NATIONAL BOARD OF ACCREDITATION

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

Program Name : Electrical Engineering	**Discipline**: Engineering & Technology
Level : Under Graduate	**Tier**: 1
Application No: 11000	**Date of Submission**: 22-09-2025

PART A- Profile of the Institute

A1.Name of the Institute: MCKV INSTITUTE OF ENGINEERING	
Year of Establishment : 1999	Location of the Institute: Liluah Howrah West Bengal Near Liluah Railway station
A2. Institute Address:243, G.T. ROAD (NORTH), LILUAH	
City:HOWRAH	State:West Bengal
Pin Code:711204	Website:www.mckvie.edu.in
Email:principal@mckvie.edu.in	Phone No(with STD Code):033-26549317
A3. Name and Address of the Affiliating University (if any):	
Name of the University :	City: Nadia
State : West Bengal	Pin Code: 741249
A4. Type of the Institution: Self-Supported Institute	
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	Engineering & Technology	UG	Automobile Engineering	2003	--	Automobile Engineering
2	Engineering & Technology	UG	Computer Science and Engineering	1999	--	Computer Science and Engineering
3	Engineering & Technology	UG	Computer Science and Engineering (Artificial Intelligence & Machine Learning)	2021	--	Computer Science and Engineering
4	Engineering & Technology	UG	Computer Science and Engineering (Data Science)	2020	--	Computer Science and Engineering
5	Engineering & Technology	UG	Electrical Engineering	2010	--	Electrical Engineering
6	Engineering & Technology	UG	Electronics & Communication Engineering	1999	--	Electronics and Communication Engineering
7	Engineering & Technology	PG	Electronics & Communication Engineering	2008	--	Electronics and Communication Engineering
8	Engineering & Technology	UG	Information Technology	1999	--	Information Technology
9	Engineering & Technology	UG	Mechanical Engineering	2008	--	Mechanical Engineering
10	Management	PG	Master of Business Administration	2020	--	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
Electrical Engineering	No	Electrical Engineering	UG
Electronics and Communication Engineering	Yes	Electronics & Communication 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	ACCRED STATUS
1	Electrical Engineering	UG	2010 / --	60	No	NA	60	2010	Approved F. No. Eastern/1-700346905 8/2020/EOA Dtd. 15th June, 2020	Granted accredita years for period (sp period)

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. Tamal Roy
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	56	55	34	21	29	52	57
N2=Number of students admitted in 2nd year in the same batch via lateral entry including leftover seats	0	13	27	34	37	9	6
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	0	0	0	0	0	0	0
Total number of students admitted in the program (N1 + N2 + N3 + N4) - excluding those admitted through multiple entry and exit points.	56	68	61	55	66	61	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	56	0	93.33
2023-24 (CAYm1)	60	55	0	91.67
2022-23 (CAYm2)	60	34	0	56.67

Average [(ER1 + ER2 + ER3) / 3] = 80.56≡ 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).	97.00	69.00	66.00
B=No. of students who graduated from the program in the stipulated course duration	64.00	59.00	63.00
Success Rate (SR)= (B/A) * 100	65.98	85.51	95.45

Average SR of three batches ((SR_1+ SR_2+ SR_3)/3): 82.31

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)
Mean of CGPA or mean percentage of all successful students(X)	7.83	8.04	8.35
Y=Total no. of successful students	55.00	34.00	21.00
Z=Total no. of students appeared in the examination	55.00	34.00	21.00
API [X*(Y/Z)]	7.83	8.04	8.35

Average API[(AP1+AP2+AP3)/3] : 8.07

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)	7.67	7.76	8.45
Y=Total no. of successful students	58.00	50.00	66.00
Z=Total no. of students appeared in the examination	61.00	55.00	66.00
API [X * (Y/Z)]	7.29	7.05	8.45

