NATIONAL BOARD OF ACCREDITATION

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

Program Name : Aerospace Engineering	**Discipline**: Engineering & Technology
Level : Under Graduate	**Tier**: 1
Application No: 10487	**Date of Submission**: 09-04-2025

PART A- Profile of the Institute

A1.Name of the Institute: AMRITA VISHWA VIDYAPEETHAM, AMRITA SCHOOL OF ENGINEERING	
Year of Establishment : 1994	Location of the Institute: Coimbatore
A2. Institute Address:AMRITA SCHOOL OF ENGINEERING AMRITA NAGAR PO ETTIMADAI COIMBATORE - 641 112 TAMIL NADU	
City:Coimbotore	State:Tamil Nadu
Pin Code:641112	Website:www.amrita.edu
Email:s_sivesh@cb.amrita.edu	Phone No(with STD Code):0422-2685502
A3. Name and Address of the Affiliating University (if any):	
Name of the University :	City:
State :	Pin Code: 0
A4. Type of the Institution: Deemed University	
A5. Ownership Status: Self financing	

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

- No. of UG programs: **14**
- No. of PG programs: **18**

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	Aerospace Engineering	2007	--	Aerospace Engineering
2	Engineering & Technology	PG	Artificial Intelligence	2020	--	Computer Science and Engineering
3	Engineering & Technology	UG	Artificial Intelligence and Data Science	2023	--	Artificial Intelligence and Data Science
4	Engineering & Technology	UG	Automation & Robotics	2021	--	Mechanical Engineering
5	Engineering & Technology	PG	Automotive Electronics	2015	--	Electronics and Communication Engineering
6	Engineering & Technology	PG	Automotive Engineering	2011	--	Mechanical Engineering
7	Engineering & Technology	PG	Biomedical Engineering	2007	--	Electronics and Communication Engineering
8	Engineering & Technology	UG	Chemical Engineering	2007	--	Chemical Engineering
9	Engineering & Technology	UG	Civil Engineering	2008	--	Civil Engineering

10	Engineering & Technology	PG	Communication Systems	2019	2024	Electronics and Communication Engineering
11	Engineering & Technology	UG	Computer & Communication Engineering	2019	--	Electronics and Communication Engineering
12	Engineering & Technology	UG	Computer Science and Engineering	1995	--	Computer Science and Engineering
13	Engineering & Technology	PG	Computer Science and Engineering	2011	--	Computer Science and Engineering
14	Engineering & Technology	UG	Computer Science and Engineering (Artificial Intelligence)	2019	--	Computer Science and Engineering
15	Engineering & Technology	UG	Computer Science and Engineering (Cyber Security)	2021	--	Cyber Security
16	Engineering & Technology	PG	Cyber Security	2006	--	Cyber Security
17	Engineering & Technology	PG	Data Science	2020	--	Artificial Intelligence and Data Science
18	Engineering & Technology	PG	Defence Technology	2021	--	Electronics and Communication Engineering
19	Engineering & Technology	UG	Electrical & Electronics Engineering	1994	--	Electrical and Electronics Engineering
20	Engineering & Technology	UG	Electrical and Computer Engineering	2019	--	Electrical and Electronics Engineering
21	Engineering & Technology	UG	Electronics & Communication Engineering	1994	--	Electronics and Communication Engineering
22	Engineering & Technology	UG	Electronics & Instrumentation Engineering	2004	2018	Electronics and Communication Engineering
23	Engineering & Technology	PG	Embedded Systems	2008	--	Electrical and Electronics Engineering
24	Engineering & Technology	PG	Engineering Design	2003	--	Mechanical Engineering
25	Engineering & Technology	PG	Industrial Intelligent Systems	2019	2022	Electrical and Electronics Engineering
26	Engineering & Technology	PG	Manufacturing & Automation	2003	--	Mechanical Engineering
27	Engineering & Technology	PG	Material Science and Engineering	2015	--	Chemical Engineering
28	Engineering & Technology	UG	Mechanical Engineering	1994	--	Mechanical Engineering
29	Engineering & Technology	PG	Power Electronics & Drives	2019	--	Electrical and Electronics Engineering
30	Engineering & Technology	PG	Renewable Energy Technologies	2014	--	Electrical and Electronics Engineering
31	Engineering & Technology	PG	Structural and Construction Engineering	2014	--	Civil Engineering
32	Engineering & Technology	PG	VLSI Design	2002	--	Electronics and Communication Engineering

