NATIONAL BOARD OF ACCREDITATION

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

Program Name : Applied Electronics & Instrumentation Engineering	**Discipline**: Engineering & Technology
Level : Under Graduate	**Tier**: 1
Application No: 10755	**Date of Submission**: 25-06-2025

PART A- Profile of the Institute

A1.Name of the Institute: HERITAGE INSTITUTE OF TECHNOLOGY	
Year of Establishment : 2001	Location of the Institute: NEAR RUBY HOSPITAL ON EMBYEPASS
A2. Institute Address:CHOWBAGA ROAD,ANANDAPUR P.O.-EAST KOLKATA TOWNSHIP	
City:Kolkata	State:West Bengal
Pin Code:700107	Website:WWW.HERITAGEIT.EDU
Email:ADMIN@HERITAGEIT.EDU	Phone No(with STD Code):033-66270614
A3. Name and Address of the Affiliating University (if any):	
Name of the University : Maulana Abul Kalam Azad University of Technology,	City: Nadia
State : West Bengal	Pin Code: 741249
A4. Type of the Institution: Deemed University	
A5. Ownership Status: Self financing	

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

- No. of UG programs: **13**
- No. of PG programs: **7**

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 in Computer Applications	2003	--	Computer Application
2	Engineering & Technology	PG	Applied Electronics & Instrumentation Engineering	2006	--	Applied Electronics and Instrumentation Engineering
3	Engineering & Technology	UG	Applied Electronics & Instrumentation Engineering	2001	--	Applied Electronics and Instrumentation Engineering
4	Engineering & Technology	UG	Biotechnology	2002	--	Biotechnology
5	Engineering & Technology	PG	Biotechnology	2007	--	Biotechnology
6	Engineering & Technology	UG	Chemical Engineering	2002	--	Chemical Engineering
7	Engineering & Technology	UG	Civil Engineering	2011	--	Civil Engineering
8	Engineering & Technology	UG	Computer Science and Business System	2020	--	Computer Science and Business System
9	Engineering & Technology	UG	Computer Science and Engineering	2001	--	Computer Science and Engineering
10	Engineering & Technology	PG	Computer Science and Engineering	2006	--	Computer Science and Engineering

11	Engineering & Technology	UG	Computer Science and Engineering (Artificial Intelligence & Machine Learning)	2021	--	Computer Science and Engineering (Artificial Intelligence and Machine Learning)
12	Engineering & Technology	UG	Computer Science and Engineering (Data Science)	2021	--	Computer Science and Engineering (Data Science)
13	Engineering & Technology	UG	Computer Science and Engineering (Internet of Things and Cyber Security including Blockchain Technology)	2022	--	Computer Science and Engineering (Internet of Things and Cyber Security including Blockchain Technology)
14	Engineering & Technology	UG	Electrical Engineering	2012	--	Electrical Engineering
15	Engineering & Technology	UG	Electronics & Communication Engineering	2001	--	Electronics and Communication Engineering
16	Engineering & Technology	PG	Electronics & Communication Engineering	2009	--	Electronics and Communication Engineering
17	Engineering & Technology	UG	Information Technology	2001	--	Information Technology
18	Engineering & Technology	UG	Mechanical Engineering	2011	--	Mechanical Engineering
19	Engineering & Technology	PG	Renewable Energy	2016	--	Chemical Engineering
20	Engineering & Technology	PG	VLSI	2011	--	Electronics and Communication Engineering

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
Electronics and Communication Engineering	Yes	Electronics & Communication Engineering	UG
Applied Electronics and Instrumentation Engineering	Yes	Applied Electronics & Instrumentation Engineering	UG
Biotechnology	No	Biotechnology	UG
Chemical Engineering	No	Chemical 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)

Allied Department/Cluster Name	Program Name	Program Level
Electronics and Communication Engineering	Electronics & Communication Engineering	UG
Electronics and Communication Engineering	Electronics & Communication Engineering	PG
Electronics and Communication Engineering	VLSI	PG

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 PROGRA ACCRED
1	Applied Electronics & Instrumentation Engineering	UG	2001 / --	60	No	NA	60	2001	Eastern/1-44641721976/2025/EOA	Granted accreditation for 3 years for the period (specify period)	2022	2025	5

List of the Allied Departments/Cluster and Programs:

SR.NO.	ALLIED DEPARTMENT NAME	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
1	Electronics and Communication Engineering	Electronics & Communication Engineering	UG	2001 / --	60	Yes	2011	180	2011	Eastern/1-44641721976/2025/EOA	Granted accreditation for 3 years for the period (specify period)	2022
2	Electronics and Communication Engineering	Electronics & Communication Engineering	PG	2009 / --	18	No	NA	18	2009	Eastern/1-44641721976/2025/EOA	Granted accreditation for 3 years for the period (specify period)	2017
3	Electronics and Communication Engineering	VLSI	PG	2011 / --	18	No	NA	18	2011	Eastern/1-44641721976/2025/EOA	Eligible but not applied	--

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

A. Name of the HoD :	Prof. (Dr.) Madhurima Chattopadhyay
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	57	51	46	42	52	42	49
N2=Number of students admitted in 2nd year in the same batch via lateral entry including leftover seats	0	7	7	3	3	8	9
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	1	2	3	2
Total number of students admitted in the program (N1 + N2 + N3 + N4) - excluding those admitted through multiple entry and exit points.	60	61	56	46	57	53	60

