

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: 2
Application No: 11318	Date of Submission: 28-11-2025

PART A- Profile of the Institute

A1.Name of the Institute: Muzaffarpur Institute of Technology Muzaffarpur	
Year of Establishment : 1954	Location of the Institute: Muzaffarpur
A2. Institute Address: PRINCIPAL MUZAFFARPUR INSTITUTE OF TECHNOLOGY MUZAFFARPUR AT LAKSHMI CHOWCK P.O - MIT MUZAFFARPUR BIHAR -842003	
City:Muzaffarpur	State:Bihar
Pin Code:842003	Website:www.mitmuzaffarpur.org
Email:principalmit.nba@gmail.com	Phone No(with STD Code):0621-2262650
A3. Name and Address of the Affiliating University (if any):	
Name of the University : Aryabhata Knowledge University Patna	City: Patna
State : Bihar	Pin Code: 800001
A4. Type of the Institution: Government Institute	
A5. Ownership Status: State Government	

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

- No. of UG programs: **10**
- No. of PG programs: **6**

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	PG	Advanced Electronics & Communication Engineering	2024	--	Electronics and Communication Engineering
2	Engineering & Technology	UG	Biomedical and Robotics Engineering	2022	--	Biomedical and robotics engineering
3	Engineering & Technology	UG	Chemical Engineering	2025	--	Chemical Engineering
4	Engineering & Technology	UG	Chemical Technology (Leather technology)	1986	--	Chemical Technology (Leather technology)
5	Engineering & Technology	UG	Civil Engineering	1954	--	Civil Engineering
6	Engineering & Technology	UG	Computer Science and Engineering	2024	--	Computer Science and Engineering
7	Engineering & Technology	PG	Electrical Energy Systems	2024	--	Electrical Engineering
8	Engineering & Technology	UG	Electrical Engineering	1960	--	Electrical Engineering
9	Engineering & Technology	UG	Electronics & Communication Engineering	2001	--	Electronics and Communication Engineering
10	Engineering & Technology	PG	Geotechnical Engineering	2022	--	Civil Engineering
11	Engineering & Technology	UG	Information Technology	2001	--	Information Technology
12	Engineering & Technology	PG	Machine Design	2017	--	Mechanical Engineering
13	Engineering & Technology	UG	Mechanical Engineering	1960	--	Mechanical Engineering
14	Engineering & Technology	PG	Thermal Engineering	2017	--	Mechanical Engineering

15	Engineering & Technology	PG	Transportation Engineering	2024	--	Civil Engineering
16	Pharmacy	UG	Pharmacy	1978	--	Pharmacy

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
Mechanical Engineering	No	Mechanical Engineering	UG
Electrical Engineering	No	Electrical Engineering	UG
Chemical Technology (Leather technology)	No	Chemical Technology (Leather technology)	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 APPROVAL DETAILS
1	Electrical Engineering	UG	1960 / --	60	No	NA	60	1960	1-44643102175/2021

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 :	YAGYANAND SHARMA
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)	2025-26 (CAY)	2024-25 (CAYm1)	2023-24 (CAYm2)	2022-23 (CAYm3)	2021-22 (CAYm4)	2020-21 (CAYm5)	2019-20 (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	59	60	59	57	56	63
N2=Number of students admitted in 2nd year in the same batch via lateral entry including leftover seats	0	9	7	9	10	10	5
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	67	68	67	66	68

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]
2025-26 (CAY)	60	56	0	93.33
2024-25 (CAYm1)	60	59	0	98.33
2023-24 (CAYm2)	60	60	0	100.00

Average [(ER1 + ER2 + ER3) / 3] = 97.22≡ 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	(2021-22) LYG	(2020-21) LYGm1	(2019-20) 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).	70.00	70.00	68.00
B=No. of students who graduated from the program in the stipulated course duration	61.00	58.00	66.00
Success Rate (SR)= (B/A) * 100	87.14	82.86	97.06

