

ADHIYAMAAN COLLEGE OF ENGINEERING
(An Autonomous Institution), Hosur
B.E.COMPUTER SCIENCE AND ENGINEERING
(CYBER SECURITY)
REGULATION 2022-CURRICULUM

Choice Based Credit System

SEMESTER I

S.No.	Course Code	Course Title	Category	L	T	P	C
-	122IP001	Induction Programme	-	-	-	-	-
THEORY							
1	122ENI01	Professional English-I	HS	2	0	2	3
2	122MAT02	Matrices and Calculus	BS	3	1	0	4
3	122PHT03	Engineering Physics	BS	2	0	0	2
4	122CYT04	Engineering Chemistry	BS	2	0	0	2
5	122PPT05	Python Programming	ES	3	0	0	3
6	122EET06	Basic Electrical Electronics and Instrumentation Engineering	ES	3	0	0	3
7	122HST07	தமிழர்மரபு /Heritage of Tamils	HS	1	0	0	1
PRACTICALS							
8	122PHP08	Engineering Physics Laboratory	BS	0	0	2	1
9	122PPP09	Python Programming Laboratory	ES	0	0	2	1
	TOTAL						19

SEMESTER II

S.No.	Course Code	Course Title	Category	L	T	P	C
1	222ENI01	Professional English-II (Embedded)	ES	2	0	2	3
2	222MAT02	Probability and Statistics	PC	3	1	0	4
3	222EST03	Environmental Science and Sustainability	BS	2	0	0	2
4	222EGT04	Engineering Graphics	ES	2	0	4	4
5	222PIT05	Physics for Information Science	ES	2	0	0	2
6	222CPI06	Programming in C	ES	2	0	2	4
7	222HST07	Tamils and Technology	HS	1	0	0	1
	Course Code	Course Title	Category	L	T	P	C
8	222CYP08	Engineering Chemistry Laboratory	BS	0	0	2	1
9	222EPP09	Engineering Practice Laboratory	ES	0	0	2	1
	TOTAL						21

SEMESTER – III

S. No	Category	Course Code	Course Title	L	T	P	C	Marks		
								CA	EA	TOT
THEORY										
1	BS	322DMT01	Discrete Mathematics	3	0	0	4	40	60	100
2	ES	322CBT02	Object Oriented Software Engineering	3	0	0	3	40	60	100
3	PC	322CSI03	Foundation of Data Science	3	0	2	4	50	50	100
4	PC	322CIT04	Object Oriented Programming	3	0	2	3	40	60	100
5	PC	322CIT05	Data Structures	3	0	0	3	40	60	100
6	PC	322CBT06	Fundamentals of Cyber Security	3	0	0	3	40	60	100
PRACTICALS										
7	PC	322CIP07	Object Oriented Programming Laboratory	0	0	2	1	60	40	100
8	PC	322CIP08	Data Structures Laboratory	0	0	2	1	60	40	100
9	EEC	322GEV01	Professional Development	0	0	2	1	-	-	100
TOTAL				18	0	8	22			

SEMESTER – IV

S. No	Category	Course Code	Course Title	L	T	P	C	Marks		
								CA	EA	TOT
THEORY										
1	ES	422CBT01	Digital Electronics	3	0	0	3	40	60	100
2	PC	422CIT02	Design and Analysis of Algorithm	3	0	2	3	40	60	100
3	PC	422CIT03	Database Management Systems	3	0	2	3	40	60	100
4	PC	422CBT04	Cryptography and Information Security	3	0	0	3	40	60	100
5	PC	422CII05	Network Essentials	3	0	0	4	40	60	100
6	PC	422CIT06	Operating Systems	3	0	0	3	40	60	100
PRACTICALS										
7	PC	422CIP07	Database Management Systems Laboratory	0	0	2	1	60	40	100
8	PC	422CBP08	Cryptography and Information Security Laboratory	0	0	2	1	60	40	100
9	EEC	422GEV02	Math Solver	0	0	2	1			100
TOTAL				18	0	8	21			

SEMESTER – V

S. No	Category	Course Code	Course Title	L	T	P	C	Marks		
								CA	EA	TOT
THEORY										
1	PC	522CIT01	Artificial Intelligence and Machine Learning	3	0	0	3	40	60	100
2	PC	522CBI02	Digital And Mobile Forensics	3	0	2	4	50	50	100
3	PC	522CST03	Theory of Computation	3	0	0	3	40	60	100
4	PC	522CIT04	Web Essentials	3	0	2	3	40	60	100
5	PE	X22XXE _{xx}	Professional Elective-I	3	0	0	3	40	60	100
6	OE	X22XXO _{xx}	Open Elective-I	3	0	0	3	40	60	100
7	MC	522MCT _{xx}	Mandatory Course – I	1	0	0	1			100
PRACTICALS										
8	PC	522CIP07	Artificial Intelligence and Machine Learning Laboratory	0	0	2	1	60	40	100
9	PC	522CIP08	Web Essentials Laboratory	0	0	4	1	60	40	100
10	VAD	522CSV _{xx}	Value Added Course	0	0	2	1	100	-	100
TOTAL				19	0	10	21			

