NATIONAL BOARD OF ACCREDITATION

Data Capturing Points of the Program Applied for NBA Accreditation– Tier I/II UG (Engineering) Institute Programs

Program Name : Electrical and Electronics Engineering	**Discipline**: Engineering & Technology
Level : Under Graduate	**Tier**: 1
Application No: 10758	**Date of Submission**: 09-06-2025

PART A- Profile of the Institute

A1.Name of the Institute: St Joseph Engineering College	
Year of Establishment : 2002	Location of the Institute: Mangalore
A2. Institute Address:St Joseph Engineering College,Vamanjoor Post,Mangalore 575028,Karnataka State,India.	
City:Dakshina Kannada	State:Karnataka
Pin Code:575028	Website:www.sjec.ac.in
Email:dean.qa@sjec.ac.in	Phone No(with STD Code):824-2263732
A3. Name and Address of the Affiliating University (if any):	
Name of the University :	City: Belgaum
State : Karnataka	Pin Code: 590018
A4. Type of the Institution: Autonomous CAY(2021-22)	
A5. Ownership Status: Self financing	

A6. Details of all Programs being Offered by the Institution:

- No. of UG programs: **8**
- No. of PG programs: **2**

Table No. A6.1: List of all programs offered by the Institute.

Sr.No.	Discipline	Level of program	Name of the program	Year of Start	Year of Closed	Name of The Department
1	Computer Application	PG	Master of Computer Application	2008	--	Computer Application
2	Engineering & Technology	UG	Artificial Intelligence and Machine Learning	2020	--	Artificial Intelligence and Machine Learning
3	Engineering & Technology	UG	Civil Engineering	2012	--	Civil Engineering
4	Engineering & Technology	UG	Computer Science and Business System	2021	--	Computer Science and Business System
5	Engineering & Technology	UG	Computer Science and Engineering	2002	--	Computer Science and Engineering
6	Engineering & Technology	UG	Computer Science and Engineering (Data Science)	2022	--	Computer Science and Engineering (Data Science)
7	Engineering & Technology	UG	Electrical and Electronics Engineering	2002	--	Electrical and Electronics Engineering
8	Engineering & Technology	UG	Electronics & Communication Engineering	2002	--	Electronics and Communication Engineering
9	Engineering & Technology	UG	Mechanical Engineering	2002	--	Mechanical Engineering

10	Management	PG	Master of Business Administration	2007	--	Management

A7. Programs to be considered for Accreditation vide this Application:

Table No. A7.1: List of programs to be considered for accreditation.

Name of the Department	Having Allied Departments	Name of the Program	Program Level
Computer Science and Engineering	Yes	Computer Science and Engineering	UG
Mechanical Engineering	No	Mechanical Engineering	UG
Civil Engineering	No	Civil Engineering	UG
Electronics and Communication Engineering	No	Electronics & Communication Engineering	UG
Electrical and Electronics Engineering	No	Electrical and Electronics Engineering	UG

Table No. A7.2: Allied Department(s) to the Department of the program considered for accreditation as above.

Cluster ID. Name of the Department (in table no. A7.1) Name of allied Departments/Cluster (for table no. A7.1)

No Record

PART-B: Program information

B1. Provide the Required Information for the Program Applied For:

Table No. B1: Program details.

A. List of the Programs Offered by the Department:

SR.NO.	PROGRAM NAME	PROGRAM APPLIED LEVEL	YEAR OF START / YEAR OF CLOSED	SANCTIONED INTAKE	INCREASE/DECREASE INTAKE (if any)	YEAR OF INCREASE/DECREASE	CURRENT INTAKE	YEAR OF AICTE APPROVAL	AICTE/COMPETENT AUTHORITY ARROVAL DETAILS	ACCREDITATION STATUS	FROM	TO	NO. OF TIMES PROGRAM ACCREDITE
1	Electrical and Electronics Engineering	UG	2002 / --	60	No	NA	60	2002	Approved F.No.South-West/1-44643507841/2025/EOA	Granted accreditation for 3 years for the period (specify period)	2022	2025	4

List of the Allied Departments/Cluster and Programs:

B2. Detail of Head of the Department for the program under consideration:

A. Name of the HoD :	Dr Sanath Saralaya
B. Nature of appointment:	Regular
C. Qualification:	Ph.D

B3. Program Details

Table No.B3.1: Admission details for the program excluding those admitted through multiple entry and exit points.

