JERUSALEM COLLEGE OF ENGINEERING

(An Autonomous Institution)
Approved by AICTE & Affiliated to Anna University
Accredited by NAAC with 'A' Grade
Chennai – 600 100

DEPARTMENT OF CYBER SECURITY

B.E.CSE (CS)

CURRICULUM

REGULATION 2023
CHOICE BASED CREDIT SYSTEM

JERUSALEM COLLEGE OF ENGINEERING
(AN AUTONOMOUS INSTITUTION AFFILIATED TO ANNA UNIVERSITY, CHENNAI)
DEPARTMENT OF CYBER SECURITY

B.E.CSE (CS)

CHOICE BASED CREDIT SYSTEM
I TO VIII SEMESTERS CURRICULUM AND SYLLABI

COURSE SUMMARY SHEET

S.No	Category	Credits as per Semester								Total Credits
		I	II	III	IV	V	VI	VII	VIII	
1	HS	4	4	-	-	-	1	1	-	10
2	BS	10	9	3	3	3	-	-	-	28
3	ES	8	3	-	-	-	-	-	-	11
4	PC	-	5	18	13	12	12	-	10	70
5	PE	-	-	-	3	3	6	6	-	18
6	OE	-	-	-	3	3	3	3	-	12
7	EEC	-	2		3	2	3	3	-	13
TOTAL (B.E)		22	23	21	25	23	25	13	10	162

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SEMESTER 1

S. No	COURSE CODE	COURSE TITLE	T/P/I	CATEGORY	CONTACT PERIODS	L	T	P	C
1	JHS2121	English for Communicative Competence	I	HS	4	2	0	2	3
2	JGE2102	Heritage of Tamils	T	HS	1	1	0	0	1
3	JMA2121	Matrices and Calculus	I	BS	4	2	0	2	3
4	JPH2101	Engineering Physics 1	T	BS	3	3	0	0	3
5	JCY2101	Engineering Chemistry	T	BS	3	3	0	0	3
6	JGE2101	Basic Engineering	T	ES	3	3	0	0	3
7	JCS2121	Programming in C	I	ES	5	3	0	2	4
8	JPC2111	Engineering Physics and Chemistry Laboratory	P	BS	2	0	0	2	1
9	JGE2111	Basic Engineering Laboratory	P	ES	2	0	0	2	1
		TOTAL			**27**	**17**	**0**	**10**	**22**

JSEMESTER 2

S. No	COURSE CODE	COURSE TITLE	T/P/I	CATEGORY	CONTACT PERIODS	L	T	P	C
1	JHS2221	English for Science and Technology	I	HS	4	2	0	2	3
2	JGE2202	Tamils and Technology	T	HS	1	1	0	0	1
3	JMA2221	Statistics for Engineers	I	BS	4	2	0	2	3
4	JPH2201	Engineering Physics 2	T	BS	3	3	0	0	3
5	JCY2201	Environmental Science and Sustainability	T	BS	2	2	0	0	2
6	JGE2221	Engineering Graphics	I	ES	4	2	0	2	3
7	JCS2201	Python Programming	T	PC	3	3	0	0	3
8	JPC2211	Engineering Physics and Environmental Science Laboratory	P	BS	2	0	0	2	1
9	JCS2211	Python Programming Laboratory	P	PC	4	0	0	4	2
10	JGE2241	Gaming and Crafts studio	P	EEC	4	0	0	4	2
		TOTAL			**31**	**15**	**0**	**16**	**23**

SEMESTER 3

S. No	COURSE CODE	COURSE TITLE	T/P/I	CATEGORY	CONTACT PERIODS	L	T	P	C
1	JMA2302	Mathematical Foundations for Computer Science	T	BS	4	2	2	0	3
2		Object Oriented Programming	T	PC	3	3	0	0	3
3		Data Structures and Algorithms	T	PC	3	3	0	0	3
4	JCB2321	Foundation of Cyber Security	I	PC	5	3	0	2	4
5		Digital Principles and Computer Organization	I	PC	5	3	0	2	4
6	JNC2361	Non-Credit Mandatory Course 1	T	NCM	3	3	0	0	-
7		Data Structure and Algorithms Laboratory	P	PC	4	0	0	4	2
8		Object Oriented Programming Laboratory	P	PC	4	0	0	4	2
9	JPT2041	Soft Skills and Aptitude	P	EEC	2	0	0	2	*
		TOTAL			**33**	**17**	**2**	**14**	**21**