Average SR of three batches ((SR_1+ SR_2+ SR_3)/3): 89.02

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(2024-25)	CAYm2(2023-24)	CAYm3 (2022-23)
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)	7.22	7.36	7.43
Y=Total no. of successful students	59.00	54.00	55.00
Z=Total no. of students appeared in the examination	59.00	60.00	59.00
API [X*(Y/Z)]	7.22	6.62	6.93

Average API[(AP1+AP2+AP3)/3] : 6.92

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 (2024-25)	CAYm2 (2023-24)	CAYm3 (2022-23)
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 2nd year/10)	7.12	7.23	7.37
Y=Total no. of successful students	61.00	62.00	62.00
Z=Total no. of students appeared in the examination	61.00	64.00	65.00
API [X * (Y/Z)]	7.12	7.00	7.03

Average API [(AP1 + AP2 + AP3)/3] : 7.05

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 (2024-25)	CAYm2 (2023-24)	CAYm3 (2022-23)
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)	7.18	7.12	7.45
Y=Total no. of successful students	58.00	61.00	59.00

Z=Total no. of students appeared in the examination	62.00	62.00	59.00
API [$X*(Y/Z)$]:	6.72	7.01	7.45

Average API [(AP1 + AP2 + AP3)/3] : 7.06

B9. Placement, Higher Studies, and Entrepreneurship

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

Item	LYG (2021-22)	LYGm1(2020-21)	LYGm2(2019-20)
FS*=Total no. of final year students	70.00	70.00	66.00
X=No. of students placed	35.00	28.00	22.00
Y=No. of students admitted to higher studies	18.00	22.00	24.00
Z= No. of students taking up entrepreneurship	0.00	0.00	0.00
Placement Index(P) = $((X + Y + Z)/FS) * 100$:	75.71	71.43	69.70

Average Placement Index = (P_1 + P_2 + P_3)/3: 72.28 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)	Current Association (Y/N)
1	YAGYANAND SHARMA	XXXXXXXX00M	Ph.D	B. R. A. BIHAR UNIVERSITY, MUZAFFARPUR	ELECTRIC VEHICLES (ELECTRICAL ENGINEERING)	27/01/1993	32.10	Assistant Professor	Associate Professor	27/07/2005	Regular	Yes
2	RAMJEE PRASAD GUPTA	XXXXXXXX77K	Ph.D	VINOBA BHAVE UNIVERSITY, HAZARIBAG	POWER SYSTEM	28/04/2022	3.7	Associate Professor	Associate Professor	28/04/2022	Regular	Yes
3	FAIZ AHMAD	XXXXXXXX86R	M.Tech	ALIGARH MUSLIM UNIVERSITY, ALIGARH	POWER SYSTEM AND DRIVES	27/07/2017	8.4	Assistant Professor	Assistant Professor		Regular	Yes
4	SHAHZAD AHSAN	XXXXXXXX02G	M.Tech	JAMIA MILLIA ISLAMIA	ELECTRICAL POWER SYSTEM MANAGEMENT	24/07/2017	8.4	Assistant Professor	Assistant Professor		Regular	Yes
5	ANKIT KUMAR SINGH	XXXXXXXX39F	M.Tech	NIT , SILCHAR	POWER AND ENERGY SYSTEM ENGINEERING	06/06/2023	2.5	Assistant Professor	Assistant Professor		Regular	Yes
6	MD SHAHAZAM	XXXXXXXX08P	M.Tech	NIT AGARTALA	POWER ELECTRONICS AND DRIVES	12/07/2023	2.4	Assistant Professor	Assistant Professor		Regular	Yes
7	SHIVANGI UTKARSH	XXXXXXXX54B	M.Tech	IIT (ISM),DHANBAD	POWER ELECTRONICS and ELECTRICAL DRIVES	09/06/2023	2.5	Assistant Professor	Assistant Professor		Regular	Yes
8	APARAJITA	XXXXXXXX08B	M.Tech	GALGOTIAS UNIVERSITY	POWER SYSTEM	07/06/2023	2.5	Assistant Professor	Assistant Professor		Regular	Yes
9	CHETNA SAGAR	XXXXXXXX90R	M.Tech	BIT, MESRA	POWER ELECTRONICS	09/06/2023	2.5	Assistant Professor	Assistant Professor		Regular	Yes

