SRI MANAKULA VINAYAGAR ENGINEERING COLLEGE
(An Autonomous Institution)
(Approved by AICTE, New Delhi & Affiliated to Pondicherry University)
(Accredited by NBA-AICTE, New Delhi, Accredited by NAAC with "A" Grade)
Madagadipet, Puducherry - 605 107

DEPARTMENT MECHANICAL ENGINEERING

3D PRINTING CLUB ANNUAL REPORT

(Academic Year: 2022 to2023)

Submitted by
Dr.P.Jayakumar
Associate Professor
Faculty Coordinator

PREFACE

The 3D Printing Club was established to provide a creative and collaborative space for individuals interested in design, innovation, and modern manufacturing technologies. The club serves as a platform where members can explore the fundamentals of 3D printing while developing practical skills in modelling, prototyping, and problem-solving.

Through hands-on projects, workshops, and collaborative activities, the club encourages curiosity, creativity, and technical growth. Members are given opportunities to transform ideas into tangible objects, fostering an understanding of how digital concepts can be brought to life using additive manufacturing.

The club also aims to promote teamwork, knowledge sharing, and responsible use of technology. By engaging with emerging tools and techniques, members are prepared to adapt to the rapidly evolving fields of engineering, design, and technology.

Faculty Coordinator

HoD/Mech **IQAC Coordinator** **Director Cum principal**

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ABOUT THE INSTITUTE

Sri Manakula Vinayagar Educational Trust was founded to provide quality and affordable education to the weaker sections of society. The trust established Sri Manakula Vinayagar Engineering College (SMVEC) in 1999. SMVEC is an autonomous institution affiliated to Pondicherry University. It offers 13 undergraduate, 8 postgraduate and 11 Research programs in engineering. SMVEC has been accredited by NAAC with "A" grade and NBA. The institution is also accredited by TATA consultancy services. The college has a good placement record with students getting job offers from top companies in India and abroad. SMVEC students have won many awards and accolades for their academic achievements. To be globally recognized for excellence in quality education, innovation and research for the transformation of lives to serve the society.

Vision

To nurture the cornerstone of excellence in engineering education and drive innovation by seamlessly integrating the fundamentals of Science and Humanities

Mission

M1: Quality Education: To provide comprehensive academic system that amalgamates the cutting edge technologies with best practices.

M2: Research and Innovation: To foster value-based research and innovation in collaboration with industries and institutions globally for creating intellectuals with new avenues.

M3: Employability and Entrepreneurship: To inculcate the employability and entrepreneurial skills through value and skill based training.

M4: Ethical Values: To instill deep sense of human values by blending societal righteousness with academic professionalism for the growth of society.

ABOUT THE DEPARTMENT

Welcome to the Department of Mechanical Engineering at Sri Manakula Vinayagar Engineering College (SMVEC). Established in 2008, our department focuses on quality education with practical, hands-on learning. Our faculty, many with doctorates, are active researchers who publish extensively. We offer state-of-the-art labs and research groups, preparing well-rounded engineers for the growing demand in manufacturing. We prioritize transparency and student engagement, collaborating with technical and professional societies for a holistic academic experience. As one of the top B.Tech mechanical colleges in Pondicherry, SMVEC is committed to nurturing students to become leaders in the mechanical engineering field.

DEPARTMENT VISION AND MISSION

VISION

The Mechanical Engineering department strives to be recognized as an excellent academic and research center for creating outstanding Engineers, Entrepreneurs and Leaders

Mission

M1: Professional Skills:

To provide quality education to enhance students inter-personal and intra-personal skills

M2: State-of-art facilities:

To render excellent infrastructure facilities and laboratories to excel as skilled professionals

M3: Research Exposure:

To Strengthen Research and Development within the department through industrial associations

M4: Employability:

To put enthusiastic exertions to enhance employability and entrepreneurship skills of students

M5: Human Values:

To empower students with professional ethics and human values to serve the society

ABOUT THE 3D PRINTING CLUB

The 3D Printing Club was formed with the objective of promoting innovation, creativity, and practical learning through additive manufacturing technology. The club provides members with hands-on experience in 3D design, modeling, and printing, helping them understand the real-world applications of this emerging technology.

Throughout the year, the club organized workshops, training sessions, and project-based activities focused on 3D modeling software, printer operation, and material handling. Members actively participated in designing and fabricating prototypes, which enhanced their technical skills and problem-solving abilities.

