



Progressive Education Society's MODERN COLLEGE OF ENGINEERING

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**INNOVATION AND
ENTREPRENEURSHIP (I & E) POLICY
OF PES'S MCOE**



Progressive Education Society's **Modern College of Engineering, Pune-05**

Innovation and Entrepreneurship (I &E) Policy

Preamble

PES's Modern College of Engineering (MCOE), Shivajinagar, Pune-5 is an esteemed institute in the education hub city Pune. Since 2014, MCOE has established Entrepreneurship Development cell to promote Innovation and Entrepreneurship. Programs like Pro-Start – Idea to Prototype /Product development competition, Vicharghan – The lecture series on Life skill management skills, IPR cell etc. has been flagship activities to promote innovation related activities. MCOE has established Institute Innovation Cell (IIC) since the inception of the program by MHRD in the year 2018. As per MHRD initiative and to implement NISP (National Innovation & Start-up Policy) effectively, now MCOE has setup dedicated Incubation center to promote innovation and entrepreneurship to convert the students and faculty innovative ideas/problems to tech-solution with a feasible business model stage. The IIC has been organizing various events to encourage students and faculty of the institute in various domains in connecting with design thinking, innovation, ideation, and incubation. The students and faculty will come up with tech solutions for the problems from Industry, Society, and Market to generate Ideas/Proof of Concepts (PoCs) and helping them to get converted to prototypes and mentor them to develop business models ready. Therefore, creating a strong pipeline of quality and quantity tech based potential start-ups for incubators to take further from students, faculty, and alumni of the institute.

The institute needs to support for faculty and student's startups by providing all the possible support as per the National Innovation and startup policy 2019 for students and faculty guidelines. Importance of this is highlighted by the fact that minimum of 1% of the total budget should be used for startup initiatives in the institute. The Atal Ranking of Institutions on Innovation Achievements (ARIIA) ranking (2021) has 70% of marks to promote Innovation, Entrepreneurship and Start-up. This strongly highlights the importance of start-up cell in the institute.

The Incubation center also helps the institute in obtaining good rank in NIRF and NBA as there is a good weightage in the domains of patents filed, patents granted, consultancy and industry collaboration.

Vision:

'National Innovation and Startup Policy-2019' was initiated by MHRD's Innovation Cell and AICTE. It is a guiding framework to envision an educational system oriented towards start-ups and entrepreneurship opportunities for students and faculties.

To make innovation the epicenter of education system, these guidelines provide pathways for developing entrepreneurial agenda, managing Intellectual Property Rights (IPR) ownership, technology licensing and equity sharing in Start-ups or enterprises established by faculty and students to encourage them actively pursue path of innovation and entrepreneurship for the future.

Our vision is to develop high quality technical human resource capable of doing cutting edge research, innovation and subsequently creation of value and wealth.

Mission:

- Inculcate Startup culture among students across all the departments and all educational years.
- Promote students and faculty members' for innovation and its use in entrepreneurship
- Help students and faculty members to create startups on their innovative and marketable ideas.
- Facilitate various resources to incubate students' and faculty members' startups.
- Actively support the incubating startups to secure technical ideas with Intellectual Property ownership.

Objectives:

- To promote and foster the start-up culture.
- To create awareness about entrepreneurship by organizing workshops and talks.
- To facilitate and fund students' innovative ideas to obtain Intellectual Property Rights
- To provide funding for innovative ideas for prototype development
- To Facilitate student/faculty members startup by providing pre-incubation and incubation facilities

Scope and Importance of Establishing the Innovation and Entrepreneurship Policy:

The Entrepreneurship Development cell may have the impact on the various evaluation systems such as NIRF, AICTE, MHRD – MIC norms, ARIIA and NBA and the brief details are presented below.

1. NIRF:

The National Institutional Ranking Framework (NIRF) was approved by the MHRD in 2015. This framework outlines a methodology to rank institutions across the country. The methodology draws from the overall recommendations broad understanding arrived at by a Core Committee set up by MHRD, to identify the broad parameters for ranking various universities and institutions. In this ranking, 30% weightage is given to Research and Professional Practice (RP) which encompasses following important points

- IPR and Patents: Published and Granted (IPR)
- Footprint of Projects and Professional Practice (FPPP),
- the quality of publications of patents and research papers

These points are directly associated with the culture of Innovation and start-ups at the institute, and hence well defined and effective I & E policy will also support good ranking in NIRF.

2. Relevance with AICTE and MHRD guidelines:

As per the AICTE guidelines, investment in the entrepreneurial activities is supposed to be a part of the institutional financial strategy. Minimum 1% fund of the total annual budget of the institution should be allocated for funding and supporting innovation and startups related activities through creation of separate '**Innovation fund**'.