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

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

Name of the Department	Having Allied Departments	Name of the Program	Program Level
Civil Engineering	No	Civil Engineering	UG
Chemical Engineering	No	Chemical Engineering	UG
Aerospace Engineering	No	Aerospace 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	Aerospace Engineering	UG	2007 / --	60	No	NA	60	2007	F.No. Southern/1-43655461262/2024/EOA Dated 24-May-2024	Granted accreditation for 3 years for the period (specify period)	2022	2025	2	4

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. A. R. Srikrishnan
B. Nature of appointment:	Regular
C. Qualification:	Ph.D

B3. Program Details

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

Item (Information to be provided cumulatively for all the shifts with explicit headings, wherever applicable)	2024-25 (CAY)	2023-24 (CAYm1)	2022-23 (CAYm2)	2021-22 (CAYm3)	2020-21 (CAYm4)	2019-20 (CAYm5)	2018-19 (CAYm6)
N=Sanctioned intake of the program (as per AICTE /Competent authority)	60	60	60	60	60	60	60

N1=Total no. of students admitted in the 1st year minus the no. of students, who migrated to other programs/ institutions plus no. of students, who migrated to this program	73	71	70	93	67	52	60
N2=Number of students admitted in 2nd year in the same batch via lateral entry including leftover seats	0	0	0	0	0	0	0
N3=Separate division if any	0	0	0	0	0	0	0
N4=Total no. of students admitted in the 1st year via all supernumerary quotas	0	0	0	0	0	0	0
Total number of students admitted in the program (N1 + N2 + N3 + N4) - excluding those admitted through multiple entry and exit points.	73	71	70	93	67	52	60

CAY= Current Academic Year. CAYm1= Current Academic Year Minus 1 CAYm2= Current Academic Year Minus 2. LYG= Last Year Graduate. LYGm1= Last Year Graduate Minus 1. LYGm2= Last Year Graduate Minus 2.

B4. Enrolment Ratio in the First Year

Table No. B4.1: Student enrolment ratio in the 1st year.

Year of entry	N (From Table 4.1)	N1 (From Table 4.1)	N4 (From Table 4.1)	Enrollment Ratio [(N1/N)*100]
2024-25 (CAY)	60	0	0	121.67
2023-24 (CAYm1)	60	0	0	118.33
2022-23 (CAYm2)	60	0	0	116.67

Average [(ER1 + ER2 + ER3) / 3] = 118.89≡ 100

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

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

Item	(2020-21) LYG	(2019-20) LYGm1	(2018-19) LYGm2
A*= (No. of students admitted in the 1st year of that batch and those actually admitted in the 2nd year via lateral entry, plus the number of students admitted through multiple entry (if any) and separate division if applicable, minus the number of students who exited through multiple entry (if any).	62.00	60.00	60.00
B=No. of students who graduated from the program in the stipulated course duration	62.00	50.00	57.00
Success Index [SI = Y / X]	1.00	0.83	0.95

Average SR of three batches ((SR_1+ SR_2+ SR_3)/3): 0.93

B6. Academic Performance of the First-Year Students of the Program

Table No.B6.1: Academic Performance of the First-Year Students of the Program.

Academic Performance	CAYm1(2023-24)	CAYm2(2022-23)	CAYm3 (2021-22)
X=(Mean of 1st year grade point average of all successful students on a 10-point scale) or (Mean of the percentage of marks of all successful students in 1st year/10)	7.33	7.67	7.09
Y=Total no. of successful students	71.00	70.00	93.00
Z=Total no. of students appeared in the examination	71.00	71.00	93.00
API [X*(Y/Z)]	7.33	7.56	7.09

Average API[(AP1+AP2+AP3)/3] : 7.33

B7: Academic Performance of the Second Year Students of the Program

Table No.B7.1: Academic Performance of the Second Year Students of the Program.