The club also encouraged teamwork and knowledge sharing among members, creating a collaborative learning environment. By engaging in practical projects, members gained exposure to modern manufacturing techniques and developed an interest in engineering, design, and technology-related fields.

Objective

- Provide members with opportunities to learn and enhance their skills in 3D printing technology. This could include training sessions, workshops, and collaborative projects.
- Foster a community where members can share their knowledge and experiences related to 3D printing.
- Encourage collaboration on 3D printing projects that involve creativity and problem-solving. Members could work together on innovative projects or contribute to larger community initiatives.
- Provide access to 3D printing resources such as printers, materials, and software. This can be particularly beneficial for members who may not have their own equipment.
- Encourage members to explore the cutting edge of 3D printing technology. This might involve research projects, attending conferences, or inviting experts in the field to share their insights.
- Foster a fun and creative atmosphere where members can explore the artistic and design aspects of 3D printing. This might involve contests, exhibitions, or themed projects

OUTCOMES OF THE 3D PRINTING CLUB

- Developed practical skills in 3D modeling, slicing, and additive manufacturing
- Enhanced hands-on experience with 3D printers and related technologies
- Improved creativity, innovation, and design-thinking abilities
- Strengthened problem-solving and critical-thinking skills through projects
- Encouraged teamwork, collaboration, and peer learning
- Increased awareness of real-world applications of 3D printing

OFFICE BEARERS AND THEIR PORTFOLIOS:

S.No	Name	Position
1.	Dr.A.Ganeshkumar Associate Professor /Mech	Staff Coordinators
2.	Mr.P.Jayakumar Associate Professor / Mech	
3.	Hariharan.P	President
4.	Karthikeyan.R	Vice President
5.	Vignesh.R	Secretary
6.	Amalanathan.a	Treasurer

The 3D Printing Club functions through the coordinated efforts of its office bearers, each contributing to the smooth operation and successful execution of club activities. The President provides leadership, plans objectives, and oversees all club operations. The Vice President assists the President and ensures continuity in leadership when required.

The Secretary is responsible for maintaining records, documenting meetings, preparing reports, and managing official communication. The Treasurer handles financial planning, maintains accounts, and ensures transparent utilization of funds for materials, equipment, and events.

LIST OF EVENTS

S. No	Titles of the Events
1	**Technical Quiz**
2	**Hands on Training Clay Design**
3	**Hands on Training in Fusion 360**
4	**3D Printing Trouble shooting**

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SMVEC/MECH/3D CLUB SMVEC/2023-24/01 **Date: 05.07.2023**

C I R C U L A R

We are glad to inform you that the Department of Mechanical Engineering and **"3D Printing Club SMVEC"** is going to organize **quiz program** titled **"Technical Quiz"** on **08-07-2023**, **10:00 AM.** In this regard, Students can participate in the event to showcase their technical skill, students are requested to enroll their name to the concerned class advisor.

Event Coordinator **HOD / MECH** **Dean (core)**

Director cum Principal

Activity Number: **01**
Name of the Event: **Technical Quiz**
Date of the Event: **08.07.2023**

Number of Participants: **74**

Resource Person: **Dr. K. Hemalatha, Associate Professor / Mech, SMVEC**

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SMVEC/MECH/3D CLUB SMVEC/2023-24/02 **Date: 08-09-2023**

C I R C U L A R

We are glad to inform you that the Department of Mechanical Engineering and **"3D CLUB SMVEC"** is going to organize **Hands on Training** titled **"Hands on Training in Clay Design"** on **12-09-2023**, **10:00 AM**. In this regard, Students can participate in the event, students are requested to enroll their name to the concerned class advisor.

Event Coordinator **HOD / MECH** **Dean (core)**

Director cum Principal

Activity Number: **02**

Name of the Event: **Hands on Training Clay Design**

Date of the Event: **12-09-2023**

Number of Participants: **74**

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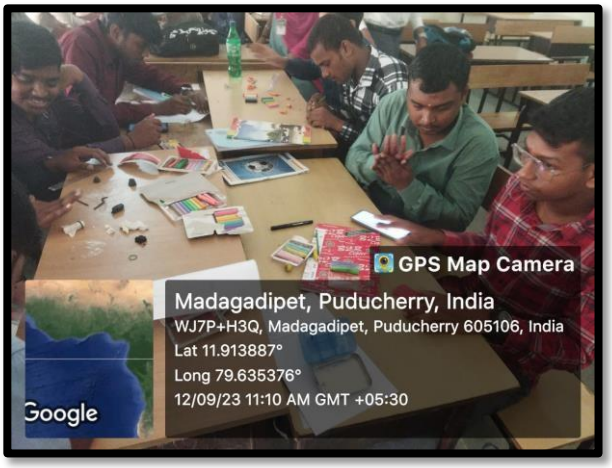
<td> 
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- Introduction of 3D and 3D printing
- Concepts of 3D
- 3D modeling with clay
- Size, Resolution, Thickness, Orientation Of Material
- Choice Of Material

