

Innovation and Startup Policy Guidelines of JUET, Guna, M.P



Jaypee University of Engineering and Technology

Guna

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I PREAMBLE

Driven by the vigour to establish itself as a world class University, with a robust innovation ecosystem, the Jaypee University of Engineering and Technology, Guna, hereby presents the “Innovation and Startup Policy Guidelines”. The broad objective of this policy is to instill R&D and foster innovation amongst our students and faculty through academic, financial and managerial support and creation of entrepreneurship culture. Further, the policy also aims to provide start-up grants, patent facilitation, and entrepreneurship support, thus providing better job prospects, improving the employability, rigorous University-Industry interactions and national and international collaborations. The thrust areas include, but not limited to development of newer materials, green production, AI and allied fields. The ultimate goal of this policy is to mentor the start-ups such that they are self-sustainable.

II VISION

To create good number of student owned start-ups within the coming five years (2025) by creation of an ambience for technology driven R&D through regular University-Industry interactions and nurturing national and international collaborations.

III MISSION

- To Educate the students about prospects in entrepreneurship and motivating them to take up start-up challenges
- To equip the students with technical and administrative skills for launching the start-ups
- To replenish the teaching pedagogy with industry driven ideas through specific modules for start-ups

IV BASIC TERMS

Start-up: A startup or start-up is a company or project undertaken by an entrepreneur to seek, develop, and validate a scalable economic model (1,2)

Student Start-up: A startup or start-up is a company or project undertaken by a student (undertaking any education) to seek, develop, and validate a scalable economic model.

Start-up Policy of Govt. of India: The detailed policy framed by the Ministry of HRD, Govt of India related to the start-up with the purpose of providing a guiding framework for the entrepreneurs

Pedagogy: It is most commonly understood as the approach to teaching, is the theory and practice of learning, and how this process influences, and is influenced by, the social, political and psychological development of learners. Pedagogy, taken as an academic discipline, is the study of how knowledge and skills are imparted in an educational context, and it considers the interactions that take place during learning. Both the theory and practice of pedagogy vary greatly, as they reflect different social, political, and cultural contexts.(3)

Experiential Learning: experiential learning means learning from experience or learning by doing. Experiential education first immerses learners in an experience and then encourages reflection about the experience to develop new skills, new attitudes, or new ways of thinking. (4)

Tinker Lab: Tinker lab acuminates the various facets and components of research, experiments and specialized fields and considers a broader perspective of the R&D.

Technology Business Incubator: It 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. Typically, Technology Business Incubator provide budding entrepreneurs all necessary infrastructure support, technology/prototype development support, research assistance, help in getting funding, business consulting assistance, marketing assistance and do whatever is necessary to make the start-up a success.(5)

Startup Accelerator: These are programs intended to accelerate the development of early stage companies or ideas. Generally speaking, an accelerator is a fixed term program that usually lasts from three to twelve months. It provides a combination of education, mentoring, and networking, often with investment. It is distinct from other forms of investment and incubation, such as angel investing, grants, or incubators. Accelerators are not incubators. Whereas an incubator is a building, and an accelerator is a program, both are forms of incubation, being methods to support early stage businesses. (6)

Venture Capital: Venture capital is a form of private equity and a type of financing that investors provide to startup companies and small businesses that are believed to have long-term growth potential. Venture capital generally comes from well-off investors, investment banks and any other financial institutions.(7)

Entrepreneurial Individuals: An entrepreneur is an individual who creates a new business, bearing most of the risks and enjoying most of the rewards. The entrepreneur is commonly seen as an innovator, a source of new ideas, goods, services, and business/or procedures. Entrepreneurs play a key role in any economy, using the skills and initiative necessary to anticipate needs and bring good new ideas to market. Entrepreneurs who prove to be successful in taking on the risks of a startup are rewarded with profits, fame, and continued growth opportunities. Those who fail, suffer losses and become less prevalent in the markets.(7)

V BROAD OBJECTIVES:

- To empower the students with keen technical acumen, administrative skills and an innovative bent of mind so that the students become job creators and not job seekers.
- To establish strong University-industry interactions and encourage international collaborations for R&D
- To provide ample exposure to the students/ faculty to meet the demands of industry.

