NATIONAL BOARD OF ACCREDITATION

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

Program Name : Mechanical Engineering	**Discipline**: Engineering & Technology
Level : Under Graduate	**Tier**: 1
Application No: 11376	**Date of Submission**: 29-10-2026

PART A- Profile of the Institute

A1.Name of the Institute: ERODE SENGUNTHAR ENGINEERING COLLEGE	
Year of Establishment : 1995	Location of the Institute: THUDUPATHI
A2. Institute Address:THUDUPATHI POST, PERUNDURAI TALUK	
City:Erode	State:Tamil Nadu
Pin Code:638057	Website:www.erodesengunthar.ac.in
Email:contact@esec.ac.in	Phone No(with STD Code):04294-232701
A3. Name and Address of the Affiliating University (if any):	
Name of the University : ANNA UNIVERSITY OF TECHNOLOGY, CHENNAI	City: Chennai
State : Tamil Nadu	Pin Code: 600025
A4. Type of the Institution: Self-Supported Institute	
A5. Ownership Status: Self financing	

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

- No. of UG programs: **17**
- No. of PG programs: **10**

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	2004	--	Computer Application
2	Engineering & Technology	UG	Agricultural Engineering	2020	--	Agricultural Engineering
3	Engineering & Technology	PG	Applied Electronics	2013	--	Electronics and Communication Engineering
4	Engineering & Technology	UG	Artificial Intelligence and Data Science	2020	--	Computer Science and Engineering
5	Engineering & Technology	UG	Biomedical Engineering	2018	--	Biomedical Engineering
6	Engineering & Technology	UG	Biotechnology	2023	--	Biotechnology
7	Engineering & Technology	PG	Chemical Engineering	2018	--	Chemical Engineering
8	Engineering & Technology	UG	Chemical Engineering	1996	--	Chemical Engineering
9	Engineering & Technology	UG	Civil Engineering	2002	--	Civil Engineering
10	Engineering & Technology	UG	Computer Science and Design	2021	--	Computer Science and Engineering

11	Engineering & Technology	UG	Computer Science and Engineering	1999	--	Computer Science and Engineering
12	Engineering & Technology	PG	Computer Science and Engineering	2011	--	Computer Science and Engineering
13	Engineering & Technology	UG	Computer Science and Engineering (Artificial Intelligence & Machine Learning)	2024	--	Computer Science and Engineering
14	Engineering & Technology	UG	Computer Science and Engineering (Cyber Security)	2024	--	Computer Science and Engineering
15	Engineering & Technology	UG	Computer Science and Engineering (Internet of Things)	2025	--	Computer Science and Engineering
16	Engineering & Technology	UG	Electrical and Electronics Engineering	1996	--	Electrical and Electronics Engineering
17	Engineering & Technology	UG	Electronics & Communication Engineering	2000	--	Electronics and Communication Engineering
18	Engineering & Technology	UG	Electronics & Instrumentation Engineering	2001	--	Electronics and Instrumentation Engineering
19	Engineering & Technology	PG	Environmental Engineering	2012	--	Civil Engineering
20	Engineering & Technology	PG	Industrial Safety Engineering	2018	--	Mechanical Engineering
21	Engineering & Technology	UG	Information Technology	2019	--	Information Technology
22	Engineering & Technology	PG	Manufacturing Engineering	2004	--	Mechanical Engineering
23	Engineering & Technology	UG	Mechanical Engineering	1996	--	Mechanical Engineering
24	Engineering & Technology	PG	Power Electronics and Drives	2012	--	Electrical and Electronics Engineering
25	Engineering & Technology	UG	Robotics and Automation	2020	--	Robotics and Automation
26	Engineering & Technology	PG	Structural Engineering	2023	--	Civil Engineering
27	Management	PG	Master of Business Administration	2008	--	Management

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

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

Name of the Department	Having Allied Departments	Name of the Program	Program Level
Mechanical Engineering	Yes	Mechanical 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
Robotics and Automation	Robotics and Automation	UG

PART-B: Program information

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

Table No. B1: Program details.

A. List of the Programs Offered by the Department:

SR.NO.	PROGRAM NAME	PROGRAM APPLIED LEVEL	YEAR OF START / YEAR OF CLOSED	SANCTIONED INTAKE	INCREASE/DECREASE INTAKE (if any)	YEAR OF INCREASE/DECREASE	CURRENT INTAKE	YEAR OF AICTE APPROVAL	AICTE/COMPETENT AUTHORITY ARROVAL DETAILS	ACCREDITATION STATUS	FROM	TO	NO. OF TIMES PROGRAM ACCREDITED	PROGRAM DURATION
1	Mechanical Engineering	UG	1996 / --	60	Yes	2020	60	2020	F.No. Southern/1-7004000280/2020/EOA	Granted accreditation for 3 years for the period (specify period)	2023	2026	5	4

Sanctioned Intake for Last Five Years for the Manufacturing Engineering	
Academic Year	**Sanctioned Intake**
2025-26	60
2024-25	60
2023-24	60
2022-23	60
2021-22	60
2020-21	60

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	TO	NO. OF TIMES PROGRAM ACCREDITE
1	Robotics and Automation	Robotics and Automation	UG	2020 / --	60	Yes	2025	60	2025	F.No. Southern/1 44643714103/2025/EOA	Applying first time	--	--	0

Sanctioned Intake for Last Five Years for the Robotics and Automation	
Academic Year	**Sanctioned Intake**
2025-26	60
2024-25	30
2023-24	30
2022-23	30
2021-22	30
2020-21	60

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

A. Name of the HoD :	Dr. N. Saravanan
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	90
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	63	49	40	46	54	40	41
N2=Number of students admitted in 2nd year in the same batch via lateral entry including leftover seats	0	14	2	14	12	27	10
N3=Separate division if any	0	0	0	1	0	0	1
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.	63	63	42	61	66	67	52

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	63	0	105.00
2024-25 (CAYm1)	60	49	0	81.67
2023-24 (CAYm2)	60	40	0	66.67

Average [(ER1 + ER2 + ER3) / 3] = 84.45≡ 17.00

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

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

Item	(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).	66.00	67.00	99.00
B=No. of students who graduated from the program in the stipulated course duration	58.00	60.00	44.00
Success Rate (SR)= (B/A) * 100	87.88	89.55	44.44

Average SR of three batches ((SR_1+ SR_2+ SR_3)/3): 73.96

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)

Mean of CGPA or mean percentage of all successful students(X)	8.00	8.60	8.20
Y=Total no. of successful students	44.00	37.00	44.00
Z=Total no. of students appeared in the examination	49.00	40.00	46.00
API [X*(Y/Z)]	7.18	7.96	7.84

Average API[(AP1+AP2+AP3)/3] : 7.66

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 2rd year/10)	8.70	8.40	8.50
Y=Total no. of successful students	39.00	55.00	60.00
Z=Total no. of students appeared in the examination	39.00	58.00	60.00
API [X * (Y/Z)]	8.70	7.97	8.50

Average API [(AP1 + AP2 + AP3)/3] : 8.39

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 (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)	8.50	8.60	8.50
Y=Total no. of successful students	54.00	59.00	60.00
Z=Total no. of students appeared in the examination	55.00	60.00	63.00
API [X*(Y/Z)]:	8.35	8.46	8.10

Average API [(AP1 + AP2 + AP3)/3] : 8.30

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	66.00	67.00	99.00
X=No. of students placed	56.00	55.00	43.00
Y=No. of students admitted to higher studies	2.00	5.00	1.00
Z= No. of students taking up entrepreneurship	0.00	0.00	0.00
Placement Index(P) = (((X + Y + Z)/FS) * 100):	87.88	89.55	44.44

Average Placement Index = (P_1 + P_2 + P_3)/3: 73.96 Placement Index Points:

PART C: Faculty Details in Department and Allied Departments

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

C1. Faculty details of Department and Allied Departments

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

Sr.No	Name of the Faculty	PAN No.	Highest degree	University	Area of Specialization	Date of Joining in this Institution	Experience in years in current institute	Designation at Time Joining in this Institution	Present Designation	The date on which Designated as Professor/ Associate Professor if any	Nature of Association (Regular/ Contract/ Ad hoc)	Currently Associated (Y/N)	In case of NO, Date of Leaving	IS HOD?
1	Dr. Y. Robinson	XXXXXXX38H	Ph.D	Bharathiyar University	Mechanical Engineering	01/07/2021	4.1	Professor	Professor	01/07/2021	Regular	No	28/08/2025	No
2	Dr. N. Saravanan	XXXXXXX11A	Ph.D	Anna University	Mechanical Engineering	07/07/2021	4.5	Professor	Professor	07/07/2021	Regular	Yes		Yes
3	Dr.P.Thangavel	XXXXXXX17L	Ph.D	Anna University	Mechanical Engineering	29/01/2024	1.10	Professor	Professor	29/01/2024	Regular	Yes		No
4	Dr.M.Vijay Anand	XXXXXXX02C	Ph.D	Anna University	Mechanical Engineering	31/07/2024	1.4	Professor	Professor	31/07/2024	Regular	Yes		No
5	Dr.S.Suresh	XXXXXXX60L	Ph.D	Anna University	Mechanical Engineering	09/06/2023	2.6	Associate Professor	Professor	30/09/2025	Regular	Yes		No
6	Dr.S.Navaneetha Krishnan	XXXXXXX71P	Ph.D	Anna University	Mechanical Engineering	13/06/2018	7.6	Associate Professor	Associate Professor	13/06/2018	Regular	Yes		No
7	Dr.M.Elango	XXXXXXX19E	Ph.D	Anna University	Mechanical Engineering	30/08/2024	1.3	Associate Professor	Associate Professor	30/08/2024	Regular	Yes		No
8	P.Chokkalingam	XXXXXXX69Q	M.E.	Anna University	Manufacturing Engineering	12/05/2011	14.7	Assistant Professor	Assistant Professor		Regular	Yes		No
9	N.S.Mohan	XXXXXXX87G	M.E.	Anna University	Manufacturing Engineering	01/07/2016	9.5	Assistant Professor	Assistant Professor		Regular	Yes		No
10	G.Dhayanithi	XXXXXXX05M	M.E.	Anna University	Manufacturing Engineering	29/05/2017	8.6	Assistant Professor	Assistant Professor		Regular	Yes		No
11	V.P.Krishnamurthy	XXXXXXX35F	M.E.	Anna University	Computer Aided Design	04/01/2023	2.11	Assistant Professor	Assistant Professor		Regular	Yes		No
12	R.Manikandan	XXXXXXX66B	M.E.	Anna University	Engineering Design	19/08/2024	1.3	Assistant Professor	Assistant Professor		Regular	Yes		No
13	A.Prabhakaran	XXXXXXX29N	M.E.	Anna University	Manufacturing Engineering	02/06/2014	11.6	Assistant Professor	Assistant Professor		Regular	Yes		No
14	K.S.Mohanraj	XXXXXXX84K	M.Tech	Anna University	Rubber Technology	10/05/2024	1.7	Assistant Professor	Assistant Professor		Regular	Yes		No
15	K.Elavarasan	XXXXXXX04H	M.E.	Anna University	Manufacturing Engineering	14/10/2024	1.1	Assistant Professor	Assistant Professor		Regular	Yes		No
16	M.Karthick	XXXXXXX47H	M.E.	Anna University	Engineering Design	23/11/2023	2	Assistant Professor	Assistant Professor		Regular	Yes		No
17	K.C.Rameshkumar	XXXXXXX90E	M.E.	Anna University	Manufacturing Engineering	02/01/2024	1.11	Assistant Professor	Assistant Professor		Regular	Yes		No