Item (Information to be provided cumulatively for all the shifts with explicit headings, wherever applicable)	2024-25 (CAY)	2023-24 (CAYm1)	2022-23 (CAYm2)	2021-22 (CAYm3)	2020-21 (CAYm4)	2019-20 (CAYm5)	2018-19 (CAYm6)

N=Sanctioned intake of the program (as per AICTE /Competent authority)	60	60	60	60	60	60	60
N1=Total no. of students admitted in the 1st year minus the no. of students, who migrated to other programs/ institutions plus no. of students, who migrated to this program	46	52	42	45	41	43	44
N2=Number of students admitted in 2nd year in the same batch via lateral entry including leftover seats	0	12	19	19	19	12	14
N3=Separate division if any	0	0	0	0	0	0	0
N4=Total no. of students admitted in the 1st year via all supernumerary quotas	3	3	3	3	3	4	5
Total number of students admitted in the program (N1 + N2 + N3 + N4) - excluding those admitted through multiple entry and exit points.	49	67	64	67	63	59	63

CAY= Current Academic Year. CAYm1= Current Academic Year Minus 1 CAYm2= Current Academic Year Minus 2. LYG= Last Year Graduate. LYGm1= Last Year Graduate Minus 1. LYGm2= Last Year Graduate Minus 2.

B4. Enrolment Ratio in the First Year

Table No. B4.1: Student enrolment ratio in the 1st year.

Year of entry	N (From Table 4.1)	N1 (From Table 4.1)	N4 (From Table 4.1)	Enrollment Ratio [(N1/N)*100]
2024-25 (CAY)	60	46	3	81.67
2023-24 (CAYm1)	60	52	3	91.67
2022-23 (CAYm2)	60	42	3	75.00

Average [(ER1 + ER2 + ER3) / 3] = 82.78≡ 17.00

B5. Success Rate of the Students in the Stipulated Period of the Program

Table No.B5.1: The success rate in the stipulated period of a program.

Item	(2020-21) LYG	(2019-20) LYGm1	(2018-19) LYGm2
A*= (No. of students admitted in the 1st year of that batch and those actually admitted in the 2nd year via lateral entry, plus the number of students admitted through multiple entry (if any) and separate division if applicable, minus the number of students who exited through multiple entry (if any).	79.00	72.00	74.00
B=No. of students who graduated from the program in the stipulated course duration	58.00	59.00	57.00
Success Rate (SR)= (B/A) * 100	73.42	81.94	77.03

Average SR of three batches ((SR_1+ SR_2+ SR_3)/3): 77.46

B6. Academic Performance of the First-Year Students of the Program

Table No.B6.1: Academic Performance of the First-Year Students of the Program.

Academic Performance	CAYm1(2023-24)	CAYm2(2022-23)	CAYm3 (2021-22)
X=(Mean of 1st year grade point average of all successful students on a 10-point scale) or (Mean of the percentage of marks of all successful students in 1st year/10)	7.63	7.12	7.08
Y=Total no. of successful students	51.00	44.00	52.00
Z=Total no. of students appeared in the examination	56.00	46.00	52.00
API [X*(Y/Z)]	6.95	6.81	7.08

Average API[(AP1+AP2+AP3)/3] : 6.95

B7: Academic Performance of the Second Year Students of the Program

Table No.B7.1: Academic Performance of the Second Year Students of the Program.

Academic Performance	CAYm1 (2023-24)	CAYm2 (2022-23)	CAYm3 (2021-22)
X=(Mean of 2nd year grade point average of all successful students on a 10-point scale) or (Mean of the percentage of marks of all successful students in 2rd year/10)	7.08	7.04	5.73
Y=Total no. of successful students	62.00	67.00	62.00
Z=Total no. of students appeared in the examination	64.00	67.00	63.00
API [X * (Y/Z)]	6.86	7.04	5.64

Average API [(AP1 + AP2 + AP3)/3] : 6.51

B8. Academic Performance of the Third Year Students of the Program

Table No.B8.1: Academic Performance of the Third Year Students of the Program

Academic Performance	CAYm1 (2023-24)	CAYm2 (2022-23)	CAYm3 (2021-22)
X=(Mean of 3rd year grade point average of all successful students on a 10-point scale) or (Mean of the percentage of marks of all successful students in 3rd year/10)	7.21	6.67	6.76
Y=Total no. of successful students	65.00	58.00	59.00
Z=Total no. of students appeared in the examination	67.00	62.00	59.00
API [X*(Y/Z)]:	6.99	6.24	6.76

Average API [(AP1 + AP2 + AP3)/3] : 6.66

B9. Placement, Higher Studies, and Entrepreneurship

Table No.B9.1: Placement, higher studies, and entrepreneurship details.

Item	LYG (2020-21)	LYGm1(2019-20)	LYGm2(2018-19)
FS*=Total no. of final year students	79.00	72.00	74.00
X=No. of students placed	35.00	30.00	42.00
Y=No. of students admitted to higher studies	3.00	2.00	3.00
Z= No. of students taking up entrepreneurship	0.00	0.00	2.00
Placement Index(P) = (((X + Y + Z)/FS) * 100):	48.10	44.44	63.51

Average Placement Index = (P_1 + P_2 + P_3)/3: 52.02 Placement Index Points:

PART C: Faculty Details in Department and Allied Departments

(Data to be filled in for the Department and Allied Departments)

C1. Faculty details of Department and Allied Departments

Table No.C1: Faculty details in the Department for the past 3 years including CAY

Sr.No	Name of the Faculty	PAN No.	Highest degree	University	Area of Specialization	Date of Joining in this Institution	Experience in years in current institute	Designation at Time Joining in this Institution	Present Designation	The date on which Designated as Professor/ Associate Professor if any	Nature of Association (Regular/ Contract/ Ad hoc)	Currently Associated (Y/N)	In case of NO, Date of Leaving	IS HOD?

