St Joseph's College of Engineering

(An Autonomous Institution)
(Approved by AICTE, Accredited by NBA & Affiliated to Anna University)

ST JOSEPH'S INNOVATION AND START–UP POLICY

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1. PREAMBLE

The National Innovation and Start-up Policy (NISP) is a guiding framework to enable the Higher Education Institutions to actively engage students, faculties, and staff in innovation and entrepreneurship-related activities. The All India Council of Technical Education (AICTE) released a Startup Policy document for AICTE approved institutions during November 2016, to address the need of inculcation of innovation and entrepreneurial culture in higher education Institutions (HEIs). In 2019, MOE's innovation cell (MIC) reformulated the AICTE startup policy as National Innovation and Start-up Policy (NISP) as a guideline for all Higher Education Institutions (HEI). The MIC conducted various eye-opener workshops and training programs for the HEI to join the NISP framework to formulate their own start-up policies in line with the protocols streamlined by the MIC. St joseph's is a frontrunner to promote an environment, where the students and faculties can explore their start-up business ideas. St joseph's start-up policy is the brain child of a dedicated a NISP coordinator and the steering committee.

2. MESSAGE FROM CHAIRMAN

St Joseph's College of Engineering is happy to be part of the National building activity of creating the Institution's Innovation and Start-up policy. The MHRD's Innovation Cell is providing an excellent opportunity to the Higher Education Institutions (HEIs) to formulate an Innovation and Start-up policy to promote the culture of Innovation among the students and faculty members. St Joseph's is committed to create a conducive environment for promoting the culture of innovation and start-up in the Institution. The St Joseph's Institution's Innovation Council (IIC) has done a wonderful job in formulating the innovation start-up policy. Congratulations to the entire team, hope the new initiative will bring more start-ups and entrepreneurship culture in the Institution.

3. MESSAGE FROM PRINCIPAL

I am very much elated to announce that, St Joseph's College of Engineering has taken the responsibility to implement St Joseph's innovation and start–up policy for the students and faculty members to promote innovation and entrepreneurship related activities. St Joseph's is actively participating in the various initiatives of the MHRD's innovation cell. Our IIC is very active in conducting various Entrepreneurship awareness programs. Our institution has categorized under Band 'B' in ARIIA 2020 rankings. The newly formulated start-up policy will enable the students and faculty members to actively participate in various start-up and entrepreneurship activities. Our main goal is to create healthy innovation culture and ecosystem inside the campus.

4. ABOUT OUR COLLEGE

National Institutional Ranking Framework (NIRF) by MHRD, Govt. of India has ranked our college among the top 200 Institutions in India. Has gained high reputation in the society over the past two decades through academic excellence testified by the number of university ranks secured by the students year after year. Since its inception our college has bagged **1348** university ranks which include **57** gold medals and **49** silver medals. Is recognized as a **Scientific and Industrial Research Organization by DSIR and DST** Govt. of India. Has completed projects of worth Rs.**1.42 Crores** that are received as grants from AICTE, NRB, DST, DBT, NMRE, TNSCT etc., for carrying out research projects. Is carrying out projects of worth **Rs. 53 lakhs** , that are received as grant from AICTE, DST. Has received **Rs. 26.67 lakhs** as grant from **AICTE, DBT, Anna University, ISTE etc.**, for conducting **Faculty Development Programmes, and Workshops.** Five departments of our college are **recognized as research centers** and **40** faculty members are recognized as research supervisors by **Anna University. 81** research scholars from various institutes are carrying out their doctoral research under the supervision of our faculty members. Has a **Scopus index of 29** for the research publications of our faculty members. Has secured Outstanding Institution Award during the **1st AICTE-ECI Chhatra Viswakarma Award – 2017** from AICTE, MHRD, Govt. of India in 2017. Has bagged **26** innovative students project awards at national level for their final year projects from Indian National Academy of Engineering, New Delhi and ISTE. Students won several prizes in **SMART INDIA HACKATHON '17, 18 and 19** conducted by AICTE. Bagged **Anna University IPR excellence Award** in 2016 for the years 2010-15. Is recognized as the best exam preparatory center for conducting **Business English Certificate (BEC)** examination by **Cambridge ESOL** for the past five years in India & **one among 25 South Asia's Best Preparatory Centers (2016-18).**

5. VISION AND MISSION OF OUR INSTITUTION

5.1 Vision of our institutions :

To become a world class educational center of the nation for Engineering, Technology, Computer Applications and Management with moral and professional standards to serve the community at large.