VI Broad framework of the guidelines: The detailed framework is described below

1. Strategies and Governance:

- a) Entrepreneurship promotion and development should be one of the major dimensions of the Jaypee University of Engineering and Technology (JUET GUNA) strategy. To facilitate development of an entrepreneurial ecosystem in the organization, specific objectives and associated performance indicators should be defined for assessment.
- b) Implementation of entrepreneurial vision at JUET GUNA should be achieved through mission statements rather than stringent control system. The entrepreneurial agenda should be the responsibility of a senior person at the level of dean/ director/ equivalent position to bring in required commitment and must be well understood by the higher authorities. However, one must understand that promoting entrepreneurship requires a different type of mindset as compared to other academic activities. Therefore, this person should be very carefully chosen from someone who understands the industry and above all business.
- c) Resource mobilization plan should be worked out at JUET GUNA for supporting pre-incubation, incubation infrastructure and facilities. A sustainable financial strategy should be defined in order to reduce the organizational constraints to work on the entrepreneurial agenda.
 - (i) Investment in the entrepreneurial activities should be a part of the institutional financial strategy. Minimum 1% fund of the total annual budget of the institution may be allocated for funding and supporting innovation and startups related activities through creation of separate 'Innovation fund'.
 - (ii) The strategy should 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 should be encouraged.
 - (iii) To support technology incubators, academic institutes may approach private and corporate sectors to generate funds, under Corporate Social Responsibility (CSR) as per Section 135 of the Company Act 2013.
 - (iv) JUET GUNA may also raise funding through sponsorships and donations. JUET GUNA should actively engage alumni network for promoting Innovation & Entrepreneurship (I&E).
- d) For expediting the decision making, hierarchical barriers should be minimized and individual autonomy and ownership of initiatives should be promoted.
- e) Importance of innovation and entrepreneurial agenda should be known across JUET GUNA and should be promoted and highlighted at institutional programs such as conferences, convocations, workshops, etc.
- f) Student and faculty startup Policy and action plan should be formulated at university level, which is inline with the current document along with well-defined short-term and long-term goals. Micro action plan should also be developed by the affiliated institutes to accomplish the policy objectives.
- g) JUET GUNA should develop and implement Innovation & Entrepreneurship (I&E) strategy and policy for the entire university in order to integrate the entrepreneurial activities across various centers, departments, faculties, within the university, thus breaking the silos.
- h) Product to market strategy for startups should be developed by the JUET GUNA on case to case basis.

- i) Development of entrepreneurship culture should not be limited within the boundaries of the JUET GUNA.
- j) JUET GUNA should be the driving force in developing entrepreneurship culture in its vicinity (regional, social and community level). This shall include giving opportunity for regional startups, provision to extend facilities for outsiders and active involvement of the JUET GUNA in defining strategic direction for local development.
- k) Strategic international partnerships should 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 should also be promoted.

2. Startups Enabling Institutional Infrastructure

Creation of pre-incubation and incubation facilities for nurturing innovations and startups in JUET GUNA should be undertaken. 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) JUET GUNA need to create facilities within their institution for supporting pre-incubation (e.g. IIC 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 should be accessible 24x7 to students, staff and faculty of all disciplines and departments across JUET GUNA.
- c) Pre-incubation facilities may or may not be a separately registered entity or Special Purpose Vehicle (SPV), but it is 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 programs related to innovation, IPR and Startups. Moreover, they will have better accountability towards investors supporting the incubation facility.
- d) JUET GUNA may 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 and are elaborately explained in Section 3.

1. Nurturing Innovations and Start ups

- a) JUET GUNA is expected to establish processes and mechanisms for easy creation and nurturing of Startups/enterprises by students (UG, PG, and Ph.D.), staff (including temporary or project staff), faculty, alumni and potential start up applicants even from outside the campus.
- b) Focus areas include development of newer materials, software based, green technologies, agro based etc.
- c) While defining their processes, JUET GUNA will 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 timeframe. In case JUET GUNA does not have a dedicated facility/ infrastructure of its own, then it may reach out to nearest incubation facilities in other HEIs in order to facilitate access to their students, staff and faculty.