1	Dr Sheryl G Colaco	XXXXXXX09N	Ph.D	Manipal University	Illumination, Control systems, Energy Management	16/09/2002	22.8	Lecturer	Professor	01/11/2014	Regular	Yes		No
2	Dr Sanath Saralaya	XXXXXXX24K	Ph.D	NITK	Power Electronics	01/02/2019	6.4	Assistant Professor	Associate Professor	01/04/2022	Regular	Yes		Yes
3	Dr Ajithanjaya Kumar M K	XXXXXXX25M	Ph.D	VTU	Energy Systems	16/08/2005	19.9	Lecturer	Assistant Professor		Regular	Yes		No
4	Mr Sathisha K	XXXXXXX59G	M.Tech	VTU	DSP and Power Electronics	01/09/2004	20.9	Lecturer	Assistant Professor		Regular	Yes		No
5	Ms. Bharathi A Rao	XXXXXXX72G	M.Tech	NITK	Power and Energy Systems	16/08/2005	19.9	Lecturer	Assistant Professor		Regular	Yes		No
6	Mr. Deepesh Kanchan	XXXXXXX34E	M.Tech	NITK	Power & Energy System	01/07/2005	19.11	Lecturer	Assistant Professor		Regular	Yes		No
7	Ms Divya K Pai	XXXXXXX28M	M.Tech	Manipal University	Control systems	06/09/2004	20.9	Lecturer	Assistant Professor		Regular	Yes		No
8	Mr. Franco Aldrin J Menezes	XXXXXXX56M	M.Tech	VTU	Power Electronics	15/07/2009	15.10	Lecturer	Assistant Professor		Regular	Yes		No
9	Ms Chaithra Shetty	XXXXXXX94F	M.Tech	VTU	Microelectronics & Control System	14/07/2015	9.10	Lecturer	Assistant Professor		Regular	Yes		No
10	Ms Himani Kishan Raj	XXXXXXX32K	M.Tech	VTU	Energy Systems Engineering	27/12/2021	3.5	Assistant Professor	Assistant Professor		Regular	Yes		No
11	Ms Madhavi Gatty	XXXXXXX80G	M.Tech	VTU	Power Electronics	30/05/2022	3	Assistant Professor	Assistant Professor		Regular	Yes		No
12	Mr Joysun Dsouza	XXXXXXX65C	M.Tech	Manipal University	Instrumentation control systems	07/03/2023	2.2	Assistant Professor	Assistant Professor		Contractual Fulltime	Yes		No
13	Dr Suresh N S	XXXXXXX28A	Ph.D	NIT Tiruchirapalli	Power Electronics & Control System	30/12/2020	1.10	Associate Professor	Associate Professor	30/12/2020	Regular	No	29/11/2022	No
14	Mr Joseph Godfrey A	XXXXXXX44D	M.Tech	VIT University	Power Electronics & Drives	06/04/2022	0.10	Assistant Professor	Assistant Professor		Regular	No	28/02/2023	No
15	Dr Subramanya K	XXXXXXX46N	Ph.D	IIT,Roorkey	Power Electronics	16/07/2012	12.10	Lecturer	Assistant Professor		Regular	Yes		No

Table No.C2: Faculty details of Allied Departments for the past 3 years including CAY.

C2. Student-Faculty Ratio (SFR)

No. of UG(Engineering) programs in Department including allied departments/ clusters (UGn):
UG1=1st UG program
UGn=nth UG program
B= No. of Students in UG 2nd year (ST)

C= No. of Students in UG 3rd year (ST)
D= No. of Students in UG 4th year (ST)
No. of PG (Engineering) programs in Department including allied departments/ clusters (PGm):
PG1=1st PG program.
PGm=mth PG program
A= No. of Students in PG 1st year
B= No. of Students in PG 2nd year
Student Faculty Ratio **(SFR)** = S/F
S= No. of students of all programs in the Department including all students of allied departments/clusters.
No. of students (ST)=Sanctioned Intake (SA)+ Actual admitted students via lateral entry including leftover seats (L) if any (limited to 10 % of SA)
Students who admitted under supernumerary quotas (SNQ, EWS, etc) will not be considered in calculating SFR value. Those students are exempted.
F=Total no. of regular or contractual faculty members (Full Time) in the Department, including allied departments/clusters (excluding first year faculty (The faculty members who have a 100% teaching load in the first-year courses)).

No. of UG Programs in the Department1 No. of PG Programs in the Department0

Table No.C2.1: Student-faculty ratio.