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	57	3	100.00
2023-24 (CAYm1)	60	51	3	90.00
2022-23 (CAYm2)	60	46	3	81.67

Average [(ER1 + ER2 + ER3) / 3] = 90.56≡ 20.00

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).	63.00	68.00	69.00
B=No. of students who graduated from the program in the stipulated course duration	57.00	52.00	60.00
Success Rate (SR)= (B/A) * 100	90.48	76.47	86.96

Average SR of three batches ((SR_1+ SR_2+ SR_3)/3): 84.64

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)	7.43	6.72	7.50
Y=Total no. of successful students	54.00	49.00	43.00
Z=Total no. of students appeared in the examination	54.00	49.00	43.00

API [X*(Y/Z)]	7.43	6.72	7.50

Average API[(AP1+AP2+AP3)/3] : 7.22

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)	7.23	6.48	8.31
Y=Total no. of successful students	56.00	46.00	57.00
Z=Total no. of students appeared in the examination	56.00	46.00	57.00
API [X * (Y/Z)]	7.23	6.48	8.31

Average API [(AP1 + AP2 + AP3)/3] : 7.34

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)	8.46	7.99	8.10
Y=Total no. of successful students	46.00	57.00	52.00
Z=Total no. of students appeared in the examination	46.00	57.00	53.00
API [X*(Y/Z)]:	8.46	7.99	7.95

Average API [(AP1 + AP2 + AP3)/3] : 8.13

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	63.00	68.00	69.00
X=No. of students placed	47.00	42.00	51.00
Y=No. of students admitted to higher studies	4.00	8.00	5.00
Z= No. of students taking up entrepreneurship	2.00	0.00	0.00
Placement Index(P) = (((X + Y + Z)/FS) * 100):	84.13	73.53	81.16

Average Placement Index = (P_1 + P_2 + P_3)/3: 79.61 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	Prof. (Dr.) Madhurima Chattopadhyay	XXXXXXX27B	Ph.D	Indian Institute of Science, Bengaluru	Micro sensors, medical instrumentation, Sensorless drive of BLDC motors	01/06/2011	14	Professor	Professor	01/06/2011	Regular	Yes		Yes
2	Prof. (Dr.) Santanu Ghorai	XXXXXXX83H	Ph.D	Indian Institute of Technology, Kharagpur	Signal Processing, Machine learning, Image Processing	19/07/2011	13.10	Associate Professor	Professor	01/07/2017	Regular	Yes		No
3	Prof. (Dr.) Surajit Bagchi	XXXXXXX66F	Ph.D	Indian Institute of Technology (Indian School of Mines), Dhanbad	Biomedical Instrumentation	10/07/2003	21.10	Lecturer	Associate Professor	01/09/2005	Regular	Yes		No
4	Prof. (Dr.) Arabinda Kumar Pal	XXXXXXX43L	Ph.D	Jadavpur University	Process Control, Soft Computing	09/08/2004	20.9	Lecturer	Associate Professor	01/03/2006	Regular	Yes		No
5	Dr. Soumik Das	XXXXXXX97D	Ph.D	Jadavpur University	Analog Signal Processing	25/08/2005	19.9	Lecturer	Assistant Professor		Regular	Yes		No
6	Dr. Pradip Saha	XXXXXXX96H	Ph.D	Jadavpur University	Signal Processing, Machine learning	27/08/2005	19.9	Lecturer	Assistant Professor		Regular	Yes		No
7	Indrajit Naskar	XXXXXXX08L	M.Tech	Maulana Abul Kalam Azad University of Technology (formerly West Bengal University of Technology)	Soft Computing	11/02/2006	19.3	Lecturer	Assistant Professor		Regular	Yes		No
8	Reshma Sengupta	XXXXXXX91F	M.Tech	University of Calcutta	Instrumentation & Control	01/08/2007	17.10	Lecturer	Assistant Professor		Regular	Yes		No

9	Arindam Sarkar	XXXXXXX48R	M.Tech	Maulana Abul Kalam Azad University of Technology (formerly West Bengal University of Technology)	Applied Electronics and Instrumentation	18/02/2008	17.3	Lecturer	Assistant Professor		Regular	Yes		No
10	Dr. Samiul Alam	XXXXXXX60B	Ph.D	University of Calcutta	Biomedical Signal Processing	21/02/2008	17.3	Lecturer	Assistant Professor		Regular	Yes		No
11	Damayanti Ghosh	XXXXXXX90R	M.Tech	University of Calcutta	Instrumentation & Control	11/01/2010	15.4	Lecturer	Assistant Professor		Regular	Yes		No
12	Dr. Samik Chakraborty	XXXXXXX29P	Ph.D	University of Calcutta	Biomedical Signal Processing	19/02/2010	15.3	Lecturer	Assistant Professor		Regular	Yes		No
13	Dr. Anil Kumar Bag	XXXXXXX56L	Ph.D	Jadavpur University	Process Control & Instrumentation	17/04/2015	10.2	Assistant Professor	Assistant Professor		Regular	Yes		No
14	Dr. Debjyoti Chowdhury	XXXXXXX64N	Ph.D	Maulana Abul Kalam Azad University of Technology (formerly West Bengal University of Technology)	Micro sensor & Embedded System	13/01/2016	9.4	Assistant Professor	Assistant Professor		Regular	Yes		No

