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 OF BIOMEDICAL ENGINEERING

BIODREAMS CLUB

ANNUAL REPORT

ACADEMIC YEAR:2022-23

SUBMITTED BY

Mrs S.SUGUNA

ASSISTANT PROFESSOR

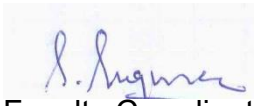
FACULTY COORDINATOR

Preface

The Technical Club **Biodreams**, established in 2020 under the Department of Biomedical Engineering, serves as a structured platform to promote technical proficiency, innovation, and professional growth among students. The club is committed to complementing academic learning with practical exposure and collaborative engagement involving faculty members, alumni, peers, and industry experts.

Bio Dreams organizes a wide range of activities including technical seminars, workshops, mini project development, technical quizzes, aptitude and logical reasoning sessions, programming skill enhancement programs, and theme-based events such as Engineers' Day and Water Day celebrations. These activities are systematically planned and executed by students, thereby fostering leadership qualities, teamwork, organizational skills, and effective communication.

Through its consistent efforts and student-driven initiatives, Bio Dreams contributes significantly to the holistic development of students and prepares them to meet the evolving demands of the biomedical engineering profession.



Faculty Coordinator
Mrs. S. Suguna

HoD/BME
Dr. A. Vijayalakshmi

Director Cum Principal
Dr. V.S.K. Venkatachalapathy

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ABOUT THE INSTITUTE

Sri Manakula Vinayaga 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.

Department of Biomedical Engineering

The Department of Biomedical Engineering is a distinguished department committed to delivering high-quality Undergraduate, Postgraduate, and Doctoral programs. The B.Tech Biomedical Engineering program is designed to equip students with strong foundations in engineering principles and medical sciences, enabling them to address real-world healthcare challenges. The department consistently strives for academic excellence, research advancement, and strong industry interaction, producing graduates who are highly valued in hospitals, medical device industries, research organizations, and healthcare technology sectors.

The department actively contributes to the national vision of advancing healthcare technology by fostering innovation, ethical responsibility, and a deep commitment to societal well-being. With a focus on emerging medical technologies and interdisciplinary collaboration, it aims to meet the evolving demands of the global healthcare industry.

Vision

To promote academic excellence and innovative research in Biomedical Engineering, preparing graduates to meet global healthcare needs with technical competence and ethical professionalism.

Mission

Academic Excellence:

To impart strong theoretical knowledge and practical skills in Biomedical Engineering to address contemporary healthcare challenges.

Research and Innovation:

To promote interdisciplinary research and innovation in emerging areas of biomedical technology for societal benefit.

Employability and Entrepreneurship:

To enhance technical, interpersonal, and entrepreneurial skills to develop competent professionals and future entrepreneurs in the healthcare sector.

Ethics:

To inculcate the significance of human values and professional skills to serve the society.

ABOUT BIODREAMS CLUB

The **Bio Dreams Club** of the Department of Biomedical Engineering is committed to exploring advancements in biomedical technology and healthcare innovation under the overarching theme:

“Innovating Healthcare through Engineering Excellence and Compassion.”

The club serves as a dynamic platform where engineering principles intersect with medical sciences to develop solutions that enhance healthcare delivery and improve quality of life. Bio Dreams encourages students to transform theoretical knowledge into practical applications through hands-on projects, technical discussions, research activities, and interdisciplinary collaboration.

Through seminars, workshops, mini-project development, health-tech expos, and expert interactions, the club fosters analytical thinking, creativity, and problem-solving skills. By integrating innovation with ethical responsibility, Bio Dreams prepares students to become competent biomedical engineers dedicated to advancing healthcare technology and serving society.

LIST OF EVENTS

S. No	Title of the Events
01	Connection based quiz on biomedical field
02	Workshop experience
03	MIND GAMES
04	Self Introduction
05	Mysteries places on earth

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DEPARTMENT OF

BIOMEDICAL ENGINEERING

SMVEC/BME/CLUB/2022-23/01 24.03.2023

CIRCULAR

This is to inform you that the "**Biodreams Club**", under the guidance of the Department of Biomedical Engineering, has proposed to conduct technical based activity for the students on 25.03.2023 (Saturday). Students are hereby instructed to participate in the event and enhance their technical knowledge.

