

SCMS SCHOOL OF ENGINEERING AND TECHNOLOGY (AUTONOMOUS)

VIDYA NAGAR, PALISSERY, KARUKUTTY – 683 576

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING



Curriculum for B.Tech. in Computer Science and Engineering

Branch Code – CS

(Group A)

2026 Scheme • Semesters S1 – S8

Vision

- To be among the leading CSE departments, developing ethical engineers and impactful research aligned with societal and sustainable development goals.

Mission

- Provide Computer Science education that cultivates creativity, problem-solving, and a passion for lifelong learning.
- Develop competent Computer Science professionals by fostering teamwork, leadership and ethical responsibility.
- Promote impactful research in cybersecurity to address societal challenges and support sustainable development.

Program Outcomes (POs)

- PO1: Engineering Knowledge: Apply math, science, computing, and engineering fundamentals to complex problems.
- PO2: Problem Analysis: Formulate and analyse complex engineering research and literature.
- PO3: Design/Development of Solutions: Design solutions considering public safety, cost, and net-zero carbon goals.
- PO4: Conduct Investigations: Use research methods, experiment design, and data analysis for valid conclusions.
- PO5: Engineering Tool Usage: Select and apply modern engineering and IT tools with an understanding of limits.
- PO6: The Engineer and the World: Evaluate societal, health, legal, and environmental sustainability impacts
- PO7: Ethics: Apply professional ethics, human values, inclusivity, and legal compliance.
- PO8: Individual and Collaborative Teamwork: Function effectively as an individual or team leader.
- PO9: Communication: Communicate and write effectively across diverse cultural and technical communities.
- PO10: Project Management and Finance: Apply management and economic principles in multidisciplinary settings.
- PO11: Life-Long Learning: Adapt to emerging technologies and engage in independent critical thinking.

Program Specific Outcomes (PSOs)

- PSO1: Apply core computing principles to analyze, design, and solve efficient computational problems.
- PSO2: Design and develop reliable software systems using modern programming tools, platforms, and engineering practices.
- PSO3: Design intelligent, scalable, and data-centric applications using advanced computing platforms.

Program Educational Objectives (PEOs)

- PEO1: Graduates will develop effective computing solutions by integrating technical expertise, problem-solving skills, and innovative approaches.
- PEO2: Graduates will contribute effectively in industry or advance in academia and research by applying analytical thinking, and professional competencies.

- PEO3: Graduates will act ethically while applying their knowledge and skills to promote societal advancement and create sustainable technology solutions.

ABBREVIATIONS & COURSE CATEGORIES

L – Lecture (hours)	T – Tutorial (hours)	P – Practical (hours)
SL – Self-Learning (hours)	MC – MOOC Course	Cr. - Credits
IAT-1 / IAT-2 – Internal Assessment Test 1 / 2	CIA – Continuous Internal Assessment	SEE – Semester End Examination
BSC – Basic Science Course	ESC – Engineering Science Course	PC / PCL – Programme Core / Programme Core Lab
PC-PBL – Programme Core – Project Based Learning	PE – Programme Elective	OE / ILE – Open Elective / Industry Linked Elective
HMC – Humanities Management Course	SEC – Skill Enhancement Course	HWP – Health & Wellness Programme
PWS – Project Work / Seminar	GC / UC / UE – Group Course / Universal Course/ Universal Elective	MOOC – Massive Open Online Course

SEMESTER 1 (S1)

SEMESTER 1 (S1)																
Sl.	Slot	Course Code	Type	Cat.	Course Title	Cr.	Hour Structure				Total Hrs.	Internal Test		CI A	SE E	Over all Marks
							L	T	P	SL		IAT 1	IAT 2			
1	A	26GAMAT101	BSC	GC	Calculus and Optimization	3	45	0	0	45	90	40	40	40	60	100
2	B	26GAPHT121 / 26GXCYT122	BSC	GC	Physics for Information Science/ Chemistry for Information Science	4	45	0	30	45	120	40	40	40	60	100
3	C	26GXEST103	ESC	GC	Engineering Graphics	3	30	0	30	30	90	40	40	40	60	100
4	D	26GXEST104	ESC	GC	Introduction to Electrical & Electronics Engineering	4	60	0	0	60	120	40	40	40	60	100
5	E	26UCEST105	ESC	UC	Programming in C	4	45	0	30	45	120	40	40	40	60	100
6	F	26GXESL106	ESC	GC	Basic Electrical and Electronics Engineering Workshop	1	0	0	30	0	30	-	-	100	-	100
7	G	26UCHWT127	HWP	UC	Health and Wellness	1	0	0	30	0	30	-	-	50	-	50
		26UCHUT128	HMC		Life Skills and Professional Communication									100	-	100
8		26UCSEM129	SEC	UC	MOOC Course/Communicative English (8 WEEKS)	0	0	0	0	0	0	-	-	-	-	-
TOTAL						20	225	0	150	225	600					
Bridge Course : Total 15 Hours																

