MoE's INNOVATION CELL (GOVERNMENT OF INDIA)

Ministry of Education
Government of India

RAJALAKSHMI ENGINEERING COLLEGE
An AUTONOMOUS Institution
Affiliated to ANNA UNIVERSITY, Chennai

INSTITUTION'S INNOVATION COUNCIL
(Ministry of Education Initiative)

RAJALAKSHMI ENGINEERING COLLEGE

INNOVATION AND STARTUP POLICY

2023-2024

For FACULTY & STUDENTS

Rajalakshmi Engineering College

An Autonomous Institution

Rajalakshmi Nagar, Thandalam,

Chennai - 602 105.

https://www.rajalakshmi.org

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AN AUTONOMOUS INSTITUTION

PREAMBLE

The National Innovation Startup Policy – 2019 (NISP) for the faculty and students of Rajalakshmi Engineering College is a co-initiative of the Ministry of Education's Innovation Cell (MIC) and All India Council for Technical Education(AICTE).

The National Innovation and Startup Policy for students and faculty of Higher Education Institutions (HEIs) will enable the Rajalakshmi Engineering College to actively engage students, faculties and staff in innovation and entrepreneurship related activities. This framework will also facilitate Ministry of Human Resource Development in bringing uniformity across HEIs in terms of Intellectual Property ownership management, technology licensing and institutional Startup policy, thus enabling creation of a robust innovation and Start up ecosystem across all HEIs.

Rajalakshmi Engineering College has classed the NISP to create an innovation and entrepreneurship-driven ecosystem. The policy aims to garner the full potential of its faculty and student resource to strengthen and achieve a generation of entrepreneurial mindsets in academia. Adhering to the objectives of the NISP, Rajalakshmi Engineering College will promote Intellectual Property Rights (IPR) ownership Technology Transfer / licensing and equity sharing in startups established by faculty and students. Rajalakshmi Engineering college will be pivotal in leveraging, nurturing, mentoring and training the faculty and students with proven research/technology development, innovative ideas and proof of concepts and transforming them into entrepreneurs and eventually as startups. The Institute NISP will offer its support to its startups in terms of working space, lab space, research tools available in the institute, networking, mentoring, training and angel / venture investment support. To achieve this the institute has partnered with leading angel and venture networks.

VISION

India aspires to become 5 trillion-dollar economy by 2024. To reach the mark, it needs to evolve systems and mechanisms to convert the present demographic dividend into high quality technical human resource capable of doing cutting edge research and innovation and deep-tech entrepreneurship. The 'National Student and Faculty Startup policy 2020' for REC is a guiding framework to envision an educational system oriented towards start-ups and entrepreneurship opportunities for student and faculties. The guidelines provide ways for students and faculties of Rajalakshmi Engineering College 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. To achieve the cultural and attitudinal shift and to ensure that 'Innovation and Startup' culture is the primary fulcrum of our higher education system a policy framework and guidelines are the need of this hour. These guidelines will enable Rajalakshmi Engineering College to actively support their faculty, staff and students to participate in innovation and entrepreneurship (I&E) related activities, thus encouraging students and faculty to consider start-ups and entrepreneurship as a career option. These recommendations and guiding principles will also help Rajalakshmi Engineering College in creating their own policy framework, if required. These guidelines will also help Rajalakshmi Engineering College to foster the startup ecosystem from entrepreneurial business model to financial success stories

MISSION

- To nurture the ideas / innovations of faculty and students into successful business models and incorporation
- To offer entrepreneurship guidance, training, mentoring, connecting to the investor network and planning their business commercialization for the long run
- To incubate the startups in the institute's Technology Business Incubator, Startup Cell or Rajalakshmi Engineering College Innovation Council
- To open an arena where the technology, products and solutions developed in the institute are commercialized.
- To enable the commercial exploitation of the Rajalakshmi Engineering College/creator's intellectual property through technology transfer and licensing of IP.

