

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

Curriculum structure for B.SC in Biotechnology with Minor in Computer Effective from academic session 2023-24

Sem	Major (Offline)	Minor (Blended Mode) (Computer chain)	Inter Disciplinary (Offline)	Ability Enhancement (Offline)	Skill Enhancement (Online /Sessional)	Common Value added Course (SESSIONAL)	Total credits
I	BMBT 1101 Biochemistry BMBT 1191 Lab on Biochemistry 5 credits (3L+2P)	M01: 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/Comm unity Services (2 credits)	22
	BMBT 1102 Cell Biology BMBT1192 Lab on cell Biology 5 credits (3L+2P)						
II	BMBT2101 Basic microbiology BMBT2191 Lab on Basic microbiology 5 credits (3L+2P)	M02: 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 / Monetizing Social Media or Design Thinking (2 credits)	Critical Thinking / NSS/ Mental Health/ Environmental Studies (2 credits)	22

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	BMBT2102 Plant and mammalian physiology BMBT2192 Lab on Plant and mammalian physiology 5 credits (3L+2P)						
III	BMBT 3201 Molecular Biology BMBT 3291 Lab on Molecular Biology 5 credits (3L+2P) BMBT3202 Enzymology and Enzyme Technology	M03: Word and PowerPoint & Spreadsheet Application with Excel (4 credits)	Any one from GE baskets Basket C or F (3 credits)	The Constitution and Human Rights (2 credits)/	Understanding basics of Cyber Security (2 credits)		21

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	<p>BMBT3292 Lab on Enzymology and Enzyme Technology 5 credits (3L+2P)</p>						
IV	<p>BMBT 4201 Bioanalytical Tools 4 credits 4L</p>	<p>M04: Basics of Operating System/ Database Management with SQL (4 credits)</p>		<p>Universal Human Values (UHV) (2 credits)</p>			23
	<p>BMBT 4202 Plant and animal tissue culture techniques 4 credits 4L</p>	<p>M05: Graphic Design with Photoshop and Illustrator/ Unix And Shell</p>					
	<p>BMBT4203 Genetics and karyotyping</p> <p>BMBT4293 Lab on Genetics and karyotyping 5 credits (3L+2P)</p>	<p>Programming (4 credits)</p>					

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V	BMBT 5301— Recombinant DNA Technology	M06:Cloud Computing /Introduction to Computer Network (4 credits)			Internship to be started after exam of 4 th sem (sem break) and completed within 5 th sem (weekends) (4 credits)		22
	BMBT 5391—Lab on Recombinant DNA Technology	M07:E-commerce and Application (4 credits)					
	5 credits(3L+2P)						
	BMBT 5302- Immunology BMBT 5392- Lab on Immunology 5 credits (3L+2P)						
VI	BMBT 6301 Plant and Animal Biotechnology 4 credits (4L)	M08:Web Development with HTML and CSS (4 credits)					22
	BMBT-6302 Developmental Biology 5 Credits (4L+1T)	M09: Internet and Networking /ERP (4 credits)					

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	<p>BMBT 6303 Agricultural and Environmental Biotechnology</p> <p>BMBT 6393 Lab on Agricultural and Environmental Biotechnology 5 credits (3L+2P)</p>						
VII	<p>BMBT 7401 Genomics , Proteomics and Bioinformatics</p> <p>BMBT 7491 Lab on Genomics , Proteomics and Bioinformatics. 5 credits (3L+2P)</p>	<p>M10: Software Project Management /Introduction To Cyber Security and Cyber Laws (4 credits)</p> <p>M11: Digital Marketing/ Data Analysis and Interpretation</p>					22

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	BMBT 7402 Bioprocess, pharmaceutical and Industrial Biotechnology BMBT 7492 Bioprocess, pharmaceutical and Industrial Biotechnology 5 credits (3L+2P)	(4 credits)					
	BMBT 7403 Research methodology 4 credits (3L+1T)						
VIII	BMBT 8401 IPR and Biosafety 5 credits(4L+1T)				Research project 12 credits		22
	BMBT 8402 Medical and Nanobiotechnology 5 credits (3L+2P)						
	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

Note:

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Normally all 5 credit courses will be either theory (3) + practical (2) [100+100 marks] or theory (4) + tutorial (1) [100 marks]

Normally all 4 credit courses will be either theory (3) + tutorial (1) or theory (4) [100 marks]

Normally all 3 credit courses will be theory (3) – Inter disciplinary (5 to 6 baskets) [100 marks]

Normally all 2 credit courses AEC/SEC/CVA would be theory or online/sessional course

4th year subjects could be foundation of Master's program (as masters would be of 1 year after 4 years UG)

7/8th semester Major subjects could include Projects in core, if required

100/200/300/400 level should be maintained as per UGC document

For online course (Skill Enhancement Course) 2 credits=30 hours.