PANIMALAR ENGINEERING COLLEGE

(A CHRISTIAN MINORITY INSTITUTION)

JAISAKTHI EDUCATIONAL TRUST

Approved by All India Council for Technical Education, New Delhi,
Government of Tamil Nadu and Affiliated to Anna University
Approved by UGC for 2(f) & 12(B) Status

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Date: 23/1/2022

Approval of formulated Innovation & start-up policy

With reference to last meeting held on 12.04.2021 on finalization of innovation & startup Policy at Panimalar Engineering Colleg as per the recommendation of Nation Innovation & Startup Policy (NISP), Meeting called to approve the drafted Innovation & start-up policy at PEC and the same will be with effective from 23.01.2022

A detailed policy document (draft) had been shared with all the committee members for a week time. The committee members unanimously approve policy document. Approved final version of Innovation & start-up policy to be uploaded on Panimalar Engineering College website under innovation & startup policies section.

Copy to:
1. EDC Cell
2. All HoDs & faculties, PEC

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Panimalar Engineering College

An Autonomous Institution, Affiliated to Anna University

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INNOVATION AND STARTUP POLICY 2020

INNOVATION and STARTUP Policy 2020 for Students and Faculty

(in-line with the National Innovation and Start-up Policy)

A Guiding Framework for Higher Education Institutions

The Innovation and Startup Policy 2020 for students and faculty of Panimalar Engineering College will enable the Institution to actively engage students, faculty members and staff in innovation and entrepreneurship related activities. This framework will also spell out the terms for Intellectual Property ownership, technology licensing and institutional Startup policy, thus enabling creation of a robust innovation and Start up ecosystem across the Institution.

Preamble

The All India Council of Technical Education (AICTE) released a Startup Policy document for AICTE approved institutions during November 2016, to address the need of inculcation of innovation and entrepreneurial culture in higher education Institutions (HEIs).Later during the year 2019, the MHRD's Innovation Cell formulated a National Innovation and Start-up Policy (NISP) as a guideline for all HEIs. The MHRD's innovation cell conducted series of follow-up workshops and trained the Institutions. This led to the formulation of new Start-up and Innovation policy for the Institution. A special committee was formed and this policy document is the brain child of subsequent deliberations that happened in the meetings.

Vision

The 'Innovation and Startup policy 2020' is a guiding framework to envision an educational system oriented towards start-ups and entrepreneurship opportunities for student and faculty members. The guidelines provide ways for developing entrepreneurial agenda, managing Intellectual Property Rights (IPR) ownership, technology licensing and equity sharing in Startups or enterprises established by faculty and students.

This policy framework shall motivate the young minds to indulge in innovation and pursue the entrepreneurial path for developing thyself and the Nation as a whole. Moreover, this policy document will guide the Institutions to attain the Prime Minister's vision of "Atmanirbhar Bharat".

National Innovation and Startup Policy 2019 for Students and Faculty

1. Strategies and Governance

a. Entrepreneurship promotion and development should be one of the major dimensions of the Institutions strategy. To facilitate development of an entrepreneurial ecosystem in the Institution, specific objectives and associated performance indicators should be defined for assessment.

b. The entrepreneurial agenda should be the responsibility of the Head of the Institution and the Institution's Innovation Council of PEC. Heads of all departments and the IIC of PEC shall work together to successfully implement the entrepreneurship culture.

c. 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.

   i. Investment in the entrepreneurial activities should 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 startup related activities.

ii. The strategy should also involve raising funds from diverse sources including Government agencies (state and central) like 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. To support technology incubators, academic Institutes may approach private and corporate sectors to generate funds under Corporate Social Responsibility(CSR) as per Section 135 of the Company Act 2013.

iv. Institute may also raise funding through sponsorships and donations. Institute should actively engage alumni network for promoting Innovation & Entrepreneurship (I&E).

d. For expediting the decision making, hierarchical barriers should be minimized and individual autonomy and ownership of initiatives should be promoted.

e. Importance of innovation and entrepreneurial agenda should be known across the Institute and should be promoted and highlighted at Institutional programs such as smart india hackathon, conferences, convocations, workshops, etc.

f. Action plan should be formulated at Institution level, with well-defined short-term and long-term goals. Micro action plan should also be developed by the affiliated Institutes to accomplish the policy objectives.

g. Institute should develop and implement Innovation and Entrepreneurship (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.

h. Product to market strategy for startups should be developed by the Institute on case to case basis.

i. Development of entrepreneurship culture should not be limited within the boundaries of the Institution.

i. Provision to extend Institution's facilities for outsiders at nominal charges (as decided from time to time) shall be considered.

ii. Strategic International partnerships shall be developed using bilateral and multilateral channels with international innovation clusters and other relevant organizations. Moreover, International exchange programs, internships, engaging the International faculty members in teaching and research shall also be promoted.

