

NATIONAL BOARD OF ACCREDITATION

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

PART-A: Profile of the Institute

Name of the Program Applied for : MECHANICAL ENGINEERING (ME)

A1: Name of the Institute :- Federal Institute of Science and Technology (FISAT)

Year of Establishment : 2002

Location of the Institute : Mookkannoor P.O., Angamaly.

A2: Institute Address :

City : Ernakulam

State : Kerala

Pincode : 683577

Website : www.fisat.ac.in

Email : mail@fisat.ac.in

Phone number : 0484 2725272
(with STD code)

A3: Name and Address of the Affiliating University (If any): -

Name of the University : APJ Abdul Kalam Technological University (APJKTU)

City : Thiruvananthapuram

State : Kerala Pin Code: 695016

A4: Type of the Institution: - (Tick the applicable choice)

Institute of National Importance ☐

Deemed University ☐

University ☐

Autonomous ☐

Non-Autonomous (Affiliated) ☒

Any other (Please specify) * ☐

***Provide Details:** _____

A5: Ownership Status: - (Tick the applicable choice)

Central Government ☐

State Government ☐

Government Aided ☒

Self-financing ☒

Any Other (Please specify) * ***Provide Details:** _____

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

❖ No. of UG programs: 7

❖ No. of PG programs: 12

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

S.N.	Level of program (UG/PG)	Name of the program	Year of Start	Year of close*	Name of the Department
1	UG	Civil Engineering	2011	–	Civil Engineering
2	UG	Computer Science and Engineering	2002	–	Computer Science and Engineering
3	UG	Computer Science and Design	2021	–	Computer Science and Engineering
4	UG	Electronics & Communication Engineering	2002	–	Electronics & Communication Engineering
5	UG	Electrical & Instrumentation Engineering	2002	–	Electronics & Instrumentation Engineering
6	UG	Electrical & Electronics Engineering	2002	–	Electrical & Electronics engineering
7	UG	Mechanical Engineering	2009	–	Mechanical Engineering
8	PG	Structural Engineering & Construction Management	2014	–	Civil Engineering
9	PG	Artificial Intelligence and Data Science	2021	–	Computer Science and Engineering
10	PG	Computer Science and Information System	2010	2022	Computer Science and Engineering
11	PG	Communication Engineering	2010	2021	Electronics & Communication Engineering
12	PG	Automotive Engineering	2021	2022	Electronics & Communication Engineering
13	PG	VLSI & Embedded Systems	2014	–	Electronics & Communication Engineering
14	PG	Power Electronics & Power System	2011	–	Electrical & Electronics engineering
15	PG	Computer & Integrated Manufacturing	2013	2022	Mechanical Engineering

16	PG	Renewable Energy	2021	–	Mechanical Engineering
17	PG	Master of Computer Application	2006	–	Computer Application
18	PG	Master of Computer Applications (Integrated)	2025	–	Computer Application
19	PG	Master of Business Administration	2006	–	Management

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

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

Cluster ID.	Name of the Department	Name of the Program
1	Computer Science and Engineering	B.Tech (Computer Science and Engineering)
2	Electronics and Communication Engineering	B.Tech (Electronics and Communication Engineering)
3	Electrical and Electronics Engineering	B.Tech (Electrical and Electronics Engineering)
4	Electronics and Instrumentation Engineering	B.Tech (Electronics and Instrumentation Engineering)
5	Mechanical Engineering	B.Tech (Mechanical Engineering)

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)
1	NA	

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

PART-B: Program information

(Data to be filled in for the program applied for Accreditation)

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

Table No. B1: Program details.

S. N.	Program Name	Year of start	Sanctioned Intake	Increase/decrease in intake, if any	Year of increase/decrease	AICTE Approval Details	Accreditation Status*	No. of times program accredited
1	Mechanical Engineering	2009	120 (current intake)	yes	2013	South-West/1-7006726428/2020/EOA	Granted accreditation for 3 years for the period (2023 - 2026)	2

* Write applicable one:

- ❖ Applying first time
- ❖ Granted accreditation for 2/3 years for the period (specify period)
- ❖ Granted accreditation for 5/6 years for the period (specify period)
- ❖ Not accredited (specify visit dates, year).
- ❖ Withdrawn (specify visit dates, year)
- ❖ Not eligible for accreditation.

