



Reaccredited with NAAC (Grade A) and
NBA Programmes* (*CE, CS, EC, EE, ME, MR)
Jyothi Hills, P. O. Vettikkattiri, Cheruthuruthy
Thrissur, Kerala, India, 679531
04884 259000 | info@jecc.ac.in | www.jecc.ac.in

A Centre of Excellence in Science and Technology by the Catholic Archdiocese of Trichur

B. TECH CURRICULUM – 2026

Semester I to VIII



(AUTONOMOUS)
CREATING TECHNOLOGY
LEADERS OF TOMORROW
ESTD 2002

Department of Electronics and Communication Engineering

Branch Code: EC

Recommended by BoS on 15-11-2025

Approved by Academic Council on 27/11/2025

(Reference: JEC/2025/AC/MOM/02/AC/02/A2)

VISION & MISSION OF THE INSTITUTE

VISION: To be a global leader in education, nurturing ethical professionals, fostering holistic excellence and sustainable societal impact.

MISSION

- Excellence in Education: Provide outcome-based and industry-relevant education that builds technical competence, innovation, and lifelong learning.
- Ethics and Values: Inspire integrity, empathy, and social responsibility to develop ethical and service-oriented professionals.
- Research, Innovation, and Entrepreneurship: Encourage creativity, research, and entrepreneurship for sustainable technological and economic growth.
- Holistic and Global Development: Promote all-round development, leadership, and global competence through collaboration and community engagement.

VISION & MISSION OF THE DEPARTMENT

VISION: To be a globally recognized department of Electronics and Communication Engineering that nurtures competent, ethical, innovative, and future-ready professionals committed to holistic excellence, sustainable technological advancement, and societal well-being.

MISSION

- Provide outcome-based and industry-relevant education in Electronics and Communication Engineering through strong fundamentals, practical learning, and lifelong learning to develop competent, innovative, and future-ready professionals.
- Foster research, innovation, entrepreneurship, and industry collaboration to develop sustainable electronics and communication technologies and solutions for real-world engineering challenges.
- Instill integrity, empathy, professional ethics, leadership, and social responsibility to develop globally competent and responsible engineers committed to sustainable development and societal well-being.

PROGRAMME EDUCATIONAL OBJECTIVES

PEO 1	Establish successful careers in industry, research, entrepreneurship, or higher education by applying strong engineering knowledge, professional skills, and lifelong learning in Electronics and Communication Engineering.
PEO 2	Emerge as innovative professionals and future leaders by developing sustainable solutions to real-world engineering challenges through continuous learning, critical thinking, and professional development.
PEO 3	Demonstrate ethical practices, professional responsibility, leadership, teamwork, and effective communication while contributing to technological advancement and societal well-being in multidisciplinary and global environments.

PROGRAMME SPECIFIC OUTCOMES

PSO 1	Apply the principles of Electronics and Communication Engineering to analyze, design, and implement electronics and communication systems for real-world applications.
PSO 2	Integrate Electronics, Communication, and Computing technologies to develop innovative solutions for multidisciplinary industrial and societal applications.

PROGRAMME OUTCOMES

PO1	Engineering Knowledge: Apply knowledge of mathematics, natural science, computing, engineering fundamentals and an engineering specialization as specified in WK1 to WK4 respectively to develop the solution of complex engineering problems.
PO2	Problem Analysis: Identify, formulate, review research literature and analyze complex engineering problems reaching substantiated conclusions with consideration for sustainable development. (WK1 to WK4)
PO3	Design/Development of Solutions: Design creative solutions for complex engineering problems and design/develop systems/components/processes to meet identified needs with consideration for the public health and safety, whole-life cost, net zero carbon, culture, society and environment as required. (WK5)
PO4	Conduct Investigations of Complex Problems: Conduct investigations of complex engineering problems using research-based knowledge including design of experiments, modelling, analysis & interpretation of data to provide valid conclusions. (WK8)
PO5	Engineering Tool Usage: Create, select and apply appropriate techniques, resources and modern engineering & IT tools, including prediction and modelling recognizing their limitations to solve complex engineering problems. (WK2 and WK6)
PO6	The Engineer and The World: Analyze and evaluate societal and environmental aspects while solving complex engineering problems for its impact on sustainability with reference to economy, health, safety, legal framework, culture and environment. (WK1, WK5, and WK7)
PO7	Ethics: Apply ethical principles and commit to professional ethics, human values, diversity and inclusion; adhere to national & international laws. (WK9)
PO8	Individual and Collaborative Team work: Function effectively as an individual, and as a member or leader in diverse/multi-disciplinary teams.
PO9	Communication: Communicate effectively and inclusively within the engineering community and society at large, such as being able to comprehend and write effective reports and design documentation, make effective presentations considering cultural, language, and learning differences.
PO10	Project Management and Finance: Apply knowledge and understanding of engineering management principles and economic decision-making and apply these to one's own work, as a member and leader in a team, and to manage projects and in multidisciplinary environments.
PO11	Life-Long Learning: Recognize the need for, and have the preparation and ability for i) independent and life-long learning ii) adaptability to new and emerging technologies and iii) critical thinking in the broadest context of technological change. (WK8)