2. Startups Enabling Institutional Infrastructure

The pre Incubation and Incubation facilities available in the Institution shall be continuously enhanced through R&D/Institutional funds.

a. The DST funded Innovation and Entrepreneurship Development Centre (IEDC) and the Institution funded Research Incubation Cell (RIC) shall be active in providing incubation support to the start-ups. The IEDC shall function as a self- sustained entity even after the funds from DST ceases.

b. The fab-labs like SAE and SAR labs shall be accessible 24x7 to students, staff and faculty of all disciplines and departments across the Institution.

c. In future, DST/MSME sponsored Technology Business Incubator may be set-up as a Special Purpose Vehicle (SPV).

d. Institution may offer mentoring and other relevant services through Pre- incubation/ Incubation units in-return for nominal consultancy fees initially (decided time to time by the Head of the Institution). Later, the services may be offered on equity sharing basis after establishing SPV. The modalities regarding Equity Sharing in Startups supported through these units will depend upon the nature of services offered by these units and are elaborately explained in Section3.

3. Nurturing Innovations and Startups

a. Institution shall establish processes and mechanisms for easy creation and nurturing of Start-ups/enterprises by students (UG, PG, Ph.D.), staff (including temporary or project staff), faculty, alumni and potential startup applicants even from outside the Institutions.

b. While defining their processes, Institutions will ensure to achieve the following:

i. Incubation support: Offer access to pre-incubation & Incubation facility to startups by students, staff and faculty for mutually acceptable time-frame.

ii. Will allow licensing of IPR from Institute to start up: 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, shall be allowed to take a license on the said technology on easy term, either in terms of license fees and/or royalty to obviate the early stage financial burden.

c. Will allow setting up a startup (including social startups) and working part-time for the startups while studying / working: HEIs may allow their students / staff to work on their innovative projects and setting up startups (including Social Startups) or work as intern/part-time in start ups (incubated in any recognized HEIs/Incubators) while studying / working. Student inventors may be allowed to opt for start up in place of their mini project/ major project, seminars, summer trainings. The area in which student wants to initiate a startup may be interdisciplinary or multi- disciplinary.

d. Students who are under incubation, but are pursuing some entrepreneurial ventures while studying shall be allowed to use their address in the Institute to register their company with due permission from the Head of the Institution. A request letter shall be forwarded to the Head of the Institution by the HoD of the department through the IIC. The Students will be given special permission to do works related to incubation. However, Students will be given permission to attend the examination only if they have above 65% attendance. Faculty members will also be allowed to indulge in start- up activities without affecting the works related to their academics.

e. On merit basis, students entrepreneurs shall be allowed to sit for the examination, even if their attendance is less than the minimum permissible percentage, with due permission

from the Head of the Institution.

f. The students may be permitted to take a semester/year break (or even more depending upon the decision of review committee constituted by the Institute) to work on their startups and re-join academics to complete the course.

g. The Institute shall explore provision of accommodation to the entrepreneurs within the campus for some period of time.

h. Allow faculty and staff to take off for a semester/year(or even more depending upon the decision of Head of the Institution) as sabbatical/ unpaid leave/casual leave/earned leave for working on startups and come back. Institution shall consider allowing use of its resource to faculty/students/staff wishing to establish start up as a fulltime effort. The seniority and other academic benefits during such period shall be preserved for such staff or faculty.

i. Institute shall 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 in the following manners:

    i Short-term/ six-month/ one-year part-time entrepreneurship training.

    ii Mentorship support on regular basis.

    iii 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.

    iv Institute shall link the startups to other seed-fund providers/ angel funds/venture funds or it may setup seed-fund once the incubation activities mature.

    v License Institute IPR as discussed in section 4 below.

