

Institutional Development Plan

5
Years



Dr. MAHALINGAM



COLLEGE OF ENGINEERING AND TECHNOLOGY

Enlightening Technical Minds

Pollachi, Tamil Nadu

October 2024

PHILOSOPHY



“A Nation’s wealth not only depends upon its water, land and mineral resources; but also, its people’s imperishable Knowledge and Skill”



Arutchelvar Dr. N. Mahalingam

Contents

S. No.	Description	Page
1	Proposed Deemed to be University (DU)	4
1.1.	Vision and Mission	4
2	Strategic Vision for Five Years - Rolling Implementation Plan	5
2.1.	Academic Plan	5
2.2.	Research Plan	14
2.3.	Infrastructure Development Plan	23
2.4	Finance Plan	27
2.5.	Governance and Administration Plan	28

Proposed Deemed to be University (DU)

The proposed deemed to be university will be named “**Mahalingam Academy of Higher Education and Research**”.

MAHALINGAM

Academy of Higher Education and Research

(Deemed to be **UNIVERSITY**)

Established u/s 3 of UGC Act 1956

1.1. Vision and Mission

Vision

Emerge as a “**institute of eminence in education, research, and outreach for improving quality of life globally**”.

Mission

During the next 15 years, DU through its Academics, Research, and Outreach will

1. Deliver world class graduate, post graduate and research programs
2. Structure programs to promote interdisciplinary, multidisciplinary, and transdisciplinary approaches
3. Offer global level education through partnerships
4. Contribute to the global fraternity through impactful research
5. Promote an ecosystem of experimentation, innovation and growth
6. Offer state of art infrastructure, high quality services and amenities
7. Attract top quality talent as students and faculty
8. Participate in community development projects
9. Ensure achievement of sustainability development goals
10. Transfer technology for societal development

2. Strategic Vision Plan for Five Years - Rolling Implementation Plan

The strategic vision plan for 5-year Rolling plans detailed for Academic, Research, Infrastructure, Finance and Governance are given below.

2.1 Academics: Five Years Rolling Implementation Plan of DU

In academics, DU will target the following outcomes and outputs in the five years implementation plan.

Sl. No.	Outcomes	Actions	Deliverables	Cumulative Outputs				
				2025-26	2026-27	2027-28	2028-29	2029-30
1.	Establish diverse schools aligned with emerging national and global trends to provide relevant, cutting-edge education and skills development.	1. Create necessary infrastructure and facilities for functioning of schools 2. Obtain approvals from statutory authorities 3. Establish the following schools 1 st year 1. School of Engineering and Technology	No. of schools	2	4	5	5	5
			No. of UG programs	12	12	12	12	12
			No. of PG programs	11	13	15	15	15
			No. of departments offering doctoral programs	12	14	16	16	16

Sl. No.	Outcomes	Actions	Deliverables	Cumulative Outputs				
				2025-26	2026-27	2027-28	2028-29	2029-30
		<p>2. School of Wellness and Health Sciences</p> <p>2nd year</p> <p>3. School Liberal Arts and Sciences</p> <p>4. School of Agricultural Sciences</p> <p>3rd year</p> <p>5. School of Education</p> <p>4. Offer the following programs in School of Engineering and Technology</p> <p>UG Programs</p> <p>B.Tech. in</p> <p>1. Mechanical Engineering</p> <p>2. Civil Engineering</p> <p>3. Automobile Engineering</p>						

Sl. No.	Outcomes	Actions	Deliverables	Cumulative Outputs				
				2025-26	2026-27	2027-28	2028-29	2029-30
		4. Electronics and Communication Engineering 5. Electrical and Electronics Engineering 6. Computer Science & Engineering 7. Information Technology 8. Artificial Intelligence and Data Science 9. Cyber Security 10. Artificial Intelligence and Machine Learning 11. Very Large-Scale Integration 12. Advanced Communication Technology PG Programs M.Tech. in						

Sl. No.	Outcomes	Actions	Deliverables	Cumulative Outputs				
				2025-26	2026-27	2027-28	2028-29	2029-30
		<ol style="list-style-type: none"> 1. CAD/CAM 2. Structural Engineering 3. Embedded Systems and Technology 4. Communication Engineering 5. Computer Science & Engineering 6. Electric Vehicles 7. Cyber Security 8. Master of Computer Applications <p>Ph.D. Program: Engineering and Technology (12 departments)</p> <p>5. Offer the following programs in School of Wellness and Health Sciences</p>						