KNOWLEDGE AND ATTITUDE PROFILE (WK)

WK1	A systematic, theory-based understanding of the natural sciences applicable to the discipline and awareness of relevant social sciences.
WK2	Conceptually based mathematics, numerical analysis, data analysis, statistics and formal aspects of computer and information science to support detailed analysis and modelling applicable to the discipline.
WK3	A systematic, theory-based formulation of engineering fundamentals required in the engineering discipline.
WK4	Engineering specialist knowledge that provides theoretical frameworks and bodies of knowledge for the accepted practice areas in the engineering discipline; much is at the forefront of the discipline.
WK5	Knowledge, including efficient resource use, environmental impacts, whole-life cost, re-use of resources, net zero carbon, and similar concepts, that supports engineering design and operations in a practice area.
WK6	Knowledge of engineering practice (technology) in the practice areas in the engineering discipline.
WK7	Knowledge of the role of engineering in society and identified issues in engineering practice in the discipline, such as the professional responsibility of an engineer to public safety and sustainable development.
WK8	Engagement with selected knowledge in the current research literature of the discipline, awareness of the power of critical thinking and creative approaches to evaluate emerging issues.
WK9	Ethics, inclusive behavior and conduct. Knowledge of professional ethics, responsibilities, and norms of engineering practice. Awareness of the need for diversity by reason of ethnicity, gender, age, physical ability etc. with mutual understanding and respect, and of inclusive attitudes.

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CUMULATIVE CREDITS

The cumulative credits for the entire B. Tech programme are 170.

CREDIT ASSIGNMENT

[Ref: National Credit Framework – Sept 2022]

Course Delivery	Code	Hours per Week	Credit
Lecture	L	1	1
Tutorial	T	1	1
Practical	P	2	1
Hands on Project	H	3/4	1

CREDIT DISTRIBUTION: YEAR/SEMESTER WISE

Year	ODD Semester	Even Semester	Total credit
First	20	22	42
Second	25	24	49
Third	23	23	46
Fourth	18	12	30
Academic Credits			167
Student Activities			3
B Tech			170
B Tech with Honours			185
B Tech with Minor			185
B Tech with Minor and Honours			200

COURSE CATEGORY AND CREDIT DISTRIBUTION

Sl.	Course Category	Nomenclature	Credits	Number of Courses
1	Basic Science Courses	BS	21	6
2	Engineering Science Courses	ES	28	10
3	Humanities, Social Science and Management	HM	10	6
4	Programme Core Courses	PC	61	21
5	Programme Elective Courses	PE	20	6
6	Open Elective Courses/Industry Linked Elective Courses.	OE/IE	8	3
7	Project Work/Seminar/ Internship	PI	13	3
8	Skill Enhancement Courses	SE	3	3
9	Indian Knowledge System	IK	2	1
10	Health and Wellness	HW	1	1
11	Student Activities	SA	3	-
Total			170	60

COURSE TYPES AND ASSESSMENT PATTERN

Course Type	Nomenclature	Credits	Assessment pattern		
			CIE	ESE	Total
Workshop	PL	1	100	NA	100
Theory Course	TC	1/2/3/4	40	60	100
Lab Course	PL	2	50	50	100
Theory + Practical	TP	4	60	40	100
Theory + Project	PB	4	60	40	100
Project	PT	3, 4	50	50	100
Seminar	SR	2	100	NA	100
Skill Enhancement Courses.	SE	1	100	NA	100

