ANNEXURE – I

ST VINCENT PALLOTTI COLLEGE OF ENGINEERING & TECHNOLOGY

ACADEMIC OFFICE

Credit Structure for Undergraduate programs

Sr. No	Category	Credits	AICTE Norms
1	Humanities, Social Sciences & Management courses	15	15
2	Basic Science courses	24	25
3	Engineering Science courses including workshop, drawing, basics of electrical/mechanical/computer etc.	18	24
4	Professional core courses	**58**	48
5	Professional Elective courses relevant to chosen specialization/branch	16	18
6	Open subjects – Electives from other technical and /or emerging subjects	12	18
7	Project work, seminar and internship in industry or elsewhere	20	15
8	Mandatory Courses [Environmental Sciences, Induction training, Indian Constitution, Essence of Indian Knowledge Tradition]	0	0
9	Comprehensive Courses [Industry Training and Skill Development, Capstone Course]	4	0
	TOTAL	Max –167	163

** BoS specific

Option A – Credits of (Project – I + Project –II + One Semester Internship based project)

Option B – Credits of (Project – I + Project –II + 6 (Project – III))

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

Sr No	Course Code	Course Title	Hours per Week			Credits	Maximum Marks		
			L	T	P		Continual Assessment	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	3	1	-	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	30	70	50
7	AS104P	Logic building with C Lab			2	1	25	25	50
8	AS105T	Communication Skills-I	2	-	-	2	15	35	50
9	AS105P	Communication Skills-I Lab			2	1	25	25	50
10	AS106P	Sports & Yoga			2	0			
11	AS107P	Skill development (Emerging technologies)			2	0			
Total			**16**	**2**	**12**	**22**	**235**	**415**	**650**

Induction Program - 3 weeks

Teaching Scheme for First Year (Semester I and II)
Bachelor of Technology
GROUP 1: SEMESTER II / GROUP 2: SEMESTERI

Sr No	Course Code	Course Title	Hours per Week			Credits	Maximum Marks		
			L	T	P		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	3	1	-	4	30	70	100
4	AS203T	Engineering Practices-II (Civil & Mechanical)	4		-	4	30	70	100
5	AS203P	Engineering Practices-II Lab(Civil & Mechanical)	-	-	2	1	25	25	50
6	AS204T	Problem Solving with Python	3	-	-	3	30	70	100
7	AS204P	Problem Solving with Python Lab	-	-	2	1	25	25	50
8	AS205T	Essence of Indian Knowledge Tradition	2			0			
9	AS206T	Communication Skills-II	2	-	-	2	15	35	50
10	AS206P	Communication Skills-II Lab			2	1	25	25	50
11	AS207P	Tinkering & Model Lab			2	0			
Total			**18**	**2**	**10**	**22**	**235**	**415**	**650**

*** Induction Program – 3weeks**

Scheme of Examination of Bachelor of Engineering (Information Technology)

Semester Pattern

III Semester B. E. (Information Technology)

Sr. No	Course Code	Course Title	Hours per Week			Credits	Maximum Marks		
			L	T	P		Continual Assessment	End Sem Examination	Total
1	AS301T	Applied Mathematics – III	3	1	-	4	30	70	100
2	IT301T	Data Structure	3			3	30	70	100
3	IT301P	Data Structure Lab			4	2	50	50	100
4	IT302T	Computer Network	3	1		4	30	70	100
5	IT302P	Computer Network Lab			2	1	25	25	50
6	IT303T	Computer Architecture and Organization	3			3	30	70	100
7	IT303P	Computer Lab - 1(Basics of Hardware and Microprocessor)			2	1	25	25	50
8	H 102	Universal Human Values - 2	3			3	25	25	50
9	IT304P	Sports, Yoga, & Career Development *			2	0			
Total			**15**	**2**	**10**	**21**	**245**	**405**	**650**

***** Career Development (Interpersonal Skills, Aptitude, and Logical Thinking)

Scheme of Examination of Bachelor of Engineering (Information Technology)

Semester Pattern

IV Semester B. E. (Information Technology)

