Innovation, Incubation & Entrepreneurship

Panimalar Engineering College

Innovation, Incubation & Entrepreneurship

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PURPOSE: This mandate sets the framework for the development and implementation of Innovation and Entrepreneurship activities at **PANIMALAR ENGINEERING COLLEGE Chennai** aims to nurture Innovation and Entrepreneurship culture in the Institution by promoting innovation & entrepreneurship activities. It encourages the Undergraduate, Postgraduate and Doctoral degree candidates and faculties to undertake Entrepreneurship as a career option and set up a successful startup venture. . This will enhance the Entrepreneurship skills of the students by way of participating in hackathons, product pitch etc.

Chapter 6: PANIMALAR ENGINEERING COLLEGE RAMAPURAM Innovation,

Concept note to establish PANIMALAR ENGINEERING COLLEGE Chennai Center for Innovation & Entrepreneurship

6.1. Introduction

PANIMALAR ENGINEERING COLLEGE Chennai Center for Innovation & Entrepreneurship (GCIE) will act as Umbrella to initiate & undertake any innovation & Entrepreneurship related initiative. It will also work closely with the Institution Center for Research & Development to transform research to Application level & there by converting to Start-up. GCIE will integrate functioning of various Cells/Centers at Institution level such as Institution‟s Innovation Council-GU (IIC), Entrepreneurship Development Cell (EDC), IPR Cell, Center of Excellence and Proposed Technology BusinessIncubator (TBI).

6.2. Goal

- **Establishing a Student Driven Entrepreneurship Development Cell (Also to act as Pre-Incubator)**
  - The objective of Entrepreneurship Development Cell is to create an entrepreneurial ecosystem in the Institution where students will get motivated to take up entrepreneurship over a job.
  - Through e-Cell students will get insight to entrepreneurial theory and practice through activities & workshops. E-Cell also facilitates a "Know how" network to address student ideas/projects to meet unique needs for mentoring and guidance.
  - E-Cell will constantly create awareness for entrepreneurship and stimulate confidence among students to consider opportunities for business creation.

- **Institution‟s Innovation Council under Ministry of Education‟s Innovation Cell**
  - Actively organize various events under Institution‟s Innovation Council-PANIMALAR ENGINEERING COLLEGE Chennai
  - Following MoE‟s Innovation Cell various initiate throughout academic year

❑ **IPR Cell**

- ❖ Spreading awareness amongst faculties & students to protect their Innovation & findings
- ❖ Innovative Student Project or Product oriented Startup Ideas will be facilitated by IPR cells to file patents and also help in Trademark registration.

❑ **Establishing Business Incubator of PANIMALAR ENGINEERING COLLEGE Chennai**

Establishing Business Incubator separate entity as section-8 company withnominated director from management of PANIMALAR ENGINEERING COLLEGE Chennai

- ❖ Business Incubator to work closely with identified student start-up through e-Cell & Pre-Incubator (All Center of Excellence at PANIMALAR ENGINEERING COLLEGE Chennai)

6.3. Vision

To transform PANIMALAR ENGINEERING COLLEGE Chennai into an innovation hub to create next generation entrepreneurs who will contribute to society through their problem solving approach and contribute to sustainable socio-economy growth of the nation.

6.4. Mission

To enable a vibrant entrepreneurial ecosystem in the Institution, by creating a pool of young start-up enthusiasts & providing them all the required support by way of mentorship & facilitation.

6.5. Strategies and Governance

6.5.1 Resource Mobilization

1) Investment in entrepreneurial activities should be a part of the Institution 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".**
2) UCRD to focus on raising funds from diverse sources to reduce dependency on 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
3) To support Institution"s proposed **Technology Business Incubator (TBI)** (Separate Section-8 legal entity to be established), potential collaboration with private and corporate sectors to generate funds, under Corporate Social Responsibility (CSR) as per Section 135 of the Company Act 2013.

4) Raising funds through HNI of Institution‟s Alumni Network. Alumni Cell of the Institution to create a list of alumni who are potential HNI and willing to support the Institution Initiative for Innovation & Startup Incubation.

6.5.2 For expediting the decision making, hierarchical barriers to be minimized and a separate "Advisory Board for PANIMALAR ENGINEERING COLLEGE Chennai Center for Innovation & Entrepreneurship" tobe established.

Proposed Board Structure:

SN	Designated/nominated official/faculty from the Institution	Role in Board
1.	Hon'ble Secretary and Correspondent	Chairman
2.	Hon'ble Director Dr. C. Sakthi Kumar	Chief Patron
3	Hon'ble Directors	Board of Directors
3.	Chief Academic Officer	Patron
4.	Director	Patron
5.	CEO/Manager of Proposed Business Incubator	Start-up Incubation Faculty in-charge of Innovation & StartupCenter
6.	Alumni Entrepreneurs (4 in No.)	Potential Investor
7.	External Investor	Connecting with Investor
8.	GoI Representative	Advising on GoI funding
9.	CEO of nearby Incubation Center (funded under DST/AIM)	Advisor

6.5.3 Promoting innovation and entrepreneurial agenda of the Institution as a major focus area in all conferences, Press meetings, convocations etc.

6.6. Startups Enabling Institutional Infrastructure

1. Creating facilities within Institution for supporting pre-incubation (e.g IIC-PANIMALAR ENGINEERING COLLEGE, e-Cell. Start-up Community etc.) An Incubation Center having co-working space and should be able to accommodate 20 start-ups at a time.
2. This Pre-Incubation/Incubation facility will be accessible 24x7 to students, staff and faculty of all schools and departments across the Institution with proper discipline & monitoring.
3. Incubation Center facility will be within the Institution Campus and it will be under a

separate Section-8 legal entity.

4. Other facilities such as Prototype center, Tinkering Lab, FabLab to be created by raising funds under various government sources and mobilizing resources from internal and external sources.
5. Zero rental fees to be charged for Startups from PANIMALAR ENGINEERING COLLEGE Chennai availing Incubation facilities for first one year (may vary on case to case basis)

6.7. Nurturing Innovations and Startups

6.7.1. *Entrepreneurship Development Cell (more details on Chapter 7)*

6.7.2 Student/Faculty Start-ups may use Institute's Address as their company official address by getting prior approval duly signed by The Management on letter head.

6.7.3 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 respective dean and duly endorsed by Entrepreneurship Faculty in-charge. A clear guideline on relaxation in attendance is given in Norms for Student Start-ups.

6.7.4 Students will be allowed to take a semester/year break (or even more depending upon the decision of the review committee composed of Director, Dean Academics, Dean Research, Manager Start Up and Innovation, Respective school dean, Faculty mentor and any other member nominatedby Management) to work on their startups and re- join academics to complete the studies. Student entrepreneurs can also earn academic credits (max 8 only) for their efforts while creating an enterprise. Review committee for award of credit for startup incorporation, will assess students who have apply to avail credits under Startup Incorporation, and based on the recommendation, max 8 credits in equivalence to elective subjects/course (Core subjects cannot be included)

6.7.5 Award of internal marks for students winning Innovation competitions/Business Plan Competition. A clear guideline is given in Norms for Student Startup/Innovator.

6.7.6 Faculty and staff will be allowed to take off for a semester / year (or even more depending upon the decision of review committee constituted by the CHIEF ACADEMIC OFFICER of the Institution) as sabbatical/ unpaid leave/ casual leave/ earned leave for working on startups and come back. Institution will also consider allowing use of its resources to faculty/students/staff wishing to establish start up as a full time effort. A clear guideline is given in Norms for Faculty Start- ups.

6.7.7 College of Management to start MBA specialization in (entrepreneurship and venturedevelopment) and PGDM in (Innovation, entrepreneurship and venture development) with batch size of 20 from Academic Year 2021-22.

6.7.8 Participation in startup-related activities will now onwards be considered as a performance activity of faculty in addition to teaching, R&D projects, industrial consultancy and management duties and will be considered while evaluating the annual appraisal of the faculty.

6.7.9 Product development and commercialization as well as participating and nurturing of student startups will now be added as assignment for faculty-duties in addition to their regular duties and each faculty may choose either product development or Mentoring Student Start-up or both (in addition to minimum required teaching and guidance) and then respective faculty are evaluated accordingly for their performance and promotion.

6.8. Product Ownership Rights for Technologies Developed at Institution

1. In case of Institution facilities / funds are used substantially on Product/Prototype development OR when IPR is developed as a part of curriculum/ academic activity, IPR is to be jointly owned by inventors and the Institution.
2. Inventors and universities 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
    a) Upfront fees or one-time technology transfer fees
    b) Royalty as a percentage of sale-price
    c) Shares in the company licensing the product
3. As an academic organization, Institution cannot be allowed to hold the equity as per the current statute, so GU Proposed Incubation Center (Established as section-8 SPV) will hold equity on Institution‟s behalf.
4. 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 the sale price, preferably 1 to 2%, unless it is a 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 Institution‟s consultancy cell or its incubation unit and the incubated company.
5. In case of, if product/ IPR is developed by innovators not using any Institution 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.
6. Institution 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.
7. All 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 Institution‟s school will have no say, including deans, programs chairs or registrars.

6.9. Organizational Capacity, Human Resources and Incentives

1. Institution will recruit staff that have a strong innovation and entrepreneurial/ industrial experience, behaviour and attitude. This will help in fostering the innovation & entrepreneurship culture.
2. Faculty and Schools of the Institution have to work in coherence and cross-school linkages should be strengthened through shared faculty, cross-faculty teaching and research in order to gain maximum utilization of internal resources and knowledge.
3. Faculty and staff will be encouraged to do courses on innovation, entrepreneurship management and venture development.
4. HR of the Institution to develop academic and non-academic incentives and reward mechanisms for all staff and stakeholders that actively contribute and support entrepreneurship agenda and activities.

6.10. Creating Innovation Pipeline and Pathways for Entrepreneurs at Institution Level

1. Creating Design Thinking Approach & more focus on problem solving assignments within the learning framework.
2. Student Startup Program (Embedded within curriculum)
3. The Institution links their startups/innovators with a wider entrepreneurial ecosystem and by providing support to students who show potential, in the 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.
4. The Institution's Innovation Council (IIC) of PANIMALAR ENGINEERING COLLEGE Chennai established MoE‟s Innovation Cell will conduct various activities related to innovation, startup and entrepreneurship development.
5. A separate FAQ/Information document on **Innovation & Entrepreneurship at PANIMALAR ENGINEERING COLLEGE Chennai** will be created and uploaded on the homepage on the Institution's website to answer the doubts and queries of the students/innovators and enlisting the facilities available at the institute.
6. One Parameter of Internal Assessment Assignment on Extra-curricular/Co Curricular Activity Participation in Innovation & Entrepreneurship. *(ARIIA Parameter 1.2)*

6.11. Preparations at School Level for Setting up E-Cell at Institution

1. Each school should create an Innovation-Entrepreneurship coordinator to help student innovators at local level.
2. Startup identification process:

- All programs, all years, projects to be introduced and levels could be mini, minor, and major projects.
- Project selection is through active industry and entrepreneur participation
- Multidisciplinary projects are encouraged

3. The coordinator shall be present in all reviews of the project.
4. He should ensure the student does PSAR & Coordination & act as catalyst to connect with the incubator start-up of Institution.
5. Every school must organize monthly hackathons on related problems & also on social issues related to their domain & interdisciplinary domain.
6. Students must be encouraged to participate in Conferences/Symposiums/Workshops/ Innovation challenges/Pitching Competitions/ idea talks and Entrepreneurship ideas competition.
7. Students participating in Boot-camps/Hackathons/Hands on Activities/Problem Solving Efforts.
8. Students participating in exposure programs like Innovation/ Startup Exhibitions/Award Functions.
9. Students participating in Product Design, Design Thinking, Immersion Programs in Innovation
10. Students must be offered every semester related to one skill not as part of credit.
11. Alumni who are entrepreneurs to mentor & their talks to be arranged.
12. School shall sign MOU and other engagement efforts for sustainable long-term cooperation with support providing organization/Industries.
13. School shall incentivize the students in terms of IA/CAT marks.
14. Tie up with best incubators, accelerators, innovation promotion organizations and develop joint initiatives to support student innovators and start-ups at school & Institution level.
15. Every department program will dedicate a few hours of its academic time where students and teachers will pursue certain activities for inculcating and strengthening the spirit of entrepreneurship.
16. There must be a minor program on Entrepreneurship for every school.
17. 20 % project must be interdisciplinary.
18. School level Entrepreneurship Development Clubs (Bootcamps) will be established through incubators to foster innovation and entrepreneurial spirit at the school and college levels.
19. **Setting up idea portal at Institution Level**
    - Anyone can put the idea in this portal
    - Anyone can choose the idea for implementation
    - All UG / PG / PhD problem statements must be added here so that one who has an idea can see who has already done work on similar ideas and can connect to the same.
20. **School** will regularly host startup-related national-level dialogues, workshops and conferences to benchmark its own progress and help create futuristic policies and action strategies to promote Innovation and student start-ups in Colleges.

21. **Staff and Students**: The Staff Members and Students who are the promoters of the Startup housed in the Institution Incubator may be allowed to use Institution resources such as labs and other such facilities for their company purposes. Use of any such facilities and resources may not be charged during the incubation period, except for facilities and instruments which are not free for the internal users. The use of space and resources of the Institution Incubator will be governed as per the norms of the Institution Incubator.

22. **Presenting to Investors**

Presenting the idea along with the supporting research to investors is an important step in the startup process, and one that requires thorough preparation. When scheduling a meeting with an investor, be very clear about its purpose. An informational or exploratory meeting may be acceptable, but be sure that the investor understands that this is the intent of the meeting. If the purpose of the meeting is to request funding, and the presentation team is not properly prepared, then subsequent meetings (and funding) are unlikely. Include the following information in the company pitch:

● What problem does the technology address?
● How does the technology provide a solution?
● What market is being pursued? What is the addressable market?
● Do not inflate data; if the idea is for a particular market segment, provide data for that segment only. - Market size - Target customer - Market segment
● What is the state of intellectual property? Is the technology well protected? Will IP be needed from other sources?
● Who is the competition? Investors expect that there is competition in every market area; claims of no competition are generally met with disbelief. What is the competitive advantage? Why would customers prefer the product or solution being offered over another?
● Who is on the executive team, and what are their roles? Why should someone invest in this team?
● How does the business model relate to the sales strategy and pricing?
● What are the expense and revenue projections for a five-year period?
● What are the key company milestones?
● How much money is being requested? How long will it last? How will the funds be spent? The presentation should be interesting and engaging. Tell a story and use examples. If potential customers or partners have provided feedback, include examples.

21. Code of Conduct:

- Each department shall have an entrepreneurship development cell headed by a coordinator and the Institution shall have an entrepreneurship development centre witha Head (EDC) who will coordinate the activities across various cells of schools and also activities which are interdisciplinary in nature. One month before the start of the academic year, the list of EDC faculty members and the EDC-coordinator will be finalized by each Dean and submitted to the Head-EDC nominated by PCHIEF ACADEMIC OFFICER and CHIEF ACADEMIC OFFICER.
- Three weeks before the start of the academic year, the list of students who are interested to become entrepreneurs shall be submitted by each Dean to Head-EDC as listed in Appendix I.
- An entrepreneurship training program focusing on basic start-up knowledge, business planning, business and management skills such as competitive advantage analysis, market research, business plan development, marketing, financial management and sales and human resources, business laws, bookkeeping, soft skills, and entrepreneurial behaviors such as risk taking, teamwork skills, and opportunity seeking shall be planned for aspiring student entrepreneurs for three months. This training should also include how to enter self-employment, subcontracting, small firm management, case studies, and exercises in setting up and running a company as appropriate to the school.
- The EDC-Coordinator at the school shall communicate with students for gathering and reviewing entrepreneurial ideas, arrange industry visits for students to develop entrepreneurial ideas, invite industry experts for presenting entrepreneurial scopes, exploring various schemes which provide seed money and conduct entrepreneurship workshops in school.
- Students shall be involved in social outreach programs in order to devise practical business solutions to social and environmental challenges.
- Each school and EDC shall invite entrepreneurial ideas from students of technical and management studies develop projects and select at least six projects in each semester and submit proposals based on these projects to MSME-Phase I. In each semester, at least two MSME-Phases I venture shall be obtained to take up the venture under entrepreneurship development centre (EDC).
- Each school and EDC shall develop the projects into test bed products and attract funding from MSME-Phase II or from other venture capitalists for seed funding.
- Each school shall also register for patents and IPR based on the above entrepreneurial project/product development activities.
- Each school shall submit the compliance report for entrepreneurship initiatives and activities of school to IQAC once in a semester within two weeks after ETE (**Appendix II**).
- Each school shall plan the activities of EDC before the start of the semester and later submit the progress report of entrepreneurship development/achievement by

respective students of the schools (who are working in EDC) once in a semester within two weeks after ETE **(Appendix III).**

22. GU will celebrate an annual **"Entrepreneurship & Start-up Day"** in all the College, jointly with the annual Poster Exhibition for Final Year projects.
23. Anyone can put an idea.
24. Anyone can choose an idea for implementation.
25. All UG/PG/Ph. D problem also must be added here so that one who has an idea can see who already has an idea & can connect to all.

