



M.A.M. SCHOOL OF ENGINEERING

Accredited by NAAC

Approved by AICTE, New Delhi; Affiliated to Anna University, Chennai

Siruganur, Trichy -621 105.

www.mamse.in

NATIONAL INNOVATION AND START-UP POLICY

VISION

M.A.M School of Engineering aims to encourage creativity, industrial visit, and entrepreneurship among its students and faculties by creating and supporting startups. This would lessen our reliance on the employment market and help us become self-reliance and self-sufficiency. By 2030, MAMSE will be one of India's innovation hubs and the most preferred destination for startups.

MISSION

Promote and facilitate business knowledge in order to encourage entrepreneurial thinking. Educate future corporate leaders to become driven, moral, and innovative.

OBJECTIVES

- Students with entrepreneurial experience and a desire for a career on their own should be sought out in their first year.
- Exposing all students, beginning in their second year, to industrial visits and the culture of business.
- Fostering an entrepreneurial culture by hosting several pertinent FDPs, STTPs, seminars, and workshops.
- To encourage creative, and innovative thinking among the teacher and student community
- Guiding students who have creative ideas to turn them into prototypes.

- To inspire students to turn their projects and Detailed Project Reports (DPRs) into workable Business plans.
- Ensuring patent filing and encouraging innovation.
- Arranging a meeting with angel investors to demonstrate concepts and prototype products in order to obtain the required funding.
- Getting students ready for a successful start-up launch.
- Providing consulting services by improving the infrastructure in the priority sectors, such as electrical and electronics, renewable energy, information technology, the internet of things, artificial intelligence, machine learning, digital manufacturing, 3D printing, and software as a service .
- The promotion of corporate and private incubators would be the main focus of CSR funding.

Expert Committee

Name of the expert members	Designation	Position held in IIC
Dr.P.Ranjith Kumar	Principal	President
Dr.A.Punitha	HOD /MCT	Convener
Dr.P.Lilly Florence	HOD/S&H	Vice President & NISP Coordinator
Dr.A.Abdul Rahman	Eminent Scientist	Patent Expert
Mr.N.Kanagasabathi	Director, RK metal Industries, Trichy	Expert from Industry
Mr.A.Wahid Ali	Director, Cavrys Life Sciences Pvt. Ltd., Chennai	Startup/Alumni Entrepreneur

Prof.R.Ramanathan	HOD /MECH	Startup Activity Coordinator & NISP MECH Coordinator
Dr.K.Chandrasekaran	HOD/ AERO	IPR Coordinator & NISP AERO-Coordinator
Prof.P.Kavitha	HOD/ ECE	Internship Coordinator & NISP ECE-Coordinator
Mr.G.Purushothaman	HOD/ EEE	Innovation Activity Coordinator & NISP EEE-Coordinator
Mr.K.Sathish Kumar	HOD/ CSE	NISP CSE-Coordinator
Prof.S.Saravanan	Mechatronics	Social Media Coordinator & NISP MCT Coordinator
Mr.M.Chandrasekar	Mechatronics	NIRF & ARIIA Coordinator

National Innovation and Startup Policy (NISP) 2022 for Students and Faculty

As per NISP 2019, MAMSE NISP'2022 is framed using the following thrust areas:

S. No.	Thrust areas of MAMSE NISP' 2022
1.	Implementing MAMSENISP'2022: Strategies and Governance
2.	Infrastructural support for startups
3.	Nurturing Innovations and Startups
4.	Institutional Product Ownership Rights
5.	Organizational Capacity, Human Resources and Incentives
6.	Establishing innovation and entrepreneurs at the institute level
7.	Faculty startup norms
8.	Pedagogy and Learning Interventions for Entrepreneurship Development
9.	Collaboration, Co-creation, Business Relationships and Knowledge Exchange
10.	Entrepreneurial Impact Assessment

