

INNOVATION AND STARTUP POLICY FOR STUDENTS AND FACULTY/STAFFS

NIT ARUNACHAL PRADESH

1. About the Institute

The National Institute of Technology, Arunachal Pradesh was established in the year 2010 under the Ministry of Education, Govt. of India. It is one of the 31 National Institutes of Technology in India and is recognized as an Institute of National Importance. Presently the institute is running in project phase with yearly intake of 190 undergraduate students in five major departments such as Civil Engineering, Computer Science and Engineering, Electrical Engineering, Electronics and Communication Engineering and Mechanical Engineering with Ph.D program in all the five departments apart from department of Bio-Technology, Chemical, Basic and applied sciences, and Management and Humanities. Currently it offers M.Tech programme in Computer Science and Engineering, Electrical Engineering, Electronics and Communication Engineering and Mechanical Engineering. All together there are total 876 students. Each department is equipped with well-established state of the art laboratories to cater to the holistic development of the students. The faculty and student of the institute are also engaged in various R&D projects sponsored by various Government agencies and the current value of such running project is around 8 Crore for 30 projects.

The institute aims to encourage and engage the faculty and students for next 5(five) years in the major thrust areas like research, innovation and entrepreneurship development in Renewable energy applications, Bamboo and cane technology applications, Medicinal and aromatic plants studies, Robotics and Mechatronics and Food processing technology etc.

2. Preamble

In November 2016, All India Council of Technical Education (AICTE) released a Startup Policy document for AICTE approved institutions, to address the need of inculcation of innovation and entrepreneurial culture in higher education institutions (HEIs). The policy primarily focused on guiding the AICTE approved institutions in implementing 'Startup Action Plan' of Government of India. Subsequent to release of the Startup policy by AICTE and further interaction & feedback received from education institutions, a need was felt for a more elaborate and comprehensive policy guiding document, which could be applicable for all the HEIs in India.

A fifteen-member committee (Annexure:1) was constituted by Ministry of Human Resource Development to formulate detailed guidelines for various aspects related to innovation, Startup and entrepreneurship management. This committee deliberated on various facets for nurturing the innovation and Startup culture in HEIs, which covered Intellectual Property ownership, revenue sharing mechanisms, norms for technology transfer and commercialization, equity sharing, etc. After multiple rounds of meetings, National Innovation and Startup Policy 2019 for students and faculties of HEIs was prepared.

3. 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 engaging in cutting edge research, innovation and deep-tech entrepreneurship.

The 'National Student and Faculty Startup policy 2019' for HEIs 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 Start up' culture becomes the primary fulcrum of our higher education system, a policy framework and set of guidelines are the need of the 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 members to consider startups 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 entrepreneurship is all about creating a business, which is financially viable and successful.

4. Objectives

1. To impart knowledge in Innovation, Entrepreneurship development and startup among the students and faculty/staffs.
2. To gear up the educational infrastructure of the institute towards start-ups cell/IIC and entrepreneurship/innovation opportunities for students, faculty members and staffs.
3. To reinforce the innovation and entrepreneurship through problem solving based learning.
4. To provide enabling mechanisms to start-ups, through training and skill development, capacity building, networking, access to knowledge and support services, etc regularly.
5. To encourage and support students, faculty and staff to consider start-ups and entrepreneurship as a career option.
6. To promote entrepreneurial and innovation culture among the students to enable them in contributing to the development of the society and the nation.

5. Committee

The following members are nominated for committee on Innovation and Startup Policy for students and faculty/staffs of NIT Arunachal Pradesh based on NISP guidelines.