SEMESTER I

Sl.	Slot	Course Code	Course Category	Course Type	Course Title	Hours/Week					Credits	Total Marks		Total
						L	T	P	H	S		CIE	ESE	
1	A	J1BST121	BS	TC	Linear Algebra and Calculus	3	0	0	0	4.5	3	40	60	100
2	B	J1BSP122	BS	TP	Physics for Electrical Science	3	0	2	0	5.5	4	60	40	100
3	C	J1ESP103	ES	TP	Algorithmic Thinking with Python	3	0	2	0	5.5	4	60	40	100
4	D	J1ESP104	ES	TP	Engineering Graphics and Computer Aided Drawing	2	0	2	0	4	3	60	40	100
5	E	J1EST115	ES	TC	Introduction to Electrical & Electronics Engineering	4	0	0	0	6	4	40	60	100
6	F	J1HWP126 / J1HMP126	HW/HM	TP	Health and Wellness / Life Skills and Professional Communication	1	0	1	0	2	1	100	-	100
7	J	J1ESL127	ES	PL	Electrical and Electronics Engineering Workshop	0	0	2	0	1	1	100	-	100
8	S	J1SET109	SE	TP	Skill Enhancement Course	0	0	0	0	2	-			-
Total						16	0	9	0	30.5	20			700

SEMESTER II

Sl.	Slot	Course Code	Course Category	Course Type	Course Title	Hours/Week					Credits	Total Marks		Total
						L	T	P	H	S		CIE	ESE	
1	A	J1BST221	BS	TC	Vector Calculus, Partial Derivatives and Transforms.	3	0	0	0	4.5	3	40	60	100
2	B	J1BSP212	BS	TP	Chemistry for Engineers	3	0	2	0	5.5	4	60	40	100
3	C	J1EST203	ES	TC	Foundations of Computing	3	0	0	0	4.5	3	40	60	100
4	D	J1ESP204	ES	TP	Fundamentals of C Programming	3	0	2	0	5.5	4	60	40	100
5	E	J1EST205	ES	TC	Engineering Entrepreneurship and IPR	2	0	0	0	3	2	40	60	100
6	F	J1HWP126 / J1HMP126	HW/HM	TP	Health and Wellness / Life Skills and Professional Communication	1	0	1	0	2	1	100	-	100
7	G	J1ECT207	PC	TC	Logic Circuit Design	2	1	0	0	3.5	3	40	60	100
8	J	J1ESL248	ES	PL	Information Technology Workshop	0	0	2	0	1	1	100	-	100
9	S	J1SET109	SE	TP	Skill Enhancement Course	0	0	0	0	2	1	-	-	-
Total						17	1	7	0	31.5	22			800

SEMESTER III

Sl.	Slot	Course Code	Course Category	Course Type	Course Title	Hours/Week					Credits	Total Marks		Total
						L	T	P	H	S		CIE	ESE	
1	A	J1BST321	BS	TC	Fourier Transforms and Complex Analysis	3	0	0	0	4.5	3	40	60	100
2	B	J1ECT302	PC	TC	Network Theory	2	1	0	0	3.5	3	40	60	100
3	C	J1ECZ303	PC	PB	Analog Circuits	2	1	0	2	5.5	4	60	40	100
4	D	J1ECP304	PC	TP	Solid State Devices	3	0	2	0	5.5	4	60	40	100
5	E	J1EST315	ES	TC	Introduction to Artificial Intelligence and Data Science	3	1	0	0	5	4	40	60	100
6	F	J1HMT346 / J1HMT436	HM	TC	Economics for Engineers / Engineering Ethics and Sustainable Development	2	0	0	0	3	2	40	60	100
7	J	J1ECL307	PC	PL	Analog Circuits Lab	0	0	3	0	1.5	2	50	50	100
8	K	J1ECL308	PC	PL	Logic Circuit Design Lab	0	0	3	0	1.5	2	50	50	100
9	S	J1SET3N9	SE	TP/TC	Skill Enhancement Course	1	0	0	0	1.5	1	100	-	100
Total						16	3	8	2	31.5	25			900

