An Autonomous Institution

INNOVATION & ENTREPRENEURSHIP POLICY

For Students and Faculty

Recognized under Section 2(f), 12(B) of the UGC Act, 1956
Accredited by NBA &ISO 9001:2015 Certified Institution
Approved by AICTE & Affiliated to Anna University, Chennai
103/G2, Bypass Road, Vannarpettai,
Tirunelveli- 627 003, Tamil Nadu
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Preamble

"Innovation is the specific tool of entrepreneurs, the means by which they exploit change as an opportunity for a different business or a different service."
— Peter F. Drucker, Innovation and Entrepreneurship

Entrepreneurs innovate. Innovation is the specific instrument of entrepreneurship. It is the act that endows resources with a new capacity to create wealth. Innovation, indeed, creates a resource. There is no such thing as a 'resource' until man finds a use for something in nature and thus endows it with economic value. Until then, every plant is a weed and every mineral just another rock.

Entrepreneurship is an attitude of mind which can take risks but calculated ones; a true entrepreneur is one who can see possibilities in a given situation where others see none and has the patience to work out the idea into a scheme to which financial support can be provided. It is one of the catalytic activities fostering initiative, promoting and maintaining economic activities and distribution of wealth. According to Peter Drucker, the entrepreneurial strategy is as important as purposeful innovation and entrepreneurial management. In a way society needs innovation and entrepreneurship in a normal, steady and an ongoing basis.

Like entrepreneurship, innovative performance has been measured in a variety of ways, using patents, trademarks, R&D inputs, and other secondary indicators such as publications or citations. Technological change is embodied in new generations of machinery and equipment and new generations of better educated workers. There are also disembodied advances in product and process technology, which result from formal and informal investment in R&D, capabilities, and on-the-job learning. Broadening of the market is one of the necessary conditions for innovation the reason is that innovation is increasingly knowledge and skill intensive. Because of the positive externalities inherent in investment in knowledge, technological advance, and human capital, public policy has

been increasingly recognized as having an important complementary role to play in fostering entrepreneurial innovation.

Innovation requires not only highly knowledgeable, experienced, and skilled entrepreneurs, but also highly skilled labourers. Thus, educational policies and capability building come into the picture. In the absence of government interventions and policies, the operation of markets results in under investment in knowledge and innovation.

Startups are the engines of exponential growth, manifesting the power of innovation. Several big companies today are startups of yester years. They were born with a spirit of enterprise and adventures kept alive due to hard work and perseverance and today have become shining becons of innovations. Any society peaks when a great number of its people have access to experiences that are in line with their life goals and this requires development of increasingly complex skills.

By smoothly integrating the technological and creative skills of students to solve the contemporary problems, the Francis Xavier Engineering College aspires to kick-start an entrepreneurial culture, which has the potential to further enhance this by supporting the knowledge and capability of the students to create new technology-driven enterprises to address challenges and take advantage of the opportunities present.

VISION

- Creating an entrepreneurial eco-system to inspire the engineering and management students to become future entrepreneurs through start-ups.

MISSION

- To create multipurpose tech park to promote innovation and startup
- To promote 100 tech-based student start-ups within 2030.

POLICY OBJECTIVES

- Mentoring the students who are having innovative ideas to convert the same to Prototype.
- To motivate students to convert their Detailed Project Reports (DPRs) and projects into viable B-plans.
- Promoting innovation and ensuring patent filing
- Organising Angel Investors meeting to present the ideas and Prototype products to get necessary financial support
- Preparing students for successful launching of their start-ups
- Providing technical and infrastructure support for the student's start-ups
- Providing consultancy services by strengthening the support infrastructure in the thrust areas such as Electrical & Electronics, Renewable energy, Information Technology (IT), Internet of Things (IoT), Artificial Intelligence (AI), Machine Learning (ML), Digital Manufacturing, 3D Printing and Software-as-a-Service (SaaS).
- CSR funding would be targeted to promote corporate and private Incubators. These Incubators shall also serve as an innovation sandbox to solve problems faced by the business establishments which in turn, shall support startups with access to platform, test bed, data, handholding etc.