1	Dr.MM Singh Assistant Professor of Department of Management and Humanities	NIT Arunachal Pradesh	Convener
2	Mr. Karan S Saragara Gujarat Technical University Innovation Council	Innovation	Member
3	Prof. M. K Shome Professor Dept. of Management and Humanities	NIT Arunachal Pradesh	Member
4	Mr. Sanju Thokchom Founder and Managing Director Edulife India Bangalore	Entrepreneur	Member
5	Dr.Mainak Mallik Dean (P & D) and Associate Professor Dept. of Civil Engineering	NIT Arunachal Pradesh	Member
6	Mr. Samudragupta Talukdar Founder Cognilements India Pvt. ltd. Bangalore	Alumni/ Entrepreneur	Member
7	Dr.S.N. Deepa Associate Professor Dept. of Electrical Engineering	NIT Arunachal Pradesh	Member
8	Dr. Sanjit Ningthoujam Assistant Professor Dept. of Computer Science Engineering VIT Andhra Pradesh	Alumni	Member
9	Dr. Sahadev Roy Coordinator IIC-Institute Innovation Council & Assistant Professor Dept. of Electronics and Communication Engineering	NIT Arunachal Pradesh	Member
10	Dr.Pranab Jyoti Lahkar Principal, Dhimaji Polytechnic Assam	External/ academic	member
11.	Dr. T.D. Das Coordinator & Startup Cell Assistant Professor Dept. of Basic and Applied Science	NIT Arunachal Pradesh	Member
12.	Dr. Saikat Kumar Jana Coordinator IPR & Assistant Professor Dept. of Biotechnology	NIT Arunachal Pradesh	Member
13.	Dr. Brajagopal Datta IIC member & Assistant Professor	NIT Arunachal Pradesh	Member

	Dept. of Electrical Engineering		
14	Dr. Shubhajit Das IIC member & Assistant Professor Dept. of Mechanical Engineering	NIT Arunachal Pradesh	Member

6. Procedure for students and faculty/staffs

- a. A student/group of students has to find out a problem statement. The problem statement should be realistic and associated directly with societal/non-societal issue.
- b. Student has to find out a potential solution that can solve the predefined problem. The solution should be innovative. The idea or innovative process is to be presented in front of the NISP coordinator/committee members.
- c. Each group will be assigned to a faculty member for mentorship. Each group has to prepare a prototype or design under the mentorship of the faculty. The prototype must adhere to TRL-Technology Readiness level and proposal will be submitted as per start up cell format.

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.

- d. The Proposal/prototype will be evaluated by experts based on potency, market value etc., which will decide the eligibility of a start-up.
- e. Once the idea/prototype/proposal is eligible for startup as decided by experts/NISP committee, this should be registered under a form of business entity like Partnership Firm, LLP, Private Limited Company or One Person Company. Start-ups should be able to provide a copy of the registration certificate/letter to the committee.
- f. In next step, the startup should be admitted to NIT Arunachal Pradesh Start-up Cell/ incubation Cell for the incubation.
- g. NIT Arunachal Pradesh Incubation Cell will be established and will help the startup in every manner to make it a successful startup in the market.
- h. Faculties need not undergo ideation stage and take part in competition as stated above. They may directly go for registration of their idea/prototype and follow steps 5-7.

7. Strategies and Governance

- a. Entrepreneurship promotion and development should be one of the major dimensions to facilitate development of an entrepreneurial ecosystem in the institute, specific objectives and associated performance indicators should be defined for assessment.
- b. Implementation of entrepreneurial vision at the institute should be achieved through vision/objective statements. However, one must understand that promoting entrepreneurship requires a different mindset as compared to other academic activities. Hence, the candidate should be very carefully chosen with essential understanding and knowledge of industry/start-up and business.
- c. Resource mobilization 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 may be a part of the institutional financial strategy. A minimum of 1% (subject to availability) fund of the total annual budget of the institution may be allocated for funding and supporting innovation and startups related activities through creation of separate 'Innovation fund' which may be amended from time to time if necessary.
 - ii. The strategy will also involve sponsorship funds from diverse sources to reduce dependency on the public funding and may attempt to bring 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 may also be encouraged.
 - iii. To support technology incubators, academic institutes may approach private and corporate sectors to generate funds, under Corporate Social Responsibility (CSR) as per Section 135 of the Company Act 2013.
 - iv. Institute may also raise fund through sponsorships and donations. Institute should actively engage alumni network for promoting Innovation & Entrepreneurship (I&E).
- d. For expediting the decision making, hierarchical barriers may be minimized and individual autonomy and ownership of initiatives may be promoted.
- e. Importance of innovation and entrepreneurial agenda will be brought to notice across the institute and will be promoted and highlighted at institutional programs such as conferences, convocations, workshops, special lecture series etc.
- f. Student and faculty/staff start up action plan will be formulated at institute level, which will be in line with the current document along with well-defined short-term and long-term goals. Micro action plan may also be developed for nearby institutes/school/college to accomplish the policy objectives.
- g. Institute may develop and implement Innovation & startup/entrepreneurship strategy and policy for the entire institute in order to integrate the entrepreneurial activities across various centers, departments, faculties, within/outside the institutes.

