

# **AJCE - Innovation and Startup Policy (AJCE-ISP)**

**Amal Jyothi College of Engineering**

**Kanjirappally**



## **Preamble**

In November 2016, All India Council of Technical Education (AICTE) released a startup Policy document for AICTE approved institutions, to address the need of inculcation of innovation and entrepreneurial culture in Higher Education Institutions (HEIs). The policy primarily focused on guiding the AICTE approved institutions in implementing the ‘Start-up Action Plan’ of Government of India. Subsequent to release of the startup policy by AICTE and further interaction & feedback received from education institutions, a need was felt for a more elaborate and comprehensive policy guiding document, which could be applicable for all the HEIs in India. A committee of fifteen members was constituted by the Ministry of Human Resource Development (MHRD) (Currently, Ministry of Education (MoE)) to formulate detailed guidelines for various aspects related to Innovation, Start-up, and Entrepreneurship management. This committee deliberated on various facets for nurturing the innovation and start-up culture in HEIs, which covered Intellectual Property (IP) ownership, revenue sharing mechanisms, norms for technology transfer and commercialization, equity sharing, etc. After multiple rounds of meetings, National Innovation and Start-up Policy 2019 (NISP-2019) for students and faculties of HEIs were prepared. The policy is being implemented by MoE’s Innovation Cell, in coordination with AICTE, University Grants Commission (UGC), and State governments & Union territories, in various universities and HEIs.

NISP-2019 entitled HEIs to compose its own inclusive Policy and Guidelines on fostering innovation and startups. An expert committee is authorized for suitably drafting the policy at the institute level considering the available resources, facilities, and the broad vision for future developments. The expert committee was formed to formulate an institute-level Innovation Startup policy at AJCE. Formulation of institute-level policy is strictly based on the guidelines given by NISP-2019. The innovation and startup policy of AJCE (AJCE-ISP) shall incorporate the existing resources available in the institute, to identify and promote both internal and external aspirants. AJCE shall establish an ecosystem that can identify innovators having innovative ideas that have a great impact on society with commercial potential and will nurture with all the needed resources and ensure the growth of commercialization of the ideas.

As in NISP-2019, AJCE-ISP shall ensure the involvement of both the student and faculty communities, and also they are benefitted. AJCE-ISP shall act as a catalyst to develop a value-based educational ecosystem at the institute capable of influencing different levels of our society to improve its standard of life and lead to a country with a prosperous and sustainable economy. AJCE-ISP is an inclusive framework covering various aspects such as management of Intellectual Property Rights (IPR) ownership, technology transfer & licensing, and equity sharing in corporate entities established by faculty, staff, and students.

### **Committee for AJCE - Innovation and Startup Policy (AJCE-ISP)**

The following faculty are members of the AJCE - Innovation and Startup Policy (AJCE-ISP) Development Committee Based on National Innovation and Startup Policy (NISP) Guidelines.

Dr. Jippu Jacob IPR Cell Coordinator Amal Jyothi College of Engineering	Chairman
Prof. Sherin Sam Jose CEO, Startups Valley TBI Amal Jyothi College of Engineering	Member
Prof. Abi Varghese IEDC, Nodal Officer Amal Jyothi College of Engineering	Member
Prof. Fr. Jins Sebastian Arackaparampil Dept of Electronics and Communication Engineering Amal Jyothi College of Engineering	Member
Prof. Careena P Dept of Electronics and Communication Engineering Amal Jyothi College of Engineering	Member
Prof. MV Varkey Dept of Civil Engineering Amal Jyothi College of Engineering	Member
Prof. Margaret Sherin Joseph Dept of Civil Engineering Amal Jyothi College of Engineering	Member
Prof. Nikhi Maria Raju Dept of Chemical Engineering Amal Jyothi College of Engineering	Member
Prof. Vinu Sankar Dept of Electrical and Electronics Engineering Amal Jyothi College of Engineering	Member
Prof. Yedu Krishnan Dept of Food Technology Amal Jyothi College of Engineering	Member