- (ii) Will allow licensing of IPR from JUET GUNA to start up: Ideally students and faculty members intending to initiate a startup based on the technology developed or co-developed by them or the technology owned by the JUET GUNA, 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) Will allow setting up a startup (including social startups) and working part-time for the startups while studying / working: JUET GUNA may allow their students / staff to work on their innovative projects and setting up startups (including Social Startups) or work as intern / part-time in startups (incubated in any recognized HEIs/Incubators) while studying / working. Student Entrepreneurs may earn credits for working on innovative prototypes/Business Models. JUET GUNA 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. 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.
- d) Students who are under incubation but are pursuing some entrepreneurial ventures while studying should be allowed to use their address in the JUET GUNA to register their company with due permission from the University.
 - e) Students entrepreneurs may be allowed to sit for the examination, even if their attendance is less than the minimum permissible percentage, with due permission from the JUET GUNA.
 - f) JUET GUNA may allow their students to take a semester/year break (or even more depending upon the decision of review committee constituted by the JUET GUNA) to work on their startups and re-join academics to complete the course. Student entrepreneurs may earn academic credits for their efforts while creating an enterprise. JUET GUNA may 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.
 - g) JUET GUNA should explore provision of accommodation to the entrepreneurs within the campus for some period.
 - h) Allow faculty and staff to take off for a semester / year (or even more depending upon the decision of review committee constituted by the JUET GUNA) as sabbatical/ unpaid leave/ casual leave/ earned leave for working on startups and come back. JUET GUNA 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.
 - i) Plan for Starting 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.
 - j) JUET GUNA will facilitate the startup activities/ technology development by allowing students/ faculty/staff to use JUET GUNA infrastructure and facilities, as per the choice of the potential entrepreneur in the following manner:
 - (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) JUET GUNA 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 JUET GUNA IPR as discussed in section 4 below.
- k) In return of the services and facilities, JUET GUNA may take 2% to 9.5% equity/ stake in the startup/company, based on brand used faculty contribution, support provided and use of JUET GUNA's IPR (a limit of 9.5% is suggested so that JUET GUNA has no legal liability arising out of startup. JUET GUNA should normally take much lower equity share, unless its full-time faculty/ staff have substantial shares). Other factors for consideration should be space, infrastructure, mentorship support, seed funds, support for accounts, legal, patents etc.
- For staff and faculty, JUET GUNA can take no-more than 20% of shares that staff / faculty takes while drawing full salary from the JUET GUNA; 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 go on sabbatical/ leave without pay/ earned leave.
- l) JUET GUNA may 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 JUET GUNA on rental basis.
- m) JUET GUNA could extend this startup facility to alumni of the JUET GUNA as well as outsiders.
- n) 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.
- o) 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.
- p) JUET GUNA might also need to update/change/revise performance evaluation policies for faculty and staff as stated above.
- q) JUET GUNA should ensure that at no stage any liability accrue to it because of any activity of any startup. Where a student/ faculty startup policy is pre-existing in JUET GUNA, then JUET GUNA may consider modifying their policy in spirit of these guidelines.