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

A. Name of the HoD : Dr Rejeesh C R

B. Nature of appointment: (Tick the applicable choice)

❖ Regular ☒

❖ Contract

❖ Ad hoc

C. Qualification: (Tick the applicable choice)

❖ Ph.D. ☒

❖ ME/M.Tech

❖ Any other*

****Please provide details:*** _____

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

Item (Information is to be provided cumulatively for all the shifts with explicit headings, wherever applicable)	CAY	CAYm1	CAYm2	CAYm3	CAYm 4 (LYG)	CAYm 5 (LYGm 1)	CAYm 6 (LYGm 2)
N= Sanctioned intake of the program (as per AICTE /Competent authority)	120	120	120	120	120	120	120
N1= Total no. of students admitted in the 1 st year minus the no. of students, who migrated to other programs/ institutions plus no. of students, who migrated to this program	113	113	108	100	81	81	112
N2= Number of students admitted in 2 nd year in the same batch via lateral entry including leftover seats	0	0	10	7	11	0	0
N3= Separate division if any	0	0	0	0	0	0	0
N4= Total no. of students admitted in the 1 st year via all supernumerary quotas	24	25	5	6	6	6	6
Total number of students admitted in the program (N1 + N2 + N3 + N4) - excluding those admitted through multiple entry and exit points.	137	138	123	113	98	87	118

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.

Item (Students enrolled in the First Year on average over 3 academic years (CAY, CAYm1, and CAYm2))	CAY	CAYm1	CAYm2
N= Sanctioned intake of the program in the 1 st year (as per AICTE/Competent authority)	120	120	120
N1= Total no. of students admitted in the 1 st year minus the no. of students, who migrated to other programs/ institutions plus no. of students, who migrated to this program	113	113	108
N4= Total no. of students admitted in the 1 st year via all supernumerary quotas	24	25	5
Enrolment Ratio (ER)= (N1+N4)/N	114.17	115	94.17
Average ER= (ER_1+ ER_2+ ER_3)/3	107.78		

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	LYG	LYGm1	LYGm2
A*= (No. of students admitted in the 1 st year of that batch and those actually admitted in the 2 nd 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).	131	120	120
B=No. of students who graduated from the program in the stipulated course duration	44	60	88
Success Rate (SR)= (B/A)*100	33.581	50	73.33
Average SR of three batches ((SR_1+SR_2+ SR_3)/3)	52.30		

Note *: If the value of A in Table No. B5.1 is less than the sum of the sanctioned intake (N) and the lateral entry including leftover seats (N2), then the value of A in Table No.B5.1 should be the sum of the sanctioned intake (N) and the lateral entry including leftover seats (N2) of Table No.B3.1.

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	CAYm2	CAYm3
X= (Mean of 1 st 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 1 st year/10)	7.27	7.09	7.16
Y= Total no. of successful students	59	64	61
Z = Total no. of students appeared in the examination	138	113	106
API = X* (Y/Z)	3.11	4.02	4.12
Average API = (API_1 + API_2 + API_3)/3	3.75		

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	CAYm2	CAYm3
X= (Mean of 2 nd 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 2 rd year/10)	7.09	7.00	6.94
Y= Total no. of successful students	36	46	47
Z =Total no. of students appeared in the examination	75	68	65
API = X* (Y/Z)	3.40	4.74	5.02
Average API = (API_1 + API_2 + API_3)/3	4.39		

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	CAYm2	CAYm3
X= (Mean of 3 rd 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 3 rd year/10)	7.29	6.99	7.12
Y= Total no. of successful students	41	44	61
Z= Total no. of students appeared in the examination	46	47	67
API = X* (Y/Z)	6.49	6.54	6.48
Average API = (API_1 + API_2 + API_3)/3	6.50		

B9: Placement, Higher Studies, and Entrepreneurship**Table No.B9.1:** Placement, higher studies, and entrepreneurship details.

