

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 : 11540	Date of Submission : 20-02-2026

PART A- Profile of the Institute

A1. Name of the Institute: R.M.K.ENGINEERING COLLEGE	
Year of Establishment : 1995	Location of the Institute: Kavaraipeitai
A2. Institute Address: R.S.M.NAGAR,KAVARAIPETTAI,GUMMIDIPOONDI TALUK,TIRUVALLUR DIST-601206.	
City:Tiruvallur	State:Tamil Nadu
Pin Code:601206	Website:WWW.RMKEC.AC.IN
Email:PRINCIPAL@RMKEC.AC.IN	Phone No(with STD Code):044-67906790
A3. Name and Address of the Affiliating University (if any):	
Name of the University : ANNA UNIVERSITY, CHENNAI	City: Chennai
State : Tamil Nadu	Pin Code: 600025
A4. Type of the Institution: Autonomous CAY(2020-21)	
A5. Ownership Status: Self financing	

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

- No. of UG programs: 11
- No. of PG programs: 3

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

Sr.No.	Discipline	Level of program	Name of the program	Year of Start	Year of Closed	Name of The Department
1	Engineering & Technology	UG	Artificial Intelligence and Data Science	2020	--	Artificial Intelligence and Data Science
2	Engineering & Technology	UG	Civil Engineering	2006	--	Civil Engineering
3	Engineering & Technology	UG	Computer Science and Business System	2020	--	Computer Science and Business System
4	Engineering & Technology	UG	Computer Science and Design	2021	--	Computer Science and Design
5	Engineering & Technology	UG	Computer Science and Engineering	1997	--	Computer Science and Engineering
6	Engineering & Technology	PG	Computer Science and Engineering	2004	--	Computer Science and Engineering
7	Engineering & Technology	UG	Electrical and Electronics Engineering	1995	--	Electrical and Electronics Engineering
8	Engineering & Technology	UG	Electronics & Communication Engineering	1995	--	Electronics and Communication Engineering

9	Engineering & Technology	UG	Electronics and Communication (Advanced Communication Technology)	2023	--	Electronics and Communication (Advanced Communication Technology)
10	Engineering & Technology	UG	Electronics Engineering (VLSI Design and Technology)	2023	--	Electronics Engineering (VLSI Design and Technology)
11	Engineering & Technology	UG	Information Technology	1999	--	Information Technology
12	Engineering & Technology	UG	Mechanical Engineering	1995	--	Mechanical Engineering
13	Engineering & Technology	PG	Power Electronics and Drives	2005	--	Electrical and Electronics Engineering
14	Management	PG	Master of Business Administration	2025	--	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
Computer Science and Business System	Yes	Computer Science and Business System	UG
Artificial Intelligence and Data Science	Yes	Artificial Intelligence and Data Science	UG
Civil Engineering	No	Civil Engineering	UG
Electrical and Electronics Engineering	No	Electrical and Electronics Engineering	UG
Mechanical Engineering	No	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)

No Record

PART-B: Program information

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

Table No. B1: Program details.

A. List of the Programs Offered by the Department:

SR.NO.	PROGRAM NAME	PROGRAM APPLIED LEVEL	YEAR OF START / YEAR OF CLOSED	SANCTIONED INTAKE	INCREASE/DECREASE INTAKE (if any)	YEAR OF INCREASE/DECREASE	CURRENT INTAKE	YEAR OF AICTE APPROVAL	AICTE/COMPETENT AUTHORITY ARROVAL DETAILS	ACCREDITATION STATUS	FROM	TO	NO. OF TIMES PROGRAM ACCREDITED	PROGRAM DURATION
1	Mechanical Engineering	UG	1995 / --	60	Yes	2022	30	2022	F.No. Southern/ 1-10973665577/2022/EOA Dated:03-07-2022	Granted accreditation for 3 years for the period (specify period)	2023	2026	5	4

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

List of the Allied Departments/Cluster and Programs:

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

A. Name of the HoD :	Dr. K.R.Senthil Kumar
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)	30	30	30	30	60	60	120
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	30	23	27	27	45	51	90
N2=Number of students admitted in 2nd year in the same batch via lateral entry including leftover seats	0	9	6	3	7	13	15
N3=Separate division if any	0	0	0	0	0	0	0
N4=Total no. of students admitted in the 1st year via all supernumerary quotas	1	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.	31	32	33	30	52	64	105

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 $[(N1/N)*100]$
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2025-26 (CAY)	30	30	1	103.33
2024-25 (CAYm1)	30	23	0	76.67
2023-24 (CAYm2)	30	27	0	90.00