4. Product Ownership Rights for Technologies Developed at JUET GUNA

- a) When JUET GUNA's 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 JUET GUNA.
- (i) Inventors and JUET GUNA 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) JUET GUNA 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 JUET GUNA and the incubated company.
- b) On the other hand, if product/ IPR is developed by innovators not using any JUET GUNA facilities, outside office hours (for staff and faculty) or not as a part of curriculum by student, then product/ IPR will be entirely owned by inventors in proportion to the contributions made by them provided a proper approval is taken before of any such IPR/Product development from the competent authority of the JUET GUNA. 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 JUET GUNA'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. JUET GUNA can use alumni/ faculty of other JUET GUNA as members, if they cannot find sufficiently experienced alumni / faculty of their own.
 - d) JUET GUNA's 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 JUET GUNA is to pay for patent filing, they can have a committee which can examine whether the IPR is worth patenting. The committee should consist of faculty who have experience and excelled in technology translation. If inventors are using their own funds or non JUET GUNA funds, then they alone should have a say in patenting.
 - e) JUET GUNA'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 / JUET GUNA will have no say, including heads of department, heads of JUET GUNA, deans or registrars.
 - f) Interdisciplinary research and publication on startup and entrepreneurship should be promoted by the JUET GUNA.

5. Organizational Capacity, Human Resources and Incentives

- a) JUET GUNA may recruit staff that has a strong innovation and entrepreneurial/ industrial experience, behavior and attitude. This will help in fostering I & E culture.
 - (i) Some of the relevant faculty members with prior exposure and interest should 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 should be developed with constant upskilling.
- b) Faculty and departments of the JUET GUNA have to work in coherence and cross-departmental linkages should be strengthened through shared faculty, cross-faculty teaching and research in order to gain.

- 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 right people, JUET GUNA may 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 may be developed and used for evaluation of annual performance.

6. Creating Innovation Pipeline and Pathways for Entrepreneurs at JUET GUNA 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 should be devised at university level.
 - (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 JUET GUNA entrepreneurial agenda.
 - (ii) Students/ staff should be taught that innovation (technology, process or 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 should 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 prepare the students for creating the start up through the education, integration of education activities with enterprise-related activities should be done.
- b) The JUET GUNA should 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 JUET GUNA should establish Institution's Innovation Councils (IICs) as per the guidelines of MHRD's Innovation Cell and allocate appropriate budget for its activities. IICs should guide JUET GUNA in conducting various activities related to innovation, startup and entrepreneurship development. Collective and concentrated efforts should 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 JUET GUNA, 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 subsidised 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 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. JUET GUNA must develop a ready reckoner of Innovation Tool Kit, which must be kept on the homepage on JUET GUNA's website to answer the doubts and queries of the innovators and enlisting the facilities available at the JUET GUNA.

7. Norms for Faculty Startups

- a) For better coordination of the entrepreneurial activities, norms for faculty to do startups should be created by the JUET GUNA. Only those technologies should be taken for faculty startups which originate from within JUET GUNA only. Role of faculty may vary from being an owner/ direct promoter, mentor, consultant or as on-board member of the startup.
- b) JUET GUNA should 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.
- c) Faculty startup may consist of faculty members alone or with students or with faculty of other institutes or with alumni or with other entrepreneurs.
- d) In case the faculty/ staff holds the executive or managerial position for more than three months in a startup, they will go on sabbatical/ leave without pay/ utilize existing leave.
- e) Faculty must clearly separate and distinguish on-going research at the JUET GUNA from the work conducted at the startup/ company.
- f) 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 JUET GUNA) may be permitted to the faculty.
- g) Faculty must not accept gifts from the startup.
- h) Faculty must not involve research staff or other staff of JUET GUNA in activities at the startup and vice-versa.
- i) Human subject related research in startup should get clearance from ethics committee of the JUET GUNA.

8. Pedagogy and Learning Interventions for Entrepreneurship Development

- a) Diversified approach should 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 JUET GUNA strategy planning to ensure enhancement of the student's thinking and responding ability.