Sl. No.	Outcomes	Actions	Deliverables	Cumulative Outputs				
				2025-26	2026-27	2027-28	2028-29	2029-30
		<p>PG Programs</p> <p>M.D. in</p> <p>9. Health Science</p> <p>M.Sc. in</p> <p>10. Yoga and Wellness</p> <p>11. Bio Informatics</p> <p>Ph.D. Program: Wellness and Health Sciences (2 departments)</p> <p>6. Offer the following programs in School Liberal Arts & Sciences</p> <p>12. M.A. Liberal Arts</p> <p>13. M.Sc. Sport Science</p> <p>Ph.D. Program: Liberal Arts and Sciences (2 departments)</p>						

Sl. No.	Outcomes	Actions	Deliverables	Cumulative Outputs				
				2025-26	2026-27	2027-28	2028-29	2029-30
		<p>7. Offer the following program in School of Agricultural Sciences</p> <p>14. M.Sc. Agriprenureship</p> <p>Ph.D. Program: Agricultural Sciences (1 department)</p> <p>8. Offer the following program in School of Education</p> <p>15. Master of Education</p> <p>Ph.D. Program: Education (1 department)</p>						
2.	Introduce courses that align with industry needs to enhance graduates' employability and relevance in the job market.	<p>1. Develop courses focused on employability/ entrepreneurship / skill development</p> <p>2. Embrace curriculum structures that enables the students to up</p>	<p>Skill development courses</p> <p>Open electives</p> <p>Life skill courses</p> <p>Minor specialization courses</p>	10	13	15	18	20
				-	-	20	30	30
				2	3	4	5	5
				-	-	30	40	40

Sl. No.	Outcomes	Actions	Deliverables	Cumulative Outputs				
				2025-26	2026-27	2027-28	2028-29	2029-30
		skill in core verticals or interdisciplinary verticals	Honours specialization courses	-	-	30	40	40
3.	Integrate lab-based activities into the curriculum to enhance practical skills and real-world applications, ensuring students are job-ready as NSQF levels.	1. Identify emerging technologies and tools 2. Collaborate with industries and national research laboratories 3. Invest on laboratory equipment, tools, infrastructure and maintenance	Industry supported laboratories	-	40	50	60	60
			Sponsored research labs	-	-	1	2	3
			Funded projects	1	3	6	8	10
			In-house Internships for skill development	-	10	15	20	20
4.	Develop the teaching and learning process based on the CDIO (Conceive – Design – Implement – Operate) framework, incorporating Learning Experience Design	1. Develop CDIO framework (explained in Annexure 1). 2. Deploying Learning Experience Design principles. 3. Utilize advanced ICT tools and smart classrooms to elevate the quality of learning experiences	No. of products developed through CDIO model	-	10	210	310	310
			No. of patent jointly published by students and faculty members	-	-	-	10	10

Sl. No.	Outcomes	Actions	Deliverables	Cumulative Outputs				
				2025-26	2026-27	2027-28	2028-29	2029-30
	principles to enhance educational outcomes.							
5.	Offer certificate, diploma, and degree courses aligned with NSQF levels to facilitate continuous professional development, ensuring individuals can upskill throughout their careers.	1. Design and develop courses for certificate programs in different NSQF levels. 2. Introduce DVoc and BVoc programs in different NSQF levels.	No. of certificate programs	1	2	3	5	15
			No. of diploma programs	1	2	3	4	5
			No. of degree programs	1	2	3	4	5
6.	Empower course faculty to design both formative and summative assessments using diverse assessment methods, ensuring a	1. Implement flexible examination system based on outcomes of course which will be designed by course handling faculty members. 2. Ensure digitalization of examination and evaluation process	No. of student beneficiaries	1190	2500	3930	5480	5480
			No. of course handling faculty members	79	166	262	365	365

Sl. No.	Outcomes	Actions	Deliverables	Cumulative Outputs				
				2025-26	2026-27	2027-28	2028-29	2029-30
	comprehensive evaluation of student learning.							

2.2. Research Plan

Research: Five Years Rolling Implementation Plan for DU

In research, DU will target the following outcomes and outputs in the five years implementation plan.