Prof. Krishnalal G Dept of Computer Science and Engineering Amal Jyothi College of Engineering	Member
Prof. Tom Kurian Dept of Computer Science and Engineering Amal Jyothi College of Engineering	Member
Prof. Midhuna Jyothi R Dept of Information Technology Amal Jyothi College of Engineering	Member
Prof. Tony Varghese Dept of Mechanical Engineering Amal Jyothi College of Engineering	Member
Prof. Sherin Thampi Dept of Mechanical Engineering Amal Jyothi College of Engineering	Member
Prof. Dr. Jeess George Dept of Mechanical Engineering Automobile Amal Jyothi College of Engineering	Member
Prof. Manu Harilal Dept of Metallurgical and Materials Engineering Amal Jyothi College of Engineering	Member
Prof. Gloriya Mathew Dept of Computer Application Amal Jyothi College of Engineering	Member
Prof. Shelly Shiju George Dept of Computer Application Amal Jyothi College of Engineering	Member

## **1. Vision**

Develop an inclusive, innovative, and entrepreneurial ecosystem consisting of faculty, students, the general public, government, industry and allied stakeholders to develop products for the global market space.

## **2. Mission**

Develop a rural techno-village, which can function as an innovation hub for the development of the market-driven product through an effective collaboration of young minds, technocrats, and the general public.

## **3. Goals**

### **3.1 Short-term Goals**

- List out and categorize the facilities of AJCE to inspire the innovativeness of staff and students
- Spread Innovation & Entrepreneurship awareness among the students and staff
- Identify the potential teams and guide them to become an entrepreneur
- Identify the interested students and connect with successful entrepreneurs
- Develop a channel for entrepreneurship development by including all the aspects like communication, networking, funding opportunities, market access etc
- Develop a pool of mentors including technical and business aspects
- Develop common prototype development and testing facility
- List out the testing facilities available for developing market potential products

### **3.2 Long-term Goals**

- Create a rural technovillage
- Develop the technovillage as a single point destination for rural technology development (mind to market)
- Establish a platform of collaboration of international agencies to ensure the intellectual outcomes are reaching the international market
- Attract corporates to rural technovillage
- Convert the institute to an innovation hub for the entire process of mind to market
- Attract the general public to reach out to technovillage in order to solve the entrepreneurial needs of them
- Increase the rate of self-employability and quality of start-up within the Institute
- Create a women and social entrepreneurship track
- Act as a hub and spoke model to connect nearby institutions in the I&E activities

## **4. Strategy**

### **4.1 General**

- Develop an ecosystem for cutting edge research, innovation and deep-tech entrepreneurship

- Creation of Technology-based incubatees on a continuous basis
- Help to create value-added jobs and services
- Introduction of Entrepreneurial culture to the students and the common people
- Create effective networking for the development of technology-based start-ups
- Develop internationally accepted technologies
- Create awareness about Technology Incubation and Commercialization of R & D products and processes
- Promote small and medium industries

## **4.2 Students**

- Nurture innovation mindset through systematic training programmes
- Inspire young minds and act as a catalyst of innovativeness, through the world-class exposure
- Facilitate modern technology-based skill acquisition for students
- Organize regular industry visits, project contests, and hackathons
- Introduce awards and incentives for students, staff, and faculty to stimulate the interest towards innovation and entrepreneurship
- Provide world-class ecosystem for innovation and product development
- Provide effective networking among stakeholders of the startup ecosystem
- Develop a peer-to-peer or reciprocal learning culture among student community Promote students to come up with commercially-viable curriculum projects
- Implement earn while learn method to get real-time experience of market and technology
- Connect with funding agencies for project/product development
- Establish linkages for certifications and licensing
- Provide IPR support system
- Provide or connect with prototyping, manufacturing, and testing facilities
- Connect with startups, technology providers, and industry
- Establish linkages for market access
- Connect with funding agencies and investors
- Links with accelerators and global market

## **4.3 Faculty**

- Nurture faculty entrepreneurs
- Develop a platform to convert their knowledge to commercial product or service
- Arrange effective networking to get easy market access
- Provide product development facilities
- Connect with testing facilities
- Provide entrepreneurial exposure
- Connect with funding agencies and investors
- Links with accelerators and global market
- Establish additional facilities for supporting innovation and entrepreneurial activities to achieve top-notch quality in institute level innovation and entrepreneurship
- Establish a research track for innovation, product development, and entrepreneurship

- Develop revenue generated and sustainable advanced incubation ecosystem

## **5. Nurturing Innovations and Startups**

### **5.1 Ideation Stage**

- Two-day innovation and entrepreneurship awareness programmes for all first-year students including UG, PG, and PhD. Which includes achievement motivation, ideation, experience sharing of successful entrepreneurs, basics of funding, registration etc
- Interested students can come to the innovation lab for interaction with senior or experienced students.
- This group will be split into two categories
  1. Management team
  2. InnovatorsMore leadership training programmes will be designed for management team and innovation and entrepreneurship training will be given for innovators.
- Establish an effective network between these groups
- Provide more exposure to them through internship programmes in startups, industrial visits, industrial training programmes
- Arrange more IPR, technology, and entrepreneurial training programmes
- All the interested teams will be connected to the statewide I&E network for more exposure
- Regularly motivate to attend more outside programmes to inspire their innovativeness