Average API [(AP1 + AP2 + AP3)/3] : 7.60

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)	7.03	7.61	9.52
Y=Total no. of successful students	47.00	65.00	60.00
Z=Total no. of students appeared in the examination	50.00	66.00	60.00
API [X*(Y/Z)]:	6.61	7.49	9.52

Average API [(AP1 + AP2 + AP3)/3] : 7.87

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	97.00	69.00	66.00
X=No. of students placed	51.00	51.00	40.00
Y=No. of students admitted to higher studies	0.00	0.00	0.00
Z= No. of students taking up entrepreneurship	0.00	0.00	0.00
Placement Index(P) = (((X + Y + Z)/FS) * 100):	52.58	73.91	60.61

Average Placement Index = (P_1 + P_2 + P_3)/3: 62.37 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
1	Dr. Tamal Roy	XXXXXXX97L	Ph.D	Jadavpur University	Control System	16/08/2011	14.1	Assistant Professor	Associate Professor	01/07/2021	Regular	Yes	
2	Dr. Abhijit Lahiri	XXXXXXX49M	Ph.D	Jadavpur University	High Voltage Engineering	01/02/2021	4.7	Professor	Professor	01/02/2021	Regular	Yes	
3	Dr. Arghya Sarkar	XXXXXXX13K	Ph.D	University of Calcutta	Power System	28/08/2000	22.8	Assistant Professor	Professor	01/08/2012	Regular	No	15/05/2023
4	Mrs. Chandrani. Sadhukhan	XXXXXXX79P	M.E.	Jadavpur University	Control System	01/03/2003	22.6	Assistant Professor	Assistant Professor		Regular	Yes	
5	Dr. Debopoma Kar Ray	XXXXXXX24P	Ph.D	University of Calcutta	Power Quality	11/08/2012	13.1	Assistant Professor	Assistant Professor		Regular	Yes	
6	Dr. Suchismita Ghosh	XXXXXXX18M	Ph.D	University of Calcutta	Control System	01/02/2011	14.7	Assistant Professor	Assistant Professor		Regular	Yes	

7	Mr. Sudeep Samanta	XXXXXXX52P	M.Tech	University of Calcutta	Electric Machine Fault Diagnosis	23/12/2011	13.8	Assistant Professor	Assistant Professor		Regular	Yes	
8	Mrs. Tanushree Kumar	XXXXXXX23H	M.Tech	University of Calcutta	Electrical Power	23/12/2011	13.8	Assistant Professor	Assistant Professor		Regular	Yes	
9	Mr. Suman Das	XXXXXXX77E	M.Tech	University of Calcutta	Instru mentation & Control	03/09/2013	12	Assistant Professor	Assistant Professor		Regular	Yes	
10	Mr. Debanka De	XXXXXXX88G	M.Tech	Jadavpur University	Illumination Tech. & Design	21/07/2015	10.2	Assistant Professor	Assistant Professor		Regular	Yes	
11	Mr. Santanu Maity	XXXXXXX23J	M.Tech	Dr. B. C. Roy Engineering College	Power System	11/01/2016	9.8	Assistant Professor	Assistant Professor		Regular	Yes	

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 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	10	10	11
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=** 10	**F2=** 10	**F3=** 11
FF=The faculty members in F who have a 100% teaching load in the first-year courses	0	0	1
Student Faculty Ratio (SFR)=S/(F-FF)	**SFR1= 19.80**	**SFR2= 19.80**	**SFR3= 19.80**
Average SFR for 3 years	**SFR= 19.80**		

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)	4	6	9.00	17.78
2023-24(CAYm1)	4	6	9.00	17.78
2022-23(CAYm2)	5	6	9.00	20.56

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	8.00
2023-24	1.00	1.00	2.00	1.00	6.00	8.00
2022-23	1.00	2.00	2.00	1.00	6.00	8.00
Average	RF1=1.00	AF1=1.33	RF2=2.00	AF2=1.00	RF2=6.00	AF2=8.00

