NATIONAL BOARD OF ACCREDITATION

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

Program Name : Civil 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	Civil Engineering	UG	2008 / --	60	No	NA	60	2008	F.No. Southern/1-43655461262/2024/EOA (Dated: 24/05/2024)	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 :	DHANYA SATHYAN
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	49	53	37	44	48	45	51
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.	49	53	37	44	48	45	51

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	81.67
2023-24 (CAYm1)	60	0	0	88.33
2022-23 (CAYm2)	60	0	0	61.67

Average [(ER1 + ER2 + ER3) / 3] = 77.22≡ 14.00

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	(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).	48.00	45.00	51.00
B=No. of students who graduated from the program in the stipulated course duration	39.00	43.00	45.00
Success Rate (SR)= (B/A) * 100	81.25	95.56	88.24

Average SR of three batches ((SR_1+ SR_2+ SR_3)/3): 88.35

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)	7.43	6.98	7.30
Y=Total no. of successful students	53.00	37.00	44.00
Z=Total no. of students appeared in the examination	53.00	37.00	44.00
API [X*(Y/Z)]	7.43	6.98	7.30

Average API[(AP1+AP2+AP3)/3] : 7.24

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)	6.70	7.32	7.31
Y=Total no. of successful students	37.00	44.00	48.00
Z=Total no. of students appeared in the examination	37.00	44.00	48.00
API [X * (Y/Z)]	6.70	7.32	7.31

Average API [(AP1 + AP2 + AP3)/3] : 7.11

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)	7.38	7.18	7.48
Y=Total no. of successful students	44.00	48.00	45.00
Z=Total no. of students appeared in the examination	44.00	48.00	45.00
API [X*(Y/Z)]:	7.38	7.18	7.48

Average API [(AP1 + AP2 + AP3)/3] : 7.35

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	60.00	60.00	60.00
X=No. of students placed	14.00	22.00	23.00
Y=No. of students admitted to higher studies	31.00	23.00	26.00
Z= No. of students taking up entrepreneurship	0.00	0.00	0.00
Placement Index(P) = (((X + Y + Z)/FS) * 100):	75.00	75.00	81.67

Average Placement Index = (P_1 + P_2 + P_3)/3: 77.22 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	K M Mini	XXXXXXX48M	Ph.D	ANNA UNIVERSITY	STRUCTURAL ENGINEERING	22/07/1996	28.8	Lecturer	Professor	01/07/2011	Regular	Yes		No
2	SOUNDHARAJAN B	XXXXXXX58P	Ph.D	IIT MADRAS	WATER RESOURCES ENGINEERING	22/01/2018	7.2	Assistant Professor	Associate Professor	01/07/2019	Regular	Yes		No
3	DHANYA SATHYAN	XXXXXXX90P	Ph.D	AMRITA VISHWA VIDYAPEETHAM	STRUCTURAL ENGINEERING	08/08/2005	19.7	Lecturer	Associate Professor	01/05/2019	Regular	Yes		Yes
4	ANANTHKUMAR M	XXXXXXX14R	M.E/M.Tech	ANNA UNIVERISTY	STRUCTURAL ENGINEERING	01/08/2009	15.8	Assistant Professor	Assistant Professor		Regular	Yes		No
5	PRAKASH C	XXXXXXX35J	Ph.D	NIT CALICUT	ENVIRONMENTAL ENGINEERING AND MANAGEMENT	07/06/2010	14.10	Assistant Professor	Associate Professor	01/07/2024	Regular	Yes		No
6	RAKESH P	XXXXXXX63G	M.E/M.Tech	NIT SURATHKAL	CONSTRUCTION TECHNOLOGY AND MANAGEMENT	10/07/2013	11.8	Assistant Professor	Assistant Professor		Regular	Yes		No
7	LALITHPRAKASH E	XXXXXXX15D	M.E/M.Tech	ANNA UNIVERISTY	CONSTRUCTION ENGINEERING MANAGEMENT	07/07/2014	10.8	Assistant Professor	Assistant Professor		Regular	Yes		No
8	ANJALY J PILLAI	XXXXXXX21D	Ph.D	IIT GUWAHATI	STRUCTURAL ENGINEERING	01/07/2022	2.9	Assistant Professor	Assistant Professor		Regular	Yes		No
9	VIJAYANARAYANAN A R	XXXXXXX56C	Ph.D	IIT MADRAS	STRUCTURAL ENGINEERING	25/11/2021	3.4	Assistant Professor	Assistant Professor		Regular	Yes		No
10	ARJUN SIVA RATHAN R T	XXXXXXX81K	Ph.D	NIT TIRUCHIRAPALLI	TRANSPORTATION ENGINEERING	30/08/2022	2.6	Assistant Professor	Assistant Professor		Regular	Yes		No
11	VISWANATH P	XXXXXXX48M	Ph.D	IIT KANPUR	GEOTECHNICAL ENGINEERING	13/02/2023	2.1	Assistant Professor	Assistant Professor		Regular	Yes		No
12	KRISHNAN K	XXXXXXX61D	Ph.D	IIT KHARAGPUR	GEOTECHNICAL ENGINEERING	19/06/2024	0.9	Assistant Professor	Assistant Professor		Regular	Yes		No
13	PRABAKARAN KESAVAN	XXXXXXX90J	Ph.D	IIT MADRAS	STRUCTURAL ENGINEERING	08/07/2024	0.8	Assistant Professor	Assistant Professor		Regular	Yes		No
14	KISHORE M S	XXXXXXX28B	M.E/M.Tech	APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY (KTU) KERALA	GEOTECHNICAL ENGINEERING	07/02/2024	1.1	Assistant Professor	Assistant Professor		Contractual Fulltime	Yes		No
15	PARESH GOVIND MIRGAL	XXXXXXX59R	Ph.D	IIT BOMBAY	STRUCTURAL ENGINEERING	07/08/2023	0.9	Assistant Professor	Assistant Professor		Regular	No	06/06/2024	No
16	V POORNIMA	XXXXXXX19H	Ph.D	ANNA UNIVERISTY	STRUCTURAL ENGINEERING	22/06/2015	7.6	Assistant Professor	Assistant Professor		Regular	No	05/01/2023	No
17	K JAYAKESH	XXXXXXX83Q	Ph.D	NIT SURATHKAL	TRANSPORTATION ENGINEERING	03/02/2020	2.6	Assistant Professor	Assistant Professor		Regular	No	08/08/2022	No