Item	LYG	LYGm1	LYGm2
FS*=Total no. of final year students	131	120	120
X= No. of students placed	50	36	46
Y= No. of students admitted to higher studies	2	7	26
Z= No. of students taking up entrepreneurship	0	2	0
X + Y + Z =	52	46	72
Placement Index (P) = (((X + Y + Z)/FS) * 100)	39.69	37.5	60
Average placement index = (P_1 + P_2 + P_3)/3	45.73		

Note *: If the value of FS in Table No. B9.1 is less than the sum of the sanctioned intake (N) and the lateral entry including leftover seats (N2), then the value of FS in Table No. B9.1 should be the sum of the sanctioned intake (N) and the lateral entry including leftover seats (N2) of Table No.B3.1.

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

S.N	Name of the Faculty	Highest degree	University	Area of Specialization	Date of Joining in this Institution	Experience in years in current institute	Designation at the Time Joining this Institution	Present Designation	The date on which Designated as Professor/Associate Professor, if any	Nature of Association (Regular/Contract/Adhoc)	If contractual mention (Full time/Part time or hourly based)	Currently Associated (Y/N)	Date of Leaving if any (In case Currently Associated is "No")
1	Dr.Rejeesh C R	M.E. and Ph.D.	Cochin University of Science and Technology (CUSAT), Kochi	Manufacturing Engineering	01/08/2013	12.2	Assistant Professor	Professor	02/06/2025	Regular		Yes	
2	Dr. Jose Cherian	M.Tech and Ph.D.	Karpagam Academy of Higher Education, Coimbatore	Production Engineering	01/07/2011	14.3	Assistant Professor	Professor	01/04/2019	Regular		Yes	
3	Dr. Sumanlal M R	M.Tech and Ph.D.	NITK, Surathkal	Thermal Engineering	01/07/2011	14.3	Assistant Professor	Professor	01/06/2021	Regular		Yes	
4	Dr. Devi Parvathy S	M.Tech and Ph.D.	Cochin University of Science and Technology (CUSAT), Kochi	Thermal Engineering	15/07/2013	12.3	Assistant Professor	Assistant Professor		Regular		Yes	
5	Sajan S	M.E.	Anna University	Engineering Design	01/08/2012	13.2	Assistant Professor	Assistant Professor		Regular		Yes	
6	Jiju P P	M.Tech	Anna University, University campus, Coimbatore	Nano Technology	15/07/2014	11.3	Assistant Professor	Assistant Professor		Regular		Yes	
7	Prince Mattom	M.Tech	NIT, Calicut	Material Science and Engineering	22/08/2006	19.2	Lecturer	Assistant Professor		Regular		Yes	
8	Suni Mathai	M.Tech	Cochin University of Science and Technology	Production Engineering	30/10/2006	18.11	Lecturer	Assistant Professor		Regular		Yes	

			(CUSAT), Koch										
9	Raju M.D	M.Tech	Calicut University	Production Engineering	04/07/2008	17.3	Lecturer	Assistant Professor		Regular		Yes	
10	Dileep G	M.Tech	Kerala University	Machine Design	03/08/2015	10.2	Assistant Professor	Assistant Professor		Regular		Yes	
11	Sreejesh K	M.Tech	NIT, Calicut	Thermal Science	02/07/2012	13.3	Assistant Professor	Assistant Professor		Regular		Yes	
12	Srijith Rajeev	M.Tech	MG University	Production and Industrial Engineering	15/07/2013	12.3	Assistant Professor	Assistant Professor		Regular		Yes	
13	Dr. Harish T M	M.Tech and Ph.D.	NIT Trichy	Welding Engineering, Metallurgic and Materials Engg	03/07/2013	12.3	Assistant Professor	Assistant Professor		Regular		Yes	
14	Rahul V	M.Tech	Calicut University	Machine Design	03/02/2014	11.8	Assistant Professor	Assistant Professor		Regular		Yes	
15	Tom Anto	M.Tech	VIT University	CAD/CAM	29/01/2014	11.8	Assistant Professor	Assistant Professor		Regular		Yes	
16	Arun J.Kulangara	M.Tech	NIT Warangal	Additive Manufacturing	05/10/2018	7	Assistant Professor	Assistant Professor		Regular		Yes	
17	Unnikrishnan S Nair	M.Tech	Amrita Viswa Vidyapeetham	Engineering Design	12/02/2020	5.8	Assistant Professor	Assistant Professor		Regular		Yes	
18	Anoop Sankar	M.E.	Anna University	Manufacturing Engineering	12/02/2020	5.8	Assistant Professor	Assistant Professor		Regular		Yes	
19	Likhil Gopalan	M.Tech	Cochin University of Science and Technology (CUSAT), Kochi	Industrial Safety	23/08/2023	2.1	Assistant Professor	Assistant Professor		Contractual	Fulltime	Yes	
20	Joseph Pappachan	M.Tech	IIT Hyderabad	Thermal Engineering	04/08/2023	2.2	Assistant Professor	Assistant Professor		Contractual	Fulltime	Yes	

