

Maulana Abul Kalam Azad University of Technology, WB
(Formerly known as West Bengal University of Technology)
Curriculum structure for B.SC with Mathematics and Computer Applications
Effective from academic session 2023-24

Sem	Major (offline)	Minor (Blended Mode)	Inter Disciplinary (Offline)	Ability Enhancement (Offline)	Skill Enhancement (Online /Sessional)	Common Value added Course (SESSIONAL)	Total
I	Differential Calulus (5 credits)	Computer Fundamental (3 credits)	Any one from GE baskets Basket A or D (3 credits)	English & Professional Communication (2 credits)	Life Skills & Personality Development (2 credits)	Yoga/ Health & Wellness/ Sports / Physical Fitness and Wellness/Community Services (2 credits)	22
	Algebra-I (5 credits)						
II	Integral Calculus (5 credits)	Management Information System (3 credits)	Any one from GE baskets Basket B or E (3 credits)	Modern Indian Languages and Literature (2 credits)	IT Skills (2 Credits)	Critical Thinking / NSS/ Mental Health/ Environmental Studies (2 credits)	22
	Algebra-II (5 credits)						
III	Real Analysis (5 credits)	Word and PowerPoint & Spreadsheet Application with Excel/ R programming & Data Analytics (4 credits)	Any one from GE baskets Basket C or F (3 credits)	The Constitution, Human Rights and Law (2 credits)	Understanding basics of Cyber Security (2 Credits)		21
	Ordinary Differential Equations (5 credits)						
IV	Integral Transform (4 credits)	Basics of Operating System/ Database Management with SQL/ PHP Programming & Web Development (4 credits)		Society Culture and Human Behavior / Universal Human Values (UHV) (2 credits)			23
	Partial Differential equations (4 credits)	Graphic Design with Photoshop and Illustrator/ Unix And Shell Programming/ Advanced Excel & Data Analytics (4 credits)					
	Geometry (2D and 3D) & Vector analysis (5 credits)						
V	Metric Space & Complex Analysis (5 credits)	Cloud Computing /Introduction to Computer Network (4 credits)			Internship to be started after exam of 4th sem (sem break) and completed within 5th sem (weekends) (4 credits)		22
	Numerical Methods (3L+2P) (5 credits)	E-commerce and Application (4 credits)					
VI	Probability and Statistics (5 credits)	Web Development with HTML and CSS/ Data Mining & Data Warehousing (4 credits)					22
	Topology and Differential Geometry (5 credits)	Internet and Networking /ERP (4 credits)					

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	Linear Programming and Game Theory (4 credits)						
VII	Number theory and cryptography (4 credits)	Software Project Management /Introduction To Cyber Security and Cyber Laws/ Machine Learning with Python (4 credits)					22
	Non-Linear Programming and Optimization Techniques (5 credits)						
	Elective-I (5 credits)	Digital Marketing/ Data Analysis and Interpretation/ Data Analysis & Reporting using SAS (4 credits)					
VIII	Discrete Mathematics (5 credits)				Research Project (12 credits)	22	
	Elective-II (5 credits)						
	19 sub - 91 credits	11 sub -42 credits	3 sub – 09 credits	4 sub – 08 credits	3 sub & Int & Proj - 22 credits	2 sub – 4 credits	176

Choice of Electives

Elective-I	Elective-II
Introduction to Algebraic Topology and Topological Data Analysis	Functional analysis
Mechanics-I	Mechanics-II
Discrete and Continuous Dynamical system	Astrophysics
Quantum Mechanics	Computational Biology
Design and analysis of algorithms	Soft computing
Vedic Mathematics	Industrial Mathematics