18	P.Kirubakaran	XXXXXXX81N	M.E.	Anna University	Engineering Design	03/07/2023	2.5	Assistant Professor	Assistant Professor		Regular	Yes		No
19	C.Chelladurai	XXXXXXX45M	M.E.	Anna University	Manufacturing Engineering	19/08/2024	1.3	Assistant Professor	Assistant Professor		Regular	Yes		No
20	S.Karthikeyan	XXXXXXX95C	M.E.	Anna University	Industrial Safety Engineering	03/06/2019	6.6	Assistant Professor	Assistant Professor		Regular	Yes		No
21	L.Boopalan	XXXXXXX20H	M.E.	Anna University	Industrial Safety Engineering	01/08/2024	1.4	Assistant Professor	Assistant Professor		Regular	Yes		No
22	R.Arunprakash	XXXXXXX44C	M.E.	Anna University	Manufacturing Engineering	01/09/2025	0.3	Assistant Professor	Assistant Professor		Regular	Yes		No
23	J.Parthiban	XXXXXXX65Q	M.E.	Anna University	Manufacturing Engineering	08/09/2025	0.3	Assistant Professor	Assistant Professor		Regular	Yes		No
24	Dr.M.Pandian	XXXXXXX26E	Ph.D	National Institute of Technology, Tiruchirappalli	Thermal Engineering	05/12/2016	7.7	Professor	Professor	05/12/2016	Regular	No	12/07/2024	No
25	M.Makeshkumar	XXXXXXX93F	M.E.	Anna University	Thermal Engineering	31/07/2024	0.9	Assistant Professor	Assistant Professor		Regular	No	31/05/2025	No
26	R.Srinivasa Moorthy	XXXXXXX76A	M.E.	Bharathiyar University	Mechanical Engineering (Engineering Design)	15/06/2018	6.1	Associate Professor	Associate Professor	15/06/2018	Regular	No	31/07/2024	No
27	R. Prabhakaran	XXXXXXX77P	M.E.	Anna University	Engineering Design	03/01/2022	2.6	Assistant Professor	Assistant Professor		Regular	No	31/07/2024	No
28	Dr.M.P.Prabhakaran	XXXXXXX49R	Ph.D	Anna University	Mechanical Engineering	07/01/2020	3.8	Associate Professor	Associate Professor	07/01/2020	Regular	No	30/09/2023	No
29	R.Arunkumar	XXXXXXX51D	M.E.	Anna University	Thermal Engineering	01/07/2021	3.1	Assistant Professor	Assistant Professor		Regular	No	31/07/2024	No
30	M. Sivam	XXXXXXX55J	M.E.	Anna University	Engineering Design	01/07/2021	3.1	Assistant Professor	Assistant Professor		Regular	No	31/07/2024	No
31	P.Tamizharasu	XXXXXXX35D	M.E.	Anna University	Industrial Safety Engineering	01/07/2020	4.1	Assistant Professor	Assistant Professor		Regular	No	31/07/2024	No
32	R.Kalidasan	XXXXXXX56K	M.E.	Anna University	Engineering Design	01/07/2016	8.1	Assistant Professor	Assistant Professor		Regular	No	31/07/2024	No
33	G.Kavin	XXXXXXX01H	M.E.	Anna University	Industrial Safety Engineering	16/04/2018	6.3	Assistant Professor	Assistant Professor		Regular	No	31/07/2024	No
34	L.Moulidharan	XXXXXXX48I	M.E.	Anna University	Industrial Safety Engineering	02/01/2019	5.6	Assistant Professor	Assistant Professor		Regular	No	31/07/2024	No

35	A.Balakumaran	XXXXXXX06N	M.E.	Anna University	CAD/CAM	03/06/2019	4.3	Assistant Professor	Assistant Professor		Regular	No	30/09/2023	No
36	R. Manikandan	XXXXXXX98J	M.E.	Karpagam University	Engineering Design	02/03/2020	3.6	Assistant Professor	Assistant Professor		Regular	No	30/09/2023	No
37	N.NavaneethaKrishnan	XXXXXXX50G	M.E.	Anna University	Engineering Design	19/06/2017	6.3	Assistant Professor	Assistant Professor		Regular	No	30/09/2023	No
38	J. Mahendravarman	XXXXXXX40C	M.E.	Karpagam University	Engineering Design	03/07/2023	1	Assistant Professor	Assistant Professor		Regular	No	31/07/2024	No
39	Dr. C. Natesamurthy	XXXXXXX13D	Ph.D	Anna University	Mechanical Engineering	01/07/2022	1.5	Associate Professor	Associate Professor	01/07/2022	Regular	No	18/12/2023	No
40	S.Kalyan Kumar	XXXXXXX68L	M.E.	ANNA UNIVERSITY	Engineering Design	01/07/2017	8.5	Assistant Professor	Assistant Professor		Regular	Yes		No
41	C.Muthumohan	XXXXXXX16F	M.E.	Anna University	Mechatronics Engineering	01/07/2021	4.5	Assistant Professor	Assistant Professor		Regular	Yes		No
42	J.Jayaraj	XXXXXXX24F	M.E.	Anna University	Industrial Safety Engineering	03/07/2023	2.5	Assistant Professor	Assistant Professor		Regular	Yes		No
43	D.Ashokkumar	XXXXXXX44D	M.E.	Anna University	Engineering Design	28/08/2024	1.3	Assistant Professor	Assistant Professor		Regular	Yes		No
44	D.Gunasekaran	XXXXXXX79E	M.E.	Karpagam University	Manufacturing Engineering	30/08/2024	1.3	Assistant Professor	Assistant Professor		Regular	Yes		No
45	K.Rajesh	XXXXXXX03N	M.E.	Anna University	Manufacturing Engineering	23/08/2024	1.3	Assistant Professor	Assistant Professor		Regular	Yes		No
46	Dr.J.Balaji	XXXXXXX31K	Ph.D	Anna University	Mechanical Engineering	01/10/2021	2.7	Associate Professor	Professor	02/01/2023	Regular	No	31/05/2024	No
47	S.Manikandan	XXXXXXX57N	M.E.	Anna University	Manufacturing Engineering	04/06/2013	10.11	Assistant Professor	Assistant Professor		Regular	No	31/05/2024	No
48	Dr.J.Manivannan	XXXXXXX19E	Ph.D	Anna University	Mechanical Engineering	03/06/2019	4.11	Assistant Professor	Associate Professor	03/06/2020	Regular	No	31/05/2024	No
49	Dr.J.Manivannan	XXXXXXX19E	Ph.D	Anna University	Mechanical Engineering	02/06/2025	1.4	Associate Professor	Associate Professor	02/06/2025	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	Dr.S.Deepankumar	XXXXXXX45N	XXXXXXXXX308	Ph.D	Anna University	Mechanical Engineering	02/05/2025	1.5	Associate Professor	Associate Professor	02/05/2025	Regular	Yes		Yes

2	R.Karthick	XXXXXXX30C	XXXXXXXXX394	M.E.	Anna University	Manufacturing Engineering	01/06/2023	2.6	Assistant Professor	Assistant Professor		Regular	Yes		No
3	R.Nithya	XXXXXXX92R	XXXXXXXXX264	M.E.	Anna University	VLSI DESIGN	07/07/2023	2.5	Assistant Professor	Assistant Professor		Regular	Yes		No
4	M.Karthick	XXXXXXX02R	XXXXXXXXX541	M.E.	Anna University	Industrial Safety Engineering	11/07/2020	5.9	Assistant Professor	Assistant Professor		Regular	No	30/04/2026	No
5	V.Vimala	XXXXXXX35L	XXXXXXXXX612	M.E.	Anna University	Engineering Design	12/07/2024	1.5	Assistant Professor	Assistant Professor		Regular	Yes		No
6	M.Mathiyalagan	XXXXXXX30R	NA	M.E.	Anna University	Engineering Design	01/07/2022	2.1	Assistant Professor	Assistant Professor		Regular	No	31/07/2024	No
7	Dr.J.Balaji	XXXXXXX31K	XXXXXXXXX176	Ph.D	Anna University	Mechanical Engineering	01/06/2024	2.4	Professor	Professor	01/06/2024	Regular	Yes		No
8	S.Manikandan	XXXXXXX57N	XXXXXXXXX794	M.E.	Anna University	Manufacturing Engineering	01/06/2024	2.4	Assistant Professor	Assistant Professor		Regular	Yes		No
9	Dr.J.Manivannan	XXXXXXX19E	XXXXXXXXX489	Ph.D	Anna University	Mechanical Engineering	01/06/2024	0.11	Associate Professor	Associate Professor	01/06/2024	Regular	No	31/05/2025	No
10	C.Pradeepkumar	XXXXXXX10R	XXXXXXXXX308	M.E.	Anna University	Computer Aided Design	25/06/2025	1.4	Assistant Professor	Assistant Professor		Regular	Yes		No
11	Dr.D.Giridhar	XXXXXXX52C	NA	Ph.D	IIT Madras	Mechanical Engineering	01/06/2023	1.2	Professor	Professor	01/06/2023	Regular	No	31/07/2024	No
12	Dr.R.Sasikumar	XXXXXXX69D	NA	Ph.D	Anna University	Mechanical Engineering	01/06/2023	1.2	Associate Professor	Associate Professor	01/06/2023	Regular	No	31/07/2024	No
13	A.Karthick	XXXXXXX31H	NA	M.E.	Karpagam University	Manufacturing Engineering	01/07/2022	2.4	Assistant Professor	Assistant Professor		Regular	No	15/11/2024	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 Department2
Table No.C2.1: Student-faculty ratio.