j. In return of the services and facilities, Institute may take consultancy fees (as decided by IIC and Head of the Institution). The Institution shall consider taking equity share from the start-up from 2% to 9.5% in the later stage, i.e, after establishing a SPV. The percentage of share shall depend on the type of support provided to the start-up.

k. For staff and faculty, Institute shall not claim any equity or consultancy fees.

l. Faculty / staff shall involve themselves in entrepreneurship / start-up activities without affecting their regular roles.

m. The Institute will provide services based on fee-based model. Seed funds shall be provided only to student/alumni initially. The same may be explored for others after establishing SPV.

n. Institute could extend this startup facility to alumni of the Institute as well as outsiders.

o. Participation in startup related activities shall be considered as a legitimate activity of faculty in addition to teaching, R&D projects, industrial consultancy and management

duties and shall be considered while evaluating the annual performance of the faculty. Every faculty may be encouraged to mentor atleast one startup/innovative project.Faculty who gets fund for start-up will be recognized through promotions and sufficient incentives

p. Product development and commercialization as well as participating and nurturing of startups shall be added to a bucket of faculty-duties and each faculty would choose a mix and match of these activities (in addition to minimum required teaching and guidance) and then respective faculty members are evaluated accordingly for their performance and promotion.

q. Institute shall ensure that at no stage any liability accrue to it because of any activity of any startup.

4. Product Ownership Rights for Technologies Developed at Institute

a. When institute facilities / funds are used substantially or when IPR is developed as a part of curriculum/ academic activity, IPR is to be jointly owned by inventors and the Institute.

b. 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, shares in the company licensing the product (applicable after establishing SPV)

c. If one or more of the inventors wish to incubate a company and license the product to this company, the royalties would be 4% of sale price for hardware product and 2% for pure software product. If it is shares in the company, shares will again be 4% (after establishing SPV).

d. On the other hand, 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 deem fit.

e. If there is a dispute in ownership, a minimum five member 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.

f. Institute IPR cell or incubation center will only be a coordinator and facilitator for providing services to faculty, staff and students. They will have no say on how the invention is carried out, how it is patented or how it is to be licensed. If institute pays for patent filing, they shall 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.

g. All Institute's decision-making body with respect to incubation / IPR / technology-licensing will consist of faculty and experts who have excelled in technology translation.

h. Interdisciplinary research and publication on startup and entrepreneurship shall be promoted by the institution. The record for which may be maintained by the R&D cell of the Institution.

5. Organizational Capacity, Human Resources and Incentives

a. Institutes shall identify staff having strong connect towards innovation and entrepreneuship/ industrial experience and involve them in IIC activities. This will help in fostering the I&E culture.

   i. Some of the relevant faculty members with prior exposure and interest shall 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 shall be developed with constant up-skilling.

b. Faculty and departments of the Institutes have to work in coherence and cross-departmental linkages shall be strengthened through shared faculty, cross-faculty teaching and research in order to gain maximum utilization of internal resources and knowledge.

c. Periodically, external subject experts such as industry personnel/ alumni shall be invited for interaction and provide strategic advice and bringing in skills which are not available internally.

d. Faculty and staff shall be encouraged to do courses on innovation, IPR, entrepreneurship management and venture development.

e. In order to attract and retain right people, Institute shall develop incentives and reward mechanisms for all staff and stakeholders that actively contribute and support entrepreneurship agenda and activities.

   i. The reward system for the staff may include sabbaticals, office and lab space for entrepreneurial activities, reduced teaching loads, awards, trainings,etc.

   ii. Faculty and students may also be honoured with financial rewards to motivate the fellow members.

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 shall 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.

ii. Students/staff shall be educated that innovation (technology, processor 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 shall be encouraged to develop entrepreneurial mind set 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, boot camps, 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 startups, integration of education activities with enterprise-related activities shall be encouraged.

b. The institute shall link their start ups 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 IIC of the Institution shall be a pioneer in implementing the above mentioned points.

