



AROR UNIVERSITY OF ART, ARCHITECTURE, DESIGN, & HERITAGE, SUKKUR, SINDH

DEPARTMENT OF BS in CYBERSECURITY

SYLLABUS FOR BS in CYBERSECURITY

FIRST YEAR - (SEMESTER I)

S. No	Courses Code	Courses	Domain	Credit Hours.	Contact Hours	Pre-Reqs
01	CSC101	Programming Fundamentals	Computing Core	(3+1)	6	NONE
02	CSC102	Application of Information & Communication Technologies	GED	(2+1)	5	NONE
03	ENG101	Functional English	GED	(3+0)	3	NONE
04	MAT103	Calculus and Analytic Geometry (QR1)	GED	(3+0)	3	NONE
05	GED102	Islamic Studies/Ethics	GED	(2+0)	2	NONE
06	GED101	Ideology and Constitution of Pakistan	GED	(2+0)	2	NONE
		SUB TOTAL		17	21	

(SEMESTER II)

S. No	Code	Courses	Domain	Credit Hours	Contact Hours	Pre-Reqs
01	CSC111	Object Oriented Programming	Computing Core	(3+1)	6	CSC101
02	MAT113	Multivariable Calculus	Maths	(3+0)	3	MAT103
03	CSC103	Discrete Structure	GED	(3+0)	3	NONE
04	ENG102	Expository Writing	GED	(3+0)	3	NONE
05	CSC104	Natural Sciences (Applied Physics)	GED	(2+1)	5	NONE
		SUB TOTAL		16	20	



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SECOND YEAR - (SEMESTER III)

S. No	Course Code	Courses	Domain	Credit Hours	Contact Hour	Pre-Reqs
01	CSC221	Data Structures	Computing Core	(3+1)	6	CSC101
02	CSC205	Artificial Intelligence	Computing Core	(2+1)	5	NONE
03	CSC206	Software Engineering	Computing Core	(3+0)	3	NONE
04	MAT212	Linear Algebra	Maths	(3+0)	3	NONE
05	CSC214	Digital Logic Design	Computing Core	(2+1)	5	NONE
		SUB TOTAL		16	22	

SEMESTER IV

S. No	Course Code	Courses	Domain	Credit Hours	Contact Hour	Pre-Reqs
01	CSC207	Database Systems	Computing Core	(3+1)	6	NONE
02	CSC208	Operating Systems	Computing Core	(2+1)	5	NONE
03	CSC209	Computer Communication & Networks	Computing Core	(2+1)	5	NONE
04	CYS201	Introduction to Cybersecurity	Domain Core	(3+0)	3	NONE
05	GED204	Civics and Community Engagement	GED	(2+0)	2	NONE
06	MAT213	Probability and Statistics	Maths	(3+0)	3	NONE
		SUB TOTAL		18	24	



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THIRD YEAR - (SEMESTER V)

S. No	Course Code	Courses	Domain	Credit Hours	Contact Hour	Pre-Reqs
01	CSC331	Analysis of Algorithms	Computing Core	(3+0)	3	CSC221
02	CSC324	Computer Organization and Assembly Language	Computing Core	(2+1)	5	CSC214
03	CSC319	Information Security	Computing Core	(3+0)	3	NONE
04	CYS302	Domain Elective-I	Domain Elective	(2+1)	5	NONE
05	CYS312	Domain Elective-II	Domain Elective	(2+1)	5	NONE
06	GED301	Introduction to Management	GED	(2+0)	2	NONE
		SUB TOTAL		17	23	

(SEMESTER VI)

S. No	Course Code	Courses	Domain	Credit Hours	Contact Hour	Pre-Reqs
01	CYS321	Network Security	Domain Core	(3+0)	3	NONE
02	CYS331	Digital Forensics	Domain Core	(2+1)	5	NONE
03	CYS303	Secure Software Design and Development	Domain Core	(3+0)	3	NONE
04	CYS304	Domain Elective-III	Domain Elective	(3+0)	3	NONE
05	CYS311	Information Assurance	Domain Core	(3+0)	3	NONE
06	ENG301	Technical & Business Writing	EN	(3+0)	3	NONE
		SUB TOTAL		18	20	



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FOURTH YEAR – (SEMESTER VII)

S. No	Course Code	Courses	Domain	Credit Hours	Contact Hour	Pre-Reqs
01	CSC431	Final Year Design Project - I	Computing Core	(0+3)	6	NONE
02	CYS414	Domain Elective-IV	Domain Elective	(3+0)	3	NONE
03	CYS405	Digital Marketing	Elective Supporting Course	(3+0)	3	NONE
04	CYS406	Domain Elective-V	Domain Elective	(2+1)	5	NONE
05	CYS416	Domain Elective-VI	Domain Elective	(2+1)	5	NONE
06	CYS415	Technology Entrepreneurship	GED	(2+0)	2	NONE
		SUB TOTAL		16	24	

SEMESTER VIII

S. No	Course Code	Courses	Domain	Credit Hours	Contact Hour	Pre-Reqs
01	CSC441	Final Year Design Project – II	Computing Core	(0+3)	12	CSC431
02	CYS419	Parallel & Distributed Computing	Domain Core	(3+0)	3	NONE
03	CYS407	Domain Elective-VII	Domain Elective	(2+1)	5	NONE
04	CYS408	Professional Practices	GED	(2+0)	2	NONE
		SUB TOTAL		12	19	

Total Credit hours = 130 Hrs

Total courses = 44