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

Sr.No	Name of the Faculty	PAN No.	APAAR faculty ID*(if any)	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	Prof.(Dr.) Prabir Banerjee	XXXXXXX03F	NA	Ph.D	Jadavpur University	Ad hoc wireless networks, MIMO & 6G networks,	07/07/2008	16.10	Assistant Professor	Professor	05/08/2014	Regular	Yes		Yes
2	Prof. (Dr.) Anindya Sen	XXXXXXX01F	NA	Ph.D	University of Minnesota	Image processing, Machine Learning, Embedded System, Microcontroller, Adhoc Network security	01/07/2014	10.11	Associate Professor	Professor	01/07/2017	Regular	Yes		No

3	Prof. Krishanu Datta	XXXXXXX49Q	NA	M.Tech	Indian Institute of Technology, Kharagpur	Embedded memory design, Advance process Technology	01/09/2011	13.9	Associate Professor	Associate Professor		Regular	Yes		No
4	Prof. (Dr.) Shounak Dasgupta	XXXXXXX03A	NA	Ph.D	Jadavpur University	Communication system , Artificial intelligence	01/07/2014	10.11	Assistant Professor	Associate Professor	01/07/2017	Regular	Yes		No
5	Prof. (Dr.) Atanu Kundu	XXXXXXX71D	NA	Ph.D	Jadavpur University	Electronic Devices and Circuits	01/08/2007	17.10	Assistant Professor	Associate Professor	01/06/2021	Regular	Yes		No
6	Prof. (Dr.) Mousiki Kar	XXXXXXX47A	NA	Ph.D	Jadavpur University	Control System and electronic circuits	22/07/2008	16.10	Assistant Professor	Associate Professor	01/06/2021	Regular	Yes		No
7	Prof. (Dr.) Asima Adak	XXXXXXX96M	NA	Ph.D	Jadavpur University	Communication systems and digital logics	01/08/2007	17.10	Assistant Professor	Assistant Professor		Regular	Yes		No
8	Prof. (Dr.) Chandrima Roy	XXXXXXX87Q	NA	Ph.D	Jadavpur University	Cognitive neuro science	13/01/2012	13.4	Assistant Professor	Assistant Professor		Regular	Yes		No
9	Prof. (Dr.) Dulal Mandal	XXXXXXX05A	NA	Ph.D	Jadavpur University	Signal and image processing	11/07/2003	21.10	Assistant Professor	Assistant Professor		Regular	Yes		No
10	Prof.(Dr.) Kasturi Mukherjee	XXXXXXX59H	NA	Ph.D	University of Calcutta	Electronic devices and VLSI systems	15/07/2013	11.10	Assistant Professor	Assistant Professor		Regular	Yes		No
11	Prof.(Dr.) Prativa Agarwalla	XXXXXXX10N	NA	Ph.D	University of Calcutta	Computational Intelligence	13/07/2012	12.10	Assistant Professor	Assistant Professor		Regular	Yes		No
12	Prof.(Dr.) Sabyasachi Chatterjee	XXXXXXX17E	NA	Ph.D	Jadavpur University	Wireless communication and Digital system and Control system	01/01/2013	12.5	Assistant Professor	Assistant Professor		Regular	Yes		No
13	Prof. (Dr.) Sayantani Datta	XXXXXXX99K	NA	Ph.D	University of Calcutta	Communication systems and RF circuits	01/09/2004	20.9	Assistant Professor	Assistant Professor		Regular	Yes		No
14	Prof. (Dr.) Shib Sankar Bhowmick	XXXXXXX27R	NA	Ph.D	Jadavpur University	Machine Learning & Data analysis	25/10/2010	14.7	Assistant Professor	Assistant Professor		Regular	Yes		No
15	Prof. (Dr.) Soumyo Chatterjee	XXXXXXX20N	NA	Ph.D	Jadavpur University	RF & microwave device modelling, Evolutionary algorithm	03/08/2007	17.10	Assistant Professor	Assistant Professor		Regular	Yes		No

