

**Maulana Abul Kalam Azad University of Technology, West Bengal
(Formerly known as West Bengal University of Technology)**

Syllabus of *B.Sc. in Cyber Security*

Effective from academic session 2023-2024

Model curriculum structure for 4-year B.Sc in Cyber Security, MAKAUT WB

Sem	Major (Offline)	Minor (Blended Mode)	Inter Disciplinary (Offline)	Ability Enhancement (Offline)	Skill Enhancement (Online /Sessional)	Common Value added Course (SESSIONAL)	TOTAL CREDITS
I	<p>Fundamentals of Computing – using C and C++ language (including lab) (Code Theory-FYCYS 101, Lab-FYCYS 191) - 3+2 credits</p> <p>Basic Mathematics and Statistics (including lab) (Code Theory-FYCYS 102, Lab-FYCYS 192) – 3+2 credits</p>	<p>(1 sub x 3 credits)</p> <p>Principles Of Management</p>	<p>Any one from GE baskets Basket A or D (3 credits)</p>	<p>AECC 101- English and Professional Communication</p>	<p>SEC 181- Life Skills & Personality Development (2 credits)</p>	<p>VAC 181A/B/C- Yoga/ Health & Wellness/ Sports (2 credits)</p>	22
II	<p>Computer Architecture and Object Oriented Concepts (including lab) (Code Theory-FYCYS 201, Lab-FYCYS 291) – 3+2 credits</p> <p>Data Structures and Algorithms (including lab) (Code Theory-FYCYS 202, Lab-FYCYS 292) – 3+2 credits</p>	<p>(1 sub x 3 credits)</p> <p>Organization Behaviour/Business Ethics & Corporate Governance</p>	<p>Any one from GE baskets Basket B or E (3 credits)</p>	<p>AECC 201- Modern Indian Languages and Literature (2 credits)</p>	<p>SEC 201- IT Skills (2 credits)</p>	<p>VAC281A/B/C/D- Critical Thinking / NSS/ Mental Health/ Environmental Studies (2 credits)</p>	22
III	<p>Python Programming (including lab) (Code Theory-FYCYS 301, Lab-FYCYS 391) – 3+2 credits</p> <p>Operating System and DBMS (including lab) (Code Theory-FYCYS 302, Lab-FYCYS 392) –3+2 credits</p>	<p>(1 sub x 4 credits)</p> <p>Principles of Marketing/Business & Sustainability</p>	<p>Any one from GE baskets Basket C or F(3 credits)</p>	<p>AECC 301- The Constitution, Human Rights and Law (2 credits)</p>	<p>SEC 301- Understanding basics of Cyber Security (2 credits)</p>		21

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IV	<p>Design and Analysis of Algorithms (including lab) (Code Theory-FYCYS 401, Lab-FYCYS 491) – 2+2 credits</p> <p>Ethical Hacking and Systems Defence (including lab) (Code Theory-FYCYS 402, Lab-FYCYS 492)– 3+2 credits</p> <p>Cryptography and Information Security (including lab) (Code Theory-FYCYS 403, Lab-FYCYS 493)– 2+2 credits</p>	<p>Human resource management /Corporate Social Responsibility (CSR) (4 credits)</p> <p>Sales and distribution management /E-Commerce (4 credits)</p>		<p>AECC 401A Society Culture and Human Behavior (2 credits)</p>		23
V	<p>Cyber Systems & Cyber Threat and Modelling (including lab) (Code Theory-FYCYS 501, Lab-FYCYS 591) – 3+2 credits</p> <p>Vulnerability Analysis, Penetration Testing, and Incident Handling (including lab) (Code Theory-FYCYS 502, Lab-FYCYS 592) – 3+2 credits</p>	<p>Financial management (4 credits)</p> <p>Entrepreneurship (4 credits)</p>			<p>FYBMS581 Internship (4 credits)</p>	22
VI	<p>Cyber Forensics (Code FYCYS 601) – 4+1 credits</p> <p>Malware Analysis (Code FYCYS 602) – 4+1 Credits</p> <p>Advanced Computer Network and Security(including lab)</p>	<p>Customer relationship management (4 credits)</p> <p>Career planning and</p>				22

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	(Code Theory-FYCYS 603, Lab-FYCYS 693) – 2+2 credits	management/Managing Workplace Diversity (4 credits)					
VII	Minor Project (Code FYCYS 781) – 5 credits Software Project Management (Code FYCYS 701) – 4+1 credits Artificial Intelligence in Security (Code FYCYS 702) – 3+1 credits	Consumer behaviour / Exploring Business Opportunity (4 credits) Strategic management/ Intellectual Property Rights (4 credits)					22
VIII	Major Project (continuation of minor project) (Code FYCYS 881)– 5 credits Security in E-business (Code FYCYS 801) - 4+1 credits				Capstone/ [Code FYCYSC881] Or Research project [Code FYCYSR882] 12 credits		22
	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