10	DEEPSHIKHA YADAV	XXXXXXXX26R	M.Tech	VINOBA BHAVE UNIVERSITY, HAZARIBAG	CONTROL SYSTEM	13/06/2023	2.5	Assistant Professor	Assistant Professor		Regular	Ye
11	ABHA KUMARI	XXXXXXXX07K	Ph.D	GAUTAM BUDDHA UNIVERSITY	CONTROL SYSTEM	06/06/2023	2.5	Assistant Professor	Assistant Professor		Regular	Ye

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 Department1

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

Description	CAY(2025-26)	CAYm1 (2024-25)	CAYm2 (2023-24)
UG1.B	66	66	66
UG1.C	66	66	66
UG1.D	66	66	66
UG1: Electrical Engineering	198	198	198
PG1.A	18	18	0
PG1.B	18	0	0
PG1: Electrical Energy Systems	36	18	0
DS=Total no. of students in all UG and PG programs in the Department	234	216	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= 234	S2= 216	S3= 198
DF=Total no. of faculty members in the Department	11	11	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= 11	F2= 11	F3= 11
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= 21.27	SFR2= 19.64	SFR3= 18.00
Average SFR for 3 years	SFR= 19.64		

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 = $2.5 \times [(10X + 4Y) / RF]$
2025-26(CAY)	3	8	11.00	14.09
2024-25(CAYm1)	3	8	10.00	15.50
2023-24(CAYm2)	3	8	9.00	17.22

C4. Faculty Cadre Proportion

- Faculty Cadre Proportion is 1(RF1): 2(RF2): 6(RF3)
- RF1= No. of Professors required = $1/9 \times \text{No. of Faculty required to comply with 20:1 Student-Faculty ratio based on no. of students (S) as per C2 of this documents.}$
- RF2= No. of Associate Professors required = $2/9 \times \text{No. of Faculty required to comply with 20:1 Student-Faculty ratio based on no. of students (S) as per section C2 of this documents.}$
- RF3= No. of Assistant Professors required = $6/9 \times \text{No. of Faculty required to comply with 20:1 Student-Faculty ratio based on no. of students (S) as per section C2 of this documents.}$
- 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
2025-26	1.00	0.00	2.00	2.00	7.00	9.00
2024-25	1.00	0.00	2.00	2.00	7.00	9.00
2023-24	1.00	0.00	2.00	2.00	6.00	9.00
Average	RF1=1.00	AF1=0.00	RF2=2.00	AF2=2.00	RF2=6.67	AF2=9.00

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	DEEPAK KUMAR	GUSET ASSISTANT PROFESSOR	RAJIV GANDHI PROUDYOGIKI VISHWAVIDYALYA, BHOPAL	EM 1 LAB	50.00
2	DR PRATIBHA KUMARI	GUSET ASSISTANT PROFESSOR	ANNA MALAI UNIVERSITY	BIOLOGY FOR ENGINEERS	50.00

(CAYm2)

S.No	Name of the Person	Designation	Organization	Name of the Course	No. of hours handled
1	RAVI KUMAR	GUSET ASSISTANT PROFESSOR	IIT BHU	BIOLOGY FOR ENGINEERS	50.00

(CAYm3)

S.No	Name of the Person	Designation	Organization	Name of the Course	No. of hours handled
1	KAVITA YADAV	GUSET ASSISTANT PROFESSOR	NIT PATNA	ELECTROMAGNETIC WAVES	50.00
2	RAVI RAJ	GUSET ASSISTANT PROFESSOR	NIT SILCHAR	LINEAR CONTROL SYSTEMS	50.00
3	KESHAV JHA	GUSET ASSISTANT PROFESSOR	NIT PATNA	CONTROL SYSTEMS	50.00

C6. Academic Research

Table No. C6.1: Faculty publication details.