SEMESTER 2 (S2)

Sl.	Slot	Course Code	Type	Cat.	Course Title	Cr.	Hour Structure				Total Hrs.	Internal Test		CI A	SE E	Overall Marks
							L	T	P	SL		IAT 1	IAT 2			
1	A	26GAMAT201	BSC	GC	Linear Algebra and Its Applications	3	45	0	0	45	90	40	40	40	60	100
2	B	26GAPHT121 / 26GXCYT122	BSC	GC	Physics for Information Science / Chemistry for Information Science	4	45	0	30	45	120	40	40	40	60	100
3	C	26GAEST203	ESC	GC	Discrete Mathematics	3	45	15	0	30	90	40	40	40	60	100
4	D	26PCCST204	PC	PC	Introduction to Python Programming	4	45	0	30	45	120	40	40	40	60	100
5	E	26UCEST205	ESC	UC	Engineering Entrepreneurship & IPR	3	45	0	0	45	90	40	40	60	40	100
6	F	26GAESL206	ESC	GC	Computing Practices Workshop	1	0	0	30	0	30	-	-	100	-	100
7	G	26UCHWT127	HWP	UC	Health and Wellness	1	0	0	30	0	30	-	-	50	-	50
		26UCHUT128	HMC		Life Skills and Professional Communication									100		100
8		26UCSEM129	SEC	UC	MOOC Course/Communicative English (8 WEEKS)	1	0	0	0	30	30	-	-	-	-	-
TOTAL						20	225	15	120	240	600					

SEMESTER 3 (S3)

SEMESTER 3 (SS)																
Sl.	Slot	Course Code	Type	Cat.	Course Title	Cr.	Hour Structure				Total Hrs.	Internal Test		CI A	SE E	Over all Marks
							L	T	P	SL		IAT 1	IAT 2			
1	A	26GAMAT301	BSC	GC	Probability Distributions and Random Processes	3	45	0	0	45	90	40	40	40	60	100
2	B	26PCCST302	PC	PC	Theory of Computation	3	45	0	0	45	90	40	40	40	60	100
3	C	26PCCST303	PC	PC	Data Structures and Algorithms	4	45	15	0	60	120	40	40	40	60	100
4	D	26PBCST304	PC-PBL	PB	Object Oriented Programming	4	60	0	0	60	120	40	40	60	40	100
5	E	26GAEST305	ESC	GC	Fundamentals of Digital Electronics and Logic Design	3	45	0	0	45	90	40	40	40	60	100
6	F	26UCHUT346	HMC	UC	Economics for Engineers	2	30	0	0	30	60	40	40	50	50	100
		26UCHUT347			Engineering Ethics and Sustainable Development							-	-			
7	G	26PCCSL307	PCL	PC	Data Structures Lab	2	0	0	45	15	60	-	-	50	50	100
8	H	26PCCSL308	PCL	PC	Java Programming Lab	2	0	0	45	15	60	-	-	50	50	100
9			SEC	MC	MOOC Course (8 WEEKS)	0	0	0	0	0	0	-	-	-	-	-
TOTAL						23	270	15	90	315	690					
Bridge Course for Lateral Entry Students: Total 15 Hrs.																