- h. Product/service to market strategy for startups may be developed by the institute on case-to-case basis.
- i. Development of entrepreneurship culture may not be limited within the boundaries of the institution.
 - i. NIT Arunachal Pradesh will be the driving force in developing entrepreneurship culture in its vicinity (regional, social and community level). This shall include giving opportunity for regional start ups, provision to extend facilities for outsiders and active involvement of the institute in defining strategic direction for local development.
 - ii. Strategic international partnerships may 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 may also be promoted.

8. Startups for Enabling Institutional Infrastructure

NIT Arunachal Pradesh will establish pre-incubation and incubation facilities for nurturing innovations and entrepreneurship. Incubation and Innovation need to be organically interlinked. Without innovation, new enterprises are unlikely to succeed. The goal of the effort should be to link INNOVATION to ENTREPRISES to FINANCIAL SUCCESS.

- a. It will create facilities within NIT Arunachal Pradesh 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 may be accessible 24x7 to students, staff and faculty of all disciplines and departments across the institution.
- c. Pre-incubation facilities may or may not be a separately registered entity or Special Purpose Vehicle (SPV), but it is always recommended that 'Incubation cum Technology Commercialization Unit (ITCU) should be a separate entity preferably registered under Section-8 of Company Act 2013 or Society registered under Society Registration Act with independent governance structure. This will allow more freedom to Incubators in decision making with less administrative hassles for executing the programmes related to innovation, IPR and Startups. Moreover, they will have better accountability towards investors supporting the incubation facility.
- d. NIT Arunachal Pradesh will 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 will depend upon the nature of services offered by these units.

9. Nurturing Innovations and Start ups

- a. NIT Arunachal Pradesh will establish processes and mechanisms for easy creation and nurturing of Startups/enterprises by students (UG, PG, Ph.D.), staff, faculty, alumni and potential start up applicants even from outside the institutions.
- b. While defining these processes, it will ensure to achieve the following:
 - i. Incubation support: Will offer access to pre-incubation & Incubation facility to start ups by students, staff and faculty for mutually acceptable time-frame. Till the incubation cell is established, NIT Arunachal Pradesh may reach out to nearest incubation facilities to facilitate access to all the students, staff and faculty. Will 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, 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.
 - ii. Will allow setting up of a start up (including social start ups) and working part-time for the start ups while studying / working. It may allow all students / staff to work on their innovative projects and setting up start ups (including Social Start ups) or work as intern / part-time in start ups (incubated in any recognized 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 will 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 should be allowed to use their address in the institute to register their company with due permission from the institution.
- d. Student entrepreneurs should 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. In view of NEP to be more flexible, the students may be allowed to take a semester/year break 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 may also set up a review committee to

review the start-ups by students. Based on the work progress, the review committee may consider giving appropriate academic credits to the students as per the NEP ordinance and part of the start-ups may be considered as B.Tech/M.Tech project.

f. The institute will explore provision of accommodation to the entrepreneurs within the campus for a stipulated period of time. 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 should consider allowing use of its resource to faculty/students/staff wishing to establish start up as a fulltime effort.

g. To strengthen academic structure, the courses such as Entrepreneurship and Engineering Ethics and IPR has been taught in all the B.Tech program for promoting innovation/start-up(entrepreneurship) and IPR.