SEMESTER IV

Sl.	Slot	Course Code	Course Category	Course Type	Course Title	Hours/Week					Credits	Total Marks		Total
						L	T	P	H	S		CIE	ESE	
1	A	J1ECT401	PC	TC	Linear Integrated Circuits	2	1	0	0	3.5	3	40	60	100
2	B	J1ECT402	PC	TC	Signals and Systems	2	1	0	0	3.5	3	40	60	100
3	C	J1ECZ403	PC	PB	Microcontroller and Interfacing	3	0	0	2	6.5	4	60	40	100
4	D	J1BSP424	BS	TP	Probability, Statistics and Random Processes	3	0	2	0	5.5	4	60	40	100
5	E	J1ECT4N5	PE	TC	Programme Elective -1	3	0	0	0	4.5	3	40	60	100
6	F	J1HMT346 / J1HMT436	HM	TC	Economics for Engineers / Engineering Ethics and Sustainable Development	2	0	0	0	3	2	40	60	100
7	J	J1ECL407	PC	PL	Linear Integrated Circuits Lab	0	0	3	0	1.5	2	50	50	100
8	K	J1ECL408	PC	PL	Microcontroller Lab	0	0	3	0	1.5	2	50	50	100
9	S	J1SET4N9	SE	TP/TC	Skill Enhancement Course	1	0	0	0	1.5	1	100	-	100
Total						16	2	8	2	31	24			900

SEMESTER V

Sl.	Slot	Course Code	Course Category	Course Type	Course Title	Hours/Week					Credits	Total Marks		Total
						L	T	P	H	S		CIE	ESE	
1	A	J1ECT501	PC	TC	Electromagnetics	3	0	0	0	4.5	3	40	60	100
2	B	J1ECT502	PC	TC	Analog and Digital Communication	2	1	0	0	3.5	3	40	60	100
3	C	J1ECZ503	PC	PB	VLSI Circuit Design	3	0	0	2	6.5	4	60	40	100
4	D	J1ECT504	PC	TC	Digital Signal Processing	2	1	0	0	3.5	3	40	60	100
5	E	J1ECP5N5	PE	TP	Programme Elective-2	3	0	2	0	5.5	4	60	40	100
6	F	J1IKT5N6	IK	TC	Indian Knowledge System	2	0	0	0	3	2	40	60	100
7	J	J1ECL507	PC	PL	Digital Signal Processing Lab	0	0	3	0	1.5	2	50	50	100
8	K	J1ECL508	PC	PL	Communication Lab I	0	0	3	0	1.5	2	50	50	100
Total						15	2	8	2	29.5	23			800

SEMESTER VI

Sl.	Slot	Course Code	Course Category	Course Type	Course Title	Hours/Week					Credits	Total Marks		Total
						L	T	P	H	S		CIE	ESE	
1	A	J1ECT601	PC	TC	Advanced Communication Theory	2	1	0	0	3.5	3	40	60	100
2	B	J1ECT602	PC	TC	Microwaves and Antennas	3	0	0	0	4.5	3	40	60	100
3	C	J1EST6N3	ES	TC	Design Thinking and Product Development	2	0	0	0	3	2	40	60	100
4	D	J1ECP604	PC	TP	System Dynamics and Control	2	1	2	0	4.5	4	60	40	100
5	E	J1ECZ6N5	PE	PB	Programme Elective -3	3	0	0	2	6.5	4	60	40	100
6	F	J1XXO6N6 / J1XXI6N6	OE/IE	TC	Open Elective-1 / ILE-1	2	0	0	0	3	2	40	60	100
7	J	J1ECL607	PC	PL	Communication Lab II	0	0	3	0	1.5	2	50	50	100
8	K	J1ECD608	PI	PT	Mini Project	0	0	0	3	3	3	50	50	100
Total						14	2	5	5	29.5	23			800