Average $[(ER1 + ER2 + ER3) / 3] = 90.00 \approx 20.00$

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

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

Item	(2021-22) LYG	(2020-21) LYGm1	(2019-20) LYGm2
A*=(No. of students admitted in the 1st year of that batch and those actually admitted in the 2nd year via lateral entry, plus the number of students admitted through multiple entry (if any) and separate division if applicable, minus the number of students who exited through multiple entry (if any).	67.00	73.00	135.00
B=No. of students who graduated from the program in the stipulated course duration	42.00	59.00	101.00
Success Rate (SR)= (B/A) * 100	62.69	80.82	74.81

Average SR of three batches $((SR_1 + SR_2 + SR_3)/3)$: 72.77

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)	7.96	6.94	7.80
Y=Total no. of successful students	23.00	27.00	27.00
Z=Total no. of students appeared in the examination	23.00	27.00	27.00
API $[X*(Y/Z)]$	7.96	6.94	7.80

Average API $[(AP1+AP2+AP3)/3]$: 7.57

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)	7.78	8.30	7.98
Y=Total no. of successful students	33.00	29.00	51.00
Z=Total no. of students appeared in the examination	33.00	30.00	52.00
API $[X * (Y/Z)]$	7.78	8.03	7.83

Average API $[(AP1 + AP2 + AP3)/3]$: 7.88

B8. Academic Performance of the Third Year Students of the Program

Table No.B8.1: Academic Performance of the Third Year Students of the Program

Academic Performance	CAYm1 (2024-25)	CAYm2 (2023-24)	CAYm3 (2022-23)
X=(Mean of 3rd year grade point average of all successful students on a 10-point scale) or (Mean of the percentage of marks of all successful students in 3rd year/10)	7.89	7.87	7.51
Y=Total no. of successful students	29.00	51.00	64.00

Z=Total no. of students appeared in the examination	29.00	51.00	64.00
API [X*(Y/Z)]:	7.89	7.87	7.51

Average API [(AP1 + AP2 + AP3)/3] : 7.76

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	67.00	73.00	135.00
X=No. of students placed	37.00	49.00	70.00
Y=No. of students admitted to higher studies	7.00	9.00	22.00
Z= No. of students taking up entrepreneurship	0.00	2.00	1.00
Placement Index(P) = $((X + Y + Z)/FS) * 100$:	65.67	82.19	68.89

Average Placement Index = $(P_1 + P_2 + P_3)/3$: 72.25 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. K.R.Senthil Kumar	XXXXXXXX03J	Ph.D	IIT Madras	Thermal Engineering	14/12/2011	14.1	Professor	Professor	14/12/2011	Regular	Yes		Yes
2	Dr. Sivagnana Prabhu K K	XXXXXXXX31J	Ph.D	Anna University	Chemical Engineering	12/02/2005	20.11	Lecturer	Professor	16/04/2015	Regular	Yes		No
3	Dr. A.Kadirvel	XXXXXXXX74A	Ph.D	Anna University	Industrial Engineering	29/06/2006	19.7	Lecturer	Professor	01/01/2014	Regular	Yes		No
4	Dr. R.Suresh Kumar	XXXXXXXX00N	Ph.D	Anna University	Thermal Engineering	09/01/2006	20	Lecturer	Professor	01/12/2021	Regular	Yes		No
5	Dr. M.Mudhu Krishnan	XXXXXXXX59F	Ph.D	Anna University	Manufacturing Engineering	16/12/2005	20.1	Lecturer	Professor	01/12/2025	Regular	Yes		No
6	Dr. S.D.Sekar	XXXXXXXX38A	Ph.D	Anna University	Thermal Engineering	27/05/2011	14.8	Assistant Professor	Associate Professor	01/06/2023	Regular	Yes		No
7	Dr.K.Vinoth Kumar	XXXXXXXX98M	Ph.D	Anna University	Product Design and Manufacturing	01/07/2024	1.7	Associate Professor	Associate Professor	01/07/2024	Regular	Yes		No

8	Dr.K.Karthick	XXXXXXXX08K	Ph.D	Annamalai University	Manufacturing Engineering	01/07/2024	1.7	Associate Professor	Associate Professor	01/07/2024	Regular	Yes		No
9	Dr. N.Mohanrajhu	XXXXXXXX25G	Ph.D	Anna University	Internal Combustion Engineering	24/06/2009	16.7	Lecturer	Associate Professor	01/03/2024	Regular	Yes		No
10	Dr. K. Sengottaiyan	XXXXXXXX14Q	Ph.D	Anna University	Internal Combustion Engineering	31/05/2013	12.8	Assistant Professor	Associate Professor	01/11/2024	Regular	Yes		No
11	Dr. P.J.Lokesh Kumar	XXXXXXXX81K	Ph.D	Anna University	CAD/CAM	14/05/2014	11.8	Assistant Professor	Associate Professor	01/11/2024	Regular	Yes		No
12	Dr. S.Rajesh	XXXXXXXX27H	Ph.D	Anna University	Thermal Engineering	25/05/2018	7.8	Assistant Professor	Associate Professor	01/12/2025	Regular	Yes		No
13	Mr. R.L.Sankar Lal	XXXXXXXX33B	M.E.	Anna University	Design (CAD)	18/06/2012	12	Assistant Professor	Assistant Professor		Regular	No	03/07/2024	No