S.No.	Item	2024-25 (CAYm1)	2023-24 (CAYm2)	2022-23 (CAYm3)
1	No. of peer reviewed journal papers published	5	7	4
2	No. of peer reviewed conference papers published	8	6	4
3	No. of books/book chapters published	4	4	2

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	Electrical machine-I Lab	35	1.Dc motor thyristor speed control trainer kit with DC Shunt Motor.	6 hr/week	Santosh Kumar	Lab Instructor	ITI
2	Electrical Machine-II Lab	35	1.3 phase Slip Ring induction motor 2.1 Phase Capacitor motor 3.DC	6 hr/week	Santosh Kumar	Lab Instructor	ITI
3	Network Theory Lab	35	1.Low pass Filter Trainer kit 2.High Pass Filter Trainer kit 3.Band Reject	6 hr/week	Sanjeev kumar	Lab Instructor	ITI
4	Electrical Instrumentation & Measurements	35	1.Displacement sensing transducers 2.Force / Weight measurement	6 hr/week	Sanjeev kumar	Lab Instructor	ITI
5	Power Electronics Lab	35	1.DSO (50 MHz 4-analog)-01 2.DSO (70 MHz)-04 3.Three Phase Four	6 hr/week	Sanju Kumar	Lab Instructor	ITI
6	Basic Electrical Lab	35	1.Transformer trainer 300VA 2.House / commercial wiring	12 hr/week	Sanjeev kumar	Lab Instructor	ITI
7	Electronics Design Lab	35	1.32-Bit Embedded ARM Board-03 2.FPGA Board with JTAG to USB	6 hr/week	Sanju Kumar	Lab Instructor	ITI
8	Power System Lab-I	35	1.Breakdown Voltage Tester 2. Insulation Tester 3. Under Voltage	6 hr/week	Vinay kumar S	Lab Instructor	ITI
9	Power System Lab-II	35	1.Sequence impedance measurement of three phase transformer	6 hr/week	Vinay kumar S	Lab Instructor	ITI

10	Microprocessor Lab	35	1.8051 Trainer kit 2. 8085 Trainer kit 3. 8086 Trainer Kit	6 hr/week	Bharat Ram	Lab Instructor	ITI
11	Digital Electronics Lab	35	1.Logic gate Trainer Kit 2. Analog digital Trainer Kit 3. Adderband	4 hr/week	Madhunita kur	Lab Instructor	Diploma in Ele

D2. Safety Measures in Laboratories

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

Sr. No	Laboratory Name	Safety Measures
1	Electrical machine-I Lab	• Proper earthing of machines • Emergency stop switches • Clear operating instructions displayed
2	Electrical Machine-II Lab	• Overload and short-circuit protection • Fire extinguisher (CO₂) • Restricted access during operation
3	Network Theory Lab	• Proper insulation of wires • Avoid loose connections • Switch OFF supply after use • Low-voltage operation
4	Electrical Instrumentation & Measurements	• Calibration before use • Handling instruments carefully • Proper grounding • Use of fused probes
5	Power System Lab	• High-voltage warning signage • Insulated mats • Authorized operation only • Emergency shutdown facility
6	Power Electronics Lab	• Use of isolation transformers • Proper ventilation • Fire extinguisher (CO₂)
7	Microprocessor Lab	• Proper power supply regulation • Correct IC handling • Cable management
8	Electronics Design Laboratory	• ESD protection • Proper soldering tools • Fume extraction • Fire safety equipment
9	Basic Electrical Engineering Lab	• Proper earthing • Use of MCBs and fuses • Insulated wiring • Supervised experiments
10	Renewable Energy Lab	• Safe handling of panels • Weather protection measures • Proper mounting • Electrical isolation
11	Computational Lab	• Proper seating and ergonomics • Electrical safety of systems • Fire extinguisher • Antivirus and data backup

D3. Project Laboratory/Research Laboratory

1. Industrial Automation Specialist Lab

Objective

To provide hands-on exposure in industrial automation and mechatronics systems.

To support mini projects, major projects, applied research, and innovation activities.

To enable students to design, develop, integrate, test, and commission automation systems.

To promote interdisciplinary learning across electrical, electronics, instrumentation, and mechatronics domains.

To bridge the gap between academic learning and industrial practices in automation.

To support startup ideas, proof-of-concept development, and consultancy work.

Outcomes

Students gain practical competency in automation system design and implementation.