COMMITTEE FOR NATIONAL INNOVATION AND STARTUP POICY 2019

Name of the Person	Role	Designation
Er.C.Arun Babu	Patron	Managing Director
Ms.C.Ananthi Babu	Patron	HR Director
Dr.K.Jeyakumar	Management Advisor	General Manager
Dr.V.Velmurugan	Management Representative	Principal
Dr.Lourdes Poobala Rayen	NISP Coordinator	Director, EDC
Dr.K.Lakshmi Narayanan	Internal Experts	Associate Professor, ECE
Mr.N.Subramanian	"	Assistant Professor, EEE
Mr.P.Ramkumar	"	Assistant Professor, Mech.
Dr.Deny	Incubation & Pre Incubation Representative	Kalasalingam TBI Manager, Kalasalingam Academy of Research and Education
Mr.Prakadesh Subramanian	Incubation & Pre Incubation Representative	CEO, Chennai Institute of Technology-Business Incubation Forum
Er.Karthick	Startup Representative	Quantanics, Pvt.Ltd Madurai
Mr.Palani Rajan	Startup Representative	Founder and CEO, Rural Basket, Ruralbasket.com
Mr.Sanjay Gunasingh,	Representation from Industry	Director, Bell Pins Pvt. Ltd, Tirunelveli
Mr.Prabaharan Murugaiah	Representation from Industry	Founder & CEO of Tech Fetch.Com, Ashburn, Virginia, United States,

		Chairman,TiliconVeli Tech Park, Tirunelveli
Abishek A.Chazhoor	Students interested in Innovation and startup	III ECE
Prem Aravindh	“	III ECE
Sharan A C	“	IV CSE
Karpagam M	“	IV CSE
Antonraj.J	“	III Civil
Jasper Samuel.J	“	IV Civil
R.Satheesh	“	IV EEE
P.Manokaran	“	IV EEE
J Paul Alex	“	IV Mech
Richard Jesu Daniel.R	“	IV Mech
Chandru.M	“	IV IT
Kasi Rajesh	“	IV IT
S.Lokesh	“	III MCA
G.Robin	“	III MCA
R.Apsara	“	II MBA
D.J.Arun Deva Simson	“	II MBA
Er.Ilayaraja	Alumni Entrepreneurs	D.R.Technologies, Melapalayam, Tirunelveli CCTV, Bio Metric, Inverter Sales and service
Er.Bala Murali	“	Nellai Systems No.2, South Balapakyanagar, Near Saranalayam, Tirunelveli-627001 Software Development
Er.Jaison.P	“	CEO & Managing Director JPR Construction Construction

		66H/4, (Upstairs), Bypass road, Vasantha nagar, Near New Bus stand, Tirunelveli-5.
Er.Jeyakumar J	“	Jeya Ruby Fireworks, Sivakasi-Elumichakapatti, Gangarakottai, Near Elayarampannai, sattur
Er.Nagarajan	“	Bright CNC Tech Automobile Component Manufacturing Plot NO 1, Sree Ganesh Street, Periya Colony, Extension Road, Athipet, Chennai-58
Er.Rathnakumar	“	MOBILE APP DEVELOPMENT No 87, Radha Nagar first street, Perumbakkam, Medavakkam, Chennai – 600100
Er.S.Obeth Newbegin	“	Singh Construction 7/58C, Main Nagar, Araikulam, Munneerpallam, Tirunelveli – 627356
Er.Fathima Marakkar	“	Navaras Natural Founder, CEO

POLICY DRAFTING AND IMPLEMENTATION TEAM

Name	Role	Designation
Dr.K.Jeyakumar	Management Advisor	General Manager
Dr.V.Velmurugan	Management Representative	Principal
Dr.Lourdes Poobala Rayen	IIC President and NISP Coordinator	Director, Entrepreneurship Development Cell, Professor Entrepreneurship
Mr.Prem Ananth	IIC Member, IIC Innovation Activity Coordinator	Assistant Professor, ECE

STRATEGIES AND GOVERNANCE

a. To facilitate development of an entrepreneurial ecosystem in the organization, specific objectives and associated performance indicators will be defined for assessment.

b. The entrepreneurial agenda will be the responsibility of the Director of Entrepreneurship Development Cell and ably supported by the EDC Co-ordinators at the respective department level.

c. Resource mobilisation plan will be worked out at the institute for supporting pre-incubation, incubation infrastructure and facilities. A sustainable financial strategy will be defined in order to reduce the organizational constraints to work on the entrepreneurial agenda.

i. Investment in the entrepreneurial activities will be a part of the institutional financial strategy. Minimum 1% fund of the total annual budget of the institution would be allocated for funding and supporting innovation and startups related activities through creation of separate 'Innovation fund'.

ii. The strategy would also involve raising funds from diverse sources to reduce dependency on the public funding. Bringing in external funding through government (state and central) such as DST, DBT, MHRD, AICTE, TDB, TIFAC, DSIR, CSIR, BIRAC, NSTEDB, NRDC, Startup India, Invest India, MeitY, MSDE, MSME, etc. and non-government sources would be encouraged.

iii. To support technology incubators, institute will approach private and corporate sectors to generate funds, under Corporate Social Responsibility (CSR) as per Section 135 of the Company Act 2013.