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

C2. Student-Faculty Ratio (SFR)

No. of UG(Engineering) programs in Department including allied departments/ clusters (UGn):

UG1=1st UG program

UGn=nth UG program

B= No. of Students in UG 2nd year (ST)

C= No. of Students in UG 3rd year (ST)

D= No. of Students in UG 4th year (ST)

No. of PG (Engineering) programs in Department including allied departments/ clusters (PGm):

PG1=1st PG program.

PGm=mth PG program

A= No. of Students in PG 1st year

B= No. of Students in PG 2nd year

Student Faculty Ratio (**SFR**) = S/F

S= No. of students of all programs in the Department including all students of allied departments/clusters.

No. of students (ST)=Sanctioned Intake (SA)+ Actual admitted students via lateral entry including leftover seats (L) if any (limited to 10 % of SA)

Students who admitted under supernumerary quotas (SNQ, EWS, etc) will not be considered in calculating SFR value. Those students are exempted.

F=Total no. of regular or contractual faculty members (Full Time) in the Department, including allied departments/clusters (excluding first year faculty (The faculty members who have a 100% teaching load in the first-year courses)).

No. of UG Programs in the Department1 No. of PG Programs in the Department0

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

Description	CAY(2025-26)	CAYm1 (2024-25)	CAYm2 (2023-24)
UG1.B	33	33	33
UG1.C	33	33	66
UG1.D	33	66	66
UG1: Mechanical Engineering	99	132	165
DS=Total no. of students in all UG and PG programs in the Department	99	132	165
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= 99	S2= 132	S3= 165

Description	CAY(2025-26)	CAYm1 (2024-25)	CAYm2 (2023-24)
DF=Total no. of faculty members in the Department	12	12	11
AF= Total no. of faculty members in the allied Departments	0	0	0
F=Total no. of faculty members in the Department (DF) and allied Departments (AF)	F1= 12	F2= 12	F3= 11
FF=The faculty members in F who have a 100% teaching load in the first-year courses	0	0	0
Student Faculty Ratio (SFR)=S/(F-FF)	SFR1= 8.25	SFR2= 11.00	SFR3= 15.00
Average SFR for 3 years	SFR= 11.42		

C3. Faculty Qualification

- Faculty qualification index (FQ) = $2.5 * [(10X + 4Y)/RF]$ where
- X=No. of faculty members with Ph.D. degree or equivalent as per AICTE/UGC norms.
- Y=No. of faculty members with M. Tech. or ME degree or equivalent as per AICTE/ UGC norms.
- RF=No. of required faculty in the Department including allied Departments to adhere to the 20:1 Student-Faculty ratio, with calculations based on both student numbers and faculty requirements as per section C2 of this documents: (RF=S/20).

Table No.C3.1: Faculty qualification.

Year	X	Y	RF	FQ = $2.5 \times [(10X + 4Y) / RF]$
2025-26(CAY)	11	1	4.00	71.25
2024-25(CAYm1)	9	3	6.00	42.50
2023-24(CAYm2)	6	5	8.00	25.00

C4. Faculty Cadre Proportion

- Faculty Cadre Proportion is 1(RF1): 2(RF2): 6(RF3)
- RF1= No. of Professors required = $1/9 * \text{No. of Faculty required to comply with 20:1 Student-Faculty ratio based on no. of students (S) as per C2 of this documents.}$
- RF2= No. of Associate Professors required = $2/9 * \text{No. of Faculty required to comply with 20:1 Student-Faculty ratio based on no. of students (S) as per section C2 of this documents.}$
- RF3= No. of Assistant Professors required = $6/9 * \text{No. of Faculty required to comply with 20:1 Student-Faculty ratio based on no. of students (S) as per section C2 of this documents.}$
- Faculty cadre and qualification and experience should be as per AICTE/UGC norms.

Table No.C4.1: Faculty cadre proportion details.

Year	Professors		Associate Professors		Assistant Professors	
	Required RF1	Available AF1	Required RF2	Available AF1	Required RF3	Available AF3
2025-26	1.00	4.00	1.00	6.00	3.00	2.00
2024-25	1.00	4.00	1.00	4.00	4.00	4.00
2023-24	1.00	4.00	1.00	2.00	5.00	5.00
Average	RF1=1.00	AF1=4.00	RF2=1.00	AF2=4.00	RF2=4.00	AF2=3.67

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.