5.2 Mission of our institutions :

- To achieve academic excellence in Engineering, Technology, Computer applications and Management Education.
- To inculcate high moral and professional standards among our students.
- To develop the overall personality of our students.
- To promote industry institute interaction through more number of collaborative programs with industries / research and development centers.
- To venture for sustained placement for our students through campus interviews.

6. NATIONAL INNOVATION AND STARTUP POLICY 2020

6.1 Introduction :

The startup policy document for the approved institutions released by the AICTE in 2016. The objective of this initiative is to promote innovation and entrepreneurial culture in higher education institutions (HEIs). The policy will encourage the students and faculties to do effective contribution in innovation and entrepreneurship activities. The committee constituted by Ministry of Human Resource Development deliberated on various features for fostering the innovation and Startup culture in HEIs, which includes the Intellectual Property ownership, revenue sharing mechanisms, norms for technology transfer and commercialization, equity sharing, etc.

6.2 Vision :

India aspires to become 5 trillion-dollar economy by 2024. To reach the mark, it needs to evolve systems and mechanisms to convert the present demographic dividend into high quality technical human resource capable of doing cutting edge research and innovation and deep-tech entrepreneurship. The 'National Student and Faculty Startup policy 2019' is a guiding framework to envision an educational system oriented towards start ups and entrepreneurship opportunities for student and faculties. The guidelines provide ways to Indian HEIs for developing entrepreneurial agenda, managing Intellectual Property Rights (IPR) ownership, technology licensing and equity sharing in Startups or enterprises established by faculty and students. In India, innovation is still not the epicenter of education. In order to achieve the cultural and attitudinal shift and to ensure that 'Innovation and Startup' culture is the primary fulcrum of our higher education system a policy framework and guidelines are the need of this hour. These guidelines will enable institutions to actively support their faculty, staff and students to participate in innovation and entrepreneurship (I&E) related activities, thus encouraging students and faculty to consider start ups and entrepreneurship as a career option. These recommendations and guiding principles will also help HEIs in creating their own policy framework, if required.

Moreover, these guidelines will facilitate Ministry of Human Resource Development in bringing uniformity across HEIs in terms of IPR ownership management, technology licensing and institutional startups policy, thus enabling creation of a robust innovation and Startup ecosystem across all HEIs. These guidelines will also help emphasize that the entrepreneurship is all about creating a business, which is financially successful.

7. GOVERNMENT OF TAMILNADU INNOVATION AND STARTUP POLICY :

7.1 Introduction :

Department of Micro, Small and Medium Enterprises released the startup and innovation policy for the period 2018 – 2023. The Tamil Nadu Startup and Innovation Policy 2018-2023, aims to provide an enabling, innovative ecosystem in the State. Implementation of the policy will enable the State to emerge as the "Knowledge Capital" and "Innovation Hub" of the country. It will also attract entrepreneurs and investors across the globe.

7.2 Vision :

To make Tamilnadu a Global Innovation Hub and the most preferred destination for startups by 2023.

7.3 Mission :

To create, support and nurture a vibrant startup ecosystem in Tamilnadu resulting in innovation and entrepreneurship driven employment and economic growth, facilitating creation of at least 5000 startups including 10 global high growth startups by 2023.

8. ST JOSEPH'S INNOVATION AND ENTREPRENEURSHIP POLICY

8.1 Committee Members :

St. JOSEPH'S COLLEGE OF ENGINEERING
you choose, we do it
(An Autonomous Institution)
(Approved by AICTE, New Delhi & Affiliated to Anna University)
OMR, Chennai – 119, Phone:044 - 24501060, 24501449, Email: jprstjosephs@stjosephs.ac.in

Date :04 / 01 / 2021

The following members are nominated as St Joseph's NISP committee members.