Academic Performance	CAYm1 (2023-24)	CAYm2 (2022-23)	CAYm3 (2021-22)
X=(Mean of 2nd year grade point average of all successful students on a 10-point scale) or (Mean of the percentage of marks of all successful students in 2rd year/10)	7.71	7.16	7.50
Y=Total no. of successful students	68.00	93.00	67.00
Z=Total no. of students appeared in the examination	70.00	93.00	67.00
API [X * (Y/Z)]	7.49	7.16	7.50

Average API [(AP1 + AP2 + AP3)/3] : 7.38

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

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

Academic Performance	CAYm1 (2023-24)	CAYm2 (2022-23)	CAYm3 (2021-22)
X=(Mean of 3rd year grade point average of all successful students on a 10-point scale) or (Mean of the percentage of marks of all successful students in 3rd year/10)	7.36	7.58	8.11
Y=Total no. of successful students	92.00	64.00	51.00
Z=Total no. of students appeared in the examination	93.00	67.00	51.00
API [X*(Y/Z)]:	7.28	7.24	8.11

Average API [(AP1 + AP2 + AP3)/3] : 7.54

B9. Placement, Higher Studies, and Entrepreneurship

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

Item	LYG (2020-21)	LYGm1(2019-20)	LYGm2(2018-19)
FS*=Total no. of final year students	64.00	60.00	60.00
X=No. of students placed	24.00	21.00	25.00
Y=No. of students admitted to higher studies	20.00	26.00	21.00
Z= No. of students taking up entrepreneurship	1.00	1.00	4.00
Placement Index(P) = (((X + Y + Z)/FS) * 100):	70.31	80.00	83.33

Average Placement Index = (P_1 + P_2 + P_3)/3: 77.88 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. J. Chandrasekhar	XXXXXXX90H	Ph.D	IIT, Bombay	Flight Dynamics , Simulators	16/10/2008	16.5	Professor	Professor	16/10/2008	Contractual Fulltime	Yes		No
2	Dr. Shantanu Bhowmik	XXXXXXX62N	Ph.D	IIT, Roorkee	Aviation and Space Materials	09/01/2013	12.2	Professor	Professor	09/01/2013	Regular	Yes		No
3	Dr. V. Sivakumar	XXXXXXX46N	Ph.D	IIT, Madras	Structural Mechanics	13/07/2006	18.8	Assistant Professor	Professor	01/07/2021	Regular	Yes		No
4	Dr. A. R. Srikrishnan	XXXXXXX40N	Ph.D	IIT, Madras	High Speed flows. Propulsions	04/06/2012	12.9	Associate Professor	Professor	01/07/2021	Regular	Yes		Yes
5	Dr. Balajee Ramakrishnananda	XXXXXXX96J	Ph.D	Nanyang Technological University, Singapore	Computational Fluid Dynmaics	07/01/2011	14.2	Assistant Professor	Associate Professor	01/07/2021	Regular	Yes		No
6	Dr. R. Kannan	XXXXXXX21P	Ph.D	IISc, Bangalore	Interfacial Thermal Fluids	09/07/2016	8.8	Assistant Professor	Associate Professor	01/07/2021	Regular	Yes		No
7	Dr. T . Rajesh Senthil Kumar	XXXXXXX08H	Ph.D	Amrita Vishwa Vidyapeetham	Aerodynamics and Propulsion	01/07/2009	15.9	Assistant Professor	Assistant Professor		Regular	Yes		No
8	Dr. Anand Raj	XXXXXXX07F	Ph.D	IIT, Madras	High Speed Flows , Propulsion	13/12/2021	3.3	Assistant Professor	Assistant Professor		Regular	Yes		No
9	Dr. Sakthivel Thangavel	XXXXXXX92A	Ph.D	IIT, Kanpur	Structures and Flight Dynamics	19/01/2022	3.2	Assistant Professor	Assistant Professor		Regular	Yes		No
10	Dr. Jinraj V Pushpangathan	XXXXXXX53D	Ph.D	IISc, Bangalore	Guidance & control of unmanned systems	27/12/2023	1.3	Assistant Professor	Assistant Professor		Regular	Yes		No
11	Dr. S. Krishna Kumar	XXXXXXX95D	Ph.D	IIT, Madras	Stochastic nonlinear Dynamics , Structural Health Monitoring	23/05/2024	0.10	Assistant Professor	Assistant Professor		Regular	Yes		No
12	Dr. Nikhil Kumar Singh	XXXXXXX29M	Ph.D	IIT, Kharagpur	Path Planning, Guidance & Control of Unmanned Vehicles	29/07/2022	2.1	Assistant Professor	Assistant Professor		Regular	No	31/08/2024	No
13	Dr. J Venkataramani	XXXXXXX55B	Ph.D	IIT, Madras	Aeroelasticity, Nonlinear Dynamics, Random Vibrations	18/12/2023	0.4	Assistant Professor	Assistant Professor		Regular	No	08/05/2024	No
14	Dr. V Sivadas	XXXXXXX63F	Ph.D	IIT, Bombay	Fluid Mechanics	02/01/2008	14.6	Associate Professor	Associate Professor	02/01/2008	Regular	No	30/06/2022	No