21	Syam K	M.Tech	APJ Abdula m Technol ogical Universi ty	Manufacturing Systems Management	21/07/2025	0.2	Assistant Professor	Assistant Professor		Contractual	Fulltime	Yes	
22	Priyadarshi Dutt	M.Tech	Bharath University, Chennai	Automobile Engineering	11/08/2025	0.2	Assistant Professor	Assistant Professor		Contractual	Fulltime	Yes	
23	Sarath S	M.E.	Anna University	Manufacturing Engineering	17/09/2025	0.1	Assistant Professor	Assistant Professor		Contractual	Fulltime	Yes	
24	Dr. Joseph Babu K	M.Tech and Ph.D.	NIT, Calicut	Machine Design	05/08/2024	0.11	Assistant Professor	Assistant Professor		Contractual	Fulltime	No	17/07/2025
25	Texo Jose	M.Tech	Calicut University	IC Engines and Turbo machinery	19/08/2024	1	Assistant Professor	Assistant Professor		Contractual	Fulltime	No	12/09/2025
26	Renjith R	M.Tech	Kerala University	Industrial Refrigeratio n and Cryogenic Engg	17/07/2012	11.10	Assistant Professor	Assistant Professor		Regular		No	10/06/2024
27	Nithin H	M.Tech	NITK Suratkal	Materials Engg	14/07/2014	10.11	Assistant Professor	Assistant Professor		Regular		No	04/07/2025
28	Manu Mathew	M.Tech	MG University	Production and Industrial Engineering	05/02/2014	10.5	Assistant Professor	Assistant Professor		Regular		No	18/07/2024
29	Anoob Jose	M.Tech	Calicut University	Machine Design	20/07/2012	11	Assistant Professor	Assistant Professor		Regular		No	09/08/2023

- 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)).

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

Year	CAY	CAYm1	CAYm2
UG1. B // 2 nd year students of UG1 program	120	132	127
UG1. C // 3 rd year students of UG1 program	127	120	120
UG1. D // 4 th year students of UG1 program	120	120	120
UG1 // Total no.of students(2 nd , 3 rd , 4 th) in UG1 program	367	372	367
PG1. A // 1 st year students of PG1 program	12	12	12
PG1. B // 2 nd year students of PG1 program	12	12	12
PG1 // Total no.of students(1 st , 2 nd) in PG1 program	24	24	24
DS=Total no. of students in all UG and PG programs in the Department	391	396	391
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=391	S2=396	S2=391
DF=Total no. of faculty members in the Department	22	23	23
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)	22	23	23
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= 391/22 =17.33	SFR2=396/23 =17.22	SFR3=391/23 = 17
Average SFR for 3 years	Average SFR=51.99/3 =17.33		

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	FQI= 2.5 * [(10X +4Y)/RF]
CAY	5	17	21.05	14.01
CAYm1	6	17	20.55	15.57
CAYm2	4	19	19.55	14.83

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 Faculty(RF1)	Available Faculty(AF1)	Required Faculty(RF2)	Available Faculty(AF2)	Required Faculty(RF3)	Available Faculty(AF3)
CAY (2025-26)	2.33	3	4.6	0	14	19
CAYm1 (2024-25)	2.28	2	4.57	1	13.7	20
CAYm2 (2023-24)	2.17	2	4.34	1	13	20
Average Numbers	RF1=2.26	AF1=2.33	RF2=4.5	AF2=0.66	RF3=13.57	AF3=19.67

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.