*Only Internal Assessment

SEMESTER 4

S. No	COURSE CODE	COURSE TITLE	T/P/I	CATEGORY	CONTACT PERIODS	L	T	P	C
1	JMA2402	Applied Linear Algebra	T	BS	4	2	2	0	3
2	JIT2401	Database Management Systems	T	PC	3	3	0	0	3
3	JCS2421	Operating Systems	I	PC	5	3	0	2	4
4	JCB2401	Cryptography and Cryptanalysis	I	PC	5	3	0	2	4
5	-	Professional Elective 1	T	PE	3	3	0	0	3
6	-	Open Elective 1	T	OE	3	3	0	0	3
7	JCB2411	Database Management Systems Laboratory	P	PC	4	0	0	4	2
8	JPT2041	Soft Skills and Aptitude	P	EEC	2	0	0	2	1
9	JGE2442	Advanced IT Infrastructure Laboratory	P	EEC	4	0	0	4	2
		TOTAL			**33**	**17**	**2**	**14**	**25**

SEMESTER 5

S. No	COURSE CODE	COURSE TITLE	T/P/I	CATEGORY	CONTACT PERIODS	L	T	P	C
1	JMA2501	Mathematical Modelling and Optimization Techniques	T	BS	4	2	2	0	3
2	JCB2501	Ethical Hacking and Penetration Testing	T	PC	3	3	0	0	3
3	JCB2521	Cyber Forensics	I	PC	5	3	0	2	4
4	JCB2522	Data Communication and Networks	T	PC	3	3	0	0	3
5	-	Professional Elective 2	T	PE	3	3	0	0	3
6	-	Open Elective 2	T	OE	3	3	0	0	3
7	JCB2511	Ethical Hacking and Penetration Testing Laboratory	P	PC	4	0	0	4	2
8	JPT2042	Technical Skills and Aptitude	P	EEC	2	0	0	2	*
9	JGE2542	MERN Stack Development Laboratory	P	EEC	4	0	0	4	2
		TOTAL			31	17	2	12	23

*Only Internal Assessment

SEMESTER 6

S. No	COURSE CODE	COURSE TITLE	T/P/I	CATEGORY	CONTACT PERIODS	L	T	P	C
1	JCB2621	Cloud Security	T	PC	3	3	0	0	3
2	JCB2601	Cyber Threat Intelligence	T	PC	3	3	0	0	3
3		Web Application Security	I	PC	5	3	0	2	4
4	-	Professional Elective 3	T	PE	3	3	0	0	3
5	-	Professional Elective 4	T	PE	3	3	0	0	3
6	-	Open Elective 3	T	OE	3	3	0	0	3
7	JHS2541	Professional Communication	P	HS	2	0	0	2	1
8	JCB2611	Cyber Threat Intelligence Laboratory	P	PC	4	0	0	4	2
9	JGE2642	Computational Intelligence Laboratory	P	EEC	4	0	0	4	2
10	JPT2042	Technical Skills and Aptitude	P	EEC	2	0	0	2	1
		TOTAL			34	18	0	14	25

SEMESTER 7

S. No	COURSE CODE	COURSE TITLE	T/P/I	CATEGORY	CONTACT PERIODS	L	T	P	C
1	-	Professional Elective 5	T	PE	3	3	0	0	3
2	-	Professional Elective 6	T	PE	3	3	0	0	3
3	-	Open Elective 4	T	OE	3	3	0	0	3
4	JNC2761	Non-Credit Mandatory Course 2	T	NCM	2	2	0	0	-
5	JHS2741	Entrepreneurship for Engineers	P	HS	2	0	0	2	1
6	JCB2741	Comprehension and Technical Seminar	P	EEC	2	0	0	2	1
7	JCB2742	Internship	P	EEC	-	-	-	4**	2
		TOTAL			**15**	**11**	**0**	**8**	**13**

** Internship of one month must be undertaken in industry through semester 4, 5 and 6 leading to 2 credit in semester 7

SEMESTER 8

S. No	COURSE CODE	COURSE TITLE	T/P/I	CATEGORY	CONTACT PERIODS	L	T	P	C
1	JCS2831	Project Work	P	PC	20	0	0	20	10
		TOTAL			**20**	**0**	**0**	**20**	**10**