6.12. Norms for Student Startups/Innovator

Start-up is a refined and renewed form of an entrepreneur. It is a juvenile organization that has just started to emerge. It can be a new entrepreneurial venture or a new business or a new partnership firm designed to reach for a climbable business model. An entity that develops a business model based on either product innovation or service innovation and makes it scalable, replicable and independent. The Startup Policy seeks to set the framework for the involvement of the Institution"s Staff and Students in Commercializing Institution"s Research into products, services and processes. It encourages Staff Members, Students and Visitors to become Entrepreneurs. It also establishes clear rules and procedures for the creation/participation of Staff and Student led Startups which may or may not be based on the Institution IP.

Goal

The Startup Policy seeks to reiterate that the employee"s primary commitment of time and intellectual contributions should be to the education, research and other obligations of the Institution and they have a primary professional obligation to act in the best interests of the Institution. Hence, care must be taken to avoid any cases of Conflict of Interest (COI) and Conflict of Commitment (COC) by all the Staff Members, Students and the Visitors of the Institution.

Vision

To create an ecosystem of having start-ups from the first year and the students to identify the problems & to think out of box ideas which can provide the solution to the problems / challenges and simulate the same and prepare the business model out of the same.

Following are the norms for Student Startups/Innovator:

- Student Start-up to be divided in three Stages namely:
  - **Stage 1: Ideation Stage:** Ideation Stage is the process of generating, exploring, and evaluating new technology/business ideas that can give the business proposed by the student entrepreneur a competitive advantage. The expert committee formed for the evaluation of the ideas should interview each entrepreneur and analyze the business potential and feasibility.

- **Stage 2: Teaming & PoC Development:** Team Formation is the key for an entrepreneur in commencing his journey before starting his own company. The team should ideally have a mix of co-founder with complementary skill sets. Having a complementary set of experience is very important for a well-rounded team from the inception. The team must have developed Proof of Concept (PoC). Expert committee comprising of Dean (R&D), IPR In-charge, Dean of Respective School, Senior Faculty Nominated by Hon CHIEF ACADEMIC OFFICER and Incubation Center In-charge; to assign Technology Readiness Level (TRL) as follows:
  - TRL 0: Idea. Unproven Concept, No testing has been performed
  - TRL 1: Basic Research. Principles postulated and observed but no experimental proof of concept available
  - TRL 2: Technology Formulation. Concept and application have been formulated
  - TRL 3: Applied Research: First Laboratory test completed; Proof of Concept (PoC)
  - TRL 4: Small Scale Prototype built in a laboratory environment ("Ugly" Prototype)
  - TRL 5: Large Scale Prototype tested in intended environment
  - TRL 6: Prototype System tested in intended environment close to expected performance
  - TRL 7: Demonstration System operating in operational environment at pre-commercial scale
  - TRL 8: First of kind commercial system. Manufacturing issues resolved
  - TRL 9: Full Commercial application: Technology available for consumers
  - It is expected that Student Start-up should progress to next level after every progress review
- **Stage 3: Minimum Viable Product Developed/ Business started/Company Formation:** The minimum viable product for Technology Idea to be developed and this to be certified by the experts for commercialization of Technology Transfer (IPR Cell)

  OR

  If it is a business service idea, the company or legally recognised entity should start the business operation as per the business plan and start generating Income (Company mandatory to sign MoU for incubation at GU)

- **For Incubated Student:** In return of services offered (Space, Infrastructure, mentorship, seed fund, accountant and legal and patent support) and use of facilities at Institution/incubation unit may take 2-9.5% equity/stake in the startup/company incubated. However, this equity model is applicable only when no rental is charged. The equity and rental can be discussed on case to case basis over a term sheet.

- **Selection Process of Students**
  - Students who have won any Business Plan Competition, Hackathon, Innovation Competition will be directly selected as Student Entrepreneur.

- ❑ PANIMALAR ENGINEERING COLLEGE Chennai Pre-Incubation Center i.e IIC-PANIMALAR ENGINEERING COLLEGE RMP& Entrepreneurship Development Center will provide assistance to the student entrepreneur in the preparation of business plans including introducing the student entrepreneur to mentors/consultants to help them prepare the plan.
- ❑ The Student Startup Team will be given one Business Mentor, One Technology Mentor and will be associated with one of the Center of Excellence (if required). Student Start-up will be provided with all infrastructure facilities(only if vacant and available) to start operations without delay.

❖ **Distribution of Grace Marks & Attendance**

- ❑ **Duty Leave/Class Leave:** Leave will be given to the student Startup Team who have taken prior permission from the Head of respective school to attend EACs/ Seminars/ Workshop/ Competitions, in-house training by E-Cell or Incubation Center etc. This shall be applicable to faculty also if they are accompanying the student/ student teams as the mentor or guide (only if required to accompany and provided adjusting their teaching load & other work)
- ❑ **Grace Marks and Attendance:** Grace marks (for internal only, not for ETE) and attendance will be provided by the Academic Cell to Student Startup Team who are incubated at GU Incubation Center based on the following broad guidelines. Accordingly, a student entrepreneur (or group) will be rated at different stages: (Though this needs to have approval from respective dean and academic cell)

SN	**Stages**	**Grace Marks**	**Attendance (Max. 40%)**
		Marks (Max full internal marks in each subject)	
1	Ideation Stage	1%	5%
2	Teaming & Company formation	1%	5%
3A	Prototype (Working model) for technology based firms	50%	20%
Or 3B	Business Services of Service based firms*	100%	40%

***Student must have incorporated as company and formally admitted as incubatee* at GU Incubation Center**

- ❖ Students shall not be allowed to avail relaxation and skip any of the examinations fixed by the Institution.
- ❖ Students should be encouraged to participate in nationally reputed idea competitions / business plan competitions /entrepreneurship seminars/national-international hackathons etc. to gain maximum exposure. Duty leave may be given for this purpose.

Students who win prizes at Institution / state / national level idea competitions / business plan contests may also be given up to 2% grace marks in the semester in which prize was awarded

6.13. Norms for Faculty Startups

Following are the norms for Faculty Startups:

- **Kind of companies**:
  a. Companies jointly owned by the faculty members and graduating students/alumni (along with possibly others)
  b. Companies owned by the faculty members (one or many) along with possibly others.
  c. Companies owned by the graduating students, alumni along with possibly others. In such cases, the faculty members and students will be known as founding members of the board of the company.

- **Role of Faculty:** Faculty members would be owners of such companies and be a Director on the Board. Also, the faculty member may choose to play an operational role (Technical Advisor, CEO, Marketing Manager etc). The faculty member can choose one of the following options:
  a. Take leave for 6 months surrendering EL/ML of the academic year and work full-time in the business
  b. Dedicate part or all of the days allocated for consultancy work to the business. However, under no circumstance the total number of days of non-Institution activities would exceed the Institution norms (weekly teaching load can be adjusted in 4 day in a week)
  c. It should be noted that the faculty should take all possible steps to ensure that his/her duties and responsibilities of faculty at GU take precedence over all other activities.
  d. A faculty member is expected to balance his outside managerial responsibilities with his academic responsibilities on full-time active duty in the Institution. This will also apply to the students/employees involved in these activities.
  e. Faculty members can undertake projects that could be conducted at respective school of PANIMALAR ENGINEERING COLLEGE Chennai, and managed through their companies provided that the Institution overhead charges are duly paid as per the consultancy norms of the Institution.

- Allow faculty and staff may take off for a semester/year as sabbatical/unpaid leave/casual leave /earned leave for working on startup and come back.

- **Disclosure and Compliance:** Financial and non-financial disclosure agreement will be signed as per the existing Institution norms. Faculty is supposed to register his company within 3 month after taking leave and submit the self-attested copy proof of Company Registration with mention of CIN Number. Maximum 6 month can be given to submit Company registration proof, if faculty fails to do so; all policy advantages will stand void.
  - No restriction on shares that staff and faculty can take as long as they don‟t spend more than 20% of office time on the startup in an advisory or consultant‟s role and

don‟t compromise with their existing academic and administrative work or duties, but can't take role of employee as CEO or other managerial role in his/her startup and cant draw salary from startup and can‟t accept gifts from his own startup. He/she can take share on profit and dividend only if any from the startup as owner/shareholder.

- ❖ In case faculty/staff is drawing salary from Institution, Institution‟s/Incubation unit stake/equity on startup should be limited to 20% of total share of faculty/staff or 9.5% of total stake whichever is minimum.
- ❖ Faculty must clearly separate and distinguish on-going research at the Institution from the work conducted at the startup/company.
- ❖ Faculty must not involve research staff or other staff engaged in academic projects of Institution in activities at the startup.

- ❖ **Methodology:** A faculty company will necessarily be required for incubation at GU Incubation Center. In no case, Faculty can open companies outside Institution Campus. Faculty‟s company main office has to be within the Institution Campus. For the incubation of the Faculty Company, evaluation will be as per the Incubation unit guidelines. Equity/ IP ownership can be discussed over case to case basis before finalizing the term sheet.
- ❖ **Resolution of Conflicts:** In situations in which the objectivity of a faculty member could reasonably be questioned, the management at GU may establish an independent committee to take steps including (but not limited to) the following: to review the appropriateness of the proposed research for Startup to be conducted at Institution, to oversee the conduct of the research, and to ensure open and timely dissemination of the research outcome. The decision of the Governing Board, in this regard, would be final.

6.14. Pedagogy and Learning Interventions for Entrepreneurship Development

1. Student driven e-Cell organizing competitions, bootcamps, workshops, awards, etc. e-Cell of PANIMALAR ENGINEERING COLLEGE Chennai will be monitored by Faculty in-charge. More details on functioning in chapter 7.
2. Institution to start annual „PANIMALAR ENGINEERING COLLEGE CHENNAI ENTREPRENEURSHIP AWARDS‟ in different categories such as Student Entrepreneur, Faculty Entrepreneur, Faculty Mentor etc. to recognize outstanding ideas, successful enterprises and contributors for promoting innovation and enterprises ecosystem within Institution. Details in chapter 7.
3. For embedding innovation culture within the learning framework, the teaching methods will include case studies on business failure and real-life experience reports by startups. Mapping such available case studies on start-up with respective courses offered by Schools in various programs to be exhaustedly done at department level. A compiled google spreadsheet collated at CHIEF ACADEMIC OFFICER office level will be made available to all faculties for this exercise.
4. **PANIMALAR ENGINEERING COLLEGE Chennai Campuspreneur Program:** Open credit course offered to all programs to promote Campus Startup at Institution Campus. Batch size in one

term would be max.100 students, in case of more than 100 students opting for the course; selection process to be kept in place. More detail in chapter 7.

5. Student achievers in Innovation & Startup to be made as Poster Boy/Girl or in various Pamphlets, prospectus, website etc. The process of selecting students will be transparent. More details in Chapter 7.
6. Entrepreneurship education will be imparted to students at curricular/ co-curricular/ extracurricular level through elective/ short term or long-term courses on innovation, entrepreneurship and venture development.
7. One Teachers assignment will be on student‟s participation in Innovation & Startup events in terms of the course. Rubrics for the same in Chapter-7.
8. Student projects and innovations should be based around real life challenges. Pedagogical changes and Learning interventions developed by the Institution for inculcating entrepreneurial culture will be a continuous process and will be constantly reviewed and updated.

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

1. Stakeholder engagement with entrepreneurial ecosystem enablers will be a prime objective. Stakeholders can be resource organizations, Technology Start-ups from the NCR region, social enterprises, alumni entrepreneurs, professional bodies and GoI representatives from Entrepreneurship promoting departments. Active engagement with them to get input for entrepreneurship and co-design the programs.
2. **Round-Table Meetup with Stakeholder for Entrepreneurial Ecosystem:** Once in a month or as per availability of required stakeholders. Agenda of meet-up will be communicated in advance & minutes will be documented.
3. **Co-Incubation Model:** Co-incubation is a concept where an incubatee can simultaneously be part of two incubation centers/institute & can avail facilities of both the centers. Co-incubation MoU with nearby Incubators in NCR to facilitate exchange of student startup/innovator in between organization and the co-incubation partner.
4. **Development of Innovation Knowledge Platform using in-house Information & Communication Technology (ICT) capabilities**: An Idea portal to create an open innovation exchange platform.
5. **MoU with other Institution/Institute**: MoU with specified deliverables in terms of innovation & entrepreneurship. If the Institution already has an academic MoU for Student Exchange program, then more deliverables can be added within the existing MoU or separate MoU can be signed.
6. **Knowledge Exchange**: Expertise of the Institution & other partner (Co-incubation or Institution) expertise should be leveraged through a knowledge exchange program. Separate programs for Student & Faculty may be designed.

6.16. Institution Support and Entrepreneurial Impact Assessment

Institution Support

- **Incorporation.** The Institution may support the staff members and the students in the incorporation of the company in the form of incorporation fees and guidance. This may also include support extended to the company for annual maintenance of the company and any charges incurred towards its compliance.
- **Seed Money**: The Institution may provide funding support to the companies in the form of grant in aid, seed grant and loan.
- **Financial Support:**
  - ✔ Company Promoted by Institution: Fully funded by Institution Management (Institution‟s Promoter will act as Angel Investor) Proposed Equity: 10 to 15 percent based on potential market of the startup and business plan.
  - ✔ Company Supported by Institution: Proposed Equity: 2-9.5% based on potential of market of the startup and business plan. Equity stake will depend on what kind of support Staff/faculty/student has availed. In no case equity stake will be higher than 9.5% (following the National Innovation & Startup Policy)
- **Mentorship and Guidance**. Institution will provide necessary mentorship and guidance through the Incubator free of cost.
- **Special Leaves**. Staff Members are expected to ensure success of their Startups by dedicating efforts and time required. Keeping this in view, Institution will allow Staff to involve in their companies in one of the following ways. A clear guideline in this regard is already mentioned in this document earlier in „Norms for faculty Startup‟.
- **Number of startups to promote:** Maximum 10 startups in every three years but not more than five startups in a year. Committee for Entrepreneurship & Startup to select this 10 Startup in the month of December-January.
- All the startup support shall be started after one month based on provisional agreement and business plan. Based on satisfactory progress report as per commitment in business plan. The Institute authority will confirm the startup agreement.
- **Startup support tenure:** Maximum 1000 Days.