18	SANTHOSHKUMAR G	XXXXXXX55D	Ph.D	IIT KANPUR	GEOTECHNICAL ENGINEERING	17/03/2021	1.7	Assistant Professor	Assistant Professor		Regular	No	14/11/2022	No
19	PUJA DUTTA	XXXXXXX69N	Ph.D	IIT KHARAGPUR	GEOTECHNICAL ENGINEERING	26/12/2022	1	Assistant Professor	Assistant Professor		Regular	No	30/12/2023	No
20	K B Anand	XXXXXXX86Q	Ph.D	IIT MADRAS	BUILDING TECHNOLOGY	01/04/2010	15	Associate Professor	Professor	01/01/2011	Contractual Fulltime	Yes		No
21	K S K KARTHIKREDDY	XXXXXXX92Q	Ph.D	IIT HYDERABAD & SWINBURNE UNIVERSITY OF TECHNOLOGY	STRUCTURAL ENGINEERING	16/02/2022	0.5	Assistant Professor	Assistant Professor		Regular	No	23/07/2022	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 Department1

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: Civil Engineering	**180**	**180**	**180**
PG1.A	30	30	30
PG1.B	30	30	30
PG1: Structural and Construction Engineering	**60**	**60**	**60**
DS=Total no. of students in all UG and PG programs in the Department	240	240	240
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=** 240	**S2=** 240	**S3=** 240

Description	CAY(2024-25)	CAYm1 (2023-24)	CAYm2 (2022-23)
DF=Total no. of faculty members in the Department	15	13	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=** 15	**F2=** 13	**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= 16.00**	**SFR2= 18.46**	**SFR3= 21.82**
Average SFR for 3 years	**SFR= 18.76**		

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	4	11.00	28.64
2023-24(CAYm1)	10	3	11.00	25.45
2022-23(CAYm2)	8	3	11.00	20.91

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	1.00	2.00	3.00	8.00	9.00
2023-24	1.00	1.00	2.00	2.00	8.00	9.00
2022-23	1.00	1.00	2.00	2.00	8.00	7.00
Average	RF1=1.00	AF1=1.00	RF2=2.00	AF2=2.33	RF2=8.00	AF2=8.33

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. Sanjay Kumar Shukla	Adjunct Professor	School of Engineering, Edith Cowan University Australia	Project(19CIE499) & Minor project (19CIE495)	78.00
2	Dr.B.Venkataraman	Dinstinguished Professor	Amrita School of Engineering, Amrita Vishwa Vidyapeetham, India	Project(19CIE499) & Minor project (19CIE495)	56.00
3	Mr.H.Srivathsan	Visiting Faculty	L&T Edutech, Chennai.	Design of Structural Steel Members(19CIE312)	14.00
4	Ms.NeerajaNath	Visiting Faculty	L&T Edutech, Chennai.	Precast Members - Systems and Constructions (23CIE473)	14.00
5	Ms.SabariSri	Visiting Faculty	L&T Edutech, Chennai.	Deep Excavation and Tunnels (23CIE474)	14.00
6	Mr.S.Thangaperumal	Visiting Faculty	L&T Edutech, Chennai.	Geo Spatial Practices for Engineers (23CIE475)	14.00

(CAYm2)

S.No	Name of the Person	Designation	Organization	Name of the Course	No. of hours handled
1	Dr. Sanjay Kumar Shukla	Adjunct Professor	School of Engineering, Edith Cowan University Australia	Research Discussion (PhD/M.tech)	8.00
2	Dr.B.Venkataraman	Dinstinguished Professor	Amrita School of Engineering, Amrita Vishwa Vidyapeetham, India	Project(19CIE499) & Minor project (19CIE495)	56.00
3	Mr.Vijaygandhi	Visiting Faculty	L&T Edutech, Chennai.	Design of Structural Steel Members (19CIE312)	14.00
4	Ms.Surendran	Visiting Faculty	L&T Edutech, Chennai.	Building and Information Modeling (19CIE448)	14.00

(CAYm3)

S.No	Name of the Person	Designation	Organization	Name of the Course	No. of hours handled
1	Dr. Sanjay Kumar Shukla	Adjunct Professor	School of Engineering, Edith Cowan University Australia	Research Discussion (PhD/M.tech)	18.00

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	22	38	18
2	No. of peer reviewed conference papers published	6	9	39
3	No. of books/book chapters published	1	5	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 K M Mini	Dr K B Anand,Dr Dhanya Sathyan,Dr G Santhoshkumar Dr Jayakesh K,Dr Vijayanarayanan	Civil	Sustainable and Resilient Infrastructure	DST-FIST	2022-27	82.00
						Amount received (Rs.):82.00