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

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

e. Importance of innovation and entrepreneurial agenda would be made known across the institute and highlighted at institutional programs such as conferences, convocations, workshops, etc.

f. Institute would develop and implement I & E strategy and policy for the entire institute in order to integrate the entrepreneurial activities across various centers, departments, faculties, within the institutes.

g. Product to market strategy for startups would be developed by the institute on case to case basis.

h. Development of entrepreneurship culture would not be limited within the boundaries of the institution.

i. Institute would be the driving force in developing entrepreneurship culture in its vicinity (regional, social and community level). This include giving opportunity for regional startups, provision to extend facilities for outsiders and active involvement of the institute in defining strategic direction for local development.

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

STARTUPS ENABLING INSTITUTIONAL INFRASTRUCTURE

Creation of pre-incubation and incubation facilities for nurturing innovations and startups in the institution would be undertaken. Incubation and Innovation would be organically interlinked. Without innovation, new enterprises are unlikely to succeed. The goal of the effort would be to link INNOVATION to ENTREPRISES to FINANCIAL SUCCESS.

a. The institute would create facilities within their institution for supporting pre-incubation (e.g. IICs as per the guidelines by MHRD's Innovation Cell, EDC, IEDC, New-Gen IEDC, Innovation Cell, Startup Cell, Student Clubs, etc.) and Incubation/ acceleration by mobilizing resources from internal and external sources.

b. This Pre-Incubation/Incubation facility would be accessible 24x7 to students, staff and faculty of all disciplines and departments across the institution.

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

d. Institution would offer mentoring and other relevant services through Pre-incubation/Incubation units in-return for fees, equity sharing and (or) zero payment basis. The modalities regarding Equity Sharing in Startups supported through these units would depend upon the nature of services offered by these units and are elaborately explained in Section 3.

NURTURING INNOVATIONS AND START UPS

a. Institution would establish processes and mechanisms for easy creation and nurturing of Startups/enterprises by students (UG, PG, Ph.D.), staff (including temporary or project staff), faculty, alumni and potential start up applicants even from outside the institutions.

b. While defining their processes, institution would ensure to achieve following:

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

ii. **Would allow licensing of IPR from institute to start up:** Ideally students and faculty members intending to initiate a start up based on the technology developed or co-developed by them or the technology owned by the institute, would be allowed to take a license on the said technology on easy term, either in terms of equity in the venture and/ or license fees and/ or royalty to obviate the early stage financial burden.

ii. **Would allow setting up a start up (including social start ups) and working part-time for the start ups while studying / working:** Institution would allow their students / staff to work on their innovative projects and setting up start ups (including Social Start ups) or work as intern / part-time in startups (incubated in any recognized HEIs/Incubators) while studying / working. Student Entrepreneurs may earn credits for working on innovative prototypes/Business Models. Institute may need to develop clear guidelines to formalize this mechanism. Student inventors may also be allowed to opt for start up in place of their mini project/ major project, seminars, summer trainings. The area in which student wants to initiate a start up may be interdisciplinary or multi- disciplinary. However, the student must describe how they would separate and clearly distinguish their ongoing research activities as a student from the work being conducted at the start up.

c. Students who are under incubation, but are pursuing some entrepreneurial ventures while studying would be allowed to use their address in the institute to register their company with due permission from the institution.

d. Students entrepreneurs would be allowed to sit for the examination, even if their attendance is less than the minimum permissible percentage, with due permission from the institute.

e. Institute would allow their students to take a semester/year break (or even more depending upon the decision of review committee constituted by the institute) to work on their start ups and re-join academics to complete the course. Student entrepreneurs may earn academic credits for their efforts while creating an enterprise. Institute would set up a review committee for review of start up by students, and based on the progress made, it may consider giving appropriate credits for academics.

f. The institute would explore provision of accommodation to the entrepreneurs within the campus for some period of time.