Entrepreneurial Impact Assessment

1. Assessment of Institution‟s entrepreneurial initiatives such as pre-incubation, incubation, entrepreneurship education will be performed after every 6-month using following evaluation parameters.
2. **Number of Events Organized by e-Cell & other schools related to Entrepreneurship/Startup:** e-Cell & IIC- PANIMALAR ENGINEERING COLLEGE RMPwill take lead in organizing any entrepreneurship/startup event**,** yet respective schools may organize any entrepreneurship event such as Alumni Entrepreneur Talk, Webinar, Workshop, Startup Talk etc. at their level. Any event organized should be well documented & following numbers should be recorded & documented:

Title of Event	No. of Student Participated	No. of faculty participated	No. of External participants (Student + Faculty)	Date of Event	Publicizing on Institution/e-cell/IIC-PANIMALAR ENGINEERING COLLEGE RMPSocial media

3. **Number of participations by Student/faculty Outside:** All schools will provide the details of participation of their students in Innovation, Startup & Entrepreneurship Event along with proof to e-Cell in-charge & IIC- PANIMALAR ENGINEERING COLLEGE RMP in following format:

Title of Event	Level (National/ International)	Organized By (Organization name)	Date of Event	Achievement if any	Certificate or any other proof available

For the above respective school‟s Dean may appoint one faculty coordinator to document the same. Also, Student Extra-curricular based assignments may also be used to collect this information.

4. **Details of beneficiaries for Courses on Innovation/Entrepreneurship/Startup**: No. of Students at all levels who have successfully attended Credit course on Innovation/Entrepreneurship/Startup offered or any NPTEL Course should be recorded. School‟s academic coordinator or Institution ERP coordinator must record this data in following format:

Title Course	Course Coordinator	Duration of Course (Start & End Date)	No. of Student passed	School

5. **Details of Awards won by Faculty/Student in Innovation/Entrepreneurship:** Must be documented at School level & provide the same to IIC- PANIMALAR ENGINEERING COLLEGE RMP& e-Cell In-charge in following format:

Title of Event/Grant	Level (National/ International)	Organized By (Organization name)	Date of Event	Nature of Award (Mention if any cash or grant money)	Certificate or any other proof available

6. **Details of Student Start-up:** Student Startup started & running in an academic year will be documented by Faculty In-charge for e-cell & IIC in following format:

Name of Startup	Name of Student & Team members	Start Month	Stage of Startup (Idea/Prototype/ MVP/Growth)	Whether incorporated?	Any Achievement

7. **Details of Faculty Start-up:** Any faculty members who have incorporated Startup or part of any Startup in Director Capacity must provide the following information to Faculty In-charge for Entrepreneurship & Innovation.

Name of Faculty	Name of Company	Company CIN No.	Faculty DIN	Start date as Director

8. **Details of Patent & other IPR filed/Granted:** IPR cell will keep record of Patent filed/granted till date in following format:

Type of IPR (Patent/Copyright/ Trademark)	Student/faculty	Name of Inventor	Date of filing	Status	Reference No.

9. Details of Startup raising Fund

Name of Startup or Startup Project	Type of Funding (Seed/Series/Grant)	Amount of funding raised	Angel Investor/ASSOCIATE DIRECTOR/Gov Org	Month of Receiving fund

All above data will give a self-assessment of the Institution's Initiative in Innovation & Entrepreneurship. Also this impact number will be reflected in Institution participation in Atal Ranking of Institutions on Innovation Achievements (ARIIA). SWOT Analysis to be done at the end of each AY assessment & Action plan will be incorporated for next year to fill the gap.

6.16. Applying for ARIIA Ranking, Funding under NIDHI-TBI, AIC, UP Startup & other incubator funding agency

1. Applying under various funding schemes:

- DST-NSTEDB-NIDHI-Technology Business Incubator
- DST‟s New Generation Innovation and Entrepreneurship Development Centre
- DST‟s Training Program for Entrepreneurship
- BIRAC Bio-NEST (Call is open throughout year)
- Technology Incubation and Development of Entrepreneurs (TIDE) by Meity, GoI
- Support for Incubator under UP Startup Policy-2020: Max. 1 Cr support for Capital 30 lakh per year for 5 year as operational Expenditure and 5 Lakh per year for acceleration program (As per UP Startup Policy 2020, UP Government to set-up 100 incubator in UP in next one year)
- MSME‟s Support for Entrepreneurial and Managerial Development of MSMEs through Incubators (15 Lakh per idea with grant-in-aid upto 1 Cr)
- AIM‟s Atal Community Innovation Centre (ACIC)
- AIM‟s Atal Incubation Center

2. Applying for ARIIA Ranking:

- **About ARIIA Ranking:** Atal Ranking of Institutions on Innovation Achievements is an initiative of Ministry of Education (MoE), Govt. of India to systematically rank all major higher educational institutions and universities in India on indicators related to “Innovation and Entrepreneurship Development” amongst students and faculties.

  Major Indicators for consideration

  Assessment of innovation and startup ecosystem in HEIs will be based on Seven parameters with certain weightages allocated as below.

  - Budget, Expenses to Support & Revenue Generated (20 Marks).
  - Infrastructures & Facilities to Support Innovations and Start-ups (10 Marks).
  - Awareness Activities for Promoting Idea Generation and Innovation (20 Marks).
  - Promotion and Supporting Entrepreneurship Development (20 Marks).
  - Intellectual Property (IP) Generation, Technology Transfer and Commercialization (14 Marks).
  - Innovative Learning Methods & Courses (10 Marks).
  - Innovations in Governance of the Institution (6 Marks)
- All Schools to appoint one faculty as Innovation Coordinator who is going to keep record of Student participation in outside events related to Innovation, Entrepreneurship & Startup.
- Also appointed Innovation coordinator at school level to keep record of event/activities organized by respective school

Chapter 7: Entrepreneurship Development Cell

7.1. Introduction, Goal, Vision & Mission

Introduction: The objective of Entrepreneurship Development Cell is to create an entrepreneurial ecosystem in the Institution where students will get motivated to take up entrepreneurship over a job. Entrepreneurship Development Cell to have a 3 faculty member committee who will look after overall working of Student‟s e-Cell & will guide and facilitate them all the time. Entrepreneurship Development Cell‟s major objective will be to strengthen the entrepreneurial ecosystem at Student level and this is to be achieved through Student body e-Cell. Role of faculty in-charges of Entrepreneurship Development Cell will be a guiding force for Student‟s e-Cell.

Goal: Making Student Driven body mentored by faculty which will facilitate a "Know how" network to address student ideas/projects for Startups and continuously create awareness for entrepreneurship by organizing Startup Talks, Workshop on Business Plan/BMC, competition and facilitating Student startup with mentor.

Vision: To become best Entrepreneurship Cell known for its vibrant & creative Startup event in North India

Mission: Following are the mission statements for Entrepreneurship Development Cell:

1. To create an entrepreneurial ecosystem in an institute where students will get motivated to take up entrepreneurship over a job.
2. Inculcating spirit of entrepreneurship in students
3. Organizing motivational and inspirational talks from successful Entrepreneurs
4. Facilitating students to convert innovative Startup idea to marketable product
5. Facilitating mentoring for student startup & early stage start-up
6. Motivating students and encouraging them to take up entrepreneurship as a preferred career choice.
7. Providing opportunities and platform to the students for pitching the ideas
8. Providing mentoring to the students for their ideas
9. Inviting young entrepreneurs to set the examples
10. Social entrepreneurship / startups idea s roadshows seed money policy
11. Preparing students for successful launching of their start-ups
12. Developing customized teaching and training materials for start-ups and engaging them in pre-startup activities
13. Capacity Building Activities for faculty as well as students.

Establishing Mentor Bank

The mentor bank should be those who have experience in entrepreneurship through students startup/ Association with TIE/ alumni entrepreneur of the Institution/ CHIEF ACADEMIC OFFICERs/ Association with DST/ Association with MSME/ Entrepreneurs/ Businessman having interest in studentstartups, etc. Proposed Mentor Bank as per activities conducted in 2020-21:

7.2. Establishing Student Entrepreneurship Cell (e-Cell GU)

1. Selecting Student ExeCom body for e-Cell at the Start of Academic year. This process should start at the end of the previously ending academic year (ideally in the month of April/May). The Faculty in-charges appointed to look after the functioning of e-Cell must initiate this process and also Student Lead of last year e-Cell should also be involved in selection process of next year
2. Creating Call for application through google form. The google form should be designed in a way that will assess the Student‟s interest & passion towards Entrepreneurship/Startup. Also any past association with other Student Club or any volunteering experience may be asked.
3. Based on responses, Faculty in-charges & Student Lead of last year e-Cell will shortlist the best 40% response. The criteria of the number of shortlisting students should be based on total number of responses received. Best practice will be to have a good number of students (approximately 70-80) for the interview.
4. While shortlisting Students for Interview, due care must be taken to have representation from all Schools of Institution, balance in student from each year (from final year to 1st Year, the ideal ratio of higher to lower semester should be 1:2:3:3) and keeping the Gender ratio as 50-50 (ideal scenario but at the same time must ensure to select best student for e-Cell)

5. Above points must also be taken into consideration while finalizing Student‟s e-Cell.
6. **Orientation Program for newly formed e-Cell:** To get the newly selected students for e-Cell familiar with functioning of e-Cell, 1 or 2 day long orientation program must be organized. This program must have sessions by faculty in-charges and best performing student members of last year e-Cell. By the end of the orientation program, e-Cell should come up with a concrete plan of events & activities to be conducted in the current academic year.

7.3. Implementation Process:

- Entrepreneurship must be taught in first year through case studies
- e-Cell set up with talks by young entrepreneurs and changemakers
- roadshow for the entrepreneurship
- talks by seniors/ alumni who have their startups sharing their failures
- The platform wherein students can pitch and mentors from entrepreneurs who can suggest their weaknesses
- Seed money and project implementation with some CHIEF ACADEMIC OFFICER
- social internship mandatory for 2 weeks
- presentation on social internships and problems identified and solutions
  business model
- Students shall be encouraged to participate to exhibit their ideas at various platform
  hand holding relaxation in attendance and continuous assessment
- They shall be given minor in entrepreneurship
- support of legal team/ seed money /incubation space and technical support

7.4. Standard Operating Process for e-Cell

1. Divide the team in various leads such as Overall Lead, Social Media Lead, and Event Organizing lead etc. as per the competent ices of student members in e-Cell.
2. Prepare an Activity calendar for each term (Winter & Summer) with well-defined date and description of event. Share the calendar with central planning of the Institution.
3. Prepare creative for any event 15 days before and publicize across all social media handles of e-Cell. Faculty in-charge must ensure that the past Student e-Cell team hands over all social media credentials to the new team and no new Social media page/handle will be created every year.
4. Ensuring a good number of student participation in all events.
5. Publishing post event photos on social media.
6. The Event Report should be well documented and may be posted in e-Cell blog & Institution website. Faculty in-charge must ensure consistency with report format

7. **Planning annual signature event**: One or two grand events can be planned well in advance which will be at the National level. The Title of Signature event should be uniform in subsequent years. For example, every year e-Cell IIT-Kharagpur organizes Global Entrepreneurship Summit, e-Cell IIT-Bombay organizes e-Summit, Eureka (Business Plan Competition), Abhyudaya (Social Entrepreneurship competition etc. In the same way, e-Cell PANIMALAR ENGINEERING COLLEGE Chennai should organize annual events at big stages nationally. One proposed event for the Academic year 2020-21 is titled as **PANIMALAR ENGINEERING COLLEGE Chennai Project Day**.
8. Forming Student Startup Community within Institution and facilitating meet-up once in a month.

7.5. Activity Calendar for Entrepreneurship Cell (ARIIA Parameter 1.1)

Sr. No.	Title of Activities	Student Lead/ Institution Lead	Duration	Count of Activities
1.	Selection Process for Student‟s e-Cell	Institution Lead	1st Week-June	1
2.	One Day Orientation Program for e-Cell	Institution Lead	2nd Week-June	1
3.	One Day Orientation Session on Entrepreneurship (Format: 1. Talk by Alumni/Founder of Early Stage Startup 2. Opportunities for Student	Institution Lead	1st-4th Week-July (For each school)	14

	Entrepreneurship at GU 3. FAQ & Panel Discussion)			
4.	Talk by Startup Founder (Sharing Success Story) (*Four Talks on startup sector: HealthCare, AgriTech, AI/ML, EdTech)	Student Lead	3rd week-July 2nd week-August (Institution Level)	4
5.	Talk on Social Entrepreneurship (Sharing Success story by Social Entrepreneur under THE SOCIAL CALL: Talk Series on Social Entrepreneurship	Student Lead	Throughout Semester (Total four Talks)	4
6.	Workshop on Problem Solving, Ideation	Institution Lead	4th Week-August & 1st Week-September	2
7.	G-Talks: Idea Pitching Competition	Student Lead	Every Saturday of the Month (Min.5 Activity)	5
8.	$500 Venture Competition	Student Lead	During Diwali Meetup	1
9.	**StartBiz:** PANIMALAR ENGINEERING COLLEGE Chennai Business PlanCompetition (Institution Level, 1st Prize: 5000)	Student Lead	4th Week-November	1
10.	PANIMALAR ENGINEERING COLLEGE Chennai Entrepreneurship Summit(Two/Three Day)	Institution Lead	2nd Week-December	1
11.	**StartBiz:** Business Plan Competition (National Level; 1st Prize: 25000, 2nd Prize: 15000, 3rd Prize: 10000)	Institution Lead	2nd Week-December	1
12.	1-week Student Startup Mentoring Program	Institution Lead	2nd Week-January	1
13.	Campus Startup Selection (Calling Application for in-house Student Startup/Business Opportunity e.g. Xerox/Printing, Food Delivery, Stationery, etc)	Institution Lead	1st Week-December	1

14.	Review of Student Startup	Institution	1st Week-	1
		Lead	February	
15.	1-Week Faculty Development Program on Entrepreneurship *(ARIIA Parameter 2.3)*	Institution Lead	2nd-4th Week February (Two FDP with 50 participants in each)	2
16.	1-week Student Startup Bootcamp *(ARIIA Parameter 2.3)*	Institution Lead	1st Week-March	1
			Total No. of Activities	**41**

7.6. PANIMALAR ENGINEERING COLLEGE Chennai Entrepreneurship Award *(ARIIA Parameter 1.1)*

1. To celebrate student/staff/faculty achievement for their efforts in Entrepreneurship, the Annual PANIMALAR ENGINEERING COLLEGE Chennai Entrepreneurship Award will be constituted.
2. Category of PANIMALAR ENGINEERING COLLEGE Chennai Entrepreneurship Award:
   - **Student Entrepreneur**: Must be enrolled in the current academic year. Award Money will be max. Rs.1 Lakh and other benefits. Criteria for selection will be
     1. No. of Business Plan/Startup Competition won outside of Institution if incorporated as registered company
     2. If incorporated to a registered company, traction for their offered service/product.
   - **Faculty Entrepreneur**: Must be as Director in a registered Startup. Award money will be max. Rs. 1 Lakh and other benefits Prize money Criteria for selection will be
     1. Incorporated company based on innovative project/product carried at Institution
     2. Incorporated company with present or past student of PANIMALAR ENGINEERING COLLEGE Chennai
   - **Faculty Mentor:** Must be actively involved in mentoring student Start-up. Award money will be max Rs.50k. Criteria for selection will be
     1. Progress of Mentored Startup
     2. No. of Startup Mentored
   - **Alumni Entrepreneur:** Must be recent pass-out of Institution (in the last 3 batches). Criteria for selection will be
     1. Company valuation
     2. Impact created in terms of jobs creations and other social factor
     3. External fund raised
     4. Public perception of the company (Based on featured in Newspaper and other Startup portal like yourstory, inc42 etc.)

7.7. Annual Entrepreneurship Summit: PANIMALAR ENGINEERING COLLEGE Chennai e-Summit *(ARIIA Parameter 1.1)*

1. Signature flagship event of e-Cell PANIMALAR ENGINEERING COLLEGE Chennai spanning across two days

2. Apart from Talks by popular Startup Founder, Investor, Panel discussion; event will also have National level Business Plan competition with total prize money of maximum Rs.50k.
3. Ideally in the month of September/October every year
4. Free for students of PANIMALAR ENGINEERING COLLEGE Chennai and will be charged for students outside of PANIMALAR ENGINEERING COLLEGE Chennai. Total attendees ratio of internal & external should be 50-50 in case of good response from outside or else can go with max. Participation of students from within Institution.
5. Wide publicity in newspaper and electronic media, both pre & post event.