1. Implementing MAMSENISP'2022: Strategies and Governance

- Entrepreneurship promotion and development should be one of the major dimensions of the HEIs strategy.
- To facilitate development of an entrepreneurial ecosystem in the organization, specific objectives and associated performance indicators should be defined for assessment.
- HEIs should be the driving force in developing entrepreneurship culture in its vicinity (regional, social and community level). This shall include giving opportunity for regional startups, provision to extend facilities for outsiders and active involvement of the institute in defining strategic direction for local development.
- The NISP Coordinator of MAMSE will hold the responsibility to promote innovation, entrepreneurship and start-ups.
- Resource mobilization plan should be worked out at the institute for supporting pre-incubation, incubation infrastructure and facilities.
- A sustainable financial strategy should be defined in order to reduce the organizational constraints to work on the entrepreneurial agenda.
- MAMSE have a plan of utilizing minimum 1% fund of the total annual budget for funding and supporting innovation and startups related activities through creation of separate 'Innovation fund'.
- Institute may also raise funding through sponsorships and donations. Institute should actively engage alumni network for promoting Innovation & Entrepreneurship (I&E).
- The strategy should also involve raising funds from diverse sources to reduce dependency on the public funding. Bringing in external funding through

government (state and central) such as DST, DBT, MHRD, AICTE, TDB, TIFAC, DSIR, CSIR, BIRAC, NSTEDB, NRDC, Startup India, Invest India, MeitY, MSDE, MSME, etc. and non-government sources should be encouraged.

- To support technology incubators, academic MAMSE approach private and corporate sectors to generate funds, under Corporate Social Responsibility (CSR) as per Section 135 of the Company Act 2013.
- Importance of innovation and entrepreneurial agenda should be known across the institute and should be promoted and highlighted at institutional programs such as conferences, convocations, workshops, etc.
- Micro and Macro action plan should also be developed by the affiliated institutes to accomplish the policy objectives.
- MAMSE will develop and implement I & E strategy and policy for the entire institute in order to integrate the entrepreneurial activities across various centers, departments, faculties, within the institutes, thus breaking the silos.

2. Infrastructural support for startups

- MAMSE creates pre-incubation and incubation facilities for nurturing innovations and startups in HEIs institutions and Incubation and Innovation need to be organically interlinked.
- MAMSE will create facilities for supporting pre-incubation (e.g. IICs as per the guidelines by MHRD's Innovation Cell, EDC, IEDC, New-Gen IEDC, Innovation Cell, Startup Cell, Student Clubs, etc.) and Incubation/ acceleration by mobilizing resources from internal and external sources.
- This Pre-Incubation/Incubation facility is accessible 24x7 to students, staff and faculty of all disciplines and departments across the institution.
- Pre-incubation facilities may or may not be a separately registered entity or

Special Purpose Vehicle (SPV), but we recommend that 'Incubation cum Technology Commercialization Unit'(ITCU) should be a separate entity preferably registered under Section-8 of Company Act 2013 or 'Society' registered under Society Registration Act with independent governance structure. This will allow more freedom to Incubators in decision making with less administrative hassles for executing the programs related to innovation, IPR and Startups. Moreover, they will have better accountability towards investors supporting the incubation facility.

- MAMSE offers mentoring and other relevant services through Pre-incubation/Incubation units

3. Nurturing Innovations and Startups

- MAMSE will establish processes and mechanisms for easy creation and nurturing of Startups/enterprises by students, staff, faculty, alumni and potential start up applicants even from outside the institutions.
- MAMSE Will allow setting up a start up and working part-time for the start ups while studying / working and Student Entrepreneurs will earn credits for working on innovative prototypes/Business Models.
- Student inventors will be allowed to opt for start up in place of their mini project/ major project, seminars, summer trainings.
- Students who are under incubation, but are pursuing some entrepreneurial ventures while studying should be allowed to use MAMSE address to register their company with due permission from the institution.
- Students entrepreneurs will be allowed to sit for the examination, even if their attendance is less than the minimum permissible percentage, with due permission from the institute.

