

M – 03

Director ~~Academics~~

Approved:

Dir Acad

Dean National Cyber Security Academy

Recommended for approval/endorsement.
21/9/26.

1. Keeping in view of the discussion held in the Academic Council Meeting (ACM) No. 07/2026 held on 17th August 2026, the curricula of the following BS level programs have been revised:

1	BS Cyber Security	Flag A
2	BS Embedded Systems Security	Flag B
3	BS Cyber Forensics and Security	Flag C

2. The minutes of the Departmental Board of Studies (DBS) (**Flag D**) and Faculty Board of Studies (FBS) (**Flag E**), pertaining to the above-mentioned curricula, are enclosed herewith.

3. Submitted for endorsement and approval, please.


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2 September 2026

Office of Dir Acad	
Date	4/9/26
Sr. No.	1752

BS Cyber Forensics and Security Curriculum (Fall 2026 onwards)

Version 5.0

Revision Date: 18th August 2026

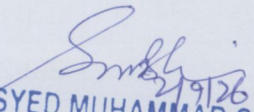
Program Overview

Category or Area	No. of Courses	Credit Hours
Major-Breadth (Core)	21	63
Interdisciplinary	04	12
General Education	15	34
Mathematics & Supporting	04	12
Major-Depth (Electives)	04	12
Internship	01	03
Total Credit Hours	46	136

Courses Detail

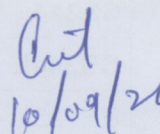
Major Breadth (Core) Courses

Sr. #	Code	Title	Pre-req	Cr Hrs
1	CS111	Programming Fundamentals	-	3-0-3
	CS111L	Programming Fundamentals Lab	-	0-1-1
2	CS112	Object Oriented Programming	CS111,CS111L	3-0-3
	CS112L	Object Oriented Programming Lab	CS111,CS111L	0-1-1
3	CS216	Data Structures	CS112,CS112L	3-0-3
	CS216L	Data Structures Lab	CS112,CS112L	0-1-1
4	CF110	Introduction to Cyber Forensics and Security	-	2-0-2
	CF110L	Introduction to Cyber Forensics and Security Lab	-	0-1-1
5	CS260	Computer Networks	-	2-0-2
	CS260L	Computer Networks Lab	-	0-1-1
6	CF101	Introduction to Forensic Science	-	3-0-3
7	CF220	Information Assurance	-	3-0-3
8	CF222	Digital Systems and Architecture	-	2-0-2
	CF222L	Digital Systems and Architecture Lab	-	0-1-1


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Page 1 of 10


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9	CS325	Operating Systems	-	2-0-2
	CS325L	Operating Systems Lab	-	0-1-1
10	CF202	Digital Evidence Handling	-	2-0-2
	CF202L	Digital Evidence Handling Lab	-	0-1-1
11	SE101	Introduction to Software Engineering	-	3-0-3
12	CF210	Network Security	CS260,CS260L	2-0-2
	CF210L	Network Security Lab	CS260,CS260L	0-1-1
13	CF423	Social Media Forensics	-	2-0-2
	CY423L	Social Media Forensics Lab	-	0-1-1
14	CF403	Criminal Justice	-	3-0-3
15	CY320	Computer Forensics	-	2-0-2
	CY320L	Computer Forensics Lab	-	0-1-1
16	CY422	Network Forensics	-	2-0-2
	CY422L	Network Forensics Lab	-	0-1-1
17	CY321	Smart Devices Forensics	-	2-0-2
	CY321L	Smart Devices Forensics Lab	-	0-1-1
18	CF211	Secure Software Design and Development	SE101	2-0-2
	CF211L	Secure Software Design and Development Lab	SE101	0-1-1
19	CF491	Final Year Project – I	-	0-1-1
20	CF492	Final Year Project – II	CF491	0-2-2
21	CF493	Final Year Project – III	CF492	0-3-3
Total:				63

Interdisciplinary Courses

Note: The students must study **FOUR** courses from this category during their degree **including the mandatory Artificial Intelligence+Lab.**

Sr. #	Code	Title	Pre-req	Cr Hrs
1	CS130	Database Systems	-	2-0-2
	CS130L	Database Systems Lab	-	0-1-1
2	CS344	Artificial Intelligence (Mandatory)	-	2-0-2
	CS344L	Artificial Intelligence Lab (Mandatory)	-	0-1-1
3	EE123	Digital Logic Design	-	2-0-2
	EE123L	Digital Logic Design Lab	-	0-1-1

Sr. #	Code	Title	Pre-req	Cr Hrs
4	CY220	Reverse Engineering & Vulnerability Analysis	-	2-0-2
	CY220L	Reverse Engineering & Vulnerability Analysis Lab	-	0-1-1
5	CS332	Design and Analysis of Algorithms	CS216	3-0-3
6	CS426	Parallel and Distributed Computing	CS325,CS325L	2-0-2
	CS426L	Parallel and Distributed Computing Lab	CS325,CS325L	0-1-1

Important Note: Due to the advanced nature of the BS Cyber Forensics & Security program and research orientation, the instructor of a course can re-design the objectives and detailed contents of the course in consultation with the Chair Department.