Year /Sem/Sec	Planned activity	Hour	Student coordinator	Staff In-charge
II/III/A	Connection based quiz on biomedical field	2,3,4	1. P.Shanmugam 2. B. Anushiya 3. T.Narendra Ganesh 4. S.Archana 5. R.Kishorkumar	Ms.S.Suguna

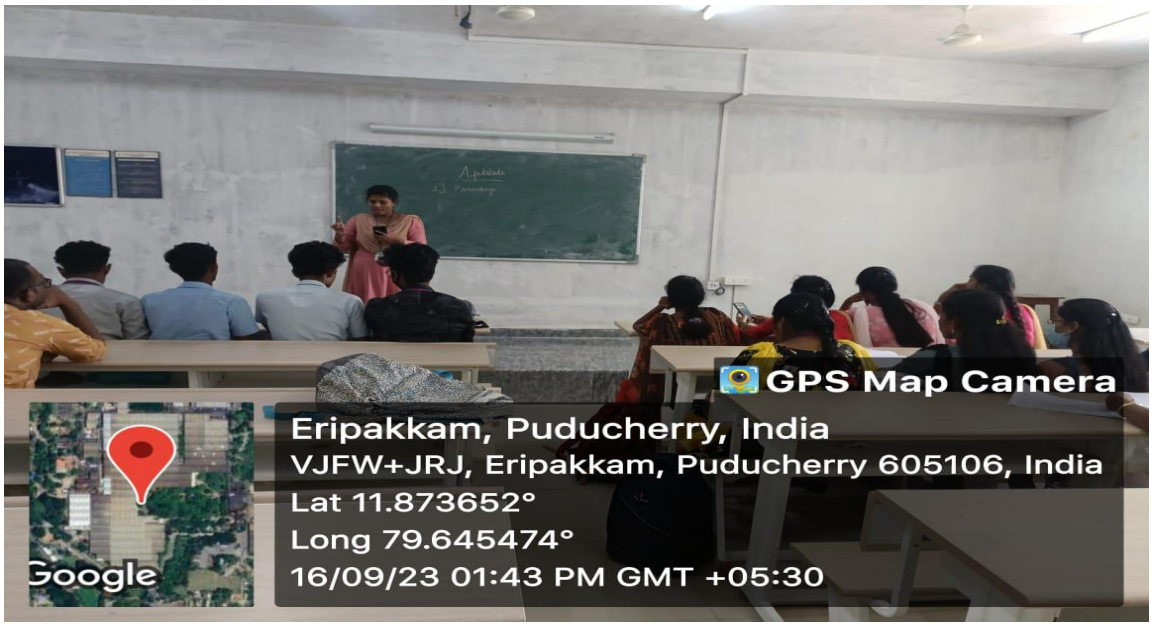
Event Coordinator

Ms.S.Suguna

HOD/BME

Dr.A.Vijayalakshmi

PHOTO GALLERY



CONNECTION BASED QUIZ

The activity enhances students' ability to identify logical connections between biomedical concepts, devices, and clinical applications, thereby strengthening conceptual clarity and interdisciplinary understanding.

It improves analytical thinking, quick reasoning, teamwork, and confidence, preparing students for technical interviews, competitive exams, and professional practice in biomedical engineering

- Total Number of Participants : 56
- Year of students: IV
- Date: 25/03/2023
- Venue : 315
- Event Coordinator: Mrs.S.Suguna
- Mode of activity: Offline

Objective of the Activity:

- **To enhance analytical and critical thinking skills** by identifying logical connections between biomedical concepts, devices, signals, and applications.
- **To promote interdisciplinary learning** by linking topics such as medical imaging, biomedical instrumentation, biomaterials, signal processing, and physiology.
- **To improve problem-solving ability** through pattern recognition and concept mapping.
- **To encourage active participation and teamwork** in a competitive academic environment.