h. Full time PGDM/MBA (IEV-Innovation, entrepreneurship and venture development) program may be started where one can get degree while incubating and nurturing a startup company.

i. Regular MBA program to start from July 2022 after the institute completes its project mode.

j. M.Tech (Rural Development and Entrepreneurship Practices) to start from July 2022 in collaboration with NIRD & PR.

k. Institute will 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 law and regulations impacting a business, etc.
- 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.

l. 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. Other factors for consideration should 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 will 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 will have to 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.
- In case of royalty income sharing for transfer/ licensing of/ permission to use IP owned by NIT Arunachal Pradesh in favour of the incubate companies, the following sharing pattern may be followed and may be divided as per institute rule as below:

Cumulative Net Income	Inventor	Department of the inventor	NIT Arunachal Pradesh
Rs. 1 to Rs. 1,00,000	50%	20%	30%
Rs. 1,00,001 to Rs. 5,00,000	50%	20%	30%
Above Rs. 5,00,000	40%	20%	40%

m. The institute should 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.

n. Institute could extend this startup facility to alumni of the institute as well as outsiders. In such case, one of the faculty members must be mentor from NIT Arunachal Pradesh. Revenue sharing pattern shown above may be followed.

o. Participation in start up related activities may 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.

p. 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 may the respective faculty members be evaluated accordingly for their performance and promotion.

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

r. Institutes should ensure that at no stage any liability accrues to it because of any activity of any startup.

s. 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.

10. 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.

i. 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

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

ii. 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.

iii. 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 institute and the incubated company.

b. In case of faculty member and staff, if product/ IPR is developed by innovators not using any institute facilities, outside office hours 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.

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 commercialization), two of the institute's alumni/ industry experts (having experience in technology commercialization) and one legal advisor with experience in IPR, will

examine the issue after meeting the inventors and help them settle this, hopefully to everybody's satisfaction. 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 will only be a coordinator and facilitator for providing services to faculty, staff and students. They will have no say on how the invention is carried out, how it is patented or how it is to be licensed. If institute is to pay for patent filing, a committee may be setup to examine whether the IPR is worth patenting. The committee should consist of faculty who have experience and have excelled in technology translation. If inventors are using their own funds or non-institute funds, then they alone should have a say in patenting.

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

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

11. Organizational Capacity, Human Resources and Incentives

- a. Institute may recruit staffs that have a strong innovation and entrepreneurial/ industrial experience, behaviour and attitude. This will help in fostering a culture of Innovation & Entrepreneurship.
 - i. Some of the relevant faculty members with prior exposure and interest should be deputed for training to promote Innovation & Entrepreneurship.
 - ii. To achieve better engagement of staff in entrepreneurial activities, institutional policy on career development of staff should be developed with constant up skilling.
- b. Faculty and departments of the institute will work in coherence and cross-departmental linkages should 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 should be encouraged to do courses on innovation, entrepreneurship management and venture development.
- e. In order to attract and retain appropriate resources, institute should 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 should be developed and used for evaluation of annual performance.

12. Creating Innovation Pipeline and Pathways for Entrepreneurs at Institute Level

- a. To ensure exposure of maximum students to innovation and pre incubation activities from the outset and to support the pathway from ideation to innovation to commercial implementation, mechanisms will be devised at institution level such as:
 - i. Spreading awareness among students, faculty and staff about the value of entrepreneurship and its role in career development or employability should be a part of the institution's entrepreneurial agenda.
 - ii. Students/ staff / faculty will be taught that innovation (technology, process or business innovation) is a mechanism to solve the problems of the society and consumers. Entrepreneurs shall innovate with focus on the market niche.
 - iii. Students will 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 should be routinely organized.
 - iv. To orient the students to innovate and be interested in start-ups through the education, integration of education activities with enterprise-related activities should be done.
- b. The institute will 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 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 institute has already established Institution's Innovation Councils (IICs) as per the guidelines of MHRD's Innovation Cell and has allocated appropriate budget for its activities. IICs will guide the institution in conducting various activities related to innovation, startup and entrepreneurship development. Collective and concentrated

efforts will 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.
 - i. Networking events must be organized to create a platform for the budding entrepreneurs to meet investors and pitch their ideas.
 - ii. Provide business incubation facilities: premises at subsidized cost. Laboratories, research facilities, IT services, training, mentoring, etc. should 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 appropriately and return it. 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.