SEMESTER – VI

S. No	Category	Course Code	Course Title	L	T	P	C	Marks		
								CA	EA	TOT
THEORY										
1	PC	622CBT01	Identity Access Management	3	0	0	3	40	60	100
2	PC	622CII02	Cloud Computing	3	0	2	4	50	50	100
3	PC	622CIT03	Mobile Application Development	3	0	0	3	40	60	100
4	PC	622CST04	Internet of Things	3	0	0	3	50	50	100
5	PE	X22XXE _{xx}	Professional Elective – II	3	0	0	3	40	60	100
6	OE	X22XXO _{xx}	Open Elective – II	3	0	0	3	40	60	100
7	MC	X22MCT _{xx}	Mandatory Course - II	3	0	0	1	40	60	100
PRACTICALS										
8	PC	622CIP08	Mobile Application Development Laboratory	0	0	2	1	60	40	100
		622CIP08	Internet of Things Laboratory	0	0	2	1	60	40	100
9	EEC	EEC	Internship	0	0	4	2	60	40	100
TOTAL				21	0	10	23			

SEMESTER – VII

S. No	Category	Course Code	Course Title	L	T	P	C	Marks		
								CA	EA	TOT
THEORY										
1	PC	722CBT01	Blockchain Technologies	3	0	0	3	40	60	100
2	PC	722CST02	AR and VR meta verse	3	0	2	4	50	50	100
3	HSMC	722CST03	Human Values and Ethics	3	0	0	3	40	60	100
4	PE	X22XXE _{xx}	Professional Elective - III	3	0	0	3	40	60	100
5	PE	X22XXE _{xx}	Professional Elective - IV	3	0	0	3	40	60	100
6	OE	722BAO _{xx}	Management Elective I	3	0	0	3	40	60	100
PRACTICALS										
7	PC	722CBP07	Blockchain Technologies Laboratory	0	0	2	1	60	40	100
8	EEC	722CSP09	Mini Project	0	0	4	2	60	40	100
TOTAL				18	0	8	22			

SEMESTER – VIII

S. No	Category	Course Code	Course Title	L	T	P	C	Marks		
								CA	EA	TOT
THEORY										
1	PE	X22XXE _{xx}	Professional Elective - V	3	0	0	3	40	60	100
2	PE	X22XXE _{xx}	Professional Elective - VI	3	0	0	3	40	60	100
PRACTICALS										
3	EEC	822CSP01	Project Work & Viva Voce	0	0	18	9	60	40	100
TOTAL				6	0	18	15			

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Applicable to the students admitted from the Academic year (2022-2023 onwards)

LIST OF MANDATORY COURSES – I

S. No	Category	Course Code	Course Title	L	T	P	C	Marks		
								CA	EA	TOT
1	MC	522MCT01	Indian Constitution	3	0	0	1			100
1	MC	522MCT02	Gender, Culture and Development	3	0	0	1			100
2	MC	522MCT03	Elements of Literature	3	0	0	1			100
3	MC	522MCT04	Introduction to women & gender Studies	3	0	0	1			100
4	MC	522MCT05	Disaster Management	3	0	0	1			100

LIST OF MANDATORY COURSES – II

S. No	Category	Course Code	Course Title	L	T	P	C	Marks		
								CA	EA	TOT
THEORY										
1	MC	622MCT01	Well Being with Traditional Practices (Yoga, Ayurveda and Siddha)	3	0	0	1			100
2	MC	622MCT02	History of Science and Technology in India	3	0	0	1			100
3	MC	622MCT03	Political and Economic Thought for a Human Society	3	0	0	1			100
4	MC	622MCT04	State, Nation Building and Politics in India	3	0	0	1			100
5	MC	622MCT05	Industrial Safety	3	0	0	1			100

LIST OF MANAGEMENT ELECTIVES (SEMESTER VII)

S. No	Category	Course Code	Course Title	L	T	P	C	Marks		
								CA	EA	TOT
THEORY										
1	HSMC	722BAO01	Principles of Management	3	0	0	3	40	60	100
2	HSMC	722BAO02	Total Quality Management	3	0	0	3	40	60	100
3	HSMC	722BAO03	Human Resource Management	3	0	0	3	40	60	100
4	HSMC	722BAO04	Knowledge Management	3	0	0	3	40	60	100
5	HSMC	722BAO05	People Management	3	0	0	3	40	60	100
6	HSMC	722BAO06	Management Information System	3	0	0	3	40	60	100

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PROFESSIONAL ELECTIVE COURSES- VERTICALS

VERTICAL 1: AI AND DATA SCIENCE

S. No	Category	Course Code	Course Title	L	T	P	C	Marks		
								CA	EA	TOT
THEORY										
1	PC	X22CIE01	Big Data Analytics	3	0	0	3	40	60	100
2	PC	X22CE02	Exploratory Data Analysis	3	0	0	3	40	60	100
3	PC	X22CIE03	Deep Learning	3	0	0	3	40	60	100
4	PC	X22CIE04	Text and Speech Analysis	3	0	0	3	40	60	100
5	PC	X22CIE05	Image and Video Analytics	3	0	0	3	40	60	100
6	PC	X22CIE06	Business Analytics	3	0	0	3	40	60	100
7	PC	X22CIE07	Cognitive Science	3	0	0	3	40	60	100