Description	CAY(2025-26)	CAYm1 (2024-25)	CAYm2 (2023-24)
UG1.B	66	62	66
UG1.C	62	66	66
UG1.D	66	66	66
UG1: Mechanical Engineering	**194**	**194**	**198**
UG2.B	32	31	30
UG2.C	31	30	31
UG2.D	30	31	66
UG2: Robotics and Automation	**93**	**92**	**127**
PG1.A	30	30	30
PG1.B	30	30	30
PG1: Industrial Safety Engineering	**60**	**60**	**60**
PG2.A	12	18	18
PG2.B	18	18	18
PG2: Manufacturing Engineering	**30**	**36**	**36**
DS=Total no. of students in all UG and PG programs in the Department	284	290	294
AS=Total no. of students of all UG and PG programs in allied departments	93	92	127
S=Total no. of students in the Department (DS) and allied departments (AS)	**S1=** 377	**S2=** 382	**S3=** 421
DF=Total no. of faculty members in the Department	27	27	27
AF= Total no. of faculty members in the allied Departments	8	7	7
F=Total no. of faculty members in the Department (DF) and allied Departments (AF)	**F1=** 35	**F2=** 34	**F3=** 34
FF=The faculty members in F who have a 100% teaching load in the first-year courses	7	6	3
Student Faculty Ratio (SFR)=S/(F-FF)	**SFR1= 13.46**	**SFR2= 13.64**	**SFR3= 13.58**
Average SFR for 3 years	**SFR= 13.56**		

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)]
2025-26(CAY)	9	25	18.00	26.39
2024-25(CAYm1)	9	25	19.00	25.00
2023-24(CAYm2)	9	25	21.00	22.62

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
2025-26	2.00	4.00	4.00	5.00	12.00	25.00
2024-25	2.00	5.00	4.00	4.00	12.00	25.00
2023-24	2.00	5.00	4.00	4.00	14.00	25.00
Average	RF1=2.00	AF1=4.67	RF2=4.00	AF2=4.33	RF2=12.67	AF2=25.00

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	P.BALAJI	MANAGING DIRECTOR	HASHTAG CNC AUTOMATION	ADVANCED CNC TECHNOLOGY	56.00

(CAYm2)

S.No	Name of the Person	Designation	Organization	Name of the Course	No. of hours handled
1	P.BALAJI	MANAGING DIRECTOR	HASHTAG CNC AUTOMATION	ADVANCED CNC TECHNOLOGY	56.00

(CAYm3)

S.No	Name of the Person	Designation	Organization	Name of the Course	No. of hours handled
1	P.BALAJI	MANAGING DIRECTOR	HASHTAG CNC AUTOMATION	ADVANCED CNC TECHNOLOGY	56.00

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	25	12	10
2	No. of peer reviewed conference papers published	15	7	12
3	No. of books/book chapters published	9	10	2

C7. Sponsored Research Project

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

(CAYm1)

PI Name	Co-PI names if any	Name of the Dept., where project is sanctioned	Project Title*	Name of the Funding agency	Duration of the project	Amount(Lacs) i.e. 15,25,000=15.25
Dr.S.Suresh		Mechanical Engineering	International Conference on sustainable Technoloogy Energies and Materials	TNSCST-TRAVEL GRANT	19.02.2025 TO 21.02.2025	0.25
Dr.Y.Robinson		Mechanical Engineering	A two days national seminar on Artificial Intelligence-Based Wearable Robotic Exoskeletons for Rehabilitation	Anusandhan National Research Foundation (ANRF)	16.08.2024 to 17.08.2024	0.70
Mr.N.S.Mohan		Mechanical Engineering	Two days Seminar on “Future-Proof Prosthetics in Biomechanics: Integration of Bio-Filler for High Performance Skeletal	Anusandhan National Research Foundation (ANRF)	06.05.2025 to 07.05.2025	1.00
Mr.S.Karthikeyan		Mechanical Engineering	Footstep generator using Piezoelectric microcontroller	TNSCST-SPS	3 Months	0.08
Dr.Y.Robinson		Mechanical Engineering	Two days national seminar on Sensors and artificial intelligence methods and algorithm for Human - Computer Intelligence Interaction	BRNS	20.09.24 to 21.09.24	0.50
Mr.K.S.Mohanraj		Mechanical Engineering	Two Days Seminar on "The Importance of AI in Additive and Subtractive Manufacturing"	Anusandhan National Research Foundation (ANRF)	23.04.2025 to 24.04.2025	1.00
Mr.N.S.Mohan		Mechanical Engineering	Two Days Seminar on "Advanced Bio-Mechanics: Prosthetics Development Through Bio Filler Integration for Skeletal Reconstruction via Rapid Prototyping.	DBT-CTEP	14.10.2025 to 15.10.2025	1.00
						Amount received (Rs.):4.53

(CAYm2)

PI Name	Co-PI names if any	Name of the Dept., where project is sanctioned	Project Title*	Name of the Funding agency	Duration of the project	Amount(Lacs) i.e. 15,25,000=15.25
Dr.S.Suresh		Mechanical Engineering	Designing and Developing AI-enhanced Unmanned Arial Vehicle (Drone) for industry 5.0	Science and Engineering Research Board (SERB)	12.03.2024 to 17.03.2024	0.90
Dr.N.Saravanan		Mechanical Engineering	Contemporary Technological advancements in green Energy Conservation for Sustainable Development	Science and Engineering Research Board (SERB))	12.02.2024 to 16.02.2024	1.00
Dr.S.Suresh		Mechanical Engineering	Smart recycling : Integrating IOT for ecofriendly plastic bottle to filament conversion and 3D printing	TNSCST-SPS	3 months	0.08
Dr.Y.Robinson		Mechanical Engineering	Two days National Seminar on Robotics as a service	CSIR	19.01.24 to 20.01.24	0.02
						Amount received (Rs.):2.00

(CAYm3)

PI Name	Co-PI names if any	Name of the Dept., where project is sanctioned	Project Title*	Name of the Funding agency	Duration of the project	Amount(Lacs) i.e. 15,25,000=15.25
Mr.G.Dhayanithi		Mechanical Engineering	Electric vehicle without rechargable	TNSCST	3 Months	0.08
						Amount received (Rs.):0.08

Total Amount (Lacs) Received for the Past 3 Years: 6.61

Note*:

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

C8. Consultancy Work

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

(CAYm1)

PI Name	Co-PI names if any	Name of the Dept., where project is sanctioned	Project Title*	Name of the Funding agency	Duration of the project	Amount(Lacs) i.e. 15,25,000=15.25
Dr.Y.Robinson		Mechanical Engineering	Development of Flange shaft) - CNC Milling	GLORY ENGINEERING WORKS	3 Months	1.00
Mr.N.S.Mohan		Mechanical Engineering	Development of Square Plate - CNC Milling	ZODIAC IMPEX	4 Months	1.15
Mr.N.S.Mohan		Mechanical Engineering	Expert technical Consultancy for precision component fabrication using CNC machining	ZODIAC IMPEX	6 Months	1.25
Mr.N.S.Mohan		Mechanical Engineering	Expert technical Consultancy for precision component fabrication using CNC machining	HASHTAG CNC Automation	6 Months	1.50
Mr.N.S.Mohan		Mechanical Engineering	SLEEVE Machineing -CNC Milling	HASHTAG CNC Automation	4 Months	1.00
Dr.S.NavaneethaKrishnan		Mechanical Engineering	Expert technical Consultancy for precision component fabrication using CNC machining	ZENITEK	5 Months	1.00
Dr.Y.Robinson		Mechanical Engineering	Magnetic block - CNC Milling	GLORY ENGINEERING WORKS	5 Months	1.15
						Amount received (Rs.):8.05

(CAYm2)

PI Name	Co-PI names if any	Name of the Dept., where project is sanctioned	Project Title*	Name of the Funding agency	Duration of the project	Amount(Lacs) i.e. 15,25,000=15.25
Dr.S.NavaneethaKrishnan		Mechanical Engineering	50 MM DIA ROD- CNC machining	ZENITEK	2 Months	0.50
Mr.N.S.Mohan		Mechanical Engineering	Expert technical Consultancy for precision component fabrication using CNC machining	HASHTAG CNC Automation	9 Months	2.39
Dr.Y.Robinson		Mechanical Engineering	Expert technical Consultancy for precision component fabrication using CNC machining	GLORY ENGINEERING WORKS	10 Months	2.32
Mr.N.S.Mohan		Mechanical Engineering	ROOLER BLOCK-CNC machining	HASHTAG CNC Automation	3 Months	0.90
Dr.S.NavaneethaKrishnan		Mechanical Engineering	CAM Rear Plate - CNC machining	ZENITEK	4 Months	0.90
Mr.N.S.Mohan		Mechanical Engineering	Expert technical Consultancy for precision component fabrication using CNC machining	ZODIAC IMPEX	6 Months	1.07
						Amount received (Rs.):8.08

(CAYm3)

PI Name	Co-PI names if any	Name of the Dept., where project is sanctioned	Project Title*	Name of the Funding agency	Duration of the project	Amount(Lacs) i.e. 15,25,000=15.25
Mr.N.S.Mohan		Mechanical Engineering	Expert technical Consultancy for precision component fabrication using CNC machining	HASHTAG CNC Automation	4 Months	1.06
Dr.S.NavaneethaKrishnan		Mechanical Engineering	Expert technical Consultancy for precision component fabrication using CNC machining	ZENITEK	5 Months	1.27
Mr.N.S.Mohan		Mechanical Engineering	Cylindrical Shaft Machining	ZODIAC IMPEX	5 Months	1.04
Mr.N.S.Mohan		Mechanical Engineering	Flate Plate Machining	HASHTAG CNC Automation	3 Months	0.92
Mr.N.S.Mohan		Mechanical Engineering	square Plate fabrication via CNC machining	ZODIAC IMPEX	4 months	0.87
Dr.Y.Robinson		Mechanical Engineering	Expert technical Consultancy for precision component fabrication using CNC machining	GLORY ENGINEERING WORKS	3 Months	0.91
						Amount received (Rs.):6.07

Total amount (Lacs) received for the past 3 years: 22.20

Note*:

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

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

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

(CAYm1)

Faculty name	Project title/ Support for Activity	Duration of the project	Amount(Lacs) i.e. 15,25,000=15.25	Amount Utilized(Lacs) i.e. 15,25,000=15.25	Outcomes of the project
K.S.Mohanraj	Development of a Multi-Purpose Quadcopter Drone	5 Months	0.50	0.50	Working Model
N.S.Mohan	Refurbishment and Instrumentation of a Single Cylinder Engine using CNC Technology	4 Months	0.50	0.50	Working Model
Dr.S.Suresh	Amazing 3D Printed Humanoid Robot Development	3 Months	0.50	0.50	Working Model
K.S.Mohanraj	Autonomous Drone-Based Crop Health Monitoring System	6 Months	0.50	0.50	Working Model
Dr.S.Suresh	Design and Implementation of an Automated Rubik's Cube Solving Robot	6 Months	0.50	0.50	Working Model
			Amount received (Rs.): 2.50		

