



**SAHRDAYA**

College of Engineering & Technology

### **INSTITUTE VISION**

Evolve as a leading technology institute to create high caliber leaders and innovators of global standing with strong ethical values to serve the industry and society.

### **INSTITUTE MISSION**

-Provide quality technical education that transforms students to be knowledgeable, skilled, innovative and entrepreneurial professionals.

-Collaborate with academia and industry around the globe, to strengthen the education and research ecosystem.

-Practice and promote high standards of professional ethics, good discipline, high integrity and social accountability with a passion for holistic excellence.

### **DEPARTMENT VISION**

To be a national Centre of excellence in Bio Sciences and Bio Engineering.

### **DEPARTMENT MISSION**

1. Educate the next generation of engineers with a relevant curriculum that will enable them to integrate biological sciences with engineering fundamentals that can create, model, and modify biological systems for industrial applicability.
2. Encourage and facilitate research that would enable students to acquire new knowledge that is industrially and socially relevant.
3. Train students to be leaders who value professional ethics and realize the need for societal contribution and environmental sustainability in their work.

### **DEPARTMENT NEWSLETTER**

## **Department of Biotechnology**

### **Program Specific Outcomes (PSOs)**

1. To measure, model and manipulate properties of biological systems at the cellular and molecular level so as to produce sustainable products that address environmental and ethical standards.
2. To formulate and execute quantitative and design- oriented analysis of biological systems with modern tools and techniques that generate new knowledge at the interface of engineering and biology.
3. To transform as socially relevant biological engineers having a professional outlook that would enable them to work as a part of a team in an industrial, research or entrepreneurial set up and sustain a desire for higher learning and research.

### **Program Educational Outcomes (PEOs)**

1. To be equipped with the engineering skills and technical concepts enabling them to take up careers in Biotechnology and allied fields globally.
2. To instill the passion for lifelong learning scientific discovery, allowing them to conduct research, communicate and innovate technologies keeping them motivated to take research and higher education.
3. To inculcate entrepreneurial and techno management skills along with professional and ethical responsibility empowering them to be responsible and socially aware citizens.



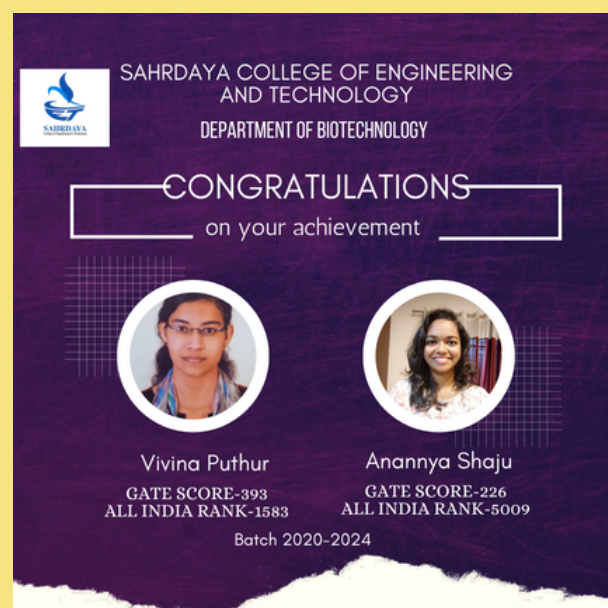
## Special Events and Achievements

- The Department of Biotechnology organized a KTU sponsored 3 day Faculty Development Programme on "Sustainable Bioreactor Processes and Applications in Bioenergy & Bio-waste Management" from 01/02/2023 to 03/02/2023.



- Dr. Leon Ittiachen delivered a talk on "Translational Research" and "Cellulosic Ethanol for Fuel Blending" in the Alumni Speaker Series on 12/05/2023 held at MIT, Manipal.
- Department of Biotechnology signed an MoU with Arjuna Natural Extracts Ltd. on 15/03/2023.
- Inauguration and blessing of the Smart Classroom funded by Arjuna Natural Extracts Ltd. in the BT Department was on 15/03/2023, 11am.
- Department of Biotechnology signed an MoU with Care Keralam Ltd. on 15/03/2023.

- Varsha V of 2018-22 batch secured an All India rank of 25 in GATE 2023.



## BEATS Association Activities

- A Talk on the topic 'IPR in the Knowledge Economy - The why behind it all', conducted by Dr. Leon Ittiachen on 27/09/2022 for the students of S7.
- Industrial Visit to Rubber Board, Kottayam, for S7 students on 29/09/2022.
- Industrial visit to Rubber Board Kottayam, for the students of S5 on 27/10/2022.
- Workshop on Python programming by Star innovations for S5 students, from 16/11/2022 to 18/11/2022.