(CAYm1)

S.No	Name of the Person	Designation	Organization	Name of the Course	No. of hours handled
1	Mr.S Rajesh	Purchase Incharge	Sri Ganapathy Pharma	Mini Project and Comprehension	30.00
2	Mr.S Rajesh	Purchase Incharge	Sri Ganapathy Pharma	Product Development Lab -3	30.00

(CAYm2)

S.No	Name of the Person	Designation	Organization	Name of the Course	No. of hours handled
1	Mr.S Rajesh	Purchase Incharge	Sri Ganapathy Pharma	Mini Project and Comprehension	30.00
2	Mr.S Rajesh	Purchase Incharge	Sri Ganapathy Pharma	Product Development Lab -3	45.00

(CAYm3)

S.No	Name of the Person	Designation	Organization	Name of the Course	No. of hours handled
1	Mr.S.Krishnakumar	Former Senior Vice President	Lucas TVS Ltd, Chennai	Design and Fabrication Project and Internship	45.00
2	Mr.S.Krishnakumar	Former Senior Vice President	Lucas TVS Ltd, Chennai	Product data Management and PLM Laboratory	45.00

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	19	14	19
2	No. of peer reviewed conference papers published	15	16	18
3	No. of books/book chapters published	2	7	1

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.M.Mudhu Krishnan		Mechanical	Fixed Wing V-Tail (Uav) Drone For Delivery And Surveillance	MSME	1 Year	15.00
Dr.A.Kadirvel		Mechanical	Workflow of Knitting processing unit	WINKNIT Processor	1 Year	5.00
						Amount received (Rs.):20.00

(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.R.Suresh Kumar		Mechanical	Low cost Evacuated Tube Heat Pipe Solar Water Heater for villages	UBA	1 Year	1.00
						Amount received (Rs.):1.00

(CAYm3)

Total Amount (Lacs) Received for the Past 3 Years: 21.00

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
Mr.N.Mohanrajhu		Mechanical	Solar Installation Project	Shri Kishan Solar Solutions	09.08.2024 to 26.08.2024	0.58
Dr.A.Kadirvel		Mechanical	TQM concept is implemented to improve the performance of solar panel	VM Photography and studio	16.01.2025 to 07.05.2025	0.55
Dr.R.SureshKumar		Mechanical	Testing Viscosity of Working Fluids	AMC Cooling Point	20.02.2025 to 19.03.2025	0.52
Dr.K.Vinothkumar	Dr. K.Karthick	Mechanical	Hydro Precision Driller: Design and Fabrication of an adjustable Hydraulic Drilling Machine for heavy duty applications	Fluidtec Controls	30.04.2025 to 30.05.2025	0.52
Dr.K.R.Senthil Kumar		Mechanical	Design of packaging systems to prevent breakage during transport.	Rajesh tiles land	05.07.2024 to 10.11.2024	0.55
Dr. K.Karthick		Mechanical	Design and analysis of mechanical trolley to handle chemicals	SSK Engineering Solutions	02.08.2024 to 10.11.2024	0.58
						Amount received (Rs.):3.30

(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. K. R. Senthil Kumar,	Mr. Sankarlal R L	Mechanical	Solar Installation Project	Shri Kishan Solar Solutions	08.07.2023 to 05.08.2023	0.52
Mr.N.Mohanrajhu	Mr. Sankarlal R L	Mechanical	Solar Installation Project(Vaniayambadi)	Shri Kishan Solar Solutions, Madurai	07.09.2023 to 04.10.2023	0.53
Dr.R.Suresh kumar		Mechanical	Automated System for Inflating Tyres	BSK Automation	15.02.2024 to 02.03.2024	0.51
Dr.A.Kadirvel		Mechanical	To implement TQM Tool and Techniques in our Industry	EDS Instruments and systems pvt LTD	12.01.2024 to 23.03.2024	0.55
Dr.M.Mudhu Krishnan		Mechanical	Design and Development of 3D-Printed Customizable Electronics Housing	Cognitronics	01.05.2024 to 30.05.2024	1.00
Dr.S.D.Sekar		Mechanical	Solar Assisted Greenhouse Drying for vegetable Processing.	GUINDT ENTREPRISES, CHENNAI	02.02.2024 to 14.05.2024	0.55
						Amount received (Rs.):3.66