7.8. Newsletter, Bi-annual Magazine

1. Monthly/Quarterly Newsletter highlighting event/activities of e-Cell and Student achievement in Startup event
2. Bi-Annual Magazine: One issue at end winter session and next issue at the end of summer session.

Chapter 8: Institution‟s Innovation Council (IIC) & IPR cell

8.1. About

In the year 2018, the Ministry of Education (MoE) through MoE‟s Innovation Cell (MIC) launched the Institution‟s Innovation Council (IIC) program in collaboration with AICTE for Higher Educational Institutions (HEIs) to systematically foster the culture of innovation and start-up ecosystem in education institutions. Primarily, IICs‟ role is to engage large number of faculty, students and staff in various innovation and entrepreneurship related activities such as ideation, Problem solving, Proof of Concept development, Design Thinking, IPR, project handling and management at Pre-incubation/Incubation stage, etc., so that innovation and entrepreneurship ecosystem gets established and stabilized in HEIs.

PANIMALAR ENGINEERING COLLEGE Chennai has established the Institution's Innovation Council in the year 2024.

IPR Cell: To facilitate IPR filing which include patent, copyright, trademark; PANIMALAR ENGINEERING COLLEGE Chennai has established a separate cell called as IPR Cell which will look after protecting the Institution's Innovative project by filing patents for them. More details about functioning of IPR Cell will be explained in 8.6

8.2. Goal

1. To spread innovation culture in the Institution
2. Improving the quality of projects by carefully examining innovation quotient
3. Hand holding Student Start-up for Product Development Phase
4. Developing design thinking approach
5. Increasing participation of innovative projects in prestigious National level hackathons & competitions

8.3. IIC Mechanism & Compliance

1. IICs established under MoE‟s Institutions Innovation Council are allotted unique IIC ID & login credential for IIC National Portal. IIC id for IIC-PANIMALAR ENGINEERING COLLEGE Chennai is **IC201912703**.

2. **Constitution of Institution Innovation Council:**

Members

Sl no.	Designation as per IIC	Name of the office bearer	Designation-Dept
1	President	Dr. N Duraipandian	Dean Academics
2	Vice President	Dr. Rajeswari Mukesh	Professor And Head-IT
3	Convenor	Mr Akarshak Bose	Manager- Start Up and Innovation
4	Innovation Activity Coordinator	Dr. Ramya Devi	Assistant Professor- BCA
5	Start-Up Activity Coordinator	Dr. Chidambaram A L	Assistant Professor- MBA

6	Internship Coordinator	Mr. Kartikeya	Placement Officer
7	IPR Activity Coordinator	Dr. S. Nagarajan	Assistant Professor- ECE
8	Social Media Coordinator	Dr. Sathiyabama P	Assistant Professor MBA
9	ARIIA Coordinator	Dr. K Murugan	Assistant Professor-Commerce
10	NIRF Coordinator	Dr. T C H Madhavi	Professor Civil

11	Member	Dr .Loganatha Prasanna S	Assistant Professor MBA
12	Member	Dr. S .Lakshmi	Assistant Professor MBA
13	Member	Dr. D. Kanchana	Assistant Professor MCA
14	Member	Mrs. R. Sathya	Assistant Professor CSE
15	Member	Mrs. Siva Sankari	Assistant Professor CSE
16	Member	Dr. Swaminathan	Assistant Professor Mech
17	Member	Dr. Roopa M	Assistant Professor ECE
18	Member	Dr. Premlatha	Assistant Professor EEE
19	Member	Dr. Monika Venkat	Assistant Professor Bio Tech
20	Member	Dr. Shweta Menon	Assistant Professor- Fashion Desg

3. IIC has to prepare its calendar as per guidelines by the IIC team. Activities carried under IIC is divided in three categories:
   - **IIC Calendar Activities**: Institute‟s IIC has to follow the calendar as prescribed by MIC. Some of the events/activities are mandatory to conduct by respective IIC. IIC must conduct min 12* activities out of total 67* activities prescribed in IIC calendar
   - **MIC Activities**: These are the activities conducted by MoE‟s Innovation Cell at central level and all registered IIC must participate & comply by submitting the report in IIC Portal. E.g. India First Leadership Talk Series, KAPILA IP Literacy Program etc. IIC must participate in min 24 activities conducted by MIC
   - **Self-Driven Activities:** Apart from IIC Calendar & MIC Driven Activities, each Institute can also organize events/activities with the theme of Innovation & Entrepreneurship. Such activities should also be reported in IIC Portal. IIC must conduct minimum 12* self-driven activities in an academic year. (* All this numbers are as per IIC2.0 & may change for next year)
4. Each event/Activities report has to be uploaded within the same quarter in IIC Portal, to be eligible for reward points.
5. Following is Score calculation mechanism for IIC 2019-20:

Activity Type	Total Number of Activities Approved	Total Threshold Number of Activities	Score (for minimum prescribed activities)	Adjusted Cumulative Reward Points For Additional Activities Beyond the Threshold Numbers for Each Category (Reflection in multiple of 100 with activity score)
IIC Calendar Activity (Score for 1 activity=4.16) Minimum 12 activities	0	12	0 (Max Score=50)	0
MIC driven Activity (Score for 1 activity=0.833) Minimum 24 activities	0	24	0 (Max Score=20)	0
Self-driven Activity (Score for 1 activity=2.5) Minimum 12 activities	0	12	0 (Max Score=30)	0

*Scores are calculated based on the minimum prescribed activities in each "activity type". IIC earn Reward Points * for conducting more than prescribed minimum activities under each "activity type", which is effective towards 5th star.*

6. Effective score range for Star allocation from Quarter 1 to Quarter 4::

Starting Score range	Ending Score range	Star allocation
>0	24.166	One Star
24.99	34.166	One and a Half Star
49.99	49.166	Two Star
49.99	64.166	Two and a Half Star
64.99	74.166	Three Star
74.99	84.166	Three and a Half Star
84.99	100	Four Star

7. Parameters for the calculation of 5th Star:

S.No	5th star Parameters	Weightage
1	Regional Mentoring Session hosting	5 marks

2	Innovation Ambassador Training Hosting	30 marks
3	Innovation Contest 2020 Participation	12.5
3.1	50- ideas	10 marks
3.2	25 PoCs	10 marks
3.3	15 prototype	10 marks
4	Reward points	50 marks *
5	Finalist of PoC contest	10

Score Range	Star
Score greater than equal to 50 marks	Full star
10 greater than equal to score greater than 49.9 marks	0.5 star
Score greater than 9.9 marks	0 star

8.4. Calendar for Institution Innovation Council (As per IIC Calendar) *(ARIIA Parameter 1.1)*

Sr. No.	Title of Activities	Mandatory/ Elective	Quarter	Thrust Area
1.	IIC Council formation or upgradation (of existing council) at Institute level. Conduct the first council meeting.	**Mandatory**	**Quarter-I**	**Inspiration, Motivation and Ideation**
2.	Workshop on "Entrepreneurship and Innovation as Career Opportunity"	Elective		
3.	My Story - Motivational Session by Successful Innovators	Elective		
4.	My Story - Motivational Session by Successful Entrepreneur/Startup founder.	Elective		
5.	Session on Problem Solving and Ideation Workshop	Elective		
6.	Exposure and field visit for problem identification	Elective		

7.	Pitching workshop & linkage of innovators with Innovation Ambassadors.	Elective		
8.	Panel Discussion on Atma Nirbhar Bharat- Vocal for Local, Make In India for the world.	Elective		
9.	Orientation Session on National Education Policy (with a focus on Innovation and entrepreneurship)	**Mandatory**		
10.	IIC Council Meeting- Review of Q1 progress and Planning for Q2.	**Mandatory**	Quarter-II	**Validation and Concept Development**
11.	Session on Process of Innovation Development	Elective		
12.	Workshop on Design Thinking, Critical thinking and Innovation Design	Elective		
13.	Field/Exposure Visit to Fab lab, Makerspace, Design Centres, City clusters etc.	Elective		
14.	Workshop on Entrepreneurship Development Phases	Elective		
15.	Design Validation through various model of design validation (e.g. Double Diamond Approach)	Elective		
16.	Session on identifying Intellectual Property component at the early stage of Innovation	Elective		
17.	Idea/ PoC pitching & validation and Institute level PoC competition. Submission of Idea/PoC on IIC Portal	**Mandatory**		
18.	Orientation session for all students & faculties of Institute by Innovation Ambassador	Elective		
19.	Call for paper writing and research report on Innovation	Elective		
20.	Orientation Session on National Innovation and Startup Policy (NISP)	**Mandatory**		

21.	Semester Break : Internship at startup	Elective		
22.	IIC Council Meeting- Review of Q2 progress and Planning for Q3	**Mandatory**	Quarter-III	**Prototype, Design, Process Development for Business Model/ Process/ Services**
23.	Field/Exposure Visit to Incubation Unit/Patent Facilitation Centre/Technology Transfer Centre/ Co-working spaces	Elective		
24.	Workshop on Prototype/Process Design and Development - Prototyping	Elective		
25.	Session/ Workshop on Business Model Canvas (BMC)	Elective		
26.	Business Plan/Prototype Competition to Invite Innovative Business Models from Students	Elective		
27.	Session on "How to plan for Start-up and legal & Ethical Steps"	Elective		
28.	Interactive Session/Mentoring Session with "Successful Start-up founders" (Entrepreneurs in Campus)	Elective		
29.	Workshop on Intellectual Property Rights (IPRs) and IP management for start up	Elective		
30.	Mentorship Session for Innovators (or) Student Entrepreneurs through experts and (or) Innovation Ambassadors/Innovation Agent	Elective		
31.	Orientation session for all students & faculties of Institute by Innovation Ambassador(s)	**Mandatory**		
32.	IIC Council Meeting- Review of Q3 progress and Planning for Q4	**Mandatory**	Quarter-IV	**Awareness about Startup and related Ecosystem**
33.	Session on Prototype Validation - Converting Prototype into a Startup	Elective		
34.	Session on Accelerators/Incubation - Opportunities for Students & Faculties - Early Stage	Elective		

	Entrepreneurs			
35.	Organise Session on “Lean Start-up & Minimum Viable Product/Business”- Boot Camp (or)Mentoring Session	Elective		
36.	Session on Angel Investment/CHIEF ACADEMIC OFFICERFunding Opportunity for Early Stage Entrepreneurs	Elective		
37.	Session on Building an Innovation/ product fit for market	Elective		
38.	Session/ Panel discussion with innovation and Startup Ecosystem Enablers from the region/state/national level	Elective		
39.	Orientation session for all students & faculties of Institute by Innovation Ambassador	Elective		
40.	Semester Break : Internship at startup.	Elective		

8.5. Internal Hackathon for SIH, hosting SIH & Participation at SIH *(ARIIA Parameter 1.1 & 1.2)*

1. Smart India Hackathon has become internationally reputed competition which is organized by Government of India by involving problem statements from Government department as well as private industries.
2. IIC- PANIMALAR ENGINEERING COLLEGE RMPto ensure Internal Hackathon for selecting teams from PANIMALAR ENGINEERING COLLEGE Chennai to send at Smart India Hackathon every year.
3. The mechanism for organizing an Internal Hackathon should be robust enough to select the best team from PANIMALAR ENGINEERING COLLEGE Chennai at National Level to increase chances of winning.
4. PANIMALAR ENGINEERING COLLEGE Chennai has successfully hosted Smart Indian Hackathon and will continueto apply for hosting Smart India Hackathon every year.
5. Winning team from PANIMALAR ENGINEERING COLLEGE Chennai at National level will be facilitated by the handsof Hon‟ble Chancellor of the Institution and will get featured in all press-releases.

8.6. Annual Hackathons *(ARIIA Parameter 1.1)*

1. Apart from Smart India Hackathon, IIC-PANIMALAR ENGINEERING

COLLEGE RMP & IPR cell to organize various hackathons atInstitution level in collaboration with various Center of Excellence at Institution.

2. Hackathon by partnering with Social organization/NGO to address problems at grass-root level- NSS/CSR of GU to contribute for the same

3. Hackathon for Artificial Intelligence & Machine Learning-Center of Excellence in AI & ML
4. Hackathon in association student‟s coding clubs DSC-GU, TechnoJam- School of Computing Science & Engineering
5. Hackathon in Biomedical Engineering & Drug Discovery
6. Hackathon in Agriculture- School of Agriculture
7. Open Hackathon- Addressing Institution Campus related problems

8.7. Annual PANIMALAR ENGINEERING COLLEGE Chennai Project Day: *(ARIIA Parameter 1.1)*

1. Signature flagship event of Institution Innovation Council PANIMALAR ENGINEERING COLLEGE Chennai spanning across two days
2. Session on Innovations, Design Thinking, Critical Thing, Frugal Innovation, PANIMALAR ENGINEERING COLLEGE ChennaiInnovation Contest.
3. **PANIMALAR ENGINEERING COLLEGE Chennai Innovation Contest**: In line with IIC‟s National Innovation Contest, IPR Cellwill also organize Innovation competition at Institution level in two categories:
   - Idea Stage
   - PoC stage

   Winners from the idea stage will be mentored to convert their idea to prototype. And will be encouraged to participate at the PoC stage in the next Innovation Competition.
   Winners from PoC stage will be mentored by Entrepreneurship Development Cell to convert their PoC to MVP stage.
   All winners from each competition must be continually monitored and their progress should be shown as an impact assessment of these activities.
4. Ideally in the month of November/ December every year
5. Free for students of PANIMALAR ENGINEERING COLLEGE Chennai and will be charged for students outside of PANIMALAR ENGINEERING COLLEGE Chennai. Total attendees ratio of internal & external should be 50-50 in case of good response from outside or else can go with max. Participation of students from within Institution.
6. Wide publicity in newspaper and electronic media, both pre & post events.

8.8. IPR Cell Functioning

1. Organizing One week IPR awareness workshop *(ARIIA Parameter 1.1)* for faculties during student vacation or 7-days spread across every Saturday. Patent Workshop must include following topics:

Prior Art search,	Trademarks filing procedure
Patent drafting	Patentability of a concept
Patent filing process,	Understanding difference between Trademark & trade name
Design filing procedure,	Licensing of intellectual property
Copyright filing procedure,	Safeguard from infringement

2. The calendar & plan of conducting this workshop for all schools after consulting with respective deans will be submitted by IPR Cell in-charge at start of academic year.

3. IPR Cell will design assessment exam (may include assignment as well) with difficulty level set as high and conducts the same right after each workshop. Faculty scoring above 75% in assessment will get a certificate of completion of patent awareness workshop.

4. Those faculties who have not been able to clear the assessment with requisite score will again be allowed to reappear/ resubmit assessment.

5. Training of all the faculties through one week IPR workshop will be the primary objective for the cell.

6. Similar kind of workshop to be organized for identifies students who exhibited good product development skills, won innovation competitions, and have developed in-house prototypes. Such students should identify through various project in-charges. IPR cell will set the target of training the number of students.

7. Identifying Project/Innovation for potential patent filing. Grooming the student/faculty team for refining their patent draft and ensuring patent with well drafted claims gets filed.

8. Facilitating for faculties & students for copyright filing. IPR Cell may also document the process to file copyrights in individual capacity but must ensure that it goes in record of IPR cell if any student/faculty files copyrights individually.

9. Faculty members who have developed original teaching material/e-content must be encouraged to file copyright for their work which is at very nominal cost.

