



Innovation and Entrepreneurship Policy For Students and Faculty



**ROYAL COLLEGE OF ENGINEERING AND
TECHNOLOGY**

Akkikavu , Thrissur

Approved
Deen
Kanwar V

RCET INNOVATION AND STARTUP POLICY FOR STUDENTS AND FACULTY

The RCET Innovation and Startup Policy for students and faculty members of RCET, Akkikavu will enable the institute to actively engage students, faculty members and members of staff in innovation and entrepreneurship related activities. This policy will also facilitate in bringing clarity in RCET Startup policy, involvement of stakeholders, support and performance parameters thus enabling creation of a robust innovation and Startup ecosystem in the institute. This document states Startups Enabling Institutional Infrastructure and practices for nurturing innovations and startups. It also elaborates Innovation Pipeline and Pathways for Entrepreneurs at Institute Level and Pedagogy and Learning Interventions for Entrepreneurship Development Collaboration. Institute participation in co-creation, Business Relationships and Knowledge Exchange is also discussed at sufficient length. The issue of Entrepreneurial Impact Assessment is also addressed in this policy along with motivating the students to opt entrepreneurship as a career option. This policy also spells out the terms for Intellectual Property ownership, technology licensing and institutional Startup policy, thus enabling creation of a robust innovation and Start up ecosystem across the Institution.

Vision

To achieve the most preferred destination for students to opt entrepreneurship and startup as a career option and enabling students for converting their ideas into viable and successful enterprises

Mission

- To orient the educational infrastructure of the institute towards startups and entrepreneurship opportunities for student and faculty members.
- To strengthen the innovation-based entrepreneurship development infrastructure.
- To encourage and support students, faculty members and staff to consider start-ups and entrepreneurship as a career option.
- To provide enabling mechanisms to startups, through training and skill development, capacity building, networking, access to knowledge & support services, etc. on continuous basis.
- To provide the guidelines to stakeholders of RCET for developing entrepreneurial agenda, managing Intellectual Property Rights (IPR) ownership, technology licensing and equity sharing in Startups or enterprises established by faculty and students.

Objectives

- To actively engage students, faculty members and staff in innovation and entrepreneurship related activities.
- To bring uniformity in terms of Intellectual Property ownership management, technology licensing, institutional Startup policy and equity sharing in Startups or enterprises established by faculty and students.
- To create a robust innovation and Startup ecosystem in RCET.
- To enable the students to participate in innovation and entrepreneurship (I&E) related activities, thus encouraging students to consider startups and entrepreneurship as a career option.
- To make the innovation as the epicenter of education.

Definitions

“**RCET**” or “**Institute**” shall mean “Royal College of Engineering, Akkikavu”.

“**Policy**” means RCET Startup Policy.

“**Faculty Member**” shall mean a faculty member of Royal College of Engineering, Akkikavu.

“**Student**” shall mean a full-time student studying at Royal College of Engineering, Akkikavu.

“**RCET Member**” shall mean any permanent faculty member on duty or on leave, faculty member on tenure, research associates, post-doctoral fellows and students having live registration.

“**Startup**” is an entity that develops a business model based on either product innovation or service innovation and makes it scalable, replicable and self-reliant as defined in Gazette Notification No. G.S.R. 127(E) dated February 19, 2019 or as per the prevailing notifications of the Government of India issued from time to time. The current definition of startup is an entity that is headquartered in India, which was incorporated less than 10 years ago, and has an annual turnover less than Rs. 100 crores.

“**Equity share**” also commonly referred to as ordinary share, 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.

“I&E” means Innovation and Entrepreneurship.

National Innovation Startup Policy 2021 for Faculty and Students

1. Strategies and Governance

- a. Entrepreneurship promotion and development should be one of the major dimensions of the Institutions strategy. To facilitate development of an entrepreneurial ecosystem in the Institution, specific objectives and associated performance indicators should be defined for assessment.
- b. The entrepreneurial agenda should be the responsibility of the Head of the Institution and the Institution’s Innovation Council of RCET. Heads of all departments and the IIC of RCET shall work together to successfully implement the entrepreneurship culture.
- c. Resource mobilization plan should be worked out at the institute for supporting preincubation, 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 should be allocated for funding and supporting innovation and startup related activities.
 - ii. The strategy should also involve raising funds from diverse sources including Government agencies (state and central) like DST, DBT, MHRD, AICTE, TDB, KSCSTE, CERD, 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. Institute may also raise funding through sponsorships and donations. Institute 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 the Institute and should be promoted and highlighted at Institutional programs such as smart India hackathon, conferences, convocations, workshops, etc.
- f. 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.
- g. Institute should develop and implement Innovation and Entrepreneurship (I&E) strategy and policy for the entire Institute in order to integrate the entrepreneurial activities across various centers, departments, faculty members, thus breaking the silos.
- h. Product to market strategy for startups should be developed by the Institute on case to case basis.
- i. Development of entrepreneurship culture should not be limited within the boundaries of the Institution.
 - i. Provision to extend Institution's facilities for outsiders at nominal charges (as decided from time to time) shall be considered.
 - ii. Strategic International partnerships shall be developed using bilateral and multilateral channels with international innovation clusters and other relevant organizations. Moreover, International exchange programs, internships, engaging the International faculty members in teaching and research shall also be promoted.

