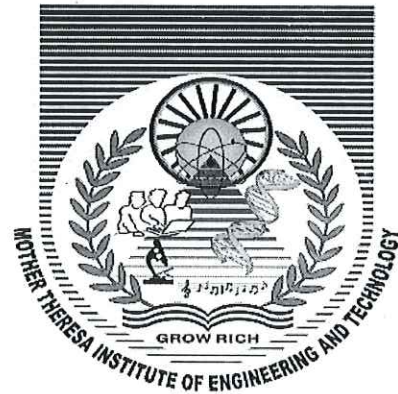


# MOTHER THERESA INSTITUTE OF ENGINEERING AND TECHNOLOGY

*(Approved by AICTE, New Delhi and Affiliated to JNTUA, Anantapuramu-515002)*

Melumoi Post, Palamaner,  
Chittoor(Dist.). AP, India-517408



## POLICY DOCUMENT

# INNOVATION & STARTUP



## VISION

To promote excellence in the field of Engineering Education, Research and Consultancy which encompasses knowledge, skills and values to produce technically and intellectually competent and socially committed students to become responsible citizens.

## MISSION

- To empower the students in developing professionalism through innovative teaching and learning process
- To improve high ethical values in engineering and technology through research and consultancy
- To promote high standards in education to meet the needs of the society
- To impart knowledge and technical skills to enhance intellectual property of primary stake holders.

## PROGRAM OUTCOMES (POS)

Engineering Graduates will be able to:

- **PO1. Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
- **PO2. Problem analysis:** Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
- **PO3. Design/development of solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
- **PO4. Conduct investigations of complex problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
- **PO5. Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
- **PO6. The engineer and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
- **PO7. Environment and sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
- **PO8. Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
- **PO9. Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
- **PO10. Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
- **PO11. Project management and finance:** Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
- **PO12. Life-long learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.



**MOTHER THERESA INSTITUTE OF ENGINEERING AND TECHNOLOGY  
INNOVATION & STARTUP POLICY**

**Preamble**

Mother Theresa Institute of Engineering and Technology (MTIET) fosters the student and staff creativity by providing a righteous platform through design thinking and divergent thinking, and help them to bring their creative ideas and imaginations into product, process, and service. This inventiveness inspires the entrepreneurial ecosystem to fulfill the need for current and future generations to come. The National Innovation and Startup Policy 2019 for students and faculty is a directorial framework to support our institute to keenly engage students and faculty members towards the innovation and entrepreneurship and startup related activities. This Innovation and Startup Policy provides detailed guidelines for several features of innovation, Startup and entrepreneurship management on various facets for nurturing the innovation, entrepreneurship and Startup culture in our institution, such as Intellectual Property ownership, revenue sharing mechanisms, norms for technology transfer and commercialization and equity sharing.

**MTIET Innovation & Startup Policy - Vision**

To empower the faculty, staff and students to participate in innovation and entrepreneurship (I&E) related activities, thereby encouraging students and faculty to consider startups and entrepreneurship as a career option.

**MTIET Innovation & Startup Policy - Mission**

Through design and divergent thinking, MTIET strives to intensify the knowledge and mobilize the governance of world-class teaching and learning for building an entrepreneurial ecosystem.

Implementation of entrepreneurial vision at our institution is accomplished through mission statement. Student and faculty startup Policy and action plan are articulated with well-defined short-term and long-term goals. Micro action plan is also developed by our institution to accomplish the policy objectives.

## 1. Strategies and Governance

- The entrepreneurial and start up activity should be under the responsibility of a senior professor in order to bring in required commitment among the students and faculty.
- Resource mobilization plan for supporting pre-incubation, incubation infrastructure and other facilities are as follows
  - i. Minimum 1 % fund of the total annual budget of the institution shall be allocated for funding and supporting the entrepreneurial and start up activity.
  - ii. The fund also raised from 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.
  - iii. Furthermore, the institutes shall approach private and corporate sectors to generate funds, under Corporate Social Responsibility (CSR) as per Section 135 of the Company Act 2013, sponsorships and donations.
- Importance of innovation, entrepreneurial and startup shall be promoted across the institute through the institutional programs such as conferences, seminars and workshops.
- The institution shall make driving force in developing entrepreneurship culture in its vicinity (regional, social and community level). Further, our institution shall collaborate with various innovation clusters, incubation centers and other relevant organizations for internship, training and research on innovation, entrepreneurial and startup activities.

## 2. Startups Enabling Institutional Infrastructure

- The institute shall create facilities for supporting pre-incubation activities/clubs and these facilities shall be accessible to all students and faculty members irrespective of the departments.
- An incubation unit shall be created with good infrastructure and lab facilities at each department for making the prototype and working models of their innovative idea.
- Research Park and Innovation Park shall be created for displaying their innovative products and conducting the exhibitions
- The existing centers of excellence are to be utilized for innovation, entrepreneurial and startup activities.