(CAYm2)

Faculty name	Project title/ Support for Activity	Duration of the project	Amount(Lacs) i.e. 15,25,000=15.25	Amount Utilized(Lacs) i.e. 15,25,000=15.25	Outcomes of the project
Dr.S.Suresh	Design and Ergonometric Testing of a High-Tension Mechanical Hand Gripper	6 Months	0.50	0.50	Working model
G.Dhayanithi	Aerodynamic Optimization of a Small-Scale Wind Trainer Blade	6 Months	0.50	0.50	Working model
S.Karthikeyan	Integrated Design of Low-Cost Electric Wheelchair with Regenerative Braking	6 Months	0.50	0.50	Working model
N.S.Mohan	Design and Fabrication of an Automated Wire Feeder and Puller Mechanism	6 Months	0.50	0.50	Protoetyp
			Amount received (Rs.): 2.00		

(CAYm3)

Faculty name	Project title/ Support for Activity	Duration of the project	Amount(Lacs) i.e. 15,25,000=15.25	Amount Utilized(Lacs) i.e. 15,25,000=15.25	Outcomes of the project
Dr.S.Navaneethakrishnan	Testing and Analysis of Natural Fibre and CI Particulate Reinforced Polymer Composites	6 Months	0.50	0.50	Journal Publications
Dr.M.Pandian	Fabrication of Low-Cost Heat Exchanger for Industrial Waste Heat Recovery	6 Months	0.50	0.50	Working model
P.Chokkalaingam	Development of Portable Biogas Digester	6 Months	0.50	0.50	Prototype
Dr.S.Navaneethakrishnan	Conventional Lathe gear Fabrication and Testing	6 Months	0.50	0.50	Journal Publications
			Amount received (Rs.): 2.00		

Total amount (Lacs) received for the past 3 years : 6.50

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	Chemistry Laboratory	30	pH Meter, UV Visible Conductivity meter, Potentiometer, Spectrophotometer, Flame Photometer, Electrical Hot Air Oven	22 Hours	Mrs.S.Kalaivani	Lab Technician	B.Sc. Chemistry, B.Ed
2	Problem Solving and Python programming Lab	30	Hardware : Wipro brand (Core i3, 4GB RAM, 500 GB HDD), Dot Matrix Printer Software : Ubuntu OS, Windows OS, Start UML, Agro UML, Visual Studio	12 Hours	Mrs.N.Nivetha	Lab Technician	B.Sc (Computer Science)
3	Engineering Physics Laboratory	30	Spectrometer, Fibre Optic kit, Travelling Microscope, Lees Disc,Torsion Pendulum,Uniform & Non- Uniform Bending setup,Diode Laser kit, Ultrasonic	22 Hours	Mrs.A.Poondhalir	Lab Technician	M.Sc. Physics
4	Engineering Practices Laboratory Group – A Mechanical	60	Assorted components for plumbing. Carpentry vice (fitted to work bench) Standard wood working tools Demolition Hammer,Circular Saw,Planer, Hand Drilling	30 Hours	Mr.T.Thirunavukarasu	Lab Technician	B.E Mechanical
5	Engineering Practices Laboratory Group – B Electrical	15	Assorted electrical components for house wiring, Electrical measuring instruments, Study purpose items: Iron box, fan and regulator, emergency lamp, Megger	15 Hours	Mr. M. Ramasamy	Lab Technician	DEEE
6	Engineering Practices Laboratory Group – B Electronics	15	Assorted electronic components for making circuits, Small PCBs, Multimeters, Study purpose items: Telephone, FM radio, low voltage power supply	30 Hours	Mr. C.Santhoshkumar	Lab Technician	B.E EEE
7	Electrical Engineering Lab	33	Synchronous motor coupled to DC motor Three phase induction motors DC Shunt motor coupled salient pole three phase alternator,Single phase induction motors	12 Hours	Mr. M.Ramasamy	Lab Technician	D.E.E.E.
8	Fluid Mechanics & Machinery Lab	33	Orifice meter setup, Venturi meter setup, Rotameter setup, Pipe Flow analysis setup, Centrifugal pump/submersible pump setup, Reciprocating pump	12 Hours	Mrs.P.Dharanai Priya	Lab Technician	B.E Mechanical
9	Strength of Materials Laboratory	33	Universal Tensile Testing machine with double shear attachment – 40 Ton Capacity, Torsion Testing Machine (60 NM Capacity),Impact Testing Machine (300 J	12 Hours	Mrs.P.Dharanai Priya	Lab Technician	B.E Mechanical
10	Communication Skills Laboratory	66	INTEL Core 2 Duo @2.66GHZ NVIDA M?B, @GBDDRAM,16 0GBHDD, ATX Cabinet, Key Board, Optical Mouse, Head Phones, FL Client & Cl	4 Hours	Mr.S.Santhosh kumar	Lab Technician	B.E CSE
11	Thermal Engineering Laboratory	33	I.C Engine – 2 stroke & 4 stroke model, Red Wood Viscometer, Apparatus for Flash and Fire Point, 4-stroke Diesel Engine with mechanical loading,hydraulic	12 Hours	Mr.S.Chinnadurai	Lab Technician	ITI
12	Manufacturing Technology Laboratory	33	Centre Lathes Turret and Capstan Lathes Horizontal Milling Machine, Vertical Milling Machine, Surface Grinding Machine, Cylindrical Grinding Machine	12 Hours	Mr.S.Kaviyarasan	Lab Technician	B.E Mechanical
13	Dynamics & Metrology And Measurements Laboratory	33	Slider crank mechanism, Universal joints, Spur gear, Helical gear, Bevel gear and Worm gear, Gear trains – Simple, Compound & Epicyclic, Governors,Cam and	12 Hours	Mr.E.Balamurugan	Lab Technician	Diploma
14	Computer Aided Modeling Laboratory	33	Computer Systems Intel Core i5 & i7 11th Gen, 1TB HDD, 16GB DDR 4 RAM computer or better hardware, with suitable graphics facility Licensed	12 Hours	Mr.S.Navinkumar	Lab Technician	B.E CSE
15	Computer Aided Analysis Laboratory	33	Computer Systems Intel Core i5 & i7 11th Gen, 1TB HDD, 16GB DDR 4 RAM, 17” Graphics Terminal, Advanced graphics accelerator,Laser Printer, Plotter	12 Hours	Mr.S.Navinkumar	Lab Technician	B.E CSE
16	Heat Transfer Laboratory	33	Guarded plate apparatus, Lagged pipe apparatus, Natural convection – vertical cylinder apparatus, Forced convection inside tube apparatus, Pin Fin apparatus	12 Hours	Mr.S.Chinnadurai	Lab Technician	ITI
17	Computer Aided Manufacturing Laboratory	33	ACE J 300 & AMS 540 V Production type CNC Lathe and Milling Machine and Trainer CNC Lathe with all accessories, CNC Milling Machine with all accessories	12 Hours	Mr.S.Navinkumar	Lab Technician	B.E CSE

18	Mechatronics Laboratory	33	HYDROSIM & PNEUMOSIM software / Automation studio, Servo controller – Open loop and Closed loop, PID controller interfacing, Stepper motor interfacing with	12 Hours	Mr.E.Balamurugan	Lab Technician	Diploma

D2. Safety Measures in Laboratories

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

Sr. No	Laboratory Name	Safety Measures
1	Workshop	1.Safety shields/devices are placed in appropriate places for easy access. 2.Availability of fire extinguisher and first aid box is Kept ready for incase of any emergency. 3.Better ventilation facility. 4.Safety charts placed at appropriate places. 5.Provision of 3- pronged plug ground connection in all electrical outlets. Maintenance of clean, dry and rough floor periodically.
2	Machine Shop	1.Provision of space between Machines. 2.Equipped with emergency stop buttons. 3.Availability of fire extinguisher, first aid box to easy access. 4.Safety charts are provided in the appropriate places 5.Better ventilation facility. 6.Maintenance of clean, dry and rough floor periodically. Preventive maintenance work carried out regularly.
3	Thermal Laboratory	1.Adequate maintenance and service of engines. 2.Provision of long and high Exhaust pipe from each engine. 3.Availability of separate store room for keeping flammable fuels. 4.Safety charts are provided in the appropriate places. 5.Provision of better spaces between Machines. 6.Equipped with emergency stop buttons. Availability of fire extinguisher, first aid box. 8.Provision of 3- pronged plug ground connection in all electrical outlets. Maintenance of clean, dry and rough floor periodically.
4	Dynamics Laboratory	1.Provision of better spaces between Machines. 2.Equipped with emergency stop buttons. 3.Availability of fire extinguisher, first aid box. 4.Provision of 3- pronged plug ground connection in all electrical outlets. Maintenance of clean, dry and rough floor periodically.
5	CAD/ CAM Laboratory	1.Provision of better spaces between Computers and Machines. 2.Facilitated of full-fledged Air-conditioning. 3.Equipped with UPS system. 4.Equipped with Anti-virus softwares. 5.Availability of fire extinguisher, first aid box. 6.Provision of 3- pronged plug ground connection in all electrical outlets. Maintenance of clean, dry and rough floor periodically.
6	Fluid Mechanics Laboratory	1.Provision of better spaces between Machines. 2.Provision of spill-ways in all Machines. 3.Equipped with emergency stop buttons. 4.Availability of fire extinguisher, first aid box. 5.Provision of better Ventilation. 6.Provision of 3- pronged plug ground connection in all electrical outlets. Maintenance of clean, dry and rough floor periodically
7	Mechatronics Laboratory	1.Provision of better spaces between Equipments. 2.Equipped with emergency stop buttons. 3.Availability of fire extinguisher, first aid box. 4.Provision of better Ventilation. 5.Provision of 3- pronged plug ground connection in all electrical outlets. Maintenance of clean, dry and rough floor periodically.
8	Metrology and Measurement Laboratory	1.Handle precision instruments with care. 2.Do not drop or mishandle measuring tools. 3.Clean instruments before and after use. 4.Avoid excessive force while taking measurements. 5.Store instruments in protective cases. 6.Do not use damaged measuring tools. 7.Maintain clean and dust-free environment. 8.Calibrate instruments periodically. 9.Avoid touching measuring surfaces with bare hands. 10.Return instruments to their designated places.
9	CNC Laboratory	1.Check machine condition before starting. 2.Verify program codes carefully. 3.Secure work piece and cutting tools properly. 4.Wear proper safety equipment. 5.Keep doors closed during operation. 6.Never reach inside the machine while running. 7.Monitor machine operation continuously. 8.Use emergency stop during abnormal conditions. 9.Clean machine after use. 10.Follow standard CNC safety and operating procedures.