### **5.2 Project Development Stage**

- Peer level casual discussions will be encouraged to fine-tune their ideas
- Brain-storming sessions will be arranged for value addition of their project ideas
- Connect with MSME sector and mentors for further enrichment of ideas
- Send them to visit exhibitions, startups, industries etc
- Arrange special training programmes for pitching, which include pitch deck preparation, communication, time management, business model identification, business plan preparation.
- Prototyping
- Make them ready for competitions, and send the teams for different competitions
- Arrange different internal competitions, such as I2U, IFH, and IFI. Small scale prototyping fund will be rewarded to the selected teams
- To get more exposure, they will be sent to participate in state/national level competitions
- Feedback will be collected from each steps and rectifications will be taken at each stage

### **5.3 Project to Product Conversion**

- Connect with product development funding agencies (Govt & Pvt)
- Prototyping support will be extended
- Connect with different reach and prototyping support systems
- Provide business & management training programmes
- Testing and finalization of product
- Market entry

- Connect with VC/Angel networks
- Connect with Govt grants for marketing of product
- Network for an effective market access
- Connect with accelerators for global market and upgradation of business

**6. Startups Enabling Mechanism**

- Maker Hub IEDC, EDC & IIC will take care of training and most of the ideation stage activities
- Industry-sponsored center of excellence will help to get in touch with present developments in the market. Examples of such CoE are Royal Enfield, Yamaha, Volvo-Eicher, Nest, etc
- IPR Cell of AJCE will extend the support for IPR registration
- Makers Valley, Fab lab, C-DAC PCB lab, E-yantra lab & Idea lab will support the prototyping process
- All the curriculum labs will extend their support for prototyping and testing
- Pre-incubation support at the innovation lab
- Incubation support and Startups Valley TBI

**7. Micro action plan**

**7.1 Major Events**

Sl No	Events	Remarks
1	My Story - Successful Alumni Talk series (5 nos)	1 per year
2	Leadership camp for IEDC Execom	1 per year
3	Tech-start - Cohort based technology startup building workshop	2 per year
4	Skill Camp	2 per year
5	Women startup enabling workshop	2 per year
6	Startup Rise - Idea to Product workshop with funding for 3 districts	2 per year
7	Story Teller - Entrepreneurs & Innovators talk session	1 per month
8	Revive Kerala - Nodal officers meetup - 3 Districts	1 per year
Total events per year		23 Events



## 7.2 Regular events based on calendar

Sl No	Event	Date	Remarks
1	National Youth Day	Jan 11	
2	National Startup Day	Jan 16	
3	National Science Day	Feb 28	
4	International Women's Day	Mar 8	Major Event
5	World Health Day	Apr 7	BIRAC
6	World IPR Day	Apr 26	IPR Cell
7	National Technology Day	May 11	
8	World Environment Day	Jun 5	BIRAC
9	World Nature Conservation Day	Jul 28	BIRAC
10	National Independence Day	Aug 15	
11	Small Industries Day	Aug 30	
12	National Engineers Day	Sep 15	
13	World Tourism Day	Sep 27	
14	Dr A P J Abdul Kalam Birthday	Oct 15	Ignited Minds Day
15	World Food Day	Oct 16	BIRAC
16	National Integration Day	Oct 31	Indira Gandhi Memorial - Major Event
17	Kerala Piravi	Nov 1	
18	Farmers Day	Dec 29	
Total events per year		18 Events	

- Total 40 events can be conducted per year - annually
- At Least one International/ National Mega Event will be conducted based on Technology, Innovation, and Entrepreneurship

- IEDC Innovation & Entrepreneurship Enabling - Outreach programme for selected students and IEDC Execom members of selected IEDCs and students of selected schools from Kottayam, Idukki, and Pathanamthitta districts

### **7.3 Contests (Annually)**

- I2U (Innovation Idea Unleashed) – contest – up to 25 ideas per year will be rewarded with financial support for project development by the management
- IFH – Innovate from Home, winners will be rewarded
- IFI- Innovate from Industry, winners will be rewarded
- Hackathons – department and college levels
- Best Startup Award

