



# **SRI MANAKULA VINAYAGAR ENGINEERING COLLEGE**

**(An Autonomous Institution)**

**Puducherry - 605 107**



## **Ecosystem for Innovations**



## Ecosystem for Innovations

The institution provides an environment that fosters innovation and incubation. Necessary facilities are provided for students, and guidance is extended to help them in their innovation and incubation efforts. Students are encouraged to apply technology to address societal needs. Support is given for the publication of research papers, conference participation, and obtaining patents. Awareness meets, workshops, seminars, and guest lectures on entrepreneurship are organized. Students have the opportunity to directly interact with successful entrepreneurs in various fields. Product service Training is provided for creating awareness on marketing the products. Training is provided to create awareness about marketing products.

The sole objective of the Incubation Center is to facilitate students to convert their Ideas into Technological Innovations. Facilities are provided for students to build prototypes for the promotion of agriculture and rural development. Financial assistance is given for both major and minor research projects.

The college has recognized research centers in fostering academic and research activities. Students are encouraged to pursuing Ph.D Programme. Students have initiated startups to transform their innovations into economic growth.

The college has recognized as a host center by external organizations like Micro, Small and Medium Enterprises (MSME). Students participated in various competitions, such as those organized by SAE India, showcasing their innovations in Designing and fabrication of E-Vehicles. Enable the student for the Industry 4.0 revolution and technologies.

Other Initiatives for creation and transfer of knowledge include. College established Robotics club, ASM Material advantage chapters for better network with industry expert for project collaborations Through this chapters the institute conduct events like Project and coding contest, through these activities students will be exposed to national and international environments and get inspiration about innovations.

With a view to fostering the creative potential of Engineering students, the All India Council for Technical Education (AICTE) has approved to set up the IDEA (Idea, Development, Evaluation & Application) Lab to boost new-age learning among students. The primary objective of establishing IDEA lab is to make the students more imaginative and creative and also to equip the students with 21st Century Skills of Design Thinking, Problem Solving and multi-disciplinary approach that enable rapid transformation of ideas into prototypes.

Financial support is extended to students for exhibiting their models at Idea Generation Contests held by other organizations. Students are given opportunities to acquire skills for the commercialization of their products. Local entrepreneurs are invited to address students and provide inspiration.



## Research and Development (R&D) Cell

The Research and Development Cell (R&D Cell) at Sri Manakula Vinayagar Engineering College (SMVEC) encourages research activities among faculty and students in engineering, technology, science, and humanities. The R&D Cell also helps faculty and students submit research proposals to funding agencies and patent innovative ideas.

Research laboratories were established under the supervision of R&D cell to conduct the research by faculty and students. Eleven departments received Pondicherry University recognized research centers for Ph. D programme. The Research and Development Cell regularly organizing workshops on Art of Writing Research Papers to faculties and students, to meet its research target. The R&D Cell encourage faculties and scholars to publish their research works in reputed journals that have good impact factor and are indexed in Scopus and Web of Science (WOS). Research Advisory Board (RAC) is constituted with eleven expert members from different reputed university to advice policy guide lines and provide directions for the growth and development of research. The institution signed MoUs with reputed industries to partner in research projects by different departments for products development.



Workshop On Art of Writing Research Proposal 18-11-2022



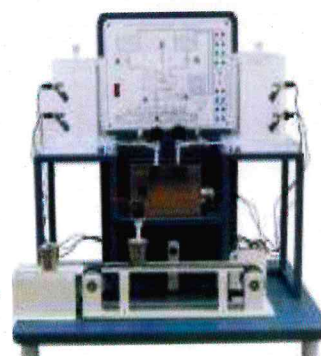
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MEMORANDUM OF UNDERSTANDING  
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## Research Facilities





### **SMVEC Center of Excellence:**

SMVEC has inaugurated about **17 Center of Excellence** in the college campus, in tie-up with top global Multi-National Companies. By utilizing the training and lab facility available in campus, students can pursue and obtain international certificate without the complication of going for an outside training centers. About **91 International certificate courses** of top companies are available in the 17 CEO available in the SMVEC campus.

The COE of SMVEC has been established with the Tie-Up with Ethnotech Academic Solutions Pvt Ltd, a one of the top knowledge consulting organizations who has experience in executing COE in top Indian educational institutions. Ethnotech helped SMVEC in establishing State of Art Laboratory with industrial standards and corporate level training standards.