15	Dr. TVK Sushil Kumar	XXXXXXX85Q	Ph.D	Amrita Vishwa Vidyapeetham	Avionics and Navigational Aids	03/01/2011	11.5	Assistant Professor	Assistant Professor		Regular	No	30/06/2022	No
16	Dr. Vaitla Laxman	XXXXXXX83N	Ph.D	IIT, Kanpur	Structural Dynamics	03/06/2011	11	Assistant Professor	Assistant Professor		Regular	No	31/05/2022	No
17	Dr. Parvathi S P	XXXXXXX86C	Ph.D	IISST, Trivandrum	Guidance and Control, Space Flight Mechanics	19/01/2022	0.7	Assistant Professor	Assistant Professor		Regular	No	22/08/2022	No
18	Dr Resmi V L	XXXXXXX29R	Ph.D	IISST, Trivandrum	Control system & Fractional order modelling	10/03/2025	0	Assistant Professor	Assistant Professor		Regular	Yes		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(2024-25)**	**CAYm1 (2023-24)**	**CAYm2 (2022-23)**
UG1.B	60	60	60
UG1.C	60	60	60
UG1.D	60	60	60
UG1: Aerospace Engineering	**180**	**180**	**180**
DS=Total no. of students in all UG and PG programs in the Department	180	180	180
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=** 180	**S2=** 180	**S3=** 180
DF=Total no. of faculty members in the Department	11	10	10
AF= Total no. of faculty members in the allied Departments	0	0	0

Description	CAY(2024-25)	CAYm1 (2023-24)	CAYm2 (2022-23)
F=Total no. of faculty members in the Department (DF) and allied Departments (AF)	**F1=** 11	**F2=** 10	**F3=** 10
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= 16.36**	**SFR2= 18.00**	**SFR3= 18.00**
Average SFR for 3 years	**SFR= 17.45**		

C3. Faculty Qualification

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

Table No.C3.1: Faculty qualification.

Year	X	Y	RF	FQ = 2.5 x [(10X + 4Y) / RF)]
2024-25(CAY)	11	0	9.00	30.56
2023-24(CAYm1)	10	0	9.00	27.78
2022-23(CAYm2)	9	1	9.00	26.11

C4. Faculty Cadre Proportion

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

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

Year	Professors		Associate Professors		Assistant Professors	
	Required RF1	Available AF1	Required RF2	Available AF1	Required RF3	Available AF3
2024-25	1.00	3.00	2.00	2.00	6.00	5.00
2023-24	1.00	3.00	2.00	2.00	6.00	4.00
2022-23	1.00	3.00	2.00	2.00	6.00	4.00
Average	RF1=1.00	AF1=3.00	RF2=2.00	AF2=2.00	RF2=6.00	AF2=4.33

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	Dr. Raju Ananth	Senior Consultant(Retd)	Structural Integrity Inc San Jose, California	19AEE331-Fundamentals of Heat transfer	25.00
2	Mr. Navneet Bhushan	Senior Consultant/Scientie	CRFITTI Consulting, Bangalore	19AEE402 - Aero Design	20.00
3	Dr Venkataraman B.	Distinguished Professor	Amrita Vishwa Vidyapeetham	19AEE204- Materials for Aviation and Space	15.00

(CAYm2)

S.No	Name of the Person	Designation	Organization	Name of the Course	No. of hours handled
1	Dr.C G Kim	Professor	KAIST Republic of Korea	19AEE342-Composite materials and mechacnics	14.00
2	Dr. Raju Ananth	Senior Consultant (Retd)	Structural Integrity Inc San Jose, California	19AEE331-Fundamentals of Heat transfer	20.00
3	Dr Rakesh kumar Sharma	Scientiest-G (Retd)	DRDL Hyderabad	19AEE101-Introduction to Aerospace Engineeringh	20.00

(CAYm3)

S.No	Name of the Person	Designation	Organization	Name of the Course	No. of hours handled
1	Mr. Sathish Mukund Bhave	Scientiest-G (Redt)	NSTL-DRDO	19AEE302- Aerospace Propulsion	30.00
2	Mr. Navneet Bhushan	Senior Consultant/Scientie	CRFITTI, Consulting, Bangalore	19AEE402 - Aero Design	30.00

C6. Academic Research

Table No. C6.1: Faculty publication details.