S.N.	Name of the Person	Designation & Organization	Name of the Course	No. of hours handled
CAYm1				

1	NIL			
..				
Total no. of hours:				
CAYm2				
1	NIL			
..				
Total no. of hours:				

CAYm3				
1	NIL			
..				
Total no. of hours:				

C6: Academic Research

Table No. C6.1: Faculty publication details.

S.N.	Item	CAYm1	CAYm2	CAYm3
1	No. of peer reviewed journal papers published	7	4	3
2	No. of peer reviewed conference papers published	4	3	7
3	No. of books/book chapters published	0	0	1

C7: Sponsored Research Project

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

S.N.	PI name	Co-PI names if any	Name of the Dept., where project is sanctioned	Project title*	Name of the Funding agency	Duration of the project	Amount (Lacs)
CAYm1							
1	NIL						
..							
Amount received (Rs.)							
CAYm2							
1	Dr. Harish		Mechanical	Methodological Analysis into the	APJAKTU	1 year	0.35

	T M			mechanical and microstructural attributes of functionally graded Inconel 825-SS 304 L manufactured using wire arc additive manufacturing			
...							
Amount received (Rs.)							35,000
CAYm3							
1	Dr. Harish T M	--	Mechan ical	Wire arc additive manufacturing of Nickel based super alloy for high temperature strategic sectors	APJAKT U RSM Research seed money	1 year	1.2 Lakhs
2	Mr. Renjith R	Mr. Anoob Jose	Mechanical	Industrial Food Dehydrator	ISHRAE Kochi	1 year	0.5 lakhs
Amount received (Rs.)							1,70,000
Total Amount (Lacs) Received for the Past 3 Years(Rs.)							2,05,000

C8: Consultancy Work

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

S.N.	PI name	Co-PI names if any	Name of the Dept., where project is sanctioned	Project title*	Name of the Funding agency	Duration of the project	Amount (Lacs)
CAYm1							
1	Mr. Nithin H	...	Mechanical	Unloading Conveyor	Navya Bakers, Angamaly	3 months	0.1 lacs
..							
Amount received (Rs.)							10,000
CAYm2							

1	NIL						
...							
Amount received (Rs.)							
CAYm3							
1	NIL						
..							
Amount received (Rs.)							
Total amount received for the past 3 years Rs							10,000

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.

S.N.	Faculty name	Project title/ Support for Activity	Duration	Amount (Lacs)	Amount Utilized (Lacs)	Outcomes of the project
CAYm1						
1	Dr. Harish T M	Advanced Superalloy based Functionally graded materials development for critical applications through metal additive manufacturing fabrication and analysis	1 year	0.7 lakhs	0.7 lakhs	Research Publication
Amount received (Rs.) 70,000						
CAYm2						
1	NIL					
Amount received (Rs.)						
CAYm3						
1	NIL					
Amount received (Rs.)						
Total amount (Lacs) received for the past 3 years					0.7	

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.

S.N.	Name of the Laboratory	No. of students per setup (Batch Size)	Name of the major equipment	Weekly utilization status (all the courses for which the lab is utilized)	Technical Manpower support		
					Name of the technical staff	Designation	Qualification
1.	Mechanical Engineering Workshop	1	Smithy, Fitting, Carpentry, Sheet metal, Foundry, Welding machine, General tools , Machine tool	(S1 ME & S1CE) 16 hrs	Mr. Mani K K, Mr. Gireesh Kumar M R Mr.Eldho P A	Trade Instructor Trade Instructor Welder	ITI ITI ITC
2	Fluid Mechanics Lab	6	Venturimeter calibration test rig, Orificemeter and Water Meter calibration test rig , Pipe friction Apparatus, Notch channel Apparatus,Orifice and Mouthpiece Apparatus, Bernoulli's theorem Apparatus, Metacentric height Apparatus, Reynold's Apparatus, Open Channel Apparatus	(S4 ME) Fluid Mechanics & Machines Lab -12hrs (S4 CE) Fluid Mechanics Lab– 12 hrs	Mr. Gopan G.	Lab Instructor	Diploma
3	Hydraulic Machines Lab	1	Closed type Pelton Turbine, Closed type Francis turbine, Closed type Kaplan turbine Open type Pelton turbine, Open type Francis turbine, Open type Kaplan turbine, Closed circuit Multi speed Centrifugal pump test rig, Closed circuit	(S4 ME) Fluid Mechanics & Machines Lab - 12hrs	Mr. Gopan G	Lab Instructor	Diploma