2. Startups Enabling Institutional Infrastructure

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

- a. The Innovation and Entrepreneurship Development Centre (IEDC) and the Institution funded SBCE Incubation space and Centre for Innovation and Research-SBCE (CIRSBCE) shall be active in providing incubation support to the start-ups.

- b. The labs shall be accessible 24x7 to students, staff and faculty members of all disciplines and departments across the Institution.
- c. In future, Technology Business Incubator may be set-up within the campus.
- d. Institution may offer mentoring and other relevant services.
- e. Our Institution promotes institutional preparation for meeting industrial needs by facilitating seminars, workshops and various other industrial training programs.

3. Nurturing Innovations and Startups

- a. Institution shall establish processes and mechanisms for easy creation and nurturing of Start-ups/enterprises by students (UG, PG, and Ph.D.), staff (including temporary or project staff), faculty members, alumni and potential startup applicants even from outside the Institutions.
- b. While defining their processes, Institutions will ensure to achieve the following:
 - i. Incubation support: Offer access to pre-incubation & Incubation facility to startups by students, staff and faculty members for mutually acceptable time-frame.
 - ii. Will allow licensing of IPR from Institute 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 institute, shall be allowed to take a license on the said technology on easy term, either in terms of license fees and/or royalty to obviate the early stage financial burden.
- c. Will allow setting up a startup (including social startups) and working part-time for the startups while studying / working: HEIs 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 inventors may 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 multi- disciplinary.
- d. Students who are under incubation, but are pursuing some entrepreneurial ventures while studying shall be allowed to use their address in the Institute to register their company with due permission from the Head of the Institution. A request letter shall be forwarded to the Head of the Institution by the HoD of the department through the IIC. The Students will be given special permission to do works related to incubation. However, Students will be

given permission to attend the examination only if they have above 65% attendance. Faculty members will also be allowed to indulge in start-up activities without affecting the works related to their academics.

- e. On merit basis, students entrepreneurs shall be allowed to sit for the examination, even if their attendance is less than the minimum permissible percentage, with due permission from the Head of the Institution.
- f. The students may be permitted 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.
- g. The Institute shall explore provision of accommodation to the entrepreneurs within the campus for some period of time.
- h. Allow faculty members and staff to take off for a semester/year (or even more depending upon the decision of Head of the Institution) as sabbatical/ unpaid leave/casual leave/earned leave for working on startups and come back. Institution shall consider allowing use of its resource to faculty members/students/staff wishing to establish start up as a fulltime effort. The seniority and other academic benefits during such period shall be preserved for such staff or faculty.
- i. Institute shall facilitate the startup activities/ technology development by allowing students/faculty members/ staff to use Institute infrastructure and facilities, as per the choice of the potential entrepreneur in the following manners:
 - i. Short-term/ six-month/ one-year part-time entrepreneurship training.
 - ii. Mentorship support on regular basis.
 - iii. Facilitation in a variety of areas including technology development, ideation, creativity, design thinking, fund raising, financial management, cash-flow management, new venture planning, business development, product development, social entrepreneurship, product- costing, marketing, brand-development, human resource management as well as law and regulations impacting a business.
 - iv. Institute shall link the startups to other seed-fund providers/ angel funds/venture funds or it may setup seed-fund once the incubation activities mature.
 - v. License Institute IPR as discussed in section 4 below.
- j. In return of the services and facilities, Institute may take consultancy fees (as decided by IIC and Head of the Institution). The Institution shall consider taking equity share from the

start-up also. The percentage of share shall depend on the type of support provided to the start-up.

- k. For staff and faculty members, Institute shall not claim any equity or consultancy fees.
- l. Faculty members/ staff shall involve themselves in entrepreneurship / start-up activities without affecting their regular roles.
- m. The Institute will provide services based on fee-based model. Seed funds shall be provided only to student/alumni, and faculty members initially.
- n. Institute could extend this startup facility to alumni of the Institute as well as outsiders.
- o. Participation in startup related activities shall be considered as a legitimate activity of faculty member in addition to teaching, industrial consultancy and management duties and shall be considered while evaluating the annual performance of the faculty member. Every faculty member may be encouraged to mentor at least one startup/innovative project. Faculty who gets fund for start-up will be recognized through promotions and sufficient incentives
- p. Product development and commercialization as well as participating and nurturing of startups shall 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 members are evaluated accordingly for their performance and promotion.
- q. Institute shall ensure that at no stage any liability accrue to it because of any activity of any startup.