S. No	Name of the Member
1.	Dr. Vaddi Seshagiri Rao, Principal
2.	Dr. B. Parvathavarthini, Dean (Research) (NISP Chairman)
3.	Dr. T. V. Narmadha, Professor / EEE (NISP Coordinator)
4.	Dr. R. Baskaran, Professor & Head / Chemical (Internal Staff Member)
5.	Dr. M. Ramesh Babu, Professor / EEE (Internal Staff Member)
6.	Mr. Nelson Naveen, CEO-Nelsonin Research (External Member)
7.	Dr. N. C. Lenin, Director Electric Vehicles Incubation and Testing, VIT Chennai (External Member)
8.	Mr. Ganesh Hariharan, Associate Director, TEKsystems (Industry Member)
9.	Mr. G. Yuvaraj, Director, Labtech Electronics (Alumni cum start–up Member)
10.	Ms. Herena Joshika. A. S (Student Member)

Principal
Dr. VADDI SESHAGIRI RAO, M.E., M.B.A., Ph.D.
PRINCIPAL
St. JOSEPH'S COLLEGE OF ENGINEERING
CHENNAI - 600 119.

Policy Drafting and implementation team :

1. Dr. B. Parvathavarthini, Deam (Research)
2. Dr. T. V. Narmadha, Professor / EEE
3. Dr M. Ramesh babu, Professor / EEE

The St Joseph's Institution Innovation Council dedicated to cultivate the research practices and to construct the institution as one among the hubs in Tamilnadu to promote startup and entrepreneurship.

8.3 Mission :

- To setup a world class incubation centre for supporting the young intrapreneurs and entrepreneurs to instill the start-ups.
- To instill the practice of applying periodically for Intellectual Property rights (IPR).
- To impart the need for innovative thinking among the faculty members and students of our institute.
- To inculcate the skills required for our students and faculty members to become a successful entrepreneur.

8.4 Objectives :

- To promote and support the emerging entrepreneurs to establish start-ups in our campus.
- To identify and address the problems in the following thrust areas, Agriculture, Renewable energy, Public transportation, Water management, Road safety, Machine learning, Disaster management etc..
- Effective utilization of the cutting-edge technology.
- To create strong bonding among the stakeholders.
- To develop and implement conclusive strategies among various stakeholders and state government.
- To conduct professional training programs for the students to enrich their entrepreneurship skills.
- To collaborate with proactive incubation centers to get support from the leading minds.

- To maximize the strong interactions between the industries and support through MoUs.
- To promote and support IPR activities.
- To conduct national level contests to promote our incubation cell.

8.5 Short Term Goal :

- To construct incubation facilities in St joseph's for fostering innovations and start-ups among the students and faculty members.

8.6 Long Term Goal :

- To attract start-ups from the external players and to develop at least 10 start-ups in next five year time period.

9. STRATEGIES AND GOVERNANCE

- Promotion and development of the start-ups is one of the primary objectives of St Joseph's.
- Encourage the students and faculties to come out with their innovative ideas and help them to make it as a product using St josephs incubation center is our additional objectives.
- The faculties who are doing real time research are encouraged to develop the product using our incubation cell.
- The students with the entrepreneur attitude are identified and encouraged to develop models using our incubation facilities.
- To develop an entrepreneurial ecosystem in the Institution, specific objectives and associated performance indicators should be defined for assessment.
- The entrepreneurial agenda should be the responsibility of the Head of the Institution and the IIC of the St joseph's.
- Heads of all departments, IIC, NISP chairman and coordinator of St joseph's shall work together to successfully implement the entrepreneurship culture.

- St Joseph's will be acting as innovation hub to promote Entrepreneurship culture in Tamilnadu by providing opportunities for young minds.

10. RESOURCE MOBILIZATION

Resource mobilization plan should be worked out at the institute for supporting pre incubation, incubation infrastructure and facilities. A sustainable financial strategy should be defined in order to reduce the organizational constraints to work on the entrepreneurial program.

- Investment in the entrepreneurial activities should be a part of the Institutional financial strategy. St Joseph's allot a minimum of 1% of its annual budget for the promotion of start-ups, entrepreneurship and intellectual property rights.
- St Joseph's develop strategies to raise funds from government agencies (state and central) like DST, DBT, MHRD, AICTE, TDB, TIFAC, DSIR, CSIR, BIRAC, NSTEDB, NRDC, Startup India, Invest India, MeitY, MSDE, MSME, etc. and non-governmental agencies to reduce the dependency on the public funding.
- To support technology incubators, St joseph's may approach private and corporate sectors to generate funds under Corporate Social Responsibility(CSR) as per Section 135 of the Company Act 2013.
- St joseph's may also raise funding through sponsorships and donations. Institute should actively engage alumni network for promoting Innovation & Entrepreneurship (I&E).
- For expediting the decision making, hierarchical barriers should be minimized and individual autonomy and ownership of initiatives should be promoted.
- Importance of innovation and entrepreneurial agenda should be known across the Institute and should be promoted and highlighted at Institutional programs such as smart India hackathon, conferences, convocations, workshops, etc.
- The various departmental and club activities of St.Joseph's will be integrated to develop a healthy research ecosystem inside the campus.