General Education Courses

Sr. #	Code	Title	Pre-req	Cr Hrs
1	CS181	Applications of Information and Communication Technologies	-	2-0-2
	CS181L	Applications of Information and Communication Technologies Lab	-	0-1-1
2	EL170	Functional English	-	3-0-3
3	EL271	Expository Writing	EL170	3-0-3
4	MA216	Discrete Structure	-	3-0-3
5	MA110	Calculus and Analytical Geometry	-	3-0-3
6	HU124	Islamic Studies and Ethics	-	2-0-2
7	HU405	Ideology and Constitution of Pakistan	-	2-0-2
8	XXXXX	Social Sciences Related Course**	-	2-0-2
9	PH111	Applied Physics	-	2-0-2
	PH111L	Applied Physics Lab	-	0-1-1
10	CS470	Professional Practices	-	2-0-2
11	HU411	Civics and Community Engagement	-	2-0-2
12	BA353	Entrepreneurship	-	2-0-2
13	HU115	Pakistan Studies	-	2-0-2
14	FQ100	Fehm-e-Quran I	-	0-1-1
15	FQ101	Fehm-e-Quran II	FQ100	0-1-1
Total Cr Hrs:				34

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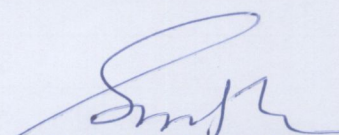
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****List of Social Science Related Courses**

Sr. #	Code	Title	Pre-req	Cr Hrs
1	BAXXX	Enterprise Security Leadership	-	2-0-2
2	BA132	Internet Economics	-	2-0-2
3	BA152	Introduction to Management	-	2-0-2

Mathematics and Supporting Courses

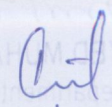
Sr. #	Code	Title	Pre-req	Cr Hrs
1	MA105	Multivariable Calculus	MA110	3-0-3
2	MA201	Linear Algebra	-	3-0-3
3	MA301	Probability and Statistics	-	3-0-3
4	EL400	Technical and Business Writing	-	3-0-3
Total Cr Hrs:				12


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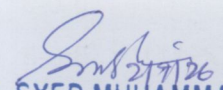
Major Depth (Elective) Courses

Note: A student has to choose **FOUR** elective courses from the list given below.

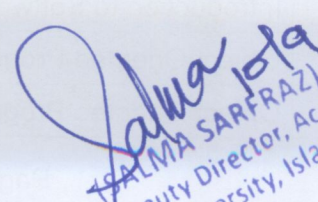
Sr. #	Code	Title	Pre-req	Cr Hrs
1	CF330	Operating System Forensics	-	2-0-2
	CF330L	Operating System Forensics Lab	-	0-1-1
2	CF331	Digital Forensics Incident Detection & Response (DFIR)	-	2-0-2
	CF331L	Digital Forensics Incident Detection & Response (DFIR) Lab	-	0-1-1


10/09/20

Sr. #	Code	Title	Pre-req	Cr Hrs
3	CF204	Cyber Laws and Compliance	-	3-0-3
4	CF324	Malware Forensics	-	2-0-2
	CF324L	Malware Forensics Lab	-	0-1-1
5	CF325	Audio Forensics	-	2-0-2
	CF325L	Audio Forensics Lab	-	0-1-1
6	CF326	Cloud Forensics	-	2-0-2
	CF326L	Cloud Forensics Lab	-	0-1-1
7	CF327	Multimedia Forensics	-	2-0-2
	CF327L	Multimedia Forensics Lab	-	0-1-1
8	CF328	Drones Forensics	-	2-0-2
	CF328L	Drones Forensics Lab	-	0-1-1
9	CF335	Cybercrime and Criminal Justice	-	3-0-3
10	CF332	Incident Response Technologies	-	2-0-2
	CF332L	Incident Response Technologies Lab	-	0-1-1
11	CF333	Financial & White-Collar Crimes Investigations	-	3-0-3
12	CF305	Ethical Issues in Forensics	-	3-0-3
13	CF206	Human Behavior in Cyber Security	-	3-0-3
14	CF207	Artificial Intelligence in Forensics	-	2-0-2
	CF207L	Artificial Intelligence in Forensics Lab	-	0-1-1
15	CF340	Open-Source Intelligence Techniques	-	2-0-2
	CF340L	Open-Source Intelligence Techniques Lab	-	0-1-1
16	CF341	Automotive Forensics	-	3-0-3
17	CF212	Cryptology	-	2-0-2
	CF212L	Cryptology Lab	-	0-1-1
18	CF306	eDiscovery Forensics and Moot Courts	-	2-0-2
	CF306L	eDiscovery Forensics and Moot Courts Lab	-	0-1-1
19	CF342	Server Environments and Architectures	-	2-0-2
	CF342L	Server Environments and Architectures Lab	-	0-1-1
20	CF307	Criminal Evidence	-	3-0-3
21	CF205	Intelligence Analysis	-	2-0-2
	CF205L	Intelligence Analysis Lab	-	0-1-1
22	CF308	International Cyber Conflicts	-	3-0-3