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

   i. Networking events shall be organized to create a platform for the budding entrepreneurs to meet investors and pitch their ideas.

   ii. Business incubation facilities shall be provided at subsidized cost (as decided by the Head of the Institution from time to time). Laboratories, research facilities, IT services, training, mentoring, etc. shall be accessible to the new startups.

e. A culture needs to be promoted to understand that money is not FREE and is risk capital. The entrepreneur must utilize these funds and pay back.

f. Institute shall develop a ready reckoner of Innovation ToolKit, 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

a. Faculty members are also encouraged to involve themselves in start-up activities. They may support the Institutions in the following manner.

   i. Role of faculty may vary from being an owner/ direct promoter, mentor, consultant or as on-board member of the startup.

ii. Faculty members shall float their own start-ups without compromising their assigned academic duties.

iii. Faculty startup may consist of faculty members alone or with students or with faculty of other institutes or with alumni or with other entrepreneurs.

b. In case the faculty/ staff holds the executive or managerial position for more than a month in a startup, they will go on sabbatical/ leave without pay/utilize existing leave.

c. Faculty shall clearly separate and distinguish on-going research at the institute from the work conducted at the startup/company.

d. In case of selection of a faculty startup 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 given.

e. Faculty must not accept gifts or money from the startup.

f. Faculty must not involve research staff or other staff of Institute in activities at the startup and vice-versa.

g. Human subject related research in startup should get clearance from Government of India and the ethics committee of the Institution

8. Pedagogy and Learning Interventions for Entrepreneurship Development

a. Diversified approach shall be adopted to produce desirable learning outcomes, which should include cross disciplinary learning using mentors, labs, case studies, games, etc. in place of traditional lecture-based delivery.

i. The clubs and associations in the Institution, along with the IIC of PEC shall focus on organizing various programs pertaining to innovation, entrepreneurship and IPR to nurture students towards innovation.

ii. Institution shall start a special annual 'INNOVATION & ENTREPRENEURSHIP AWARD' to recognize outstanding ideas, successful enterprises and contributors for promoting innovation and enterprises eco system within the Institute.

iii. For creating awareness among the students, the teaching methods shall include case studies on business failure and real-life experience reports by startups.

iv. Tolerating and encouraging failures: Our systems are not designed for tolerating and encouraging failure. 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.

v. Innovation champions shall be nominated from within the students/ faculty/ staff for each department/stream of study.

b. Entrepreneurship education shall 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.

i. Integration of expertise of the external stakeholders should be done in the entrepreneurship education to evolve a culture of collaboration and engagement with external environment.

ii. In the beginning of every academic session, Institute shall 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 shall be continuously updated based on entrepreneurship research outcomes. This should also include case studies on failures.

iii. Industry linkages should be leveraged for conducting research and survey on trends in technology, research, innovation and market intelligence. More MoUs with start-ups may also be inked for knowledge sharing purpose.

iv. Sensitization of students should be done for their understanding on expected learning outcomes.

v. Customized video materials/learning materials should be available for the startups to guide them.

vi. It must be noted that not everyone can become an entrepreneur. 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.

c. Pedagogical changes shall be carried out to ensure that maximum number of student projects and innovations are based around real life challenges. Learning interventions developed by the Institute for inculcating entrepreneurial culture shall be constantly reviewed and updated.

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

a. Stakeholder engagement shall be given prime importance in the entrepreneurial agenda of the Institute. Institute shall identify potential partners, resource organizations, micro, small and medium- sized enterprises (MSMEs),social enterprises, schools, alumni, professional bodies and entrepreneurs to support entrepreneurship.

i. To encourage co-creation, bi-directional flow/ exchange of knowledge, material and people shall be ensured between Institute and incubation / co-incubation facilities

ii. Institute shall 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, lectures, etc.

iii. Mechanism shall be developed by the institute to capitalize on the knowledge gained through these collaborations.

iv. Care shall be taken to ensure that events DON'T BECOME an end goal. First focus of the incubator should be to create successful ventures.

b. Institute shall provide support mechanisms and guidance for creating, managing and coordinating the relationships with Industries.

i. Through formal and informal mechanisms such as internships, teaching and research exchange programmes, clubs, social gatherings, etc., faculty, staff and students of the institute shall be given the opportunities to connect with their external environment.

ii. The Institute shall depute Single Point of Contact (SPOC) of industry linkages and start-ups.

iii. Knowledge management shall be done by the Institute through development of innovation knowledge platform using in house Information & Communication Technology (ICT) capabilities.