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

h. Start a part-time/full time MS/ MBA/ PGDM (Innovation, entrepreneurship and venture development) program where one can get degree while incubating and nurturing a startup company. AICTE has already issued guidelines for a similar program.

i. Institute would facilitate the startup activities/ technology development by allowing students/ faculty/ staff to use institute infrastructure and facilities, as per the choice of the potential entrepreneur in the following manners:

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

    ii Mentorship support on regular basis.

    iii. Facilitation in a variety of areas including technology development, ideation, creativity, design thinking, fund raising, financial management, cash-flow management, new venture planning, business development, product development, social entrepreneurship, product- costing, marketing, brand-development, human resource management as well as law and regulations impacting a business.

    iv. Institute may also link the startups to other seed-fund providers/ angel funds/ venture funds or itself may set up seed-fund once the incubation

activities mature.

v. License institute IPR as discussed in section 4 below.

j. In return of the services and facilities, institute may take 2% to 9.5% equity/ stake in the startup/ company, based on brand used, faculty contribution, support provided and use of institute's IPR (a limit of 9.5% is suggested so that institute has no legal liability arising out of startup. The institute would normally take much lower equity share, unless its full-time faculty/ staff have substantial shares). Other factors for consideration would be space, infrastructure, mentorship support, seed- funds, support for accounts, legal, patents etc.

*For staff and faculty, institute can take no-more than 20% of shares that staff / faculty takes while drawing full salary from the institution; however, this share would be within the 9.5% cap of company shares, listed above.

*No restriction on shares that faculty / staff can take, as long as they do not spend more than 20% of office time on the startup in advisory or consultative role and do not compromise with their existing academic and administrative work / duties. In case the faculty/ staff holds the executive or managerial position for more than three months in a startup, then they would go on sabbatical/ leave without pay/ earned leave.

*In case of compulsory equity model, Startup may be given a cooling period of 3 months to use incubation services on rental basis to take a final decision based on satisfaction of services offered by the institute/incubator. In that case, during the cooling period, institute cannot force startup to issue equity on the first day of granting incubation support.

k. The institute would also provide services based on mixture of equity, fee-based and/ or zero payment model. So, a startup may choose to avail only the support, not seed funding, by the institute on rental basis.

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

m. Participation in startup related activities needs to be considered as a legitimate activity of faculty in addition to teaching, R&D projects, industrial consultancy and management duties and must be considered while evaluating the annual performance of the faculty. Every faculty may be encouraged to mentor at least one startup.

n. Product development and commercialization as well as participating and nurturing of startups would now be added to a bucket of faculty-duties and each

faculty would choose a mix and match of these activities (in addition to minimum required teaching and guidance) and then respective faculty are evaluated accordingly for their performance and promotion.

o. Institutions might also need to update/change/revise performance evaluation policies for faculty and staff as stated above.

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

q. Where a student/ faculty startup policy is pre-existing in an institute, then the institute may consider modifying their policy in spirit of these guidelines.

PRODUCT OWNERSHIP RIGHTS FOR TECHNOLOGIES DEVELOPED AT INSTITUTE

a. When institute facilities / funds are used substantially or when IPR is developed as a part of curriculum/ academic activity, IPR is to be jointly owned by inventors and the institute.
    a. Inventors and institute could together license the product / IPR to any commercial organisation, with inventors having the primary say. License fees could be either / or a mix of
        1. Upfront fees or one-time technology transfer fees
        2. Royalty as a percentage of sale-price
        3. Shares in the company licensing the product
    b. An institute may not be allowed to hold the equity as per the current statute, so SPV may be requested to hold equity on their behalf.
    c. If one or more of the inventors wish to incubate a company and license the product to this company, the royalties would be no more than 4% of sale price, preferably 1 to 2%, unless it is pure software product. If it is shares in the company, shares would again be 1% to 4%. For a pure software product licensing, there may be a revenue sharing to be mutually decided between the institute and the incubated company.

b. On the other hand, if product/ IPR is developed by innovators not using any institute facilities, outside office hours (for staff and faculty) or not as a part of curriculum by student, then product/ IPR would 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.

c. If there is a dispute in ownership, a minimum five member committee consisting of two faculty members (having developed sufficient IPR and translated to commercialisation), two of the institute's alumni/ industry experts (having experience in technology commercialisation) and one legal advisor with experience in IPR, would examine the issue after meeting the inventors and help them settle this, hopefully to everybody's satisfaction. Institute can use alumni/ faculty of other institutes as members, if they cannot find sufficiently experienced alumni / faculty of their own.