4. 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.
- 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 upfront fees or one-time technology transfer fees, royalty as a percentage of sale-price, shares in the company licensing the product.
- c. If one or more of the inventors wish to incubate a company and license the product to this company, the royalties would be 4% of sale price for hardware product and 2% for pure software product. If it is shares in the company, shares will again be 4%.

- d. On the other hand, if product/IPR is developed by innovators not using any Institute facilities, outside office hours (for staff and faculty) or not as a part of curriculum by student, then product/IPR 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.
- e. 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.
- f. 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 pays for patent filing, they shall 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-institute funds, then they alone should have a say in patenting.
- g. 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.
- h. Interdisciplinary research and publication on startup and entrepreneurship shall be promoted by the institution.

5. Organizational Capacity, Human Resources and Incentives

- a. Institutes shall identify staff having strong connect towards innovation and entrepreneurship/ industrial experience and involve them in IIC activities. This will help in fostering the I&E culture.
 - i. Some of the relevant faculty members with prior exposure and interest shall 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 shall be developed with constant up-skilling.

- b. Faculty and departments of the Institutes have to work in coherence and cross-departmental linkages shall be strengthened through shared faculty, cross-faculty teaching and research in order to gain maximum utilization of internal resources and knowledge.
- c. Periodically, external subject experts such as industry personnel/ alumni shall be invited for interaction and provide strategic advice and bringing in skills which are not available internally.
- d. Faculty and staff shall be encouraged to do courses on innovation, IPR, entrepreneurship management and venture development.
- e. Faculty members are encouraged to equip themselves by undergoing FDP's by EDI, TEQIP sponsored programs, Workshops and technology fair.
- f. In order to attract and retain right people, Institute shall develop 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.

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

- a. To ensure exposure of maximum students to innovation and pre-incubation activities at their early stage and to support the pathway from ideation to innovation to market, mechanisms 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 experimental 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 startups 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.
- e. 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.
- f. 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.

7. 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 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.

8. Pedagogy and Learning Interventions for Entrepreneurship Development

- a. Diversified approach shall 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. The clubs and associations in the Institution, along with IEDC RCET shall focus on organizing various programs pertaining to Innovation, entrepreneurship and IPR to nurture students towards innovation.
 - ii. Institution shall start a special 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 shall 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 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.

- 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, Institute shall conduct an induction program about the importance of I&E so that freshly inducted students are made aware about the entrepreneurial agenda of the Institute and available support systems. Curriculum for the entrepreneurship education shall 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. More MoUs with startups may also be inked for knowledge sharing purpose.
 - iv. Sensitization of students should be done for their understanding on expected learning outcomes.
 - v. Customized learning materials should be available for the startups to guide them.
 - vi. 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 shall be carried out to ensure that maximum number of student projects and innovations are based around real life challenges. Learning interventions developed by the Institute for inculcating entrepreneurial culture shall be constantly reviewed and updated.

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

- a. Stakeholder engagement shall be given prime importance in the entrepreneurial agenda of the Institute. Institute shall identify potential partners, resource organizations, micro, small and medium- sized enterprises (MSMEs), social enterprises, schools, alumni, professional bodies and entrepreneurs to support entrepreneurship.
- i. To encourage co-creation, bi-directional flow/ exchange of knowledge, material and people shall be ensured between Institute and incubation / co-incubation facilities

- 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, lectures, etc.
 - iii. Mechanism shall be developed by the institute to capitalize on the knowledge gained through these collaborations.
 - iv. Care shall be taken to ensure that events don't become an end goal. First focus of the incubator should be to create successful ventures.
- b. Institute shall provide support mechanisms and guidance for creating, managing and coordinating the relationships with Industries.
- 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 shall be given the opportunities to connect with their external environment.
 - ii. The Institute shall depute Single Point of Contact (SPOC) of industry linkages and startups.
 - iii. Knowledge management shall be done by the Institute through development of innovation knowledge platform using in house Information & Communication Technology (ICT) capabilities.

10. Entrepreneurial Impact Assessment

- a. Impact assessment of institute'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 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

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 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.

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.

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: A licensing is a partnership between an intellectual property rights owner and another who is authorized to use such rights (licensee) in exchange for an agreed payment (fee or royalty).

Approved

Dr. Devi-V