16	Prof. (Dr.) Srabanti Pandit	XXXXXXX55A	NA	Ph.D	Jadavpur University	Nan scale CMOS Device, VLSI Design, Digital System	18/02/2013	12.3	Assistant Professor	Assistant Professor		Regular	Yes		No
17	Prof. (Dr.) Sriparna Bhattacharya	XXXXXXX75F	NA	Ph.D	Jadavpur University	Digital System, Antenna design, Communication system	04/07/2002	22.11	Assistant Professor	Assistant Professor		Regular	Yes		No
18	Prof. (Dr.) Susovan Mandal	XXXXXXX52C	NA	Ph.D	Jadavpur University	Analog Circuits, Microwave Engineering, Optics & photonics	01/09/2010	14.9	Assistant Professor	Assistant Professor		Regular	Yes		No
19	Prof. (Dr.) Tania Das	XXXXXXX52C	NA	Ph.D	University of Calcutta	Photonics, Optical metrology, EM biosensor, Microwave systems	01/08/2013	11.10	Assistant Professor	Assistant Professor		Regular	Yes		No
20	Prof. (Dr.) Tapas Chakraborty	XXXXXXX39G	NA	Ph.D	Jadavpur University	Microelectronics & Solar cell devices	10/01/2012	13.4	Assistant Professor	Assistant Professor		Regular	Yes		No
21	Prof. Amrita Banerjee	XXXXXXX51H	NA	M.Tech	University of Calcutta	Nanoscale memory devices, VLSI systems	15/07/2013	11.10	Assistant Professor	Assistant Professor		Regular	Yes		No
22	Prof. Ananya Chattopadhyay	XXXXXXX46P	NA	M.Tech	National Institute of Technology, Durgapur	Wireless Communication , Digital Systems	10/07/2017	7.10	Assistant Professor	Assistant Professor		Regular	Yes		No
23	Prof. Arindam Ray	XXXXXXX96C	NA	M.Tech	University of Calcutta	Analog and Digital Circuits	16/02/2004	21.1	Assistant Professor	Assistant Professor		Regular	No	09/04/2025	No
24	Prof. Debamita Roy	XXXXXXX19A	NA	M.Tech	University of Calcutta	Solar Cell, VLSI Circuits	25/07/2016	8.10	Assistant Professor	Assistant Professor		Regular	Yes		No
25	Prof. Debanjali Sadhu	XXXXXXX51K	NA	M.Tech	National Institute of Technology, Durgapur	Leaky Wave antenna, Signal processing, Wireless	01/08/2012	12.10	Assistant Professor	Assistant Professor		Regular	Yes		No
26	Prof. Md. Shahnawaz	XXXXXXX48M	NA	M.E.	Jadavpur University	Devices & Circuits	09/08/2010	14.9	Assistant Professor	Assistant Professor		Regular	Yes		No
27	Prof. Pratima Shaw	XXXXXXX26L	NA	M.Tech	National Institute of Technology, Durgapur	RF, Microwave Devices and Circuits	24/07/2017	7.10	Assistant Professor	Assistant Professor		Regular	Yes		No

28	Prof. Rajib Ranjan Pal	XXXXXXX28J	NA	M.Tech	University of Calcutta	Communication Systems and Electronic Devices & Circuits	12/01/2011	14.4	Assistant Professor	Assistant Professor		Regular	Yes		No
29	Prof. Subhrajit Chakraborty	XXXXXXX58E	NA	M.Tech	Jadavpur University	Devices & Circuits	02/09/2008	16.9	Assistant Professor	Assistant Professor		Regular	Yes		No
30	Prof. Orijit Biswas	XXXXXXX48G	NA	M.Tech	Maulana Abul Kalam Azad University of Technology (formerly West Bengal University of Technology)	VLSI Devices	07/09/2012	12.8	Assistant Professor	Assistant Professor		Regular	Yes		No
31	Prof. Rudranath Mitra	XXXXXXX69N	NA	M.Tech	Maulana Abul Kalam Azad University of Technology (formerly West Bengal University of Technology)	Networks	31/01/2007	16.4	Assistant Professor	Assistant Professor		Regular	No	10/06/2023	No

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 Department3
Table No.C2.1: Student-faculty ratio.

Description	CAY(2024-25)	CAYm1 (2023-24)	CAYm2 (2022-23)
UG1.B	66	66	63
UG1.C	66	63	63
UG1.D	63	63	66
UG1: Applied Electronics & Instrumentation Engineering	**195**	**192**	**192**
UG2.B	198	198	198
UG2.C	198	198	198
UG2.D	198	198	198
UG2: Electronics & Communication Engineering	**594**	**594**	**594**
PG1.A	18	18	18
PG1.B	18	18	18
PG1: Applied Electronics & Instrumentation Engineering	**36**	**36**	**36**
PG2.A	18	18	18
PG2.B	18	18	18
PG2: Electronics & Communication Engineering	**36**	**36**	**36**
PG3.A	18	18	18
PG3.B	18	18	18
PG3: VLSI	**36**	**36**	**36**
DS=Total no. of students in all UG and PG programs in the Department	231	228	228
AS=Total no. of students of all UG and PG programs in allied departments	666	666	666
S=Total no. of students in the Department (DS) and allied departments (AS)	**S1=** 897	**S2=** 894	**S3=** 894
DF=Total no. of faculty members in the Department	14	14	14
AF= Total no. of faculty members in the allied Departments	29	30	31
F=Total no. of faculty members in the Department (DF) and allied Departments (AF)	**F1=** 43	**F2=** 44	**F3=** 45
FF=The faculty members in F who have a 100% teaching load in the first-year courses	0	0	0
Student Faculty Ratio (SFR)=S/(F-FF)	**SFR1= 20.86**	**SFR2= 20.32**	**SFR3= 19.87**
Average SFR for 3 years	**SFR= 20.35**		

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)	29	14	41.00	21.10
2023-24(CAYm1)	26	18	41.00	20.24

2022-23(CAYm2)	24	21	41.00	19.76

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	4.00	4.00	9.00	5.00	27.00	34.00
2023-24	4.00	4.00	9.00	5.00	27.00	35.00
2022-23	4.00	4.00	9.00	5.00	27.00	36.00
Average	RF1=4.00	AF1=4.00	RF2=9.00	AF2=5.00	RF2=27.00	AF2=35.00

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	Tushar Kanti Dutta	Instrumentation & Control Engineer	Abu Dhabi National Oil Company (ADNOC) Offshore, Abu Dhabi	Process Control (Theory & Lab)	60.00

(CAYm2)

(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	7	8	5
2	No. of peer reviewed conference papers published	4	7	4
3	No. of books/book chapters published	0	6	1