Description	**CAY(2024-25)**	**CAYm1 (2023-24)**	**CAYm2 (2022-23)**
UG1.B	66	66	66
UG1.C	66	66	66
UG1.D	66	66	66
UG1: Electrical and Electronics Engineering	**198**	**198**	**198**
DS=Total no. of students in all UG and PG programs in the Department	198	198	198
AS=Total no. of students of all UG and PG programs in allied departments	0	0	0
S=Total no. of students in the Department (DS) and allied departments (AS)	**S1=** 198	**S2=** 198	**S3=** 198
DF=Total no. of faculty members in the Department	13	13	12
AF= Total no. of faculty members in the allied Departments	0	0	0
F=Total no. of faculty members in the Department (DF) and allied Departments (AF)	**F1=** 13	**F2=** 13	**F3=** 12
FF=The faculty members in F who have a 100% teaching load in the first-year courses	3	3	3
Student Faculty Ratio (SFR)=S/(F-FF)	**SFR1= 19.80**	**SFR2= 19.80**	**SFR3= 22.00**
Average SFR for 3 years	**SFR= 20.53**		

C3. Faculty Qualification

- Faculty qualification index (FQI) = 2.5 * [(10X +4Y)/RF] where
- X=No. of faculty members with Ph.D. degree or equivalent as per AICTE/UGC norms.
- Y=No. of faculty members with M. Tech. or ME degree or equivalent as per AICTE/ UGC norms.
- RF=No. of required faculty in the Department including allied Departments to adhere to the 20:1 Student-Faculty ratio, with calculations based on both student numbers and faculty requirements as per section C2 of this documents: (RF=S/20).

Table No.C3.1: Faculty qualification.

Year	**X**	**Y**	**RF**	**FQ = 2.5 x [(10X + 4Y) / RF)]**
2024-25(CAY)	3	10	9.00	19.44
2023-24(CAYm1)	2	11	9.00	17.78
2022-23(CAYm2)	2	10	9.00	16.67

C4. Faculty Cadre Proportion

- Faculty Cadre Proportion is 1(RF1): 2(RF2): 6(RF3)

- RF1= No. of Professors required = 1/9 * No. of Faculty required to comply with 20:1 Student-Faculty ratio based on no. of students (S) as per C2 of this documents:.
- RF2= No. of Associate Professors required = 2/9 * No. of Faculty required to comply with 20:1 Student-Faculty ratio based on no. of students (S) as per section C2 of this documents:.
- RF3= No. of Assistant Professors required = 6/9 * No. of Faculty required to comply with 20:1 Student-Faculty ratio based on no. of students (S) as per section C2 of this documents:.
- Faculty cadre and qualification and experience should be as per AICTE/UGC norms.

Table No.C4.1: Faculty cadre proportion details.

Year	Professors		Associate Professors		Assistant Professors	
	Required RF1	Available AF1	Required RF2	Available AF1	Required RF3	Available AF3
2024-25	1.00	1.00	2.00	1.00	6.00	10.00
2023-24	1.00	1.00	2.00	1.00	6.00	10.00
2022-23	1.00	1.00	2.00	1.00	6.00	10.00
Average	RF1=1.00	AF1=1.00	RF2=2.00	AF2=1.00	RF2=6.00	AF2=10.00

C5. Visiting/Adjunct Faculty/Professor of Practice

Table No. C5.1: List of visiting/adjunct faculty/professor of practice and their teaching and practical loads.

(CAYm1)

S.No	Name of the Person	Designation	Organization	Name of the Course	No. of hours handled
1	Dr Narasimha Pandit	Adjunct Professor	KPTCL	Power System Operation and Control	17.00

(CAYm2)

S.No	Name of the Person	Designation	Organization	Name of the Course	No. of hours handled
1	Dr Narasimha Pandit	Adjunct Professor	KPTCL	Power System Operation and Control	23.00
2	Dr Narasimha Pandit	Adjunct Professor	KPTCL	Research Methodology	2.00

(CAYm3)

C6. Academic Research

Table No. C6.1: Faculty publication details.

S.No.	Item	2023-24 (CAYm1)	2022-23 (CAYm2)	2021-22 (CAYm3)
1	No. of peer reviewed journal papers published	3	6	1
2	No. of peer reviewed conference papers published	3	2	3
3	No. of books/book chapters published	0	0	1

C7. Sponsored Research Project

Table No. C7.1: List of sponsored research projects received from external agencies.