Overview of the Activity

The **Connection-Based Quiz** in the biomedical field is an interactive academic activity that tests students' ability to identify logical relationships between biomedical concepts, devices, diseases, physiological parameters, and clinical applications. Instead of straightforward questions, participants are given multiple related clues and must determine the common link connecting them.

The quiz covers various domains such as biomedical instrumentation, medical imaging, biosensors, human anatomy and physiology, biomaterials, signal processing, and healthcare technologies. Students participate individually or in teams, encouraging collaboration and active learning.

This activity enhances critical thinking, interdisciplinary understanding, quick reasoning ability, and application-oriented knowledge, preparing students for technical interviews, competitive examinations, and professional practice in biomedical engineering.

Outcome of the Event

- **Demonstrate strong conceptual clarity** by identifying relationships between biomedical concepts and technologies.
- **Apply interdisciplinary knowledge** by linking topics such as instrumentation, imaging, physiology, and signal processing.
- **Enhance analytical and logical reasoning skills** through pattern recognition and connection-based thinking.
- **Improve quick decision-making ability** in time-bound competitive environments.
- **Strengthen teamwork and collaborative learning skills** (in team-based participation).

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SMVEC/BME/CLUB/2023-24/02 **27.08.2023**

CIRCULAR

This is to inform that our department **Biodreams Club** has planned to conduct technical activity for the II year students on **28.08.2023** (Saturday). Students are asked to utilize the opportunity to enhance their knowledge.

Year/Sem/Sec	Planned Activity	Hour	Student coordinator
II/III/A	• Workshop Experience	4,5	1. Shanmugam 2. B. Anushiya 3. T. Narendra Ganesh 4. S. Archana 5. R. Kishorkumar

