all the segments of human society. Studying B.Sc in computer science is demand of the time. Within a given time bound frame work there are a number of points which can be considered as outcomes of the course.

After completion of the course, the learners should be able

- (i) To gain knowledge and skills about computer science, computer software, hardware and peripheral systems.
- (ii) To learn various techniques to solve the problems
- (iii) To have good idea about different organs of computer systems
- (iv) To use computers in real life necessities.
- (v) To discover the possibilities of the facts which are beneficial for mankind.
- (vi) To help learners choosing their right paths for making their careers.
- (vii) To prepare the learners to be familiar with the current practices of the industries.
- (viii) To find the ways for self- employment and entrepreneurships.
- (ix) To make the learners prepared for higher studies and researches.
- (x) To remain updated about current trends and practices in IT industries.

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Curriculum Structure

1st Semester

Sl No.	Subject Type	Subject Code	Subject Name	Credit Point	Credit Distribution		
					L	P	T
1	DSC	CS 101	Programming Fundamental – using C Language	3	3		
2		CS 191	Programming using C	2		2	
3		CS 102	Digital Electronics	3	3		
4		CS 192	Digital Electronics Lab	2		2	
5	DSE	MIM101	Principles of Management	3	3		
6	GE		Any one from GE baskets A or D	3	3		
7	AECC	AECC101	English & Professional Communication	2	2		
8	SEC	SEC181	Life Skills & Personality Development	2		2	
9	VAC	VAC181A/B/C	Yoga / Health & Wellness / Sports /	2		2	
Total Credit					22		

2nd Semester

Sl No.	Subject Type	Subject Code	Subject Name	Credit Point	Credit Distribution		
					L	P	T
1	DSC	CS 201	Data Structures	3	3		
2		CS 291	Data Structures Lab	2		2	
3		CS 202	Computer Organization	3	3		
4		CS 292	Computer Organization Lab.	2		2	
5	DSE	MIM201A/B	Organization Behaviour /Business Ethics & Corporate Governance	3	3		
6	GE		Any one from GE baskets B or E	3	3		
7	AECC	AECC201	Modern Indian Languages and Literature	2	2		
8	SEC	SEC281	IT Skills	2		2	
9	VAC	VAC281A/B/C/D	Critical Thinking/ NSS/ Mental Health/Environmental Studies	2		2	
Total Credit					22		

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3rd Semester

Sl No.	Subject Type	Subject Code	Subject Name	Credit Point	Credit Distribution		
					L	P	T
1	DSC	CS 301	Design and Analysis of Algorithm	3	3		
2		CS 391	Design and Analysis of Algorithm Lab	2		2	
3		CS302	Database Management Systems	3	3		
4		CS 392	Database Management Systems Lab	2		2	
5	DSE	MIM301A/B	Principles of Marketing / Business & Sustainability	4	3		1
6	GE		Any one from GE baskets C or F	3	3		
7	AECC	AECC301	The Constitution, Human Rights and Law	2	2		
8	SEC	SEC381	Understanding basics of Cyber Security	2		2	
Total Credit					21		

4th Semester

Sl No.	Subject Type	Subject Code	Subject Name	Credit Point	Credit Distribution		
					L	P	T
1	DSC	CS 401	Object Oriented Programming using JAVA	3	3		
2		CS 491	OOP using Java	2		2	
3		CS 402	Data Communication and Computer Networks	4	3		1
4		CS 403	Software Engineering	4	3		1
5	DSE	MIM401A/B	Human resource Management / Corporate Social Responsibility	4	3		1
6		MIM402A/B	Sales and distribution management / E-Commerce	4	3		1
7	AECC	AECC401A/B	Society Culture and Human Behavior / Universal Human Values	2	2		
Total Credit					23		

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5th Semester

Sl No.	Subject Type	Subject Code	Subject Name	Credit Point	Credit Distribution		
					L	P	T
1	DSC	CS 501	Operating Systems	3	3		
2		CS 591	Operating Systems Lab	2		2	
3		CS 502	Advanced Java Programming	3	3		
4		CS 592	Advanced Java Programming Lab	2		2	
5		CS 503	Cryptography and Information Security	4	3		1
6	DSE	MIM501	Financial management	4	3		1
7		MIM502	Entrepreneurship	4	3		1
Total Credit					22		

6th Semester

Sl No.	Subject Type	Subject Code	Subject Name	Credit Point	Credit Distribution		
					L	P	T
1	DSC	CS 601	Artificial Intelligence	3	3		
2		CS 691	Artificial Intelligence Lab	2		2	
3		CS602	Python Programming	3	3		
4		CS 692	Python Programming Lab	2		2	
5		CS 603	Soft Computing	4	3		1
6	DSE	MIM601	Customer relationship management	4	3		1
7		MIM602A/B	Career planning and management / Managing Workplace Diversity	4	3		1
Total Credit					22		

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B.Sc. in Computer Science (Honours)

7th Semester

Sl No.	Subject Type	Subject Code	Subject Name	Credit Point	Credit Distribution		
					L	P	T
1	DSC	CS 701	Machine Learning	3	3		
2		CS 791	Machine Learning Lab	2		2	
3		CS 702	Research Methodology	3	3		
4		CS 792	Research Methodology Lab	2		2	
5	DSE	MIM701A/B	Consumer Behaviour / Exploring Business Opportunity	4	3		1
6		MIM702A/B	Strategic management / Intellectual Property Rights	4	3		1
7	SEC	SEC 781	Industrial Training with Minor Project	4		4	
Total Credit					22		

8th Semester

Sl No.	Subject Type	Subject Code	Subject Name	Credit Point	Credit Distribution		
					L	P	T
1	DSC	CS 801	Cloud Computing	3	3		
2		CS 891	Cloud Computing Lab	2		2	
3		CS802	Web Technology	3	3		
4		CS 892	Web Technology Lab	2		2	
5		CS 803	Block Chain Technology	4	3		1
		CS 804	Management Information System	4	3		1
	SEC	SEC 881	Major Project	4		4	
Total Credit					22		

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B.Sc. in Computer Science (Honours with Research)

7th Semester

Sl No.	Subject Type	Subject Code	Subject Name	Credit Point	Credit Distribution		
					L	P	T
1	DSC	CS 701	Machine Learning	3	3		
2		CS 791	Machine Learning Lab	2		2	
3		CS 702	Research Methodology	3	3		
4		CS 792	Research Methodology Lab	2		2	
5	DSE	MIM701A/B	Consumer Behaviour / Exploring Business Opportunity	4	3		1
6		MIM702A/B	Strategic management / Intellectual Property Rights	4	3		1
7	SEC	SEC 781	Industrial Training with Minor Project	4		4	
Total Credit					22		

The Research Project / Dissertation (SEC 882) work will start from the beginning of fourth year (7th Semester)

8th Semester

Sl No.	Subject Type	Subject Code	Subject Name	Credit Point	Credit Distribution		
					L	P	T
1	DSC	CS 801	Cloud Computing	3	3		
2		CS 891	Cloud Computing Lab	2		2	
3		CS802	Web Technology	3	3		
4		CS 892	Web Technology Lab	2		2	
5	SEC	SEC 882	Research Project / Dissertation	12		12	
Total Credit					22		