St. MARTIN'S ENGINEERING COLLEGE
Dhulapally, Secunderabad – 500100
NBA & NAAC A+ Accredited

Innovation
&
Startup Policy

CONTENTS

FOREWORD

M. LAXMAN REDDY
CHAIRMAN

MESSAGE

It gives me immense pleasure to launch the Innovation and Startup policy of St. Martin's Engineering College. I congratulate the Principal and Faculty members for conceptualizing these guidelines to promote innovation and entrepreneurship in our institute. This is indeed a historical moment for the college to create novel opportunities for satisfying the aspirations of young minds for their brighter and independent future. Implementation of this policy will serve a major role in developing a creative and innovative products/services that shall not only address the local problems but also render a great service towards global challenges.

I firmly believe that this policy will encourage and motivate the students to build startups. Also it promotes new investments, create new business avenues, increase the job opportunities and provide better livelihood.

M.LAXMAN REDDY

Chairman

FOREWORD

G. CHANDRA SEKHAR YADAV
EXECUTIVE DIRECTOR

MESSAGE

Identification of untapped demand and underdeveloped markets, has given opportunities to various Entrepreneurs to convert their ideas to products. The Indian Startup Ecosystem is driven by an extremely diverse and inclusive entrepreneurial work force. The country has been able to establish a strong footprint in becoming a globally recognized Startup Nation. India has been at the forefront of frugal innovation. India is having the advantage of growing rate of working age population would exceed that of total population. Flipkart, Snapdeal, Paytm, OYO, Ola, Paperboat, BigBasket, Urbanladder are the millennial 'Startups" in India. Both central Government and State Government have been initiated to support all the sectors with special focus on Startups. To fulfill the vision of our Government, our institute has formulated Innovation and Startup policy.

I would like the students and budding Engineers to take advantage of the provisions made in the "Innovation and Startup" policy and provide solution in the field of healthcare, education, agriculture and social infrastructure of the community.

G.CHANDRASEKHAR YADAV

Executive Director

FOREWORD

DR.P. SANTOSH KUMAR PATRA

PRINCIPAL

Start-up India has been a dream mission of the Government of India. To strengthen this mission the Ministry of Human Resource Development framed National Innovation and Startup policy for students and faculties of higher educational institutions.In this context, Government of Telangana has come out with its comprehensive Innovation policy to support innovation in the State.

In line with MHRD 'National Innovation and Startup Policy' and Innovation Policy of the Government of Telangana, we framed a dedicated Innovation and Startup policy which aims to foster entrepreneurship and promote innovationby creating an ecosystem that is conducive for growth of Start-ups.This policy has been prepared keeping in view the teething problem faced by young entrepreneurs. Through this policy, an entrepreneurial environment is provided to the students which will enhance their creativity and innovation skills.

I am glad that this policy will attract the students to choose entrepreneurship as a career rather than seeking a job as well as create an innovation centric atmosphere in our institute. Further, I am sure "Innovation and Startup" policy of St. Martin's Engineering College helps the students to establish many Startups and create more employment opportunities.

(Dr.P. Santosh Kumar Patra)

Principal

1. Introduction

Innovation is a process by which a domain, a product, or a service is renewed and brought up to date by applying new processes, introducing new techniques, or establishing successful ideas to create new value. Innovation is a facilitator of entrepreneurship and a way of empowering people. Continuous innovation is required in all domains to compete and sustain. innovation has been a major change driver globally – intervening to provide accessible and affordable solutions to cater to dynamic consumer needs.Innovation is increasingly recognized as an important driver of economic growth, productivity and employment, and it is widely accepted as a key aspect of economic dynamism.

India is marching towards establishing itself as a top global innovator for high technology products and services. India has started a journey towards creating an enabling environment by putting in place an ecosystem that breeds innovation. The Governmentof India has launched severalsignificant initiatives forpromoting innovation, suchas the Start-up India initiative,Accelerating Growth of NewIndia's Innovations (AGNII),Atal Tinkering Labs, New intellectual property rights (IPR) policy,Smart City Mission, UchchatarAvishkaar Yojana, etc. India has improved its innovation ranking in GII 2020 to reach 48th position from its last year's rank of 55. The country has been able to establish a strong footprint in becoming a globally recognized Startup Nation.India is the top-ranked economy in Central and Southern Asia, showing particularstrengths in tertiary sector and R&D, the quality of its universities and scientific publications, itsmarket sophistication and ICT service exports where it ranks first in the world. India now ranks 3rd among the lower middle-income economy group, a new milestone.India ranks 2nd in the qualityof innovation for the fifthconsecutive year, with top position in the quality of scientificpublications the quality of its universities.