Enhanced ability to analyze, design, and solve real-world industrial problems.

Improved proficiency in modern engineering tools and software.

Development of teamwork, communication, and project management skills.

Readiness for industrial automation roles, higher studies, and entrepreneurship.

Relevance to Program Outcomes (POs)

PO1,PO2,PO3,PO4,PO5,PO9,PO10,PO12

2. Building Automation Laboratory

Objective

To provide hands-on training in design, installation, integration, and maintenance of building automation systems.

To support student projects, applied research, innovation, and skill development in smart building technologies.

To enable learners to integrate HVAC, Fire Alarm, Access Control, and CCTV systems under a unified Building Management System (BMS).

To bridge the gap between academic learning and real-time building automation practices.

To enhance industry readiness, safety awareness, and multidisciplinary teamwork.

Outcomes

Students acquire practical skills in building automation system design and integration.

Improved capability to analyze, design, and implement smart building solutions.

Enhanced proficiency in modern automation tools, software, and networking.

Development of teamwork, communication, documentation, and project management skills.

Increased employ-ability in HVAC, BMS, Fire Safety, Surveillance, and Smart Building sectors.

Encouragement of innovation, entrepreneurship, and consultancy-oriented thinking.

Relevance to Program Outcomes (POs)

PO1,PO2,PO3,PO4,PO5,PO9,PO10,PO12

3. Tinkering Laboratory

Objective

To promote innovation, creativity, and hands-on learning among students.

To encourage experiential learning through exploration, design, and experimentation.

To support prototype development, mini projects, interdisciplinary projects, and startup ideas.

To inculcate problem-solving, design thinking, and entrepreneurial mindset.

To provide an open environment for learning beyond the formal curriculum.

Outcomes

Enhanced creativity, curiosity, and innovation skills among students.

Improved ability to conceptualize, design, and build working prototypes.

Development of hands-on technical skills in electronics, embedded systems, and IoT.

Strengthened teamwork, communication, and leadership skills.

Increased student participation in innovation contests, hackathons, and startups.

Contribution to entrepreneurial mindset and life-long learning.

Relevance to Program Outcomes (POs)

PO1,PO2,PO3,PO4,PO5,PO9,PO10,PO12

4.e-Yantra Laboratory

Objective

To enhance hands-on learning in embedded systems, robotics, and automation through the e-Yantra initiative.

To strengthen problem-solving and programming skills using microcontroller-based systems.

To support project-based learning, innovation, and research in robotics and embedded technologies.

To align student learning with industry-relevant and technology-driven applications.

To encourage participation in e-Yantra competitions, MOOCs, and national-level initiatives.

Outcomes

Improved programming, embedded systems, and robotics skills among students.

Enhanced ability to design, build, and troubleshoot robotic systems.

Development of analytical thinking, innovation, and teamwork skills.

Increased student participation and recognition in national-level competitions.

Better preparedness for careers in robotics, automation, IoT, and embedded systems.

Promotion of self-learning and life-long learning culture.

Relevance to Program Outcomes (POs)

PO1,PO2,PO3,PO4,PO5,PO9,PO10,PO12

5.Renewable Energy System Laboratory

Objectives

To provide hands-on exposure to solar PV and wind energy systems using emulator-based and hybrid configurations.

To enable students to analyze, design, and test hybrid renewable energy systems under controlled laboratory conditions.

To familiarize students with performance analysis, load sharing, and energy management in solar–wind hybrid systems.

To support mini projects, major projects, and applied learning in renewable and sustainable energy technologies.

To develop awareness of clean energy, sustainability, and environmental responsibility.

To bridge the gap between theoretical concepts and real-time renewable energy applications.

Outcomes

Students gain practical competency in operating and analyzing solar PV and wind energy systems.

Ability to evaluate I–V and P–V characteristics, system efficiency, and hybrid system performance.

Improved understanding of hybrid renewable energy integration and power conditioning concepts.

Enhanced problem-solving, analytical, and experimental skills related to sustainable energy systems.

Preparedness for careers, higher studies, and entrepreneurship in renewable energy and green technologies.

