



BACHELORS OF SCIENCE IN CYBER SECURITY-BS(CYS)

Structure of BS(CYS) Program Total Credit Hours: 136 Total Courses: 44 Semesters: 8 Duration: 4 Years	Category: Courses (Credit Hours) General Education: 12 (30) Major courses: 18 (64) + 7 (21) Allied/interdisciplinary courses: 5 (15) Internship/field experience: N/A Capstone project: 2 (6) Total: 44 (136)
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SCHEME OF STUDIES

S #	COURSE CODES	CLASS	COURSE TITLE	CREDIT HOURS	PRE-REQ	CO-REQ
SEMESTER 1						
1	CMC111	CORE	Programming Fundamentals	3 + 0	-	CMC111-L
	CMC111-L	CORE	Programming Fundamentals (Lab)	0 + 1		
2	GER111	GER	Application of Information & Communication Technologies	2 + 0	-	GER111-L
	GER111-L	GER	Application of Information & Communication Technologies (Lab)	0 + 1		
3	GER152	GER	Natural Science (Applied Physics)	2 + 0	-	GER152-L
	GER152-L	GER	Natural Science (Applied Physics (Lab))	0 + 1		
4	GER131	GER	Calculus and Analytic Geometry	3 + 0	-	
5	GER121	GER	Functional English	3 + 0	-	
				13+3(16)		
SEMESTER 2						
1	CMC112	CORE	Object Oriented Programming	3 + 0	CMC111	CMC112-L
	CMC112-L	CORE	Object Oriented Programming (Lab)	0 + 1	CMC111-L	
2	GER132	GER	Discrete Structures	3 + 0	GER131	
3	CMC122	CORE	Digital Logic Design	2 + 0	GER152	CMC122-L
	CMC122-L	CORE	Digital Logic Design (Lab)	0 + 1	GER152-L	
4	GER142	GER	Ideology and Constitution of Pakistan	2 + 0	-	
5	GER122	GER	Expository Writing	3 + 0	GER121	
6	MTE111	MATHS	Multivariable Calculus	3 + 0	GER131	
				16+2(18)		

SEMESTER 3						
1	CMC251	CORE	Data Structures	3 + 0	CMC112	CMC251-L
	CMC251-L	CORE	Data Structures (Lab)	0 + 1	CMC112-L	
2	CMC222	CORE	Computer Organization & Assembly Language	3 + 0	CMC122	CMC222-L
	CMC222-L	CORE	Computer Organization & Assembly Language (Lab)	0 + 1	CMC122-L	
3	CYC211	DOMAIN CORE	Cyber Security	3 + 0	GER132	
4	CMC261	CORE	Computer Networks	3 + 0	CMC122	CMC261-L
	CMC261-L	CORE	Computer Networks (Lab)	0 + 1	CMC122-L	
5	MTE212	MATHS	Probability & Statistics	3 + 0	MTE111	
				15+3(18)		
SEMESTER 4						
1	CMC241	CORE	Operating Systems	3 + 0	CMC251	CMC241-L
	CMC241-L	CORE	Operating Systems (Lab)	0 + 1	CMC251-L	
2	CYC231	DOMAIN CORE	Information Assurance	2 + 0	CYC211	CYC231-L
	CYC231-L	DOMAIN CORE	Information Assurance (Lab)	0 + 1	CYC211-L	
3	MTE213	MATH	Linear Algebra	3 + 0	MTE111	
4	CMC252	CORE	Analysis of Algorithms	3 + 0	CMC251	
5	MTE221	GER	Technical & Business Writing	3 + 0	GER122	
6	GERXXX	GER	Social Science I	2 + 0	MTE221	
				16+2(18)		
SEMESTER 5						
1	CMC371	CORE	Software Engineering	3 + 0	CMC252	
2	CMC362	CORE	Information Security	3 + 0	CMC261	CMC362-L
	CMC362-L	CORE	Information Security (Lab)	0 + 1	CMC261-L	
3	CMC331	CORE	Database Systems	3 + 0	CMC241	CMC331-L
	CMC331-L	CORE	Database Systems (Lab)	0 + 1	CMC241-L	
4	CSEXXX	DOMAIN ELEC	Domain Elective 1	2 + 1	-	
5	CYC312	DOMAIN CORE	Network Security	2 + 0	CMC261	CYC312-L
	CYC312-L	DOMAIN CORE	Network Security (Lab)	0 + 1	CMC261-L	
				13+4(17)		

SEMESTER 6						
1	CMC381	CORE	Artificial Intelligence	3 + 0	CMC252/ CMC371	CMC381-L
	CMC381-L	CORE	Artificial Intelligence (Lab)	0 + 1	CMC252-L/ CMC371-L	
2	CSC382	DOMAIN CORE	HCI & Computer Graphics	2 + 0	CMC371	CSC382-L
	CSC382-L	DOMAIN CORE	HCI & Computer Graphics (Lab)	0 + 1	CMC371-L	
3	CSEXXX	DOMAIN ELEC	Domain Elective 2	2 + 1	-	
4	ESCXXX	GER	Social Science II	3 + 0	-	
5	CYC321	DOMAIN CORE	Secure Software Design and Development	2 + 0	CMC362	CYC321-L
	CYC321-L	DOMAIN CORE	Secure Software Design and Development (Lab)	0 + 1	CMC362-L	
6	GER141	GER	Islamic Studies	2 + 0	-	
				14+4(18)		
SEMESTER 7						
1	CMC491	CORE	Final Year Project - I	0 + 3	CMC381	
2	CSEXXX	DOMAIN ELEC	Domain Elective 3	2 + 1	-	
3	CSEXXX	DOMAIN ELEC	Domain Elective 4	2 + 1	-	
4	CSEXXX	DOMAIN ELEC	Domain Elective 5	2 + 1	-	
5	CSC442	DOMAIN CORE	Parallel & Distributed Computing	3 + 0	CMC241/ CSC382	CSC442-L
	CSC442-L	DOMAIN CORE	Parallel & Distributed Computing (Lab)	0 + 1	CMC241-L/ CSC382-L	
6	GER462	GER	Technopreneurship	2 + 0	-	
				11+7(18)		
SEMESTER 8						
1	CMC492	CORE	Final Year Project - II	0 + 3	CMC491	
2	GER463	GER	Professional Practices	2 + 0	-	
3	GER443	GER	Civics and Community Engagement	2 + 0	-	
4	CSEXXX	DOMAIN ELEC	Domain Elective 6	2 + 1	-	
5	CSEXXX	DOMAIN ELEC	Domain Elective 7	2 + 1	-	
				8+5(13)		
			TOTAL CREDIT HOURS	136		

****Campus will decide to offer a course.**