d. Institute IPR cell or incubation center would only be a coordinator and facilitator for providing services to faculty, staff and students. They would have no say on how the invention is carried out, how it is patented or how it is to be licensed. If institute is to pay for patent filing, they can have a committee which can examine whether the IPR is worth patenting. The committee would consist of faculty who have experience and excelled in technology translation. If inventors are using their own funds or non- institute funds, then they alone would have a say in patenting.

e. All institute's decision-making body with respect to incubation / IPR / technology-licensing would consist of faculty and experts who have excelled in technology translation. Other faculty in the department / institute would have no say, including heads of department, heads of institutes, deans or registrars.

f. Interdisciplinary research and publication on startup and entrepreneurship would be promoted by the institutions.

ORGANIZATIONAL CAPACITY, HUMAN RESOURCES AND INCENTIVES

a. Institute would recruit staff having a strong innovation and entrepreneurial/ industrial experience, behaviour and attitude. This would help in fostering the I&E culture.

    i. Some of the relevant faculty members with prior exposure and interest would be deputed for training to promote I&E.

    ii. To achieve better engagement of staff in entrepreneurial activities, institutional policy on career development of staff would be developed with constant upskilling.

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

c. Periodically some external subject matter experts such as guest lecturers or alumni can be engaged for strategic advice and bringing in skills which are not available internally.

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

e. In order to attract and retain right people, institute would develop academic and non-academic incentives and reward mechanisms for all staff and stakeholders that actively contribute and support entrepreneurship agenda and activities.

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

    ii. The recognition of the stakeholders may include offering use of facilities and services, strategy for shared risk, as guest teachers, fellowships, associateships, etc.

    iii. A performance matrix would be developed and used for evaluation of annual performance.

CREATING INNOVATION PIPELINE AND PATHWAYS FOR ENTREPRENEURS AT INSTITUTE LEVEL

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

    iv. Spreading awareness among students, faculty and staff about the value of entrepreneurship and its role in career development or employability would be a part of the institutional entrepreneurial agenda.

    v. Students/ staff would be taught that innovation (technology, process or business innovation) is a mechanism to solve the problems of the society and consumers. Entrepreneurs would innovate with focus on the market niche.

vi. Students would be encouraged to develop entrepreneurial mindset through experiential learning by exposing them to training in cognitive skills (e.g. design thinking, critical thinking, etc.), by inviting first generation local entrepreneurs or experts to address young minds. Initiatives like idea and innovation competitions, hackathons, workshops, bootcamps, seminars, conferences, exhibitions, mentoring by academic and industry personnel, throwing real life challenges, awards and recognition would be routinely organized.

vii. To prepare the students for creating the start up through the education, integration of education activities with enterprise-related activities would be done.

b. The institute would link their start ups and companies with wider entrepreneurial ecosystem and by providing support to students who show potential, in pre-startup phase. Connecting student entrepreneurs with real life entrepreneurs would help the students in understanding real challenges which may be faced by them while going through the innovation funnel and would increase the probability of success.

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

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

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

    b. Provide business incubation facilities: premises at subsidised cost. Laboratories, research facilities, IT services, training, mentoring, etc. would be accessible to the new startups.

    c. Culture needs to be promoted to understand that money is not FREE and is risk capital. The entrepreneur must utilize these funds and return. While funding is taking risk on the entrepreneur, it is an obligation of the entrepreneur to make every effort possible to prove that the funding agency did right in funding him/ her.

e. Institute must develop a ready reckoner of Innovation Tool Kit, which must be kept on the homepage on institute's website to answer the doubts and queries of the innovators and enlisting the facilities available at the institute.

NORMS FOR FACULTY STARTUPS

a. For better coordination of the entrepreneurial activities, norms for faculty to do startups would be created by the institutes. Only those technologies would be taken for faculty startups which originate from within the same institute.

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

    ii. Institutes would work on developing a policy on 'conflict of interests' to ensure that the regular duties of the faculty don't suffer owing to his/her involvement in the startup activities.

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

b. In case the faculty/ staff hold the executive or managerial position for more than three months in a startup, they would go on sabbatical/ leave without pay/ utilize existing leave.
c. Faculty must clearly separate and distinguish on-going research at the institute from the work conducted at the startup/ company.
d. In case of selection of a faculty start up by an outside national or international accelerator, a maximum leave (as sabbatical/ existing leave/ unpaid leave/ casual leave/ earned leave) of one semester/ year (or even more depending upon the decision of review committee constituted by the institute) may be permitted to the faculty.
e. Faculty must not accept gifts from the startup.
f. Faculty must not involve research staff or other staff of institute in activities at the startup and vice-versa.
g. Human subject related research in startup would get clearance from ethics committee of the institution.