			Reciprocating pump test rig, Jet pump test rig, Gear pump test rig, Model of runners, impellers & cut models of valves and pipe fittings, Cut model of centrifugal pump, Cut model of Reciprocating pump.				
4	Computer Aided Design & Analysis Lab	1	Computer system (49 nos) Intel i5 processor with 8GB RAM Software installed - AutoCAD 2017 (3000users). - CREO 2.0 (55 Users) - ABAQUS 6.13 (30 Users) - ANSYS (1 user)	(S3 ME) Computer Aided Machine Drawing & Modelling Lab -12hrs (S6 ME) Computer Aided Design & Analysis Lab-12hrs	Mr. Sunilkumar V S	Lab Instructor	Diploma
5	Advanced Machine Tool Lab	2	Lathe machines, Horizontal milling machine, Vertical Milling machine, Shaping machines, Slotting machines, Surface grinding machine, Pedestal grinding machine, Welding machine, Radial Drilling machine, Tool and cutter grinding Machine, Lathe tool dynamometer, power hacksaw, angle grinder, portable electric impact drill, cut-off saw. CNC Turning centre	S4 ME Manufacturing Technology lab I 12hrs S5 ME Manufacturing Technology lab II 12 hrs	Mr. Sajeewan V S	Trade Instructor	ITI
6	Heat Engine Lab	6	Single cylinder four stroke diesel engine, Four stroke four	S5 ME Thermal Engineering	Mr. Jisto Varghese	Tradesman	ITC

			cylinder MPFI petrol engine, Twin cylinder diesel engine, Single cylinder diesel engine, Single cylinder horizontal diesel engine, Single cylinder four stroke petrol engine -2 nos, Redwood Viscometer, Junker's Gas Calorimeter, Cleveland Flash and fire point apparatus, Multi stage reciprocating air Compressor, Cut models of Four stroke Diesel engine, Two stroke Petrol engine, Differential gear box.	Lab I 12hrs			
7	Mechanical Measurements Lab	6	Vernier caliper, Vernier depth gauge, Vernier height gauge, Outside micrometer, Depth micrometer, Slip gauge box, Bevel protractor, Combination set, Sine bar, Profile projector, Vibration test rig, surface plate, Outside micrometer, Digital Vernier caliper, Bore gauge, Tool maker's Microscope, Stroboscope, Bourdon's pressure gauge, Rotameter, Strain Gauge.	S5 ME Manufacturing Technology Lab II	Mr. Suresh E	Trade instructor	ITI
8	Heat Transfer Lab	6	Emissivity measuring apparatus, Heat transfer through Composite wall apparatus, Heat transfer through lagged pipe, Heat transfer	S6 ME Thermal Engineering Lab II 12 hrs	Mr. Sunilkumar VS	Lab Instructor	Diploma

			in natural convection, Heat transfer in forced convection, Parallel & Counter flow heat exchanger, Thermal conductivity of an insulating powder, Heat pipe apparatus, Thermal conductivity of liquids, Steffan Boltzman Constant Apparatus, Temperature Measurement Trainer, Pressure Measurement Trainer, Air Conditioning test rig, Refrigeration test rig.				
9	Mechanical Engineering Lab	6	Gyroscope, Universal governor apparatus, Centrifugal air blower test rig, Rotary air compressor, Whirling of Shaft apparatus, Transverse Vibration Apparatus	S7 ME Mechanical Engineering Lab 6 hrs	Mr. Gopan G	Lab Instructor	Diploma
10	Mechatronics Lab	6	Basic Pneumatic Trainer Kit, Advanced Electro Pneumatic Trainer Kit, Microcontroller Trainer Kit and Stepper Motor, 3 D printer, Motion Controller with servo Motors and Encoders	S7 ME Mechanical Engineering Lab 6 hrs	Mr. Suresh E G	Trade instructor	ITI
11	Metallographic Lab	6	Belt Grinder, Double Disc Variable speed type Polishing Machine, Electrical Muffle Furnace, Micro Vickers Hardness Tester, Inverted	S4 ME Manufacturing Technology lab I	Mr. Jisto Varghese	Tradesman	ITC