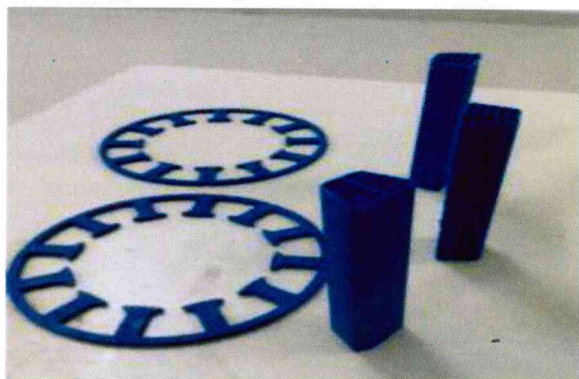
This high standard of training, industry tie-ups, company specific training, international certification, knowledge sharing, career guidance, soft skill development, right attitude training, etc, are focused towards the development of students for facing the competitive world.

### **Institution Innovation Council (IIC):**

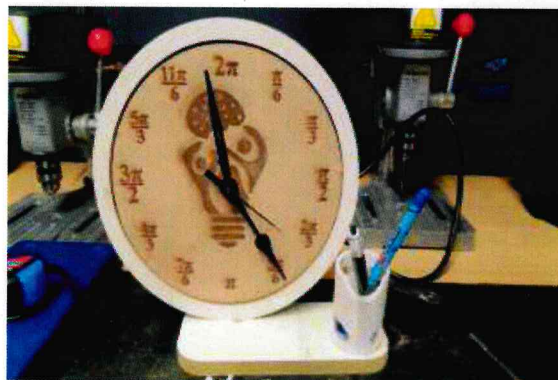
The Institution Innovation Council was started in 2019 at the initiative of the Innovation Cell of the Ministry of Human Resource Development, Government of India. The Council includes members from students, teachers, industry and Patent expert. A number of activities are conducted through this Council to motivate and promote creativity and innovation among students and faculty members as given below.

- Technical seminars by Industry experts
- Workshops on IPR and Entrepreneurship
- Hackathons for students
- Project expo for students
- Innovation challenge and business plan competition
- Field visit to incubation centre.

The Council has been awarded 3 stars by MHRD IC for performance during 2019-20, 2020-21 and 22-23. Four faculty members have been trained as ambassadors in product design, product development, IPR and entrepreneurship. All these have helped in promoting innovation and ideas for technology development for commercialization.