PEDAGOGY AND LEARNING INTERVENTIONS FOR ENTREPRENEURSHIP DEVELOPMENT

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

i. Student clubs/ bodies/ departments must be created for organizing competitions, bootcamps, workshops, awards, etc. These bodies would be involved in institutional strategy planning to ensure enhancement of the student's thinking and responding ability.

ii. Institute will start annual 'INNOVATION & ENTREPRENEURSHIP AWARD' to recognize outstanding ideas, successful enterprises and contributors for promoting innovation and enterprises ecosystem within the institute.

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

iv. Tolerating and encouraging failures: Our systems are not designed for tolerating and encouraging failure. Failures need to be elaborately discussed and debated to imbibe that failure is a part of life, thus helping in reducing the social stigma associated with it. Very importantly, this would be a part of institute's philosophy and culture.

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

b. Entrepreneurship education would be imparted to students at curricular/ co-curricular/ extra- curricular level through elective/ short term or long-term courses on innovation, entrepreneurship and venture development. Validated learning outcomes would be made available to the students.

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

ii. In the beginning of every academic session, institute will conduct an induction program about the importance of I&E so that freshly inducted students are made aware about the entrepreneurial agenda of the institute and available support systems. Curriculum for the entrepreneurship education would be continuously updated based on entrepreneurship research outcomes.

This would also include case studies on failures.

iii. Industry linkages would be leveraged for conducting research and survey on trends in technology, research, innovation, and market intelligence.

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

v. Student innovators, startups, experts must be engaged in the dialogue process while developing the strategy so that it becomes need based.

vi. Customized teaching and training materials would be developed for startups.

vii. It must be noted that not everyone can become an entrepreneur. The entrepreneur is a leader, who would convert an innovation successfully into a product, others may join the leader and work for the startup. It is important to understand that entrepreneurship is about risk taking. One must carefully evaluate whether a student is capable and willing to take risk.

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

COLLABORATION CO CREATION, BUSINESS RELATIONSHIPS AND KNOWLEDGE EXCHANGE

a. Stakeholder engagement would be given prime importance in the entrepreneurial agenda of the institute. Institutes would find potential partners, resource organizations, micro, small and medium- sized enterprises (MSMEs), social enterprises, schools, alumni, professional bodies and entrepreneurs to support entrepreneurship and co-design the programs.

b. To encourage co-creation, bi-directional flow/ exchange of knowledge and people would be ensured between institutes such as incubators, science parks, etc.

c. Institute would organize networking events for better engagement of collaborators and would open up the opportunities for staff, faculty and students to allow constant flow of ideas and knowledge through meetings, workshops, space for collaboration, lectures, etc.

d. Mechanism would be developed by the institute to capitalize on the knowledge gained through these collaborations.

e. Care must be taken to ensure that events DON'T BECOME an end goal. First focus of the incubator would be to create successful ventures.

f. The institute would develop policy and guidelines for forming and managing the relationships with external stakeholders including private industries.

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

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

i. Connect of the institute with the external environment must be leveraged in form of absorbing information and experience from the external ecosystem into the institute's environment.

j. Single Point of Contact (SPOC) mechanism would be created in the institute for the students, faculty, collaborators, partners and other stakeholders to ensure access to information.

k. Mechanisms would be devised by the institutions to ensure maximum exploitation of entrepreneurial opportunities with industrial and commercial collaborators.

l. Knowledge management would be done by the institute through development of innovation knowledge platform using in-house Information & Communication Technology (ICT) capabilities.

ENTREPRENEURIAL IMPACT ASSESSMENT

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

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

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

iii. Impact would also be measured for the support system provided by the institute to the student entrepreneurs, faculty and staff for pre-incubation, incubation, IPR protection, industry linkages, exposure to entrepreneurial ecosystem, etc.

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

c. Impact assessment for measuring the success would be in terms of sustainable social, financial and technological impact in the market. For innovations at pre-commercial stage, development of sustainable enterprise model is critical. COMMERCIAL success is the ONLY measure in long run.

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CHAIRMAN
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TIRUNELVELI - 627 003.