(CAYm1)

PI Name	Co-PI names if any	Name of the Dept., where project is sanctioned	Project Title*	Name of the Funding agency	Duration of the project	Amount(Lacs) i.e. 15,25,000=15.25
Dr Sheryl Grace Colaco	-	SPIE, USA	International Education Outreach Grant	SPIE, USA	1	3.75
						Amount received (Rs.):3.75

(CAYm2)

PI Name	Co-PI names if any	Name of the Dept., where project is sanctioned	Project Title*	Name of the Funding agency	Duration of the project	Amount(Lacs) i.e. 15,25,000=15.25
-	-	-	-	-	-	0.00
						Amount received (Rs.):0.00

(CAYm3)

PI Name	Co-PI names if any	Name of the Dept., where project is sanctioned	Project Title*	Name of the Funding agency	Duration of the project	Amount(Lacs) i.e. 15,25,000=15.25
-	-	-	-	-	-	0.00
						Amount received (Rs.):0.00

Total Amount (Lacs) Received for the Past 3 Years: 3.75

Note*:

- Only sponsored research projects will be considered. Infrastructure-based projects will not be considered here.

C8. Consultancy Work

Table No. C8.1: List of consultancy projects received from external agencies.

(CAYm1)

PI Name	Co-PI names if any	Name of the Dept., where project is sanctioned	Project Title*	Name of the Funding agency	Duration of the project	Amount(Lacs) i.e. 15,25,000=15.25
-	-	-	-	-	-	0.00
						Amount received (Rs.):0.00

(CAYm2)

PI Name	Co-PI names if any	Name of the Dept., where project is sanctioned	Project Title*	Name of the Funding agency	Duration of the project	Amount(Lacs) i.e. 15,25,000=15.25
-	-	-	-	-	-	0.00
						Amount received (Rs.):0.00

(CAYm3)

PI Name	Co-PI names if any	Name of the Dept., where project is sanctioned	Project Title*	Name of the Funding agency	Duration of the project	Amount(Lacs) i.e. 15,25,000=15.25
-	-	-	-	-	-	0.00
						Amount received (Rs.):0.00

Total amount (Lacs) received for the past 3 years: 0.00

Note*:

- Only consultancy projects will be considered. Infrastructure-based projects will not be considered here.

C9. Institution Seed Money or Internal Research Grant to its Faculty for Research Work

Table No. C9.1: List of faculty members received seed money or internal research grant from the Institution.

(CAYm1)

Faculty name	Project title/ Support for Activity	Duration of the project	Amount(Lacs) i.e. 15,25,000=15.25	Amount Utilized(Lacs) i.e. 15,25,000=15.25	Outcomes of the project
-	-	-	0.00	0.00	-
			Amount received (Rs.): 0.00		

(CAYm2)

Faculty name	Project title/ Support for Activity	Duration of the project	Amount(Lacs) i.e. 15,25,000=15.25	Amount Utilized(Lacs) i.e. 15,25,000=15.25	Outcomes of the project
-	-	-	0.00	0.00	-
			Amount received (Rs.): 0.00		

(CAYm3)

Faculty name	Project title/ Support for Activity	Duration of the project	Amount(Lacs) i.e. 15,25,000=15.25	Amount Utilized(Lacs) i.e. 15,25,000=15.25	Outcomes of the project
Dr Suresh N S	Smart Grid and Micro Grid Lab	1 year	2.09	1.00	Research paper
Dr Sheryl Grace	Artificial light Impact on Fodder production	1 year	0.40	0.07	Research paper
			Amount received (Rs.): 2.49		

Total amount (Lacs) received for the past 3 years : 2.49

PART D: Laboratory Infrastructure in the Department

(Data to be filled in for the Department)

D1. Adequate and Well-Equipped Laboratories, and Technical Manpower

Table No.D1.1: List of laboratories and technical manpower.

Sr. No	Name of the Laboratory	Number of students per set up(Batch Size)	Name of the Important Equipment	Weekly utilization status(all the courses for which the lab is utilized)	Technical Manpower Support		
					Name of the Technical staff	Designation	Qualification