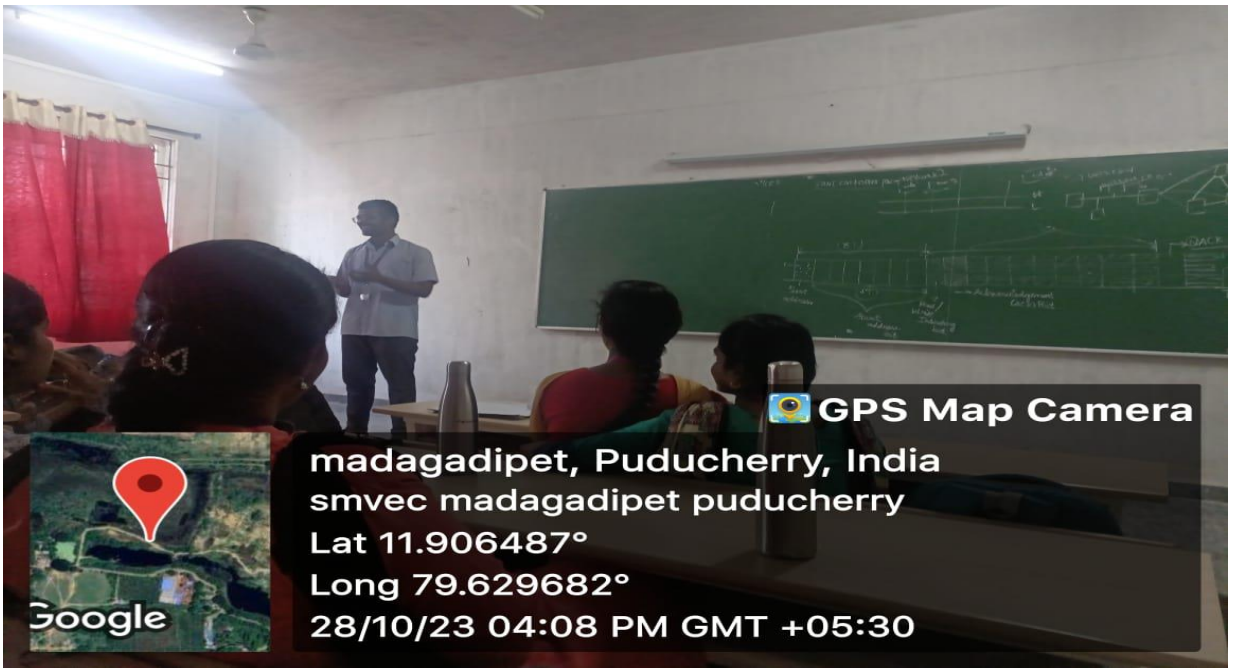
Mrs. S. Suguna

Department Coordinator

Dr. A. Vijayalakshmi

HOD/BME

PHOTO GALLERY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WORKSHOP EXPERIENCE

- The **Workshop Experience Activity** is a practical learning initiative designed to provide students with hands-on exposure to emerging technologies, tools, and techniques related to their field of study. It bridges the gap between theoretical knowledge and real-world applications by allowing students to actively participate in demonstrations, experiments, and skill-based training sessions.
- Through expert guidance, interactive sessions, and practical implementation, students gain deeper conceptual understanding and technical competency. This activity enhances problem-solving ability, teamwork, and professional skills, preparing them for industry requirements, research work, and advanced academic pursuits.

- Total Number of Participants : 56
- Year of students: IV
- Date: 27/08/23
- Venue : 312

Objective of the Activity

- Sharing your workshop experience can help disseminate knowledge and insights gained during the workshop to the students. This is particularly useful if the workshop covered important topics or provided valuable information.
- Your workshop experience might inspire others to participate in similar workshops or engage in learning experiences.
- The primary objective of presenting an idea is to communicate it clearly and effectively. You want your audience to understand the idea and its key points.

Overview of the Activity

The **Workshop Experience Activity** is a structured hands-on learning program designed to provide practical exposure to specialized tools, technologies, and techniques related to the students' field of study. It enables participants to gain experiential knowledge through live demonstrations, guided practice sessions, and real-time problem-solving activities.

During the workshop, experts or resource persons deliver interactive sessions that combine theoretical explanations with practical implementation. Students actively engage in experiments, simulations, software usage, or hardware handling to strengthen their technical competency.

This activity enhances practical skills, technical confidence, teamwork, and industry readiness, helping students bridge the gap between classroom learning and professional applications.

Outcome of the Activity

- A successful presentation can capture the interest of your classmates, making them engaged and eager to learn more about your idea.
- Our idea presentation might inspire your classmates to think more creatively or generate their own ideas related to the topic.
- Sharing a personal experience from a workshop can engage your classmates, making the topic more relatable and interesting. It can bring a practical perspective to the theoretical concepts discussed in class.

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SMVEC/BME/CLUB/2022-23/03 **15/09/23**

CIRCULAR

This is to inform that our department **BioDreams Club** has planned to conduct technical activity for the II & III year students on 16/09/23 (Saturday). Students are asked to utilize the opportunity to enhance their knowledge.

Year/Sem/ Sec	Planned Activity	Hour	Student coordinator
III/V/A	MIND GAMES	4,5	1. M.Kaviya Selvi 2. M.Shibaani 3. S.Yogeshwari 4. K.Kamaleshwar 5. M.Gurubalan
II/III/A	Completing Learnathon Modules	7,8	1. L. Gayathri 2. B. Madhimalar 3. S.Sujithasree 4. J. Abdul Rahman 5. S. Annamalai

Mrs. S. Suguna
Department Coordinator

Dr. A. Vijayalakshmi
HOD/BME

MIND GAMES

The Mind Games Activity is an engaging and intellectually stimulating event designed to challenge students through logical puzzles, reasoning tasks, and strategy-based challenges.
It encourages critical thinking, quick decision-making, and effective problem-solving in a fun and competitive environment.