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

- St Joseph's institute innovation cell promotes research and innovation culture among the students and faculties through various programs.
- The IIC policies will be disseminated to the stakeholders and discussed in the annual board meetings. The amendments are made whenever it is required.

11. STARTUPS ENABLING INSTITUTIONAL INFRASTRUCTURE

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

- In future, DST funded Innovation and Entrepreneurship Development Centre (IEDC) will be set-up and the Institution funded Incubation Cell (IC) shall be active in providing incubation support to the start-ups.
- In future the fab-labs like SAE and SAR labs shall be accessible 24x7 to students, staff and faculty of all disciplines and departments across the Institution.
- In future, DST/MSME sponsored Technology Business Incubator may be set-up as a Special Purpose Vehicle (SPV).

12. NURTURING INNOVATIONS AND STARTUPS

a. St joseph's will 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. While defining their processes, our institute will ensure to achieve following:

i. Offer access to Incubation facility to start ups to students, staff and faculty for mutually acceptable time-frame.

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

iii. Allow setting up of a startup and working part-time for the startups while studying / working.

iv. Our Institute will allow their students / staff to work on their innovative projects and setting up startups (including Social Startups) while studying / working.

v. Student Entrepreneurs may earn credits for working on innovative prototypes/Business Models, where ever permitted by the respective statutory authorities. Institute may need to develop clear guidelines to formalize this mechanism. Student inventors may also be allowed to opt for startup in place of their mini project/ major project, seminars, summer trainings. The area in which student wants to initiate a startup may be interdisciplinary or multidisciplinary.

b. Students who are pursuing incubation activities and are pursuing some entrepreneurial ventures while studying should be allowed to use their address in the institute to register their company with due permission from the institution.

c. Our institute will facilitate the startup activities/ technology development by allowing students/faculty/staff/alumni/nearby outsiders to use institute infrastructure and facilities, as per the choice of the potential entrepreneur in the following manners, wherever permitted:

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. Our 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. St joseph's will extend this startup facility to alumni of the institute as well as outsiders with due approvals.

vi. License institute IPR as discussed in section 13 below.

d. In return of the services and facilities, institute may take equity/ stake in the startup/company, based on brand used, faculty contribution, support provided and use of institute's IPs. The quantum of stake/royalty will be on mutually agreed terms through an MoU. Other factors for consideration should be space, infrastructure, mentorship support, seed funds, support for accounts, legal, patents etc.

13. PRODUCT OWNERSHIP RIGHTS FOR TECHNOLOGIES DEVELOPED AT INSTITUTIONS

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

ii. Inventors and Institution could together license the product / IPR to any commercial organization, with inventors having the primary say, as per mutual agreement between the owners of IP 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

iii. An institute may not be allowed to hold the equity as per the current statute, so SPV (Special purpose Vehicle) may be requested to hold equity on their behalf.

iv. If one or more of the inventors wish to incubate a company and license the product to this company, the royalties would be no more than 4% of sale price, preferably 1% to 2%, unless it is pure software product. If it is shares in the company, shares will again be 1% to 4%. For a pure software product licensing, there may be a revenue sharing to be mutually decided between the Institution and the incubated company.

v. On the other hand, if product/ IPR is developed by innovators without using any of the facilities of the Institution, or if it is developed 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.

vi. If there is a dispute in ownership, a Committee consisting of minimum five members, comprising two independent staff/faculty members (who have developed sufficient IPR and translated to commercialization not related to the invention/ technology/ project under dispute), two of the Institution's alumni/ industry experts (having experience in technology commercialization), and one legal advisor with experience in IPR, will examine the issue after meeting the inventors, and help them settle the issue, to everybody's satisfaction. Institution can use alumni/ faculty of other Institutions as members of this Committee, if they cannot find sufficiently experienced Alumni / faculty of their own.