10. Key Impact Assessment for IPR Cell:

- Number of Copyrights/Designs- Applied during current Financial year
- Number of Copyrights/Designs- Granted during current Financial year
- Number of Patents Filed & Published during current Financial year
- Number of Patents Granted in last three Financial year
- Number of IPs Commercialized/ Technology Transferred during current Financial year

8.9. Initiatives to File patent at Institution Level *(ARIIA Parameter 7.4)*

Patent Search and Analysis Report (PSAR)

- PSAR is introduced with the objective of avoiding repetitive kinds of projects. In this activity, each student of 7th Semester B.Tech is asked to study at least 5 patents related to his/ her project and has to prepare Patent Search and Analysis Report (PSAR). Patent Drafting Exercise (PDE) is introduced for students of final year B.Tech. Every team of students is asked to draft provisional patent documents for their final year project considering its Innovativeness & Patentability. All students are taught about provisional patent drafting, filing procedure (for various patent filing forms), steps & fees and other required details.

- Final Year students develop their projects usually in groups of 2-4 students from a similar discipline. GU will permit inter-disciplinary projects and such teams may consist of students from more than one branch of Engineering. For such a project, there will be a faculty Guide from each of the concerned departments and the guides will work together to support the project.
- Students may be permitted to develop their ideas and their products at External Incubators/companies, if these entities, have been certified by GU. Wherever the syllabi require the students to make presentations and/or give seminars, students may be permitted to make their presentations at the Open House and present their project seminars where they are working for their project.
- The mentors from Incubator / Companies can act as an external project/thesis Guide. In such a case, the Incubators / Companies will be required to furnish full information about the project and the students along with the names of the Mentors for the Project to the Institution, the Principals of the Colleges and to the HODs in the Colleges, within three weeks of the start of the semester.
- Alumni Startup candidates will be selected by the College on the basis of an intensive review of each project submitted for this scheme.
- The selected candidate will be required to function from a College Incubator on day-to-day basis and may be required to mentor various start-up related programs for the College. Student Start-ups or Alumni startups (within 3 years of graduation), which have made an extraordinary impact and which had an early stage connection with College Incubator will be given suitable recognition/citation/awards for their achievements.
- GU will create a collaborative online platform for linking student start-ups so that they may be able to share their challenges, to link with suitable mentors and to catalyze cross-pollination of innovative ideas and to leverage complementary resources and skill sets.
- Students are permitted to undertake their Industrial Seminar, Project Seminar and Industrial Visit at State level Technology Business Incubators where the additional facilities are being set up.
- In order to promote education in hardware manufacturing and creating prototypes of hardware products, mini-fab labs at incubators should be provided by the college for creating derivative labs as these are machines which can create more machines.
- Student entrepreneurs working on a startup idea even from the first year of college may be permitted to convert their startup project as their final year project towards degree completion. Mentors assigned by Incubators may be involved in the conduct of Viva Voce. Project reports certified by the Incubators may be sent back to the respective colleges for forwarding to Institution.
- Nearby industry chambers, clusters, civil society organizations, research institutes, start-up ecosystems enablers need to be engaged through different processes in the value chain.

8.10. Annual Project Demonstration/Exhibition *(ARIIA Parameter 1.1)*

1. IPR Cell will also coordinate planning of project exhibition/demonstration for final year students at each school/department.
2. Innovation Gallery will be set up which will exhibit the best hardware project from departments & projects for which patent is filed. All patented projects must have an acrylic poster kept along with the project with mention of patent filing number, date of filing and abstract. Innovation Gallery will be open for any invited guest/industry person visiting Institution campus & may also be available for tech-transfer. UCRD to develop separate policy document for tech-transfer to corporates/industry for the technology developed at PANIMALAR ENGINEERING COLLEGE Chennai.
3. **Project Competition**: Twice in a year, one at winter term and one at summer term. In two categories:
   - Idea Stage
   - PoC stage

   Winner from idea stage will be directly given entry at finale of PANIMALAR ENGINEERING COLLEGE Chennai InnovationContest
   Winner from the PoC stage will be directly given entry at the finale of PANIMALAR ENGINEERING COLLEGE Chennai Innovation Contest.

8.11. Support for Participation at Innovation Contest & Innovation Project Development *(ARIIA Parameter 1.2 & Parameter 4)*

1. Reimbursement of Participation charges to participate at National/International Innovation Project Competition, Business Plan Competition, Entrepreneurship Events, Startup Events
2. Submission of Duly filled application form along with required documents to be attached before going for participation & report along with expenditure summary, payment receipts, attested copies of certificate (Scanned), one page report to be submitted within a week after participation to be eligible to get reimbursement. (Format of Application Form attached in Appendix -IV)
3. Maximum financial support will depend on the nature & uniqueness of Project. Final approval of financial support shall be with competent authority. Registration Fees will be 100% reimbursed, Project Cost shall be max 50%.
4. Any Students/Staff requested to avail financial support to participate at competition outside or Project/Prototype Development must prepare Idea/PoC Submission Form first. Scope of Innovation may fall in any one of the following themes but not limited to:
   1) Healthcare & Biomedical devices.
   2) Basic & applied Sciences (Physics, Chemistry, Mathematics, Bioscience)
   3) Medical Allied Sciences
   4) Management Case-Studies
   5) Agriculture & Rural Development.
   6) Smart Vehicles/ Electric vehicle/ Electric vehicle motor and battery technology.
   7) Food Processing.

8) Robotics and Drones.
9) Waste management & Environment
10) Clean & Potable water.
11) Renewable and affordable Energy.
12) IoT based technologies (e.g. Security & Surveillance systems etc)
13) ICT, cyber physical systems, Block chain, Cognitive computing, Cloud computing,
14) AI & ML to various applications

5. Any Project Proposal Outside from above themes will be considered only after recommendation from Scrutiny Committee.
6. In case of failure to submit a detailed report along with expenditure summary, certificates & other required documents as per the reimbursement format, the application will be rejected & no financial support will be provided.

Chapter 9: Innovation & Entrepreneurship Courses in Curriculum

(ARIIA Parameter 2)

9.1. PANIMALAR ENGINEERING COLLEGE Chennai Campuspreneur Program

1. This program is quite similar to a cohort/student bootcamp organized by any academic incubator, the only differentiator for this program will be, to have within curriculum study.
2. Batch size in one term will be maximum 100 students.
3. **Eligibility to apply**: 1st year and 2nd year student from any school
4. Selection Process to have call for application through google form, shortlisting & interview by Alumni Entrepreneur.
5. Objective of this program will be to create more campus companies which will operate within Institution campuses. Campus companies are miniature forms of a startup wherein students try a hands-on approach for their startup idea by considering Institution‟s student, staff/faculty as their sample customer/user. Example, delivery app operational within Institution to order food from the canteen to your location.
6. Selection for each term will have 50-50 % selection from engineering & non-engineering domains.
7. This program will have one-month classroom based training wherein students will also finalize their team during this period. Next two month will be an on-ground hands-on approach to their Startup idea.
8. This program will also have credits and assignments, class test and end term exam, all will be activity orientated. Final evaluation will be done by an external Entrepreneur/mentor.
9. Each Team under this program will be divided into two Tracks: B-Track (Business Plan Development) & C-Track (Initial Funding & will return funding after completion of Program. Working on Campus Startup e.g. Food Delivery, Stationery, etc.)
10. Teaching Learning Method: Activity Based Learning

Campuspreneur Evaluation Scheme
(Offered under Open Electives Credits: 3)
IA (20-Best 5)

IA (each of 4 marks)	Description	Rubrics			
		4	3	2	1
IA-1	Poster on Business Plan (B-track)/Sales	Using charts/figures/diagram to illustrate	Details study done and presented in visually/grap	Well presented	Timely Submission

	Strategy (C-track)	better	hicly		
IA-2	Customer Engagement(C-Track)/ Surveys (B-track)	More than 30 customers/ more than 4 surveys and analysis	15-30 customers engaged/ 4 surveys taken and analysed	5-15 customer engaged/ 2 survey from different sources	Only 5 customers engaged/1-Survey taken
IA-3	Using internet tools	Using website, amazon, flipkart/ Youtube & Website	Using fb,insta,Ytube/Developed website	Using Facebook,instagram,twitter/Using Android resources	Using facebook/using google tools
IA-4 (attendance of Review)	-	-	-	-	-
IA-5	Profits/Progress	75% profit/ 2nd version launched	50% profit/ 1st version completed	25% profit/ Development started	10% profit/ Website developed
IA-6 (extra curricular)	Participation at events	4 events	3 events	2 events	1 event
IA-7 (Attendance in Mentoring Sessions)	-	-	-	-	-

CAT‟s (20: average of 3-CAT)

CAT (each of 20 marks)	Criteria	Confidence, knowledge, countering skill (5)	Organization of presentation (5)	Uses of figures/graphs/charts (5)	Presentation Skill (5)
CAT-1	Board meeting presentation-1				
CAT-2	Board meeting presentation-3				
CAT-3	Board meeting presentation-3				

ETE‟s: Written exam + 1 hour presentation in front of External Expert

9.2. Basic of Entrepreneurship (Offered in 1st & 2nd Sem)

Subject: Basic of Entrepreneurship

Syllabus
Total Hour: 16 Hours
Mode: Workshop/Classroom

- **Lesson 1: Let"s Get Started**
  Duration: 2 Hours
  Learning Objectives:
  - Form teams that students will work with for the entire duration of the course.
  - Learn how entrepreneurship has changed the world.
  - Learn what entrepreneurship is.
  - Identify six entrepreneurial myths and uncover the true facts.
  - Learn how entrepreneurship has changed your country through a class discussion.
- **Lesson 2: Explore E-cells on Campus**
  Duration: 2 Hours
  Learning Objectives:
  - Appreciate the fact that E-cells help shape career dreams and develop skills required to build a successful career.
  - Understand how E-cells can transform individuals into successful leaders and entrepreneurs.
  - Get inspired by the success story of Local Entrepreneurs.
  - Express your dreams.
- **Lesson 3: Listen to Some Success Stories**
  Duration: 2 Hour
  Learning Objectives:
  - Understand how ordinary people become successful global entrepreneurs, their journeys, their challenges, and their successes.
  - Understand how ordinary people from their own countries have become successful entrepreneurs.
- **Lesson 4: Characteristics of a Successful Entrepreneur**
  Duration: 2 Hours
  Learning Objectives:
  - Understand the entrepreneurial journey and the concept of different entrepreneurial styles.
  - Understand each of the five entrepreneurial styles in the model and how they differ from each other.
  - Identify your potential entrepreneurship style based on personality traits, strengths, and weaknesses.

- Understand how different entrepreneurship styles work, and how people with different styles work together.

❖ **Lesson 5: Design Thinking**
Duration: 2 Hours
Learning Objectives:
- Understand Design Thinking as a problem-solving process.
- Describe the principles of Design Thinking.
- Describe the Design Thinking process

❖ **Lesson 6: Sales Skills to Become an Effective Entrepreneur**
Duration: 2 Hours
Learning Objectives:
- Understand what customer focus is and how all selling effort should be kept customer-centric.
- Use the skills/techniques of personal selling, Show and Tell, and Elevator Pitch to sell effectively.

❖ **Lesson 7: Managing Risks and Learning from Failures**
Duration: 2 Hours
Learning Objectives:
- Understand that risk-taking is a positive trait
- Identify risk-taking traits and resilience traits
- Appreciate the role of failure on the road to success and understand when to give up

❖ **Lesson 8**: **Orientation Program in Entrepreneurship**
Duration: 2 Hours
Learning Objectives:
- Identify the reasons why people want to become entrepreneurs.
- Help participants identify why they would want to become entrepreneurs.
- Give participants the real picture of the benefits and challenges of being an entrepreneur.

9.3. Courses Offered through MOOCs (Credit Equivalence through SWAYAM & other platform)

Earning credit through SWAYAM, NPTEL & Other platforms will be as per existing rules/policy of Institution. This shall be applicable for courses of Entrepreneurship as well.

Following are the identified certificate courses offered by SWAYAM/NPTEL & Startup India Portal

➢ Entrepreneurship Essentials (Duration: 12 Weeks by IIT-Kharagpur, **Credits**: 4 https://onlinecourses.nptel.ac.in/noc21_ge06/preview)
➢ Entrepreneurship Development (Duration: 8 Weeks by National Institute of Technical Teachers Training and Research, Chandigarh; **Credits**: 3 https://onlinecourses.swayam2.ac.in/ntr21_ed08/preview)

- ➢ Design, Technology and Innovation (Duration: 8 Weeks by IIT-Bombay; **Credits**: 4 https://onlinecourses.nptel.ac.in/noc21_de03/preview)
- ➢ Innovation by Design (Duration: 4 Weeks by IIT-Bombay; **Credits**: 2 https://onlinecourses.nptel.ac.in/noc21_de05/preview)
- ➢ Product Design and Innovation (Duration: 4 Weeks by IIT-Guwahati; **Credits**: 2 https://onlinecourses.nptel.ac.in/noc21_de01/preview)
- ➢ Startup India Learning Program by Upgrad (Duration: 4 Weeks, 7 Module offered by UpGrad; **Credits:** 3 https://startupindia.upgrad.com/)
- ➢ Startup School by Y Combinator (Duration: 5 Hours, 3 Modules offered by Y-Combinator; **Credit: 0.5** https://www.startupschool.org/ **)**
- ➢ Starting-up Post Covid (Duration: 6 Hours, 1 Module Offered by Lead Angel Academy; **Credit**: 0.5 https://academy.leadangels.in/courses/starting-up-post-covid)

❖ Suggested Flow for taking up above Onlines courses

Sr. No.	**Course Title**	**Recommendation**	**Recommended Year of Study to enroll**	**Credits Equivalent**
1.	Startup India Learning Program by Upgrad	Highly Recommended	First Year	3
2.	Startup School by Y Combinator	Highly Recommended	First/Second Year	0.5
3.	Entrepreneurship Essentials	Recommended	First/Second Year	4
4.	Starting-up Post Covid	Recommended	Second Year	0.5
5.	Design, Technology and Innovation	Highly Recommended	Second/Third Year	4
6.	Innovation by Design	Recommended	Second/Third Year	2
7.	Product Design and Innovation	Recommended for Product Design Learner	Third Year	2
8.	Entrepreneurship Development	Optional	Third Year	3
			Total Credits offered through MOOCs	**19**

❖ More courses may be added in the bucket of Offered courses on Innovation & Entrepreneurship through MOOCS

9.4. Minor in Innovation & Entrepreneurship

1. Student can earn minor in Innovation & Entrepreneurship in addition to their regular enrolled program under CBCS rules at PANIMALAR ENGINEERING COLLEGE Chennai
2. Min Criteria to be eligible for Minor in Innovation & Entrepreneurship is successful completion of Credit courses on Innovation & Entrepreneurship, earning min 18 credits
3. The Total of 18 Credits may be combination of regular/optional/elective/open courses on Innovation & Entrepreneurship offered in regular curriculum plus credit earned through MOOCs (SWAYAM/NPTEL, Accredited Courses by Startup India Portal)

Chapter 10: PANIMALAR ENGINEERING COLLEGE RAMAPURAM Business Incubator Foundation

Concept Note on Setting up Incubation Center at PANIMALAR ENGINEERING COLLEGE Chennai

10.1. About Business Incubator

The objective of setting up PANIMALAR ENGINEERING COLLEGE Chennai Business Incubator Foundation will focus on nurturing,

Promoting, developing startups and provide incubation support to Student/Alumni Startup from PANIMALAR ENGINEERING COLLEGE Chennai & selected startups from all across India.

- Host Organization: The parent body, also called the host organization, will be PANIMALAR ENGINEERING COLLEGE Chennai. Promoters of PANIMALAR ENGINEERING COLLEGE Chennai will also acts as promoter of PANIMALAR ENGINEERING COLLEGE Chennai Business Incubator foundation

- Sector Focus: Some incubators are sector agnostic, thus, nurturing and promoting start-ups of all kinds. These incubators focus on all types of start-ups that come their way, irrespective of the stage of the start-up. It is more of a top down approach where the incubator is trying to cater to most of the entrepreneurs of a particular region. Also, it often makes physical incubation possible as the start-ups use the physical infrastructure of the incubation centre. The disadvantage is that the incubator is flooded with a huge number of queries and applications. Therefore, the incubator would need manpower to sort and evaluate the applications and then revert to the entrepreneurs. However, this approach contributes to the overall development of the regional ecosystem.