SEMESTER VII

Sl.	Slot	Course Code	Course Category	Course Type	Course Title	Hours/Week					Credits	Total Marks		Total
						L	T	P	H	S		CIE	ESE	
1	A	J1ECT7N1 / J1ECM7N1	PE	TC	Programme Elective - 4 / MOOC/Self Study	3	0	0	0	4.5	3	40	60	100
2	B	J1ECT7N2 / J1ECM7N2	PE	TC	Programme Elective - 5 / MOOC/Self Study	3	0	0	0	4.5	3	40	60	100
3	C	J1XXO7N3 / J1XXI7N3 / J1XXM7N3	OE	TC	Open Elective - 2 / ILE-2/ MOOC/ Self Study	3	0	0	0	4.5	3	40	60	100
4	D	J1HMT7N4 / J1HMM7N4	HM	TC	HM-6/MOOC/Self Study	2	0	0	0	3	2	40	60	100
5	E	J1HMT705 / J1HMM7N5	HM	TC	Constitution of India / MOOC/Self Study	1	0	0	0	1.5	1	40	60	100
6	J	J1ECQ706	PI	SR	Seminar	0	0	4	0	2	2	100	-	100
7	K	J1ECD707 / J1INT707	PI	PT	Project / Internship	0	0	0	16	16	4	100	-	100
Total						12	0	4	16	36	18			700

SEMESTER VIII

Sl.	Slot	Course Code	Course Category	Course Type	Course Title	Hours					Credits	Total Marks		Total
						L	T	P	H	S		CIE	ESE	
1	A	J1ECT8N1 / J1ECM8N1	PE	TC	Programme Elective- /MOOC Self Study	3	0	0	0	4.5	3	40	60	100
2	B	J1XXO8N2 / J1XXM8N2	OE	TC	Open Elective-3/MOOC Self Study	3	0	0	0	4.5	3	40	60	100
3	C	J1HMT8N3 / J1HMM8N3	HM	TC	HM-7/MOOC/ Self Study	2	0	0	0	3	2	40	60	100
4	K	J1ECD804 / J1INT804	PI	PT	Project/ Internship	0	0	0	16	16	4	50	50	100
Total						8	0	0	16	28	12			400

APPENDIX-I- COURSE CATEGORY

(**TC** -Theory Course, **TP**, Theory course embedded with Practical's, **PB**-Theory course with project-based learning)

1.PROGRAMME CORE COURSES

Sl.	Semester	Course Code	Course Name	Course Type	Credits
1	S2	J1ECT207	Logic Circuit Design	TC	3
2	S3	J1ECT302	Network Theory	TC	3
3	S3	J1ECZ303	Analog Circuits	PB	4
4	S3	J1ECP304	Solid State Devices	TP	4
5	S4	J1ECT402	Signals and Systems	TC	3
6	S4	J1ECT401	Linear Integrated Circuits	TC	3
7	S4	J1ECZ403	Microcontroller and Interfacing	PB	4
8	S5	J1ECT501	Electromagnetics	TC	3
9	S5	J1ECT502	Analog and Digital Communication	TC	3
10	S5	J1ECT504	Digital Signal Processing	TC	3
11	S5	J1ECZ503	VLSI Circuit Design	PB	4
12	S6	J1ECT601	Advanced Communication Theory	TC	3
13	S6	J1ECT602	Microwaves and Antennas	TC	3
14	S6	J1ECP604	System Dynamics and Control	TP	4
15	S3	J1ECL307	Analog Circuits Lab	PL	2
16	S3	J1ECL308	Logic Circuit Design Lab	PL	2
17	S4	J1ECL407	Linear Integrated Circuits Lab	PL	2
18	S4	J1ECL408	Microcontroller Lab	PL	2
19	S5	J1ECL507	Digital Signal Processing Lab	PL	2
20	S5	J1ECL508	Communication Lab I	PL	2
21	S6	J1ECL607	Communication Lab II	PL	2
Total Credits					61

2. PROGRAMME ELECTIVE

2.1 PROGRAMME ELECTIVE-1 (SEMESTER-IV)

Sl.	Slot	Subject Code	Subject	Category
1	E	J1ECT415	Digital System Design	Stream Elective-1
2	E	J1ECT425	Embedded System Design	Stream Elective-2
3	E	J1ECT435	Machine Learning and Intelligent Systems	Stream Elective -3
4	E	J1ECT445	Instrumentation	Stream Elective -4