- A qualified patent attorney to be appointed for advising the students and teachers about patents and he will assist them in obtaining patents granted by patent offices.

### 3. Nurturing Innovations and Start ups

- Institute is expecting to establish processes and mechanisms for easy creation and nurturing of Startups/enterprises by students, staff (including temporary or project staff), faculty, alumni and potential start up applicants even from outside the institutions.
- The institute shall offer to access to pre-incubation & Incubation facility to start ups by students, staff and faculty for mutually acceptable time-frame. In case MTIET doesn't have a dedicated facility/ infrastructure of its own, then the institute shall facilitate to reach out the nearest incubation facilities in other HEIs.
- Ideally students and faculty members intending to initiate a startup based on the technology developed or co-developed by them or the technology owned by the institute, should be allowed to take a license on the said technology on easy term, either in terms of equity in the venture and/ or license fees and/ or royalty to obviate the early stage financial burden.
- Students entrepreneurs are allowed for end semester examination, even if their attendance is less than the minimum permissible percentage, with due permission
- Students are allowed to take a semester/year break to work on their startups and re-join academics to complete the course.
- Student entrepreneurs may earn academic credits for their efforts while creating an enterprise.
- A review committee is to be framed by the Institution for review of start up by students, and appropriate credits for academics can be awarded based on the progress made. The members of the committee include:

Members	Function
Head of the Institute (HoI)	Supervises the activities of Innovation and startups.
Dean (R&D)	Coordinates between the staff and the HoI. Also, responsible for organizing training, consulting industry experts, etc.
HOD Concerned Dept R&D Cell Co-ordinator- Concerned Dept Internal Subject Experts	Experts to evaluate the Invention Disclosure Forms (IDF's) submitted by inventors. To take decisions on the inventions.
Industry Person	Experts to evaluate the IDF's submitted by inventors. To take decisions on the inventions. Suggest further recommendations.

- Provision of accommodation to the student entrepreneurs within the campus for some period of time is provided.
- Faculty member and staff are allowed to take off for a semester / year as sabbatical leave for working on startups and come back.
- The seniority and other academic benefits during such period may be preserved for such staff or faculty.
- As per AICTE guidelines Part-time/full time (Innovation, entrepreneurship and venture development) program are encouraged where one can get degree while incubating and nurturing a startup company.
- As per guidelines, in return of the services and facilities, our Institution 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 (a limit of 9.5% is suggested so that institute has no legal liability arising out of startup).
- Our Institution takes much lower equity share, unless its full-time faculty/ staff have substantial shares). The factors for consideration should be space, infrastructure, mentorship support, seed funds, support for accounts, legal, patents etc.
- Our institution provides services based on mixture of equity, fee-based and/ or zero payment model. So, a startup may choose to avail the MTIET Innovation & Startup Policy resource support, by the institute on rental basis also.
- Participation in startup related activities is considered as a legitimate activity of faculty in addition to teaching, R&D projects, and industrial consultancy and management duties. It will be considered while evaluating the annual performance of the faculty.
- Every faculty may be encouraged to mentor at least one startup.
- Product development and commercialization as well as participating and nurturing of startups would now be added to 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. Product Ownership Rights for Technologies Developed at Institute**

- IPR is developed in our Institution as a part of academic activity then it is owned by inventors and the Institute.
- If product/ IPR are developed by innovators not using any institute facilities, outside office hours 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 deem fit.

- If there is a dispute in ownership, a minimum five member committee consisting of two faculty members, two of the institute's alumni/ industry experts 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.
- 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.
- In case of institution to pay for patent filing, a committee can examine whether the IPR is worth patenting. If inventors are using their own funds or non-institute funds, then they alone have a say in patenting.
- MTIET encourages to concentrate in interdisciplinary research and publication for startup.
- Proposals for Government and Non-Government Funds for research activities, seed money funds are to be actively applied by the faculty members of the Institution.

#### **5. Organizational Capacity, Human Resources and Incentives**

- MTIET should recruit staff that have a strong innovation and entrepreneurial/ industrial experience, behavior and attitude. This will help in fostering the I&E culture.
  - i. Some of the relevant faculty members with prior exposure and interest should be deputed for training to promote I&E.
  - ii. To achieve better engagement of staff in entrepreneurial activities, institutional policy on career development of staff should be developed with constant up skilling.
- Our institution encourages faculty members to do courses on innovation, entrepreneurship management and venture development.
- Faculty members are encouraged to equip themselves by undergoing FDP's by EDI , TEQIP sponsored programs, Workshops and technology fair.