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)

(CAYm2)

(CAYm3)

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

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	POWER ELECTRONICS AND DRIVES LABORATORY	4	• DIAC & TRIAC Trainer Kit • SCR Trainer Kit • UJT Triggering Circuit Trainer Kit • Converter Firing Circuit Trainer Kit Thyristor Triggering	4 Hrs	Mr. Sumit Kumar Baksh	Sr. Technical Assistant	Diploma in Instrumentat
2	INDUSTRIAL INSTRUMENTATION LABORATORY	4	• Halogen Moisture Analyzer • Dead Weight Tester • Test Setup for Calibration of Pressure gauge and Pressure transmitter using Dead Weight	4 Hrs	Ms. Harapriya Panda	Sr. Technical Assistant	A.M.I.E.

3	INTERNET OF THINGS LABORATORY	1	• 34 Nos. PC • Canon LBP 2900B Printer • ArduinoUno board • ESP 8266 • ESP 32 • LDR	4 Hrs	Mr. Bibhas Maikap	Technical Assistant	Diploma in Instrumentat
4	MICROPROCESSORS AND MICROCONTROLLERS LABORATORY	4	• PC (12 nos.) with communication software (TALK) • 8085 Microprocessor Trainer kit • 8255	20 Hrs (Odd Se	Mr. Koushik Mazumder	Sr. Technical Assistant	Diploma in Instrumentat
5	PROCESS CONTROL LABORATORY	4	• Pressure Control Loop consisting of : • Pressure Controller (Honeywell, DC1040) •	6 Hrs	Ms. Harapriya Panda	Sr. Technical Assistant	A.M.I.E.
6	ELECTRICAL AND ELECTRONIC MEASUREMENTS LABORATORY	4	• A to D Converter Trainer • D to A Converter Trainer Kit • Study of Static Characteristics of a	4 Hrs	Mr. Sujoy Kumar Das	Sr. Technical Assistant	MCA
7	SENSORS AND TRANSDUCERS LABORATORY	4	• Kelvin Double Bridge Set up • De-Sauty's Bridge Trainer Kit • Anderson's Bridge Trainer Kit •	4 Hrs	Mr. Sujoy Kumar Das	Sr. Technical Assistant	MCA
8	CIRCUITS AND NETWORKS LABORATORY	1	• 34 PCs • 20MHz Dual Trace Oscilloscope • 1MHz Function Generator • Power Supply •	4 Hrs	Mr. Sumit Kumar Baksh	Sr. Technical Assistant	Diploma in Instrumentat
9	CONTROL SYSTEM LABORATORY	1	• 34 PCs • 20MHz Dual Trace Oscilloscope • 1MHz Function Generator • Power Supply	4 Hrs	Mr. Sujoy Kumar Das	Sr. Technical Assistant	MCA
10	ANALOG ELECTRONICS LABORATORY	4	• Function Generator, 1MHz, 2MHz, 3MHz. • CRO, 20 MHz, 30MHz Dual Channel • Tripple	6 Hrs	Ms. Suparna Banerjee	Technical Assistant	Diploma in E.C.E.
11	DIGITAL ELECTRONICS LABORATORY	4	• IC 7400, Quad 2- input NAND gate • IC 7402, Quad 2- input NOR gate • IC 7404, Hex	4 Hrs	Ms. Harapriya Panda	Sr. Technical Assistant	A.M.I.E.
12	DESIGN THINKING & IDEA LAB WORKSHOP	1	• 34 PCs	4 Hrs	Mr. Bibhas Maikap	Technical Assistant	Diploma in Instrumentat
13	MINI PROJECT/ ELECTRONIC DESIGN WORKSHOP	4	• Function Generator, 1MHz, 2MHz, 3MHz. • CRO, 20 MHz, 30MHz Dual Channel • Tripple	8 Hrs	Ms. Suparna Banerjee	Technical Assistant	MCA

D2. Safety Measures in Laboratories

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

Sr. No	Laboratory Name	Safety Measures
1	POWER ELECTRONICS AND DRIVES LABORATORY	The following safety measures are used in all the labs: □ Specific Safety Rules like Do's and Don'ts are displayed and instructed for all students. □ First aid box and fire extinguishers are kept in each laboratory. □ Well trained technical supporting staff monitor the labs at all times. □ Damaged equipments are identified and serviced at the earliest. □ A clean and organized laboratories are maintained □ The use of cell phones is prohibited. □ Appropriate storage areas are available. PC Systems with needed software are readily available for students' usage.
2	INDUSTRIAL INSTRUMENTATION LABORATORY	The following safety measures are used in all the labs: □ Specific Safety Rules like Do's and Don'ts are displayed and instructed for all students. □ First aid box and fire extinguishers are kept in each laboratory. □ Well trained technical supporting staff monitor the labs at all times. □ Damaged equipments are identified and serviced at the earliest. □ A clean and organized laboratories are maintained □ The use of cell phones is prohibited. □ Appropriate storage areas are available. PC Systems with needed software are readily available for students' usage.