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Page 5 of 10


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Sr. #	Code	Title	Pre-req	Cr Hrs
23	CF309	National Cybersecurity Challenge Problem	-	0-3-3
24	CF343	Supervisory Control and Data Acquisition (SCADA) Forensics	-	3-0-3
25	CF207	Forensic Professional Practice	-	3-0-3
26	CF334	Forensic Accounting and Fraud Detection	-	3-0-3
27	CF343	IoT Forensics	-	2-0-2
	CF343L	IoT Forensics Lab	-	0-1-1

Semester-wise Scheme of Studies

S. #.	Course Code	Course Title	Pre-Req	Credit Hours
Semester – I				
1	EL170	Functional English	-	3-0-3
2	CF110	Introduction to Cyber Forensics and Security	-	2-0-2
	CF110L	Introduction to Cyber Forensics and Security Lab	-	0-1-1
3	CS181	Applications of Information and Communication Technologies	-	2-0-2
	CS181L	Applications of Information and Communication Technologies Lab	-	0-1-1
4	CS111	Programming Fundamentals	-	3-0-3
	CS111L	Programming Fundamentals Lab	-	0-1-1
5	HU124	Islamic Studies and Ethics	-	2-0-2
6	MA216	Discrete Structures	-	3-0-3
7	MA114*	Foundational Mathematics (non-credit)	-	3-0-3
Semester Cr. Hrs.				15-3-18
*For students who have not studied Mathematics at Intermediate level				
Semester – II				
1	CF101	Introduction to Forensic Science	-	3-0-3
2	SE101	Introduction to Software Engineering	-	3-0-3
	CS112	Object Oriented Programming	CS111,CS111L	3-0-3
	CS112L	Object Oriented Programming Lab	CS111,CS111L	0-1-1

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S. #.	Course Code	Course Title	Pre-Req	Credit Hours
4	CS260	Computer Networks	-	2-0-2
	CS260L	Computer Networks Lab	-	0-1-1
5	PH111	Applied Physics	-	2-0-2
	PH111L	Applied Physics Lab	-	0-1-1
6	FQ100	Fehm-e-Quran I	-	0-1-1
7	MA118*	Pre-Calculus (non-credit)	-	3-0-3
Semester Cr. Hrs.				13-4-17
*For students who have not studied Mathematics at Intermediate level				
Semester – III				
1	CF220	Information Assurance	-	3-0-3
2	CS216	Data Structures	CS112,CS112L	3-0-3
	CS216L	Data Structures Lab	CS112,CS112L	0-1-1
3	MA110	Calculus and Analytical Geometry	-	3-0-3
4	CF222	Digital Systems and Architecture	-	2-0-2
	CF222L	Digital Systems and Architecture Lab	-	0-1-1
5	CS344	Artificial Intelligence (Interdisciplinary Elective-I)	-	2-0-2
	CS344L	Artificial Intelligence Lab (Interdisciplinary Elective-I)	-	0-1-1
6	FQ101	Fehm-e-Quran II	FQ100	0-1-1
Semester Cr. Hrs.				13-4-17
Semester – IV				
1	CS325	Operating Systems	-	2-0-2
	CS325L	Operating Systems Lab	-	0-1-1
2	CF211	Secure Software Design and Development	SE101	2-0-2
	CF211L	Secure Software Design and Development Lab	SE101	0-1-1
3	CF202	Digital Evidence Handling	-	2-0-2
	CF202L	Digital Evidence Handling Lab	-	0-1-1
4	CF210	Network Security	CS260,CS260L	2-0-2
	CF210L	Network Security Lab	CS260,CS260L	0-1-1
5	MA105	Multivariable Calculus	-	3-0-3
6	HU115	Pakistan Studies	-	2-0-2
Semester Cr. Hrs.				13-4-17

Summer Semester				
1	CF 490	Internship (6-8 weeks)*	-	0-3-3
Semester Cr. Hrs.				0-3-3

*Under exceptional circumstances, a student can undertake the internship after 5th, 6th or 7th semester (with the approval by the Chair Dept.).