There are other incubators that focus on specific sectors such as *technology,*

agriculture, renewable energy, healthcare, design, cultural aspects such as arts and handicrafts, etc. These incubators generally have at least one or two team members who are experienced in that specific sector, who undertake the job of evaluating the

start-up applications. However, these incubators do not restrict themselves to any particular region but cater to all start-ups of a specific sector from across the country. Whether they look into early stage start-ups or mature start-ups depends on their objective. However, such incubator caters through the virtual incubation model as the start-ups usually find it difficult to relocate.
(Reference source: https://meitystartuphub.in/assets/docs/NPI_Handbook.pdf)

PANIMALAR ENGINEERING COLLEGE Chennai Business Incubator Foundation will also be Sector specific. Sectors focus ofthe center will be decided after taking inputs from all stakeholder of the PANIMALAR ENGINEERING COLLEGE Chennai specially Students & faculties.

- Commercial Purpose: Here, commercial purpose refers to the nature of the incubator, i.e., *„for-profit" and „not-for-profit"*.

The *„for-profit"* incubators look at start-ups from the point of view of creating a source of revenue for themselves. This may be through commercialization and licensing of technologies emerging out of their start-ups. Some also cater to the office space requirement of the start-ups and offer them working space in lieu of rent.
However, the *„not-for-profit incubators"* aim at nurturing and promoting innovative start-ups to scale. Such incubators generally help entrepreneurs to move forward through the various level of venture development. The incubators with *„no-profit"* motive are usually Section 8 companies registered under The Companies Act, 2013 (previously Section 25 company registered under The Companies Act, 1956) or are sometimes set up as a Society. The advantage of being registered as a Section 8 (formerly Section 25 Company), Society or a Trust, as the case may be, are multiple. The incubator finds it easier to attract start-ups as they know that the aim of the incubator is to support start-ups.
Further, the incubator can avail exemptions under Section 12AA of the Income Tax Act and can raise CSR funds from corporates as corporates benefit from the 80G certificate provided by the incubator for the funds received. Non-profit incubators are generally seen as developmental agencies; hence, it is easier to seek grants from both government as well as multilateral donors to run various entrepreneurship development programmes.
PANIMALAR ENGINEERING COLLEGE Chennai Business Incubator Foundation will be not-for-profit incubator with legal status of Section 8 Company.
(*FAQ & Procedure for Section-8 company registration: https://yourstory.com/2016/10/section-eight-company-registration*)

- Incubator Development Phase

Preparatory | 6 - 12 months before formal launch

- *Appointing a nodal person from the Host Institute*:

  Either faculty member experience in handling Entrepreneurship Cell & Mentoring Start-ups OR Recruiting expert in setting up Academic Incubation Center acting as CEO/Manager
- *Enhancing preparedness to host the TBI*:

Starting Entrepreneurship Cell, IIC, introducing Entrepreneurship & innovation courses in curriculum

- Preparing a good TBI proposal with focus, vision and mission
- Milestones and viable business plans

Development | 5 - 7 yrs after formal launch

- *Flow of funds from funding agencies*
- *Creation of infrastructure and facilities*
- *Good governance and management system*
- *Core incubator team*
- *Incubation process and value added incubation services*
- *Flow of incubatee entrepreneurs*
- *Network and linkages*
- *Sustenance of incubator operations*

Mature | This phase comes after the development phase and should continue for long

- *Good incubation environment*
- *Consistent flow of incubatee entrepreneurs*
- *Visibility in region*
- *Financially sustainable incubator*
- *Expansion and scaling up*
- *Hand holding of new incubators*

10.2. Planning the Incubator

The following aspects need to be determined before starting detailed planning:

1. Host organization‟s perspectives
2. Appointing an incubator manager
3. Availability of funds
4. Identifying the legal structure
5. Building a work culture
6. Identifying revenue streams

a. Host organization"s perspectives:

To set up an incubator, the host organization has to broadly decide the following factors:

1. Vision and Focus of the Incubator: The host organization sets up an Advisory Board about setting up the incubator. This Advisory board will be same as Advisory Board for “PANIMALAR ENGINEERING COLLEGE Chennai Center for Innovation & Entrepreneurship” (Point 6.5.2). The vision of the „PANIMALAR ENGINEERING COLLEGE Chennai Business Incubator Foundation‟ must be aligned to the vision statement of

PANIMALAR ENGINEERING COLLEGE Chennai. This vision statement should be defined after discussion with Advisory Board Members.

Vision:_____

_____

2. Appointing a Representative Officer (Director, Innovation & Entrepreneurship Cell, PANIMALAR ENGINEERING COLLEGE Chennai): The PANIMALAR ENGINEERING COLLEGE Chennai to appoints a representative officer who will be staff of the Institution. The representative officer will be Director/Dean of Innovation & Entrepreneur Cell. The representative officer is held responsible for taking up the initiative, exploring the feasibility of setting up the incubator with respect to the location and the sector and thereafter creating a basic approach plan. The Advisory Board will guide the actions and decisions of the representative officer.

The representative officer in consultation with senior management of the Institution has to address the following things:

Vision: A broad vision for the incubator in alignment with the Institution

Location: Identifying or creating space within Institution Campus

Infrastructure: Space often becomes a constraint when the incubator tries to apply to some of the Government schemes for funds to set up operations as it is mandatory eligibility requirement. Institution can provide incubation space within Institution Campus at the outset. Also listing basic facilities requirements based on Incubator‟s Sector focus (e.g. Co-working space, Meeting hall, Conference hall, FabLab, MakerSpace, Technology focused Laboratory etc.)

Funding: Estimate the basic fund requirement for the next two years and ensure that the incubator has initial funding to start with. PANIMALAR ENGINEERING COLLEGE Chennai will provide the initial funding for registration of the incubator, hiring the incubation manager, infrastructural facilities, starting operations and maintaining a minimum capital in hand.

Governance: Governance/Advisory Board and Execution /Implementation team would be separate and the incubator will be registered as a separate legal entity (Section 8). While the Board performs the advisory role and will help the incubator CEO/Manager to build strategies; the executive functions will be performed by the incubator CEO/Manager and the team hired for running the operations of the incubator.

b. Appointing an Incubator CEO/Manager:

As the plans for the incubator become more concrete, the immediate requirement of an incubator CEO/manager emerges. It should be noted that the representative officer (Director, Innovation & Entrepreneurship Cell,

PANIMALAR ENGINEERING COLLEGE Chennai) cannot and should not be the incubator manager. Representative officer can look after role of Incubator CEO/Manager for initial period (not more than 6-months) and for that period Host Organization must provide Incentive (drawn from Incubator financial) over fixed salary from the host organization. After initial few months of Incubation setup, Incubator must appoint an full time CEO/Manager. It is a daunting task to recruit an incubator manager who has innate passion for entrepreneurship and willingness to help start-ups without becoming its founder. However, this time-consuming activity is one of the most significant factors in the long-term success of the incubator. The success, failure, accomplishments and growth of the incubator largely depend on the vision and the abilities of the incubator manager. The most prized quality of the incubator manager would be his or her entrepreneurial experience and network connections. This is important because the incubator manager should be able to empathise with the problems of the start-ups and should be able to create a path for both the incubator and its start-ups.

Also, the host organization should consider offering the incubator manager a salary that is on par with the salary of the senior staff in an established corporate. Hence, the salary amount would be substantially higher than that of the staff in an academic institution or a foundation. NIDHI-TBI, Guidelines and Pro-forma for submission of proposal lay down that "Host Institution shall be free to decide on the remuneration of CEO. The DST grant for the salary for the CEO will be limited to Rs. 1.75 lakhs p.m. or actual, whichever is lower. This limit of Rs. 1.75 lakhs p.m. is fixed in the year 2016-17 and would get revised every year with a hike in salary of 10%." Upon recruitment, the incubator manager has to concentrate on a wide range of activities.

Some of these would be as below:

1. Take over the charge from the representative officer
2. Understand the vision of the host organization
3. Survey the ecosystem to understand the activities that are taking place
4. Identify the ecosystem stakeholders who can help the incubator
5. Decide the focus of the incubator
6. Crystallize the objectives and goals of the incubator
7. Check the fund commitment available from the host organization
8. Find other sources of funds for setting up the incubator
9. Submit proposals to different agencies, primarily government, to raise funds for initial activities
10. Form a separate legal entity for the incubator
11. Create an agreement between the host organization and the incubator stating the objectives, commitments and the deliverables
12. Decide whether to register the incubator as a Technology Business Incubator (TBI)
13. Ensure that the governing and execution bodies of the incubator are separate

14. Decide on the business model that the incubator needs to follow
15. Create an approach document or plan to begin work
16. Visit other business incubators to understand various processes and activities
17. Connect with the other ecosystem stakeholders working within the same space

c. Availability of Funds :

The host organization usually provides the initial funds required to set up and start the incubator operations. The expenses would include conducting surveys, travelling to meet other incubator managers and stakeholders, paying service providers for establishing a separate legal entity, registration fees, charges for infrastructural and utility facilities, etc. The fund available may or may not be adequate for a long time. Therefore, the incubator manager has to look out for different avenues of availing the fund. One of the modes to access the funds is to register as an incubator under the Department of Central Government or as a nodal institution under State Governments. The other mode would be raising funds through CSR. While the schemes and funds from the Government provide funds for capital expenditure such as infrastructural development and scaling up, programmes, mentoring as well as investments, the CSR funds are usually restricted funds meant specifically for a project, programme, investment or start-up from a specific sector.

The following table lists schemes under various funding agencies that support incubator depending on its objectives:

Sr. No.	Name of Scheme	Funding Agency	Funding Amount (May vary as per proposal)	Call for Proposal Window	Link	Format
1.	DST's Training Program for Entrepreneurship	NSTEDB, DST, Government of India	1 Lakh to 1.6 Lakh per programs	May-June every year	https://onlinedst.gov.in/Projectproposalformat.aspx	https://dst.gov.in/sites/default/files/DST-Training%20Programme%20on%20Entrepreneurship-1.pdf

2.	DST's New Generation Innovation and Entrepreneurship Development Centre	NSTEDB, DST, Government of India	1 Cr to 2.5 Cr (For Five Years)	May-July every year	http://www.newgeniedc-edii.in/	http://www.newgeniedc-edii.in/NewGen-Doc/NewGen%20IEDC%20project.pdf
3.	DST-NSTEDB-NIDHI-Technology Business Incubator	NSTEDB, DST, Government of India	1 Cr to 7 Cr (For Five Years)	Not defined	https://onlinedst.gov.in/Projectproposalformat.aspx	http://www.nstedb.com/New_Programmes/NIDHI-TBI.pdf
4.	BIRAC Bio-NEST	BIRAC, (DBT), Government of India	1 Cr to 5 Cr	Open throughout the year	https://birac.nic.in/cfp_view.php?id=22&scheme_type=9	https://birac.nic.in/webcontent/BioNEST_Guidelines_04_07_2018.pdf
5.	Technology Incubation and Development of Entrepreneurs (TIDE) by Meity, GoI	MEITY, GoI	1 Cr to 3 Cr	Not defined	https://meitystartuphub.in/incubators/schemes/tide-2-0	-
6.	Support for Incubator under UP Startup Policy-2020	UP Startup Mission, UP State Government	1 Cr (Capital) 30 Lakhs per year (Operational for 5 Years)	Open throughout the year	http://startinup.up.gov.in/	Online Mode

7.	MSME's Support for Entrepreneurial and Managerial Development of MSMEs through Incubators	MSME	1 Cr (procurement and installation of Plant and Machines) Rs.15 Lakh per Idea	Open throughout the year	https://my.msme.gov.in/mymsme/reg/COM_IncubationForm.aspx	Online Mode
8.	AIM's Atal Incubation Center	AIM, NITI Aayog	Upto Max 10 Cr	Not defined	https://aim.gov.in/atal-incubation-centres.php	Online Mode
9.	AIM's Atal Community Innovation Centre (ACIC)	AIM, NITI Aayog	Upto Max 2.5 Cr	Not defined	https://aim.gov.in/acic-apply.php	Online Mode

d. Identifying Legal Structure:

The „non-profit" incubator can choose any of the following legal structures for itself:

1. Society under Society Registration Act, 1860 or equivalent State Law
2. Section 8 Company under The Companies Act, 2013 (formarly Section 25 company under The Indian Companies Act, 1956)
3. Public Charitable Trust

All the above-mentioned legal structures allow the incubator to avail the following benefits:

- Exemption under Section 12AA under the Income Tax Act 1961; subject to permission from the Income Tax Authority
- Ability to provide its donors the benefit of availing exemption on donations given under Section 80G of the Income Tax Act, 1961; subject to permission from the Income Tax authority for grant of approval under 80G"

- ❖ Allowing FCRA registration that allows accepting receipt of fund from foreign entity

Following aspects on various factors that guide the choice of legal structure:

- ❖ Control: *The Section 8 company has much more transparency than the Society or Trust form.* For example, the Companies Act, 2013 requires the Section 8 company to hold a minimum of four Board Meetings where the business of the organization is discussed. This ensures that the activities of the organization are aligned with its objectives. The minutes of the meetings are also to be maintained. In case of a Society or a Trust, there is no regulation that binds such organizations to convene any meeting. Hence, the members of the organization can carry on activities on their own accord. However, one can ensure proper governance structure by specifying it in bye laws for Society and in trust deed for Trust.
- ❖ Transparency: *The Section 8 Company is required to adhere to the regulations under The Companies Act, 2013 and hence needs to submit statutory and other filings to the Ministry of Corporate Affairs (MCA) and other statutory authorities. This facilitates more transparency as the external agencies can also access the documents through the MCA and other portals as required.* In case of the Society and Trust, the statutory filings are made at regional level, thus, making it difficult for the external agencies to access any documents for review.
- ❖ Compliances: Since the Section 8 company is governed by The Companies Act, 2013 it is required to adhere to multiple compliances. *While more compliance implies more documentation, it also ensures that the company is abiding by rules and the business is being conducted legally.* For example, in case of a Section 8 company, the resignation of a Director needs to be immediately reported to the MCA, whereas, in case of the Society and Trust, it can be reported at the time of annual filing of reports. The quantum of compliances and documentation including filings is much higher in a Section 8 company than in the Society or Trust.