S.No.	Item	2023-24 (CAYm1)	2022-23 (CAYm2)	2021-22 (CAYm3)
1	No. of peer reviewed journal papers published	7	13	6
2	No. of peer reviewed conference papers published	3	1	2
3	No. of books/book chapters published	0	1	0

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. Shantanu Bhowmik		Department of Aerospace Engineering	Development of Mine Blast Proof Hybrid Composite	Bharat Forge	03 Months	28.50
						Amount received (Rs.):28.50

(CAYm2)

(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
Dr. A. R. Srikrishnan		Department of Aerospace Engineering	Analysis of throat film cooling for Semi-cryogenic Thrust chamber	ISRO	1.5 Years	21.93
						Amount received (Rs.):21.93

Total Amount (Lacs) Received for the Past 3 Years: 50.43

Note*:

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

C8. Consultancy Work

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

(CAYm1)

(CAYm2)

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. Shantanu Bhowmik		Department of Aerospace Engineering	Development of High Impact Resistance Hybrid Composite for Defence, Aviation and Space”	Carborundum Universal Ltd	04 Months	25.18
						Amount received (Rs.):25.18

(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
Dr. Shantanu Bhowmik		Department of Aerospace Engineering	Development of Ultra Lightweight Fireproof And Insulating Composite	Gharda Chemicals Ltd	06months	3.25
						Amount received (Rs.):3.25

Total amount (Lacs) received for the past 3 years: 28.43

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 A R Srikrishnan	Supersonic jet facility	1 Year	58.00	58.00	Construction of supersonic free jet facility being used for research
Dr Rajesh Senthil Kumar T	UAV lab and research facility	1 Year	5.00	5.00	Development of fixed wing UAV with VTOL capacity and Coaxial octocopter UAV
			Amount received (Rs.): 63.00		

(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 R Kannan	Stereo PIV facility	1 year	104.00	104.00	Establishment PIV facility which is currently used for Applied research
			Amount received (Rs.): 104.00		

(CAYm3)

Total amount (Lacs) received for the past 3 years : 167.00

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	Aerodynamics Lab	3	Low Speed wind tunnel	6	R SreePrasad/ S Rajasek	Technical Assistant/Senior	BE/BE
2	Aero structures Lab	3	(i) Constant Strength Beam (ii) Combined Loading (iii) Sheer Center for open section (iv) Sheer Stress in	6	R Sreeprasad/ M Thirukur	Technical Assistant/Skillec	BE/DEE
3	Propulsion Lab	3	(i) Propeller Efficiency Test Rig (ii) Incompressible free Jet (iii) Supersonic Nozzle (iv) Flame speed	6	S Rajasekaran/ R Yuvaraj	Senior lab assistant/Skille	BE/DME
4	Flight Testing Lab	3	Flight Simulator	6	S Rajasekaran/ M Thiruku	Senior lab assistant/Skille	BE/DEE
5	Aero Design Lab	6	Computational facility with design software	3	S Rajasekaran	Senior lab assistant	BE
6	Avionics Lab	3	MATLAB/SIMULINK	6	S Rajasekaran	Senior lab assistant	BE

7	UAV Lab	6	(i) Multirotor Kit (ii) RC Aircraft (iii) CG measurement set up (iv) Moments of Inertia measurement set up	6	R SreePrasad/ R Yuvaraj	Technical Assistant/Skillec	BE/DME
8	Materials Testing Lab	4	(i) Torsion testing machine (ii) Brinell hardness testing machine (iii) Deflection test apparatus (iv) Rockwell hardness testing machine (v) Universal	6	S Rajasekaran	Senior lab assistant	BE
9	Mechanics of Fluids Lab	4	(i) Falling ball viscometer (ii) Center of pressure (iii) Metacentric height (iv) Heleshaw experiment (v) Bernoulli experiment setup (vi) Jet impact studies	6	R SreePrasad	Technical Assistant	BE
10	Measurements and Instrumentation lab	5	(i) Linear displacement measurement (ii) Angular displacement measurement (iii) Angular velocity measurement (iv) Load measurement (v)	6	R Yuvaraj	Skilled assistant	DME