The Institute Innovation Council (IIC) has been organizing various events since its inception. Apart from that the institute is expected to initiate the startup cell to promote the incubation and enhance innovation culture in the institute. At our institute, IIC of MCOE has been actively running these activities and have initiated various programs to develop its own incubation center.

3. Relevance with Atal Ranking of Institutions on Innovation Achievements (ARIIA) – 2021

As per the ARIIA evaluation of colleges across the nation, more than 60% of weightage is given to the innovation and startup support, funding, revenue generation, IP etc.

Sl. No	Parameters	Non-Technical HEI	Technical HEI
1	Developing an Innovative and Entrepreneurial Mind-set through Series of Activities	8	4
2	Teaching and Learning: Academic Programmes related to Innovation & Entrepreneurship (I & E) & IPR offered by the HEI	10	6
3	Dedicated Infrastructure & Facilities to Promote Innovation & Entrepreneurship at HEI	13	13
4	Generation of Innovations/ ideas with the support of HEI and recognition received	13	13
5	Ventures Established with the support of the HEI & Recognitions Received	8	12
6A	Angel & VC Fund/Investment Mobilized to Support Innovation & Startups Incubated at HEI	3	5
6B	Promotion of Collaboration for & Co-Creation of I & E initiatives	8	5
7	Intellectual Property (IP), Generation and Commercialization	14	19
8A	Annual Budget on Promoting and Supporting I&E Activities: Total expenses towards I &E and IPR support activities	8	8
8B	Total Revenue Generated by HEI from Incubation Services to Startups and Commercialization of IP and Innovations	4	6
9	Participation of HEI in I & E Initiative of MOE	11	9
Total		100	100

Table Credits: ARIIA websie, MoE

Framework to implement NISP at MCOE

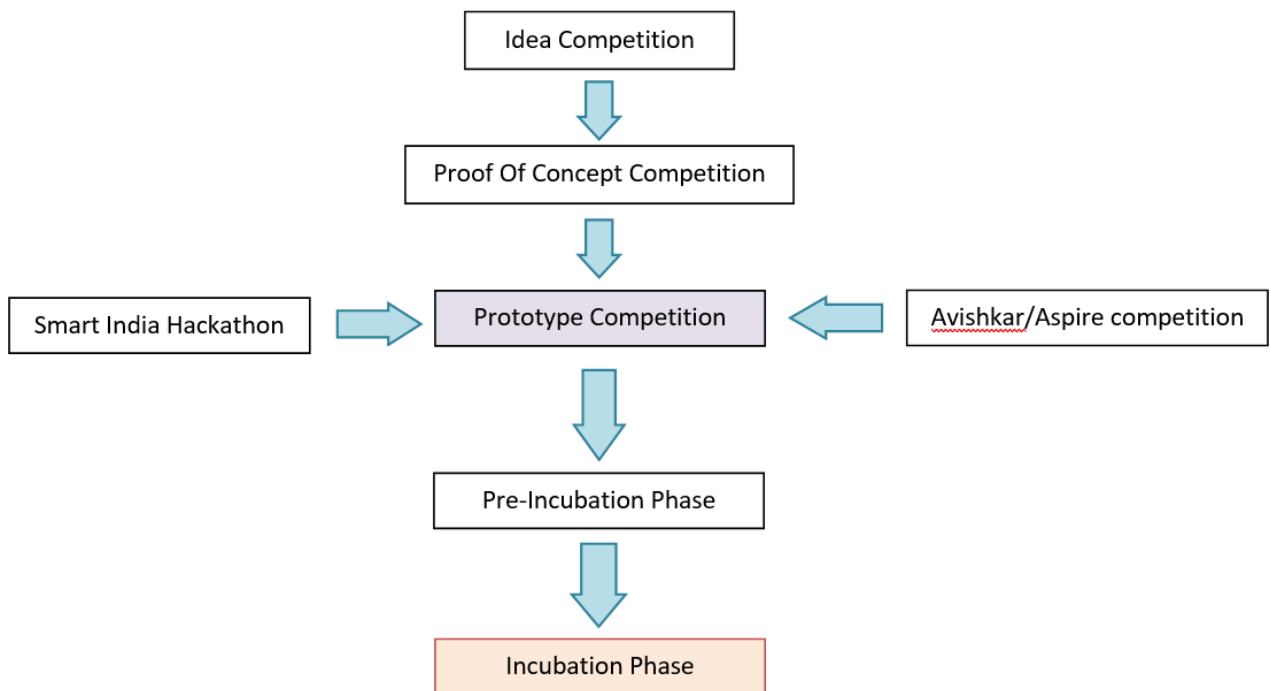
In addition to various programs supporting to innovative projects, MCOE has set-up two separate facilities

- 1. Pre-incubation cell**
- 2. Incubation Center**

Details and roles of these facilities are described subsequently.