(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
TWAS-UNESCO Associate (Travel Grant)	Dr. B Soundharajan	Civil	Travel Grant	TWAS-UNESCO	2022- 2025	4.39
						Amount received (Rs.):4.39

(CAYm3)

Total Amount (Lacs) Received for the Past 3 Years: 86.39

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. Anjaly J Pillai	Dr.Vijayanarayanan A.R, Dr.Viswanath P, Dr.Arjun Siva Rathan	Civil	Vetting /Proof checking of structural and geotechnical analysis and drawings of two bridges at The Nilgiris district	DRDA, Government of Tamilnadu	2023	5.93
Dr. K. M. Mini	Mr. K. Srinivasan	Civil	Material Testing	Aquatek sanitary fittings pvt ltd	2023	0.18
						Amount received (Rs.):6.11

(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. M. Mini	Mr. K. Srinivasan	Civil	Material Testing	Aquatek sanitary fittings pvt ltd	2023	0.02
Dr. K. M. Mini	Mr. K. Srinivasan	Civil	Material Testing	Elgi Ultra Industries Limited	2023	0.10
Dr.Arjun Siva Rathan R T		Civil	Soil Testing	L&T, coimbatore	2022	0.15
						Amount received (Rs.):0.27

(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.K.M.Mini	Mr.K.Srinivasan	Civil	Material Testing	Elgi Ultra Industries Limited	2021	0.26
						Amount received (Rs.):0.26

Total amount (Lacs) received for the past 3 years: 6.64

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. Dhanya Sathyan	Self-curing high strength concrete for sustainable construction	2 years	11.65	7.60	Paper publications (3)
			Amount received (Rs.): 11.65		

(CAYm2)

(CAYm3)

Total amount (Lacs) received for the past 3 years : 11.65

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	Strength of Materials laboratory	4	Universal Testing Machine- 400kN, Universal Testing Machine(computerized) – 400kN, Impact Test - Izod (168 J), Impact Test - Charpy (300 J), Compression	OddSemester:!	K.Srinivasan T.Balasund	Senior Instructor Lab /	Pursuing PhD M-Tech M
2	Construction Material Testing Laboratory	4	Elcometer, UPV metre, Rebound Hammer, Flow Table For Concrete, Core Drilling Machine, Los Angeles Abrasion Testing Machine, Mortar Mixer, Mortar	OddSemester:(	Vivek H Das ,Anjumol A	Senior Lab Assistant	B.E. Civil Engineering
3	Geotechnical Engineering Laboratory	4	Consolidation Apparatus (single), Direct Shear Apparatus, Unconfined Compression Test Apparatus, Triaxial Shear Test Apparatus, Permeability Apparatus	OddSemester:(	Kavitha KK	Sr.Lab Assistant	Diploma in Civil Engineeri

4	Environmental Engineering Laboratory	4	Hot Plate With Magnetic Stirrer, Micro Controller Based Colorimeter, Refrigerator, B.O.D.Incubator, Muffle	Odd Semester	Vishnuprasad.T	Sr.Lab Assistant	M-Tech pursuing, B-Tech
5	Surveying Laboratory	4	Total station(Trimple), Total station(Pentax), GPS, Theodolite, Automatic Level, Dumpy Level, Plane Table	OddSemester:	Thangamani. V	Lab Instructor	Diploma in Civil Engineeri
6	Structural Engineering Laboratory	4	Loading Frame, Foam Generator, Pan mixer, Tile Abrasion Testing Machine, Shake Table, Electro	OddSemester:	Venkateshwaran P	Lab Assistant	Diploma in Civil Engineeri

D2. Safety Measures in Laboratories

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

Sr. No	Laboratory Name	Safety Measures
1	Strength of Materials Laboratory	Fire Extinguisher, First Aid Box
2	Construction Materials Laboratory	Fire Extinguisher, First Aid Box, Mask, Gloves, Helmet, Concrete Safety Shoe
3	Geotechnical Engineering Laboratory	Fire Extinguisher, First Aid Box, Mask, Gloves
4	Environmental Engineering Laboratory	Fire Extinguisher, First Aid Box, Goggles, Mask, Gloves, Eye wash& shower
5	Surveying Laboratory	Fire Extinguisher, First Aid Box, Cap
6	Structural Engineering Laboratory	Fire Extinguisher, First Aid Box, Mask, Gloves

D3. Project Laboratory/Research Laboratory

The Department is having three research laboratories which are functioning under the Regular laboratories. These labs are established with the support of funding from Govt. agencies like DST in addition to the seed funding from the university. Main purpose of these labs are providing the required research facilities in various emerging areas of Civil engineering. The details of projects undergone in these labs along with the major equipment available and the resulting publications are listed from section 6.4.1 through 6.4.3.

7.5.1.High performance concrete Lab (Under Construction Materials lab)

Utilization rate – 80% - through project

Table 7.5.1 (a): Details of Major Equipment

S.N.	Major Equipment	Cost (Rupees)	Company /Make
1	Viscometer 	4,00,000	Brookfield
2	SCC equipment	50,000	AIMIL
3	Marsh cone, Mini slump	50,500	AIMIL

Table 7.5.1(b): Details of the projects

Year	No. of Projects	Title of the Project
2015 – 16	3	• Modelling of fresh and hardened properties of SCC using regularized least square approach. • Modelling the workability of superplasticized PPC paste using RLS with the application of RKS. • Influence of test temperature on rheological properties of superplasticised PPC paste.