Relevance to Program Outcomes (POs)

PO1, PO2, PO3, PO4, PO5, PO7, PO10, PO12

6.Startup Cell**Objective**

To promote innovation, entrepreneurship, and startup culture among students.

To create awareness about startup schemes of the Government of Bihar and Government of India.

To mentor and support student-led startups from idea generation to execution.

To monitor and report the progress and effectiveness of startup schemes at the state level.

To encourage students to apply for funding, incubation, and acceleration programs.

Outcomes

Four student startups selected under Bihar Startup Scheme.

Three student startups received financial support from Bihar Startup Fund Trust.

Student startups achieved recognition at regional, state, and national levels.

Establishment of a dedicated Incubation Cell within the institute.

Currently 15 startups incubated, including 5 student-led startups.

Enhanced entrepreneurial mindset and innovation skills among students.

Relevance to Program Outcomes (POs)

PO2,PO3,PO5,PO9,PO10,PO11,PO12

7.Institution's Innovation Council (IIC)**Objective**

To foster a culture of innovation and entrepreneurship among students and faculty.

To encourage, inspire, and nurture young innovators to transform ideas into prototypes.

To develop a local innovation ecosystem within the institute.

To prepare the institute for Atal Ranking of Institutions on Innovation Achievements (ARIIA).

To enhance cognitive, problem-solving, and entrepreneurial skills of students.

Outcomes

Increased student engagement in innovation and entrepreneurship activities.

Development of prototypes and early-stage startup ideas.

Establishment of a structured mentorship and support ecosystem.

Recognition of innovative projects at local, state, and national levels.

Strengthened innovation awareness and culture across the campus.

Enhanced institution-industry collaboration and ARIIA readiness.

Relevance to Program Outcomes (POs)

PO2,PO3,PO5,PO9,PO10,PO11,PO12

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
2023-24(CAYm2)	335	17	7	15	51
2024-25(CAYm1)	400	20	14	21	77
2025-26(CAY)	480	24	15	25	71

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 2025-26	Actual Expenses in 2025-26 till	Budgeted in 2024-25	Actual Expenses in 2024-25 till	Budgeted in 2023-24	Actual Expenses in 2023-24 till	Budgeted in 2022-23	Actual Expenses in 2022-23 till
Infrastructure Built-Up	14668000	11000000	12947900.00	10983575	8700629	8614463	12500000	12177263
Library	1200000.00	0	1200000.00	1189871.00	800000	750000	500000	480000
Laboratory equipment	30200000.00	13106679.00	40832160.00	36685557	35917351.00	35917114.00	27200000.00	27032426.00
Teaching and non-teaching staff	140907000.00	101935902.00	155757000.00	129168161.00	131284000.00	110623758.00	123751003.00	102239680.00
Outreach Programs	0	0	0	0	0	0	0	0
R&D	6000000	5825000	3000000	2979500	0	0	0	0
Training, Placement and	75000	75000	67500	67500	71000	71000	88000	88000
SDGs	1875000	1875000	800000	792098	1800000	1796988	0	0
Entrepreneurship	300000	300000	600000	600000	250000	250000	0	0
Others, specify	200000	200000.00	0	0	0	0	0	0
Total	195425000.00	134317581.00	215204560.00	182466262.00	178822980.00	158023323.00	164039003.00	142017369.00

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 2025-26	Actual Expenses in 2025-26 till	Budgeted in 2024-25	Actual Expenses in 2024-25 till	Budgeted in 2023-24	Actual Expenses in 2023-24 till	Budgeted in 2022-23	Actual Expenses in 2022-23 till
Laboratory equipment	0	0	1900000	1896893	8100000	7908370	250000	244800
Software	0	0	750000	739199	0	0	0	0
SDGs	0	0	0	0	0	0	0	0
Support for faculty development	0	0	1710000	1678711	72000	71362	125000	121760
R & D	0	0	3000000	2979500	0	0	0	0
Industrial Training, Industry expert,	0	0	0	0	0	0	0	0

Miscellaneous Expenses*	72000	70088	670000	662377	1100000	1021842	200000	195435
Total	72000	70088	8030000	7956680	9272000	9001574	575000	561995