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	Mrs. Sohini Chakraborty (Visiting)	Assistant Professor	Swami Vivekananda Institute of Modern Science	Biology (BS-BIO301)	12.00
2	Prof. (Dr.) Subhasish Banerjee	Retired Pro Vice-Chancellor	Brainware University	Advanced Power System, Power Quality & Deregulation	50.00

(CAYm2)

S.No	Name of the Person	Designation	Organization	Name of the Course	No. of hours handled
1	Mrs. Sohini Chakraborty (Visiting)	Assistant Professor	Swami Vivekananda Institute of Modern Science	Biology (BS-BIO301)	12.00
2	Prof. (Dr.) Subhasish Banerjee	Retired Pro Vice-Chancellor	Brainware University	Advanced Power System, Power Quality & Deregulation	50.00

(CAYm3)

S.No	Name of the Person	Designation	Organization	Name of the Course	No. of hours handled
1	Prof. (Dr.) Buddhadeb Chattopadhyay (Visiting)	Retired Principal	Government College of Engineering and Leather Technology	Biology (BS-BIO301)	12.00
2	Prof. (Dr.) Subhasish Banerjee	Retired Pro Vice-Chancellor	Brainware University	Advanced Power System, Power Quality & Deregulation	50.00

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	5	4	3
2	No. of peer reviewed conference papers published	9	0	2
3	No. of books/book chapters published	0	1	4

C7. Sponsored Research Project

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

(CAYm1)

(CAYm2)

(CAYm3)

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

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)

(CAYm2)

(CAYm3)

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

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
Dr. Debopoma Kar Ray & Mr. Sudeep Samanta	Automated Solar Panel Cleaning System	4	0.00	0.00	Published three research papers and Develop prototype model and published patent on " Automated Solar Panel Cleaning System"
			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
Dr. Debopoma Kar Ray & Mr. Sudeep Samanta	Automated Solar Panel Cleaning System	4	0.00	0.00	Published four research papers and Develop prototype model and published patent on " Automated Solar Panel Cleaning System"
			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. Debopoma Kar Ray & Mr. Sudeep Samanta	Automated Solar Panel Cleaning System	4	0.91	0.91	Published four research papers and Develop prototype model and published patent on " Automated Solar Panel Cleaning System"
			Amount received (Rs.): 0.91		

Total amount (Lacs) received for the past 3 years : 0.91

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	Electric Circuit Theory lab	3	1.CRO 2.Function generator 3. Power supply unit 4.Computers with MATLAB software 5.Breadboard and components	5	Mr. Uday Bhanu	Lab Instructor (S	Diploma in Elect
2	Numerical Methods Lab	1	1.Computer with DBMS 2. server with UPS 3.LAN connected, Oracle 11G	5	Mr. Mangal Sing	Lab Instructor (S	M.Tech in IT
3	Analog Electronics Lab	4	1.CRO 2 Function generator 3 Power supply unit 4. Bread Board	5	Mr. Chandan Da	Senior lab Instru	Diploma in Elect
4	Electric Machines - I Lab	5	1. DC Machines 2. Transformers 3. Three phase Induction motor 4. Single phase Induction motor 5. Auto	5	Mr. Arup Roy & M	Senior lab Instru	Diploma in Elect
5	Digital Electronic Lab	4	1. DC power supply 2. Logic Gate IC 3. 7 Segment display 4. CRO 5. Function generator	5	Mr. Uday Bhanu	Lab Instructor (S	Diploma in Elect