10. Entrepreneurial Impact Assessment

a. Impact assessment of institute's entrepreneurial initiatives such as pre-incubation, incubation, entrepreneurship education should be performed regularly using well defined evaluation parameters.

i. Monitoring and evaluation of knowledge exchange initiatives, engagement of all departments and faculty in the entrepreneurial teaching and learning shall be assessed periodically.

ii. Number of startups created, support system provided at the Institutional level and satisfaction of participants, new business relationships created by the institute shall be recorded and used for impact assessment.

iii. Impact shall 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.

b. Formulation of strategy and impact assessment should go hand in hand. The information on impact of the activities should be actively used while developing and reviewing the entrepreneurial strategy. 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.

GLOSSARY

Accelerators	Startup Accelerators design programs in batches and transform promising business ideas into reality under the guidance of mentors and several other available resources.
Angel Fund	An angel investor is a wealthy individual who invests his or her personal capital and shares experiences, contacts, and mentors (as possible and required by the startup in exchange for equity in that startup). Angels are usually accredited investors. Since their funds are involved, they are equally desirous in making the startup successful.
Cash flow management	Cash flow management is the process of tracking how much money is coming into and going out of your business.
Co-Creation	Co-creation is the act of creating together. When applied in business, it can be used as is an economic strategy to develop new business models, products and services with customers, clients, trading partner or other parts of the same enterprise or venture.
Compulsory Equity	An equity share, commonly referred to as ordinary share also, represents the form of fractional or part ownership in which a shareholder, as a fractional owner, undertakes the maximum entrepreneurial risk associated with a business venture. The holders of such shares are members of the company and have voting rights.
Corporate Social Responsibility	Corporate social responsibility (CSR) is a self-regulating business model that helps a company be socially accountable – to itself, its stakeholders, and the public.
Cross-disciplinary	Cross-disciplinary practices refer to teaching, learning, and scholarship activities that cut across disciplinary boundaries.
Entrepreneurial culture	A culture/ society that enhance the exhibition of the attributes, values, beliefs and behaviors that are related to entrepreneurs.
Entrepreneurial Individuals	An Individual who has an entrepreneurial mindset and wants to make his/her idea successful.
Entrepreneurship education	Entrepreneurship education seeks to provide students with the knowledge, skills and motivation to encourage entrepreneurial success in a variety of settings.
Experiential learning	Experiential learning is the process of learning through experience, and is more specifically defined as learning through reflection on doing.
Financial management	Financial Management is the application of general principles of management to the financial possessions of an enterprise.
Hackathon	A hackathon is a design sprint-like event in which computer programmers and others involved in software development, including graphic designers, interface designers, project managers, and others, often including domain experts, collaborate intensively on software projects.
Host Institution	Host institutions refer to well-known technology, management and R&D

	Institutions working for developing startups and contributing towards developing a favorable entrepreneurial ecosystem.
Incubation	Incubation is a unique and highly flexible combination of business development processes, infrastructure and people, designed to nurture and grow new and small businesses by supporting them through the early stages of development.
Intellectual Property Rights Licensing	A licensing is a partnership between an intellectual property rights owner (licensor) and another who is authorized to use such rights (licensee) in exchange for an agreed payment (fee or royalty).
Knowledge Exchange	Knowledge exchange is a process which brings together academic staff, users of research and wider groups and communities to exchange ideas, evidence and expertise.
Pedagogy and Experiential Learning	It refers to specific methods and teaching practices (as an academic subject or theoretical concept) which would be applied for students working on startups. The experiential learning method will be used for teaching 'startup related concepts and contents' to introduce a positive influence on the thought processes of students. Courses like 'business idea generation' and 'soft skills for startups' would demand experiential learning rather than traditional class room lecturing. Business cases and teaching cases will be used to discuss practical business situations that can help students to arrive at a decision while facing business dilemma(s). Field based interactions with prospective customers; support institutions will also form a part of the pedagogy which will orient the students as they acquire field knowledge.
Pre-incubation	It typically represents the process which works with entrepreneurs who are in the very early stages of setting up their company. Usually, entrepreneurs come into such programs with just and idea of early prototype of their product or service. Such companies can the graduate into full-fledged incubation programs.
Prototype	A prototype is an early sample, model, or release of a product built to test a concept or process.
Science parks	A science park, also known as a research park, technology park or innovation centre, is a purpose-built cluster of office spaces, labs, workrooms and meeting areas designed to support research and development in science and technology.
Seed fund	Seed fund is a form of securities offering in which an investor invests capital in a startup company in exchange for an equity stake in the company.
Special Purpose Vehicle	Special purpose vehicle, also called a special purpose entity, is a subsidiary created by a parent company to isolate financial risk. Its legal status as a separate company makes its obligations secure even if the parent company goes bankrupt.
Startup	An entity that develops a business model based on either product innovation or service innovation and makes it scalable, replicable and self-reliant and as defined in Gazette Notification No. G.S.R. 127(E)