2.2 PROGRAMME ELECTIVE- 2 (SEMESTER-V)

Sl.	Slot	Subject Code	Subject	Category
1	E	J1ECP515	HDL Programming (Verilog/VHDL)	Stream Elective-1
2	E	J1ECP525	Embedded Networking	Stream Elective-2
3	E	J1ECP535	Intelligent Optimization in ML	Stream Elective-3
4	E	J1ECP545	Robotics and Automation	Stream Elective-4

2.3 PROGRAMME ELECTIVE- 3 (SEMESTER-VI)

Sl.	Slot	Subject Code	Subject	Category
1	E	J1ECZ615	FPGA Design	Stream Elective-1
2	E	J1ECZ625	Embedded System Programming and Interfacing	Stream Elective-2
3	E	J1ECZ635	Deep Learning	Stream Elective -3
4	E	J1ECZ645	Mechatronics System Design	Stream Elective -4

2.4 PROGRAMME ELECTIVE- 4 (SEMESTER-VII)

Sl.	Slot	Subject Code	Subject	Category
1	A	J1ECT711	Digital Image Processing	General Elective/MOOC
2	A	J1ECT721	Optical Communication	General Elective/MOOC
3	A	J1ECT731	Computer Networks	General Elective/MOOC
4	A	J1ECT741	Advanced DSP	General Elective/MOOC
5	A	J1ECT751	Nano Electronics	General Elective/MOOC
6	A	J1ECT761	Machine Learning for Signal Processing	General Elective/MOOC
7	A	J1ECT771	Compound Semiconductors	General Elective/MOOC

2.5 PROGRAMME ELECTIVE- 5 (SEMESTER-VII)

Sl.	Slot	Subject Code	Subject	Category
1	B	J1ECT712	Secure Communication	General Elective/MOOC
2	B	J1ECT722	Coding Theory	General Elective/MOOC
3	B	J1ECT732	Cryptography	General Elective/MOOC
4	B	J1ECT742	Advanced Machine Learning and Deep Learning	General Elective/MOOC
5	B	J1ECT752	Low power VLSI	General Elective/MOOC
6	B	J1ECT762	Biomedical Engineering	General Elective/MOOC
7	B	J1ECT772	Digital CMOS Design	General Elective/MOOC

2.6 PROGRAMME ELECTIVE- 6 (SEMESTER-VIII)

Sl.	Slot	Subject Code	Subject	Category
1	A	J1ECT811	Renewable Energy System	General Elective/MOOC
2	A	J1ECT821	Speech and Audio Processing	General Elective/MOOC
3	A	J1ECT831	Microwave Devices and Circuits	General Elective/MOOC
4	A	J1ECT841	Satellite and Radar Communication	General Elective/MOOC
5	A	J1ECT851	Real Time Operating System	General Elective/MOOC
6	A	J1ECT861	High Speed Digital Design	General Elective/MOOC
7	A	J1ECT871	System On Chip Design	General Elective/MOOC

3. OPEN/INDUSTRY LINKED ELECTIVES

3.1 OPEN/INDUSTRY LINKED ELECTIVES - 1 (SEMESTER-VI)

Sl.	Slot	Subject Code	Subject	Category
1	F	J1ECO616	Entertainment Electronics	Open Elective
2	F	J1ECO626	Introduction to VLSI and Embedded Systems	Open Elective
3	F	J1ECO636	Wearable and Healthcare Electronics	Open Elective

3.2 OPEN/INDUSTRY LINKED ELECTIVES -2 (SEMESTER-VII)

Sl.	Slot	Subject Code	Subject	Category
1	C	J1ECO713	Medical Image Analysis	Open Elective
2	C	J1ECO723	Communication Systems for Engineers	Open Elective
3	C	J1ECO733	Optimization in Electronic Systems	Open Elective

3.3 OPEN/INDUSTRY LINKED ELECTIVES (SEMESTER-VIII)

Sl.	Slot	Subject Code	Subject	Category
1	B	J1ECO812	Computer Vision and Image Analysis	Open Elective
2	B	J1ECO822	Internet of Things and Smart Systems	Open Elective
3	B	J1ECO832	Biomedical Devices and Instrumentation	Open Elective