- ❖ Holding of Equity: The incubator, as part of supporting start-ups, provides seed fund in the form of equity investment. *While a Section 8 company and Society can hold shares in an incubated company, the Trust shall have to appoint an individual or a corporate body to hold the shares in the incubated company on its behalf.*

An incubator registered as a Section 8 company in comparison to an incubator registered as a Society or Trust will require adhering to more compliance and

having more documentation but will be more transparent. The incubator‟s host institute can find a comparison of the three legal structures in the following table:

Particulars	Society	Section 8 company	Trust
Formation & Ownership	Minimum 7 persons should subscribe their names to Memorandum of Association (MoA), file the same and certified copies of the same with the Registrar of Society along with the fees	Minimum 2 persons should subscribe their name to the MoA and apply to the Regional Director for registration under Section 8 of The Companies Act, 2013	The Act remains silent on the number of trustees required. Hence, a single trustee can also govern the Trust. However Income Tax Authorities ask for atleast two trustees to govern the trust
Timeline for Formation	1 Month	1 - 3 Months	10 - 15 days
Formation Cost	INR 3,000 - 10,000	INR 30,000 - 50,000	INR 10,000 - 15,000
Liability	Limited to their subscription amount	Limited to their subscription amount	Limited liability to make good the loss which the trust property has sustained
Compliance Requirement	List of the names, addresses and occupations of the governors, council, directors, committee, or other governing bodies must be filed annually with the registrar	Annual accounts and annual return of the company to be filed annually with RoC. Maintenance of various secretarial records including inter-alia minutes books for the board meeting, general meeting and various other statutory registers is required to be maintained	Statement of accounts of the trust to be submitted to Assistant Charity Commissioner. If the Trust is creating a Corpus, then the provision of creating the Corpus should be mentioned in the Trust Deed

Alteration of Objects	Objects can be modified with the approval of 3/5th of the members	Objects can be modified anytime subject to approval of Central Govt.	Objects can be modified subject to approval of the Charity Commissioner.
Management Control	Governing Council as elected by the society members	Directors are appointed by the shareholders	Trustees / Board of Trustees are appointed
Members Participation	As per the MOA of the society	All the rights of the shareholders as per The Companies Act and MOA, ordinary resolution, special resolution etc	As per the Trust Deed
Termination	Can be dissolved by $3/5^{th}$ of the members	Winding up is a cumbersome and time- consuming process which can take anywhere between 10-12 months	Trust is generally irrevocable and cannot be wound up. However, it extinguishes when its purpose is completely fulfilled or becomes impossible or by the testator/ author of the Trust and by the consent of all the beneficiaries competent to contract
Transfer of Ownership	Permissible with appointment of new members and resigning of old members and approved by $3/5^{th}$ members resolution	By transfer of shares	A new trustee can be appointed in place of the existing trustee subject to approval from the Charity Commissioner
Area of operations	Usually restricted to state boundaries	All of India	As per the Trust Deed
Public Transparency	Low	High	Low

Table 1: Comparison between Society, Section 8 Company and Trust

e. Building the Work Culture & Ecosystem:

The majority of the incubators in India are set up in academic institutions - entities with cultures that are diametrically opposite to that of a start-up. Their longer feedback loops leading to longer cycles of decision-making do not align with the needs of a start-up. Start-ups are agile organizations and deal with a huge amount of uncertainty. They need incubators that understand their challenges. Incubators, therefore, need to mimic a start-up‟s culture to be able to empathize with them. Owing to the cultural differences between an academic institution and a start-up, the In-charge, Incubation Center OR CEO/Incubator manager should take conscious steps to define, build and nurture a culture in the incubator. This also leads to the imperative solution that the culture including the work process and decision-making should be different from that of the academic institution. Therefore, establishing the incubator as an independent entity with its own executive machinery makes more sense.

Stephen Wunker and George Pohle in their Forbes article, Built for Innovation, highlight that the same task is more difficult for a business incubator perhaps as it tries to cater to start-ups of different characteristics. Innovation is the key to an incubator‟s setting up, existence and growth. While there is no set formula for creating an innovative enterprise, the four models, namely, marketplace of ideas, visionary leader, systematic innovation, collaborative innovation account for the majority of the most successful companies today.

(Source http://www.forbes.com/forbes/2007/1112/137.html)

While the business incubator may choose any of the models that the companies follow; more often it is the multi and cross cultural aspects intermingled with openness of the environment that defines the incubator or the incubator‟s culture.

Like other organizations, the culture of the incubator is also established by its leaders, i.e. Representative Officer, CEO/ incubator manager. It is his or her beliefs, values and vision that shapes the culture of the organization. When organizations develop positive, virtuous cultures they achieve significantly higher levels of organizational effectiveness including financial performance, customer satisfaction, productivity, and employee engagement. (Source: https://hbr.org/2015/12/proof-that-positive-work-cultures-are-more-productive)

Archtype	Leadership	Staff	Process	Environment	Examples

Marketplace of Ideas	Executives content with „leading from behind"	Staff recruited for their creativity and passion	Well-stated goals and boundaries; ability to trail quickly; clear metrics for success	Should allow for and encourage experimentation	Google, 3M, Best Buy, television companies
Visionary Leader	An executive with insight and creativity who motivates employees to pursue a vision	Staff who are adept at teamwork and can execute leader"s plan	Well-understood mechanisms that link executive vision to daily activities	Few interdependencies with outside parties; a business model that supports pursuing just a handful of big initiatives	Steve Jobs (Apple), Akio Morita (Sony), Henry Ford
Systematic Innovation	Strong executive leadership that sets priorities, raises urgency and allocates resources appropriately	Staffing policies that dedicate small numbers to discrete tasks and do not penalize failure	Cross-functional approaches and a high tolerance for dissent and experimentation	Diffuse product lines that are impossible for a small set of individuals to dictate and control	Samsung, Procter & Gamble, Goldman Sachs
Collaborative Innovation	Recognises when to outsource, has expertise in forming strategic alliances & navigating conflicts with partners	Staff empowered to make deals with outside vendors without the onus of approved policies	Competency in finding external partners; technology or infrastructure that enables dynamic reconfiguration	Excellent understanding of customer needs, a strategic advantage (economic, brand channel) that maintains differentiation	Vodafone, Facebook

Table 2: Mapping your Innovation DNA: Built for Innovation, Forbes Article (2007)

f. Building the Work Culture & Ecosystem:

Across the globe, there are multiple models of revenue that an incubator can follow. Infodev‟s Global Practice in Incubation Policy Development and Implementation highlights four business models as below: (Source: https://www.infodev.org/infodev-files/resource/InfodevDocuments_982.pdf)

- ❖ Rent Model: Rental charges to clients can be a source of funds though incubators need to achieve a significant size before this becomes a major income source.
- ❖ Equity Model: Incubators can take minority stakes (2-9%) in incubated businesses, often in return for free and low rent periods, enabling future income from dividend payments. An additional equity (e.g 1-2%) may be further added for additional periods spent in the incubators.
- ❖ Royalty Model: According to this model, revenues earned by the client will legitimate a royalty payment for the incubator. Usually the royalty is at around 5% of the revenue and is limited in time (on an average, five years).
- ❖ Deferred Debt Model: In this model the services provided to the client are valued, along with incubator„s overheads, and then charged in the incubation fee. The client has up to 10 years to pay back the debt to the incubator. Once the client has left the incubator and/or when the client has reached an agreed financial target, the total debt due to the incubator is fixed and the repayment can start. Repayment can be in a lump sum or partial payments.

The revenue model of the incubator largely depends on its vision and activities. A „non-profit‟ incubator necessarily needs to use combination revenue models listed below to create enough funds to run its operations and provide support to the start-ups. However, attaining sustenance for an incubator is a difficult task.

- ❖ Programme Funding: Programme funding accounts for a majority of the cash flow into the incubator. For different programmes, an incubator may choose to partner with several stakeholders. Such programmes include start-up support programmes, ecosystem development programmes, or, branding/marketing programmes. Programme funds received by the incubator are either restricted or unrestricted grants, i.e., the utilisation of such grants is mandated by the donor. Restricted grants have fund utilisation guidelines that the incubator needs to follow and usually these are for operational expenses. On the other hand, unrestricted grants allow an incubator to utilise the funds as they deem fit in order to realise the end outcome from the grant. Of late, several donors expect grantees to raise matching funding from the private sector. An incubator that leverages donor funds to raise additional funding support for the programme is able to demonstrate a higher utilization of the

donor‟s funds and thereby, greater value for money and the subsequent impact.

- Professional Fees: Incubators offer knowledge support to various stakeholders. This may take the form of consulting assignments, fees for capacity building or training, mentoring, etc. Professional fees are usually ancillary sources of revenue. Since several incubators are registered as „non-profits‟ (and therefore, exempted from taxes), high revenues from professional fees may risk the incubator losing out on its non-profit status and therefore attract taxes on all its activities.
- Management Fees: Incubators that actively invest in start-ups against equity, or manage seed funds, can charge a „management fee‟ to manage the investment funds. While the fee structure varies depending on the fund type, typically, the management fees are between 2% & 3% p.a. of the total investment fund. The Government of India has several schemes - Seed Support Schemes (SSS) - to get investment funds. While investing, incubators also syndicate additional funds from private individuals (angels) or corporates and increase the mileage of the seed funds received through such schemes.
- Exits: Incubators that hold equity in start-ups are poised to receive cash flow from successful „exits‟ – liquidity events where start-ups raise additional funds and return the incubators‟ investment. Usually, monies received from exits are ploughed back into the funding corpus, thus increasing the size of the investable funds of an incubator.
- CSR Funds: With effect from April 1, 2014, every company, private limited or public limited, which either has a net worth of INR 500 crores or a turnover of INR 1,000 crores or net profit of INR 5 crores, needs to spend at least 2% of its average net profit for the immediately preceding three financial years on Corporate Social Responsibility (CSR) activities. Academic incubators are valid recipients of such CSR funds and this has opened up a new revenue stream for academic incubators. Such incubators can receive CSR funds to help the start-ups in the sectors that fall under the mandate of the company. CSR support for incubators is still in its infancy and several incubators are experimenting different models of engaging with corporate CSR departments.
- Sponsorships: Incubators‟ programmes are supported by several “sponsors”. Most corporate sponsorships are routed to the incubator from the marketing budgets of the corporate. In return for the sponsorship, a sponsor may want to have logo presence, access to future clients, brand visibility and association with “innovation”, etc. An incubator may also co-create a brand with a long-term partner and convert sponsorships into a longer term brand association.

- ❖ Rent: Incubators that lease either working space or lab space to start-ups charge a rent for the facilities provided. Over the last few years, several incubators and private entities have set up „co-working spaces", and „maker labs" to help start-ups gain access to high quality working and lab spaces. In addition to space, such incubators also host several start-up events and programs that allow start-ups to network and meet like-minded entrepreneurs, mentors and investors.
- ❖ Support from Host Organization: Financial support from host organization, though not technically a revenue stream, is an important determinant of the success of an incubator. *It takes anywhere from three to six years for an incubator to achieve reasonable amount of reputation in the ecosystem and build a model for sustenance.* Until then, the incubator"s operations are funded by the support from host organization. An incubator can also secure funding support from several government departments like DST, MNRE, MSME, DIPP, etc.

Reference: Handbook for Non-Profit Incubator Managers

https://niti.gov.in/writereaddata/files/Handbook%20for%20Incubator%20Managers.pdf

Chapter 11: Methodology for Atal Ranking of Institutions on Innovation Achievement (ARIIA)

11.1. About ARIIA

Atal Ranking of Institutions on Innovation Achievements (ARIIA) is an initiative of the Ministry of Education (MoE), Govt. of India to systematically rank all major higher educational institutions and universities in India on indicators related to "Innovation and Entrepreneurship Development" amongst students and faculties.

ARIIA ranking will certainly inspire Indian institutions to reorient their mind-set and build ecosystems to encourage high quality research, innovation and entrepreneurship. More than quantity, ARIIA will focus on quality of innovations and will try to measure the real impact created by these innovations nationally and internationally. Moreover, ARIIA will set the tone and direction for institutions for future development for making them globally competitive and in the forefront of innovation .

11.2. Framework for ARIIA-2021 Rankings

ARIIA 2021: Parameters & Weightages

There is a differential weightage allocation for "Technical HEI" and "Non-Technical HEI" classes. The weightages allocation for the various parameters and a special section named as "Participation of HEI in I & E Initiative of MOE" included as below.

Sr. 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 & CHIEF ACADEMIC OFFICER Fund/Investment Mobilized to SupportInnovation & Startups Incubated at HEI	3	5
6B	Promotion of Collaboration for & Co-Creation of I & E	8	5

	initiatives		
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**

Parameters & Sub-Parameters

Sr. No.	Parameters & Sub-Parameters	Non-Technical HEI	Technical HEI
1	***Developing an Innovative and Entrepreneurial Mind-set through Series of Activities (FY 2019-20)***		
1.1	Number of co-curricular events related to Innovation and Entrepreneurship (I & E) conducted by the HEI	4	2
1.2	Number of co-curricular events related to I&E organized by external organizations where students/faculty members of HEI were sent to participate/represent	4	2
	Sub Total	**8**	**4**
2	***Teaching and Learning: Academic Programmes related to Innovation & Entrepreneurship (I & E) & IPR offered by the HEI (AY 2019-20)***		
2.1	Number of full-fledged programmes/courses in Innovation / Entrepreneurship / Intellectual Property offered by the HEI (Diploma/ UG/ PG/ PhD)	2	1
2.2	Number of short-term Certificate courses or Elective group(s)/ Major or Minor Specializations/ Core Credit courses offered by the HEI in Innovation and Entrepreneurship (I & E) of minimum 30 contact hours of duration	2	1
2.3	Number of I & E related MDP, EDP, FDP, Employment Generation Skill Development Programs conducted by HEI (Approved by Regulatory bodies of HEIs or other State and Central government agencies) of minimum 30 contact hours of duration	2	1
2.4	Number of full-time faculty who have completed any	1	1

	specialized training programme of I & E (MDP, EDP, FDP, Certificate course of minimum 30 contact hours of duration) conducted by State and Central government agencies (for example AICTE, MIC, Ministry of MSME etc.), knowledge agencies etc		
2.5	Number of entrepreneurial skill development/employment generating training programmes conducted by the HEI for external participants (local residents, community members, alumni etc.)	2	1
2.6	Number of full-time faculty with a degree (UG/PG/PhD) in entrepreneurship/innovation/ IPR and(or) received training on I&E, and IPR	1	1
	Sub Total	**10**	**6**
3	**Dedicated Infrastructure & Facilities to Promote Innovation & Entrepreneurship at HEI (FY 2019-20)**		
3.1	Number of active Ideas/ Innovation centric Student Clubs in the HEI with access to co-working space/ work- stations for students with facilities & equipment available for I & E activities	2	2
3.2	Existence of dedicated infrastructures and facilities at HEI to support Innovation, Entrepreneurship and IPR	3	5
3.2a	Existence of Pre-incubation centers such as Tinker Lab/ EDC/ IEDC/ New Gen IEDC/ etc. with minimum space of >= 600 sq. ft. floor area		
3.2b	Existence of Incubation Unit with minimum space of >= 1500 sq. ft. floor area		
3.2c	Existence of Research Park/Innovation Park with minimum Space of >= 5000 sq. ft. Floor area		
3.3	Existence of Centre of Excellence with Advanced Tools & Equipment with minimum space of >= 1000 Sq. ft.	1	1
3.4	Existence of IPR Cell / Patent Facilitation Unit / Technology Transfer Centre at the institute	1	2
3.5	Number of dedicated staff to oversee I & E activities under the leadership of a senior professor/Head of the institute	2	1
3.6	Number of empaneled external experts/ agencies for mentorship regarding IPR, innovation development and enterprise development	2	1
3.7	Number of faculty members/ staff of the HEI deputed on committees of other HEIs to mentor and support the establishment of their I & E eco-system	2	1

	Sub Total	***13***	***13***
4	**Generation of Innovations/ ideas with the support of HEI and recognition received (FY 2019-20)**		
4.1	Number of Innovations TRL 0-3 and/or Number of non-technical Innovations (scouted and evaluated) registered with the departments of HEI/ preincubation/Incubation center	3	1
4.2	Number of Innovations TRL 4-6	1	2
4.3	Number of Innovations TRL 7-9	1	3
4.4	Number of ideas or innovative projects implemented in the community/Social Innovations	2	2
4.5	Number of ideas or innovative projects/TRLs/Social Innovations implemented with financial support from HEIs	3	3
4.6	Number of awards won by the student and faculty innovations at State/National/International Level in I & E related events	3	2
	Sub Total	**13**	**13**
5	***Ventures Established with the support of the HEI & Recognitions Received (FY 2019-20)***		
5.1	Number of Startups with CIN / Entrepreneurial Ventures with at least GST number started by students/ faculties/ Staff/ Alumni and facilitated by HEI/EDC/ Pre-incubation/ Incubation/ Research Park etc	4	4
5.2	Number of Startups with CIN /Entrepreneurial Ventures with GST number started by the external beneficiaries (i.e. excluding Student, Faculty & Staff) who had received Employment Generating Skill Training Program conducted by the HEI/EDC/Pre-incubation/ Incubation	2	3
5.3	Number of Faculty as Founder or Co-Founder with DIN	1	2
5.4	Number of Startups with Annual Turnover of Rs. 50 Lakhs or 10 employees	1	3
	Sub Total	**8**	**12**
6A	***Angel & CHIEF ACADEMIC OFFICER Fund/Investment Mobilized to SupportInnovation & Startups Incubated at HEI (FY 2019-20)***		
6A.	Total amount raised by innovators pre-	1	2