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S. #.	Course Code	Course Title	Pre-Req	Credit Hours
Semester – V				
1	CF320	Computer Forensics	-	2-0-2
	CF320L	Computer Forensics Lab	-	0-1-1
2	MA301	Probability and Statistics	-	3-0-3
3	CFXXX	Major Depth Elective I	-	2-0-2
	CFXXX	Major Depth Elective I Lab	-	0-1-1
4	CFXXX	Major Depth Elective II	-	2-0-2
	CFXXX	Major Depth Elective II Lab	-	0-1-1
5	CF321	Smart Devices Forensics	-	2-0-2
	CF321L	Smart Devices Forensics Lab	-	0-1-1
6	EL271	Expository Writing	EL170	3-0-3
Semester Cr. Hrs.				14-4-18
Semester – VI				
1	MA201	Linear Algebra	-	3-0-3
2	BA353	Entrepreneurship	-	2-0-2
3	CYXXX	Major Depth Elective III	-	2-0-2
4	CYXXXL	Major Depth Elective III Lab	-	0-1-1
5	XXXXX	Interdisciplinary Elective-II	-	2-0-2
6	XXXXXL	Interdisciplinary Elective-II Lab	-	0-1-1
7	HU411	Civics and Community Engagement	-	2-0-2
8	EL400	Technical and Business Writing	-	3-0-3
9	CF491	Final Year Project – I	List A*	0-1-1
Semester Cr. Hrs.				14-3-17

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Semester – VII				
1	CF423	Social Media Forensics	-	2-0-2
	CF423L	Social Media Forensics Lab	-	0-1-1
2	CFXXX	Major Depth Elective IV	-	2-0-2
	CFXXXL	Major Depth Elective IV Lab	-	0-1-1
3	CF422	Network Forensics	CF210,CF210L	2-0-2
	CF422L	Network Forensics Lab	CF210,CF210L	0-1-1
4	SSXXX	Social Science Elective	-	2-0-2
5	CF403	Criminal Justice	-	3-0-3
6	CF492	Final Year Project – II	CF491	0-2-2
Semester Cr. Hrs.				11-5-16
Semester – VIII				
1	CS470	Professional Practices	-	2-0-2
2	CXXX	Interdisciplinary Elective-III	-	2-0-2
	CXXXL	Interdisciplinary Elective-III Lab	-	0-1-1
3	CXXX	Interdisciplinary Elective IV	-	2-0-2
	CXXXL	Interdisciplinary Elective IV Lab	-	0-1-1
4	HU405	Ideology and Constitution of Pakistan	-	2-0-2
5	CF493	Final Year Project – III	CF492	0-3-3
Semester Cr. Hrs.				8-5-13
Total Credit Hours: 136				

Total No. of Credit Hours: 136

Total No. of Courses: 49

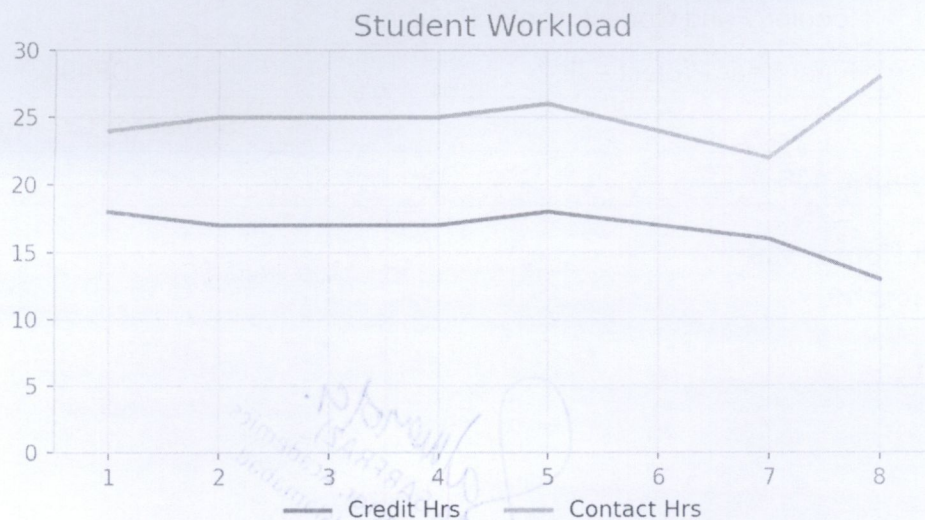
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List 'A': Pre-requisites for FYP		
1	CS216	Data Structures
2	CS216L	Data Structures Lab
3	CS325	Operating Systems
4	CS325L	Operating Systems Lab
5	DF202	Digital Evidence Handling
6	DF202L	Digital Evidence Handling Lab
7	CF211	Secure Software Design and Development
8	CF211L	Secure Software Design and Development Lab
9	CY223	Network Security
10	CY223L	Network Security Lab

Student Workload (Semester-Wise)



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