3	INTERNET OF THINGS LABORATORY	The following safety measures are used in all the labs: □ Specific Safety Rules like Do's and Don'ts are displayed and instructed for all students. □ First aid box and fire extinguishers are kept in each laboratory. □ Well trained technical supporting staff monitor the labs at all times. □ Damaged equipments are identified and serviced at the earliest. □ A clean and organized laboratories are maintained □ The use of cell phones is prohibited. □ Appropriate storage areas are available. PC Systems with needed software are readily available for students' usage.
4	MICROPROCESSORS AND MICROCONTROLLERS LABORATORY	The following safety measures are used in all the labs: □ Specific Safety Rules like Do's and Don'ts are displayed and instructed for all students. □ First aid box and fire extinguishers are kept in each laboratory. □ Well trained technical supporting staff monitor the labs at all times. □ Damaged equipments are identified and serviced at the earliest. □ A clean and organized laboratories are maintained □ The use of cell phones is prohibited. □ Appropriate storage areas are available. PC Systems with needed software are readily available for students' usage.
5	PROCESS CONTROL LABORATORY	The following safety measures are used in all the labs: □ Specific Safety Rules like Do's and Don'ts are displayed and instructed for all students. □ First aid box and fire extinguishers are kept in each laboratory. □ Well trained technical supporting staff monitor the labs at all times. □ Damaged equipments are identified and serviced at the earliest. □ A clean and organized laboratories are maintained □ The use of cell phones is prohibited. □ Appropriate storage areas are available. PC Systems with needed software are readily available for students' usage.
6	ELECTRICAL AND ELECTRONIC MEASUREMENTS LABORATORY	The following safety measures are used in all the labs: □ Specific Safety Rules like Do's and Don'ts are displayed and instructed for all students. □ First aid box and fire extinguishers are kept in each laboratory. □ Well trained technical supporting staff monitor the labs at all times. □ Damaged equipments are identified and serviced at the earliest. □ A clean and organized laboratories are maintained □ The use of cell phones is prohibited. □ Appropriate storage areas are available. PC Systems with needed software are readily available for students' usage.
7	SENSORS AND TRANSDUCERS LABORATORY	The following safety measures are used in all the labs: □ Specific Safety Rules like Do's and Don'ts are displayed and instructed for all students. □ First aid box and fire extinguishers are kept in each laboratory. □ Well trained technical supporting staff monitor the labs at all times. □ Damaged equipments are identified and serviced at the earliest. □ A clean and organized laboratories are maintained □ The use of cell phones is prohibited. □ Appropriate storage areas are available. PC Systems with needed software are readily available for students' usage.
8	CIRCUITS AND NETWORKS LABORATORY	The following safety measures are used in all the labs: □ Specific Safety Rules like Do's and Don'ts are displayed and instructed for all students. □ First aid box and fire extinguishers are kept in each laboratory. □ Well trained technical supporting staff monitor the labs at all times. □ Damaged equipments are identified and serviced at the earliest. □ A clean and organized laboratories are maintained □ The use of cell phones is prohibited. □ Appropriate storage areas are available. PC Systems with needed software are readily available for students' usage.
9	CONTROL SYSTEM LABORATORY	The following safety measures are used in all the labs: □ Specific Safety Rules like Do's and Don'ts are displayed and instructed for all students. □ First aid box and fire extinguishers are kept in each laboratory. □ Well trained technical supporting staff monitor the labs at all times. □ Damaged equipments are identified and serviced at the earliest. □ A clean and organized laboratories are maintained □ The use of cell phones is prohibited. □ Appropriate storage areas are available. PC Systems with needed software are readily available for students' usage.
10	ANALOG ELECTRONICS LABORATORY	The following safety measures are used in all the labs: □ Specific Safety Rules like Do's and Don'ts are displayed and instructed for all students. □ First aid box and fire extinguishers are kept in each laboratory. □ Well trained technical supporting staff monitor the labs at all times. □ Damaged equipments are identified and serviced at the earliest. □ A clean and organized laboratories are maintained □ The use of cell phones is prohibited. □ Appropriate storage areas are available. PC Systems with needed software are readily available for students' usage.
11	DIGITAL ELECTRONICS LABORATORY	The following safety measures are used in all the labs: □ Specific Safety Rules like Do's and Don'ts are displayed and instructed for all students. □ First aid box and fire extinguishers are kept in each laboratory. □ Well trained technical supporting staff monitor the labs at all times. □ Damaged equipments are identified and serviced at the earliest. □ A clean and organized laboratories are maintained □ The use of cell phones is prohibited. □ Appropriate storage areas are available. PC Systems with needed software are readily available for students' usage.
12	DESIGN THINKING & IDEA LAB WORKSHOP	The following safety measures are used in all the labs: □ Specific Safety Rules like Do's and Don'ts are displayed and instructed for all students. □ First aid box and fire extinguishers are kept in each laboratory. □ Well trained technical supporting staff monitor the labs at all times. □ Damaged equipments are identified and serviced at the earliest. □ A clean and organized laboratories are maintained □ The use of cell phones is prohibited. □ Appropriate storage areas are available. PC Systems with needed software are readily available for students' usage.

13	MINI PROJECT/ ELECTRONIC DESIGN WORKSHOP	The following safety measures are used in all the labs: □ Specific Safety Rules like Do's and Don'ts are displayed and instructed for all students. □ First aid box and fire extinguishers are kept in each laboratory. □ Well trained technical supporting staff monitor the labs at all times. □ Damaged equipments are identified and serviced at the earliest. □ A clean and organized laboratories are maintained □ The use of cell phones is prohibited. □ Appropriate storage areas are available. PC Systems with needed software are readily available for students' usage.