Telangana, the newest state of India, has been a hot bed of technology innovation owing to its rapid growth as a leader in the Information Technology (IT) sector. The Government of Telangana is active in bringing the culture of Innovation and Entrepreneurship in the state. Telangana State Innovation cell (TSIC) has taken so many initiatives to accelerate the startup ecosystem. T- Hub, India's largest incubation ecosystemthat was launched recently is attracting a number of exciting early-stage companies as well as global interest from a range of partners and investors from academia and the industry. The Government of Telangana is keen to further harness the potential of young entrepreneurs by providing the necessary policy linking with the policy of Government of India initiatives including Digital India, Make in India, Standup & Startup India and Skill India. The innovation policy of the Government of Telangana is based on five pillars including Physical infrastructure and program management capabilities, Funding models &Capital, Human Capital, engagement with industry, Rural and Social Enterprise.

2. About SMEC

St. Martin's Engineering College (SMEC) is established in 2002 by St. Martin's Children's Education Society. SMEC offers B.Tech in CSE (240), IT (180), ECE (240), EEE (60), MECHANICAL (180), CIVIL (120), CSE- AI & ML (60) and MBA (120) with an intake of 1080 (UG) and 120 (PG) students per year . SMEC is a prestigious Autonomous(UGC-Govt of India) engineering college and first choice by aspiring students and parents.Since inception, SMEC with a motto of providing Quality Education in a highly disciplined and conducive environment with International Standards.It is a beautiful, unique & ineffable place which exudes positive energy, spiritual epiphany, sense of serendipity and produces intellectual, cultural, social giants & academic leaders.

SMEC is awarded with prestigious grade A+ from NAAC(only 27 colleges in India, awarded A+ grade by NAAC),NIRF ranked, National ranking by ARIIA - 2020, 2(f) & 12(B) Recognized by UGC Act of 1956, NBA accredited, Permanently Affiliated to JNTUH, Approved by AICTE, only young college in Telangana to receive UGC-Paramarsh, ISO certified, DSIR Recognition, J-Hub certified(JNTUH), TASK certified(Govt of Telangana), Part of Institute Innovation Council(MHRD-Govt of India), Remote center of IIT Bombay, Member of CII and MSME certified Institution. Signed more than 88 MoUs with major companies' and institutions. Careers 360 Certified as AA+; Competition Success Review Ranked in top 3; and Wikipedia Ranked 2ndin Telangana. SMEC is bestowed with the glorious Governor Award Thrice; The Engineering Educators' Award 2019; NIRDPR Award (Govt. of India); IDF Best Partner Award; Dewang Mehta Award; TCS ION Award; CSI Award (Students Chapter); Best Innovation by Federation of Gujarat Industries, Street Cause-Most Dedicated Division, Best college award from Education Matter, Best College in sports facility and achievement by Stumagz, Telangana, National Leadership Excellence Award- 2019 by ICCI.Best Engineering College by American College of Dubai, Dubai. Rs. 21.46 Lakhs received from SERB, Government of India, Consultancy project worth of Rs. 444 Crores received from GHMC – Hyderabad, Government of Telangana. Recently Rs.15 lakhs funding from AICTE also received. Adding feather in the cap, now SMEC students started receiving international award and funding (4000 USD) from George Mason University Virginia, USA for our best start up.

Encouraging budding entrepreneurs is one of the prominent aspects in SMEC. Entrepreneurship is one of the prominent importance given in SMEC. The students are encouraged towards entrepreneurship and are trained accordingly. By establishing their own company, the student not only contributes to the nation building but also gives the employment opportunities to many others. The students of SMEC are facilitated in plant training, internships and other industrial related activities so that the students have complete awareness about business activities before becoming an entrepreneur.The College providesincubation facilities for the students and faculty to develop their own ideas into products. The incubation services are offered throughAbdhul Kalam Incubation Center, Texas Instruments Incubation Center, John Smeaton Incubation Center, Tesla Incubation Centre and Internet of Things (IOT) Incubation Center.