D2. Safety Measures in Laboratories

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

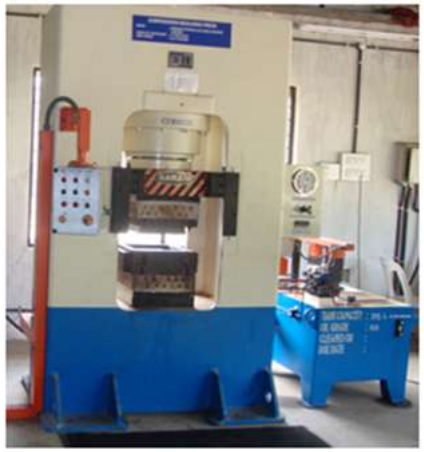
Sr. No	Laboratory Name	Safety Measures
1	Aerodynamics Lab	1. Safety rules are carefully drafted and displayed. 2. Every first class of the lab course is dedicated to explaining safety measures to students. 3. First aid box is made available. 4. Sufficient numbers of Dry Chemical Powder (DCP) fire extinguishers are placed in the laboratory. 5. Periodical checking of electrical, and plumbing setup are carried out. 6. Appropriate storage areas are provided for tools, chemicals and hazardous materials. 7. lab is equipped with sufficient numbers of wide doors and emergency exits.
2	Aero structures Lab	1. Safety rules are carefully drafted and displayed. 2. Every first class of the lab course is dedicated to explaining safety measures to students. 3. First aid box is made available. 4. Sufficient numbers of Dry Chemical Powder (DCP) fire extinguishers are placed. 5. Periodical checking of electrical, and plumbing setup are carried out. 6. Appropriate storage areas are provided for tools. 7. Sufficient numbers of wide doors and emergency exits are provided.
3	Propulsion Lab	1. Safety rules are carefully drafted and displayed. 2. Every first class of the lab course is dedicated to explaining safety measures to students. 3. First aid box is made available. 4. Sufficient numbers of Dry Chemical Powder (DCP) fire extinguishers are placed. 5. Periodical checking of electrical, and plumbing setup are carried out. 6. Appropriate storage areas are provided for tools, chemicals and hazardous materials. 7. lab is equipped with sufficient numbers of wide doors and emergency exits. 8. Students are provided with sufficient earmuffs to protect their ears from noise.
4	Flight Testing Lab	1. Safety rules are carefully drafted and displayed. 2. Every first class of the lab course is dedicated to explaining safety measures to students. 3. First aid box is made available. 4. Sufficient numbers of Dry Chemical Powder (DCP) fire extinguishers are placed in the laboratory. 5. Periodical checking of electrical, and plumbing setup are carried out. 7. lab is equipped with sufficient numbers of wide doors and emergency exits.
5	Aero Design Lab	1. Safety rules are carefully drafted and displayed. 2. Every first class of the lab course is dedicated to explaining safety measures to students. 3. First aid box is made available. 4. Sufficient numbers of Dry Chemical Powder (DCP) fire extinguishers are placed in the laboratory. 5. Periodical checking of electrical, and plumbing setup are carried out. 7. lab is equipped with sufficient numbers of wide doors and emergency exits.
6	Avionics Lab	1. Safety rules are carefully drafted and displayed. 2. Every first class of the lab course is dedicated to explaining safety measures to students. 3. First aid box is made available. 4. Sufficient numbers of Dry Chemical Powder (DCP) fire extinguishers are placed in the laboratory. 5. Periodical checking of electrical, and plumbing setup are carried out. 7. lab is equipped with sufficient numbers of wide doors and emergency exits.
7	UAV Lab	1. Safety rules are carefully drafted and displayed. 2. Every first class of the lab course is dedicated to explaining safety measures to students. 3. First aid box is made available. 4. Sufficient numbers of Dry Chemical Powder (DCP) fire extinguishers are placed in the laboratory. 5. Periodical checking of electrical, and plumbing setup are carried out. 7. lab is equipped with sufficient numbers of wide doors and emergency exits. 8. Appropriate storage areas are provided for tools, batteries and hazardous materials.