D3. Project Laboratory/Research Laboratory

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

S.No	List of project Laboratory
1	Workshop Practices Laboratory
2	Manufacturing Technology Laboratory
3	Thermal Engineering Laboratory
4	Dynamics Laboratory
5	Metrology and Measurement Laboratory
6	Mechatronics Laboratory
7	Computer Aided Modelling Laboratory
8	Computer Aided Manufacturing Laboratory
9	CNC Laboratory

The Laboratories are constructed with all accessories.
Mechanical department has state of the art laboratories equipped with several facilities. Facilities of different laboratories are listed below:

a)Workshop

Workshop is equipped with tools and equipment for fitting, carpentry, and foundry and welding. Workshop comprises of Pipe Vice, 1 hp power hacksaw Machine, Angle Grinder, Jig Saw, circular saw, Wood Planer, Angle Grinder and cut-off machine. Special facilities in Foundry lab comprises of Mobile Gas Melting Furnace with Gas Manifold for three Cylinders and Injection Moulding Machine.

b) Machine shop

Machine shop is equipped with facilities such as Turnmax lathe, Delux lathe, Back plate, change gears, Taper turning attachment and chucks. Special machines such as Radial drilling machines, Tool and Cutter Grinding machine, Centre less grinder, Horizontal surface grinder, Planning machine, Turret lathe, Helical milling machine, Lathe tool dynamometers, drill tool dynamometer and Gear Hobbing are also available.

c) Thermal Engineering laboratory

Thermal Engineering laboratory is equipped with Reciprocating air Compressor, Four stroke four cylinder, Twin Cylinder Kirloskar Diesel Engine with Exhaust Gas Calorimeter, Single Cylinder Diesel Engine with Electrical Loading, Four Stroke Single Cylinder Petrol Engine, Cut Section Model of Four Stroke Diesel Engine, Cut Section Model of Two Stroke Petrol Engine, Refrigeration Test Rig, Red Wood Viscometer, Say Bolt Viscometer, Pensky- Mortien"s Apparatus, Tachometer, Air Conditioning Test Rig, Air Blower Test Rig, Single Cylinder Diesel Engine Retardation Test, Pin-Fin Apparatus, L.P.G. Refrigeration Test Rig, Twin Cylinder Diesel Engine Test Rig, Auto Exhaust Gas Analyser and Eddy Current Dynamometer.

d) Metrology and Measurements Laboratory

Metrology and measurement laboratory is equipped with Gear tooth vernier, Depth micro meter, Slip Gauge Set, Sine Bar, Bevel Protractor, Inside Micrometer, Thread Micro meter, Auto Collimator, Go and No-Go Gauges, Profile Projector, Tool Makers Microscope, Gear Tester, Calibration Setup for Dial and Electrical Comparator.

e) Dynamics laboratory

Dynamics laboratory has facilities like hot wire anemometer, static and dynamic balancing machine, dead weight pressure gauge tester, CAM analysing machine, Proving ring, vacuum gauge calibration test rig, Turn table apparatus, universal governor, vibrating table, digital stroboscope, skotch yoke mechanism, Bifilar suspension system and vibration analyser. It has vibration lab apparatus such as whirling of shaft, Dunkerley"s rule, torsional vibration single and two rotor system, longitudinal vibration with single beam and torsional vibration with viscous damping.

f) Computer Aided Drafting (CAD) laboratory

Software such as AutoCAD, Pro-E WF 5.0, Mechanical desktop 4.0, Unigraphics UG - NX4 and IRONCAD 7.0 for 2D drafting and 3D modeling is available in the laboratory. It is equipped with analysis software like ANSYS 11.0. It is equipped with Computer Systems Intel Core i5 & i7 11th Gen, 1TB HDD, 16GB DDR 4 RAM and 18.5” Wide LED screen. It has 24” Plotter Mono facility, Epson Projector and A1 Size 24” Plotter Mono. The lab is completely air conditioned with LCD Projector facility.

i) Computer Aided Manufacturing (CAM) laboratory

The laboratory has the following CAM software's such as CADEM and EDGECAM (R1 version). Production type and Trainer type CNC milling machine and CNC lathe machine are available for machining all the type work piece Such as Aluminium and Acrylic work pieces. ACE J 300 & AMS 540 V Production type CNC Lathe and Milling Machine and Trainer CNC Lathe with all accessories, CMAS CNC Lathe and Milling Simulator Package are available for validating the codes. It is equipped with PC with Core i3 Duo 1.8 GHZ processor, 4 GB DDR-2 RAM and 17" Wide TFT screen.

j) Mechatronics laboratory

Mechatronics laboratory is equipped with facilities like basic Hydraulic and pneumatic kit, electro-pneumatic kit, PLC controller pneumatic trainer kit, PLC controller, PLC trainer kit, PID controller, servo controller interfacing for closed loop & open loop, capacitance transducers and tacho generator. The laboratory has software like LAB VIEW 8.2.1 and AUTOMSIM for data Acquisition and simulation purposes.

k) CNC laboratory

The CNC Laboratory provides hands-on training in modern machining and manufacturing technologies. It develops students skills in CNC programming, machine operation and precision manufacturing.

PROJECT LABORATORIES

Mini Project: As per the curriculum, the student has to complete Design and Fabrication (Mini Project) at the end of III year (Sixth Semester).

- The project work should be carried out inside the campus.
- The mini project must consist of design and fabrication aspects.
- The project work is executed under the guidance of a faculty member.

Finally, the project work is assessed by an external and internal examiner through presentation and viva-voce.

Project work:

The student has to execute a Project work preferably from Industry or R & D based project work in the Institution.

A batch consisting of maximum four students shall undertake project work.

The project works are evaluated by Internal and an External Examiner and marks are awarded. The project work is linked to course objectives, modelling, analysis, design and implementation. The progress of the project work is continuously monitored by the internal project review committee

Students are doing project work in the field of manufacturing, design and analysis. Students utilized the following laboratory to do their project works.

- Work shop
- Machine Shop
- Thermal Lab
- CAD/CAM Lab

Domain Area	Laboratory Utilization
Manufacturing and Fabrication	Machine Shop
Heat exchanger	Thermal Lab
Refrigeration and Air conditioning	Thermal Lab
Design and analysis	CAD/CAM lab
CNC programming	CAM Lab
Foundry operations	Workshop
Computer aided Simulation and analysis	CAD Lab

Centre of Excellence

S.No	Name of the Laboratory	Services Provided by the research labs	POs & PSOs
1	E – Vehicle Laboratory	E – Vehicle Technology and Battery Management System	PO1, PO2, PO3,PO4, PO5, PO6, PO7,PO11, PO12, PSO1, PSO2
2	Rapid Prototyping Centre	PCB Milling, Laser Cutting, 3D Printing, CNC Routing	PO1, PO2, PO3,PO4, PO5, PO6, PO7,PO11, PO12, PSO1, PSO2
3	Drone Centre	Skill Development Training, Start- Up, Projects.	PO1, PO2, PO3,PO4, PO5, PO6, PO7,PO11, PO12, PSO1, PSO2
4	IOT Centre	Product Development, Skill development training, Start- up, Projects.	PO1, PO2, PO3,PO4, PO5, PO6, PO7,PO11, PO12, PSO1, PSO2
5	Nano – Technology Laboratories	Super Capacitor Projects, Photo Catalytic Projects in solar cells. Bio diesel research work	PO1, PO2, PO3,PO4, PO5, PO6, PO7,PO11, PO12, PSO1, PSO2

ELECTRICAL VEHICLE CENTER of EXCELLENCE

We’re thrilled to announce the establishment of an Electric Vehicle Center of Excellence (EV COE) at Erode Sengunthar Engineering College, in proud association **with Decibels Lab Bangalore.**

This center is designed to empower students with h ands-on skills tailored for the fast-evolving automotive and EV industry. It also opens up avenues for faculty, industry experts, and research scholars to collaborate on cutting-edge R&D initiatives.

The EV COE is equipped with:

- Cell Testing & Pack Testing
- Pack Manufacturing Unit
- Single & Multi-cell Algorithm Development Kits
- Advanced Powertrain Bench
- Vehicle Testing Facilities
- Motor Testing Setup
- CAN Communication Unit

This initiative is a big step towards bridging the gap between academic learning and industry demands.












RAPID PROTOTYPING CENTRE

3D Printing CoE

The Centre of Excellence in 3D printing at Erode Sengunthar Engineering College is a state-of-the-art facility established to foster innovation, research, and h ands-on training in the field of additive manufacturing. The center aims to bridge the gap between academic knowledge and industrial applications by providing a platform for interdisciplinary collaboration, advanced prototyping, and real-world problem-solving using cutting-edge 3D printing technologies

Key Features

- Advanced multi-material 3D printers capable of working with PLA, ABS, PETG, Carbon PETG, TPU, and other engineering-grade polymers.
- Research-focused initiatives on sustainable, functional, and customized manufacturing processes.
- Collaborative projects with industries, start-ups, and research institutions.
- Skill development and certification programs for students and professionals.
- Support for student innovation through prototyping and product development assistance.

Facilities@ 3D Printing CoE



DRONE CENTRE

DRONE DEVELOPMENT CENTER

The Drone Development Center will serve as the foundation for research, experimentation and h ands-on learning in aerial robotics and autonomous systems. To provide students with state of the art facilities for drone design, testing and application. Equipped with advanced tools for drone fabrication and modification focused on integrating machine learning and autonomous navigation systems into drones.

Drone Technology Training Programs: Focus Areas

- Basics of aerodynamics and flight principles
- Drone assembly and troubleshooting techniques
- Precision Agro Drone Spraying Techniques
- Manual and autonomous flight training
- H ands-on flight practice with various drone models
- Flight Operations & Piloting Skills
- DGCA Approved Drone licensing and certification

Facilities @ Drone Development Center






INTERNET of THINGS CENTRE

Internet of Things CoE

The Centre of Excellence in IoT at **Erode Sengunthar Engineering College** is a dynamic hub focused on advancing education, research, and innovation in the rapidly evolving field of the Internet of Things. This center serves as a platform for students, researchers, and industry partners to explore smart solutions that connect devices, data, and systems for real-world impact.

Key Highlights

- Equipped with advanced IoT development boards, sensors, cloud platforms, and edge computing tools.
- H ands-on training and certification programs in embedded systems, wireless communication, and IoT application development.
- R&D in smart agriculture, healthcare, home automation, industrial IoT, and smart cities.
- Collaborative projects with industries and institutions to solve practical challenges using IoT.
- Skill development and certification programs for students and professionals.