3. Preamble

Government of India is fiercely pursuing the goal of creating an enterprisingIndia, State government also taking the initiative on its part to reinforce these initiatives bycreating the enabling atmosphere. India aims to become 5 trillion- dollar economy, then it needs to evolve systems and mechanisms to convert the present demographic dividend into high quality technical human resource capable of doing research and innovation and deep- tech entrepreneurship. The young population of India creates a massive demographic dividend. For the next 40 years, the country would have a youthful, dynamic and productive workforce.

On Global Innovation Index (GII) 2020, India's rank is 48 where the last year rank is 55. Considering India's real potential, it should certainly aspire to within top 25 in next 5 years. It can happen only if robust Innovation and entrepreneurship ecosystem developed in colleges and universities where more professionals need to make their own jobs. To ensure that innovation and entrepreneurship emerges in the higher educational systems, MHRD's Innovation Cell is taking many initiatives like conducting Smart India Hackathon, International Hackathon and establishing Institute's Innovation Councils across higher educational institutions. To promote innovation and entrepreneurship culture among students AICTE created "National Innovation and Startup Policy 2019".This policy provides guidelines to the higher educational institutionsfor creating their own policy in order to promote their students towards innovation and entrepreneurship.

The Government of Telangana also framed an innovation policy with key focus areas like IoT, Health Tech and Sustainability. The state government attached all its entrepreneurship related efforts to T-Hub.T-Hub will support technology-related startups across multiple sectors. Through T-Hub, every startup in the state will have access to all community and promotions events. The state government provides various funds like early-stage investingvehicle T-Fund (Telangana Innovation Fund), T-SEED fund and Phoenix fund to startups for commercializing their ideas.

To fulfill the aim of state government and central government, St. Martin's Engineering College formulated an Innovation and Startup Policy by interacting with alumni entrepreneur, Innovator, Startup founder and Industry Representative. The policy is presumed to nurture innovation, investment in R&D, infrastructure,knowledge creation, technological development and skilled manpower, resulting in highgrowth entrepreneurial ventures across the spectrum of various sectors.

4. Vision

To create a vibrant and sustainable ecosystem in the institute by nurturing innovation skills of students and enabling them to create technology-based startups.

5. Mission

- Motivating the students to work on new ideas and convert them into successful products.
- Inculcating the innovation and entrepreneurship culture among the students and encouraging them to create startups.
- Encouraging the students to involve in startup and entrepreneurship related activities.
- Providing Capacity building programmes and activities for students

6. Long Term Objectives

- Encourage, facilitate and support emergence of large number of technology startups.
- Attract investments into the Incubation and Startup Ecosystem in terms of crores.
- Extend a dedicated support for providing innovative technology solution to society-oriented problems.
- Collaborate with private and government industries to promote entrepreneurship among the students
- Attract large corporates to set up Centers of Excellence to promote entrepreneurship culture.
- Generating funds from external entities to create startups and promote innovation.

7. Short Term Objectives

- Encourage the students to choose entrepreneurship as their careers.
- Train the students with necessary skills for creating their own startups.
- Inculcate the social responsibility of students.
- Provide necessary support to the students to launch their own startups during their course of study.
- Guide the students about Intellectual Property Rights protection
- Motivate the students to identify the business opportunities in their local areas.

8. Innovation and Startup Policy

8.1 Strategies & Governance for Promoting Innovation & Entrepreneurship

- The Innovation and Startup Policy of our institute is developed in align with National Innovation and Startup Policy 2019 and Innovation Policy of the Government of Telangana.

- A Senior Faculty with less hierarchy and autonomy is assigned to implement the Entrepreneurial activity.

- Resource mobilization plan is available at the institute for supporting pre-incubation, incubation infrastructure and facilities

- Minimum 1% fund of the total annual budget of the institution is allocated for funding and supporting innovation and startups related activities through creation of separate 'Innovation fund'.

- Activities are in place to get 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.

- Funding through Corporate Social Responsibility (CSR) as per Section 135 of the Company Act 2013, sponsorships, donations and alumni network shall also be explored.

- Strategy shall be developed to promote the entrepreneurial activities across various centers, departments, faculties.

- International partnerships should be developed using bilateral and multilateral channels with international innovation clusters and other relevant organizations.

8.1.1 Creating Innovation Pipeline and Pathways for Entrepreneurs

- Maximum number of students should participateandgothroughpre-incubationprocessofProblemidentification,Solutiondevelopment,ProofofConceptvalidation andprototypedevelopment,businessmodelandproposaldevelopment.