### **7.4 Special programmes (in association with other agencies)**

- Management development programmes in association with Kerala Startup Mission
- Innohack – International Hackathon, in association with SRH University for Applied Sciences Berlin, Germany
- One District One Idea Programme – Business cluster development initiative in association with K-DISC, Govt. of Kerala
- Science Ride – Science popularization programmes in association with Department of Science and Technology Govt. of India

## **8. Incubation support system**

- College will invest at least 1% of its annual budget in innovation and entrepreneurship activities
- Conference halls with AV facilities including video conferencing support will be extended
- Guesthouse accommodation will be provided for the needy persons according to the availability of rooms
- Hostel accommodation facility will be extended for the incubatees, hostel rules and regulations are applicable to them
- Student incubatees can use the incubator address for registration of startups, which will be applicable only during the incubation period
- All incubation support will be provided to alumni, staff as well as general public
- Interdisciplinary research and publication on startup and entrepreneurship will be promoted
- Following services will be provided to incubatees
  - Fully Air-Conditioned Incubation Space
  - Library facility through a central library
  - Central computing facility
  - Laboratory Facilities
  - Technical support
  - Financial assistance
  - IPR supports
  - High-Speed Internet
  - Electricity & Water

- Telephone
- Reception service
- Networking opportunities
- Guest-house facilities
- Canteen facility
- Parking Area
- Security service

## **9. Norms for Student Driven Innovations & Startups**

- Students are allowed to setup Startup or work part-time for the startup during the course period, based on university regulations.
- Students are allowed to earn credit/activity points for working on Innovative business models, according to university regulations.
- Student Innovators/entrepreneurs are allowed to opt for startup in place of mini project /major project, seminar and summer training etc.
- Student entrepreneurs can take a semester break/year break to work on their startup with prior approval from the university.
- Student entrepreneurs are allowed to use the address of incubation unit (Startups Valley TBI) to register their venture during studying/incubation period.

## **10. IP Ownership Rights for Technologies Developed**

- If college resources are used, then IPR should be made jointly by the college, and inventor and license together and revenue should be shared among the parties.
- If any one of inventor want to start a startup based on the technology developed by utilizing the college resources, then it can be licensed to inventor with royalty of 4% of sales price to the college.
- If it is in the form of shares, then it will be 4%. In case software share divide is based on mutually decided between the institute incubation unit and incubate company.
- On any dispute on IPR ownership and revenue sharing and licensing, then a five-member committee setup by college will look into the matter and recommend.
- Interdisciplinary research and publication on startup and entrepreneurship will be promoted

## **11. Thrust Areas**

AJCE Innovation and Startup Policy will focus on the expertise and facilities available at the institute, and the regional demands as the primary criteria for identifying thrust areas/ domains. Two categories of areas are selected for innovation promotion through IEDC and Entrepreneurship promotion through TBI. Innovation and Start-up Policy at AJCE shall promote innovation lead technology entrepreneurship that focuses on the future and emerging technologies like:

Innovation and Entrepreneurship Development Center : Any domain (project development )

Technology Business Incubator

: Rural technology  
Artificial Intelligence  
Green Technology  
Information Technology  
Food Tech  
Agri Tech  
Robotics

## **12. Support to Community**

- Conduct innovation promotional programmes for other school/college students
- Provide AJCE I&E facility visit by other schools or colleges
- Organize project expos for the benefit of common people
- Extend the incubation support at Startups valley TBI
- Arrange rural technology exhibitions
- Organize IPR workshop for general public
- Channelize I&E funds for innovators

## **13. Core resource centers available for I&E initiatives**

- Institution Innovation Cell (AICTE)
- Innovation and Entrepreneurship Development Center (Supported by NSTEDB, DST)
- IEDC Bootcamp (Kerala Startup Mission)
- Entrepreneurship Development Cell (Dept of Industries and Commerce)
- IPR Cell of KSCSTE (Kerala State Council Science Technology and Environment)
- Technology Business Incubator (DST, Govt of India)
- BioNEST Technology Business Incubator (DBT, Govt of India)

## **14. Industry Center of Excellence available**

- Royal Enfield CoE (Royal Enfield)
- Eicher CoE (Volvo-Eicher Commercial Vehicles Ltd)
- Yamaha Training School (Yamaha India Motors P LTD)
- Bosch Training School (Bosch ltd)
- ANFOT (NEST Group)
- KEMPPI CoE (KEMPPI)
- C-DAC
- AWS Academy
- Redhat Academy
- Oracle Academy

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