(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. Sankarlal R L	Mr. Mohanrajhu	Mechanical	Solar Installation Project	Shri Kishan Solar Solutions, Madurai	14.11.2022 to 30.11.2022	0.50
Dr. K. R. Senthil Kumar	Mr. R. L. Sankarlal	Mechanical	Optimized Design and Analysis of the Metal Framed Structure for Static and Dynamic Loads.	Tejas Solar Solution, Alwarthirunagar, Chennai - 87	15.02.2023 to 08.03.2023	0.30
Mr. P.J.Lokesh Kumar	Dr.A.Kadirvel	Mechanical	Industrial Safety and 5S Implementation	Golden Rock Granites Pvt Ltd, Bandikavanoor, Periyapalayam, Chennai - 67	14.3.2023 to 17.03.2023	0.15
Mr. Sankarlal R L	Mr. Mohanrajhu	Mechanical	Solar Installation Project(5000W)	Tejas Solar Solution, Alwarthirunagar, Chennai - 87	04.03.2023 to 02.05.2023	0.50
Dr.S.D.Sekar	Mr.P.J.Lokesh Kumar	Mechanical	Design and fabrication of Greenhouse Dryer	D.S.R.Engineering Works	17.03.2023 to 02.05.2023	0.30
Dr. K. R. Senthil Kumar	Mr. Sankarlal R L	Mechanical	Solar Installation Project	Shri Kishan Solar Solutions, Madurai	03.05.2023 to 28.05.2023	0.40
Dr.R.Suresh kumar		Mechanical	IoT-Enabled Thermal Management in Window Air Conditioners	Infiniti Automation	02.01.2024 to 05.05.2023	0.52
Mr. Mohanrajhu		Mechanical	Harnessing the Sun: Solar Installation Initiative	Shri Kishan Solar Solutions, Madurai	03.08.2022 to 07.11.2022	0.56
						Amount received (Rs.):3.23

Total amount (Lacs) received for the past 3 years: 10.19

Note*:

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

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

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

(CAYm1)

Faculty name	Project title/ Support for Activity	Duration of the project	Amount(Lacs) i.e. 15,25,000=15.25	Amount Utilized(Lacs) i.e. 15,25,000=15.25	Outcomes of the project
Dr.K.Vinoth Kumar	EV Toy Train	2	2.50	2.50	Donated the Collector Office
			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.M.Mudhu Krishnan	From Petrol to Power: The Rise of Electric Two-Wheelers	1	2.00	1.98	project
			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.R.Suresh Kumar	Automated Guided Vehicle	2 years	2.03	2.03	To carry the food items to the each block
			Amount received (Rs.): 2.03		

Total amount (Lacs) received for the past 3 years : 6.53**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	Lathe Shop	30	Centre Lathe, Turret and Capstan Lathes	Used for Manu	Mr.R.Viswanathan	Lab Technician	ITI Turner (CNC)
2	Special Machine Shop	30	Milling Machine, Surface Grinding, Cylindrical Grinding Machine, Radial Drilling Machine, Gear Hobbing Machine	Used for Manu	Mr.R.Viswanathan	Lab Technician	ITI Turner (CNC)
3	Thermal Engineering Laboratory	30	I.C Engine – 2 stroke and 4 stroke model, 4-stroke Diesel Engine with mechanical & hydraulic loading. Single and Multi-cylinder Petrol Engine, Data	Used for Therm	Mr. N.P.Muralikrishna	Lab Technician	ITI

4	Heat and Mass Transfer Lab	30	Heat transfer through Natural convection, forced convection apparatus, Heat transfer through Pin Fin Apparatus, Heat transfer through composite wall	Used for Heat	Mr. N.P.Muralikrishna	Lab Technician	ITI
5	Metrology and Measurement Lab	30	Slip Gauge Set, Sine Bar, Sine Center, Profile Projector / Tool Makers Microscope, Mechanical / Electrical / Pneumatic Comparator, Temperature	Used for Metro	Mr. M.Mahendran & Mr.R.	Lab Technician	ITI & ITI Turner (CNC)
6	Dynamics Laboratory	30	Cam analyzer., Motorized gyroscope, Governor apparatus - Watt, Porter, Proell and Hartnell	Used for Dyna	Mr. G.Srinivasan	Lab Technician	ITI
7	Mechatronics Laboratory	30	asic Pneumatic Trainer Kit with manual and electrical controls & PLC control, Hydraulic trainer kit, Multi	Used for Pneu	Mr. M.Mahendran Mr. C.S	Lab Technician	ITI
8	CAD / CAM Laboratory	30	Computer nodes or systems (High end CPU with 1 GB main memory) networked to the server, CAD/CAM software (Pro E or IDEAS or Unigraphics	Used for Desig	Mr.K.Vinayaga Moorthy	Lab Instructor	DME
9	Strength of Materials and Fluid Mechanics and Machinery Laboratory	30	UTM Machine, Rockwel and Brinel Hardness Tester, Torsion testing machine, Vickers Hardness testing machine, Load frame Testing machine, Tensile testing	Used for Stren	Mr.K.Vinayaga Moorthy &	Lab Instructor Lab Technic	DME,ITI