False laminations



Students Developed Clock with Pen Stand

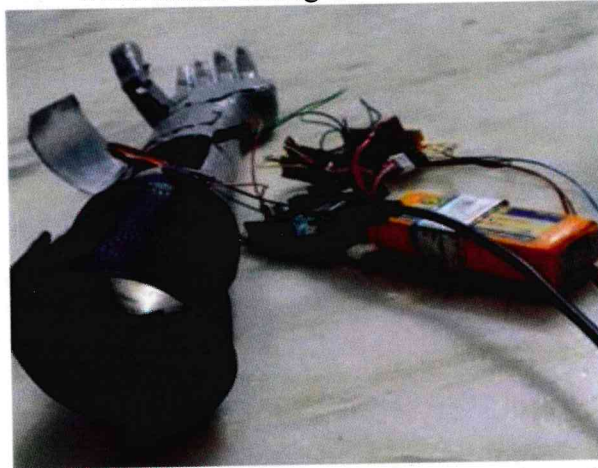




Face shield during Covid 19



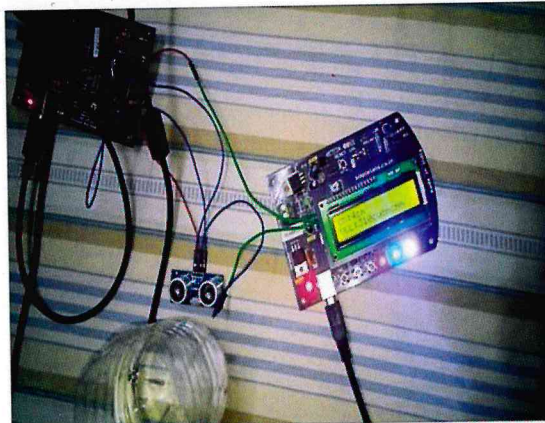
3D printed Photo Frame



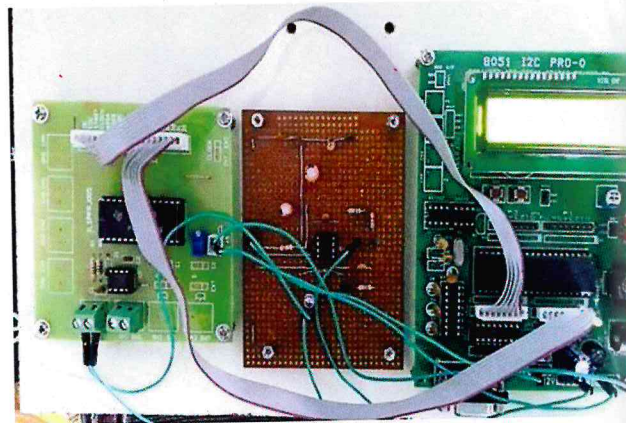
Animatronic Hand for The Physically Challenged



Warning System in Coal Mines



Digital Fuel Indicator



Analyzing Electro Magnetic Radiation





Ground nut harvester

### Intellectual Property Rights (IPR) Cell

Intellectual Property Rights (IPR) Cell is Established in a year 2020 to provide a platform to share and discuss the latest development and applications with practical exposure and assist the faculty members, students and research scholars for patent filing process.

#### Objectives:

- To provide awareness on IPRs protection information, orientation and facilities to faculty & students
- To get necessary clearances from competent authorities while filling patents and other IPRs like copyrights registration and design registration, etc. through IPR Cell.
- To workout modalities on behalf of students for commercialization of patented technologies.
- To organize various IPR awareness programmes in collaborating with Research With the continuous and sustained efforts all the faculty and students and also in collaborative research

111 design patents are filed ,50 Published and 20 product patents applied for grant.



One Day Seminar on Patent for Engineers on 18-02-2022





Two days workshop on IPR and Patent filing

### Outcomes of IPR Cell

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :28/08/2020

(21) Application No.202041037094 A

(43) Publication Date : 04/09/2020

(54) Title of the invention : SMART PORTABLE AUTOMATED PANEER MAKING DEVICE

(51) International classification

(31) Priority Document No

(32) Priority Date

(33) Name of priority country

(86) International Application No  
Filing Date

(87) International Publication No

(61) Patent of Addition to Application Number  
Filing Date

(62) Divisional to Application Number  
Filing Date

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31/00

:NA

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(71)Name of Applicant :

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(72)Name of Inventor :

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5)DR.K.HEMALATHA

6)DR.T.COUMARESSIN

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8)DR.G.BALAMURUGA MOHAN RAJ

9)DR.R.RAVISANKAR

10)L.MARTIN

(57) Abstract :

Paneer preparation time is a more time-consuming process and requires more human effort. In this approach, the entire paneer making process is automated in a convenient and hygienic way in order to produce high quality and fresh paneer with less human effort. The basic requirement for the paneer maker involves boiling the milk in an efficient and non-interactive way, adding coagulating agents like vinegar and to stir in a compact way and to drain the whey as simple as possible and then finally applying a gradual pressure over the paneer. All these processes are carried out by modifying the milk boiler and providing some special attachments over it. In order to reduce human interaction, the whole process is automated by using a microcontroller. This invention also satisfies the demand of the small-scale industries and homes for making the paneer.