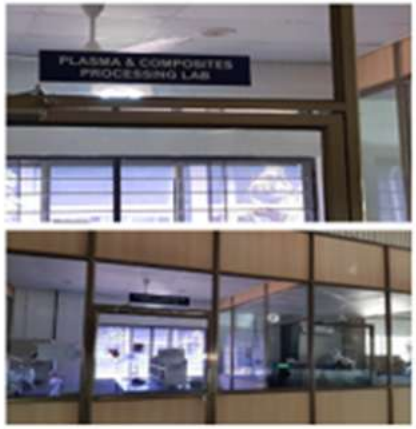
8	Fluid Flow Diagnostics Lab	1. Safety rules are carefully drafted and displayed. 2. Every first class of the lab course is dedicated to explaining safety measures to students. 3. First aid box is made available. 4. Sufficient numbers of Dry Chemical Powder (DCP) fire extinguishers are placed in the laboratories. 5. Periodical checking of electrical, and plumbing setup are carried out. 6. Appropriate storage areas are provided for tools, chemicals and hazardous materials. 7. Lab is equipped with sufficient numbers of wide doors and emergency exits. 8. Goggles to prevent exposure of eyes to laser. 9. Earmuffs are avaiable for students.
9	Composite Manufacturing Lab /Composite Processing and Testing Lab	1. Safety rules are carefully drafted and displayed. 2. Every first class of the lab course is dedicated to explaining safety measures to students. 3. First aid box is made available. 4. Sufficient numbers of Dry Chemical Powder (DCP) fire extinguishers are placed. 5. Periodical checking of electrical, and plumbing setup are carried out. 6. Appropriate storage areas are provided for tools, chemicals and hazardous materials. 7. Labs are equipped with sufficient numbers of wide doors and emergency exits. 8. PG students are not allowed handle the chemicals and operate the machines without the presence of faculty or lab staff. 9. Sufficient number of gloves goggles and apron while handling chemicals. 10. Face mask to prevent nano-particle inhaling

D3. Project Laboratory/Research Laboratory

1. Composite Manufacturing Lab

- 500 Bar/500C - compressible molding machine
- Plasma Vapor Deposition/Sputtering machine
- Oven





Plasma & Composites Processing

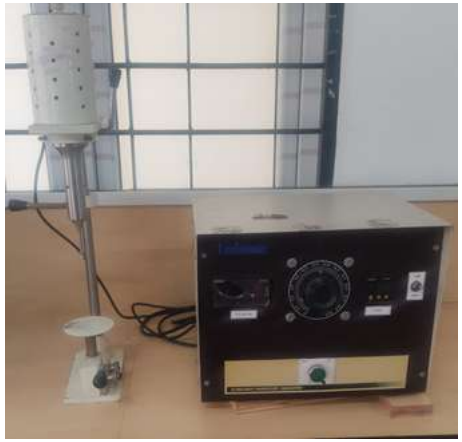
Compression Moulding M/c

Oven

2. Composite Processing and Testing Lab

- 10 kN Universal testing machine Zwick roell
- Pulverizer machine
- Sonicator

Tensile Testing machine (Zwick- 10kN)

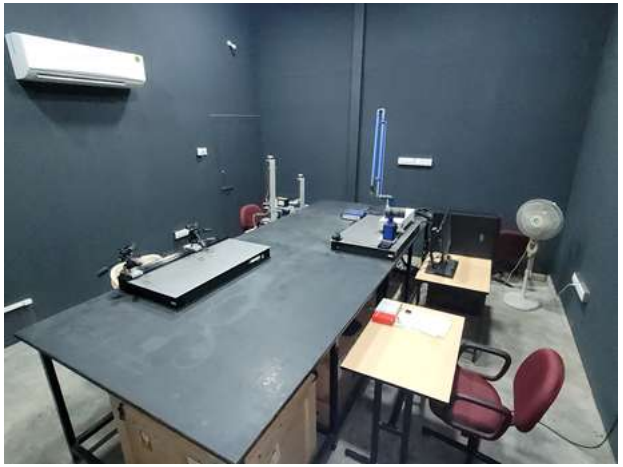


Sonicator

Pulverizer machine

3. Fluid Flow Diagnostics and PIV Lab

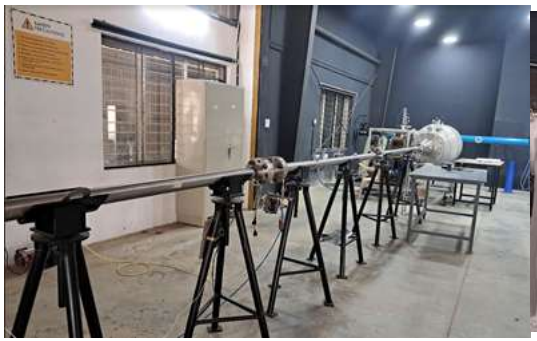
- High Speed Camera
- Laser
- Stereo PIV set up
- Background Oriented Schlieren
- Conventional Schlieren (optical)