D2. Safety Measures in Laboratories

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

Sr. No	Laboratory Name	Safety Measures
1	Lathe Shop and Special Machine Shop	<ul style="list-style-type: none"> Wear safety goggles, gloves, and aprons. No loose clothing or jewelry near machines. Maintain proper tool condition and cleanliness. Use guards on lathes, grinders, and milling machines. Ensure first-aid kit and fire extinguisher availability.
2	Thermal Engineering Laboratory	<ul style="list-style-type: none"> Ensure proper ventilation and exhaust for engines and boilers. Wear heat-resistant gloves and safety goggles. Keep fire extinguishers and sand buckets nearby. Do not touch hot surfaces until cooled. Regularly check fuel lines for leaks.
3	Dynamics of Machines Laboratory	<ul style="list-style-type: none"> Ensure all rotating parts have protective covers. Maintain safe distance during operation. Avoid touching moving components. Secure balancing machines before testing. Disconnect power before adjustments.
4	Strength of Materials Laboratory	<ul style="list-style-type: none"> Use safety goggles while testing specimens. Keep hands clear of moving parts during loading. Ensure proper alignment of test specimens. Do not exceed machine load limits. Report cracks or damage in equipment immediately.
5	Fluid Mechanics and Hydraulic Machines Laboratory	<ul style="list-style-type: none"> Avoid water spillage near electrical connections. Wear non-slip footwear. Keep equipment properly grounded. Do not operate pumps or turbines at unsafe speeds. Shut off power before maintenance.
6	CAD/CAM Laboratory	<ul style="list-style-type: none"> Do not eat or drink near computers and CNC machines. Maintain proper electrical earthing for all systems. Use UPS and surge protectors to prevent data loss or damage. Follow safety procedures when operating CNC machines (eye protection, no loose clothing). Back up data regularly and shut down systems properly.

7	Mechatronics Laboratory	<ul style="list-style-type: none">• Handle electrical and electronic components with dry hands.• Ensure proper grounding of all circuits and controllers.• Disconnect power before wiring or circuit changes.• Use low-voltage sources for testing where possible.• Avoid loose wires; organize cables to prevent tripping.
8	Metrology and Measurement Laboratory	<ul style="list-style-type: none">• Handle precision instruments (like micrometers, vernier calipers) with care.• Keep measuring instruments clean and free from oil or dust.• Do not drop or roughly handle instruments.• Calibrate equipment regularly for accuracy.• Store instruments in protective cases after use.

D3. Project Laboratory/Research Laboratory

To promote innovation, research culture, and industry-oriented learning beyond regular curriculum laboratories, the Department of Mechanical Engineering has established dedicated Project Laboratories, Research Laboratories, and Centres of Excellence (CoE).

These facilities enable students and faculty members to undertake design projects, interdisciplinary research, consultancy activities, prototype development, and sponsored research work, thereby strengthening outcome-based education and research competency.

7.5.A. Availability of project laboratories/research laboratories

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

S.No.	Name of the Laboratory
1.	Centres of Excellence (CoE)- Product life Cycle Management
2.	IDEA Lab
3.	Research Laboratory
4.	Project Laboratory

7.5.B Centres of Excellence (CoE)- Product life Cycle Management

The department has established PLM - Centres of Excellence focusing on emerging technologies such as:

- Automation and Robotics
- Advanced Manufacturing
- Computational Engineering
- Sustainable Energy Systems

The CoEs aim to bridge the gap between academia and industry practices by providing advanced training, workshops, and collaborative research opportunities.

1. Purpose of PLM-Based Project / Research Labs

A Product Life Cycle Management (PLM) laboratory or Centre of Excellence in Mechanical Engineering supports the complete engineering product development cycle, including:

- Concept and design
- Engineering analysis
- Manufacturing planning
- Product testing
- Product improvement and lifecycle management

Students use tools like:

- SolidWorks
- ANSYS
- AutoCAD
- Pro E
- PTC Windchill

These facilities help students implement industry-oriented design and development practices.