2016 -17	5	• Durability study in fly ash based superplasticized PPC mortar • Short term and long term hardened properties of fly ash based superplasticized concrete. • Coupled effect of temperature and superplasticizer dosage on the rheological properties of cement paste containing class F fly ash and modelling of rheological properties. • Effect of superplasticizer on setting time of concrete • Strength and durability studies of SCC incorporating silica fume and ultra fine GGBS.
2017 – 18	1	• Study on structural behavior of Hybrid fiber reinforced Self • compacting concrete
2018 – 19	1	• Damping and strength of FRP confined crumb rubber concrete square column (On going)
2021 –22	2	• Flexural And Durability Properties of Geopolymer Mortar Reinforced with Hybrid Fibers (Steel Fiber, Polypropylene Fiber and Coir Fiber) And Carbon Nanotubes (Cnt) • Study and Modelling of Variation of Durability Characteristics of Self Consolidation Cement Mortar with its Rheological and Mechanical Properties Using Machine Learning Methods
2022 –23	1	• Property evaluation of timber Crete reinforced with basalt fiber
2023 –24	1	• Experimental and Analytical Investigation on Mechanical Behaviour for High Strength Concrete

Salient Publications

- P. J. Ardhira, S. K. Shukla, and D. Sathyan, “Synthesis of geopolymer mortar from biomass ashes and forecasting its compressive strength behaviour,” Case Studies in Construction Materials, vol. 21, p. e03581, Dec. 2024, doi: 10.1016/j.cscm.2024.e03581.
- Nair, K.A. (https://www.scopus.com/authid/detail.uri?authorId=58672433500), Anand, K.B., (https://www.scopus.com/authid/detail.uri?authorId=57196502300) “Sustainability of alternative concretes: emergy and life-cycle analysis”, Proceedings of the Institution of Civil Engineers: Engineering Sustainability, 2023, 177(4), pp. 217–229
- Krishna Raj, P.R., (https://www.scopus.com/authid/detail.uri?authorId=58027163400) Anand, K.B. (https://www.scopus.com/authid/detail.uri?authorId=57196502300), Sharma, A.K., (https://www.scopus.com/authid/detail.uri?authorId=57164225300) “Development and Performance Evaluation of Geopolymer Based Self Compacting Earthen Concrete’, *Lecture Notes in Civil Engineering*, 2023, 284, pp. 713–722
- L. Joseph, P. Sarath Kumar, K. Jayanarayanan, and K. M. Mini, “Strengthening of plain concrete cylinders with hybrid composites based on basalt and sisal fiber systems,” Materials Today: Proceedings, vol. 66, pp. 2444–2448, 2022, doi: 10.1016/j.matpr.2022.06.366.
- V. Poornima, K. Vasanth Kumar, and P. P. Hridhi Nandu, “Comparative Study on Fly Ash Based AAM Concrete with GGBS, Rice Husk Ash and Sugarcane Bagasse Ash,” Lecture Notes in Civil Engineering. Springer International Publishing, pp. 43–61, 2022. doi: 10.1007/978-3-030-96202-9_4.
- P. J. Ardhira and D. Sathyan, “A comparative study of normal and self-compacting geopolymer mortar and its strength prediction using tensor flow approach,” Materials Today: Proceedings, vol. 65, pp. 1046–1055, 2022, doi: 10.1016/j.matpr.2022.04.139
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- Manoj and D. Sathyan, “Strengthening of concrete square column using FRP composites,” J. Phys.: Conf. Ser., vol. 2070, no. 1, p. 012206, Nov. 2021, doi: 10.1088/1742-6596/2070/1/012206.
- Rahesh Hari, K M Mini, (2019) “Mechanical and durability properties of sisal-nylon 6 hybrid fibre reinforced high strength SCC”, Construction and Building Materials, 204, pp.479-491
- Dhanya Sathyan, Anand, K.B. (2019). “Influence of superplasticizer family on the durability characteristics of fly ash incorporated cement concrete.” Construction and Building Materials, 204, 864–874
- Ardra Mohan, Mini K M, (2018) “Strength and Durability studies of SCC incorporating silica fume and ultra fine GGBS” Construction and Building Materials ,171, 919–928
- Sowmini Gopinathan, K B Anand, (2018) “Properties of cement grout modified with ultra-fine slag”, Frontiers of Structural and Civil Engineering, 12(1), pp. 58–66
- Dhanya Sathyan, K B Anand , Aravind J Prakash and Pemjith B (2018), “Modeling of fresh and hardened stage properties of self compacting concrete using random kitchen sink algorithm”, International journal of concrete structures and materials, Springer, DOI 10.1186/s40069-018-0246-7.
- Dhanya Sathyan, Anand, K.B. and Sindu Menon, M. (2018). “Temperature influence on rheology of superplasticized pozzolana cement and modeling using random kitchen sink algorithm.” Journal of materials in civil engineering, ASCE,DOI: 10.1061/(ASCE) MT.1943-5533.0002406.
- Manomi N, Dhanya Sathyan , K B Anand(2018),“Coupled effect of superplasticizer dosage and fly ash content on strength and durability of concrete”, Material today proceeding. 5(11), Part 3 (https://www.sciencedirect.com/science/journal/22147853/5/11/part/P3), Pages 24033-2404
- Aparna S,Dhanya Sathyan and K B Anand(2018) “Microstructural and rate of water absorption study on fly-ash incorporated cement mortar”, Material today proceeding Volume 5, Issue 11, Part 3 (https://www.sciencedirect.com/science/journal/22147853/5/11/part/P3), Pages 23692-23701
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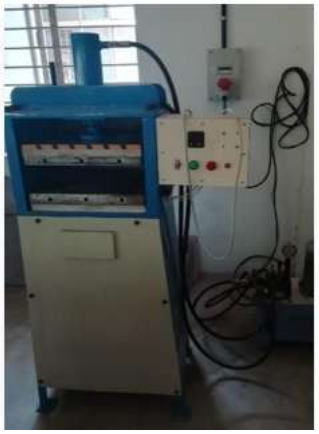
- Ardra Mohan, Mini K M, (2018) “Strength Studies of SCC Incorporating Silica Fume and Ultra Fine GGBS” Materials Today: Proceedings 5(11), pp. 23752-23758
- Dhanya Sathyan, K B Anand, K M Mini and Aparna S (2018), “Optimization of superplasticizer in portland pozzolana cement mortar and concrete”, IOP conference series,Volume 310, DOI:10.1088/1757-899X/310/1/012036.
- Dhanya Sathyan, K B Anand, Chinnu Jose and Aravind N R (2018), “Modelling the mini slump spread of superplasticized PPC paste using RLS with the application of random kitchen sink”, IOP conference series, Volume 310. DOI:10.1088/1757- 899X/310/1/012035.
- Aravind J Prakash , Dhanya Sathyan, K B Anand and Aravind N R (2018) , “Comparison of ANN and RKS approaches to model SCC strength, IOP conference series, Volume 310. DOI:10.1088/1757-899X/310/1/012037.
- Ananthkumar M, Dhanya Sathyan, Prabha S, (2018) “Study on Effectiveness of Processed and Unprocessed Black liquor pulps in improving the properties of PPC mortar, Concrete and SCC”, Material today proceeding, IOP Conf. Series: Materials Science and Engineering 310 012038 doi:10.1088/1757-899X/310/1/012038
- Sindhu Menon.M, Dhanya Sathyan, and K.B.Anand (2017), “Studies on Rheological Properties of Superplasticised PPC Paste, International Journal of Civil Engineering and Technology. Volume 8, Issue 10, pp 939–947.
- Dhanya Sathyan, K.B.Anand and K.M.Mini (2016),“Experimental Study on Portland Pozzolana Cement-Superplasticiser compatibility in mortar”, International journal of earth science and engineering, Vol. 09, No.02, pp 539-544.

