

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	Fundamentals of Computing – using C and C++ language (including lab) (Code Theory-FYCYS 101, Lab-FYCYS 191) - 3+2 credits Basic Mathematics and Statistics (including lab) (Code Theory-FYCYS 102, Lab-FYCYS 192) – 3+2 credits	(1 sub x 3 credits) Principles Of Management	Any one from GE baskets Basket A or D (3 credits)	AEC 101-English and Professional Communication	SEC 101- Life Skills & Personality Development (2 credits)	CVA 181- Yoga/ Health & Wellness/ Sports (2 credits)	22
II	Computer Architecture and Object Oriented Concepts (including lab) (Code Theory-FYCYS 103, Lab-FYCYS 193) – 3+2 credits Data Structures and Algorithms (including lab) (Code Theory-FYCYS 104, Lab-FYCYS 194) – 3+2 credits	(1 sub x 3 credits) Organization Behaviour/Business Ethics & Corporate Governance	Any one from GE baskets Basket B or E (3 credits)	AEC 102- Modern Indian Languages and Literature (2 credits)	SEC 102- IT Skills (2 credits)	CVA 182- Critical Thinking / NSS/ Mental Health/ Environmental Studies (2 credits)	22
III	Python Programming (including lab) (Code Theory-FYCYS 201, Lab-FYCYS 291) – 3+2 credits	(1 sub x 4 credits) Principles of Marketing/Business &	Any one from GE baskets Basket C or F(3 credits)	AEC 201- The Constitution, Human Rights and Law (2	SEC 201- Understanding basics of Cyber Security (2 credits)		21

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	Operating System and DBMS (including lab) (Code Theory-FYCYS 202, Lab-FYCYS 292) –3+2 credits	Sustainability		credits)			
IV	Design and Analysis of Algorithms (including lab) (Code Theory-FYCYS 203, Lab-FYCYS 293) – 2+2 credits Ethical Hacking and Systems Defence (including lab) (Code Theory-FYCYS 204, Lab-FYCYS 294)– 3+2 credits Cryptography and Information Security (including lab) (Code Theory-FYCYS 205, Lab-FYCYS 295)– 2+2 credits	Human resource management /Corporate Social Responsibility (CSR) (4 credits) Sales and distribution management /E-Commerce (4 credits)		AEC 202A Society Culture and Human Behavior (2 credits)			23
V	Cyber Systems & Cyber Threat and Modelling (including lab) (Code Theory-FYCYS 301, Lab-FYCYS 391) – 3+2 credits Vulnerability Analysis, Penetration Testing, and Incident Handling (including lab) (Code Theory-FYCYS 302, Lab-FYCYS 392) – 3+2 credits	Financial management (4 credits) Entrepreneurship (4 credits)			FYBMS 380 Internship (4 credits)		22

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VI	<p>Cyber Forensics (Code FYCYS 303) – 4+1 credits</p> <p>Malware Analysis (Code FYCYS 304) – 4+1 Credits</p> <p>Advanced Computer Network and Security(including lab) (Code Theory-FYCYS 305, Lab-FYCYS 393) – 2+2 credits</p>	<p>Customer relationship management (4 credits)</p> <p>Career planning and management/Managing Workplace Diversity (4 credits)</p>					22
VII	<p>Minor Project – 5 credits</p> <p>Software Project Management (Code FYCYS 401) – 4+1 credits</p> <p>Artificial Intelligence in Security (Code FYCYS 402) – 3+1 credits</p>	<p>Consumer behaviour / Exploring Business Opportunity (4 credits)</p> <p>Strategic management/ Intellectual Property Rights (4 credits)</p>					22
	<p>Major Project (continuation of minor project) – 5 credits</p> <p>Security in E-business (Code FYCYS</p>				<p align="center">Capstone/ [Code FYCYSC481] Or Research project</p>		22

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VIII	403) - 4+1 credits				[Code FYCYSR482] 12 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