- MAMSE allow their students to take a semester/year break to work on their start ups and re-join academics to complete the course. Student entrepreneurs may earn academic credits for their efforts while creating an enterprise. Institute should set up a review committee for review of start up by students, and based on the progress made, it may consider giving appropriate credits for academics.
- MAMSE explores the provision of accommodation to the entrepreneurs within the campus for some period of time.
- Start a part-time/full time MS/ MBA/ PGDM (Innovation, entrepreneurship and venture development) program where one can get degree while incubating and nurturing a startup company. AICTE has already issued guidelines for a similar program.
- Institute will facilitate the startup activities/ technology development by allowing students/ faculty/ staff to use institute infrastructure and facilities, as per the choice of the potential entrepreneur such as Short-term/ six-month/ one-year part-time entrepreneurship training and Mentorship support on regular basis.
- Facilitation in a variety of areas including technology development, ideation, creativity, design thinking, fund raising, financial management, cash-flow management, new venture planning, business development, product development, social entrepreneurship, product- costing, marketing, brand-development, human resource management as well as law and regulations impacting a business.
- Institute also link the startups to other seed-fund providers/ angel funds/ venture funds or itself may set up seed-fund once the incubation activities mature.

- In return of the services and facilities, institute may take 2% to 9.5% equity/ stake in the startup/ company, based on brand used faculty contribution, support provided and use of institute's IPR.
- For staff and faculty, institute can take not more than 20% of shares that staff / faculty takes while drawing full salary from the institution; however, this share will be within the 9.5% cap of company shares, listed above.
- No restriction on shares that faculty / staff can take, as long as they do not spend more than 20% of office time on the startup in advisory or consultative role and do not compromise with their existing academic and administrative work / duties. In case the faculty/ staff holds the executive or managerial position for more than three months in a startup, then they will go on sabbatical/ leave without pay/ earned leave.
- In case of compulsory equity model, Startup may be given a cooling period of 3 months to use incubation services on rental basis to take a final decision based on satisfaction of services offered by the institute/incubator. In that case, during the cooling period, institute cannot force startup to issue equity on the first day of granting incubation support.
- Institute could extend this startup facility to alumni of the institute as well as outsiders.
- Participation in startup related activities needs to be considered as a legitimate activity of faculty in addition to teaching, R&D projects, industrial consultancy and management duties and must be considered while evaluating the annual performance of the faculty. Every faculty is encouraged to mentor at least one startup.
- Product development and commercialization as well as participating and nurturing of startups would now be added to a bucket of faculty-duties and

each faculty would choose a mix and match of these activities and then respective faculty are evaluated accordingly for their performance and promotion.

4. Institutional Product Ownership Rights

- Inventors and institute could together license the product / IPR to any commercial organization, with inventors having the primary say. License fees could be either / or a mix of Upfront fees or one-time technology transfer fees, Royalty as a percentage of sale-price and Shares in the company licensing the product.
- If one or more of the inventors wish to incubate a company and license the product to this company, the royalties would be no more than 4% of sale price, preferably 1 to 2%, unless it is pure software product. If it is shares in the company, shares will again be 1% to 4%. For a pure software product licensing, there may be a revenue sharing to be mutually decided between the institute and the incubated company.
- If product/ IPR is developed by innovators not using any institute facilities, outside office hours (for staff and faculty) or not as a part of curriculum by student, then product/ IPR will be entirely owned by inventors in proportion to the contributions made by them. In this case, inventors can decide to license the technology to third parties or use the technology the way they consider fit.
- MAMSE will not hold the equity as per the current statute, so SPV may be requested to hold equity on their behalf.
- If there is a dispute in ownership, a minimum five membered committee consisting of two faculty members (having developed sufficient IPR and translated to commercialization), two of the institute's alumni/ industry experts (having experience in technology commercialization) and one legal

advisor with experience in IPR, will examine the issue after meeting the inventors and help them settle this, hopefully to everybody's satisfaction. Institute can use alumni/ faculty of other institutes as members, if they cannot find sufficiently experienced alumni / faculty of their own.