- Incubation unit in institution is collaborated with external agencies and ecosystem enablers and provide network support to incubate startups.

- Students will be motivated to participate innovation and business plan competitions and Hackathons. 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.

- Startup Fest and Idea Hackathons will be conducted at national level in the campus. Such initiatives would serve as an ideal platform to explore their entrepreneur skills.

8.1.2 Building Organizational capacity, Human Resources and Incentives

- Faculty will be recruited with strong innovation and entrepreneurial/ industrial experience,
  behavior and attitude.

- Faculty members with prior exposure and interest should be deputed for training to promote Innovation &Entrepreneurship (I&E).

- The faculty members from all the department have to work in coherence and cross-departmental linkages should be strengthened through shared faculty, cross-faculty teaching and research in order to gain maximum utilization of internal resources and knowledge.

- Periodically a guest lecture and innovative programs will be conducted for strategic advice and bringing in skills

- Faculty and staff should be encouraged to do courses on innovation, entrepreneurship management andventure development.

- Reward and incentive will be given to faculty members and staff to actively contribute and supportentrepreneurship agenda and activities.

- The reward system for the staff may include sabbaticals, office and lab space for entrepreneurialactivities, reduced teaching loads, awards, trainings, etc.

- The recognition of the stakeholders may include offering use of facilities and services, strategyfor shared risk, as guest teachers, fellowships, associateships, etc.

- A performance matrix should be developed and used for evaluation of annual performance

8.1.3 Collaboration, Co-creation and Business Relationship and Knowledge Exchange

- Institutes should find potential partners, resource organizations, micro, small and medium sizedenterprises (MSMEs), social enterprises, schools, alumni, professional bodies and entrepreneurs to support entrepreneurship and co-design the programs.

- Mechanisms will be devised to ensure maximum exploitation of entrepreneurial opportunities with industrial and commercial collaborations.

8.2 Norms for Faculty & Students Driven Innovations and Startups

- Provide access to pre-incubation & Incubation facility to start ups by students,staff and faculty for mutually acceptable time-frame.

- 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 distinguishtheir ongoing research activities as a student from the work being conducted at the start up.

- 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 institution.

- The faculty and staff will be allowed to take off for a semester / year (or even more depending upon the decision of review committee) as sabbatical/ unpaid leave/ casual leave/ earned leave for working on startups and come back. Institution should consider allowing use of its resource tofaculty/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.

- The students/ faculty/staff will be allowed to use institute infrastructure and facilities to facilitate the startup activities/ technology development.

- Short term internship training and mentorship support will be provided to the students.

- Facilitation will be provided in a variety of areas including technology development, ideation, creativity,   design thinking, fund raising, financial management, cash-flow management, new ventureplanning, business development, product development, social entrepreneurship, product costing, marketing, brand-development, human resource management as well as law and regulations impacting a business.

8.2.1   Incentivizing Students for Innovation and Entrepreneurship

- Students will be allowed 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.

- Students entrepreneurs will 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 Institute.

- The students are permitted to take a semester/year break based upon the decision of review committee 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. Institute will 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.

- The institute should explore provision of accommodation to the entrepreneurs within the campus for some period of time.

8.2.2 Incentivizing Faculty for Innovation and Entrepreneurship

- The faculty will be allowed facultytostartStartupbasedonthetechnologydevelopedinthelabattheinstituteorpreviouslydevelopedsomewhereelsebuthaveownershiponIP,iftechnologybased.

- The facultyandstaff will be allowed totakeoffforasemester/yearassabbatical/unpaidleave/casualleave/earnedleaveforworking onstartupandcomeback.

- Norestrictiononsharesthatstaffandfacultycantakeaslongastheydon'tspendmorethan20%of officetimeonthestartupinadvisoryor consultant's roleanddon'tcompromisewiththeirexistingacademicandadministrativeworkorduties.

- Incasefaculty/staffisdrawingsalaryforminstitute,institute'sstake/equityonstartupshouldbelimitedto20%oftotalshareoffaculty/stafffor9.5%oftotalstakewhicheverisminimum.

8.2.3 Norms for Faculty Startups

- Roleoffacultywhileteachingmaybeasowner/founder/co-founder/Director-promoter/adviser/mentor/consultantbut can't takeroleofemployeeasCEOorothermanagerialroleinhis/herstartupand can't drawsalaryfromstartupand can't acceptgiftsfromhisownstartup.He/shecantakeshareonprofitanddividendonlyifanyfromstartupasowner/shareholder.