7.5.2Energy efficient materials lab (Under Structures lab)

Utilization Rate – 80% - through projects

Table 7.5.2 (a): Details of Major Equipment

S.N.	Major Equipment	Cost (Rupees)	Company/Make
1	Foam generator	52,000/-	LCM foam

			
2	Hot guarded plate apparatus 	1,41,600/-	ALMECH
3	Hot press 	93,810/-	MechStatic Engineering

4	Impedance tube 	5,15,000/-	Sree Balaji Engineering and Equipments

Table 7.5.2 (b): Details of the Project

Year	No. of Projects	Title of the Project
2017 – 18	5	• Development of High Volume Fly ash Foam Concrete Wall Panel Using Rice Straw as Thermal Insulation Material • Light Weight Insulating Material Prepared from Rice husk incorporated with Foam concrete • Study on performance of hybrid fiber reinforced foam concrete. • Effect of perlite on the thermo-mechanical and durability properties of foam concrete. • A study on performance of EPS sandwich foam concrete wall panel
2018 -19	2	• Experimental study on the performance of sugarcane bagasse fibre reinforced foam concrete. • Light weight insulating materials using EPS beads in foam concrete
2021-22	1	• Flexural and durability characteristics of Bamboo Fiber and Steel Fiber Reinforced Concrete
2022 – 23	2	• Green Construction using Mycelium • Performance Evaluation of industrial waste fiber reinforced foam concrete

2023 - 24	2	• Flexural behaviour of Geopolymer Slabs strengthened with Galvanized Iron Mesh and Carbon Textiles • Feasibility Analysis of Floating Solar System in Reservoir