vii. The IPR cell or incubation center of the Institution will be only a coordinator and facilitator for providing services to faculty, staff and students. They will have no say on how the invention is carried out, whether the invention needs to be patented, or whether the invention needs to be licensed. If Institution is to pay for patent filing, a Committee may be constituted, which will examine whether the IPR can be protected under patent laws. The Committee should consist of faculty who have experience and excelled in technology

translation. If inventors are using their own funds, then, they alone have the right to decide whether the invention needs to be protected under patent laws.

viii. Institution's 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 Department / Institution will have no say, including Heads of Department, Heads of the Institution, Deans or Registrar.

ix. Interdisciplinary research and publication on start-up and entrepreneurship shall be promoted by the Institution.

14. MODIFICATIONS IN ACADEMIC / EXAMINATION REGULATIONS & HR POLICIES

St joseph's is an autonomous institutions will come up with modifications in Academic/Examination regulations & HR Policies to facilitate students & Faculty to become successful entrepreneurs and initiate startups. However the decision of the institute in their implementation is final.

a. St joseph's will come up with regulations to enable its students to turn to entrepreneurs by modifying its academic & examination regulations. Students entrepreneurs will be allowed to sit for the examinations, even if their attendance is less than the minimum permissible percentage, wherever permitted by corresponding statutory authorities, with due prior permission from the institute.

b. Institute may 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 startups and re-join academics to complete the course, wherever permitted by corresponding statutory authorities. Student entrepreneurs may earn academic credits for their efforts while creating an enterprise, if permitted. Institute should 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.

c. The institute will explore provision of accommodation to the entrepreneurs within the campus for some period of time on chargeable basis.

d. May 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 paid leave up to one month/sabbatical/unpaid leave/ casual leave/ earned leave for working on startups and come back, wherever applicable. Institution should 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.

e. Product development and commercialization, 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.

f. Institute might also update/change/revise performance evaluation policies for faculty and staff as stated above.

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

15. PRODUCT OWNERSHIP RIGHTS FOR TECHNOLOGIES DEVELOPED AT INSTITUTE

a. When the products are incubated in the incubation centre of the institute, IPR is to be jointly owned by inventors and the institute.

b. Inventors and institute could together license the product / IPR to any commercial organization, with inventors having the primary say. License fees could be either / or a mix of

i. Upfront fees or one-time technology transfer fees

ii. Royalty as a percentage of sale-price

iii. Shares in the company licensing the product

c. An institute may not be allowed to hold the equity as per the current statute, so Special Purpose Vehicle (SPV) may be formed and it will hold equity on their behalf.

d. If one or more of the inventors wish to incubate a company and license the product to this company, the royalties, licensing, revenue sharing will be mutually agreed upon through an MoU between the institute and the incubated company.

16. NORMS FOR FACULTY STARTUPS

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

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

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

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

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

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

d. In case of selection of a faculty startup by an outside national or international accelerator, a maximum leave (as sabbatical/ existing leave/ unpaid leave/ casual leave/ earned leave) of one semester/ year (or even more depending upon the decision of review committee constituted by the institute)may be given.

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

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

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

17. CREATING INNOVATIONS PIPELINE AND PATHWAY FOR ENTREPRENEURS AT INSTITUTE LEVEL

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

i. Spreading awareness among students, faculty and staff about the value of entrepreneurship and its role in career development or employability.

ii. Students/staff shall be educated that innovation (technology, processor business innovation)is a mechanism to solve the problems of the society and consumers. Entrepreneurs should innovate with focus on the market niche.

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

iv. To prepare the students for creating the startups, integration of education activities with enterprise-related activities shall be encouraged.

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

c. The IIC of the Institution shall be a pioneer in implementing the above mentioned points. d. For strengthening the innovation funnel of the institute, access to financing must be opened for the potential entrepreneurs.

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

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

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

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

18. COLLABORATION, CO-CREATION, BUSINESS RELATIONSHIPS AND KNOWLEDGE EXCHANGE

a. Stakeholder engagement should be given prime importance in the entrepreneurial agenda of the institute. Institute should 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.

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

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

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

iv. Care must be taken to ensure that events Don't become an end goal. First focus of the incubator should be to create successful ventures.