	dated February 19, 2019.
Technology Business Incubator	Technology Business incubator (TBI) is an entity, which helps technology-based startup businesses with all the necessary resources/support that the startup needs to evolve and grow into a mature business.
Technology Commercialization	Technology commercialization is the process of transitioning technologies from the research lab to the marketplace.
Technology licensing	Agreement whereby an owner of a technological intellectual property (the licensor) allows another party (the licensee) to use, modify, and/or resell that property in exchange for a compensation.
Technology management	Technology management is the integrated planning, design, optimization, operation and control of technological products, processes and services.
Venture Capital	It is the most well-known form of startup funding. Venture Capitalists (VCs) typically reserve additional capital for follow-up investment rounds. Another huge value that VCs provide is access to their networks for employees or clients for products or services of the startup.

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Implementation of Startup Policy

Panimalar Engineering College's Entrepreneurship Development Cell (EDC) plays a vital role in guiding students toward achieving excellence in both personal and professional skill sets, helping them become efficient entrepreneurial engineers with a focus on startups.

- **Create awareness of entrepreneurship** among students through training programs and camps.
- **Enhance industry-institute interaction** through guest lectures and industrial visits.
- **Equip students with necessary managerial skills** to start and manage successful startups.
- **Develop entrepreneurial skills** to help students adapt to current market trends.
- **Guide students to channel their goals** and become versatile entrepreneurs.

Key Achievements

- **2018-2019**: Organized 9 programs, benefiting 334 students and 2 faculty members. As a result, 3 startups were initiated.
- **2019-2020**: Organized 9 programs, benefiting 469 students and 3 faculty members. This year saw the initiation of 8 startups.
- **2020-2021**: Due to the pandemic, only 3 programs were conducted, benefiting 186 students. Despite the challenges, 3 startups were launched.
- **2021-2022**: Organized 6 programs, benefiting 409 students, with 3 startups initiated.
- **2022-2023**: Organized 10 programs, benefiting 4,795 students, leading to the initiation of 8 startups.
- **2023-2024**: Organized 4 programs, benefiting 1,687 students, resulting in 14 startups being launched.
- **2024-2025**: Organized 16 programs, benefiting 800 students, resulting in 16 startups being launched and college won I prize of Rs. One Lakh & III Prize of Rs. Ten Thousand in EDII Hackathon 2024.
- **2025-2026**: Organized 11 programs, benefiting 400 students, resulting in 4 startups being launched.

PANIMALAR ENGINEERING COLLEGE

(A Christian Minority Institution)

JAISAKTHI EDUCATIONAL TRUST

Approved by All India Council for Technical Education, New Delhi

An Autonomous Institution, Affiliated to Anna University, Chennai

All Eligible UG Programmes are Permanently Affiliated to Anna University

All Eligible UG Programmes are Accredited by National Board of Accreditation(NBA)

Approved by UGC for 2(f) & 12(B) Status

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Committee Members

S.NO	NAME OF THE MEMBER	DESIGNATION	POSITION
1	Dr. N. Venkateswaran	Dean / MBA	Chairman
2	Mrs. V.Anitha Moses	Professor / CSE	Convener
3	Dr. M. Helda Mercy	Professor & HOD / IT	Member
4	Dr. A. Swaminathan	Professor / CSBS	Member
5	Dr. S. Shibu	Associate Professor / ECE	Member
6	Dr. R.Anand Babu	Associate Professor / AIML	Member
7	Dr. M.S. Maharajan	Assistant Professor / AI & DS	Member
8	Mr. K. Naveen	Assistant Professor / MECH	Member
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10	Dr. S. Satheesh Kumar	Assistant Professor / MBA	Member

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