Sl. No.	Outcomes	Actions	Deliverables	Cumulative Outputs				
				2025-26	2026-27	2027-28	2028-29	2029-30
1.	Start doctoral program in every school	1. Identify requirements of key stakeholders 2. Faculty and resource allocation 3. Establish clear and rigorous admission criteria for doctoral candidates	Number of PhD scholars admitted	25	50	75	90	100
2.	Improve both the quality and quantity of publications	1. Offer Research Training and Workshops 2. Build a Strong Research Network 3. Support Open Access Initiatives	No. of Publications in Q1	50	60	75	85	100
			No. of Publications in SCIE	100	150	200	250	300
			No. of Publications in Scopus	100	200	300	400	500

Sl. No.	Outcomes	Actions	Deliverables	Cumulative Outputs				
				2025-26	2026-27	2027-28	2028-29	2029-30
		1. Provide due weightage to research targets in Faculty career management systems. 2. Set Milestones and Key Performance Indicators 3. Provide incentives and recognition for outstanding research	No. of Publications in Conferences	100	200	300	400	500
			No. of Books Published	10	20	30	40	50
			No. of Book chapters Published	50	75	125	175	200
3.	Strengthen the efforts for fetching a more significant number of externally funded projects.	1. Provide Training and conduct Workshops 2. Cultivate Relationships with Funding Agencies 3. Develop an Effective Grant Review Process 4. Encourage competitive peer-reviewed research funding across disciplines	No. of projects from Government Agency	10	25	50	75	100
			No. of projects related to society's needs and Corporate needs	10	25	50	75	100
			No. of projects from CSR Funds	5	15	25	40	50
			No. of Seminar Grant	5	15	25	40	50

Sl. No.	Outcomes	Actions	Deliverables	Cumulative Outputs				
				2025-26	2026-27	2027-28	2028-29	2029-30
		5. Foster Collaboration and Networking	No. of Travel Grant	5	15	25	40	50
4.	Enhance Seed Money for In-house R&D Projects	1. Create Cross-Functional Teams	No. of faculty receiving seed money for In-House R&D	50	80	125	160	200
		2. Involve students in research projects	Total amount of seed money given for faculty in lacs	25	40	60	80	100
		3. Implement Idea Generation Platforms	No. of Students receiving seed money for In-house projects	75	125	175	200	250
		4. Increase seed money for in-house research	Total amount of seed money given to students in lacs	25	40	60	80	100
5.			No. of consultancy activities	60	80	100	125	150

Sl. No.	Outcomes	Actions	Deliverables	Cumulative Outputs				
				2025-26	2026-27	2027-28	2028-29	2029-30
	Expand Consultancy Services	1. Network with industries for consultancy and testing services 2. Offer state-of-the-art research facilities for consultancy services 3. Collaborate with industry partners and government agencies 4. Provide customized training programs for industries	Total amount generated from consultancy activities in lacs	40	60	80	100	125
			No. of Corporate training programs	10	20	30	40	50
			Income generated in Lacs	40	60	80	100	125
6.	Increase Intellectual Property Rights (IPR)	1. Identify the patentable inventions. 2. Create Inventor Recognition Programs 3. Provide Financial support for IPR filing 4. Engage Legal Counsel	No. of Patent filed	30	40	60	80	100
			No. of Design filed	30	40	60	80	100
			No. of Copyright filed	30	40	60	80	100
			No. of Technology Transfer	5	10	25	40	50

Sl. No.	Outcomes	Actions	Deliverables	Cumulative Outputs				
				2025-26	2026-27	2027-28	2028-29	2029-30
7.	Enhance Industry Sponsored Research	1. Establish industry-academic linkages	No. of Industry sponsored research lab	10	20	30	40	50
		2. Promote Multidisciplinary Collaboration	No. of Industry sponsored projects	20	30	50	75	100
		3. Act as a liaison between researchers and relevant branches of government as well as Industry	No. of Joint publications	15	20	30	50	80
		4. Monitor and Evaluate Progress	No. of MoU's	60	70	80	90	100
		5. Facilitate Joint Workshops and Training	No. of the workshop for Industry Insights	5	10	15	20	25
			No. of Research-based Internship	20	40	60	80	100
8.	Strengthen International Research Collaboration	1. Participate in International Conferences	No. of Faculty Exchange with Global Institutions	5	10	20	30	50
		2. Promote global Joint Publications and joint Research Projects	No. of Student exchange with global institutions	25	50	100	150	200

