#### ANNEXURE – I

# ST VINCENT PALLOTTI COLLEGE OF ENGINEERING & TECHNOLOGY ACADEMIC OFFICE

## Credit Structure for Undergraduate programs

Sr. No	Category	Credits
1	Humanities, Social Sciences & Management courses	14
2	Basic Science courses	26
3	Engineering Science courses including workshop, drawing, basics of electrical/mechanical/computer etc.	19
4	Professional core courses	50
5	Professional Elective courses relevant to chosen specialization/branch	39
6	Open subjects – Electives from other technical and /or emerging subjects	15
7	Project work, seminar and internship in industry or elsewhere	
8	Mandatory Courses [Environmental Sciences, Induction training, Indian Constitution, Essence of Indian Knowledge Tradition]	0
9	Comprehensive Courses [Industry Training and Skill Development, Capstone Course]	4
	TOTAL	Max - 167

#### VISION

To excel in Computer Science and Engineering education, research and project management by empowering the students with strong conceptual knowledge.

#### MISSION

To educate the students with basic foundation blocks of core and allied disciplines of Computer Science and Engineering.

To provide practical skills in the advancements of the Computer Science and Engineering field required for the growing dynamic IT and ITES industries.

To sculpt strong personal, technical, research, entrepreneurial, and leadership skills.

To inculcate knowledge in lifelong learning, professional ethics and contribution to the society.

# ANNEXURE – I

# Teaching Scheme for First Year (Semester I and II) Bachelor of Engineering

## **GROUP 1: SEMESTER I / GROUP 2: SEMESTER II**

Sr No	Course Code	Course Title	Ho	ours Wee	per k	Credits	Ν	Aaximum Mark	(S
			L	Т	Р		Continual Assessmen t	End Sem Examination	Total
1	AS101T	Engineering Physics & Material Sciences	4	1	-	5	30	70	100
2	AS101P	Engineering Physics & Material Sciences Lab	-	-	2	1	25	25	50
3	AS102T	Applied Mathematics – I	4	-	-	4	30	70	100
4	AS103T	Engineering Practices-I (Electrical & Electronics)	4		-	4	30	70	100
5	AS103P	Engineering Practices-I Lab(Electrical & Electronics)	-	-	2	1	25	25	50
6	AS104T	Logic building with C	3	-		3	15	35	50
7	AS104P	Logic building with C Lab			2	1	25	25	50
8	AS105T	Communication Skills	2	-	-	2	15	35	50
9	AS106P	Communication Skills Lab			2	1	25	25	50
10	AS107P	Sports / Yoga / Library			2	0			
	Te	otal	17	1	10	22	220	380	600

**Induction Training 3 weeks** 

	<b>GROUP 1: SEMESTER II / GROUP 2: SEMESTER I</b>												
Sr No	Course Code	Course Title	Ho V	urs Vee	per k	Credits	Ma	ximum Marks					
			L	Т	Р		Continual Assessment	End Sem Examination	Total				
1	AS201T	Engineering Chemistry & Environmental Science	4	1	-	5	30	70	100				
2	AS201P	Engineering Chemistry & Environmental Science Lab	-	-	2	1	25	25	50				
3	AS202T	Applied Mathematics – II	4	-	-	4	30	70	100				
4	AS202P	Computational Mathematics Lab	-	-	2	1	25	25	50				
5	AS203T	Engineering Practices-I (Mechanics & drawing)	4		-	4	30	70	100				
6	AS203P	Engineering Practices-I Lab(Mechanic s & drawing)	-	-	2	1	25	25	50				
7	AS204T	Problem Solving with Python	3	-	-	3	30	70	100				
8	AS204T	Problem Solving with Python Lab	-	-	2	1	25	25	50				
10	AS205T	Essence of Indian Knowledge Tradition	2			0							
11	AS206P	Sports / Yoga			2	0							
12	AS207P	Library / Tinkering &Model Lab			1	0							
Total			17	1	11	20	220	380	600				

# **Teaching Scheme for First Year (Semester I and II) Bachelor of Engineering** GROUP 1: SEMESTER II / GROUP 2: SEMESTER I

\* Induction Training 3 weeks

### Semester Pattern

### III Semester B. E. (Computer Science & Engineerig in Cyber Security)

Sr N	Course Code	Course Title	Ho	Hours per Week			Maximum Marks		
0			L	Т	Р		Continual Assessment	End Sem Examination	Total
1	AS301T	Applied Mathematics – III	4			4	30	70	100
2	CS301T	Data structure	4			4	30	70	100
	CS301P	Data structure lab			2		25	25	50
4	CS302T	Information Security Fundamentals	3			3	30	70	100
5	CS303T	Data Communication and Computer Networks	3			3	30	70	100
7	CS304T	Web Technology	3			2	30	70	100
8	CS304P	Web Technology lab			2	2	25	25	50
10	H 102	Universal Human Values - 2	3			3	25	25	50
11		Sports / Yoga / Library / Career Development			2	0			
		Total	20		6	21	225	425	650