- Total Number of Participants : 56
- Year of students: IV
- Date: 16/09/23
- Venue : 316
- Mode of Activity: Offline

Objective of the Activity

- To enhance students' logical and analytical thinking skills.
- To improve problem-solving abilities under time constraints.
- To develop concentration and attention to detail.
- To encourage creative and strategic thinking.
- To strengthen memory and cognitive flexibility.
- To promote teamwork and collaboration among participants.
- To build confidence in decision-making.

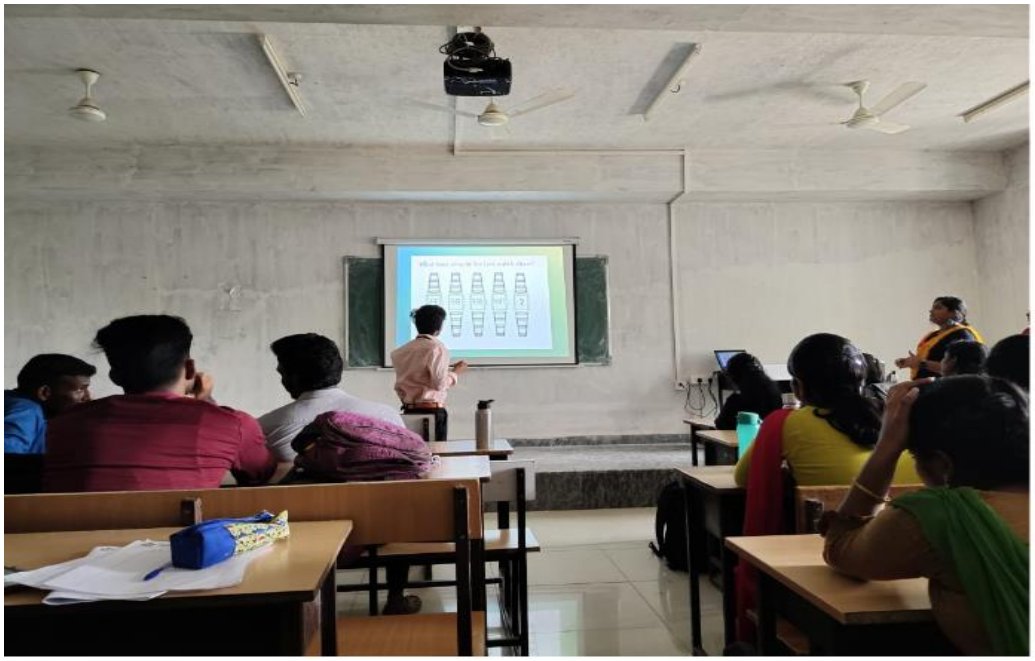
Overview of the Activity

- The Mind Game Activity is designed to challenge students through interactive puzzles and brain-teasing tasks.
- It includes activities such as logical reasoning problems, memory tests, and strategy-based games.
- Participants compete individually or in teams to solve challenges within a fixed time.
- The activity promotes critical thinking and rapid decision-making.
- Different rounds may include riddles, pattern recognition, and problem-solving scenarios.
- The event is conducted in an engaging and fun-filled environment.

Outcome of the Activity

- Students demonstrate improved logical and analytical thinking skills.
- Participants show enhanced problem-solving ability under time constraints.
- Improved concentration and focus during challenging tasks.
- Better memory retention and cognitive flexibility.
- Increased confidence in decision-making and reasoning.
- Enhanced teamwork and collaborative skills in group activities

PHOTO GALLERY

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DEPARTMENT OF BIOMEDICAL ENGINEERING

SMVEC/BME/CLUB/2023-24/04 06/08/23

CIRCULAR

This is to inform that our department **Bio Dreams Club** has planned to conduct technical activity for the I, II & III year students on 07/08/23 (Saturday). Students are asked to utilize the opportunity to enhance their knowledge.