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

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

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

ii. 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.

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

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

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

19. ENTREPRENEURIAL IMPACT ASSESSMENT

a. Impact assessment of various institute's pre-incubation, incubation, entrepreneurship activities should be performed regularly using well defined evaluation parameters.

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

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

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

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

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

Glossary:

Angel Fund	An angel investor is a wealthy individual who invests his or her personal capital and shares experiences, contacts, and mentors (as possible and required by the start-up in exchange for equity in that start-up). Angels are usually accredited investors. Since their funds are involved, they are equally desirous in making the start-up successful.
Cash flow management	Cash flow management is the process of tracking how much money is coming into and going out of your business.
Co-Creation	Co-creation is the act of creating together. When applied in business, it can be used as is an economic strategy to develop new business models, products and services with customers, clients, trading partner or other parts of the same enterprise or venture
Compulsory Equity	An equity share, commonly referred to as ordinary share also, represents the form of fractional or part ownership in which a shareholder, as a fractional owner, undertakes the maximum entrepreneurial risk associated with a business venture. The holders of such shares are members of the company and have voting rights.
Corporate Social Responsibility	Corporate social responsibility (CSR) is a self-regulating business model that helps a company be socially accountable – to itself, its stakeholders, and the public.
Cross-disciplinary	Cross-disciplinary practices refer to teaching, learning, and scholarship activities that cut across disciplinary boundaries.
Entrepreneurial Culture	A culture/ society that enhance the exhibition of the attributes, values, beliefs and behaviors that are related to entrepreneurs.
Entrepreneurial Individuals	An Individual who has an entrepreneurial mindset and wants to

	make his/her idea successful.
Entrepreneurship Education	Entrepreneurship education seeks to provide students with the knowledge, skills and motivation to encourage entrepreneurial success in a variety of settings.
Experiential Learning	Experiential learning is the process of learning through experience and is more specifically defined as learning through reflection on doing.
Financial Management	Financial Management is the application of general principles of management to the financial possessions of an enterprise.
Hackathon	A hackathon is a design sprint-like event in which computer programmers and others involved in software development, including graphic designers, interface designers, project managers, and others, often including domain experts, collaborate intensively on software projects.
Incubation	Incubation is a unique and highly flexible combination of business development processes, infrastructure, and people, designed to nurture and grow new and small businesses by supporting them through the early stages of development
Intellectual Property Licensing	A licensing is a partnership between an intellectual property rights owner (licensor) and another who is authorized to use such rights (licensee) in exchange for an agreed payment (fee or royalty).
Knowledge Exchange	Knowledge exchange is a process which brings together academic staff, users of research and wider groups and communities to exchange ideas, evidence and expertise.
Pre-incubation	It typically represents the process which works with entrepreneurs who are in the very early stages of setting up their company. Usually, entrepreneurs come into such programs with just and idea of early prototype of their product or service. Such companies can

	the graduate into full-fledged incubation programs
Pedagogy and Experiential Learning	It refers to specific methods and teaching practices (as an academic subject or theoretical concept) which would be applied for students working on start-ups. The experiential learning method will be used for teaching 'start-up related concepts and contents' to introduce a positive influence on the thought processes of students. Courses like 'business idea generation' and 'soft skills for start-ups' would demand experiential learning rather than traditional class room lecturing. Business cases and teaching cases will be used to discuss practical business situations that can help students to arrive at a decision while facing business dilemma(s). Field based interactions with prospective customers; support institutions will also form a part of the pedagogy which will orient the students as they acquire field knowledge.
Prototype	A prototype is an early sample, model, or release of a product built to test a concept or process.
Seed fund	Seed fund is a form of securities offering in which an investor invests capital in a start-up company in exchange for an equity stake in the company.
Special Purpose Vehicle	Special purpose vehicle, also called a special purpose entity, is a subsidiary created by a parent company to isolate financial risk. Its legal status as a separate company makes its obligations secure even if the parent company goes bankrupt.
Start-up	An entity that develops a business model based on either product innovation or service innovation and makes it scalable, replicable, and self-reliant and as defined in Gazette Notification No. G.S.R. 127(E) dated February 19, 2019.
Technology Business Incubator	Technology Business incubator (TBI) is an entity, which helps technology-based start-up businesses with all the necessary

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