INSTITUTE NISP POLICY COMMITTEE

NISP Institute Chairman

Dr. (Mrs.) Thangam Meganathan

Mr. M. Abhay Shankar

NISP Coordinator

Dr. A. Selvaraj/EEE

Administrative Members

Dr. Natteri M. Sudharsan, Professor, Mechanical Engineering

Dr. P. Kumar, Head, ED Cell

Dr. C.B.Ragothaman, Professor, Management Studies

Dr. Johanna Rajkumar, Professor, Biotechnology

Dr.Jobin Christ

Dr.R.Premkumar, Professor, Biomedical Engineering

Dr.M.C.Jobin Christ, Professor, Biomedical Engineering

Dr. A.Paramasivam, Associate Professor, Mechanical Engineering

Monitoring Committee

Dr. S.P. Srinivasan, Professor, Mechanical Engineering

1. STRATEGIES AND GOVERNENCE

a. Entrepreneurship promotion and development is one of the major dimensions of the REC strategy. To facilitate development of an entrepreneurial ecosystem for students and faculty in the organization with specific objectives and associated performance indicators will be defined for assessment.

b. Implementation of entrepreneurial vision at the Rajalakshmi Engineering College will be achieved through mission statements rather than stringent control system. The entrepreneurial agenda will be the responsibility of a COORDINATOR to bring in required commitment and must be well understoodby the higher authorities.

c. As a part of the institutional financial strategy, Rajalakshmi Engineering College will allocate 1% of the total annual budget of the institution for funding and supporting innovation and startups related activities through creation of separate Innovation fund.

d. 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 will be a part of the institutional financial strategy.Adequate fund will be allocated for funding and supporting innovation and startups related activities.

    ii. The strategy involves 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 will be encouraged.

    iii. To support technology incubators, academic Rajalakshmi Engineering College may approach private and corporate sectors to generate funds, under Corporate Social Responsibility (CSR) as per Section 135 of theCompany Act 2013.

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

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

f. Student and faculty startup Policy and action plan will beformulated at college level, which isin line with the current document along with well-defined short-term and long-term goals. Micro action plan will also be developed by the affiliated Rajalakshmi Engineering College to accomplish the policy objectives.

g. Product to market strategy for startups will be developed by REC on case to

case basis.

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

   i. REC will 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 institute in defining strategic direction for local development.

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

2. STARTUPS ENABLING INSTITUTIONAL INFRASTRUCTURE

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

a. REC will create facilities for supporting pre-incubation (e.g. IICs as per the guidelines by MHRD'sInnovation 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 will be accessible 24x7 to students, staff and faculty of all disciplines and departments across the institution.

c. REC will offer mentoring and other relevant services through Pre-incubation/Incubation units in- return for fees, equity sharing and (or) zero payment basis

3. NURTURING INNOVATIONS AND STARTUPS

   a. REC establish processes and mechanisms for easy creation and nurturing of Start-ups/enterprises bystudents (UG, PG, Ph.D.), staff (including temporary or project staff), faculty, alumni and potentialstart up applicants even from outside the institutions.

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

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

      ii. It 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, will 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.

c. Will allow setting up a startup (including social start ups) and working part-time for the start ups while studying / working: REC may allow their students / staff to work on their innovative projectsand setting up start-ups (including Social Start-ups) or work as intern / part-time in start-ups while studying / working.

d. Rajalakshmi Engineering College will consider allowing use of its resource to faculty/students/staff wishing to establishstart up as a fulltime effort.

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

f. Rajalakshmi Engineering College 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 thefollowing 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 Rajalakshmi Engineering College will also link the startups to other seed-fund providers/ angel funds/ venture fundsor itself may set up seed-fund once the incubation activities mature.

d. 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 encouragedto mentor at least one startup.

e. Product development and commercialization as well as participating and nurturing of startups wouldnow be added to a bucket of faculty-duties and each faculty would choose a mix and match of theseactivities (in addition to minimum required teaching and guidance) and then respective faculty are evaluated accordingly for their performance and promotion.

f. Rajalakshmi Engineering College will update /change / revise performance evaluation policies for faculty as stated above

4. PRODUCT OWNERSHIP RIGHTS FOR TECHNOLOGY 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 Rajalakshmi Engineering College together will license the product / IPR to any commercial organization, with inventors having the primary say. License fees could be either / or mix of

        1. Upfront fees or one-time technology transfer fees
        2. Royalty as a percentage f sale-price
        3. Shares in the company licensing the product

b. Rajalakshmi Engineering College 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, they can have a committee which can examine whether the IPR is worth patenting. The committee will 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 will have a say in patenting.