SEMESTER 4 (S4)

Sl.	Slot	Course Code	Type	Cat.	Course Title	Cr.	Hour Structure				Total Hrs.	Internal Test		CI A	SE E	Over all Marks
							L	T	P	SL		IAT 1	IAT 2			
1	A	26GAMAT401	BSC	GC	Graph Theory	3	45	0	0	45	90	40	40	40	60	100
2	B	26PCCST402	PC	PC	Database Management Systems	3	45	0	0	45	90	40	40	40	60	100
3	C	26PCCST403	PC	PC	Operating Systems	4	45	15	0	60	120	40	40	40	60	100
4	D	26PBCST404	PC-PBL	PB	Computer Organization and Architecture	4	60	0	0	60	120	40	40	60	40	100
5	E	26PECST41N	PE	PE	Program Elective-1	3/5	45	0	0	45/105	90/150	40	40	40	60	100
6	F	26UCHUT346	HMC	UC	Economics for Engineers	2	30	0	0	30	60	40	40	50	50	100
		26UCHUT347			Engineering Ethics and Sustainable Development							-	-			
7	G	26PCCSL407	PCL	PC	Operating Systems Lab	2	0	0	45	15	60	-	-	50	50	100
8	H	26PCCSL408	PCL	PC	DBMS Lab	2	0	0	45	15	60	-	-	50	50	100
9			SEC	MC	MOOC Course (8WEEKS)	1	0	0	0	30	30	-	-	-	-	-
TOTAL						24/26	270	15	90	345/405	720/780					

SEMESTER 5 (S5)

Sl.	Slot	Course Code	Type	Cat.	Course Title	Cr.	Hour Structure				Total Hrs.	Internal Test		CI A	S E E	Over all Marks
							L	T	P	SL		IA-1	IA-2			
1	A	26PCCST501	PC	PC	Computer Networks	3	45	0	0	45	90	40	40	40	60	100
2	B	26PCCST502	PC	PC	Design and Analysis of Algorithms	3	45	0	0	45	90	40	40	40	60	100
3	C	26PCCST503	PC	PC	Machine Learning	4	45	15	0	60	120	40	40	40	60	100
4	D	26PBCST504	PC-PBL	PB	Microcontrollers	4	60	0	0	60	120	40	40	60	40	100
5	E	26PECST52N	PE	PE	Program Elective-2	3/5	45	0	0	45/105	90/150	40	40	40	60	100
6	F	26GXEST566 / 26UCHUT567	ESC	GC	Design Thinking and Product Development (Group specific) / Constitution of India	2	30	0	0	30	60	40	40	40	60	100
7	G	26PCCSL507	PCL	PC	Networks Lab	2	0	0	45	15	60	-	-	50	50	100
8	H	26PCCSP508	PWS	PC	Mini Project	2	0	0	45	15	60	-	-	50	50	100
9			SEC	MC	MOOC (8 weeks)	0	0	0	0	0	0	-	-	-	-	-
TOTAL						23/25	270	15	90	315/375	690/750					
Industrial Visit: Maximum 12 days are permitted in S5/S6, not exceeding more than 6 working days. Industrial Training: Students who are not participating in the industrial visit must attend industrial training during that period.																

SEMESTER 6 (S6)

Sl.	Slot	Course Code	Type	Cat.	Course Title	Cr.	Hour Structure				Total Hrs.	Internal Test		CI A	S E E	Over all Marks
							L	T	P	SL		IA-1	IA-2			
1	A	26PCCST601	PC	PC	Compiler Design	3	45	0	0	45	90	40	40	40	60	100
2	B	26PCCST602	PC	PC	Advanced Computing Systems	4	45	15	0	60	120	40	40	40	60	100
3	C	26PBCST603	PC-PBL	PB	Fundamentals of Cyber Security	4	60	0	0	60	120	40	40	60	40	100
4	D	26PECST63N	PE	PE	Program Elective-3	3/5	45	0	0	45/105	90/150	40	40	40	60	100
5	E	26OECST61N / 26IECST61N	OE/ILE	OE/ILE	Open Elective-1/ Industry Linked Elective	3	45	0	0	45	90	40	40	40	60	100
6	F	26GAEST566/ 26UCHUT567	ESC	GC	Design Thinking and Product Development (Group specific) / Constitution of India	2	30	0	0	30	60	40	40	40	60	100
7	G	26PCCSL607	PCL	PC	Machine Learning Lab	2	0	0	45	15	60	-	-	50	50	100
8	H	26PCCSL608	PCL	PC	Systems Lab	2	0	0	45	15	60	-	-	50	50	100
9			SEC	MC	MOOC (8 weeks)	1	0	0	0	30	30	-	-	-	-	-
TOTAL						24/26	270	15	90	345/405	720/780					
Industrial Visit: Maximum 12 days are permitted in S5/S6, not exceeding more than 6 working days. Industrial Training: Students who are not participating in the industrial visit must attend industrial training during that period.																