19ME801-PROJECT WORK PHASE – II (2021-2025 BATCH)

IV YEAR MECHANICAL– ENGLISH MEDIUM

PROJECT DETAILS

S. No.	Name of the Students	Project Title	Supervisor Name	Title mapped with PO's
1	Elangovan R Hariprasath.A.S Saravanakumar.V Yugender R	Burst pressure analysis of 3D printer type-IV composite pressure vessel for CNG storage using ansys.	Dr.J.Balaji	PO11,PO3,PO9
2	Dhinakaran.B, Nishak.J Tamilselvan.K Thaveethu Raj.B	Sustainable biodiesel production from waste cooking oil using zinc ferrites magnetic Nano catalyst: synthesis, characterization and process optimization	Mr.N.S. Mohan	PO11,PO5,PO8

3	Dharmaraj.K K Andasamy.R Kavibharathi.V Vishwa.S	Automated Vehicle Speed Control System in Restricted Zone.	Dr.M.Elango	PO11,PO8
4	Dharshan B Mohanvel S.R Rajadurai G Wesly Jose J	Development of ligthweight Safety helmets Using Sisal and Coconut Fiber-Reinfroced Composite Materials.	Mr.L.Boopalan	PO11,PO8,PO3
5	Balasurya.M Mohan Babu.K Mohamed Naveeth.N Sri Sakthivel.P	Investigating the effect of nozzle diameter variation on additive manufacturing process.	Mr.G.Dhayanithi	PO11,PO8,PO3
6	Liyakath Nijamudeen J M Mohan Ram P Shanmugavel K Tamilselan V	Investigation of composite material using natural fiber pineapple, abaca and rise husk	Dr.N.Saravanan	PO11,PO8,PO4
7	Kishore V S, Murugan.S Robert Rajan.L Vishnu.A	Mechanical behaviour of PLA and PETG s andwich structure by fused deposition modelling	Dr.S.Suresh	PO11,PO8,PO5
8	Alagarsamy.P Gowtham.S John Ebinesar.J Kavin.R.K	Analysing and testing the Characteristics of CNG sample at different composite materials using PET-G and ABS	Mr.V.P.Krishnamurthy	PO11,PO8,PO5
9	Dinesh M Sakthivel M Sasidharan V Srijai M	Study on Thermal behaviour of shell and spiral Coil Heat Exchanger at Different spiral Coil inclination Angles	Dr.P.Thangavel	PO11,PO8,PO2
10	Boopathi.A Karthikeyan.S Ranjith Kumar.E Saran.S	Foot step generator using piezoelectric principle with microcontroller.	Mr.S.Karthikeyan	PO11,PO8,PO5

11	Sivaraj G P Praneshkumar.T Satees Kumar.D Sakthi Bala M	Experimental investigation of 3D printed composite overwrapped pressure vessel	Dr.J.Balaji	PO11,PO8,PO2
12	Golu Kumar Singh Kundan Kumar Rahul Kumar Jha	Synthesis and characterization of strontium ferrites as a high efficiency catalyst for biodiesel production from recycled cooking oil.	Mr.N.S. Mohan	PO11,PO8
12	Golu Kumar Singh Kundan Kumar Rahul Kumar Jha	Synthesis and characterization of strontium ferrites as a high efficiency catalyst for biodiesel production from recycled cooking oil.	Mr.N.S. Mohan	PO11,PO8
13	Abhimanyu Kumar Aman Kumar An And Kumar Avinash Yadav	Sustainable hydrophobic coating development using silica extracted from sugarcane bagasse waste ash	Dr.J Manivannan	PO11,PO8,PO7
14	Arunkumar.V Vasanth Shankar M.P Vimal S Karthikeyan S	Design of hybrid electric vehicle using solar and wind energy with dynamo charging unit.	Mr.P.Chokkalingam	PO11,PO8,PO7
15	Hari Prasath S Hemach Andhru V Vaanmukil B Vignesh M	Conventional lathe gear fabrication and testing by using Natural fibers and Cast Iron Particulate Reinforced Polymer Composites Materials.	Dr.S.Navanneethakrishnan	PO11,PO8,PO4

FINAL YEAR MECHANICAL (BATCH 2020-24)

PROJECT WORK PHASE-2

S. No.	Name of the Students	Project Title	Supervisor Name	Title mapped with PO's
1	Mushraf Khan Hareramkumar Rahul Kumar Sonu Kumar	Investigation On Solar Refrigiration System	Dr.M.P andian, Prof & Head/Mech	PO10,PO3,PO9

2	Thooyavan M Rajesh Kumar T Kavinkumar K Sivanantham S	Testing and Analysis of Natural Fiber and CiParticuilate Reinforced Epoxy Polymer Composites	Dr.S.Navaneethakrishnan, ASP/Mech	PO10,PO5,PO8
3	Kaviraj S Senthil Kumar S Nivash S Cibi C	Influence of Nano Particles On The Stir Zone Seam of Fsw Joints In Az31B Magnesium Alloy	Dr.J.Balaji, ASP/Mech	PO11,PO8
4	Ananth M Dhasaradhan S Logesh S Shivajalapathi B	Study of MicroHardness and Wear Properties of Az31B Magnesium Alloy With Addition of Ceramic Particles Via Fsw	Dr.J.Balaji, ASP/Mech	PO11,PO8,PO4
5	Mohamed Faizal J A Mohanraj S Sanjay B Rajkumar R	Enhancing Strength and Durability of Pla 3D Printed Component Joints Through By Adhesive Bonding	Dr.S.Suresh, ASP/Mech	PO11,PO7,PO3
6	Premnath P Balaji C Bharathraj B Kavinkumar P	Microstructure and Mechanical Properties of Friction Stir Welded Al/Mg Joint With Addition of Nano Filler	Dr.S.Suresh, ASP/Mech	PO11,PO7,PO4
7	Satheesh K Maharaja Sharukhan.S Diplal Kumar	Experimental Investigation of Hybride Matrix Composite Using Plastic Waste	Mr.P.Chokkalingam, AP/Mech	PO11,PO7,PO5
8	Aravind A Karthik M Dineshkumar G Hariprakash S	Synthesis of Iron TitanatePerovskite Catalyst For Bio Fuel Production	Mr.N.S.Mohan, AP/Mech	PO11,PO7,PO5
9	Dinesh Kumar N Prakash M Prabhu G Muthuraman G	Preparation and Optimization of Srtio3 Nanocatalyst For Biodisel Production	Mr.N.S.Mohan, AP/Mech	PO11,PO7,PO2

10	Manoj V (17) Nandhakumar S Surya C Sethubathi J	An Analysis of Cashewnut Shell Composite Compared To Epoxy and Cnsl Resins	Mr.G.Dhayanithi, AP/Mech	PO11,PO8,PO5
11	Vallarasu S Arulmanik andan K Aswanth S Udhayakathir U	Insvestigating The Comparative Properties of Metal Matrix Composite Using Stainless Steel and Mild Steel	Mr.G.Dhayanithi, AP/Mech	PO11,PO9,PO2
12	Sriharan V Sabarish S Ajay M Madhankumar K	Preparation and Mechanical Properties of Jute Fiber and Coconut Shell Powder Reinforced With Epoxy Composite	Mr.S.Karthikeyan, AP/Mech	PO11,PO9
13	Sudhakar Sudharsan Kavin S Thirunnavukkarasu	Experimental Investigation On Hybrid Composite Using Silk and Abaca Fibers	Mr.A.Prabakaran, AP/Mech	PO11,PO9,PO7
14	Guhanesh V Manoj V Gowtham V Ranjith R	Structural Modification of Austempered Ductile Iron Steering Knuckle	Mr.V.P.Krishnamurthy, AP/Mech	PO11,PO8,PO7
15	Praveen A M.Naveen Kumar Dhamothiran V R.S.Sujith	Structural Analysis and Optimization of Streeing Knuckle	Mr.V.P.Krishnamurthy, AP/Mech	PO11,PO9,PO4

19ME705 PROJECT PHASE I

IV YEAR – VII Sem– ENGLISH

PROJECT DETAILS

S. No.	Name of the Students	Project Title	Supervisor Name	Title mapped with PO's

1.	An And Kumar An Andkumar Bikram Kumar Iniyavan.M	Saurapunarvani Yantra: A Solar-Powered, Voice-Controlled, Smart Paper Shredder With Real-Time Recycling, Compacting, And Circular Economy Integration	Mr.R.Manik Andan	PO1,PO2,PO3,PO5,PO7
2.	Balaji.V Giridharan.S Mithun Kumar Hariharan. Km	Experimental Investigation And Material Characteristics of Bio Filament Synthesized Using Eggshells	Mr.N.S. Mohan	PO1,PO4,PO7
3.	Dinesh.U Vignesh.S Vasanth.M Dinesh P Yuvaraj	Waste Plastic To Fuel Conversion Unit	Dr.N.Saravanan	PO1,PO3, PO4,PO7
4.	Ragul Kannan Saravana Kumar.K Sri Ram .B Sudharsn.R	Automated Ceiling Fan With Linear Motion Mechanism	Dr.J Manivannan	PO1,PO3, PO5
5.	Ashwin Raja.M Mathivanan.Cm Praveen Kumar.E Victor Jose A	Simulation of Digital Twin Technology In Electrochemical Micromachine	Mr.L.Boopalan	PO1,PO2, PO3, PO4, PO5
6.	Poovarasan.G Praveen Kumar.M Vijayaraj.V Manik Andan.T	Desin And Fabrication of Additive Manufacturing of Tool Electrode of Electro Chemical Micro Machine	Mr.L.Boopalan	PO1,PO3, PO4,PO5
7.	Gokul Krishnan.K Mriyarasan.K Nikkil.C Lakshmi Narayanan.Jr	Design And Fabrication of Defence Components Using Wire And Additive Manufacturing	Mr.N.S. Mohan	PO1,PO2, PO3,PO5

8.	Yuvan Shankar S Aravindh N Harishwaran.V Prakash	Design And Fabrication of A Low-Cost Filament Extruder Using Recycled Pet Bottles	Mr.G.Dhayanithi	PO1,PO2, PO3,PO5, PO7
9.	Bharath.R Gopal.V Mohammed Ismail J Sibiraj.G	Development of Compact Twins Screw Extrusion Process For 3 D Printing Production Filament	Mr.N.S. Mohan	PO1,PO2, PO3,PO4, PO5
10.	Anna Malai D Aththiya A Balasubramanian Bhagat Singh Sasitharann K	TRANSESTERIFICATION of COOKING OIL OVER A HIGHLY ACTIVE Mnfe2o4/Zno NANO COMPOSITE CATALYST	Mr.C.CHELLADURAI	PO1,PO2, PO3,PO4, PO7
11.	Gokul Kumar.S Ponperumal Saravanan K Ranjith .K Vimal Raj .R	DISOLINATION of Iot DEVICE	Dr.M. ELANGO	PO1,PO2, PO3,PO5, PO7
12.	Kush Kumar Param Hans Kumar Ankit Kumar Gokul.B	Development of A Smart Iot Enabled High - Performance Aqueous- Based Degreasing System For Industrial Engineering Components	Dr.J Manivannan	PO1,PO2, PO3,PO5, PO7
13.	Mohan B Suyabarathan R Allwin M Sibiraj.S	Development of Activated Carbon-Natural Fibre Composite Water Fillteration	Mr.Chelladurai	PO1,PO2, PO3,PO4, PO7