1	Computing Techniques in Power System Laboratory	25	Pcs-70, B/W printer -1, Matlab R2024a, ETAP 24.0.0	6 Hrs	Ms Shailaja B	Lab Instructor	Diploma in Computer Sc
2	Power System Protection Laboratory	25	HVAC/HVDC kit -1, Electrolytic tank kit-1, Transformer oil testing kit-1, Small Size High	6 hrs	Mr Maxim D'Souza	Foreman	B.E. in Electrical
3	Control System Laboratory	25	PC- 27, Matlab R2024a (Campus wide licence),Function Generator-5, PID Controller-2, DC	6 hrs	Mr Raghu R	Lab Instructor	Diploma in Electronics a
4	Digital Signal Processing Laboratory	25	Pcs-70, B/W printer -1, Matlab R2024a	6 hrs	Ms Shailaja B	Lab Instructor	Diploma in Computer Sc
5	Power Electronics Laboratory	25	Power Scope-5, RPS-10, Voltage controller module-04, Speed Control of motors-04, DC Motors and	6 hrs	Mr Melwin Miranda	Lab Technician	ITI in Electrical
6	Computer Aided Electrical Drawing Laboratory	60	Pcs-70, B/W printer -1, Autocad 2022	4 hrs	Ms Shailaja B	Lab Instructor	Diploma in Computer Sc
7	Analog Electronic circuits Laboratory	25	Digital Storage Oscilloscope-5, 30MHz Dual trace Oscilloscope-10, Function Generator 3MHz-2,	6 hrs	Ms.Priya A	Lab Instructor	Diploma in Electronics a
8	Hardware Description Language (HDL) Laboratory	25	PCs- 29, Software xilink_14.7 (open source), FPGA Trainer Kit with cable and Power supply -25,	6 hrs	Ms.Priya A	Lab Instructor	Diploma in Electronics a
9	Microcontroller Laboratory	25	PC-27, MSP 430 Teaching kit-12, Micro controller kit with LCD display & keyboard-15, Power Supply-	6 hrs	Mr Raghu R	Lab Instructor	Diploma in Electronics a
10	Transformers and Generators Laboratory	25	Transformers 2KVA-3, Transformers 1KVA-7, Dimmerstat 3ø-4, Dimmerstat 1ø-8, Voltmeter - 12	6 hrs	Mr Maxim D'Souza	Foreman	B.E. in Electrical
11	Electric Motors Laboratory	25	Synchronous motor with mechanical load-1, DC compound motor coupled with DC compound	6 hrs	Mr Maxim D'Souza	Foreman	B.E. in Electrical
12	Digital Electronics Laboratory	25	Digital IC Trainer Kit-12, Digital IC Tester-1, Analog IC Tester-1, Digital multimeter-1, Digital and Analog	6 hrs	Ms.Priya A	Lab Instructor	Diploma in Electronics a
13	Electric Circuit Analysis (ECA) Lab	25	DC Power supply -10, Digital Ammeter (0-100ma) -12	6 hrs	Mr Melwin Miranda	Lab Technician	ITI in Electrical

D2. Safety Measures in Laboratories

Table No. D2.1: List of various safety measures in laboratories.

Sr. No	Laboratory Name	Safety Measures
1	Machines Lab	Wearing of Rubber soled shoes at all times. Availability of carbon dioxide type fire extinguisher class BC, sand buckets and first aid box, CC TV camera. MCBs are provided in case of emergency. All machines are earthed properly. Electrical panels are displayed with the sign board. Rubber mat is provided below the electrical panel board. MCBs are provided in case of emergency.

2	CTPS lab/ DSP Lab/ Computer Aided Electrical Drawing Lab/Control system lab	Availability of dry powder fire extinguisher class ABC and first aid box, CC TV camera. MCBs are provided in case of emergency.
3	Microcontroller Lab/HDL lab	Availability of carbon dioxide type fire extinguisher class ABC and first aid box, CC TV camera. MCBs are provided in case of emergency.
4	Electronics Lab/AEC Lab/ECA lab	Wearing of Rubber soled shoes at all times. Availability of carbon dioxide type fire extinguisher class BC and first aid box, CC TV camera. MCBs are provided in case of emergency.
5	Power Electronics Lab	Wearing of Rubber soled shoes at all times. Use of dry powder fire extinguisher class BC and first aid box, CC TV camera. MCBs are provided in case of emergency.
6	Power System Protection Laboratory	Wearing Rubber soled shoes at all times. Availability of carbon dioxide type fire extinguisher class BC, sand buckets and first aid box, CC TV camera. MCBs are provided in case of emergency.

D3. Project Laboratory/Research Laboratory

Research Laboratory/Project Laboratory

Research Laboratory/Project Laboratory was started in the academic year 2024-25. The objective of the lab is to facilitate students projects and research work of the faculties. This lab will be utilized by the students to do their project work during the alloted project hours. Faculty utilize these facilities for their professional growth. Log books are maintained by the lab staff. The details of the lab is provided in the Table 7.1 below.

