

**B.Sc.CYBERSECURITY****CHOICEBASEDCREDITSYSTEM-****LEARNING OUTCOMES BASED CURRICULUM FRAMEWORK (CBCS - LOCF)**

(Applicable to the candidates admitted from the academic year 2022-2023 onwards)

(NaanMudhalvan scheme has been implemented from 2nd to 5th semester for the 2023-2024 Batch)

Sem.	Part	Course	Title	Ins. Hrs	Credit	Exam Hours	Marks		Total
							Int.	Ext.	
I	I	Language Course – I Tamil \$ / Other Languages + #		6	3	3	25	75	100
	II	English Course - I		6	3	3	25	75	100
	III	Core Course – I (CC)	Programming in C and Data Structures	5	5	3	25	75	100
		Core Practical – I (CP)	Programming in CLab	4	4	3	40	60	100
		First Allied Course – I (AC)		4	4	3	25	75	100
		First Allied Course – II (AC)		3	-	-	-	-	-
	IV	Value Education	Value Education	2	2	3	25	75	100
TOTAL				30	21	-	-	-	600
II	I	Language Course - II Tamil \$ / Other Languages + #		6	3	3	25	75	100
	II	English Course - II		4	3	3	25	75	100
	III	Core Course – II (CC)	Programming in Java	5	5	3	25	75	100
		Core Practical – II (CP)	Programming in JavaLab	4	4	3	40	60	100
		First Allied Course – II (AC)		3	2	3	25	75	100
		First Allied Course – III (AC)		4	4	3	25	75	100
		Add on Course – I ##	Professional English – I	6*	4	3	25	75	100
	IV	Environmental Studies	Environmental Studies	2	2	3	25	75	100
VI	NaanMudhalvan Scheme (NMS) @@	Language Proficiency for Employability - Overview of English Language Communication	2	2	3	25	75	100	
TOTAL				30	29	-	-	-	900

III	I	Language Course – III Tamil \$ / Other Languages + #		6	3	3	25	75	100	
	II	English Course - III		6	3	3	25	75	100	
	III	Core Course – III (CC)	Programming in Python		5	5	3	25	75	100
		Core Practical - III (CP)	Programming in Python Lab		4	4	3	40	60	100
		Second Allied Course – I (AC)			4	4	3	25	75	100
		Second Allied Practical (AP)			3	-	-	-	-	-
		Add on Course – II ##	Professional English - II		6*	4	3	25	75	100
	IV	Non-Major Elective - I Those who choose Tamil in Part I can choose a non-major elective course offered by other departments. Those who do not choose Tamil in Part I must choose either a) Basic Tamil if Tamil language was not studied in school level or b) Special Tamil if Tamil language was studied upto 10 th & 12 th std.			2	2	3	25	75	100
	VI	NaanMudhalvan Scheme (NMS) @@	Digital Skills for Employability – Microsoft Digital Skills		-	2	3	25	75	100
	TOTAL				30	27	-	-	-	800
IV	I	Language Course –IV Tamil \$ / Other Languages + #		6	3	3	25	75	100	
	II	English Course – IV		6	3	3	25	75	100	
	III	Core Course - IV (CC)	Fundamentals of Cyber Security		5	5	3	25	75	100
		Core Practical - IV (CP)	Cyber Security Lab		4	4	3	40	60	100
		Second Allied Practical (AP)			3	2	3	40	60	100
		Second Allied Course – III (AC)			4	4	3	25	75	100
	IV	Non-Major Elective II Those who choose Tamil in Part I can choose a non-major elective course offered by other departments. Those who do not choose Tamil in Part I must choose either a) Basic Tamil if Tamil language was not studied in school level or b) Special Tamil if Tamil language was studied upto 10 th & 12 th std.			2	2	3	25	75	100
	VI	NaanMudhalvan Scheme (NMS) @@	Fundamentals of Web Development		-	2	3	25	75	100
	TOTAL				30	25	-	-	-	800