- (ii) JUET GUNA should subsequently institute on 'INNOVATION & ENTREPRENEURSHIP AWARD' to recognize outstanding ideas, successful enterprises and contributors for promoting innovation and enterprises ecosystem within the JUET GUNA.
 - (iii) For creating awareness among the students, the teaching methods should include case studies on business failure and real-life experience reports by startups.
 - (iv) Tolerating and encouraging failures: Our systems are not designed for tolerating and encouraging failure. Failures need to be elaborately discussed and debated to imbibe that failure is a part of life, thus helping in reducing the social stigma associated with it. Very importantly, this should be a part of JUET GUNA's philosophy and culture.
 - (v) Innovation champions should be nominated from within the students/ faculty/ staff for each department/ stream of study.
- b) Entrepreneurship education should be imparted to students at curricular/ co-curricular/ extracurricular 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 the external stakeholders should be done in the entrepreneurship education to evolve a culture of collaboration and engagement with external environment.
 - (ii) In the beginning of every academic session, JUET GUNA should conduct an induction program about the importance of I & E so that freshly inducted students are made aware about the entrepreneurial agenda of the JUET GUNA and available support systems. 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 should be leveraged for conducting research and survey on trends in technology, research, innovation, and market intelligence.
 - (iv) Sensitization of students should 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 should 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 JUET GUNA for inculcating entrepreneurial culture should be constantly reviewed and updated.

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

- a) Stakeholder engagement should be given prime importance in the entrepreneurial agenda of the JUET GUNA. JUET GUNA 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) JUET GUNA 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 JUET GUNA 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) JUET GUNA 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 JUET GUNA policy and JUET GUNA 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 JUET GUNA should be given the opportunities to connect with their external environment.
 - (ii) Connect of the JUET GUNA with the external environment must be leveraged in form of absorbing information and experience from the external ecosystem into the JUET GUNA's environment.
 - (iii) Single Point of Contact (SPOC) mechanism should be created in the JUET GUNA for the students, faculty, collaborators, partners and other stakeholders to ensure access to information.
 - (iv) Mechanisms should be devised by the JUET GUNA to ensure maximum exploitation of entrepreneurial opportunities with industrial and commercial collaborators.
 - (v) Knowledge management should be done by the JUET GUNA through development of innovation knowledge platform using in house Information & Communication Technology (ICT) capabilities.

10 Key performance Indicators

- a) Criterion for performance evaluation of incubates shall be developed by JUET GUNA to adjudge the status regularly.
- b) There shall be a certain minimum of innovation and incubation activity at the university departments in terms of projects.
- c) University should create strategy to ensure that students, irrespective of locations, sectors and year of study, can take part through various activities at different levels of startup.
- d) University should aim to create a mechanism to enable minimum 1% of its graduates to be either self-employed or job creators.
- e) University will collaborate with other universities in joint efforts to promote innovation and entrepreneurship in particular sector or geographical location of mutual interest.
- f) The University should tie up with incubators, accelerators, innovation promotion organizations to develop joint initiatives to support student innovators and start-ups.
- g) University shall engage itself in efforts for sustainable long term cooperation with supporting organizations, incubators, investors and industry

11. Entrepreneurial Impact Assessment

- a) Impact assessment of JUET GUNA's entrepreneurial initiatives such as pre-incubation, incubation, entrepreneurship education should be performed regularly using well defined evaluation parameters.
 - (i) Monitoring and evaluation of knowledge exchange initiatives, engagement of all departments and faculty in the entrepreneurial teaching and learning should be assessed.
 - (ii) Number of start ups created, support system provided at the university level and satisfaction of participants, new business relationships created by the JUET GUNA should be recorded and used for impact assessment.
 - (iii) Impact should also be measured for the support system provided by the JUET GUNA 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.

12. Patent Filing Cost:

The cost of filing the patent and prosecution of patent application of any person affiliated with JUET GUNA may be supported up to a maximum of 50% of the total cost of patenting for Indian Patents and up to 30% in case of International patents, subject to the prior approval of filing such patent by the competent authority of JUET GUNA and discretion of the management and based on the recommendation of expert team constituted on a case to case basis.

Note: The above guidelines may be modified/changed as and when required by the approval of the competent authority of JUET GUNA .

The Innovation and startup Policy Guidelines of JUET,Guna is prepared by a committee formed on 11/11/2019 comprising of following faculty members:

1. Dr. Vikram Singh Chouhan.
2. Dr. Sandeep Arya
3. Dr. Kamini Bhasin

The suggestions inputs of Dr. Yogesh Iyyer has also being incorporated .The final compilation is done by Dr. Sandep Srivastava (HOD-HSS)

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