- MAMSE IPR cell or incubation center will only be a coordinator and facilitator for providing services to faculty, staff and students. If MAMSE is to pay for patent filing, they can have a committee which can examine whether the IPR is worth patenting. The committee should consist of faculty who have experience and excelled in technology translation. If inventors are using their own funds or non- institute funds, then they alone should have a say in patenting.
- MAMSE's decision-making body with respect to incubation / IPR / technology-licensing will consist of faculty and experts who have excelled in technology translation. Other faculty in the department / institute will have no say, including heads of department, heads of institutes, deans or registrars.

5. Organizational Capacity, Human Resources and Incentives

- MAMSE recruit staff that has a strong innovation and entrepreneurial/ industrial experience, behavior and attitude such as prior exposure and interest in entrepreneurial activities, institutional policy on career development.
- Faculty and departments of the institutes will work in coherence and departmental linkages.
- Periodically some external subject matter experts such as guest lecturers or alumni can be engaged for strategic advice and bringing in skills which are not available internally.
- Faculty and staff should be encouraged to do courses on innovation, entrepreneurship management and venture development.

- MAMSE will develop academic and non-academic incentives and reward mechanisms for all staff and stakeholders that actively contribute and support entrepreneurship agenda and activities in order to attract and the reward system for the staff includes sabbaticals, office and lab space for entrepreneurial activities, reduced teaching loads, awards, trainings, etc.
- The recognition of the stakeholders include offering use of facilities and services, strategy for shared risk, as guest teachers, fellowships, associateships, etc.
- A performance matrix will be developed and used by MAMSE for evaluation of annual performance.

6. Establishing innovation and entrepreneurs at the institute level

- MAMSE spreads awareness among students, faculty and staff about the value of entrepreneurship and its role in career development or employability should be a part of the institutional entrepreneurial agenda. Students/ staff should be taught that innovation is a mechanism to solve the problems of the society and consumers.
- Students are encouraged to develop entrepreneurial mindset through experiential learning by exposing them to training in cognitive skills by inviting first generation local entrepreneurs or experts to address young minds.
- MAMSE will link the start ups and companies with wider entrepreneurial ecosystem and by providing support to students who show potential, in pre-startup phase. Connecting student entrepreneurs with real life entrepreneurs will help the students in understanding real challenges which may be faced by them while going through the innovation funnel and will increase the probability of success.
- MAMSE established Institution's Innovation Councils (IICs) as per the

guidelines of MHRD's Innovation Cell and allocated appropriate budget for its activities. IICs guide institution in conducting various activities related to innovation, startup and entrepreneurship development. Collective and concentrated efforts are taken to identify, scout, acknowledge, support and reward proven student ideas and innovations and to further facilitate their entrepreneurial journey.

- MAMSE promotes the entrepreneurs to understand that money is not FREE and is risk capital. The entrepreneur must utilize these funds and return. While funding is taking risk on the entrepreneur, it is an obligation of the entrepreneur to make every effort possible to prove that the funding agency did right in funding him/ her.
- MAMSE develops a ready reckoner of Innovation Tool Kit, which will be kept on the homepage on institute's website to answer the doubts and queries of the innovators and enlisting the facilities available at the institute.

7. Faculty startup norms

- For better coordination of the entrepreneurial activities, norms for faculty to do startups will be created by MAMSE.
- Role of faculty is allowed to vary from being an owner/ direct promoter, mentor, consultant or as on-board member of the startup.
- MAMSE works on developing a policy on 'conflict of interests' to ensure that the regular duties of the faculty don't suffer owing to his/her involvement in the startup activities.
- Faculty startup will consist of faculty members alone or with students or with faculty of other institutes or with alumni or with other entrepreneurs.
- Faculty must clearly separate and distinguish on-going research at the institute

from the work conducted at the startup/ company.

- In case of selection of a faculty start up by an outside national or international accelerator, a maximum leave (as sabbatical/ existing leave/ unpaid leave/ casual leave/ earned leave) of one semester/ year (or even more depending upon the decision of review committee constituted by the institute) will be permitted to the faculty.
- Human subject related research in startup will get clearance from ethics committee of the institution.