Pipeline and Pathways of Start-Up promotion at MCOE's Innovation and Entrepreneurship cell

Following is the pipeline algorithm that will help especially students to inculcate and grow innovation culture among them and eventually reach to the level of registration of a well-functioning company with the nurturing of MCOE's Innovation center.



Funding policy for the start-ups at different phases

- Partial/full funding at Prototype phase may be given for selected teams
- Seed funding amount will be decided for start-ups who reach up to incubation phase
- For IPR, funding will be provided as per the IPR cell policy.
- The pre-incubation and incubation facility as per the following details will be provided to the eligible teams.

MCOE Pre-incubation facility: “Pro-START” at MCOE

Logo :



Ideas with entrepreneurial potential are identified by various means, such as start-up idea competition, Hackathon, project competition etc. Motivation of team members, detailed examination of the idea and viability to convert into functioning start-up is carefully examined by a panel from ED cell. Selected ideas are provided pre-incubation facilities where one faculty member is allocated for each idea as a mentor.

Each idea is carefully nurtured to develop its proof of concept (POC) with the help of mentor. At this stage, regular meetings and presentations are conducted to make the robust foundation of the various aspects of the idea.

After POC is ready, presentation in front of the ED-cell committee's is defended for the approval. With successfully completion of POC stage, prototyping phase is initiated by the mentor and initial financial funds are granted. If needed, subject expert from outside organization is also arranged by the mentor. Teams are encouraged to participate into various idea/prototyping competition such as i2i, AIH etc. and provided logistical and partially financial support.

To secure ideas, in-house IP expert faculty is also provided to file patent/ design/ copyright, if any.

MCOE Incubation Center:

logo:



Institute offers incubation facilities to the budding start-ups with well-equipped support. Project ideas with start-up potential after passing the proof of concept and prototyping phase are incorporated into our incubation center. Each start-up is given mentoring by faculty in-charge / Alumni entrepreneur / External entrepreneur as and when required.

At the Incubation Center we take conscious efforts to develop the market-ready Minimum Viable Product (MVP). To provide necessary guidance to student's start-up, e.g. company registration and relevant processes, MOU has been signed with established incubation center, BHAU Institute of Innovation and Entrepreneurship (Government College of Engineering, Pune). In parallel, trademark registration is also initiated, considering the potential of the growth of the individual company.

Facilities Provided:

- Room space admeasuring 1,400 sq. feet for Incubation center and 500 sq. feet for pre-incubation facility.
- Separate cubicles for each start-ups
- Individual work desk for start-ups
- Furniture and storage as per the need
- Computer and broadband/ Wi-Fi connection
- In-house mentor as a subject expert as per required

Instruments/Equipment/Test facility provided:

- **Electronics tools:** Soldering iron station, CRO, digital multi-meter, power supply.
- **IOT:** Arduino boards kit, various sensors modules, battery packs, power adaptors
- **Mechanical tools:** screwdriver set, electric drilling machine, electric screwdriver, vernier caliper, spanner set, nut-bolt set
- **Optics:** set of convex and concave lens, set of eye piece, telescope, tripod, Optical bench
- Printer, papers, and stationery etc.

Committee panel – Innovation and Entrepreneurship promotion

Internal:

- 1) **Prof. Dr. Mrs. K. R. Joshi (Chair)**
- 2) **Prof. Dr. Mrs. R. S. Kamathe, IQAC Head**
- 3) **Dr. Mrs. S. D. Borde, Dean R&D**
- 4) **Dr. Pallavi Shintre, ED Cell & IIC Coordinator**
- 5) **Dr. Dnyanesh Bandgar, Incubation Center Coordinator**

External:

- 1) **Mr. Sanjay Jagtap Director- Ecosystem Development ENSIN Forum**

Norms for Faculty and Student's Start-Ups

- As per the NISP 2019 policy (Page 18), the detailed norms for start-ups at PES's MCOE will be framed, as and when required.
- It will typically include following
 - Partial relaxation in other responsibilities for faculty who have start-up will be decided
 - To help students manage time for start-up initiative, relaxation to curriculum for audit course will be decided.
 - Relaxation for non-teaching staff who have started entrepreneurial initiatives will be decided.

Strategies for collaborations with established Incubation centers

- MOU with ENSIN Forum Incubation Center and AIC Pinnacle Incubation Center has been done.
- More active collaborations will be done with Venture Center – Incubation center of other organisations.

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