Salient Publications

- Vighnesh, R. (https://www.scopus.com/authid/detail.uri?authorId=57210117095), Viswanath, P. (https://www.scopus.com/authid/detail.uri?authorId=57195216650), Anand, K.B., (https://www.scopus.com/authid/detail.uri?authorId=57196502300) “Multi-factor thermal analysis of phase (https://www.scopus.com/record/display.uri?eid=2-s2.0-85197249516&origin=resultslist)change material integrated roofing elements”, (https://www.scopus.com/record/display.uri?eid=2-s2.0-85197249516&origin=resultslist) *Architectural Science Review*, 2024
- R. Neeraja, P. Jayakrishnan, and K. M. Mini, “Experimental and statistical investigation on structural feasibility of admixture based foam concrete with hexagonal wire mesh reinforcement,” Journal of Building Engineering, vol. 80, p. 107967, Dec. 2023, doi: 10.1016/j.jobe.2023.107967.
- S. Dora, R. B. Barta, and K. M. Mini, “Study on foam concrete incorporated with expanded vermiculite/capric acid PCM – A novel thermal storage high-performance building material,” Construction and Building Materials, vol. 392, p. 131903, Aug. 2023, doi: 10.1016/j.conbuildmat.2023.131903.
- L. Joseph, E. Kalyana Chakravarthi, S. K. P, K. Jayanarayanan, and M. K.M., “Nano filler incorporated epoxy based natural hybrid fiber confinement of concrete systems: Effect of fiber layers and nano filler addition,” Structures, vol. 51, pp. 320–331, May 2023, doi: 10.1016/j.istruc.2023.03.050.
- P. Yogesh, K. Ravi, R. Karthik, M. Bhavana, S. Muthukumar, and D. Sathyan, “Strength and workability characteristics of hybrid bamboo and steel fiber reinforced concrete,” Materials Today: Proceedings, vol. 80, pp. 1135–1141, 2023, doi: 10.1016/j.matpr.2022.12.121.
- S. Sharook, D. Sathyan, and M. K. Madhavan, “Thermo-mechanical and durability properties of expanded perlite aggregate foamed concrete,” Proceedings of the Institution of Civil Engineers - Construction Materials, vol. 176, no. 4, pp. 141–149, Jul. 2023, doi: 10.1680/jcoma.20.00041.
- V. Vijayan, K. Jayakesh, and K. B. Anand, “Mechanical properties of recycled aggregates concrete with sisal fiber and silica fume,” Materials Today: Proceedings, vol. 65, pp. 1887–1894, 2022, doi: 10.1016/j.matpr.2022.05.055.
- Amritha Raj, Dhanya Sathyan, Mini K.M “Physical and Functional Characteristics of Foam concrete: A Review Construction & Building Materials”, Ref. No.: CONBUILDMAT-D-18-05052.
- Shrook S, Dhanya Sathyan,KM Mini, Effect Of Expanded Perlite Aggregate On The Thermo-Mechanical And Durability Properties Of Foam Concrete, Journal of Building Engineering, Reference: JOBE_2018_785
- Aravind N.R, Dhanya Sathyan,KM Mini, Rice husk incorporated foam concrete wall panels as a thermal insulating material in building , Indoor and Built Environment.Ref.No: IBE-18-0330
- Bhagyasree raj, Dhanya Sathyan, Mini K M ,Study on performance of hybrid fibre reinforced foam concrete, Journal of materials in civil engineering, ASCE, Ref.No: MTENG-7901
- Sarath Chandra, Amritha Raj, Dhanya Sathyan., Mini K M, “A study on performance of eps sandwich foam concrete wall panel”, Energy Efficiency, Springer , Manuscript No. ENEF_ D-19-00100

7.5.3 Advanced water treatment research lab (under Environmental Engineering)

Utilization rate – 70% - through projects

Table 7.5.3 (a): Details of Major Equipment

S.N.	Major Equipment	Cost (Rupees)	Company/Make
1	Immersion Type Photo Reactor - Advanced oxidation UV/Visible – 1000 ml photoreactor (Heber, Chennai)	1,46,839	Heber Scientific, Chennai
2	Centrifuge shaker	14,200	REMI
3	Digital Water Analyser	49,500	ELICO
4	Orbital shaker	55,000	NEO LAB

5	BOD incubator	50,820	KEMI
6	Auto Clave	1,08,816	KEMI

Table 7.5.3 (b) Details of the Project

Year	No. of Projects	Title of the Project
2015 – 16	2	• Ecotoxicity tests on fresh water organisms for water contaminants • Treatment of emerging contaminants in water - carbamazepine and felodipine using advanced oxidation process
2016 -17	3	• Removal of azo dye and amoxcillin as contaminants in water using advanced oxidation process and adsorption • Study on removal of reactive yellow dye and other emerging contaminants in water employing adsorption and advanced oxidation process • Kinetic study of adsorption and advanced oxidation process on acid orange 7 and other emerging contaminants in water
2017 – 18	2	• Photocatalytic degradation of recalcitrant contaminants and its management - a study • Degradation of reactive violet dye using advanced oxidation process
2018 - 19	1	• Degradation of amiodarone as emerging contaminant using advanced oxidation process
2022 - 23	2	• Treatment of waste water containing crystal violet dye using coconut pith as biochar by adsorption • Treatment of dyes in wastewater using adsorption
2023- 24	1	• Optimizing Dye Adsorption using Biochar derived from Areca Catechu Husk: A Predictive Modelling

Salient Publications

- J. M. Tharayil, P. Chinnaiyan, D. M. John, and K. M S, “Environmental sustainability of FO membrane separation applications – Bibliometric analysis and state-of-the-art review,” Results in Engineering, vol. 21, p. 101677, Mar. 2024, doi: 10.1016/j.rineng.2023.101677.
- J. M. Tharayil and P. Chinnaiyan, “Biogenic synthesis of ZnO from Rubia cordifolia root extract: A study on sono-photocatalytic dye degradation and anti-bacterial assay,” Results in Engineering, vol. 20, p. 101567, Dec. 2023, doi: 10.1016/j.rineng.2023.101567.