Sr No	Course Code	Course Title	Hours per Week			Credits	Maximum Marks		
			L	T	P		Continual Assessment	End Sem Examination	Total
1	IT401T	Discrete Structure	3	1		4	30	70	100
2	IT402T	Software Engineering and Project Management	3			3	30	70	100
3	IT402P	Software Engineering and Project Management Lab			2	1	25	25	50
4	IT403T	Object Oriented Programming	3			3	30	70	100
5	IT403P	Object Oriented Programming Lab			2	1	25	25	50
6	IT404T	Theory of Computation	4	1		5	30	70	100
7	IT405P	Software Lab - 1 (Web Technology Lab)			4	2	50	50	100
8	AS401T	Constitution of India	2			0	25	25	50
9	IT406P	Technical Skill Development**			2	1		50	50
10	IT407P	Career Development *	2			0			0
Total			**17**	**2**	**10**	**20**	**245**	**455**	**700**

***** Career Development(Interpersonal Skills, Aptitude, and Logical Thinking)

** Technical Skill Development – Desirable to have Industry skill enhancement

Scheme of Examination of Bachelor of Engineering (Information Technology)

Semester Pattern

V Semester B. E. (Information Technology)

Sr No	Course Code	Course Title	Hours per Week			Credits	Maximum Marks		
			L	T	P		Continual Assessment	End Sem Examination	Total
1	IT501T	Data Base Management System	3			3	30	70	100
2	IT501P	Data Base Management System Lab			2	1	25	25	50
3	IT502T	Design and Analysis of Algorithms	3	1		4	30	70	100
4	IT503T	Operating System	3			3	30	70	100
5	IT504T	Open Elective - I 1. Web Development 2. Augmented Reality & Virtual Reality	3			3	30	70	100
6	IT504P	Open Elective - I 1. Web Development Lab 2. Augmented Reality & Virtual Reality Lab			2	1	25	25	50
7	IT505T	Elective - I 1. Advance Computer Network 2. Gaming Architecture and Programming 3. IoT DevOps	2	1		3	30	70	100
8	AS501T	Economics and Management	4			4	15	35	50
9	AS502T	English for Engineers	2			2	25	25	50
10	IT506P	Technical Skill Development**			2	1		50	50
11	IT507P	Career Development *			4	0			
Total			**20**	**2**	**10**	**25**	**240**	**510**	**750**

***** Career Development(Interpersonal Skills, Aptitude, and Logical Thinking)

** Technical Skill Development – Desirable to have Industry skill enhancement

	Open Elective - I
IT504T(i)	Web Development
IT504P	Web Development Lab
IT504T(ii)	Augmented Reality & Virtual Reality
IT504P	Augmented Reality & Virtual Reality Lab

Scheme of Examination of Bachelor of Engineering (Information Technology)

Semester Pattern

VI Semester B. E. (Information Technology)

Sr No	Course Code	Course Title	Hours per Week			Credits	Maximum Marks		
			L	T	P		Continual Assessment	End Sem Examination	Total
1	IT601T	Java Programming	4			4	30	70	100
2	IT601P	Java Programming Lab			2	1	25	25	50
3	IT602T	Artificial Intelligence & Machine Learning	3			3	30	70	100
4	IT602P	Artificial Intelligence & Machine Learning Lab			2	1	25	25	50
5	IT603T	Elective - II 1. Cloud Computing 2. Mobile Application Development 3. Wireless Sensor Networks	2	1		3	30	70	100
6	IT604T	Elective - III 1. Computer Graphics & Animation 2. Human Computer Interface 3. Block-chain Technology	2	1		3	30	70	100
7	IT605T	Open Elective-II 1. Ethics in Information Technology 2. Software Testing and Quality Assurance	3	1		4	30	70	100
8	IT606P	Project - I			4	2	50	50	100
9	H 103/4	Foundational Humanities Elective	2			0			
10	IT607P	Career Development*			4	0			0
11	IT608P	Capstone Course – I **			2	1	25	25	50
Total			**16**	**3**	**14**	**22**	**275**	**475**	**750**

* Career Development (Interpersonal Skills and Aptitude)