1	Incubated/incubated at HEI from Angel/CHIEF ACADEMIC OFFICER Fund/HighNet worth Individual (HNI)		
6A.2	Total amount raised by Startups incubated at HEI from Angel /CHIEF ACADEMIC OFFICER Fund /High Net worth Individual (HNI)	1	2
6A.3	Total amount of Credit/Loans from Financial Institutions that was facilitated by HEI for innovators/startups	1	1
	Sub Total	**3**	**5**
6B	**Promotion of Collaboration for & Co-Creation of I & E initiatives (AY 2019-20)**		
6B.1	Number of Collaborations with incubation units outside the HEI either to provide OR receive Incubation Support	3	2
6B.2	Number of Collaborations with other HEIs as mentor/ mentee Institute to promote I&E in the Campus	3	2
6B.3	Number of Collaborations with start-ups /Industry Associations /Knowledge Agencies to promote I & E activities and/or internship opportunities	2	1
	Sub Total	**8**	**5**
7	**Intellectual Property (IP), Generation and Commercialization**		
7.1	Number of research papers published (Student/Faculty) with Keywords -Innovation, and Entrepreneurship in Scopus journals during the AY 2019-20	2	2
7.2	Number of Copyrights/Designs- Applied during the FY 2019-20	1	1
7.3	Number of Copyrights/Designs Granted during the FY 2019-20	2	2
7.4	Number of Patents Filed & Published during the FY 2019-20	2	2
7.5	Number of Patents Granted (last 3 FYs: 2017-18, 2018-19, 2019-20)	3	5
7.6	Number of Patents held by Pre-Incubated Innovations/Incubated Startups (last 3 FYs: 2017-18, 2018- 19, 2019-20))	2	3
7.7	Number of IPs Commercialized/ Technology Transferred during the FY 2019-20	2	4
	Sub Total	**14**	**19**
8A	***Annual Budget on Promoting and Supporting I&E Activities: Total expenses towards I &E and IPR***	8	8

	support activities		
8A.1	Amount spent on events conducted (Financial Fields of line items entered in 1.1)	2	1
8A.2	Amount spent on student/faculty participation in I&E events conducted by external organizations (Financial Fields of line items entered in 1.2)	2	1
8A.3	Expenses incurred in the establishment, maintenance and operation of Pre-Incubation and/or Incubation infrastructure (capital expenditure + operational expenditure) (Financial Fields of line items entered in 3.1, 3.2 and 3.3)	2	2
8A.4	Total seed fund/grant disbursed by HEI from its own funds to innovation/ entrepreneurial ventures (Financial Fields of line items entered in 4 & 5)	1	2
8A.5	Total Seed Fund/Grant received from external sources disbursed to Startups (Financial Fields of line items entered in 4 & 5)	1	2
	Sub Total	**8**	**8**
8B	***Total Revenue Generated by HEI from Incubation Services to Startups and Commercialization of IP and Innovations***		
8B.1	Total grant/funds received from authentic sources such as Govt, Non Govt, CSR bodies etc. towards promoting and supporting innovation, IPR , Startups and preincubation/incubation activities in the campus	2	2
8B.2	Total revenue from Incubation Services offered by HEI to Startups/innovators (training and skill + mentoring + office space and rent). It excludes fees earned for offering general consulting services offered and training conducted by HEIs	1	1
8B.3	Total revenue generated from commercialization/Licensing of IPs owned by HEIs (It exclude IP commercialization made by incubated Startups/ Innovators).	1	3
	Sub Total	**4**	**6**
9	***Participation of HEI in I & E Initiative of MOE***		
9.1	Adopted National Innovation and Start-up Policy at the HEI	2	2
9.2	Establishment of Institution's Innovation Council (IIC) at HEI	2	2
9.3	Trained Innovation Ambassadors at HEI	2	2
9.4	Participation in Smart India Hackathon (SIH)	2	1

9.5	Facilitated Registration of Start-ups/ Technologies developed from HEIs in YUKTI 2.0 (Young India combating COVID with Knowledge, Technology and Innovation) portal of MIC (The line items entered in 5.1, 5.2 and 5.3 will be reviewed and validated)	2	1
9.6	Participation of Students from the HEI in National Education Alliance of Technology (NEAT) courses	1	1
	Sub Total	**11**	**9**
	Total	**100**	**100**

11.3. Cross-referencing with ARIIA ParametersReferencing Various Initiatives & Points of this Mandate document with ARIIA Parameters

Parameter 1.1: Number of co-curricular events related to Innovation and Entrepreneurship (I & E) conducted by the HEI	7.5 Activity Calendar for Entrepreneurship Cell 7.6 PANIMALAR ENGINEERING COLLEGE Chennai Entrepreneurship Award 7.7 Annual Entrepreneurship Summit: PANIMALAR ENGINEERING COLLEGE Chennai e-Summit 8.4 Calendar for Institution Innovation Council 8.5 Internal Hackathon for SIH, hosting SIH 8.6 Annual Hackathons 8.7 PANIMALAR ENGINEERING COLLEGE Chennai Project Day 8.8 One week IPR awareness workshop 8.10 Project Exhibition
Parameter 1.2: Number of co-curricular events related to I&E organized by external organizations where students/faculty members of HEI were sent to participate/represent	6.10 Point No.6 8.11 Support for Participation at Innovation Contest & Innovation Project Development
Parameter 2: ***Teaching and Learning: Academic Programmes related to Innovation & Entrepreneurship (I & E) & IPR offered by the HEI***	**Chapter 9**
Parameter 3.6 Number of empaneled external experts/ agencies for mentorship regarding IPR, innovation development and enterprise development	Chapter 7: Mentor Bank
Parameter 4: Generation of Innovations/ ideas with the support of HEI and recognition received	**8.7 PANIMALAR ENGINEERING COLLEGE Chennai Project Day (Innovation Contest)** 8.10 Project Exhibition 8.11 Support for Participation at Innovation Contest & Innovation Project Development

Parameter 7.4: Number of Patents Filed & Published during the FY 2019-20	8.9 Initiatives to File patent at Institution Level
Parameter 9: ***Participation of HEI in I & E Initiative of MOE***	8.3 IIC Mechanism & Compliance 8.5 Internal hackathon for SIH, Hosting SIH, Participation at SIH

Appendix I:

Idea/PoC Submission Format for PANIMALAR ENGINEERING COLLEGE Chennai Innovation Contest:

Institution‟s Innovation Council-PANIMALAR ENGINEERING COLLEGE Chennai PANIMALAR ENGINEERING COLLEGE Chennai

Idea/PoC Submission Form

Team Details

Team Lead:

Name	Email	Contact No.

Team Member Details

Sr.No.	Name	Email	Contact No.

Add more fields if required

Mentor (if Any)

Sr.No.	Name	Email	Contact No.

Add more fields if required

Name of School:

Name of the Idea/Proof of Concept (PoC)	
Theme	*Choose most appropriate theme (max 2) from Annexure 1*
Define the problem & relevance to today"s market/society/industry need *(Max 100 words)*	
Propose the solution to Problem Identified *(Max 100 words)*	
Describe the product/process/ service and write how it is innovative / unique. *(Max 100 words)*	
How is your proposed product/ process/service being different/ better from a similar product/ process/ service, if any, in the market *(Max 100 words)*	
If your Idea is technology based, then specify the TRL Level (Technology Readiness Level) and Expecting the features of Idea/PoC. ***Note:*** *For the Idea level, TRL 0 – 2 is expected.* *For the PoC level, TRL 3 is expected.* *(Max 100 words)* *Chose most appropriate TRL*	

*level from **Annexure 1***	
Feasibility of Idea/PoC solution (SMART) *(Check the appropriateness of the Idea/PoC)* *(Max 50 words for each from a-e)*	
(a) Specific- Specify the features of Innovative Idea/PoC.	
(b) Measurable- Mention the approach to convert idea/PoC to Prototype/Innovation with milestones.	
(c) Attainable- Explain how you are going to achieve the prototype development objective with the available resources at your disposal.	
(**d) Realistic**- what kind of skill set of team and resources are required to achieve the goal in a specific time period?	
(e) Timeline- Develop a timeline against the milestones for taking Idea/PoC to Prototype Development and (or) Commercial level/start-up stage.	
Applicability of Solution 10 Marks *(Max 50 words for each from a-e)*	
(a) Usability: what is the usability of your innovation? *(Level of acceptance of innovation and its Features among target group)*	

(b) Scalability: how your Innovation will be scalable at market level.	
(c) Economic sustainability: Explain the potential of innovation to become profitable or financially viable.	
(d) Environment Sustainability: How your innovation is environment friendly or addresses environmental problems?	
(e) Is there any Intellectual Property (IP) Component associated with innovation? if yes, explain.	
Define the potential market size (in terms of INR) and target customers. *(Max 100 words)*	

Themes:

1. Healthcare & Biomedical devices.
2. Agriculture & Rural Development.
3. Smart Vehicles/ Electric vehicle/ Electric vehicle motor and battery technology.
4. Food Processing.
5. Robotics and Drones.
6. Waste management.
7. Clean & Potable water.
8. Renewable and affordable Energy.
9. IoT based technologies (e.g. Security & Surveillance systems etc)
10. ICT, cyber physical systems, Block chain, Cognitive computing, Cloud computing, AI & ML.

9 stages of TRL-Technology Readiness Level:

TRL 0: Idea. Unproven concept, no testing has been performed.

TRL 1: Basic research. Principles postulated observed but no experimental proof available.

TRL 2: Technology formulation. Concept and application have been formulated.

TRL 3: Applied research. First laboratory tests completed; proof of concept.

TRL 4: Small scale prototype built in a laboratory environment ("ugly" prototype).

TRL 5: Large scale prototype tested in intended environment.

TRL 6: Prototype system tested in intended environment close to expected performance.

TRL 7: Demonstration system operating in operational environment at pre-commercial scale.

TRL 8: First of a kind commercial system. Manufacturing issues solved.

TRL 9: Full commercial application, technology available for consumers

Appendix II: (Format for Reimbursement to participate at Outside Events)

Application Form for Teaching Staff

To, Date:
Director, Innovation & Entrepreneurship Cell
Through: Dean of School of _____
Respected Sir/Madam,
I wish to avail the financial assistance for Participation in

1) Event
2) Competition
3) Workshop
4) Any other (Specify_____)

Following documents are attached herewith (Put tick)

1) Budget
2) Conference leaflet / Event Leaflet
3) Statement from the organizer that the expenses (TA & DA) not supported/partially provided.
4) Certificate of participation & Tickets (original) (To be submitted after the event)
5) Bills (To be submitted after the event)

These are submitted with a request to kindly accord approval for the same.

Thanking You, Sincerely,

Name(s) of Staff(s):
Signature of Staff

Name of School:

Total fund availed in current academic session: (Different heads: Innovation/R&D cell etc.)

Remark on Scrutiny by School Coordinator:

Innovation Coordinator Dean,
School of _____

Note: Expended amount will be sanctioned subject to recommendation from Scrutiny committee.

Recommendation by the Scrutiny committee

1) Registration fee only
2) TA/DA

Manager (Innovation Cell) **Chief Academic Officer (Innovation Cell)**

Chief Academic Officer

Application Form for Students

To, Date:
Director, Innovation & Entrepreneurship Cell
Through: Dean of School of _____
Respected Sir/Madam,
I wish to avail the financial assistance for Participation in

1) Event
2) Competition
3) Workshop
4) Innovation Project/Prototype
4) Any other (Specify_____)

Following documents are attached herewith (Put tick)

1) Budget
2) Conference leaflet / Event Leaflet
3) Statement from the organizer that the expenses (TA & DA) not supported/partially provided.
4) Innovation Project Report submission in Idea/PoC Submission Format
5) Certificate of participation & Tickets (original) (To be submitted after the event)
6) Bills (To be submitted after the event)
These are submitted with a request to kindly accord approval for the same.

Thanking You, Sincerely,

Name(s) of Student(s): Signature of Student (Team Lead in case of Team)

Semester/Section
School:
Admission No.:
Enrollment No.
Category of Student (SC/ST/OBC/OPEN):

Total fund availed in current academic session: (Different heads: Innovation/R&D cell etc.):

Remark on Scrutiny by School Coordinator:

Innovation Coordinator Dean,
School of _____

Note: Expended amount will be sanctioned subject to recommendation from Scrutiny committee.

Recommendation by the Scrutiny committee

1) Registration fee only
2) TA/DA

Dean (Innovation Cell) **Associate Dean (Innovation Cell)**

Vice-Chancellor

Appendix III

Entrepreneurship Initiative and activity report (In-house events/activities)

School of _____

Date:

Date	Initiative and activities to encourage/nourish entrepreneurship	Students participated	Faculty participated	No. of Outside participation	Venue/location/ site

Signature of Coordinator:
Signature of Dean:
Signature of Head-EDC:
IQAC:

Appendix IV:
Entrepreneurship development/achievement report

School of _____

Date:

Name of the Enterprise	Headed by (student/ Faculty)	Date of starting the entrepreneurship	Other students involved	Progress in development/ achievement (product growth, revenue growth, employee growth, any awards, others)	Details of funding agency and amount	Details of Patent/IPR registered

Signature of Coordinator:

Signature of Dean:

Signature of Head-EDC:

IQAC:

Appendix V

Incubation Application Form

1. Name of the Applicant: (Please attach copy of Memorandum and Articles of Association of the Company)
2. Address of registered office:
3. Authorized capital
4. Share/Equity distribution
5. Name of Directors and Promoters:
6. Name of faculty Mentor:
7. Business/ Idea Details
8. Title of your Business/Technology proposal for Incubation:
9. Brief Description of the Product/Services/Technology business you plan to incubate in GU.
10. Brief description of the R&D efforts and other technological inputs you hope to resource from GU
11. Have you interacted with the concerned faculty and has he/she/they consented to collaborate with you?
12. Why do you want to locate in the GU Incubation Centre?
13. Infrastructure requirement for space, workstations or PCs:
14. List any special requirements for usage of GU laboratory facilities:
15. Specify requirement of Mentoring and other professional services/ support.
16. Indicate how your business might benefit from access to GU‟s human and physical resources.
17. Have you prepared a Business Plan? If yes, please submit a copy.
    (Please look at the web-site for the suggested format).
18. Please indicate your sources of funds
19. Profile of your Company
    (Type of business, details as date of registration etc., membership of stock exchange if any, key personnel/associates, specific achievements etc.)
20. Profile of Directors and Promoters: (Attach brief resume)
21. Please give names and address of up to 3 referees who are acquainted with your career profession/ achievement.
22. Any other detail which would help in evaluating your proposal
23. Declaration:

We hereby declare that we have read and understood the terms & conditions of the Incubation Agreement, including provisions relating to transfer equity and seed capital guidelines, provided to me by the PANIMALAR ENGINEERING COLLEGE Chennai Incubation Centre office, and agree to sign the same once our company is approved for the incubation at PANIMALAR ENGINEERING COLLEGE Chennai Incubation Centre. We shall follow the rules and regulations of Incubation Center and GU.

The declaration and facts in the application are true and best to our knowledge and nothing material has been concealed.

Applicant/CHIEF ACADEMIC OFFICER/PCHIEF ACADEMIC OFFICER Applicant/ CHIEF ACADEMIC OFFICER/PCHIEF ACADEMIC OFFICER

Signature Signature

Name: Name:

Company Common Seal

Attachments:

• Certificate of incorporation

• MoA & AoA of Applicant Company.

• Business plan

• Resume of Promoters.