PROJECT BASED LEARNING

19MEX12-3D PRINTING TECHNOLOGY AND PROCESSES

Year /Sem :IV MECH / VII

S.NO	REGISTER NO	NAME	PROJECT TITLE	Title mapped with PO's

1	730422114002 730422114003 730422114004 730422114012 730422114017 730422114019 730422114027	Anand Kumar Anand Kumar Ankit Kumar Bikram Kumar Iniyavan M Kush Kumar Param Hans Kumar	Preparation of Types of Flanges Using Fdm Based 3d Printing Process	PO1,PO2, PO3,PO5
2	730422114005 730422114009 730422114014 730422114023 730422114303 730422114305 730422114307	Annamalai D Balaji V Giridharan S Mithun Kumar Dinesh P Gokul B Hariharan K M	Duster With Chalk Piece Tray Using Fdm Process	PO1,PO3,PO5

Department Achievements:

Faculty Awards

1. Dr.S.Navaneethakrishnan, Associate Professor, received NPTEL- Special Category award (Prospects) from IIT Madras behalf of our college.





2. Mr.G.Dhayanithi, Assistant Professor received Faculty Leader award by Step (Society for Technocracy Engineering Professionals)held at **K.S.R Institutions** on 15.05.2025.



3. Mr.N.S.Mohan, Assistant Professor served as jury member to help, evaluate and mentor the talented participants of **Tamil Nadu Women in Science and Engineering (TNWISE) - TNWISE 2025 Hackathon**held at SONA College of Technology, Salem on 14th March 2025.

4. **Dr.N.Saravanan, Professor, Department of Mechanical Engineering**, Erode Sengunthar Engineering College completed Six Months AICTE-QIP-PG Programme on **Artificial Intelligence & Data Science** at Indian Institute of Information Technology, Kottayam-686635, Kerala.From 07.07.2024 to20.12. 2024.





Student Awards:

1. Selvan.V.Balaji and SelvanGokul Krishnan K of III Year Mechanical Engineering (English Medium) received third place for “Best Project Award” in the Science Expo 2K24 Organized by Bannari Amman Institute of Technology during 13th to 15th November 2024.







2. **Selvan. V.Balaji** Received **First Place in Mr.LATHE**, **Second Place in CNC MACHINING** and **Second Place in AUTO ASSEMBLY** in the event “National Level Technical Symposium **MEKCHAT 25.0**” organized by Government College of Engineering, Salem during 03rd and 04th March 2025.



3. **Mr.N.S.Mohan, Assistant Professor** guided **Anne Anita Beaula P, Bhavadhaarani B, Boomika M** students of Second year Artificial Intelligence and Data Science and secured Third Price with a cash reward of Rs.15,000 in the **Tamil Nadu Women in Science and Engineering (TNWISE) - TNWISE 2025 Women Hackathon**held at SONA College of Technology, Salem on 14th March 2025.





4. The following students of **Second year Mechanical Engineering** have completed NPTEL course on "**Renewable Energy Engineering: Solar, Wind and Biomass Energy Systems**" Logesh R, Jagadheswarn K, Kumar G, Dhayanithi D, Rajkamal K, Lithikkumar S, Gokulmurugan L, Gokul Y, Kumaravel D, Kishore Kumar B, Gokul Krishnan &Pavithiran M.

Faculty Patent Publication Details

- Dr.N.Saravanan, Professor, Department of Mechanical Engineeering, Erode Sengunthar Engineering College Published a patent (Patent No:405515-001) titled "ENCODER SUPPORT FOR COMPUTER NUMERIC CONTROL (CNC) MACHINE" on 12/07/2024
- Mr.K.S.Mohanraj, Assistant Professor/Mech, published a patent in "Minimizing Carbon Footprint through Wing Design Optimization" on 25/10/2024.
- Mr.K.S.Mohanraj, Assistant Professor/Mech, published a patent in "Design Thinking based Optimized Aerospike Nozzle for Adaptive Thrust and Altitude Efficiency" on 07/03/2025.
- Mr.K.S.Mohanraj, Assistant Professor/Mech, published a patent in "Harnessing Quantum Mechanics for Accurate Molecular Interaction Simulations in Drug Development" on 21/03/2025.
- Mr.K.S.Mohanraj, Assistant Professor/Mech, published a patent in "Entangled Qubits Transform Traditional Learning Methods Into Intelligent Adaptive Systems" 28/03/2025.
- Mr.K.S.Mohanraj, Assistant Professor/Mech, published a patent in "AI-Powered Application for Plastic Waste Recycling and Reuse" 18/04/2025.
- Mr.K.S.Mohanraj, Assistant Professor/Mech, published a patent in "Redefining Cyber Defense Strategies in the Quantum Computing Era" 23/05/2025.
- Dr.M.VijayAn and, Professor, published a patent in "Electric Power Generation from Biomass Gasification: A Study of System Efficiency and Optimization" on 30/08/2024.
- Dr.M.Elango, Associate Professor/Mech, published a patent in "Dynamic Analysis and Fabrication of Laminated Hybrid Composite Structures with Silicon Carbide Fillers" on 08/11/2024.
- Dr.M.Elango, Associate Professor/Mech, published a patent in "Smart Force Indicating Toogle Lever" on 08/11/2024.

Products Developed by Students

Electrical Wire Feeder/Puller Mechanism:

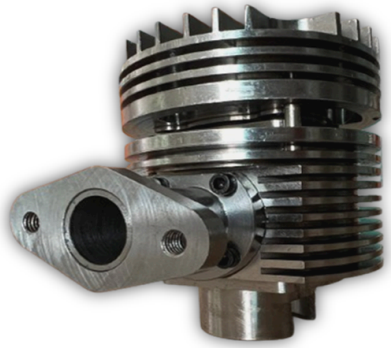
Batch Members:	K.Gokul Krishnan, J.R.Lakshmi Narayanan, K.Meiyarasan & C.Nikkil
Year:	III Year Mech (English Medium)
Guided by:	N.S.Mohan, AP/Mech & Mr.H.David, CNC - Prod. Engg.



Product Photograph

Two-Stroke Petrol Engine (Cylinder Head):

Batch Members:	V.Balaji, D.Giridharan, Mithun Kumar & K.M.Hariharan
Year:	III Year Mech (English Medium)
Guided by:	Mr.N.S.Mohan, AP/Mech & Mr.H.David, CNC - Prod. Engg.
YouTube Link:	https://youtu.be/FSMH8VgIrpY



Product Photograph

Hydraulic External Gear Pump:

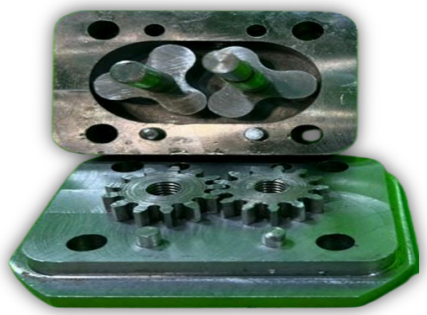
Batch Members:	Balaji.K, M.Guruvanandham, A.Sathish Kumar & M.Sridhar
Year:	III Year Mech (Tamil Medium)
Guided by:	Mr.N.S.Mohan, AP/Mech & Mr.H.David, CNC - Prod. Engg.
YouTube Link:	https://youtube.com/shorts/qV2gNzYL9Iw



Product Photograph

Hydraulic Lobe Pump:

Batch Members:	D.Annamalai, A.Athithya, R.Bhagat Singh & M.Iniyavan,
Year:	III Year Mech (English Medium)
Guided by:	Mr.N.S.Mohan, AP/Mech & Mr.H.David, CNC - Prod. Engg.



Product Photograph

Hydraulic Vane Pump:

Batch Members:	G.Poovarasan, V.Vijayraj, R.Vimalraj & V.Harishwaran
Year:	III Year Mech (English Medium)
Guided by:	Mr.C.Chelladurai, AP/Mech & Mr.H.David, CNC - Prod. Engg.



Product Photograph

ESEC CNC – MACHINING CENTRE

CNC Lathe Machine: ACE Micromatic J300LM Jobber Elite



MACHINE SPECIFICATION

- **Model:** ACE Micromatic J300LM
- **Control System:** FANUC Series
- **Spindle Speed:** 3500RPM
- **Max Turn Dia:** 180 mm
- **Max Turn Length:** 200 mm

- **Turret Head:** 8 Station

CNC Milling Machine: Ace Micromatic 540V Vertical Machining Center



MACHINE SPECIFICATION

- **Model:** ACE Micromatic 540V
- **Control System:** FANUC Series
- **Spindle Speed:** 4000RPM
- **Bed Size:** 750 X 400 mm
- **Z axis Travel:** 300 mm
- **Magazine Capacity:** 20 Station

OUTCOMES OF ESEC - CNC MACHINING CENTRE ESTABLISHMENT:

- **Enhanced Technical Skills** – Students and trainees gain hands-on experience in CNC programming, operation, and maintenance.
- **Industry-Ready Workforce** – Graduates acquire job-ready skills aligned with manufacturing industry demands.
- **Improved Research & Innovation** – Enables prototyping and advanced research in mechanical, aerospace, and automation fields.
- **Increased Employability** – Equips learners with certifications and competencies for high-demand CNC machining roles.
- **Support for Local Industries** – Provides precision machining services to small and medium enterprises (SMEs).
- **Curriculum Enhancement** – Strengthens engineering and vocational programs with practical, industry-standard training.
- **Cost-Effective Production** – Reduces outsourcing needs by enabling in-house part fabrication for institutional projects.
- **Promotion of Advanced Manufacturing** – Encourages adoption of automation and smart manufacturing technologies.

COURSE DETAILS:

1. **CNC Turning Machine Operation & Programming**

- **Duration:** 15 days
- **Level:** Beginner to Intermediate
- **Prerequisites:** Basic machining knowledge (manual lathe experience preferred)
- **Software Used:** Fanuc or G-code-based CNC simulators
- **Hands-on Training:** Live projects on CNC lathe machines
- **Certification:** CNC Turning Operator/Programmer Certificate
- **Assessment:** Practical machining test + written exam

Course Objectives:

- Understand CNC turning principles, components, and machine setup.
- Learn to read and interpret engineering drawings for turning operations.
- Master G-code and M-code programming for CNC lathes.
- Operate CNC turning machines safely, including tool and workpiece setup.
- Perform facing, turning, grooving, threading, and taper turning operations.
- Optimize cutting parameters (speed, feed, depth of cut) for efficiency.
- Troubleshoot common CNC turning errors and tool wear issues.
- Apply quality control techniques using precision measuring instruments.