Note: Open Electives are such courses which will be offered by other departments.

SEMESTER 7 (S7)

Sl.	Slot	Course Code	Type	Cat.	Course Title	Cr.	Hour Structure				Total Hrs.	Internal Test		CI A	SE E	Over all Marks
							L	T	P	SL		IAT 1	IAT 2			
1	A	26PECST74N/26PECSM74N	PE	PE	Program Elective-4 (Self Study/ MOOC/ Online)	3/5	45	0	0	45/105	90/150	40	40	40	60	100
2	B	26PECST75N/26PECSM75N	PE	PE	Program Elective-5 (Self Study/MOOC/ Online)	3/5	45	0	0	45/105	90/150	40	40	40	60	100
3	C	26UEHUT71N/26UEHUM71N	HMC	UE	HMC Elective (Self Study/MOOC/ Online)	2	30	0	0	30	60	40	40	50	50	100
4	D	26OECST72N / 26OECSM72N/ 26IECST72N	OE/ ILE	OE/ ILE	Open Elective-2/ Industry Linked Elective (Self Study/ MOOC/Online)	3	45	0	0	45	90	40	40	40	60	100
5	E	26PCCSS705	PWS	PC	Seminar	2	0	0	45	15	60	-	-	50	-	50
6	F	26PCCSP706/26PCCSI706	PWS	PC	Option 1: Major Project Option 2: Internship (4-6 Months)	5	0	0	150	0	150	50	50	100	-	100
TOTAL						18/20/22	165	0	195	180/240/300	540/600/660					

SEMESTER 8 (S8)

Sl.	Slot	Course Code	Type	Cat.	Course Title	Cr.	Hour Structure				Total Hrs.	Internal Test		CI A	SE E	Over all Marks
							L	T	P	SL		IAT 1	IAT 2			
1	A	26PECST86N/26PECSM86N	PE	PE	Program Elective-6 (Self Study/MOOC/ONLINE)	3/5	45	0	0	45/105	90/150	40	40	40	60	100
2	B	26UCHUT802/26UCHUM802	HMC	UC	Organizational Behavior and Business Communication (Self Study/MOOC/ONLINE)	2	30	0	0	30	60	40	40	50	50	100
3	C	26OECST83N/26OECSM83N / 26IECST83N	OE/ ILE	OE/ ILE	Open Elective-3/ Industry Linked Elective (Self Study/MOOC/ONLINE)	3	45	0	0	45	90	40	40	40	60	100
4	D	26PCCSP804/26PCCSI804/26PCCSJ804	PWS	PC	Option 1: Major Project Option 2: Internship (4-6 Months) Option 3: Major Project Phase-2	5	0	0	150	0	150	50	50	100	-	100
TOTAL						13/15	120	0	150	120/180	390/450					

TOTAL PROGRAMME CREDITS (S1 – S8):**165 + Additional Credits from level 5 courses (if awarded) + 3 Credits from Activity Points**

PROGRAMME ELECTIVES, OPEN ELECTIVES & HMC ELECTIVES

Note: Level 5 courses in the B. Tech. curriculum carry a total of 5 credits, consisting of 3 credits for the Programme Elective and 2 additional credits. The additional 2 credits shall be awarded only if the student meets the eligibility conditions specified in the B. Tech. - 2026 regulations. If those conditions are not fulfilled, the student will receive only 3 credits for the course.

PROGRAM ELECTIVE-1

Sl.	Course Code	Type	Cat.	Course Title	Cr.	Hour Structure				Total Hrs.	Internal Test		CIA	SE E	Over all Marks
						L	T	P	SL		IAT 1	IAT 2			
1	26PECST411	PE	PE	Pattern Recognition	3	45	0	0	45	90	40	40	40	60	100
2	26PECST412	PE	PE	Functional Programming	3	45	0	0	45	90	40	40	40	60	100
3	26PECST413	PE	PE	Cyber Ethics, Privacy, And Legal Issues	3	45	0	0	45	90	40	40	40	60	100
4	26PECST414	PE	PE	Signals And Systems	3	45	0	0	45	90	40	40	40	60	100
5	26PECST415	PE	PE	VLSI Design	3/5	45	0	0	45/105	90/150	40	40	40	60	100