Year/Sem/Sec	Planned Activity	Hour	Student coordinator
II/IV/A	Self Introduction	5,6	1. M.Gopesh Anand 2. K.Chandrasekaran 3. K.Pooranamithra 4. V.Sampriti
III/V/A	Paper Presentation	6,7	1. P. Shanmugam 2. M. Medwin Devakumar 3. S. Archana 4. B. Anushiya

Mrs.S.Suguna
Club Coordinator

Dr.A.Vijayalakshmi
HOD/BME

Self introduction

The Self-Introduction Activity is designed to help participants confidently present themselves in a clear and structured manner.
It provides an opportunity to share personal background, interests, strengths, and career goals in a supportive environment.
This activity enhances communication skills, builds self-confidence, and fosters better interaction among participants.

- Total Number of Participants : 56
- Year of students: IV
- Date: 07/08/23
- Venue : 316
- Mode of Activity: Offline

Objective of the Activity

- To build confidence in speaking before an audience.
- To improve communication and presentation skills.
- To help participants express their personal background, interests, and goals clearly.
- To reduce stage fear and hesitation.
- To develop self-awareness and clarity about personal strengths.
- To encourage positive self-expression.

Overview of the Activity

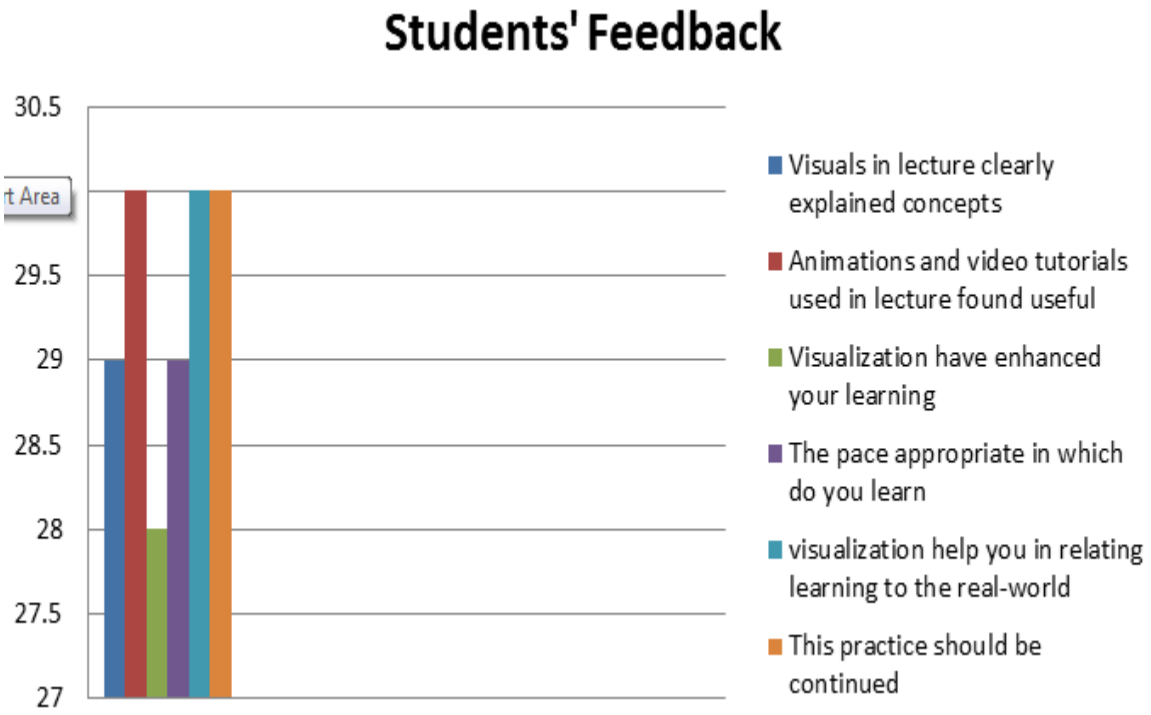
- The Self-Introduction Activity provides an opportunity for participants to introduce themselves in a structured manner.
- Each participant shares details such as name, educational background, interests, strengths, and career goals.
- The activity helps create a comfortable and interactive environment among group members.
- It encourages clear and confident verbal communication.
- Participants practice organizing their thoughts before speaking.