No. of Pages : 16 No. of Claims : 3



## DESIGN PATENT

**ORIGINAL**  
No. 109687

**भारत सरकार**  
**GOVERNMENT OF INDIA**  
**पेटेंट कार्यालय**  
**THE PATENT OFFICE**

**CERTIFICATE OF REGISTRATION OF DESIGN**

Design No. 356034-003  
Date 03/01/2022  
Reciprocity Date\*  
Country

Certified that the design of which a copy is annexed hereto has been registered as of the number and date given above in class 15-05 in respect of the application of such design to AUTOMATIC FLOOR MOPPING MACHINE in the name of 1. SRI MANAKULA VINAYAGAR ENGINEERING COLLEGE, MADAGADIPET, PUDUCHERRY - 605 107, INDIA 2. DR. V. S. K. VENKATACHALAPATHY, DIRECTOR CUM PRINCIPAL, SRI MANAKULA VINAYAGAR ENGINEERING COLLEGE, MADAGADIPET, PUDUCHERRY - 605 107, INDIA 3. DR. K. VELMURUGAN, DEAN - RESEARCH & DEVELOPMENT, SRI MANAKULA VINAYAGAR ENGINEERING COLLEGE, MADAGADIPET, PUDUCHERRY - 605 107, INDIA 4. DR. L. MARTIN, ASSOCIATE PROFESSOR, DEPARTMENT OF MECHANICAL ENGINEERING, SRI MANAKULA VINAYAGAR ENGINEERING COLLEGE, MADAGADIPET, PUDUCHERRY - 605 107, INDIA, ET AL.

in pursuance of and subject to the provisions of the Designs Act, 2000 and the Designs Rules, 2001.

**INTELLECTUAL PROPERTY INDIA**  
Controller General of Patents, Designs and Trade Marks

\*The reciprocity date (if any) which has been allowed and the name of the country.  
Copyright in the design will subsist for ten years from the date of Registration, and may underlie terms of the Act and Rules, be extended for a further period of five years.  
This Certificate is not for use in legal proceedings or for obtaining registration abroad.

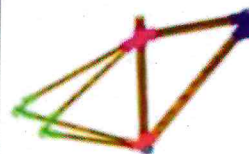
DR. V. S. K. VENKATACHALAPATHY,  
SRI MANAKULA VINAYAGAR ENGINEERING  
COLLEGE MADAGADIPET, PUDUCHERRY - 605 107,  
INDIA

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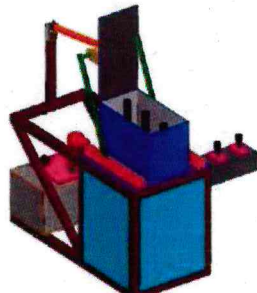
DESIGN NUMBER	350546-001
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1. SRI MANAKULA VINAYAGAR ENGINEERING COLLEGE, MADAGADIPET, PUDUCHERRY - 605 107, INDIA 2. DR. V. S. K. VENKATACHALAPATHY, DIRECTOR CUM PRINCIPAL, DEPARTMENT OF MECHANICAL ENGINEERING, SRI MANAKULA VINAYAGAR ENGINEERING COLLEGE, MADAGADIPET, PUDUCHERRY - 605 107, INDIA 3. DR. K. VELMURUGAN, PROFESSOR & HEAD, DEPARTMENT OF MECHANICAL ENGINEERING, SRI MANAKULA VINAYAGAR ENGINEERING COLLEGE, MADAGADIPET, PUDUCHERRY - 605 107, INDIA 4. DR. K. HEMALATHA, ASSOCIATE PROFESSOR, DEPARTMENT OF MECHANICAL ENGINEERING, SRI MANAKULA VINAYAGAR ENGINEERING COLLEGE, MADAGADIPET, PUDUCHERRY - 605 107, INDIA, ET AL.	
DATE OF REGISTRATION	04/10/2021
TITLE	POMOGRANATE DESEEDER
PRIORITY NA	

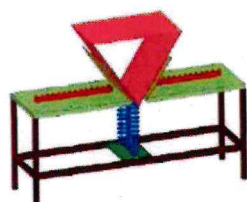


DESIGN NUMBER	350543-001
CLASS	12-11
1. SRI MANAKULA VINAYAGAR ENGINEERING COLLEGE, MADAGADIPET, PUDUCHERRY - 605 107, INDIA 2. DR. V. S. K. VENKATACHALAPATHY, DIRECTOR CUM PRINCIPAL, DEPARTMENT OF MECHANICAL ENGINEERING, SRI MANAKULA VINAYAGAR ENGINEERING COLLEGE, MADAGADIPET, PUDUCHERRY - 605 107, INDIA 3. DR. K. VELMURUGAN, PROFESSOR & HEAD, DEPARTMENT OF MECHANICAL ENGINEERING, SRI MANAKULA VINAYAGAR ENGINEERING COLLEGE, MADAGADIPET, PUDUCHERRY - 605 107, INDIA 4. S. VIJAYARAJ, DEPARTMENT OF MECHANICAL ENGINEERING, SRI MANAKULA VINAYAGAR ENGINEERING COLLEGE, MADAGADIPET, PUDUCHERRY - 605 107, INDIA, ET AL.	
DATE OF REGISTRATION	04/10/2021
TITLE	BAMBOO BICYCLE FRAME
PRIORITY NA	