6	Electrical & Electronic Measurement Lab	4	1.AC Energy meter 2 Resistive load 3 Phase Shifting Transformer 4.Inductive Load 5. CTs, PTs 6. Capacitive Load	5	Mr. Sagar Biswa	Junior lab Instruc	Diploma in Elect
7	Electric Machines II Lab	5	1.Three phase Induction motor 2. Auto Transformer 3.Alternator 4.DC Motor 5.Control Unit 6.Single phase Induction	5	Mr. Arup Chandr	Senior lab Instru	Diploma in Elect
8	Power System I Lab	4	1.Trainer Kit of ABCD parameter of transmission line (Panel set-up) 2. Trainer Kit of Active and reactive power	5	Mr. Biswajit Bhat	Senior lab Instru	Diploma in Elect
9	Control Systems Lab	2	1.Computers with UPS, 2. MATLAB software	5	Mr. Arup Chandr	Senior lab Instru	Diploma in Elect
10	Microprocessor & Microcontroller Lab	2	1.Micro-processor kit 2. CRO 3. Microcontroller kit 4. Power supply	5	Mrs. Sumita Bha	Senior lab Instru	A.M.I.E. (ECE), I
11	Digital Signal Processing Lab	1	1.Computers with UPS, 2. MATLAB software	5	Mr. Arup Chandr	Senior lab Instru	Diploma in Elect
12	Power Electronics Lab	3	1.Half and Full wave Bridge Rectifiers 2. inverters, Chopper circuit using Thyristor, R and RC based SCR	5	Mr. Pinaki Chakr	Senior lab Instru	A.M.I.E in Electri
13	Power System II Lab	4	1.On time and Off time delay relay 2. CT, PT 3. Under voltage relay, 4. Over current relay 5. Earth fault relay 6. ETAP	5	Mr. Biswajit Bhat	Senior lab Instru	Diploma in Elect
14	Data Structure and Algorithm Lab	1	1.Computers with LAN 2. UPS, VS code	5	Mrs Aditi Bandyc	Senior lab Instru	M.C.A
15	Computer Organization Lab	3	1.5v, 1 amp power supply 2.Bread Board 3.Resistors 4.Digital IC 5.LED	5	Mrs. Sumita Bha	Senior lab Instru	A.M.I.E(ECE), D
16	Electric Drives Lab	4	1.DC motor drive 2. Chopper circuit 3. IGBT circuit 4. A.C motor drive 5. Single phase motor control 6. TRIAC circuit 7.	5	Mr. Pinaki Chakr	Senior lab Instru	A.M.IE in Electri
17	Data Base Management System Lab	1	1.Computers with LAN 2. UPS, Oracle 11G (Clint-server based)	5	Mr. Kailash Char	Senior Lab Instru	Senior Lab Instru
18	Object Oriented Programming Lab	1	1.Computers with LAN 2. UPS, Oracle 11G 3. LDK1.6, 1.7	5	Mr. Pintu Das	Senior Lab Instru	M.C.A
19	Electrical and Electronic design I Lab	5	1.Coil winding machine 2 Drill Machine 3. Bench vice	6.67	Mr. Biswajit Bhat	Senior lab Instru	Diploma in Elect
20	Electrical and Electronic design II Lab	5	1.Coil winding machine 2. Drill Machine 3. Bench vice	5	Mr. Biswajit Bhat	Senior lab Instru	Diploma in Elect
21	Basic Electrical Lab	5	1. DC Motor 2. 3-point Starter 3. DC Power supply 4. Transformer 5. R-L-C Load 6. Carbon Filament Lab	10	Mr. Sagar Biswa	Junior lab Instruc	Diploma in Elect