8. Pedagogy and Learning Interventions for Entrepreneurship Development

- Diversified approach will be adopted to produce desirable learning outcomes, which will include cross disciplinary learning using mentors, labs, case studies, games, etc. in place of traditional lecture-based delivery.
- Student clubs/ bodies/ departments were created for organizing competitions, boot camps, workshops, awards, etc. These bodies will be involved in institutional strategy planning to ensure enhancement of the student's thinking and responding ability.
- MAMSE will start annual 'INNOVATION & ENTREPRENEURSHIP AWARD' to recognize outstanding ideas, successful enterprises and contributors for promoting innovation and enterprises ecosystem within the institute.
- For creating awareness among the students, the teaching methods will include case studies on business failure and real-life experience reports by startups.
- Failures need to be elaborately discussed and debated to imbibe that failure is a part of life, thus helping in reducing the social stigma associated with it. Very importantly, this should be a part of institute's philosophy and culture.

- Entrepreneurship education will be imparted to students at curricular/ co-curricular/ extra-curricular level through elective/ short term or long-term courses on innovation, entrepreneurship and venture development. Validated learning outcomes will be made available to the students.
- In the beginning of every academic session, MAMSE will conduct an induction program about the importance of I&E so that freshly inducted students are made aware about the entrepreneurial agenda of the institute and available support systems. Curriculum for the entrepreneurship education will be continuously updated based on entrepreneurship research outcomes with case studies on failures.
- Student innovators, startups, experts will be engaged in the dialogue process while developing the strategy so that it becomes need based.
- Customized teaching and training materials will be developed for startups.
- The entrepreneur is a leader, who would convert an innovation successfully into a product, others may join the leader and work for the startup. It is important to understand that entrepreneurship is about risk taking. One must carefully evaluate whether a student is capable and willing to take risk.
- Pedagogical changes need to be done to ensure that maximum number of student projects and innovations are based around real life challenges. Learning interventions developed by the institutes for inculcating entrepreneurial culture should be constantly reviewed and updated.

9. Collaboration, Co-creation, Business Relationships and Knowledge Exchange

- MAMSE will find potential partners, resource organizations, micro, small and medium-sized enterprises (MSMEs), social enterprises, schools, alumni, professional bodies and entrepreneurs to support entrepreneurship and co-

design the programs.

- MAMSE will organize networking events for better engagement of collaborators and should open up the opportunities for staff, faculty and students to allow constant flow of ideas and knowledge through meetings, workshops, space for collaboration, lectures, etc.
- MAMSE will develop the mechanism to capitalize on the knowledge gained through these collaborations.
- MAMSE will develop policy and guidelines for forming and managing the relationships with external stakeholders including private industries.
- Knowledge exchange through collaboration and partnership will be a part of institutional policy and institutes must provide support mechanisms and guidance for creating, managing and coordinating these relationships.
- Through formal and informal mechanisms such as internships, teaching and research exchange programmes, clubs, social gatherings, etc., faculty, staff and students of MAMSE will be given the opportunities to connect with their external environment.
- Single Point of Contact (SPOC) mechanism will be created in MAMSE for the students, faculty, collaborators, partners and other stakeholders to ensure access to information.
- Knowledge management will be done by MAMSE through development of innovation knowledge platform using inhouse Information & Communication Technology (ICT) capabilities.

10. Entrepreneurial Impact Assessment

- Impact assessment of institute's entrepreneurial initiatives such as pre-incubation, incubation, entrepreneurship education will be performed regularly

by MAMSE using well defined evaluation parameters.

- Monitoring and evaluation of knowledge exchange initiatives, engagement of all departments and faculty in the entrepreneurial teaching and learning should be assessed.
- Number of startups created, support system provided at the institutional level and satisfaction of participants, new business relationships created by the institutes should be recorded and used for impact assessment.
- Impact will be measured for the support system provided by the institute to the student entrepreneurs, faculty and staff for pre-incubation, incubation, IPR protection, industry linkages, exposure to entrepreneurial ecosystem, etc.
- Impact assessment for measuring the success should be in terms of sustainable social, financial and technological impact in the market. For innovations at pre-commercial stage, development of sustainable enterprise model is critical. Commercial success is the only measure in long run.