- 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.

- Faculty must clearly separate and distinguish on-going research at the institute from the workconducted at the startup/ company.

- In case selection for acceleration or incubation, the faculty may take sabbatical leave or other leave up to one semester or year or more based on committee recommendation.

- Faculty must not involve research staff or other staff engaged in academic projects of institute in activities at the startup

8.3 Incubation & Pre-Incubation support Facility Creation and Access

- Pre-incubation will prepare student entrepreneurs for the incubation phase by providing them with prerequisite skills and knowledge that will help them to validate and assess their ideas.

- Pre-incubation and incubation facilities will be given to the faculty and students for nurturing innovations and startups

- This Pre-Incubation/Incubation facility will be accessible 24x7 to students, staff and faculty of all disciplines and departments across the institution.

- Mentoring and other relevant services will be provided through Pre-incubation/Incubation unitsin-return for fees, equity sharing and (or) zero payment basis.

- In return of services offered (Space, Infrastructure, mentorship, seed fund, accountant and legal and patent support) and use of facilities at Institute/incubation unit may take 2-9.5% equity / stake in the startup/company incubated.

- Startup may be given a cooling period of 3 months to use the incubation services on rental basis to take final decision in the case of compulsory equity model.

8.4 IP Ownership Rights for Technologies Developed

- When institute facilities / funds are used substantially or when IPR is developed as a part ofcurriculum/ academic activity, IPR is to be jointly owned by inventors and the institute.

- Ifanyoneofinventorwanttostartastartupbasedonthetechnologydevelopedasabove,thenitca nbelicensedtoinventorwithroyaltywouldbenomorethan4%ofsalesprice,preferably1-2%,unlessitispuresoftwareproduct.

- If it is inform of shares, then it will again between1-4%.Incase of software shared ivied is based on mutually decided between the institute/ incubation unit and incubate company.

- IPR cell is functioning to carry out the patent filing task and examine whether the IPR is worth patenting. The IPR cell consist of faculty who have experience and excelled in technology translation.

- Interdisciplinary research and publication on startup and entrepreneurship will be promoted to excel innovation.

8.5 Pedagogy and Learning Interventions for Entrepreneurship Development

- 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.

- In addition to regular classes and assignments, entrepreneurs or startup entrepreneurs will be invited on campus to mentor/guide the students. Validated learning outcomes should be made available to the students.

- A set of activities will be scheduled like opportunity sensing and business Ideation, Raw Ideas to Viable Business Idea, Technology Commercialization, IP filing and Business plan preparation.

- In the beginning of every academic session, an induction program will be conducted 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 should be continuously updated based on entrepreneurship research outcomes. This should also include case studies on failures.

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

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

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

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

- Pedagogical changes need to be done to ensure that maximum number of student projects andinnovations are based around real life challenges. Learning interventions developed by the institutes for inculcating entrepreneurial culture should be constantly reviewed and updated.

- Annual 'INNOVATION & ENTREPRENEURSHIP AWARD' is in practice to recognize outstanding ideas, successful enterprises and contributors for promoting innovation and enterprises ecosystem within the institute.

8.6 Entrepreneurial Performance Impact Assessment

- Impact assessment of entrepreneurial initiatives such as pre-incubation, incubation, entrepreneurship education shall be performed regularly.

- Well defined evaluation parameters or key performance indicators shall be developed for impact assessment.

Glossary

Entrepreneurial culture	A culture/ society that enhance the exhibition of the attributes, values, beliefs andbehaviors that are related to entrepreneurs.
Hackathon	A hackathon is a design sprint-like event in which computer programmers and others involved in software development, including graphic designers, interfacedesigners, project managers, and others, often including domain experts,collaborate intensively on software projects.
Incubation	Incubation is a unique and highly flexible combination of business developmentprocesses, infrastructure and people, designed to nurture and grow new and smallbusinesses by supporting them through the early stages of development.
Pre-incubation	It typically represents the process which works with entrepreneurs who are in thevery early stages of setting up their company. Usually, entrepreneurs come intosuch programs with just and idea of early prototype of their product or service.
Startup	An entity that develops a business model based on either product innovation orservice innovation and makes it scalable, replicable and self-reliant