PROGRAM ELECTIVE-2

Sl.	Course Code	Type	Cat.	Course Title	Cr.	Hour Structure				Total Hrs.	Internal Test		CIA	SE E	Over all Marks
						L	T	P	SL		IAT 1	IAT 2			
1	26PECST521	PE	PE	Software Project Management	3	45	0	0	45	90	40	40	40	60	100
2	26PECST522	PE	PE	Artificial Intelligence	3	45	0	0	45	90	40	40	40	60	100
3	26PECST523	PE	PE	Computer Graphics & Multimedia	3	45	0	0	45	90	40	40	40	60	100
4	26PECST524	PE	PE	Data Compression	3	45	0	0	45	90	40	40	40	60	100
5	26PECST525	PE	PE	Data Mining	3/5	45	0	0	45/105	90/150	40	40	40	60	100

PROGRAM ELECTIVE-3

Sl.	Course Code	Type	Cat.	Course Title	Cr.	Hour Structure				Total Hrs.	Internal Test		CIA	SE E	Over all Marks
						L	T	P	SL		IAT 1	IAT 2			
1	26PECST631	PE	PE	Deep Learning	3	45	0	0	45	90	40	40	40	60	100
2	26PECST632	PE	PE	Fundamentals of Cryptography	3	45	0	0	45	90	40	40	40	60	100
3	26PECST633	PE	PE	Quantum Computing	3	45	0	0	45	90	40	40	40	60	100
4	26PECST634	PE	PE	Wireless & Mobile Computing	3	45	0	0	45	90	40	40	40	60	100
5	26PECST635	PE	PE	Cloud Computing	3/5	45	0	0	45/105	90/150	40	40	40	60	100

PROGRAM ELECTIVE-4

Sl.	Course Code	Type	Cat.	Course Title	Cr.	Hour Structure				Total Hrs.	Internal Test		CIA	SE E	Over all Marks
						L	T	P	SL		IAT 1	IAT 2			
1	26PECST741	PE	PE	Web Programming	3	45	0	0	45	90	40	40	40	60	100
2	26PECST742	PE	PE	Bioinformatics	3	45	0	0	45	90	40	40	40	60	100
3	26PECST743	PE	PE	Blockchain and Cryptocurrencies	3	45	0	0	45	90	40	40	40	60	100
4	26PECST744	PE	PE	Digital Image Processing	3	45	0	0	45	90	40	40	40	60	100
5	26PECST745	PE	PE	Computer Vision	3/5	45	0	0	45/105	90/150	40	40	40	60	100

PROGRAM ELECTIVE-5

Sl.	Course Code	Type	Cat.	Course Title	Cr.	Hour Structure				Total Hrs.	Internal Test		CIA	SE E	Over all Marks
						L	T	P	SL		IAT 1	IAT 2			
1	26PECST751	PE	PE	Advanced Computer Networks	3	45	0	0	45	90	40	40	40	60	100
2	26PECST752	PE	PE	Responsible Artificial Intelligence	3	45	0	0	45	90	40	40	40	60	100
3	26PECST753	PE	PE	Digital Forensics	3	45	0	0	45	90	40	40	40	60	100
4	26PECST754	PE	PE	Data Analytics	3	45	0	0	45	90	40	40	40	60	100
5	26PECST755	PE	PE	Algorithms For Data Science	3/5	45	0	0	45/105	90/150	40	40	40	60	100

PROGRAM ELECTIVE-6

Sl.	Course Code	Type	Cat.	Course Title	Cr.	Hour Structure				Total Hrs.	Internal Test		CIA	SE E	Over all Marks
						L	T	P	SL		IAT 1	IAT 2			
1	26PECST861	PE	PE	Natural Language Processing	3	45	0	0	45	90	40	40	40	60	100
2	26PECST862	PE	PE	Speech and Audio Processing	3	45	0	0	45	90	40	40	40	60	100
3	26PECST863	PE	PE	Prompt Engineering	3	45	0	0	45	90	40	40	40	60	100
4	26PECST864	PE	PE	Cyber Security	3	45	0	0	45	90	40	40	40	60	100
5	26PECST865	PE	PE	Topics in Security	3/5	45	0	0	45/105	90/150	40	40	40	60	100