D3. Project Laboratory/Research Laboratory

Table No.7.5.1: List of project laboratory/research laboratory/Centre of Excellence.

S.N.	Name of the Laboratory
1.	Project laboratory
2.	Research and development laboratory

The students are given access to carry out their academic and research projects in the **Project laboratory** and **Research and development laboratory**.
For academic projects, at the beginning of 7th semester, students are divided into fourteen groups while each group consists of four to five students. Each group can select their project guide based on their marks and area of interest. Students are free to choose projects from different relevant fields of Instrumentation such as Biomedical (e. g., Real time monitoring system for heart rate SPO2 and body temperature, Seizure detection an IoT and AI based approach, Design of IoT based wearable heart rate measuring device, Multiple Gesture Controlled Wheelchair, Automated early detection of abnormalities in eyes using a pre trained model with OCT retinal images, Identifying Lungs disease incorporating X-Ray plate using CNN, Automatic wheel chair for paralysed patients using head gesture, Smart Stretcher system, PPG based wearble system for mental stress detection and analised, etc.) to agriculture (e. g., Internet of things connected weather monitoring system, Food spoilage detection using IoT, Smart plant watering system with IoT, Design and development of IoT based indoor saffron cultivation system, etc.), image processing (e. g., Design and Implementation of IoT based biometeric attendance system, Smart Attendance marking system using Face recognition, DRISTI - Digital Recognition and Intelligence Surveilance Hub for Tracking Indiviidual, etc.), renewable energy (e. g., Smart eco-friendly charging system for electric vehicles, Solar power electric vehicle with safety system, Green energy based electric vehicle charger, etc.), Home automation (e. g., Smart Wi-Fi door lock with camera and password, Home automation using Arduino, Smart parking system using Arduino Uno, Voltage control smart home automation, IoT based smart ventilation system, IoT based aquorium monitoring system, etc.), and robotics (Design and control of two wheeled self balancing robot, Quad copter compact flying robot, etc.).

Beyond their academic projects, students are also involved to carry out their research projects in different domain (e. g., Eye-blink Controlled wheelchair, Smart IOT Based Ventilation System, ML based walking gait analysis through foot worn FSR insole, IOT Based Conditioning of RO Filter Monitor System, Measurement of blood glucose concentration from tears to predict type-2 diabetic patients, Fruit Ripeness Detector, Smart Solar Tracking and Energy Storage System, Real time water quality monitoring system, Healthcare device for Alzheimer patient, etc.) under the guidance of our faculties.

The **Research and development laboratory** was created to advance affordable and accessible biomedical sensing technologies by developing micro-scale diagnostic platforms that combine MEMS sensors and microfluidics. It aims to bridge the gap between academic research and real-world healthcare applications, while also fostering hands-on innovation and interdisciplinary learning among students. This lab engages in the design, fabrication, and integration of micro-scale sensing systems and lab-on-chip platforms for healthcare and environmental applications. With expertise spanning embedded systems, edge AI, and sensor design, the lab has produced patented innovations and peer-reviewed publications on applications such as non-invasive cardiac monitoring, malignancy detection, and assistive devices for Parkinson's patients. It also serves as a hub for mentoring students in hands-on research, fostering translational outcomes through project-based learning and industry-aligned prototyping.

The following facilities and their utilization, as listed in the table below, are available in the project laboratory.

Sr. No.	Name of the Facilities	Utilization
1.	• Room size: 88 SqM • Experimental Tables: 12 • Stools: 12 • Almirah: 04	For accommodation and completion of B. Tech student's project.
2.	• PC (04 nos.) with • PSPICE • Multisim 13.0 Single User • Licensed LabView with Interfacing tool (NI)	Students can use to simulate and test their project models.
3.	DSO (4 no.s), 100MHz Dual Channel with and without Inbuilt Function Generator	Students can measure/ store/ analyze/ display low to high frequency signals.
4.	CRO (5 no. s), Make: Aplab/ Scientific, 20 MHz Dual Channel.	Students can measure/ analyze/ display different kind of signals.
5.	Function generator (9 no. s), Make: Aplab/ Scientific, 3MHz.	Used as an input device to provide different kind of signals such as, sinusoidal/ triangular/ square wave signals for analyzing and testing their models.
6.	Flash Programmer with CD and computer interface cable.	Students can burn their program in different microcontrollers (89C51, 89S52, etc.)
7.	Display Driver with latches - seven segments Display Board, Make: Microtech Industries.	Used for displaying something relevant to their projects.
8.	Arduino UNO/ Mega (40 no.s)	Students can use this open-source microcontroller board equipped with sets of digital and analog input/output (I/O) pins to interface to various expansion boards.
9.	Microcontroller AT89C52(30 no.s)	Used to interface and control different input and output devices.