D2. Safety Measures in Laboratories

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

Sr. No	Laboratory Name	Safety Measures
1	Electrical Machines-I & II Lab	1. Proper earthing protection. 2. Enclosed casing of high voltage & low voltage electrical lines. 3. Power supply of each instrument provided with MCB. 4. The instrument's circuits & its components are enclosed in proper casing having fuse for protection from high electrical hazards. 5. Specific safety rules like Do's and Don'ts are displayed and instructed for all students. 6. Fire extinguisher and First Aid box are kept in each floor. 7. Well trained Laboratory Instructor monitor the laboratories at all times.
2	Power System I & II Lab	1. Proper earthing protection. 2. Enclosed casing of high voltage & low voltage electrical lines. 3. Power supply of each instrument provided with MCB. 4. The instrument's circuits & its components are enclosed in proper casing having fuse for protection from high electrical hazards. 5. Specific safety rules like Do's and Don'ts are displayed and instructed for all students. 6. Fire extinguisher and First Aid box are kept in each floor. 7. Well trained Laboratory Instructor monitor the laboratories at all times.
3	Electrical and Electronic design Lab-I & II	1. Proper earthing protection. 2. Enclosed casing of high voltage & low voltage electrical lines. 3. Power supply of each instrument provided with MCB. 4. The instrument's circuits & its components are enclosed in proper casing having fuse for protection from high electrical hazards. 5. Specific safety rules like Do's and Don'ts are displayed and instructed for all students. 6. Fire extinguisher and First Aid box are kept in each floor. 7. Well trained Laboratory Instructor monitor the laboratories at all times.
4	Power Electronics Lab	1. Proper earthing protection. 2. Enclosed casing of high voltage & low voltage electrical lines. 3. Power supply of each instrument provided with MCB. 4. The instrument's circuits & its components are enclosed in proper casing having fuse for protection from high electrical hazards. 5. Specific safety rules like Do's and Don'ts are displayed and instructed for all students. 6. Fire extinguisher and First Aid box are kept in each floor. 7. Well trained Laboratory Instructor monitor the laboratories at all times.

5	Electric Drives Lab	1. Proper earthing protection. 2. Enclosed casing of high voltage & low voltage electrical lines. 3. Power supply of each instrument provided with MCB. 4. The instrument's circuits & its components are enclosed in proper casing having fuse for protection from high electrical hazards. 5. Specific safety rules like Do's and Don'ts are displayed and instructed for all students. 6. Fire extinguisher and First Aid box are kept in each floor. 7. Well trained Laboratory Instructor monitor the laboratories at all times.
6	Project Lab	1. Proper earthing protection. 2. Enclosed casing of high voltage & low voltage electrical lines. 3. Power supply of each instrument provided with MCB. 4. The instrument's circuits & its components are enclosed in proper casing having fuse for protection from high electrical hazards. 5. Specific safety rules like Do's and Don'ts are displayed and instructed for all students. 6. Fire extinguisher and First Aid box are kept in each floor. 7. Well trained Laboratory Instructor monitor the laboratories at all times.
7	Control Systems Lab	1. Proper earthing protection. 2. Enclosed casing of high voltage & low voltage electrical lines. 3. Power supply of each instrument provided with MCB. 4. The instrument's circuits & its components are enclosed in proper casing having fuse for protection from high electrical hazards. 5. Specific safety rules like Do's and Don'ts are displayed and instructed for all students. 6. Fire extinguisher and First Aid box are kept in each floor. 7. Well trained Laboratory Instructor monitor the laboratories at all times.
8	Digital Signal Processing Lab	1. Proper earthing protection. 2. Enclosed casing of high voltage & low voltage electrical lines. 3. Power supply of each instrument provided with MCB. 4. The instrument's circuits & its components are enclosed in proper casing having fuse for protection from high electrical hazards. 5. Specific safety rules like Do's and Don'ts are displayed and instructed for all students. 6. Fire extinguisher and First Aid box are kept in each floor. 7. Well trained Laboratory Instructor monitor the laboratories at all times.
9	Basic Electrical Lab	1. Proper earthing protection. 2. Enclosed casing of high voltage & low voltage electrical lines. 3. Power supply of each instrument provided with MCB. 4. The instrument's circuits & its components are enclosed in proper casing having fuse for protection from high electrical hazards. 5. Specific safety rules like Do's and Don'ts are displayed and instructed for all students. 6. Fire extinguisher and First Aid box are kept in each floor. 7. Well trained Laboratory Instructor monitor the laboratories at all times.

D3. Project Laboratory/Research Laboratory

Mention facilities & Utilization

Project Laboratory: The department recognizes that project method of content delivery is effective and efficient in developing integrated competencies implying technology and employability skills. The department tries to conduct the project under the guidance of experienced faculty members in order to impart industry like experience so that the graduates smoothly can transit from the world of learning to the world of work. To achieve these objectives the current project laboratory was conceived since 2012.