OPEN ELECTIVE-1

Sl.	Course Code	Type	Cat.	Course Title	Cr.	Hour Structure				Total Hrs.	Internal Test		CIA	SE E	Over all Marks
						L	T	P	SL		IAT 1	IAT 2			
1	26OECST611	OE/ILE	OE	Data Structures	3	45	0	0	45	90	40	40	40	60	100
2	26OECST612	OE/ILE	OE	Machine Learning for Engineers	3	45	0	0	45	90	40	40	40	60	100
3	26OECST613	OE/ILE	OE	Object Oriented Programming	3	45	0	0	45	90	40	40	40	60	100

OPEN ELECTIVE-2

Sl.	Course Code	Type	Cat.	Course Title	Cr.	Hour Structure				Total Hrs.	Internal Test		CIA	SE E	Over all Marks
						L	T	P	SL		IAT 1	IAT 2			
1	26OECST721	OE/ILE	OE	Computer Networks	3	45	0	0	45	90	40	40	40	60	100
2	26OECST722	OE/ILE	OE	Cloud Computing	3	45	0	0	45	90	40	40	40	60	100
3	26OECST723	OE/ILE	OE	Software Engineering	3	45	0	0	45	90	40	40	40	60	100

OPEN ELECTIVE-3

Sl.	Course Code	Type	Cat.	Course Title	Cr.	Hour Structure				Total Hrs.	Internal Test		CIA	SEE	Over all Marks
						L	T	P	SL		IAT 1	IAT 2			
1	26OECST821	OE/ILE	OE	Introduction to Algorithms	3	45	0	0	45	90	40	40	40	60	100
2	26OECST832	OE/ILE	OE	Web Programming	3	45	0	0	45	90	40	40	40	60	100
3	26OECST833	OE/ILE	OE	Software Testing	3	45	0	0	45	90	40	40	40	60	100

HMC ELECTIVE

Sl.	Course Code	Type	Cat.	Course Title	Cr.	Hour Structure				Total Hrs.	Internal Mark				Over all Marks
						L	T	P	SL		IAT 1	IAT 2	CIA	SEE	
1	26UEHUT711	HMC	UE	Project Management: Planning, Execution, Evaluation and Control	2	30	0	0	30	60	40	40	50	50	100
2	26UEHUT712	HMC	UE	Proficiency Course in Foreign Language. (MOOC only)	2	0	0	0	60	60	-	-	-	-	-
3	26UEHUT713	HMC	UE	Financial Management	2	30	0	0	30	60	40	40	50	50	100

MINOR PROGRAM – COMPUTER SCIENCE AND ENGINEERING

Sem.	Course Code	Type	Cat.	Course Title	Cr.	Hour Structure				Total Hrs.	Internal Mark				Over all Marks
						L	T	P	SL		IAT 1	IAT 2	CIA	SEE	
S3	26MNCST309	MN	MN	Python For Application Development	4	45	15	0	60	120	40	40	40	60	100
S4	26MNCST409	MN	MN	Database Management Systems/MOOC	4	45	15	0	60	120	40	40	40	60	100
S5	26MNCST509	MN	MN	Web Application Development/ MOOC	4	45	15	0	60	120	40	40	40	60	100
S6	26MNCST609	MN	MN	Software Architecture/ MOOC	3	45	0	0	45	90	40	40	40	60	100
TOTAL					15										

Slot M is assigned to Minor Examinations in the respective semesters.

HONOURS PROGRAM

Sem	Course Code	Type	Cat.	Course Title	Cr.	Hour Structure				Total Hrs.	Marks Distribution				Over all Marks
						L	T	P	SL		IAT 1	IAT 2	CIA	SEE	
S4	26HNCST409	HN	HN	Advanced Mathematics for Computer Science	4	45	15	0	60	120	40	40	40	60	100
S5	26HNCST509	HN	HN	Object Oriented Design using UML/ MOOC	4	45	15	0	60	120	40	40	40	60	100
S6	26HNCST609	HN	HN	Advanced Algorithms/ MOOC	4	45	15	0	60	120	40	40	40	60	100
S7	26HNCST709	HN	HN	Advanced Cryptography / MOOC	3	45	0	0	45	90	40	40	40	60	100
TOTAL					15										

Slot N is assigned to Honours Examinations in the respective semesters.