		Type Microscope with Image Analyser.				
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D2: `Safety Measures in Laboratories

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

S.N.	Name of the Laboratory	Safety measures
1.	Hydraulic Machines Lab	a) First Aid box. b) Fire Extinguisher. c) Periodic and Preventive maintenance is conducted in accordance with the schedule. d) Standard earthing is provided for the lab. e) Proper ventilation. f) Do's and don'ts displayed g) Safety measure charts by productivity council were displayed
2.	Fluid Mechanics Lab	a) First Aid box. b) Fire Extinguisher. c) Periodic and Preventive maintenance is conducted in accordance with the schedule. d) Standard earthing is provided for the lab. e) Proper ventilation. f) Do's and don'ts displayed g) Safety measure charts by productivity council were displayed h) Pathways are provided for safety movements.
3	Heat Engine Lab	a) First Aid box. b) Fire Extinguisher. c) Periodic and Preventive maintenance is conducted in accordance with the schedule. d) Standard earthing is provided for the lab. e) Proper ventilation. f) Do's and don'ts displayed g) Safety measure charts by productivity council were displayed h) Pathways are provided for safety movements.
4	CAD / CAM Lab	a) First Aid box. b) Fire Extinguisher. c) Periodic annual maintenance of the system. d) Standard earthing is provided for the lab. e) Proper air conditioning and lighting facilities provided. f) Firewall provided for LAN security. g) Centralized Antivirus online updated. h) Students are authenticated with individual passwords which are controlled by system admin.
5	Advanced	a) First Aid box. b) Fire Extinguisher. c) Periodic and

	Machine Tools Lab	Preventive maintenance is conducted in accordance with the schedule. d) Standard earthing is provided for the lab. e) Proper ventilation. f) Do's and don'ts displayed g) Safety measure charts by productivity council were displayed h) Hand Gloves and Goggles are provided. i) Pathways are provided for safety movements
6	Metallographic Lab	a) First Aid box. b) Fire Extinguisher. c) Periodic maintenance is conducted. d) Standard earthing is provided for the lab. e) Proper ventilation. f) Do's and don'ts displayed g) Safety measure charts by productivity council were displayed h) Hand Gloves and Goggles are made mandatory.
7	Mechanical Workshop	a) First Aid box. b) Fire Extinguisher. c) Periodic and Preventive maintenance is conducted in accordance with the schedule. d) Standard earthing is provided for the lab. e) Proper ventilation. f) Do's and don'ts displayed g) Safety measure charts by productivity council were displayed h) Hand Gloves and Goggles are provided.
8	Mechanical Measurements Lab	a) First Aid box. b) Fire Extinguisher. c) Standard earthing is provided for the lab. d) Proper ventilation. e) Do's and don'ts displayed f) Safety measure charts by productivity council were displayed
9	Heat Transfer Lab	a) First Aid box. b) Fire Extinguisher. c) Periodic maintenance conducted in accordance with the schedule. d) Standard Earthing is provided for the lab. e) Proper ventilation. f) Do's and don'ts displayed g) Safety measure charts by productivity council were displayed
10	Mechanical Engineering lab	a) First Aid box. b) Fire Extinguisher. c) Periodic maintenance conducted in accordance with the schedule. d) Standard Earthing is provided for the lab. e) Proper ventilation. f) Do's and don'ts displayed g) Safety measure charts by productivity council were displayed

Table No. D3.1: List of project laboratory/research laboratory /Centre of Excellence.