PIV LAB

4. Supersonic/Hypersonic Flow Facility

- Hypersonic Shock Tunnel
- Open Supersonic Jet Facility



Hypersonic Shock Tunnel (MACH 8)

Open Supersonic Jet Facility

5. Interfacial Thermal Fluids Lab

6. Multiple 64 GB Intel Xeon Servers.

7. High Performance Computing Facility

- 5 nodes - each node is 96 core and 256 GB memory
- I-DEAS 10NX, CATIA V5R14, Pro/ENGINEER Creo 5.0, Unigraphics NX, Autodesk Inventor SERIES Auto CAD R14, VERICUT 4.1, ANSYS 13.0, Fluent 6.3, GAMBIT, MoldFlow 3.0, ARENA 11.0, Poly Flow 11.0, Paulsons CBT, Edge cam R2012, ABAQUS, LS-DYNA, Hyper Works 7.0, Solid Edge V19, Mechanical Desktop 6.

PART E: First Year faculty and financial Resources

(Data to be filled in for the first year course faculty and budget allocation and utilization)

E1. First Year Student-Faculty Ratio (FYSFR)

Table No. E1.1: FYSFR details.

Year	Sanctioned intake of all UG programs (S4)	No. of required faculty (RF4= S4/20)	No. of faculty members in Basic Science Courses & Humanities and Social Sciences including Management courses (NS1)	No. of faculty members in Engineering Science Courses (NS2)	Percentage= No. of faculty members ((NS1*0.8) + (NS2*0.2))/(No. of required faculty (RF4)); Percentage= ((NS1*0.8) +(NS2*0.2))/RF
2022-23(CAYm2)	1320	66	75	65	111
2023-24(CAYm1)	1440	72	83	84	116
2024-25(CAY)	1980	99	86	98	89

E2. Budget Allocation, Utilization, and Public Accounting at Institute Level

Table No. E2.1: Budget and actual expenditure incurred at Institute level.

Items	Budgeted in 2024-2025	Actual Expenses in 2024-2025 till	Budgeted in 2023-2024	Actual Expenses in 2023-2024 till	Budgeted in 2022-2023	Actual Expenses in 2022-2023 till	Budgeted in 2021-2022	Actual Expenses in 2021-2022 till
Infrastructure Built-Up	69000000	71812496	63000000	65260771	56000000	55807472	262000000	227590356
Library	33000000	31752441	24000000	24673925	64000000	63091836	96000000	91424028
Laboratory equipment	54000000	50960549	28000000	25159375	15000000	15183885	11000000	9123871
Teaching and non-teaching staff salary	1113000000	1135763217	1087000000	1097974733	1034000000	1044140652	768000000	760008856
Outreach Programs	23500000	23878785	26000000	25992719	27000000	28304929	10000000	10634248
R&D	195000000	189632130	115000000	111365553	81000000	78901094	23000000	20618716
Training, Placement and Industry linkage	6000000	5917481	4500000	4785665	5000000	4987162	5000000	4838902
SDGs	27000000	26000000	24000000	23300000	20000000	18900000	5500000	5200000
Entrepreneurship	1000000	960000	1000000	892800	1000000	866016	500000	649512
Others, specify	615000000	585583135	598000000	553435027	574000000	546376752	606000000	572157256
Total	**2136500000**	**2122260234**	**1970500000**	**1932840568**	**1877000000**	**1856559798**	**1787000000**	**1702245745**

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

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

Items	Budgeted in 2024-2025	Actual Expenses in 2024-2025 till	Budgeted in 2023-2024	Actual Expenses in 2023-2024 till	Budgeted in 2022-2023	Actual Expenses in 2022-2023 till	Budgeted in 2021-2022	Actual Expenses in 2021-2022 till
Laboratory equipment	675000	653284	3500000	3397406	250000	240183	150000	4680

Software	1000000	976935	75000	59456	850000	760059	820000	811610
SDGs	1000000	975640	1000000	926634	770000	754805	200000	205564
Support for faculty development	175000	171131	325000	312467	300000	271000	270000	254200
R & D	6500000	6138936	4700000	4369517	3000000	2390998	1400000	1228754
Industrial Training, Industry expert, Internship	200000	176466	150000	92292	150000	79266	200000	46726
Miscellaneous Expenses*	30000000	29984395	29000000	28339809	26500000	26096745	23500000	23244174
Total	**39550000**	**39076787**	**38750000**	**37497581**	**31820000**	**30593056**	**26540000**	**25795708**