\* Interpersonal Skills, Aptitude, and Logical Thinking

### Semester Pattern

### IV Semester B. (Computer Science & Engineerig in Cyber Security)

Sr	Course			urs Vee	per k	Credits	Maximum Marks			
N O	Code	Course Title	L	Т	Р		Continual Assessment	End Sem Examinatio n	Tota l	
1	CS501T	Object Oriented programming concepts	3			3	30	70	100	
	CS501P	Object Oriented programming concepts lab			2	2	25	25	50	
2	CS502T	Professional Elective-I	4			4	30	70	100	
3	CS503T	Dynamic Paradigm in Cyber Security	4			3	30	70	100	
4	CS504T	Advanced Database Management Systems	3			3	30	70	100	
5	CS504P	Advanced Database Management Systems lab			2	2	25	25	50	
6	CS505T	Cryptographic Mathematics	4			3	30	70	100	
7		Constitution of India	2			0	25	25	50	
	CS506T	Operating System	3			3	30	70	100	
8		Industrial Training Skill Development			2	1	0	50	50	
9		Career Development * (Audit Course)	2			0	0	0	0	
		Total	25		6	24	255	545	800	

\* Interpersonal Skills, Aptitude, and Logical Thinking

## Semester Pattern

### V Semester B. E. (Computer Science & Engineering in Cyber Security)

S.r.	Course Code	Course Title	Hours per Week			Credit s	Maximum Marks			
No			L	Т	Р		Continual Assessmen t	End Sem Examinatio n	Tota l	
	CS501T	Professional Elective-II	4			4	30	70	100	
	CS502T	Digital Cyber Law	3			3	30	70	100	
	CS503T	Network Security	3			3	30	70	100	
	CS503P	Network Security Lab			2	2	25	25	50	
	H103/4T	Foundational Humanities Elective	2			0	30	70	100	
	CS505T	Open Elective - I	3			3	15	35	50	
	CS505P	Open Elective – I- lab			2	2	25	25	50	
	AS501T	Economics and Management	4			4	15	35	50	
	AS502T	English for Engineers	2			2	25	25	50	
		Industry Training & Skill Development			2	1	0	50	50	
		Career Development *			4	0				
Total			2 1		1 0	24	225	475	700	

## \* Advanced Interpersonal Skills and Advanced Aptitude

	Open Elective - I
CS505T-I	Java Programming
CS505T-II	Python Programming
	Foundational Humanities Elective
H-103	Development of Societies
H 104	Philosophy

### Semester Pattern

### VI Semester B. E. (Computer Science & Engineering in Cyber Security)

Sr	Course Code	Course Title	Hours per Week			Credits	Ma	Maximum Marks			
0			L	Т	Р		Continual Assesmen t	End Sem Examination	Tota l		
	CS601T	Professional Elective-III	4			4	30	70	100		
	CS601P	Professional Elective- III(OS Lab)			2	2	25	25	50		
	CS602T	Security software development life cycle	3			3	30	70	100		
	CS603T	Design Analysis and Algorithms	3			3	30	70	100		
	CS603P	Design Analysis and Algorithms lab			2	2	25	25	50		
	H 103/4	Foundational Humanities Elective	2			0					
7	CS604T	Open Elective-II	3	1		4	30	70	100		
8	CS605T	Project - I									
9		Career Development*			4	0					
10		Capstone Course **			2	1	25	25	50		
		Total	1 5	1	10	19	195	355	550		

# \* Advanced Interpersonal Skills and Advanced Aptitude

## **\*\*** Comprehensive Online Exam

Course Code	Open Elective - II	Course Code	Foundational Humanities Elective
CS604T-I	Ethical Hacking	H 103/4-I	Development of Socities
CS604T-II	Managing risk in information systems	H 103/4-II	Philosopy
CS604T-III	Threat and Malware Analysis		

### Semester Pattern

### VII Semester B. E. (Computer Science & Engineering in Cyber Security)

Sr N 0	Course Code	Course Title	Hou W	Hours per Week		Credit s	Maximur		
			L	Т	Р		Continual Assessment	End Sem Examinati on	Total
	CS701T	Cyber Forensics	4			4	30	70	100
	CS701P	Cyber Forensics lab			2	2	25	25	50
	CS702T	Theory of Computation				4	30	70	100
	CS703T	Professional Elective-IV	4			4	30	70	100
	CS704T	Open Elective - III	4			4	30	70	100
	CS705T	Project - II			4	4			
		Summer / Winter Internship *				2			
		Capstone Course- II **			2	1	25	25	50
	]	Fotal	16		8	25	170	330	500

\*Four weeks Internship Completion till 6<sup>th</sup> Semester

#### **\*\*** Comprehensive Online Exam

	<b>Open Elective - III</b>
CS704T-I	Secure Software Engineering and Management
CS704T-II	Distributed Systems and Cloud Computing

#### Semester Pattern

VIII Semester B. E. (Computer Science & Engineering in Cyber Security)

#### **Option A**

Sr	Course Code	Course Title	Hours per Week			Credits	Maximum Marks			
No	Coue		L	Т	Р		Continual Assessment	End Sem Assessment	Total	
1	CV801P	Project based on one semester internship in Industry/Research Institute/ National Laboratories/ Incubation Center	_	-	-	12	200	200	400	
		Total	-	-	-	12	200	200	400	

#### \*End Semester Examination will consist of evaluation of Seminar and Project Report

Option B is available to students only after recommendation of the concerned Head of the department. The project and internship should contribute towards career development plan of the students.

Sr No	Course Code	Course Title	Hours per Week			Credits	Maximum Marks		
			L	Т	Р		Continual Assessment	End Sem Assessment	Total
1	CV801P	Institutional Internship	-	-	-	6	100	100	200
2	CV802P	Project - III	-	-	-	6	100	100	200
Total			-	-	-	12	200	200	400