S.N.	Name of the Laboratory
1.	Project Fabrication lab
2.	Centre for Sustainable Manufacturing and Renewable Energy (C-SMRE)
3.	Centre for Applied Computational Research (CACR)

NATIONAL BOARD OF ACCREDITATION

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

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))/RF4
CAY	720	36	17	92	88.88
CAYm1	720	36	17	98	92.22
CAYm2	720	36	18	93	91.66

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 2025-2026	Actual expenses in CFY (till Nov 2025)	Budgeted in 2024-2025	Actual Expense s in 2024-2025	Budgeted in 2023-2024	Actual Expenses in 2023-2024	Budgeted in 2022-2023	Actual Expenses in 2022-2023
Infrastructure Built-Up	16,24,07,000	3,43,84,331	7,34,74,000	7,74,05,469	5,61,00,000	3,81,42,590	3,35,33,000	5,25,07,211
Library	3,50,000	2,24,699	2,15,000	3,41,628	5,00,000	3,66,158	8,00,000	4,51,700
Laboratory equipment	36,00,600	3,65,780	25,98,445	12,41,980	36,90,920	9,80,521	29,93,500	15,31,317
Laboratory consumables	39,16,192	5,25,776	14,53,280	5,20,668	10,79,200	5,27,618	14,52,440	5,45,049
Teaching and non-teaching staff salary	21,85,83,257	13,72,06,717	20,57,50,000	19,60,07,927	20,65,00,000	20,28,44,248	19,98,50,000	19,64,04,400

Items	Budgeted in 2025-202 6	Actual expenses in CFY (till Nov 2025)	Budgeted in 2024-202 5	Actual Expense s in 2024-20 25	Budgeted in 2023-202 4	Actual Expenses in 2023-202 4	Budgeted in 2022-202 3	Actual Expenses in 2022-202 3
Outrea ch Progra ms	4,15,000	98,362	4,15,000	2,59,05 0	2,10,000	,41,792	1,00,000	1,58,061
R&D	35,50,000	35,050	24,75,000	3,25,02 6	38,50,00 0	3,83,762	1,60,000	87,713
Training, Placement and Industry linkage	1,23,50,50 0	2,48,63, 536	96,21,700	1,29,31, 626	89,91,00 0	1,14,00, 981	27,11,50 0	1,71,49, 841
SDGs	46,46,000	9,35,135	33,84,275	12,55,5 98	34,18,30 0	14,79,96 3	26,53,40 0	17,30,90 6
Entrepreneurs hip	6,00,000	1,00,000	4,00,000	7670	0	12,000	2,50,000	30,000
Others*,pl. specify								
Software	47,12,000	7,32,941	19,99,000	7,32,94 1	10,15,58 0	3,13,644	22,39,50 0	12,09,86 0
Maintenance and spares	1,56,33,25 0	2,02,50, 548	83,80,500	1,50,42, 883	68,70,00 0	66,37,23 4	49,84,45 0	97,15,24 4
College Affiliation and other fees	17,25,000	16,54,58 5	16,00,000	9,59,59 5	40,00,00 0	81,90,70 2	62,00,00 0	67,78,45 9
Miscellaneous expenses	4,85,94,00 0	3,57,01, 494	7,41,13,5 00	8,79,03, 248	7,51,58,0 00	6,69,45, 806	7,01,62,6 10	5,87,84, 680
Total amount	48,10,82,7 99	25,70,78 ,954	38,58,79, 700	39,49,3 5,309	37,13,83, 000	33,84,67 ,019	32,80,90, 400	34,70,84 ,441

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

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

Items	Budgeted in 2025-2026	Actual expenses in 2025-2026 (till Nov 2025)	Budgeted in 2024-2025	Actual Expenses in 2024-2025	Budgeted in 2023-2024	Actual Expenses in 2023-2024	Budgeted in 2022-2023	Actual Expenses in 2022-2023
Laboratory equipment	200000	0	7,50,000	38608	8,70,000	0	14,20,000	889364
Laboratory Consumables	268300	1,23,249	85,000	74988	2,58,700	1,31,587	1,44,000	85,822
Software	8,00,000	0	6,50,000	0	100000	0	0	0
SDGs	2,60,000	131329	2,00,000	1,78,207	451300	2,07,285	2,05,000	2,65,031
Support for faculty development	0	5000	0	30,143	0	34,683	100000	2,500
R & D	587000	0	351000	28,199	539000	36,650	327000	18530
Industrial Training, Industry expert, Internship	800000	0	800000	3,31,728	0	294855	600000	719305
Miscellaneous expenses *	1,25,000	113920	105000	55939	45,000	324656	131000	54226
Total amount	30,40,300	3,73,498	29,41,000	7,37,812	22,64,000	10,29,716	29,27,000	20,34,778