Table No. 7.5.2 :LIST OF STUDENTS PLACED IN TCS-PLM (BATCH-2019-23)

Sl No.	Reg. Number	Name of the Student	Name of the Company
1	111719114052	PRAGATHESH M	TCS Ninja

2	111719114069	SHANMUGAM .A	TCS Ninja
3	111719114083	TARUN	TCS Ninja
4	111719114040	Lokesh. A	TCS Digital

Table No. 7.5.3: LIST OF STUDENTS PLACED IN TCS-PLM (BATCH-2020-24)

Sl No.	Reg. Number	Name of the Student	Name of the Company
1	111720106010	DEEPAK D	TCS Ninja
2	111720106044	SRIRAM M	TCS Ninja
3	111720106312	SUREA HARISH N	TCS Ninja

Table No. 7.5.4 :LIST OF STUDENTS PLACED IN TCS-PLM (BATCH-2021-25)

Sl No.	Reg. Number	Name of the Student	Name of the Company
1	111721106008	DHANNUSH KATHIRESAN	TCS Digital
2	111721106010	Divyesh SURESH	TCS Ninja
3	111721106030	Rajesh Ramajayam	TCS Ninja
4	111721106032	Sesha Sai Sathish Kumar	TCS Ninja
5	111721106040	TheepakVijay B R	TCS Ninja

Table 7.5.5: Projects executed using PLM COE Lab Facilities)

S.No	Register Number	Name of the Student	Title of the Project	POs Addressed	PSOs Addressed
1	111721106024 111721106305 111721106032 111721106017	Naveen Kumar M Logeshwaran B S Sesha Sai Kishore T	Hybrid turbocharger for hybrid electric vehicle	PO1, PO2, PO3, PO5, PO9	PSO3
2	111721106007 111721106011 111721106035 111721106040	Boopathi Raj G Durga Eshwanth S Saravanan M A Theepak Vijay B R	Fabrication of Rams bottom safety valve	PO1, PO3, PO5, PO11	PSO2, PSO3

3	111721106009	Dhanusharavinth G K	Design and development of V engine	PO1, PO2, PO3, PO5	PSO1
	111721106010	Divyesh S			
	111721106034	Sanjay Shanmugaa M			
	111721106038	T M Purushothaman			
4	111721106030	Rajesh R	Design and development of filament extruder	PO2, PO3, PO5, PO7, PO9	PSO3
	111721106031	Ram Prasath R			
	111721106037	Sivaprasad K			
	111721106044	Vigneshwar S			
5	111721106021	Logesh B		PO1, PO2, PO3, PO5, PO7	PSO3
	111721106041	Thirumurugan M J			

IDEA LAB

The institution has established an AICTE-sponsored IDEA (Idea Development, Evaluation & Application) Lab to promote innovation, product development, interdisciplinary learning, and hands-on engineering practice among students.

The IDEA Lab functions as a central innovation ecosystem, enabling students from Mechanical Engineering and other departments to transform ideas into working prototypes through access to advanced fabrication, design, and digital manufacturing facilities.

The IDEA Lab has significantly contributed to:

- Enhancement of experiential learning.
- Development of industry-ready skills.
- Promotion of innovation and entrepreneurship culture.
- Increased participation in national innovation programs.
- Prototype and patent development by students.

Snapshots for utilization of IDEA Lab



Students presenting their project work to guests visiting our campus



Students are actively involved in project work at the IDEA Lab during working days.



Students have successfully developed a temple prototype using 3D printing in the IDEA Lab.



Students are engaging with their project mentor in the IDEA Lab

Research Laboratory Activities

The research laboratories support:

- Faculty research publications.
- Sponsored and consultancy projects.
- PG thesis and undergraduate research work.
- Experimental validation of simulation studies.
- Industry problem-solving activities.

These laboratories facilitate exposure to modern engineering research methodologies.

Table No. 7.5.6: Outcome of the Research Laboratory facilities - Conference

Name	Title	Conference	Year
Mr. S Rajesh	Prediction of ultimate tensile strength of dissimilar substances welding using random forest regression	International Conference on Innovations in Robotics, Intelligent Automation and Control	2024
Dr. P J Lokesh Kumar	Experimental Investigation and Analysis of Emerging Hybrid Composite: Ramie/Kenaf/Bamboo/Pineapple	3rd International Conference on Disruptive Technologies	2024
Dr. R Suresh Kumar	Using a smart wearable devices monitoring the social distance in smart cities	RMKMATE 2023	2023

Mr. K Sengottaiyan	An artificial industrial intelligence based model for efficient scheduling to perform manufacturing and execution of commercial machines using Industry 4.0	RMKMATE 2023	2023
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Table No. 7.5.7: Outcome of the Research Laboratory facilities - Product Development

Names	Event	College	Prize	Date
Manoj Kumar K	MSME Idea Hackathon 4.0	MSME	15 LAKHS GRANT	Jun 25
Dhanush K	AEROTECH ASCENDERS	SAEISS Drone Development Challenge 2024	2nd prize	Aug 2024
The Team Aerotech Ascenders, a team of 10 students	SAE India southern section	KCG College of Technology	3rd prize of overall performance award in Autonomous Drone	26/Aug/23

Project Laboratory Facilities

Dedicated project laboratories are provided for students to:

- Design and fabricate engineering systems.
- Develop working prototypes.
- Conduct experimentation related to final year projects.
- Perform interdisciplinary projects involving mechanical, electrical, and automation domains.