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

5. ORGANIZATIONAL CAPACITY, HUMAN RESOURCES AND INCENTIVES

a. 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.

b. Periodically subject matter experts will be invited for strategic advice and bringing in skills which are not available internally.

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

d. In order to attract and retain right people, Rajalakshmi Engineering College will develop academic and non-academic incentives and reward mechanisms for its faculty that actively contribute and support entrepreneurship agenda and activities. The rewards may include sabbaticals, office and lab space for entrepreneurial activites, reduced teaching loads, wards, trainings, etc.

6. CREATING INNOVATION PIPELINE & PATHWAYS FOR ENTREPRENEURS AT INSTITUTE LEVEL

Rajalakshmi Engineering College will devise a strategy to its early stage entrepreneurs in supporting their pathway from ideation to innovation to commercial success.

a. Rajalakshmi Engineering College will establish Institution Innovation

Councils as per the guidelines of MHRD's Innovation Cell and will allocate 1% of the total annual budget to support Innovation and startup agenda of the institute appropriate budget for its activities

b. To ensure exposure of maximum students to innovation and pre-incubation activities at their early stageand to support the pathway from ideation to innovation to market, mechanisms will be devised atinstitution level.

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

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

   iii. Students will be encouraged to develop entrepreneurial mindset through experiential learningby 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 will be routinely organized.

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

c. REC will link their start-ups and companies with wider entrepreneurial ecosystem and by providingsupport to students who show potential, in pre-startup phase. Connecting student entrepreneurs withreal 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.

d. REC establish Institution's Innovation Councils (IICs) as per the guidelines of MHRD's Innovation Cell. IICs will guide institutions in conducting various activities related to innovation, startup andentrepreneurship development. Collective and concentrated efforts will be undertaken to identify, scout, acknowledge, support and reward proven student ideas and innovations and to further facilitatetheir entrepreneurial journey.

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

   i. Networking events will be organized to create a platform for the budding entrepreneurs to meetinvestor's and pitch their ideas.

   ii. Provide business incubation facilities: premises at subsidized cost. Laboratories, research facilities, IT services, training, mentoring, etc. will be accessible to the new startups.

7. NORMS FOR FACULTY STARTUPS

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

   i. Role of faculty may vary from being an owner/ direct promoter / founder / co-founder / shareholder /mentor/consultant/board member in the startup.

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

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

b. Faculty must not accept gifts from the startup.

c. Faculty must not involve research staff or other faculty of institute in activities are the startup and vice-versa

d. Human subject related research in startup will get clearance from ethics committee of the institution.

8. OWNERSHIP OF TECHNOLOGY

If institute fund or facility is used substantially and an IPR is developed, it can be jointly owned by both. It can be jointly licensed to commercial organization. Terms can be mutually worked out within the frame work suggested by MHRD. .However, if the IPR is entirely developed by innovator without using institute facility and time, then IPR will be owned by the innovator. In the case of any dispute on ownership a committee will be constituted as per the norms suggested by MHRD and it will be resolved.

9. EQUITY SHARES

In consideration of the support provided by Rajalakshmi Engineering College, the Startup agrees to issue and allocate equity shares to the Incubator according to the following terms:

Equity Stake: The Startup hereby agrees to issue and allocate 25% of its equity shares to Rajalakshmi Engineering College based on the inputs required by the startup.

Valuation: The valuation of the Startup for the purpose of determining the equity stake issued to Rajalakshmi Engineering College shall be determined by mutual agreement between the Startup and the Incubator, considering the Startup's current stage, progress, and future prospects.

Rights and Obligations: The Rajalakshmi Engineering College shall have the rights and obligations associated with its equity stake in accordance with the laws and regulations governing such ownership interests, including but not limited to voting rights, dividend entitlements, and rights to information.