COURSES UNDER VARIOUS COURSE CLASSIFICATION

Engineering Science Courses (ESC)				
Sl. No:	Semester	Course Category	Course Name	Credits
1	S1	GC	Engineering Graphics (A &B)/ Engineering Mechanics (C)	3
2		GC	Introduction to Electrical & Electronics Engineering (A & B)	4
3		UC	Programming in C	4
4		GC	Basic Electrical and Electronics Engineering Workshop	1
5	S2	GC	Discrete Mathematics	3
6		UC	Engineering Entrepreneurship & IPR	3
7		GC	Computing Practices Lab	1
8	S3	GC	Fundamentals of Digital Electronics and Logic Design	3
9	S5/S6	GC	Design Thinking and Product Development (Group specific)	2
TOTAL				24

Basic Science Course (BSC)				
Sl. No:	Semester	Course Category	Course Name	Credits
1	S1	GC	Calculus and Optimization	3
2	S1/S2	GC	Physics for Information Science	4
3			Chemistry for Information Science	4
4	S2	GC	Linear Algebra and its Applications	3
5	S3	GC	Probability Distributions and Random Process	3
6	S4	GC	Graph Theory	3
TOTAL				20

Humanities Based Courses (HMC)/Health and Wellness (HWP)				
Sl. No:	Semester	Course Category	Courses	Credits
1	S1/S2	UC	Health and Wellness	1
2	S1/S2	UC	Life Skills and Professional Communication	1
3	S3/S4	UC	Economics for Engineers	2
4	S3/S4	UC	Engineering Ethics and Sustainable Development	2
5	S5/S6	UC	Constitution of India	2
6	S7	UE	HMC Elective-1 (Self Study/MOOC/ONLINE)	2
7	S8	UC	Organizational Behavior and Business Communication (Self Study/MOOC/ONLINE)	2
TOTAL				12

Program Core (PC) Courses				
Sl. No:	Semester	Course Category	Courses	Credits
1	S2	PC	Introduction to Python Programming	4
2	S3	PC	Theory of Computation	3
3	S3	PC	Data Structures and Algorithms	4
4	S4	PC	Database Management Systems	3
5	S4	PC	Operating Systems	4
6	S5	PC	Computer Networks	3
7	S5	PC	Design and Analysis of Algorithms	3
8	S5	PC	Machine Learning	4
9	S6	PC	Compiler Design	3
10	S6	PC	Advanced Computing Systems	4
TOTAL				35
Project Based Program Core (PC-PBL) Course				
1	S3	PB	Object Oriented Programming	4
2	S4	PB	Computer Organization and Architecture	4
3	S5	PB	Microcontrollers	4
4	S6	PB	Fundamentals of Cyber Security	4
TOTAL				16
Program Core Laboratory (PCL) Course				
1	S3	PC	Data Structures Lab	2
2	S3	PC	Java Programming Lab	2
3	S4	PC	Operating Systems Lab	2
4	S4	PC	DBMS Lab	2
5	S5	PC	Networks Lab	2
6	S6	PC	Machine Learning Lab	2
7	S6	PC	Systems Lab	2
TOTAL				14
GRAND TOTAL for Program Core				65

Program Elective (PE) Courses				
Sl. No:	Semester	Course Category	Courses	Credits
1	S4	PE	Program Elective-1	3
2	S5	PE	Program Elective-2	3
3	S6	PE	Program Elective-3	3
4	S7	PE	Program Elective-4 (Self Study/ MOOC/ ONLINE)	3
5	S7	PE	Program Elective-5 (Self Study/ MOOC/ ONLINE)	3
6	S8	PE	Program Elective-6 (Self Study/ MOOC/ ONLINE)	3
TOTAL				18

Project/Internship & Seminar (PWS)				
Sl. No:	Semester	Course Category	Course Name	Credits
1	S5	PC	Mini Project	2
2	S7	PC	Seminar	2
3		PC	Option 1: Major Project Option 2: Internship (4-6 Months)	5
4	S8	PC	Option 1: Major Project Option 2: Internship (4-6 Months) Option 3: Major Project Phase-2 (For the students who have not opted for internship in either S7 or S8)	5
TOTAL				14