13. Norms for Faculty/staff Startups

- a. For better coordination of the entrepreneurial activities, norms for faculty to do startups should be created by the institutes. Only those technologies/Non-technologies should be taken for faculty startups which originate from within the same institute.
 - i. Role of faculty/staff may vary from being an owner/ direct promoter, mentor, consultant or as on-board member of the startup.
 - ii. Institutes should work on developing a policy on 'conflict of interests' to ensure that the regular duties of the faculty/staff don't suffer owing to his/her involvement in the startup activities.
 - iii. Faculty/staff 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 regular faculty/ staff holds the executive or managerial position for more than three months in a startup, they may 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-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 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 the startup should get clearance from ethics committee of the institution.

14. Pedagogy and Learning Interventions for Entrepreneurship Development

- a. Diversified approach will be adopted to produce desirable learning outcomes, which should include cross disciplinary learning using mentors, labs, case studies, games, etc. in place of traditional lecture-based delivery.
 - i. Student clubs/ bodies/ departments must be created for organizing competitions, bootcamps, workshops, awards, etc. These bodies should be involved in institutional strategy planning to ensure enhancement of the student's thinking and ability to respond to stimuli.
 - ii. Institutes shall 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 will 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. It is imperative that this shall be a part of institute's philosophy and culture.
 - v. Innovation champions shall be nominated from within the students/ faculty/ staff for each department/ stream of study.
- b. Entrepreneurship education shall be imparted to students at curricular/ co-curricular/ extra-curricular level through elective/ short term or long-term courses on innovation, entrepreneurship and venture development. Validated learning outcomes should be made available to the students.
 - i. Integration of expertise of external stakeholders shall be done in the entrepreneurship education to evolve a culture of collaboration and engagement with external environment.

- ii. In the beginning of every academic session, institute shall conduct an induction program about the importance of I&E so that freshly inducted students are made aware about the entrepreneurial agenda and available support systems in the institute. Curriculum for the entrepreneurship education should be continuously updated based on entrepreneurship research outcomes. This should also include case studies on failures.
 - iii. Industry linkages shall be leveraged for conducting research and survey on trends in technology, research, innovation, and market intelligence.
 - iv. Sensitization of students shall 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 shall 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 such a 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 should be constantly reviewed and updated.

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

- a. Stakeholder engagement shall be given prime importance in the entrepreneurial agenda of the institute. Institutes 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 human resource shall be ensured between institutes such as incubators, science parks, etc.

- ii. Institute shall organize networking events for better engagement of collaborators and should open up the opportunities for staff, faculty and students to allow constant flow of ideas and knowledge through meetings, workshops, space for collaboration, lectures, etc.
 - iii. Mechanism shall 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. Primary focus of the incubator should be to create successful ventures.
- b. The institute shall develop policy and guidelines for forming and managing the relationships with external stakeholders including private industries.
- c. Knowledge exchange through collaboration and partnership may be made a part of institutional policy and institute 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 institute should be given ample opportunities to connect with their external environment.
 - ii. Interface 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 inhouse Information & Communication Technology (ICT) capabilities.

16. Entrepreneurial Impact Assessment

- a. Impact assessment of institute's entrepreneurial initiatives such as pre-incubation, incubation, entrepreneurship education may 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 may be assessed.
 - ii. Number of start ups created, support system provided at the institutional level and satisfaction of participants, new business

relationships created by the institute should be recorded and used for impact assessment.

- iii. Impact may 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 linkage, exposure to entrepreneurial ecosystem, etc.
- b. Formulation of strategy and impact assessment will go hand in hand. The information on impact of the activities will be actively used while developing and reviewing the entrepreneurial strategy.
- c. Impact assessment for measuring the success will 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.