Transfer Restrictions: The equity shares issued to Rajalakshmi Engineering College shall be subject to certain transfer restrictions, including restrictions on transferability, pre-emption rights, and rights of first refusal, as mutually agreed upon by the Startup and the Rajalakshmi Engineering College (Incubator).

10.REWARDS

All the stake holders and innovators will be rewarded for their successful start-up and innovation. Incentive can be academic or non-academic in nature such as sabbatical leave for faculties, office space, reduced teaching load, maintaining seniority while on start-up leave, sponsorship for higher education or any other suitable form. Stake holders may be rewarded as guest teachers, fellowships, associates etc. For student innovators reward can be in terms of scholarship, forgoing limits of attendance, exemption from class and lecture hours etc. They may also achieve credit for innovation and start-up and substitution of project and mini-project by start-up. In special case break-up in semester or year may be permitted as per university norms.

11.PEDAGOGY AND LEARNING INTERVENTIONS FOR ENTREPRENEURS HIP DEVELOPMENT

a. Diversified approach will be adopted to produce desirable learning outcomes, which willinclude cross disciplinary learning using mentors, labs, case studies, games, etc. in place oftraditional lecture-based delivery.
    i. Student clubs/ bodies/ departments must be created for organizing

competitions, boot camps, workshops, awards, etc. These bodies will be involved in institutional strategy planning to ensure enhancement of the student's thinking and responding ability.

ii. Rajalakshmi Engineering College will start annual 'INNOVATION & ENTREPRENEURSHIP AWARD' to recognize outstanding ideas, successful enterprises and contributors for promoting innovationand 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. Very importantly, this will be a part of institute's philosophy and culture.

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

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

i. Integration of expertise of the external stakeholders will 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, REC will conduct an induction program about the importance of I&E so that freshly inducted students are made aware about the entrepreneurialagenda of the institute and available support systems. Curriculum for the entrepreneurship education will be continuously updated based on entrepreneurship research outcomes. This will also include case studies on failures.

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

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

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

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

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 Rajalakshmi Engineering Collegefor inculcating entrepreneurial culture will be constantly reviewed and updated.

12. COLLABORATION, CO-CREATION BUSINESS RELATIONSHIPS & KNOWLEDGE EXCHANGE

a. Stakeholder engagement will be given prime importance in the entrepreneurial agenda of the institute. Rajalakshmi Engineering College will 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 will be ensured between Rajalakshmi Engineering College such as incubators, science parks, etc.
    ii. Institute will organize networking events for better engagement of collaborators and willopen 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 will be developed by the institute to capitalize on the knowledge gained throughthese collaborations.
    iv. Care must be taken to ensure that events DON'T BECOME an end goal. First focus of the incubator will be to create successful ventures.
b. The institute will develop policy and guidelines for forming and managing the relationships withexternal stakeholders including private industries.
c. Knowledge exchange through collaboration and partnership will be made a part of institutional policy and Rajalakshmi Engineering College 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 programs, clubs, social gatherings, etc., faculty, staff and students of the Rajalakshmi Engineering College will be given the opportunities to connect with their external environment.
    ii. Connect of the institute with the external environment must be leveraged in form of absorbinginformation and experience from the external ecosystem into the institute's environment.
    iii. Single Point of Contact (SPOC) mechanism will be created in the institute for the students, faculty, collaborators, partners and other stakeholder's to ensure access to information.
    iv. Mechanisms will be devised by the institutions to ensure maximum exploitation of entrepreneurial opportunities with industrial and commercial collaborators.

13. ENTREPRENEURIAL IMPACT ASSESSMENT

The institute NISP committee will periodically assess the impact of the entrepreneurial activities initiated by the institute.

a. Impact assessment of institute's entrepreneurial initiatives such as pre-incubation, incubation, entrepreneurship education will 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 will be assessed.
    ii. Number of startups created, support system provided at the institutional level and satisfaction of participants, new business relationships created by the Rajalakshmi Engineering College will be recorded and used for impact assessment.
    iii. Impact will 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 will go hand in hand. The information on impact ofthe 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 will be evaluated through the institute entrepreneurial network COMMERCIAL success is the ONLY measure in long run.

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