- B. Ramasamy, J. Jeyanthi, and P. Chinnaiyan, “Fe-TiO2 and Ag-ZnO mediated visible light photocatalysis for atenolol and acetaminophen removal – A comparative study and modeling,” Environmental Nanotechnology, Monitoring & Management, vol. 19, p. 100779, May 2023, doi: 10.1016/j.enmm.2023.100779.
- R. M. Muthuraman, A. Murugappan, and B. Soundharajan, “Highly effective removal of presence of toxic metal concentrations in the wastewater using microalgae and pre-treatment processing,” Appl Nanosci, vol. 13, no. 1, pp. 475–481, Apr. 2021, doi: 10.1007/s13204-021-01795-7.
- R. M. Muthuraman, A. Murugappan, and B. Soundharajan, “Adsorption of Cr(Iii) Ions Using Low-Cost Material And Assessment of Water Quality In Greywater: A Sustainable Approach,” RJC, vol. 14, no. 03, pp. 2024–2030, 2021, doi: 10.31788/rjc.2021.1436129
- Chinnaiyan, P et al., 2018a. Pharmaceutical products as emerging contaminant in water : relevance for developing nations and identification of critical compounds for Indian environment. Environ Monit Assess, 190(288), pp.1 – 13. (SCI e , Scopus, IF – 1.9)
- Chinnaiyan, P. et al., 2018b. Photocatalytic degradation of metformin and amoxicillin in synthetic hospital wastewater : effect of classical parameters. International Journal of Environmental Science and Technology, Online. Available at: https://doi.org/10.1007/s13762-018-1935-0 (https://doi.org/10.1007/s13762-018-1935-0). (SCI e , Scopus, IF – 2.2)
- Akshaya A, Prakash Chinnaiyan*, Dhanya Unni, Keerthana G, Use of TiO2 and Rice Husk Ash to study the removal of Reactive Yellow Dye as contaminant in water” , International Conference on Advances in Materials and Manufacturing Applications , Aug 17 -19, 2017 (Scopus indexed- IConAMMA_2017)
- Swarnalakshmi K S,Prakash Chinnaiyan, Nivetha S, Athira S Nair, Use of Rice husk ash as an adsorbent to remove contaminants in water and comparison with advanced oxidation process - a study, International Conference on Advances in Materials and Manufacturing Applications , Aug 17 -19, 2017 (Scopus indexed IConAMMA_2017)

Major Proposals submitted from the lab

- Project proposal submitted to DST-WTI-Mission mode, 2017 for the project titled “Improvement of ground water quality and ground water recharge through rejuvenation of Ganganarayansamudharam pond in Perur Chettipalayam, Coimbatore” for an amount of 69.24 lakhs
- Project proposal submitted to SYST 2017 (Scheme for Young Scientist, DST) for the project titled ‘Development of portable water treatment unit for removal of critical pharmaceutical compounds in Indian water for an amount of Rs.20.82 lakhs
- Project proposal submitted under section 35 (Amrita University) for the project titled ‘Treatment of emerging contaminants in water using advanced oxidation process for an amount of Rs.43.67 lakhs on 10.1.17
- Project proposal submitted to SYST 2015 (Scheme for Young Scientist, DST) for the project titled ‘Treatment of pharmaceutical and personal care products using advanced oxidation processes’ for an amount of Rs.14 lakhs

Apart from these research labs, regular labs are also used for research and project works of the students and selected project details are listed in Sections 6.4.4 through 6.4.6

7.5.4 Construction Materials Lab

Table 7.5.4: Details of the Project

Year	No. of projects	Project Title
2015 - 16	1	• Analysis of neutron shielding capacity of Boron carbide in concrete
2016 - 17	2	• Effect of Superplasticizer on the Setting time of PPC Concrete • A Study on Utilization of Recycled Waste as Filler in Foam Concrete
2017 - 18	4	• Strength and Durability Characteristics of Concrete made using Copper Slag and Mineral Admixtures • Reactive Powder Concrete [RPC] – Optimum Mix Design, Workability And Mechanical Properties • Study on performance of Hybrid fibre reinforced foam concrete • Study on Partial Replacement of M - Sand With Dolomite – Silica Sand in Cement Mortar

2018 - 19	3	• Effective utilization of Dolomite Rock Sand in concrete as FA replacement – a study • High strength concrete using M sand – an experimental study • Abrasion resistance of concrete using sustainable material
2021 - 22	2	• Experimental Investigation on Performance of Encapsulated Bacteria-based Self-Healing Mortar • Usage of Non-Metallic Fraction Recycled from Printed Circuit Board in Concrete Paver Blocks and Paver Tiles
2022 - 23	2	• Light Transmission through Mortar using Optical Fibers • Geopolymer concrete under ambient temperature with partial replacement of recycled concrete aggregates for the coarse aggregate
2023 - 24	3	• Performance Evaluation of HMA Mix of Varying Reclaimed asphalt Pavement Material and Binder Content • Use of waste clay brick powder as a partial replacement for binder in geopolymer concrete • Application and Analysis of Activated Carbon in Pervious concrete

Salient Publications

- P. R. K. Soda et al., “Performance assessment of sustainable bio cement mortar incorporated with bacteria-encapsulated cement-coated alginate beads,” Construction and Building Materials, vol. 411, p. 134198, Jan. 2024, doi: 10.1016/j.conbuildmat.2023.134198.
- S. R. Raveendran Thulasi Bai, S. Velayudhan, and J. Lekshmipathy, “Evaluation of Structural and Functional Performance of Interlocking Concrete Block Pavement and Flexible Pavement,” Journal of Testing and Evaluation, vol. 51, no. 6, pp. 3968–3986, May 2023, doi: 10.1520/jte20220566.
- Jegan Bharath Kumar, V. Sunitha, R. T. Arjun Siva Rathan, P. Murshida, and S. Mathew, “Influence of moisture and compaction effect on volumetric and mechanical properties of bituminous mix,” International Journal of Pavement Engineering, vol. 24, no. 2, Nov. 2022, doi: 10.1080/10298436.2022.2144312.
- P. R. Krishna Raj, K. B. Anand, and A. K. Sharma, “Development and Performance Evaluation of Geopolymer Based Self Compacting Earthen Concrete,” Lecture Notes in Civil Engineering. Springer International Publishing, pp. 713–722, Oct. 30, 2022. doi: 10.1007/978-3-031-12011-4_59.
- M. S. Riyana, D. Sathyan, and M. K. Haridharan, “Effective Utilization of Industrial and Agricultural Waste for Developing Sustainable Self-Compacting Concrete,” MSF, vol. 1048, pp. 376–386, Jan. 2022, doi: 10.4028/www.scientific.net/msf.1048.376.