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SMVEC/MECH/3D CLUB SMVEC/2023-24/03 **Date: 04-10-2023**

C I R C U L A R

We are glad to inform you that the Department of Mechanical Engineering and **"3D CLUB SMVEC"** is going to organize **Hands on Training** titled **"Hands on Training in Fusion 360"** on **07-10-2023**, **09:30 AM**. In this regard, Students can participate in the event, students are requested to enroll their name to the concerned class advisor.

Event Coordinator **HOD / MECH** **Dean (core)**

Director cum Principal

Activity Number: **03**

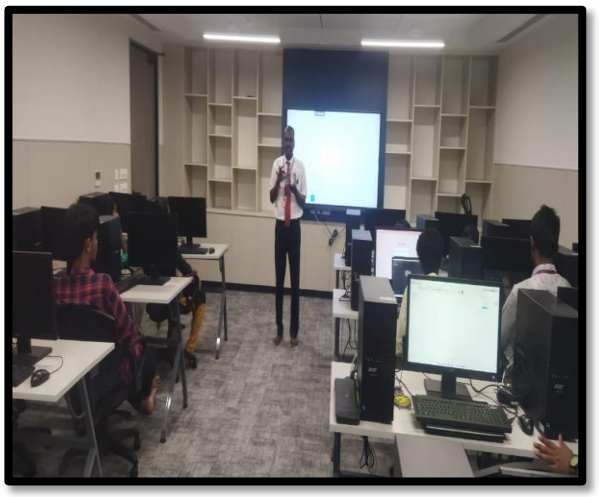
Name of the Event: **Hands on Training in Fusion 360**

Date of the Event: **7.10.2023**

Number of Participants: **50**

Resource Person: **Mr.P.Jayakumar/ Tech Guru (IDEA LAB)-SMVEC**

Photos:



Topics covered

- Get started in Fusion 360
- Design sketch
- Construction features
- Design solid
- Additional features and operations

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SMVEC/MECH/3D CLUB SMVEC/2023-24/04 **Date: 22.11.2023**

C I R C U L A R

We are glad to inform you that the Department of Mechanical Engineering and **"3D CLUB SMVEC"** is going to organize **Hands on Training** titled **"3D Printing Trouble shooting"** on **25.11.2023**, **09:30 AM.** In this regard, Students can participate in the event , students are requested to enroll their name to the concerned class advisor.

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Event Coordinator **HOD / MECH** **Dean (core)**

Director cum Principal

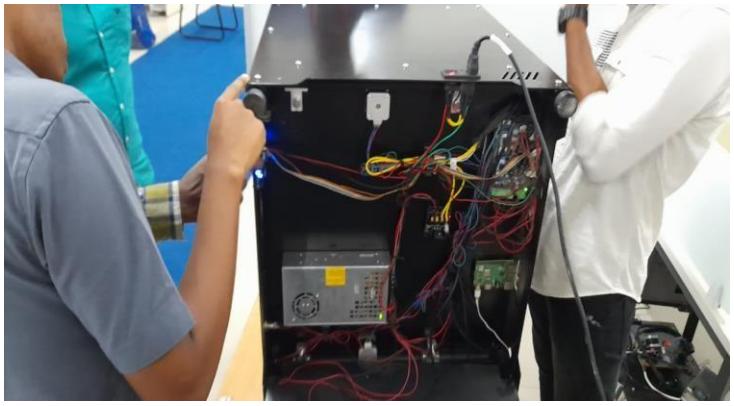
Activity Number: **04**

Name of the Event: **3D Printing Trouble shooting**

Date of the Event: **25.11.2023**

Number of Participants: 25

Photos:



Topics Covered

- How to assemble the 3D Printer
- Bed levelling
- Troubleshooting of various bed issue
- Filament loading and unloading issues
- Extruding filament issue