Table 7.1: Deatils of the Research Laboratory/Project Laboratory

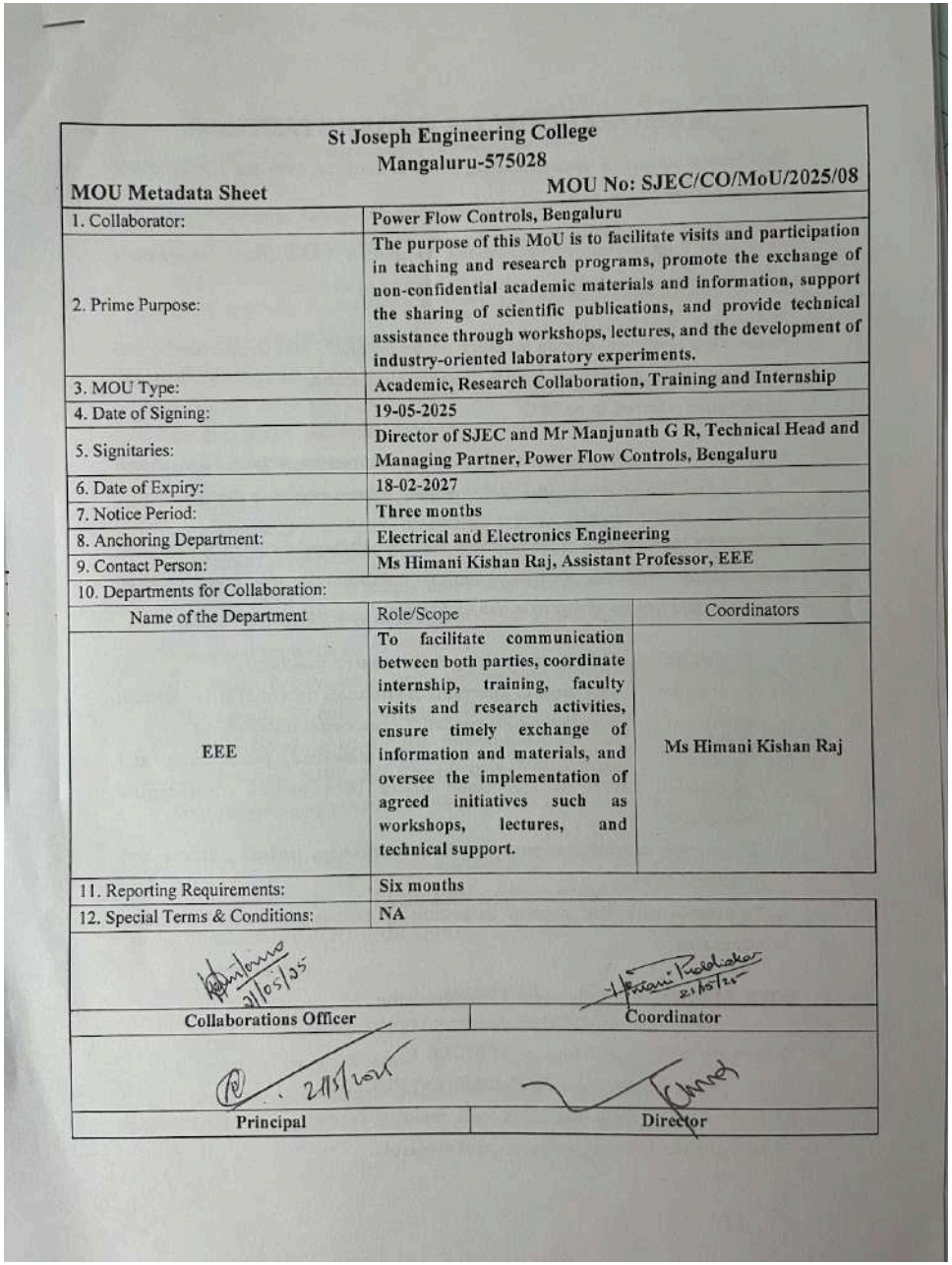
Sl. No.	Name of the lab	Area	Main equipments
1.	Project Laboratory/Research Laboratory	35.2 sq m	Power scope, DSO, Signal generator, single phase fully and semi controlled bridge converter power circuit Load, three phase fully and semi controlled bridge converter power circuit Load, single phase bridge inverter, 3 level neutral Clamp inverter

Support for Power System Protection lab

The Department of Electrical and Electronics Engineering has an MoU with Power Flow Control Private Limited. Figure 7.5.1 shows a document regarding the MoU with St Joseph Engineering College and Power Flow Control. The support given to St Joseph Engineering College (SJEC) through this MoU includes:

Facilitating faculty and student visits for teaching and research programs.

- Promoting the exchange of academic materials and information (non-confidential).
- Supporting the sharing of scientific publications.
- Providing technical assistance through
    - Workshops
    - Lectures
    - Development of industry-oriented laboratory experiments.



St Joseph Engineering College
Mangaluru-575028

MOU Metadata Sheet — **MOU No: SJEC/CO/MoU/2025/08**

1. Collaborator:	Power Flow Controls, Bengaluru
2. Prime Purpose:	The purpose of this MoU is to facilitate visits and participation in teaching and research programs, promote the exchange of non-confidential academic materials and information, support the sharing of scientific publications, and provide technical assistance through workshops, lectures, and the development of industry-oriented laboratory experiments.
3. MOU Type:	Academic, Research Collaboration, Training and Internship
4. Date of Signing:	19-05-2025
5. Signitaries:	Director of SJEC and Mr Manjunath G R, Technical Head and Managing Partner, Power Flow Controls, Bengaluru
6. Date of Expiry:	18-02-2027
7. Notice Period:	Three months
8. Anchoring Department:	Electrical and Electronics Engineering
9. Contact Person:	Ms Himani Kishan Raj, Assistant Professor, EEE
10. Departments for Collaboration:	

Name of the Department	Role/Scope	Coordinators
EEE	To facilitate communication between both parties, coordinate internship, training, faculty visits and research activities, ensure timely exchange of information and materials, and oversee the implementation of agreed initiatives such as workshops, lectures, and technical support.	Ms Himani Kishan Raj

11. Reporting Requirements:	Six months
12. Special Terms & Conditions:	NA

21/05/25 — 21/05/25

Collaborations Officer	Coordinator
Principal	Director

Fig 7.5.1 : Document of MoU with Power Flow Control Private Limited

AICTE Idea Lab-Design and Fabrication Facilities:

The lab covers an area of 5000 plus sq. ft equipped with advanced machinery, tools, and consumables to support the translation of an idea into prototype development or the solution of a problem. Recognizing the significance of skill development in an individual's academic and professional journey, the SJEC AICTE IDEA Lab offers several hands-on courses for undergraduate students, starting from the first semester through the sixth semester.