** Capstone Course – I (Comprehensive knowledge gained in *branch name)*

	Open Elective - II		Foundational Humanities Elective
IT605T(i)	Ethics in Information Technology	H-103	Development of Societies
IT605T(ii)	Software Testing and Quality Assurance	H 104	Philosophy

Scheme of Examination of Bachelor of Engineering (Information Technology)

Semester Pattern

VII Semester B. E. (Information Technology)

Sr No	Course Code	Course Title	Hours per Week			Credits	Maximum Marks		Total
			L	T	P		Continual Assessment	End Sem Examination	
1	IT701T	Information and Cyber Security	3			3	30	70	100
2	IT702P	Software Lab - 2 (Emerging Technology Lab)			4	2	50	50	100
3	IT703T	Elective - IV 1. Data Warehousing and Mining 2. Natural Language Processing 3. Edge Computing	2			2	30	70	100
4	IT703P	Elective - IV Lab 1. Data Warehousing and Mining Lab 2. Natural Language Processing Lab 3. Edge Computing Lab			4	2	50	50	100
5	IT704T	Elective - V 1. Deep Learning 2. Advance in Data Base Management System 3. Digital Forensics	3			3	30	70	100
6	IT705T	Open Elective - III 1. Agile Software Development 2. Web Technology	4			4	30	70	100
7	IT706P	Project - II			8	4	75	75	150
8	IT707P	Summer /Winter Internship *				2			
9	IT708P	Capstone Course – II **			2	1	25	25	50
Total			**12**	**0**	**18**	**23**	320	480	**800**

* Summer / Winter Internship (Evaluation of Four Weeks Internship Completion till 6th Semester)

** Capstone Course – II (Comprehensive knowledge gained in *branch name)*

	Open Elective - III
IT705T(i)	Agile Software Development
IT705T(ii)	Introduction to Web Technology

Scheme of Examination of Bachelor of Technology (Information Technology)

Semester Pattern

VIII Semester B. Tech. (Information Technology)

Option A

Sr No	Course Code	Course Title	Hours per Week			Credits	Maximum Marks		
			L	T	P		Continual Assessment	End Sem Assessment	Total
1	IT801P	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	T	P		Continual Assessment	End Sem Assessment	Total
1	IT802P	Institutional Internship	-	-	-	6	100	100	200
2	IT803P	Project - III	-	-	-	6	100	100	200
Total			**-**	**-**	**-**	**12**	**200**	**200**	**400**

Autonomy Scheme Minor and Honor Proposed Courses

Minor in Cloud Computing& Security

Sr. No.	Semester	Minor Course Proposed	Credits
1	4th	Software Engineering and Project Management (Th)	4
2	4th	Software Engineering and Project Management (Lab)	
3	5th	Data Base Management System (Th)	4
4	5th	Data Base Management System (Lab)	
5	6th	Java Programming (Th)	5
6	6th	Java Programming (Lab)	
7	7th	Information and Cyber Security	3
8	8th	Cloud Computing using Salesforce	4
Total			**20**

Minor in Artificial Intelligence & Machine Learning

Sr. No.	Semester	Minor Course Proposed	Credits
1	4th	Software Engineering and Project Management (Th)	4
2	4th	Software Engineering and Project Management (Lab)	
3	5th	Data Base Management System (Th)	4
4	5th	Data Base Management System (Lab)	
5	6th	Artificial Intelligence & Machine Learning (Th)	4
6	6th	Artificial Intelligence & Machine Learning (Lab)	
7	7th	Natural Language Processing(Th)	4
8	7th	Natural Language Processing(Lab)	
9	8th	Big data Analytic and Business Intelligence	4
Total			**20**

B.E. IT with Honor in Data Science

Sr. No.	Semester	Honor Course Proposed	Credits
1	4th	Introduction to Data Science and Data Analytics Basics for everyone	4
2	5th	SQL for Data Science and Data Science Tool	4
3	6th	Visualization data with Python and Python for data science project	4
4	7th	R Programming Basics for Data Science and Data Visualization with R	4
5	8th	Big Data, Hadoop and Spark Basics	4
Total			**20**