4. HUMANITIES, SOCIAL SCIENCE AND MANAGEMENT

Sl.	Semester	Course Code	Course	Course Type	Credits
1	S1/S2	J1HMP126	Life Skills and Professional Communication	TC	1
2	S3/S4	J1HMT346	Economics for Engineers	TC	2
3		J1HMT436	Engineering Ethics and Sustainable Development	TC	2
4	S7	J1HMT7N4	Elective (Project Management/Foreign Languages)	TC	2
5	S7	J1HMT705	Constitution of India. (MOOC)	TC	1
6	S8	J1HMT8N3	Organizational Behavior and Business Communication	TC	2
Total Credits					10

5. INDIAN KNOWLEDGE SYSTEM

Sl.	Semester	Course Code	Course	Course Type	Credits
1	S5	J1IKT5N6	Indian Knowledge System	TC	2
Total Credits					2

6. HEALTH AND WELLNESS

Sl.	Semester	Course Code	Course	Course Type	Credits
1	S1/S2	J1HWP126	Health and Wellness	TP	1
Total Credits					1

7. BASIC SCIENCE COURSES

Sl.	Semester	Course Code	Course	Course Type	Credits
1	S1	J1BST121	Linear Algebra and Calculus	TC	3
2	S1/S2	J1BSP122	Physics for Electrical Science	TP	4
3	S1/S2	J1BSP212	Chemistry for Engineers	TP	4
4	S2	J1BST221	Vector Calculus, Partial Derivatives and Transforms.	TC	3
5	S3	J1BST321	Fourier Transforms and Complex Analysis	TC	3
6	S4	J1BSP424	Probability, Statistics and Random Processes	TP	4
Total Credits					21

8. ENGINEERING SCIENCE COURSES

Sl.	Semester	Course Code	Course	Course Type	Credits
1	S1	J1ESP103	Algorithmic Thinking with Python	TP	4
2	S2	J1ESP204	Fundamentals of C Programming	TP	4
3	S1	J1ESP104	Engineering Graphics and Computer Aided Drawing	TP	3
4	S1	J1EST115	Introduction to Electrical & Electronics Engineering	TC	4
5	S1	J1ESL127	Electrical and Electronics Engineering Workshop	PL	1
6	S2	J1EST205	Engineering Entrepreneurship and IPR	TC	2
7	S2	J1EST203	Foundations of Computing	TC	3
8	S2	J1ESL248	Information Technology Workshop	PL	1
9	S3	J1EST315	Introduction to Artificial Intelligence and Data Science	TC	4
10	S6	J1EST6N3	Design Thinking and Product Development	TC	2
Total Credits					28

9. SKILL ENHANCEMENT COURSES / ADD ON COURSES

Sl.	Semester	Course Code	Course	Course Type	Credits
1	S1	J1SET109	Skill Enhancement Course	TP	-
	S2	J1SET109	Skill Enhancement Course	TP	1
2	S3	J1SET3N9	Skill Enhancement Course (Aptitude Proficiency-1)	TP/TC	1
3	S4	J1SET4N9	Skill Enhancement Course (Aptitude Proficiency-2)	TP/TC	1
4	S5		ADD ON Courses		P/F
5	S6		ADD ON Courses		P/F
Total Credits					3

APPENDIX-II ABBREVIATIONS

L	Lecture hours per week
T	Tutorial hours per week
P	Practical hours per week
H	Hands-on projects per week
S	Self-learning hours per week
PO	Programme Outcome
PSO	Programme Specific Outcome
PEO	Programme Educational Objective
WK	Knowledge and Attitude Profile
BS	Basic Science Courses
ES	Engineering Science Courses
HM	Humanities, Social Science and Management Courses
PC	Programme Core Courses
PE	Programme Elective Courses
PI	Project Work/Seminar/ Internship
IK	Indian Knowledge System
HW	Health and Wellness
SA	Student Activities
TC	Theory Course
PL	Practical Course
TP	Theory Course Embedded with Practical
PB	Theory Course Embedded with Micro projects
PT	Project
SR	Seminar
SE	Skill Enhancement Courses.