Design Number	373086-003	
Class	15-09	
1.SRI MANAKULA VINAYAGAR ENGINEERING COLLEGE MADAGADIPET, PUDUCHERRY-605107 INDIA 2. DR S JAYAKUMAR, (PROFESSOR), DEPARTMENT OF CIVIL ENGINEERING, SRI MANAKULA VINAYAGAR ENGINEERING COLLEGE, MADAGADIPET, PUDUCHERRY-605107 INDIA		
Date of Registration	26/10/2022	
Title	PERFORATED INTERLOCKING BRICK MOULDING.MACHINE	
Priority NA		

Design Number	373089-002	
Class	13-01	
1.SRI MANAKULA VINAYAGAR ENGINEERING COLLEGE MADAGADIPET, PUDUCHERRY-605107 INDIA 2. DR V.S.K VENKATACHALAPATHY DIRECTOR CUM PRINCIPAL, SRI MANAKULA VINAYAGAR ENGINEERING COLLEGE, MADAGADIPET, PUDUCHERRY-605107, INDIA 3. P SATHIA PRATHAP ASSISTANT PROFESSOR, DEPARTMENT OF MECHANICAL ENGINEERING, SRI MANAKULA VINAYAGAR ENGINEERING COLLEGE, MADAGADIPET, PUDUCHERRY-605107, INDIA 4. V BALAJI DEPARTMENT OF MECHANICAL ENGINEERING, SRI MANAKULA VINAYAGAR ENGINEERING COLLEGE, MADAGADIPET, PUDUCHERRY-605107, INDIA , et al.		
Date of Registration	26/10/2022	
Title	DEVICE FOR POWER GENERATION FROM HUMAN STRIDE	
Priority NA		

#### Entrepreneurship Development Cell (EDC)

Entrepreneurship Development Cell (EDC) was formed in the year 2019 Institute EDC C continuously conducts events and awareness workshops to students. Cell started in 2019 with the a to Promote and sustain student innovations from ideation to startup developing entrepreneurial e system. For the past 5 years our students are participating in the CII project context and won numl of awards and seed money grant for students.

#### List of Achievements:

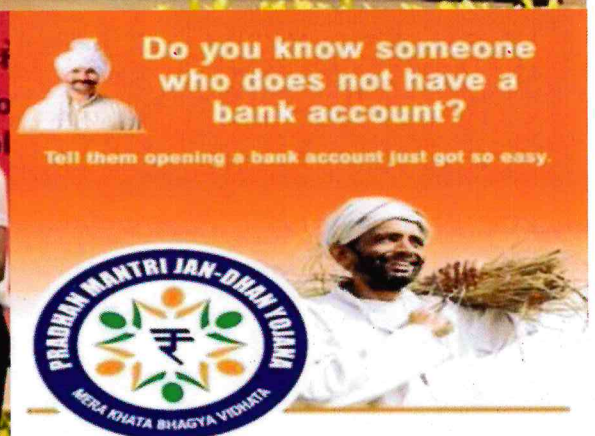
- Bronze Medal in Techgium 2018 with Rs.2 lakhs cash award.
- Winner of Project contest SRISHTI 2019 cash award of Rs.1,12,000/- conducted by, Saint gits College of Engineering, Kotayam.
- Third year ECE students D.Sakthikumaran, R.Dhivakar, Anbu won first prize of Rs.50000 and second prize of Rs.35000 in Robowar, shaastra 2k19 conducted by IIT Madra
- III year EEE students Ms. S. Ilakkiya, Ms. S. Madhumitha, received Punjab Technical University Award For Young Engineer Innovators in ISTE Student National Convection held on 29th & 30th January 2019 at Lalbhai Dhalpatbhai College of Engineering, Ahmadabad.
- Winner of Smart India Hackathon 2021 in the category of Hardware Project with cash pr of Rs. 1,00,000.
- Winner of Inframind 2021 and won the cash award of Rs. 1.5 lakhs with Digital O conducted by TCS.
- 2nd Runner up of Unisys Cloud 20/20 - 2021 event conducted by Unisys, Bangalore w cash prize of Rs. 1,00,000.
- Winner of AICTE – Lilavati Award 2021 with cash award of Rs. 50,000.
- Winner of Inter College Innovation Challenge (IC)2021 with cash prize of Rs.1,00,000.