Open Elective (OE) Courses				
Sl. No:	Semester	Course Category	Courses	Credits
1	S6	OE	Open Elective-1	3
2	S7	OE	Open Elective-2 (Self Study/ MOOC/ ONLINE)	3
3	S8	OE	Open Elective-3 (Self Study/ MOOC/ ONLINE)	3
TOTAL				9

Skill Enhancement (SEC) Courses				
Sl. No:	Semester	Course Category	Courses	Credits
1	S1/S2	UC	MOOC (8 Weeks)	1
1	S3/S4	MC	MOOC (8 Weeks)	1
1	S5/S6	MC	MOOC (8 Weeks)	1
TOTAL				3

Activity Points					
Sl. No.	Group	Activities	Point	Credit	Minimum Credit Requirements
Participation					3 Credits (One credit from each Group)
1	I	Short Term Internship (Minimum 2 weeks offline).	10 points	1 Credit for 40 Points	
2		Industrial Training (Minimum 2 weeks).	10 points		
3		Attending Conference (Within Institute or outside).	5 points		
4		Attended Conference with Paper Presentation (Within Institute or outside).	10 points		
5		Attended Workshops/STTP (Totaling 5 days of all programs per semester).	5 points per semester		
6		Professional Body member.	5 points		
7		Participation in Club activity within institutions.	2 points		
8		Participation in Inter/Intra college Hackathons/Project Competitions/ Technical Festivals/Technical Events.	5 points per event		

9		Participation in Industrial Visit organized by S5/S6 curriculum.	10 points	
10		Participation in GATE/National Exams (on submission of score cards/result).	10 points	
11		Participation in IEDC Activities (minimum 2 activities per year).	10 points per year	
12		MOOC certification on Indian knowledge systems (IKS).	10 points	
Technical/ Academic/ Co-Curricular Achievements				
1	II	Journal/Conference Publication.	40 points per publication	1 Credit for 40 Points
2		Patent Publishing.	40 points per publication	
3		Department/College owned Magazine/newsletter publication.	5 points per year	
4		Winners in Inter/Intra college Hackathons/Project Competitions/ Technical Festivals/Technical Events.	20 points per win	
5		Winners of Club Activities (college level).	10 points per win	
6		Academic achievement (Above 9 SGPA in any semester).	20 points	
7		Silver or above certification in any NPTEL/SWAYAM MOOCs.	20 points for each MOOC	
8		Aptitude Proficiency Certification (GRE, CAT, GMAT etc.)/Valid Gate Score.	40 points for every single score	
9		Funded Projects.	40 points per funded project	
10		Individual Start-up/Entrepreneurship activity validated by the department.	20 points (per year)	
11		Elected Student Representatives of Club/ University/ National/ International Technical Bodies.	20 points	
12		Foreign Language Skill (TOEFL/IELTS/BEC exams).	20 points per score	
13		International Internship.	40 points	
14		Coordinators of Editorial board/Club/University/National Technical events.	10 points per year	
Extracurricular				
1	III	NSS, NCC, NSO (National Sports Organization) (minimum 2 years of activity done as member).	40 points	1 Credit for 40 Points
2		Arts/Sports/Games: (Multiply by 2 for University level, Multiply by 3 for state level, Multiply by 4 for national level).	5 points for Participation per year	
			10 points for winning in any event per year	
			10 points for coordinating any event per year	
3		Union Activities	5 points for Participation in Election as a voter per year	
			10 points for Standing in Election as a candidate per year (must have come in top 5 in election result within the category)	
			15 points for Elected members	
4		Participation Social outreach program (initiated or approved by Department/College/NSS/Government bodies/professional bodies).	5 points per certificate	

Course classifications of the B. Tech Program and Overall Credit Structure			
S.No.	Code Type	Category	Credits
1	ESC	Engineering Science Courses	24
2	BSC	Basic Science Course	20
3	HMC/ HWP	Humanities Based Courses /Health and Wellness	12
4	PC	Program Core Courses	35
5	PC-PBL	Project Based Program Core Course	16
6	PCL	Program Core Laboratory Course	14
7	PE	Program Elective Courses	18
8	PWS	Project/Internship & Seminar	14
9	OE	Open Elective Courses	9
10	SEC	Skill Enhancement Courses	3
11	MSA	Mandatory Student Activities	3
TOTAL CREDITS			168