Sl. No.	Outcomes	Actions	Deliverables	Cumulative Outputs				
				2025-26	2026-27	2027-28	2028-29	2029-30
		3. Host International Workshops and Seminars	No. of Joint Publications	20	40	60	80	100
		4. Collaborate research within the university and with sister institutions	No. of Joint Research Projects	5	10	20	30	50
9.	Develop a Robust Research Ecosystem	1. Modernize labs outfitted with cutting-edge equipment and technology	No. of Major Research Equipment	50	60	75	90	100
		2. Deploy computational resources and high-performance computer clusters for data-intensive research	No. of Technology development centres	10	20	30	40	50
			No. of membership and research clusters	10	20	30	40	50
		3. Contribute public databases, archives, and research materials	No. of public datasets contributed to the research.	5	10	15	20	25

Sl. No.	Outcomes	Actions	Deliverables	Cumulative Outputs				
				2025-26	2026-27	2027-28	2028-29	2029-30
		4. Liaison with foreign organizations to facilitate cross-border research cooperation. 5. Invest in Emerging Technologies	No. of centres in frontier areas of research	5	6	7	8	10
10.	Build strong research capacity	1. Invite Expert Speakers and Facilitators	No. of HEIs Collaborated	10	15	20	30	50
		2. Promote Cross-Disciplinary Participation	No. of Research workshops and seminars	20	25	30	40	75
		3. Conduct Hands-on research workshops, case studies and seminars periodically	No. of International Conference	3	5	7	9	10
		4. Discovery-based style of learning to conduct student research	Incentive for research contributions in lacs	25	50	75	90	100
			Support for attending FDP/ Conference in lacs	50	90	125	160	200

Sl. No.	Outcomes	Actions	Deliverables	Cumulative Outputs				
				2025-26	2026-27	2027-28	2028-29	2029-30
		5. Promote Competitions for innovation among student communities	No. of students receiving four-year degree programs to be admitted in Ph.D	-	-	-	-	50
		6. Institute policies to attract students from other nations to study for a PhD	No. of Master's students for the 2-year program with the second year devoted entirely to research	-	15	25	50	100
		7. Fast-track promotion system for recognizing high-impact research and contribution.	No. of events by Research interest group	150	200	225	260	300
		8. Provide teaching assistantship for Ph.D scholars	No. of events by the Student Research Council	15	20	30	40	50
			Mobility of students to carry out research at institutions abroad	-	-	-	-	50

Sl. No.	Outcomes	Actions	Deliverables	Cumulative Outputs				
				2025-26	2026-27	2027-28	2028-29	2029-30
11.	Improve Community Engaged Research activities	1. Develop strategies for attaining sustainable goals. 2. Reflect on the research product with the community 3. Build Capacity for Community Research 4. Implement training programs for community members to enhance their research literacy and participation.	No. of Community Engagement Programs organized	15	20	30	40	50
			No. of Technological solution provided	10	20	30	40	50
			No. of Outreach activities conducted	25	50	75	100	150

2.3. Infrastructure Development Plan

Infrastructure: Five Years Rolling Implementation Plan for DU

In infrastructure, DU will target the following outcomes and outputs in the five years implementation plan.

Sl. No.	Outcomes	Actions	Deliverables	Outputs				
				2025-26	2026-27	2027-28	2028-29	2029-30
1.	Establish administrative and academic buildings as per the requirements.	1. Construct buildings for key officials as per the requirement 2. Construct buildings for academic requirements 3. Construct buildings and spaces for support services	Administrative building	4500 m ²	-	-	-	-
			Academic and research building	-	1300 m ²	1300 m ²	1300 m ²	1300 m ²
			Basic amenities area	2000 m ²	2000 m ²	2000 m ²	2000 m ²	2000 m ²
			Food court	1000 m ²				
2.	Create World-Class Academic and Research Hubs	1. Purchasing of Major lab equipment for new courses 2. Purchasing advanced lab equipment for research	Major equipment	10	10	20	20	20

Sl. No.	Outcomes	Actions	Deliverables	Outputs				
				2025-26	2026-27	2027-28	2028-29	2029-30
3.	Expand Student and faculty Accommodation and Amenities based on new initiatives.	1. Construct student housing 2. Construct staff housing	Hostel units	1 for 350 boys + 1 for 150 girls	1 for foreign students	-	-	-
			Quarters	50 Faculty	25 Staff	50 Faculty	50 Staff	100 Faculty
4.	Enhance physical and digital facilities in classrooms and library	1. Convert classrooms into smart classrooms 2. Construct smart classrooms 3. Purchase books 4. Subscribe to journals and periodicals	Smart Classrooms	20	20	20	20	20
			Books and Journals Print	5000	5000	5000	5000	5000
			Digital Resources	500	1000	1000	1500	1500
5.	Enhance transportation and connectivity	1. Purchase vehicles 2. Introduce new routes	Electric buses	2	2	2	2	2
			Other vehicles	3	5	5	10	10