- Faculty members and departments of our institution is working in coherence and cross-departmental linkages to strengthen shared faculty, cross-faculty teaching and research in order to gain maximum utilization of internal resources and knowledge.
- In order to attract and retain right people, our institution proudly announces Budding Entrepreneur award and reward mechanisms along with academic and non-academic incentives for all faculty members and stakeholders who are actively contributing and supporting entrepreneurship agenda and activities.

#### **6. Creating Innovation Pipeline and Pathways for Entrepreneurs at Institute Level**

a. To ensure exposure of maximum students to innovation and pre incubation activities at their early stage and to support the pathway from ideation to innovation to market, mechanisms should be devised at institution level.

- i. Spreading 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.
- ii. Students/ staff should be taught that innovation (technology, process or business innovation) is a mechanism to solve the problems of the society and consumers. Entrepreneurs should innovate with focus on the market niche.
- iii. Students should be encouraged to develop entrepreneurial mindset through experiential learning by exposing them to training in cognitive skills (e.g. design thinking, critical thinking, etc.), by inviting first generation local entrepreneurs or experts to address young minds. Initiatives like idea and innovation competitions, hackathons, workshops, bootcamps, seminars, conferences, exhibitions, mentoring by academic and industry personnel, throwing real life challenges, awards and recognition should be routinely organized.
- iv. To prepare the students for creating the start up through the education, integration of education activities with enterprise-related activities should be done.

b. The institute should link their 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.

c. The institute should establish Institution's Innovation Councils (IICs) as per the guidelines of MHRD's Innovation Cell and allocate appropriate budget for its activities. IICs should guide institutions in conducting various activities related to innovation, startup and entrepreneurship development. Collective and concentrated efforts should be undertaken to identify, scout, acknowledge, support and reward proven student ideas and innovations and to further facilitate their entrepreneurial journey.

d. For strengthening the innovation funnel of the institute, access to financing must be opened for the potential entrepreneurs.

- i. Networking events must be organized to create a platform for the budding entrepreneurs to meet investors and pitch their ideas.
- ii. Provide business incubation facilities: premises at subsidized cost. Laboratories, research facilities, ITservices, training, mentoring, etc. should be accessible to the new startups.
- iv. A culture needs to be promoted 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.

e. Institute must develop a ready reckoner of Innovation Tool Kit, which must 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. Norms for Faculty Startups**

- Faculty members those who hold the executive or managerial position for more than three months in a startup, can apply for sabbatical/ leave without pay/ utilize existing leave based on approved by the panel.
- Faculty members 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) may be permitted to the faculty.
- Faculty must not accept gifts from the startup.

- Faculty must not involve research staff or other staff of institute in activities at the startup and vice-versa.
- Human subject related research in startup should get clearance from ethics committee of the institution.

#### **8. Pedagogy and Learning Interventions for Entrepreneurship Development**

- Student activities/ cells/ bodies/ departments must be created for organizing competitions, boot camps, workshops, awards, etc. These bodies should be involved in institutional strategy planning to ensure enhancement of the student's thinking and responding ability.
- Institutes should start annual 'INNOVATION & ENTREPRENEURSHIP AWARD' to recognize outstanding ideas, successful enterprises and contributors for promoting innovation and enterprises ecosystem within the institute.
- Innovation champions should be nominated from within the students/ faculty/ staff for each department/ stream of study.
- Entrepreneurship education should be imparted to students at curricular/ co-curricular/ extracurricular level through elective/ short term or long-term courses on innovation, entrepreneurship and venture development. Validated learning outcomes should be made available to the students.
- Instead of traditional lecture-based delivery the courses are handled with various innovative tools and cross disciplinary learning such as Project based learning, Practical based learning, Industrial case study, Mini projects, Mentor–Mentee system, etc.
- Entrepreneurship skills are imparted to students at curricular/ co-curricular/ extracurricular level.
- Validated Learning outcomes can be achieved through Choice based credit system/One credit industrial courses/Professional elective/ short term or long-term courses on innovation, entrepreneurship and venture development.

#### **9. Collaboration, Co-Creation, Business Relationships and Knowledge Exchange**

- Stakeholder engagement should be given prime importance in the entrepreneurial agenda of the institute.
- The institution is designed to discover potential partners, resource organizations, micro, small and medium sized enterprises (MSMEs), social enterprises, schools,

alumni, professional bodies and entrepreneurs to meet the evolving needs of the incubates.

- Knowledge exchange through collaboration and partnership should be made a part of institutional policy and institutes must provide support mechanisms and guidance for creating, managing and coordinating these relationships.

#### 10. Entrepreneurial Impact Assessment

- Impact assessment for pre-incubation, incubation, entrepreneurship education is formulated with well-defined parameters. The information on impact of the activities shall be actively used while developing and reviewing the entrepreneurial strategy.
- 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 should also 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.

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