Outcome of the Activity

- Participants gain confidence in speaking before others.
- Improved clarity and fluency in verbal communication.
- Reduced stage fear and hesitation.
- Better self-awareness about personal strengths and goals.
- Enhanced ability to present information in a structured manner.
- Improved body language and professional etiquette.

PHOTO GALLERY

STUDENT FEEDBACK



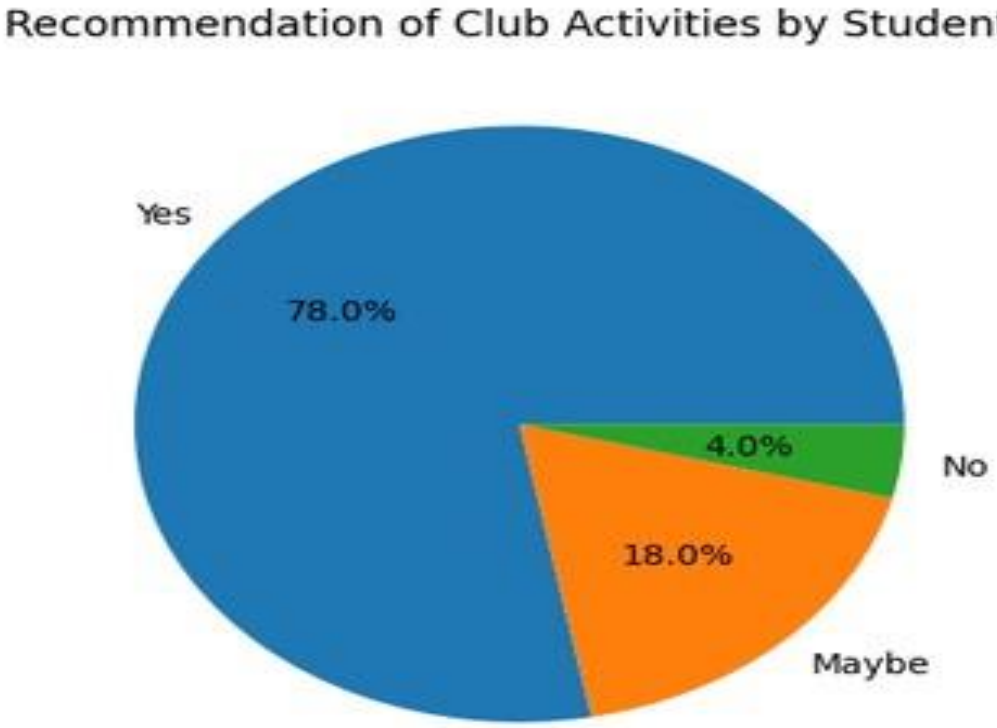
The pie chart depicts the overall satisfaction level of students regarding the BIO DREAMS CLUB activities conducted during the academic year 2023–2024. It is observed that 78% of students rated the activities as Excellent or Very Good, indicating a high level of satisfaction. Only 4% rated the activities as Average, and no negative feedback was recorded.

The bar chart represents the average ratings given by students for various effectiveness parameters. The ratings are consistently above 4.4 out of 5, highlighting the club's strong performance in event organization, hands-on exposure, skill development, and teamwork enhancement. The highest rating was observed for hands-on exposure, reflecting the practical orientation of the club activities.

STUDENT FEEDBACK

The pie chart shows that 78% of students are willing to recommend the Robotics and Automation Club activities to other students, while 18% expressed conditional interest. This clearly

demonstrates the positive perception and value of the club among students



FUTURE PLAN OF ACTION

- R&D Innovation Lab: Establish a dedicated space for long-term prototyping, where members can evolve simple Arduino projects into market-ready, low-cost diagnostic tools.
- **Industry & Hospital Partnerships:** Formalize **internship pipelines** and observational visits with medical device manufacturers and hospitals to bridge the gap between classroom theory and clinical reality.
- **Global Bio-Hackathons:** Host annual **inter-collegiate competitions** focused on solving real-world healthcare challenges using signal processing, AI, and sustainable medical hardware.