Sl. No.	Outcomes	Actions	Deliverables	Outputs				
				2025-26	2026-27	2027-28	2028-29	2029-30
			New routes	5	10	10	15	15
6.	Expand renewable energy usage progressively meeting the campus energy requirements.	<ol style="list-style-type: none"> 1. Install additional capacity of Solar PV 2. Replace lights and fixtures with LED 3. Install solar powered lights 	Renewable energy usage	15%	20%	20%	30%	30%
7.	Establish an ecofriendly safe natural wastewater treatment and management system	<ol style="list-style-type: none"> 1. Install a pilot facility 2. Run trials 3. Extend the facility for entire campus 	Natural wastewater management facility	1	-	-	-	-
8.	Establish an inhouse centre recycle, reuse of	<ol style="list-style-type: none"> 1. Develop new system for waste management and reuse 	Inhouse centre to recycle and reuse waste	-	1	-	-	-

Sl. No.	Outcomes	Actions	Deliverables	Outputs				
				2025-26	2026-27	2027-28	2028-29	2029-30
	waste to promote waste to wealth.	2. Integrate existing system with the new system						
9.	Create sports and recreational infrastructure with international standards	1. Construct indoor stadium 2. Construct new air-conditioned auditorium 3. Construct a swimming pool 4. Augment existing sports and games courts	International Sports and Recreational Infrastructure	-	Swimming Pool	New Auditorium		Indoor Stadium

2.4 Finance Plan

Finance: Five Years Rolling Implementation Plan for DU

In finance, DU will target the following outcomes and outputs in the five years implementation plan.

DU will incur the following expenses towards the inception and development of the university in the next five years managing funds from income sources already mentioned. Management will continue to contribute any shortfall in funds.

Table .2: Expense to be incurred in 5 years rolling implementation plan

	2025-26	2026-27	2027-28	2028-29	2029-30
Academic Plan	50	100	200	200	200
Recruitment	50	50	50	50	50
Admission	500	500	400	200	200
Research	300	500	800	1000	1300
Research Centre (CoE)	2000	400	300	200	100
Campus ICT	400	300	300	300	300
Infrastructure	3500	3000	2500	1000	500
Career development	100	200	400	500	500
Network and Collaboration	75	80	85	90	95
Alumni engagement	50	60	70	80	80
Governance and Administration	200	200	200	200	200
Salary	1320	2550	3875	5300	5450
Expense	8545	7940	9180	9120	8975

All amounts mentioned in table are in INR Lacs

2.5. Governance and Administration Plan

Governance and Administration: Five Years Rolling Implementation Plan for DU

In governance and administration, DU will target the following outcomes and outputs in the five years implementation plan.

Sl. No.	Outcomes	Actions	Deliverables	Outputs				
				2025-26	2026-27	2027-28	2028-29	2029-30
1.	Adhere to an annual calendar for all statutory body meetings	1. Conduct regular Executive council, Finance committee, Academic council and Board studies meetings	No. of meetings of executive council, finance committee, and academic council per year	4	4	4	4	4
			No. of Board studies meetings	4	4	4	4	4
2.	Execute strategic plans providing future direction and ensuring achievement of intended goals	1. Prepare strategic plans 2. Prepare annual operating plans 3. Review implementation of plans	Strategic Plans	1	-	-	-	1
			Annual Operating Plans	1	1	1	1	1
			Reviews of AOP	4	4	4	4	4
3.		1. Conduct internal and external audits and reviews	Internal audits	4	4	4	4	4
			External audits	2	2	2	2	2

Sl. No.	Outcomes	Actions	Deliverables	Outputs				
				2025-26	2026-27	2027-28	2028-29	2029-30
	Ensure quality assurance through reviews and audits	2. Conduct academic and administrative audit	Academic and Administrative audits	1	1	1	1	1



Dr. Mahalingam College of Engineering and Technology

Makkinaickenpatti (Post), Udumalai Road,
Pollachi - 642003, Coimbatore, Tamilnadu, India

Ph: +91 - 4259 - 236030 / 40 / 50

website: www.drmcet.ac.in