The IDEA lab conducts workshops, training, ideation sessions, boot camps, competitions, etc., to nurture ideas, imagination, and creativity among stakeholders. The facility is open to SJEC students, faculty, and staff, as well as students from other schools or colleges, industries, entrepreneurs, startups, and alumni. With available industrial-grade advanced machinery, electronic tools, and testing equipment, wrapped in open-source software and staffed by trained personnel, the IDEA Lab is a platform for learning, innovation, and technical prototyping, and provides a stimulus for on-campus and local entrepreneurship. Figure 7.5.2 shows the clips of students involved in the AICTE IDEA Lab.

Fig 7.5.2 : AICTE Idea Laboratory

PART E: First Year faculty and financial Resources

(Data to be filled in for the first year course faculty and budget allocation and utilization)

E1. First Year Student-Faculty Ratio (FYSFR)

Table No. E1.1: FYSFR details.

Year	Sanctioned intake of all UG programs (S4)	No. of required faculty (RF4= S4/20)	No. of faculty members in Basic Science Courses & Humanities and Social Sciences including Management courses (NS1)	No. of faculty members in Engineering Science Courses (NS2)	Percentage= No. of faculty members ((NS1*0.8) + (NS2*0.2))/(No. of required faculty (RF4)); Percentage=((NS1*0.8) + (NS2*0.2))/RF
2022-23(CAYm2)	720	36	31	32	87
2023-24(CAYm1)	780	39	41	36	103
2024-25(CAY)	780	39	44	38	110

E2. Budget Allocation, Utilization, and Public Accounting at Institute Level

Table No. E2.1: Budget and actual expenditure incurred at Institute level.

Items	Budgeted in 2024-2025	Actual Expenses in 2024-2025 till	Budgeted in 2023-2024	Actual Expenses in 2023-2024 till	Budgeted in 2022-2023	Actual Expenses in 2022-2023 till	Budgeted in 2021-2022	Actual Expenses in 2021-2022 till

Infrastructure Built-Up	40200000	40202708	47750000	2587465	110500000	0	19000000	1747534
Library	5180000	5130342	5720000	4491845	4005000	3656963	3354000	3353989
Laboratory equipment	36825000	24254802	28000000	28277859	26084000	18272736	25767000	18665159
Teaching and non-teaching staff salary	214694000	216932815	193018000	188487743	155600000	169416458	146000000	139620528
Outreach Programs	133000	25479	500000	75089	500000	10634	20000	263451
R&D	10791000	5913387	9816000	2686421	6278500	3502518	6004000	2729475
Training, Placement and Industry linkage	1881000	2517801	1848000	1790301	1100000	2689745	514000	919924
SDGs	1200000	456070	5200000	1732223	0	0	0	0
Skill training expenses	18895000	16657044	13750000	12664348	13000000	11738042	6205000	9290095
Laboratory Consumables, Maintenance and Spares,	33803000	133007906	88209000	114564567	87250000	88454932	87786700	74276866
Total	**363602000**	**445098354**	**393811000**	**357357861**	**404317500**	**297742028**	**294650700**	**250867021**

E3. Budget Allocation, Utilization, and Public Accounting at Program Specific Level

Table No. E3.1: Budget and actual expenditure incurred at program level.

Items	**Budgeted in 2024-2025**	**Actual Expenses in 2024-2025 till**	**Budgeted in 2023-2024**	**Actual Expenses in 2023-2024 till**	**Budgeted in 2022-2023**	**Actual Expenses in 2022-2023 till**	**Budgeted in 2021-2022**	**Actual Expenses in 2021-2022 till**
Laboratory equipment	1085000	1046781	2111460	1834965	1463548	532127	1893200	2475174
Software	550000	684400	425000	0	0	0	0	0
SDGs	0	0	0	0	0	0	0	0
Support for faculty development	200000	61905	200000	4218	100000	16652	150000	12000
R & D	175000	82207	165000	58230	265000	85388	305000	10000
Industrial Training, Industry expert, Internship	0	13064	0	0	0	0	0	0
Miscellaneous expenses (Lab consumables,	552000	330872	502000	365316	402000	700874	430500	280882
Total	**2562000**	**2219229**	**3403460**	**2262729**	**2230548**	**1335041**	**2778700**	**2778056**