17. Exit Policy

Once the formal incubation period ends, the company may be strong enough to survive outside of the incubator and within the competitive marketplace; this is one of the most critical phases of its life.

There are several ways for a start-up to exit the incubation programme.

- i. Continues independently,
- ii. Is acquired by (or merged with) an established company,
- iii. Discontinues its operations, or
- iv. Is participating in a so-called growth programme offered by the incubator or other involved stakeholders. These growth support and infrastructure programmes shall aim to support start-ups with high growth potential after the incubation phase that still need support or dedicated infrastructure (office space, R&D labs, etc.) that they themselves cannot yet finance or realize.

Period of Incubation/ Exit:

The incubate company shall be offered an incubation period of two years. However, based on the performance of the startup and it may be extended by six months. An Incubate startup may leave the incubator under the following circumstances:

- i. Completion of two years stay (depending upon the students course year when applied) (if no extension granted).
- ii. Underperformance or non-viability of business proposition as decided on case to case basis.
- iii. Irresolvable promoters dispute on a case to case basis.
- iv. Violation of any Incubation policy.

- v. When the company enters in an acquisition, merger or amalgamation deal or reorganization deal resulting in a substantial change in the profile of the company, its promoters, directors, shareholders, products or business plans.
- vi. Change in promoters' team without concurrence of committee.
- vii. Any change of more than 50% of equity ownership would require a prior approval of the committee.

And/or any other reason the Committee deems fit for the exit of the incubate company, will be final on the matter, notwithstanding anything written elsewhere. The decision can not be disputed by any incubate company.

18. Review of policy

The NISP coordinator shall organize the review committee meeting and finalize the recommendations of the review committee, considering the feedback from assessment team which will reflect the impact of the existing policies.

19. Audit and book keeping

Separate accounts following standard accounting principles shall be maintained for receipt of funds and expenditures incurred in relation to Innovation and Startup activities and the accounts may be audited periodically i.e. biannually by a competent person.

20. Conflict of interest

The inventor(s)/mentors are required to arbitrate any conflict of interest or potential conflict of interest. If the inventor(s) and/or their immediate family have a stake in a licensee or potential licensee company then they are required to disclose the stake they and/or their immediate family have in the company. Under these circumstances, it must be ensured by the inventor(s) that their entrepreneurial activities do not have an adverse impact on inventor(s) teaching, research and/or any other institutional responsibility.

Annexure-1

Committee for 'National Innovation and Startup Policy 2019' Guidelines for Higher Education Institutions

1.	Prof. Ashok Jhunjunwala Professor, Indian Institute of Technology Madras	Chairman
2.	Shri Sukhbir Singh Sandhu Additional Secretary (Higher Education) Ministry of Human Resource Development New Delhi	Member
3.	Prof. Anil D Sahasrabudhe Chairman, All India Council of Technical Education New Delhi	Member
4.	Dr. Rajnish Jain Secretary, University Grants Commission	Member
5.	Dr. G. Raghuram Director, Indian Institute of Management Bangalore	Member
6.	Dr. Anand Deshpande Chairman and Managing Director, Persistent Systems, Pune	Member
7.	Dr. Abhay Karandikar Director, Indian Institute of Technology, Kanpur	Member
8.	Dr. Udai B. Desai Director, Indian Institute of Technology Hyderabad	Member
9.	Dr. Appa Rao Podile Vice-Chancellor, University of Hyderabad	Member
10.	Dr. Mini Shaji Thomas Director, National Institute of Technology, Trichy	Member
11.	Dr. Sanjay H Inamdar CEO, Flucon Industries & Chairman, AICTE Startup Policy Committee	Member
12.	Dr. Uday Kumar Yaragatti Director, MNIT, Jaipur	Member
13.	Dr. Gautam Biswas Director, Indian Institute of Information Technology Guwahati	Member
14.	Sh. Hiranmay Mahanta Director, Gujarat Technological University Innovation Council	Invitee
15.	Dr. Abhay Jere Secretary Chief Innovation Officer, Ministry of Human Resource Development	Member