10.	IR Tx/Rx (80 no.s)	All these consumable items are used for developing different project models.
	Power Supply with different range, Make: Scientific.	
	Crystal Oscillator with different range (150 no.s)	
	Different ICs (e.g., LM35, LM117, LM324, 741C, etc.) (each 50 no.s)	
	Transistor (BC547, BC147, BC1548, BC 239, 2N222, BC 307, etc.) (each 30 no.s)	
	Different Diodes (50 no.s)	
	Capacitor (22pF to 470μF) (each 30 no.s)	
	Resistors (10Ω to 1MΩ) (each 100 no.s)	
	Digital Multimeter, Make: Aplab	
	IC base with different configuration (total 500 no.s)	
	LDR (20 no.s)	
	LED with different colors (250 no.s)	
	Veroboard (250 no.s)	
	Jumper wire with different configuration (each 250 no.s)	
	Soldering iron and associates (11 no.s)	

Samples of projects done in project Laboratory:

Sl. No.	Name of the Student	Project guide	Title of the project	Relevance to POs/PSOs
1.	Suchandra Pal Kundu Mayukh Roy Pulak Mitra Suchandra Pal Kundu	Prof. (Dr.) Madhurima Chattopadhyay	Green energy based electric vehicle charger.	PO: 1-3, 5, 6, 8-11. PSO: 1-3.
2.	Asif Karim Ansari Sweety Alley Shaikh Mohammad Hamim	Dr. Arabinda Kumar Pal	Solar power electric vehicle with safety system.	PO: 1-3, 5, 6, 8-11. PSO: 1-3.
3.	Vicky Kumar Adarsh Jyotiraditya Mishra	Dr. Surajit Bagchi	Development and characterization of a conductivity sensor for industrial and clinical application	PO: 1-6, 8-11. PSO: 1-3.
Sl. No.	**Name of the Student**	**Project guide**	**Title of the project**	**Relevance to POs/PSOs**
4.	Anish Kumar Singh Aditya Raj Rishi Raj	Ms. Reshma Sengupta	IoT based smart ventilation system	PO: 1-3, 5, 6, 8, 11. PSO: 1-3.
5.	Pallavi Jha Harsh Raj Harsh Agarwal Saptarshi Biswas	Dr. Soumik Das	KAVACHAM: Train Accident Prevention System.	PO: 1-3, 5, 9. PSO: 1-3.
6.	Avinash Kumar Singh Rwitoban Dey Prithwish Das Bondhu Dey	Prof. (Dr.) Madhurima Chattopadhyay	Real time monitoring system for heart rate SPO2 and body temperature.	PO: 1-6, 9, 10, 12. PSO: 1-3.

7.	Swastik Paul Sayak Roy Utsav Bose Dibyajyoti Das Yshan Roy	Mr. Arindam Sarkar	Design and development of IoT based indoor saffron cultivation system.	PO: 1, 3, 5. PSO: 1-3.
8.	Santosh Kumar Rai Pratik Kumar Rai Rodasee Mitra Sakshi Kumari	Dr. Debjyoti Chowdhury	Pre active fault detection in induction motor through machine learning and Iot based monitoring.	PO: 1-6, 8-11. PSO: 1-3.
9.	Shourya Sarkar Sumay Ray Gourab Das	Prof. (Dr.) Santanu Ghorai	Automatic wheel chair for paralysed patients using head gesture.	PO: 1-6, 8-11. PSO: 1-3.
10.	Ayan Manna Arnab Biswas Arnab Maji Shamayita Mukherjee	Dr. Samiul Alam	PPG based wearble system for mental stress detection and analised	PO: 1-6, 8-11. PSO: 1-3.
11.	Archan Deb Rajasri Chatterjee Souraja Maity	Dr. Pradip Saha	IoT based aquorium monitoring system	PO: 1-3, 5, 6, 8-11. PSO: 1-3.
12.	Shourja Chakraborty Debaditya Samanta Jainendra Tater Shivendra Singh	Mr. Indrajit Naskar	Identifying Lungs disease incorporating X-Ray plate using CNN	PO: 1-5. PSO: 1-3.

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)	1020	51	42	67	92
2023-24(CAYm1)	1020	51	42	68	93
2024-25(CAY)	1020	51	40	68	89

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	0	0	0	0	0	0	0	0

Library	2000000	1527000	2000000	1286000	4500000	1523000	1500000	1715000
Laboratory equipment	13500000	14931000	13500000	10552000	5000000	11811000	2500000	3539000
Teaching and non-teaching staff salary	391800000	378009000	372500000	362743000	370500000	346368000	338000000	337655000
Outreach Programs	500000	594000	500000	642000	500000	812000	500000	495000
R&D	6000000	5404000	6000000	5372000	5000000	5578000	5000000	4252000
Training, Placement and Industry linkage	4700000	4258000	4500000	4013000	1700000	1096000	500000	400000
SDGs	500000	364000	700000	650000	400000	335000	200000	239000
Entrepreneurship	700000	666000	500000	504000	0	0	0	0
Others, specify	114300000	101513000	100000000	106463000	97100000	92409000	79300000	70632000
Total	**534000000**	**507266000**	**500200000**	**492225000**	**484700000**	**459932000**	**427500000**	**418927000**

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	500000	336000	100000	15000	500000	560000	100000	53000
Software	200000	190000	100000	54000	100000	48000	100000	136000
SDGs	50000	18000	50000	33000	50000	18000	50000	13000
Support for faculty development	150000	84000	150000	76000	50000	83000	50000	0
R & D	200000	236000	500000	247000	500000	263000	100000	31000
Industrial Training, Industry expert, Internship	200000	229000	200000	147000	100000	113000	100000	35000
Miscellaneous	500000	291000	500000	287000	200000	262000	200000	171000
Total	**1800000**	**1384000**	**1600000**	**859000**	**1500000**	**1347000**	**700000**	**439000**