VERTICAL 2: FULL STACK DEVELOPMENT

S. No	Category	Course Code	Course Title	L	T	P	C	Marks		
								CA	EA	TOT
THEORY										
1	PC	X22CIE08	C# & NET	3	0	0	3	40	60	100
2	PC	X22CIE09	Advanced Scripting	3	0	0	3	40	60	100
3	PC	X22CIE10	UI and UX Design	3	0	0	3	40	60	100
4	PC	X22CIE11	Advanced Python Programming	3	0	0	3	40	60	100
5	PC	X22CIE12	Cloud Services and Management	3	0	0	3	40	60	100
6	PC	X22CIE13	Web Application Security	3	0	0	3	40	60	100
7	PC	X22CIE14	Software Testing and Automation	3	0	0	3	40	60	100

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VERTICAL 3: CLOUD AND DATA CENTER TECHNOLOGIES

S. No	Category	Course Code	Course Title	L	T	P	C	Marks		
								CA	EA	TOT
THEORY										
1	PC	X22CIE15	Devops	3	0	0	3	40	60	100
2	PC	X22CIE16	Virtualization	3	0	0	3	40	60	100
3	PC	X22CIE17	Cloud Services and Management	3	0	0	3	40	60	100
4	PC	X22CIE18	Storage Technologies	3	0	0	3	40	60	100
5	PC	X22CIE19	Software Defined Networks	3	0	0	3	40	60	100
6	PC	X22CIE20	Stream Processing	3	0	0	3	40	60	100
7	PC	X22CIE21	Security and Privacy in Cloud	3	0	0	3	40	60	100

VERTICAL 4: CYBER SECURITY

S. No	Category	Course Code	Course Title	L	T	P	C	Marks		
								CA	EA	TOT
THEORY										
1	PC	X22CIE22	Ethical Hacking	3	0	0	3	40	60	100
2	PC	X22CBE23	Secure SDLC	3	0	0	3	40	60	100
3	PC	X22CBE24	AI for Cyber Security	3	0	0	3	40	60	100
4	PC	X22CIE21	Security and Privacy in Cloud	3	0	0	3	40	60	100
5	PC	X22CIE26	Social Network Security	3	0	0	3	40	60	100
6	PC	X22CSE27	Quantum Cryptography	3	0	0	3	40	60	100
7	PC	X22CSE28	Network Security	3	0	0	3	40	60	100

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ADHIYAMAAN COLLEGE OF ENGINEERING (AUTONOMOUS), HOSUR**B.E. COMPUTER SCIENCE AND ENGINEERING****(CYBER SECURITY)****R2022-CURRICULUM****Choice Based Credit System****VERTICAL 5: CREATIVE MEDIA**

S. No	Category	Course Code	Course Title	L	T	P	C	Marks		
								CA	EA	TOT
THEORY										
1	PC	X22CIE29	Multimedia and Animation	3	0	0	3	40	60	100
2	PC	X22CIE30	Multimedia Data Compression and Storage	3	0	0	3	40	60	100
3	PC	X22CIE10	UI and UX Design	3	0	0	3	40	60	100
4	PC	X22CIE32	Visual Effects	3	0	0	3	40	60	100
5	PC	X22CIE33	Game Development	3	0	0	3	40	60	100
6	PC	X22CIE34	Video Creation and Editing	3	0	0	3	40	60	100
7	PC	X22CSE35	Image and video Analytics	3	0	0	3	40	60	100

VERTICAL 6: EMERGING TECHNOLOGIES

S. No	Category	Course Code	Course Title	L	T	P	C	Marks		
								CA	EA	TOT
THEORY										
1	PC	X22CIE01	Big Data Analytics	3	0	0	3	40	60	100
2	PC	X22CSE37	Neural Networks and deep learning	3	0	0	3	40	60	100
3	PC	X22CIE24	Quantum Computing	3	0	0	3	40	60	100
4	PC	X22CSE39	Robotics process Automation	3	0	0	3	40	60	100
5	PC	X22CIE10	UI and UX Design	3	0	0	3	40	60	100
6	PC	X22CIE15	Devops	3	0	0	3	40	60	100
7	PC	X22CSE42	Design Thinking	3	0	0	3	40	60	100

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S.No	Semester	Credits
1	I	19
2	II	21
3	III	22
4	IV	21
5	V	21
6	VI	23
7	VII	22
8	VIII	15
Total		164

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CYBER SECURITY CORE COURSES

S.No.	Semester	Name of the Course	No. of Credits
1	III	322CBT06 - Fundamentals of Cyber Security	3
2	IV	422CBT01 -Cryptography and Information Security	3
3	IV	422CBP08 -Cryptography and Information Security Laboratory	1
4	V	522CBI02 - Digital and Mobile Forensics	4
5	VI	622CBT01 Identity Access Management	3
7	VII	722CBT01 - Blockchain Technologies	3
8	VII	722CBP07 - Blockchain Technologies Laboratory	1
Total credits			18