Students are encouraged to utilize these facilities throughout the academic year under faculty supervision.

7.5.C. Utilization of Project / Research Labs / COE

Academic Year	No. of UG Projects Using Lab	No. of Research Publications
CAY	6	4
CAYm1	10	6
CAYm2	12	6

Photos of Students achievements



Students project display on international Science day celebration



The Team Aerotech Ascenders, a team of 10 students and a faculty mentor, represented RMK Engineering College to take part in the final event of the **SAE Autonomous Drone Development Competition 2023**, held at KCG College of Technology, Chennai, from **25 to 26 August 2023**.

7.5.3 Utilization of project laboratories/research laboratory /Centre of excellence



SAE BAJA 2022 event at Pithampur, Near Indore, Madhya Pradesh during 16th Feb 2022 to 20th Feb 2022.

Table 7.5.4 Funds received

Name of the Faculty	Title of the Research	Sponsor By	Status
Dr. P. J. Lokesh Kumar	Design and Development of Nextgen Dancing Doll	TNSCST (Rs. 7500)	Completed

Dr. M. Mudhukrishnan	Fixed Wing V-Tail (UAV) Drone for Delivery and Surveillance	MSME (Rs.15,00,000)	Ongoing (2025-26)
Dr. R. Suresh Kumar	Low cost Evacuated Tube Heat Pipe Solar Water Heater for villages	Unnat Barath Abhiyan (Rs. 1,00,000)	Completed (2024-25)
Mr. K. Muralidharan	Trolley Encompassed Pesticide	AICTE- SAMRI DHI	COMPLETED
Mr. K. Muralidharan	UBA Technology Development and Customization – Decomposing of wastes for Agricultural uses	Unnat Barath Abhiyan (UBA)	COMPLETED



Research Lab - CNC Production Lathe

7.5.D Relevance to POs/PSOs

Students are performed:

- CAD modeling of machine parts
- Finite element analysis
- Product assembly design
- Prototype development
- Product testing and validation
- Reverse engineering projects.

Table 7.5.4 Laboratory relevance to POs/PSOs

Facility	PO1	PO2	PO3	PO5	PO7	PO9	PO11	PSO1	PSO2	PSO3
Project Lab	✓	✓	✓	✓	–	✓	✓	✓	✓	✓
Research Lab	✓	✓	✓	✓	✓	–	✓	✓	–	✓
PLM - COE Lab	✓	✓	✓	✓	✓	✓	✓	–	✓	✓
IDEA Lab	✓	✓	✓	✓	✓	–	✓	✓	–	✓

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)	1020	51	39	6	64
2024-25(CAYm1)	1020	51	39	5	63
2025-26(CAY)	1140	57	38	8	56

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	65000000	54045722	59500000	59451081	61500000	61283825	73000000	72902520
Library	3000000	2244355	3500000	3404893	2300000	2290285	1300000	1199576
Laboratory equipment	30000000	24666740	38700000	38565392	15000000	14904667	27000000	26828660
Teaching and non-teaching staff salary	428000000	351645708	367100000	367100116	328000000	327692007	292000000	290769073

Outreach Programs	17500000	6727550	17000000	16720150	16500000	16366610	12000000	11649340
R&D	14656000	12429171	13655000	13511910	17295000	16762155	14360000	14233864
Training, Placement and Industry linkage	38000000	32892631	37500000	37316188	42500000	42464285	28000000	28062278
SDGs	22000000	5765374	21100000	21021148	13000000	12950757	6300000	6477225
Entrepreneurship	344000	344000	325000	325000	285000	285000	250000	250000
Others, specify	498570000	334687524	622180000	620831870	666670000	664231197	598040000	596706036
Total	1117070000	825448775	1180560000	1178247748	1163050000	1159230788	1052250000	1049078572

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	150000	75000	92000	81508	92000	80778	66180	65985
Software	357043	357043	389400	389400	389400	389400	190000	190000
SDGs	110000	109900	105000	104716	110000	106663	90000	79978
Support for faculty development	984289	984289	328333	328333	115500	110000	75000	70800
R & D	455538	327319	1328005	1328005	397135	397135	453042	453042
Industrial Training, Industry expert, Internship	13541	13541	25600	25345	13500	13175	272891	265450
Miscellaneous Expenses*	243000	243000	663000	664443	353759	353750	252500	252523
Total	2313411	2110092	2931338	2921750	1471294	1450901	1399613	1377778