Project lab has sufficient space to accommodate specified numbers/batches of students with sufficient number of PCs/hardware.

It consists of the following facilities:

Hardware Project:

Hardware circuits and hardware-software interface-based projects are regularly undertaken in the department. All equipment is meticulously maintained to ensure it remains in excellent working condition. The department houses specialized laboratory facilities dedicated to hardware and software projects, providing students with the resources to carry out innovative experiments aimed at addressing real-world engineering and technological challenges. In this lab, students gain hands-on experience by applying their knowledge of Mathematics, Electrical, Electronics, and Computer Engineering to develop practical solutions for real-time problems. This exposure not only enhances their technical skills but also fosters creativity and problem-solving abilities, preparing them for professional challenges in the field of engineering.

Software Project:

Students undertake projects based on simulation and modelling, utilising advanced software tools such as **MATLAB, ETAP, LabVIEW, MiPower**, and others. To carry out these projects effectively, students access the relevant facilities and resources available in the designated laboratories. These projects enable students to apply theoretical concepts to practical scenarios, enhancing their analytical and problem-solving skills. Furthermore, working with high-end simulation software familiarizes students with industry-standard tools, preparing them for real-world engineering challenges.

Project Reports:

The department maintains student project reports from previous academic sessions in the Departmental Library, allowing current students to easily access them and build upon past work. Additionally, some notable projects are preserved in the project laboratory, and students are encouraged to present and publish their work in various national and international conferences and journals.

Project Lab Utilization:

Sl. No.	Category	Project / Event
1.	B.Tech	Academic Project work
2.	Project for External Event	BITM, Smart India Hackathon, IET Young Engineers Awards etc.
3.	Project for Internal Event	Technotica, Hands on Training on Electric Circuit Design, Five Days Workshop on Application of ETAP for Analysis of Power System Network, Two days online workshop on ntroduction to MATLAB.

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)	540	27	16	43	79
2023-24(CAYm1)	540	27	15	50	81
2024-25(CAY)	540	27	17	51	88

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	11500000	8624388	12000000	8792540	7000000	6975654	5000000	11715361
Library	2000000	1442205	1900000	1823608	1500000	1384589	1000000	879446
Laboratory equipment	8000000	6105323	6000000	4949265	6200000	3979427	3000000	2928821
Teaching and non-teaching staff salary	145000000	139880985	130000000	130735889	115000000	110252482	130000000	103677531
Outreach Programs	2300000	2193436	1400000	1382564	1000000	1386606	500000	247451
R&D	4500000	3924067	2500000	2268769	800000	488154	2000000	373495
Training, Placement and Industry linkage	2400000	2274923	2150000	1971970	1700000	1605137	2000000	956458
SDGs	5600000	3721672	6000000	5244407	6000000	5197065	4800000	3249384
Entrepreneurship	200000	96930	250000	56723	200000	62700	200000	15689
Others, specify	63880000	55325344	38550000	39432724	33100000	35868921	23500000	23980445
Total	**245380000**	**223589273**	**200750000**	**196658459**	**172500000**	**167200735**	**172000000**	**148024081**

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	300000	269079	50000	25099	20000	15700	200000	193028
Software	70000	48970	150000	144746	100000	56394	75000	46600
SDGs	50000	20000	700000	669300	400000	353400	20000	0
Support for faculty development	50000	37500	100000	85405	100000	76555	10000	0
R & D	50000	20500	100000	41643	450000	401670	100000	90919
Industrial Training, Industry expert,	130000	129837	50000	47356	100000	59173	50000	47790
Miscellaneous Expenses*	20000	19165	5000	3945	50000	38988	5000	0
Total	**670000**	**545051**	**1155000**	**1017494**	**1220000**	**1001880**	**460000**	**378337**