V	III	Core Course -V (CC)	Cyber Crimes and Mitigation Techniques	5	5	3	25	75	100
		Core Course – VI (CC)	Social Web Analytics	5	5	3	25	75	100
		Core Course – VII (CC)	Ethical Hacking	5	5	3	25	75	100
		Core Practical -V (CP)	Ethical Hacking Lab	4	4	3	40	60	100
		Major Based Elective – I (Any one)	1. Web and information Security 2. Fundamentals of Cryptography	5	4	3	25	75	100
	IV	Skill Based Elective I	Linux Programming	4	2	3	25	75	100
		Soft Skills Development		2	2	3	25	75	100
	VI	NaanMudhalvan Scheme (NMS) @@	Generative AI with IBM	-	2	3	25	75	100
	TOTAL			30	29	-	-	-	800
	VI	III	Core Course - VIII (CC)	Introduction to Block Chain Technology	6	5	3	25	75
Core Course - IX (CC)			Cloud Computing Security	6	5	3	25	75	100
Core Practical – VI (CP)			Cloud Computing Lab	4	4	3	40	60	100
Major Based Elective – II (Any one)			1. Cyber Law and Defence Techniques 2. Penetration Testing	5	4	3	25	75	100
Project				4	3	-	20	80	100
IV		Skill Based Elective – II	Mobile Application Development	4	2	3	25	75	100
V		Gender Studies		1	1	3	25	75	100
		Extension Activities **		-	1	-	-	-	-
TOTAL			30	25	-	-	-	700	
GRAND TOTAL			180	156	-	-	-	4600	

List of Allied Courses

First Allied Course

Mathematics

Second Allied Course

Applied Physics

\$ForthosewhostudiedTamilupto10th+2(RegularStream).

+Syllabusfor otherLanguagesshouldbeonparwithTamilatdegreelevel.

#ThosewhostudiedTamilupto10th+2butoptforotherlanguagesindegreelevel
underPart-I shouldstudyspecialTamilinPart – IV.

The Professional English – Four Streams Course is offered in the 2nd and 3rd Semester (only for 2022-2023 Batch) in all UG Courses. It will be taught apart from the Existing hours of teaching / additional hours of teaching (1 hour / day) as a 4 credit paper as an add on course on par with Major Paper and completion of the paper is must to continue his / her studies further. (As per G.O. No. 76, Higher Education (K2) Department dated: 18.07.2020).

* The Extra 6 hrs / cycle as per the G.O. 76/2020 will be utilized for the Add on Professional English Course.

@ NCC Course is one of the Choices in Non-Major Elective Course. Only the NCC cadets are eligible to choose this course. However, NCC Course is not a Compulsory Course for the NCC Cadets.

**ExtensionActivitiesshallbeoutsideinstructionhours.

@@ NaanMudhalvan Scheme.

SUMMARY OF CURRICULUM STRUCTURE OF UG PROGRAMMES

Sl. No.	Part	Types of the Courses	No. of Courses	No. of Credits	Marks
1.	I	Language Courses	4	12	400
2.	II	English Courses	4	12	400
3.	III	Core Courses	8	40	800
4.		Core Practical	7	29	700
5.		Allied Courses I & II	4	16	400
6.		Allied Practical	2	4	200
7.		Major Based Elective Courses	2	8	200
8.		Add on Courses	2	8	200
9.		Project	1	3	100
10.	IV	Non-Major Elective Courses (Practical)	2	4	200
11.		Skill Based Elective Courses	2	4	200
12.		Soft Skills Development	1	2	100
13.		Value Education	1	2	100
14.		Environmental Studies	1	2	100
15.	V	Gender Studies	1	1	100
16.		Extension Activities	1	1	--
17.	VI	NaanMudhalvan Scheme	4	8	400
		Total	47	156	4600

PROGRAM OBJECTIVES:

The educational objectives of the program are:

- To prepare students with the technical knowledge and skills needed to protect and defend computer systems and networks.
- To develop graduates that can plan, implement, and monitor cybersecurity mechanisms to help ensure the protection of information technology assets.
- To develop graduates that can identify, analyze, and remediate computer security breaches.

PROGRAMME OUTCOMES:

Upon completion of the degree program, students will be able to:

- Analyze and evaluate the cybersecurity needs of an organization.
- Conduct cyber-security risk assessment.
- Measure the performance and troubleshoot cybersecurity systems.
- Implement cybersecurity solutions.
- Be able to use cybersecurity, information assurance, and cyber/computer forensics software/tools.