Course Outcomes:

- Explain CNC Turning Fundamentals.
- Interpret Engineering Drawings.
- Write CNC Turning Programs.
- Safely Operate CNC Lathes.
- Perform Machining Operations.
- Optimize Machining Parameters.
- Diagnose & Resolve Issues.
- Ensure Quality Standards.

2. **CNC Milling Machine Operation & Programming**

- **Duration:** 15 days
- **Level:** Beginner to Intermediate
- **Prerequisites:** Basic machining knowledge (manual milling preferred).
- **Software Used:** Fanuc, or CAM software.
- **Hands-on Training:** Practical sessions on 3-axis CNC milling machines
- **Certification:** CNC Milling Operator/Programmer Certificate
- **Assessment:** Practical machining test + written exam

Course Objectives:

- Understand CNC milling machine components, axes, and operations.
- Read and interpret part blueprints for milling applications.
- Write and edit G-code programs for 2D and 3D milling operations.
- Set up tools, workholding devices, and workpiece zero positions.
- Perform face milling, pocketing, drilling, contouring, tapping and slotting.
- Optimize machining parameters for surface finish and tool life.
- Operate CNC milling machines with safety protocols.
- Inspect finished parts using micrometers and calipers.

Course Outcomes:

- Explain CNC Milling Fundamentals.
- Interpret Part.
- Program CNC Milling Machines.
- Set Up Machines & Workpieces.
- Perform Machining Operations.
- Optimize Machining Parameters.
- Apply Safety Best Practices.
- Inspect Finished Parts.

TOOLS & EQUIPMENTS:

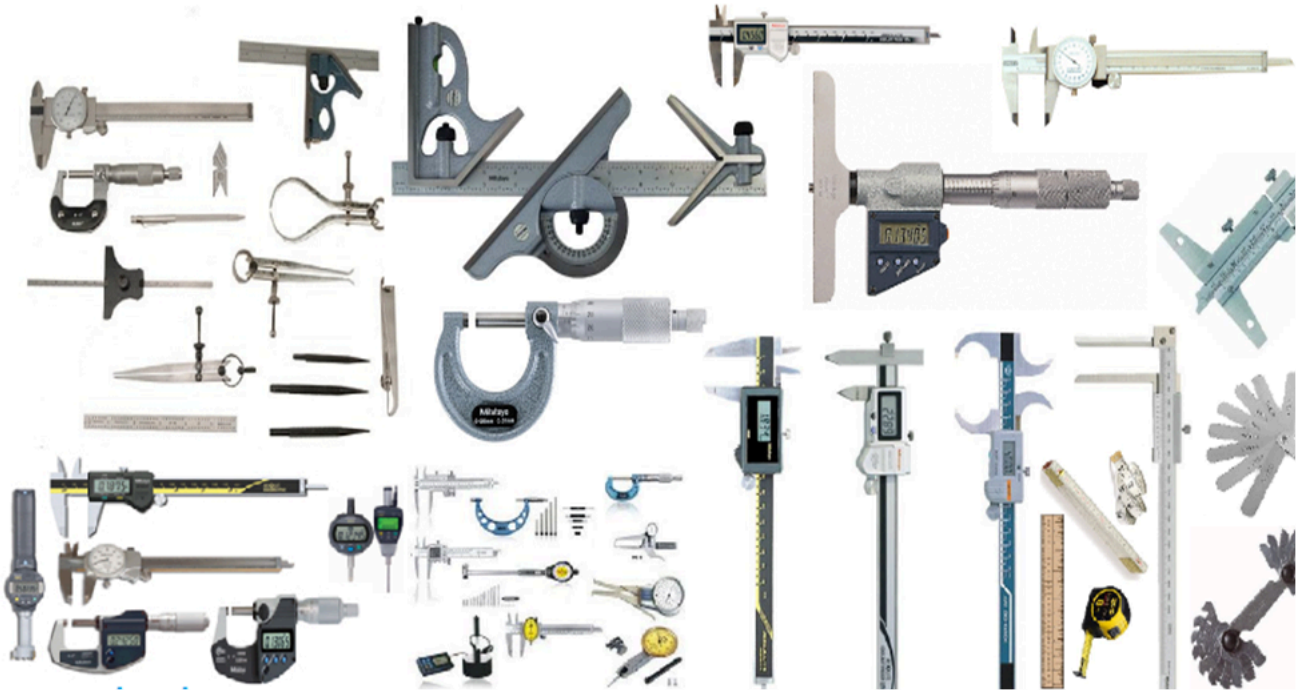
CNC Turning Tools



CNC Milling Tools

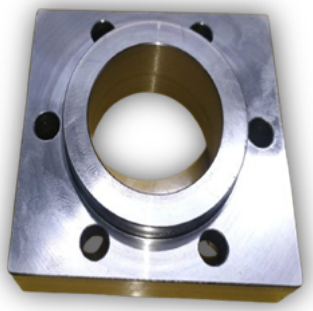


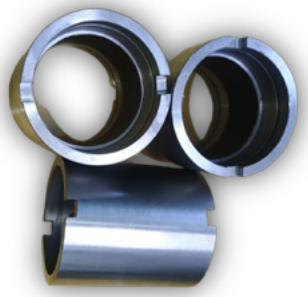
Measuring Equipments



INDUSTRIAL DEVELOPMENT JOBS





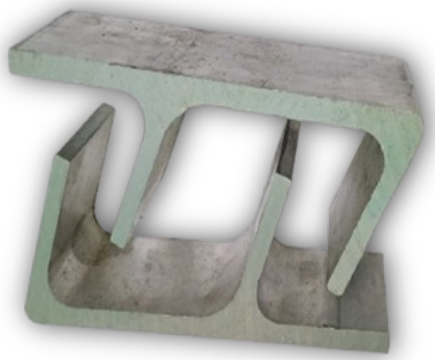




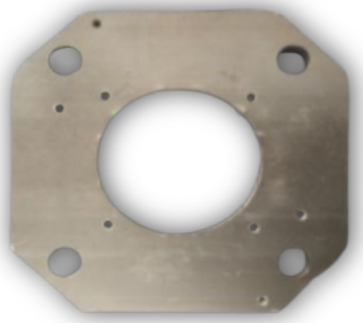


PRODUCTION JOB ORDERS CARRIED OUT AT ESEC-CNC MACHINING CENTRE



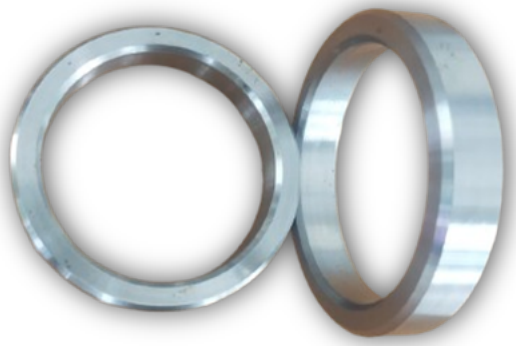












DESIGNER PRODUCTS DEVELOPED AT ESEC-CNC MACHINING CENTRE



STUDENTS TRAINING & CONSULTANCY WORK CARRIED OUT AT ESEC-CNC MACHINING CENTRE

Training provided for students:

Name of the Training	Period of Training	Topics Covered	Beneficiaries

CNC & VMC Basic Training	1 day	About CNC & VMC, G Codes and M Codes, Basic Programming	986 I year students of ESEC
CNC & VMC Basic Training	1 day	About CNC & VMC, G Codes and M Codes, Basic Programming	1023 I year students of ESEC
CNC & VMC Basic Training	1 day (6^{th} to 30^{th} 2024) 4 Batches / Day	About CNC & VMC, G Codes and M Codes, Basic Programming	1283 I year students of ESEC
CNC & VMC Advanced Training Program	15 days (3^{rd} to 22^{nd} October)	SOLIDWORKS, Master CAM, CNC Setting, Hands on Training & Projects	20 Final year Mechanical Engineering Students
Mastering CNC Programming: A 15 days Intensive Training Program	15 days (17.02.2025 to 07.03.2025)	G-code and M-code programming, CNC machine setup, tool-path simulation, GD&T.	15 Third year Mechanical Engineering Students

We are receiving regular orders from the following industries:

Glory Engineering Works-Coimbatore.

SKM Industry-Salem.

Zenitek Industry-Erode.

MM Gears-Perundurai.

PHOTOGRAPHS










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)	1140	57	44	19	68
2024-25(CAYm1)	1440	72	50	22	62
2025-26(CAY)	1530	76	57	21	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 2025-26	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	265000000	251988999	250000000	225294703	175000000	159757851	132000000	118157265
Library	2250000	1799815	1780000	1269047	1661000	1292799	1470000	1373170
Laboratory equipment	15250000	12212372	42000000	36615624	17900000	17864447	24750000	20848397
Teaching and non-teaching staff salary	210000000	205917277	172400000	163742912	122100000	119034857	107000000	98685697
Outreach Programs	1350000	1294219	1800000	1638025	1000000	800730	3000000	2641751
R&D	16000000	14679745	12400000	11904352	10550000	9937090	5335000	4749606
Training, Placement and Industry linkage	3700000	3583438	4725000	3790981	4605000	4048026	3275000	2351019
SDGs	16000000	15810939	10070000	9919802	8185000	7964860	6210000	5835394
Entrepreneurship	1800000	1756270	700000	597217	300000	247317	150000	97363
Others, specify	180845000	164789030	157690000	149870896	145475000	125798143	102295000	96045147
Total	**712195000**	**673832104**	**653565000**	**604643559**	**486776000**	**446746120**	**385485000**	**350784809**

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	3000000	2523069	1400000	1397700	1300000	1126388	5200000	5185808

Software	250000	240189	260000	251738	190000	182359	250000	212205
SDGs	650000	630297	450000	432949	500000	362323	500000	493623
Support for faculty development	300000	228845	150000	136771	200000	201005	250000	237607
R & D	2900000	2821033	2750000	2717338	2000000	1978425	700000	697715
Industrial Training, Industry expert, Internship	250000	242852	300000	265457	325000	245976	300000	298876
Miscellaneous Expenses*	29515000	29266268	29250000	28769932	30350000	30150051	29950000	29673765
Total	**36865000**	**35952553**	**34560000**	**33971885**	**34865000**	**34246527**	**37150000**	**36799599**