7.5.5 Geotechnical Engineering Lab

Table 7.5.5: Details of the Project

Year	No. of Projects	Project Title
2015 -16	1	• Physical & strength response study of recycled materials in pavement applications.

2016 - 17	3	• Performance Evaluation of Areca Leaf Cells as Cellular Confinement in Soil in Comparison to HDPE Geocells • Estimation Of Seismic Bearing Capacity of Shallow Strip Footing Using Psuedo Dynamic Approach • Prediction of Critical Phreatic Level for Slope Stability of Different Types of soil using a Scaled Down Laboratory Model
2017 - 18	3	• Pseudo - dynamic analysis of soil nailed wall considering composite failure surface. • Investigation on different shaped shallow foundations for on shore wind turbines • Performance evaluation of coconut shell mat as cellular confinement in soils. Experimental and analytical studies
2018 - 19	2	• Behaviour of square footing on sand reinforced with natural fibre geo cell • Comparative study of variation in geotechnical properties of soil remediated using biochar
2023 - 24	1	• Optimization of Lime, Cement and Bagasse content for the stabilization of Subgrade Soil

Salient Publications

- S. Sharma, V. Parol, and A. Prashant, “Instability Behaviour of Kutch Soil under Plane Strain Conditions,” Geo-Congress 2024. American Society of Civil Engineers, pp. 118–127, Feb. 22, 2024. doi: 10.1061/9780784485309.013.
- D. Manna, G. Santhoshkumar, and P. Ghosh, “Ultimate Bearing Capacity of Strip Footing on Reinforced Embankment Using Upper Bound Limit Analysis,” Lecture Notes in Civil Engineering. Springer Singapore, pp. 543–551, Sep. 27, 2021. doi: 10.1007/978-981-16-3383-6_48.
- P. A. Krishnan, V. Pradeep Gokul, B. Adithya, and A. K. Sharma, “Bottom Ash Stabilized Subgrade Soil Admixed with Sugarcane Bagasse Ash,” Lecture Notes in Civil Engineering. Springer Nature Singapore, pp. 179–188, 2022. doi: 10.1007/978-981-16-5669-9_15.
- S. Muthukumar, S. Priyanka, and S. Priya, “Laboratory Model Study on Erosion Control Using Coir Geotextile,” Lecture Notes in Civil Engineering. Springer Singapore, pp. 415–430, Nov. 27, 2021. doi: 10.1007/978-981-16-6140-2_33.
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7.5.6 Structural Engineering Lab

Table 7.5.6: Details of the Project

Year	No. of Projects	Project
2015 - 16	3	• Strength of reinforced concrete beam in flexure using Hybrid Sisal -Jute CFRP Composite System • Strengthening Steel Members with Holes Under Tension Using Unidirectional GFRP Sheets • Experimental studies on a vibrating beam under high flexural stresses
2016 - 17	2	• Mechanical Properties and Shear Strengthening Capacity of High Volume Fly Ash-Cementitious Composite • Effectiveness of material modification of shear walls in reduction of vibration transmission
2017 - 18	2	• Vibration isolation at the level of footing using modified concrete • Study of corrosion resistance in reinforced concrete using natural core shell pigments.
2021-22	2	• Numerical Modeling and Experimental Studies on Bamboo Reinforced Ferrocement Wall Panel • Flexural Behaviour of Steel Fiber and Waste Tire Fiber Reinforced Concrete
2022 - 23	2	• Comparison of Dynamic Amplification Factor for a Plate Girder Bridge • Sustainable Corrosion Resistant Coating on Rebar Embedded in RC Structures Using Garlic Peel Extract
2023 - 24	3	• Analysis of Cable Stayed Bridge • sustainable Corrosion Resistance Coating on Fe 415 Steel using Organic Materials • Performance of Organic Carbon Coatings on Fe415 Steel under Marine Conditions.

Salient Publications

- J. Pillai and S. Talukdar, “Fatigue Damage Assessment of Tensile Specimen considering Bilinear Damage Process,” IOP Conf. Ser.: Earth Environ. Sci., vol. 1326, no. 1, p. 012008, Jun. 2024, doi: 10.1088/1755-1315/1326/1/012008.
- P. Jayakumar and D. Sathyan, “Flexural shear behavior of FRHSC beams with fibers only in shear span,” Materials Today: Proceedings, vol. 49, pp. 2110–2115, 2022, doi: 10.1016/j.matpr.2021.08.316.

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	72	71	109
2023-24(CAYm1)	1440	72	78	87	111
2024-25(CAY)	1980	99	80	105	86

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	1800000	1750600	900000	0853079	880000	815260	1200000	901525

Software	800000	752720	50000	44042	600000	598751	800000	790568
SDGs	800000	751722	700000	686395	600000	594613	200000	200234
Support for faculty development	1800000	556343	2000000	1944382	6050000	5611455	500000	32545
R & D	5700000	4730000	3600000	3236679	2000000	1883556	2100000	441437
Industrial Training, Industry expert, Internship	200000	196604	50000	30676	75000	75569	50000	25319
Miscellanious expenses	23800000	23102730	21850000	20992451	21600000	20558227	22850000	22641547
Total	**34900000**	**31840719**	**29150000**	**27787704**	**31805000**	**30137431**	**27700000**	**25033175**