- Final year students of Information Technology won First place in “Virtusa Jatayu Season II – a business requirement in 2022.
- S.T Narendra Ganesh won the First Prize for “On-Spot Doodling on Virtual Reality” conducted by ‘edureka! Learning Center’, Villupuram on 18<sup>th</sup> November 2022.
- III Year Students of Biomedical Engineering secured a position in top 5 teams and won Cash Prize Amount of Rs.10, 000/- in an Innovation Contest 2022 conducted by CII Puducherry.



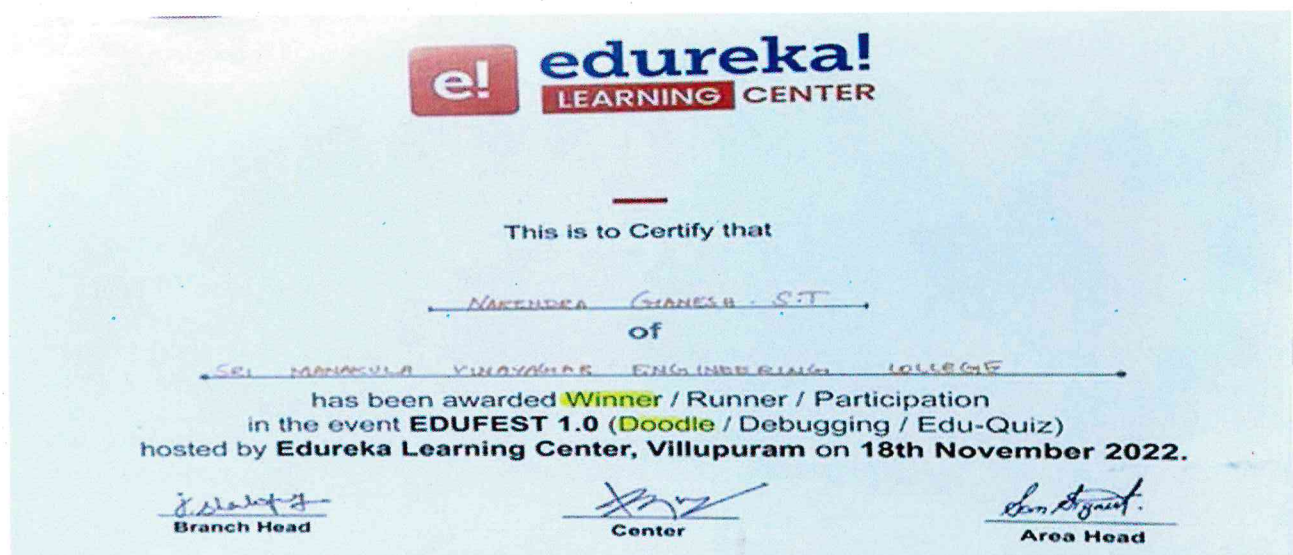












### AICTE IDEA Lab

AICTE-IDEA Labs are being established in engineering colleges across India to help students develop their creative and problem-solving skills. These labs will provide students with the facilities and resources they need to turn their ideas into prototypes. SMVEC-AICTE IDEA Lab was established in the year 2022.

IDEA Labs will have a wide range of equipment and tools, such as 3D printers, laser cutters, and electronics kits. Students will be able to use these resources to design and build their own projects. In addition to providing technical skills, IDEA Labs will also help students develop 21st century skills such as critical thinking, collaboration, and communication. Students will be encouraged to work together on projects and to present their work to others. The ultimate goal of IDEA Labs is to transform engineering education and to help students become more creative and innovative. **53 events were conducted through our AICTE Ideal Lab.**

#### Training offered in IDEA Lab:

- Training for faculties: FDP
- Training for students: Skilling Program, Ideation workshop, Internship
- Industry Members: Awareness workshop
- ITI students: Professional Skilling Program
- School Students: Projects by school students
- School teachers: Awareness Program







*Buefa*  
Dean R&D



*[Signature]*  
Director cum Principal