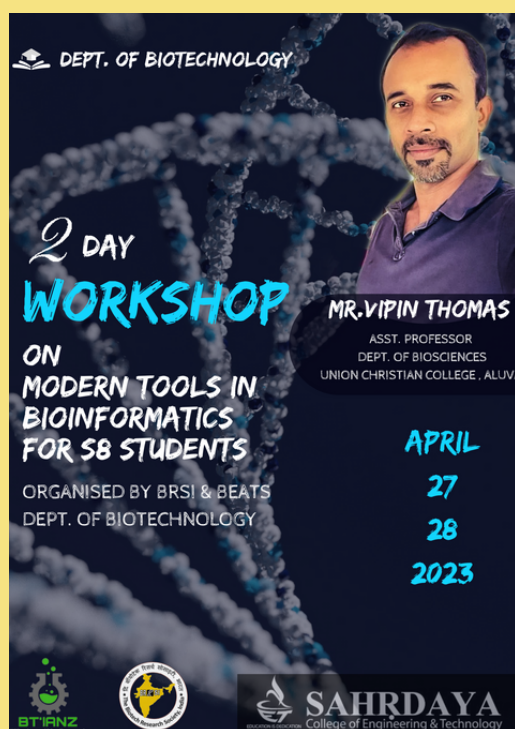
- Technical paper writing session conducted by Dr. Ambili Mechoor, HOD BT for S5 & S7 students on 30/09/2022.
- Expert talk organized by BEATS along with ICC cell on the topic 'Women Empowerment and Health', for S3 BT & EC girls.
- As part of MoU signed with Zaara Biotech, BEATS Association Department of Biotechnology, SCET along with BRSI conducted an Exhibition on the products developed by our students in connection with the training conducted by Zaara Biotech Ltd on 18/11/2022.
- Talk session on Introduction to chemical engineering by Dr. Uma and Mr. Francis John on 25/01/2023.
- Session on how to write a Technical paper for S6 students by Ms. Sumi Maria, on 24/02/2023.
- Expert talk on sustainable energy processes conducted by Ms. Amritha Basanth, UKF College of Engineering and Technology for S3, S5 & S7 students on 18/10/2022.
- Industry interaction on basic water treatment technique by T.A. Kumar, Sensorex Chennai on 27/02/2023.



- Talk on career opportunities conducted by Dr. Leon Ittiachen for the students of S4 on 06/03/2023.
- Industrial visit organized for S4 students to Arjuna Naturals pvt.Ltd, Coimbatore on 10/04/2023.



- On 17/03/2023 & 18/03/2023, Annual Athletic meet was conducted. Our students showcased the spirit of sportsmanship and achieved prizes in 100m, Long jump, High jump, Basketball, Throw ball, etc.



- Talk on topic "Emerging Technologies for Bio refineries and Value-added Products" by Ms.Sabeera Aboobacker for the students of S4 & S8 on 12/04/2023.
- Workshop on "Modern Tools in Bioinformatics" by Mr. Vipin Thomas, Asst Professor, UC College Aluva was jointly organized by BRSI and BEATS for S8 students on 27/04/2023 and 28/04/2023.

- Idea Presentation titled "Pitch biotech related products" jointly organized by BRSI and BEATS Association for S2 students on 10/07/2023
- Students of BT department enthusiastically participated in the arts fest (AROHAM 2K23, April 19-20) and showcased their talents to win in the various categories. Some of the achievements include: -

1st prize for:

- Eastern group song
- Western group song
- Mime
- Nadanpattu
- Mimicry
- Oil painting
- Water colour
- Monoact
- Hindi recitation, etc.

2nd prize for:

- Oppana
- Margamkali
- Nostalgia (boys)
- Mappilapattu
- Classical music
- Adapt to a tune
- Debate (Eng), etc.

## Student Achievements

- Sreema M of S8 BT received a cash award of Rs 31,000/- for achieving academic excellence sponsored by Bank of Baroda.



- 17 students from the department were placed in various companies.

1. CTS - 1
2. TCS - 1
3. Sutherland - 10
4. Jobin & Jismi - 1
5. Federal Bank - 1
6. Byjus - 2
7. Anand Narayan, Juvel Babu and Linda Joe Francis got selected by Zifo.

- Anand Narayan, Anna Rose Antony, Athira Jayakumar, Jiya K J and Sreema M qualified GAT-B.

- Sona K Baby qualified KMAT.

- Project group consisting of Aleen Mathson, Aparna K S, Mariya Raj and Rahila Raji won the third prize along with a cash prize of Rs. 5,000/- in SCI fest organized in Sahrdaya College of Engineering and Technology, Kodakara.



- Project group consisting of Anand Narayan, Athira S S, Rosemary Francis and Varsha S won the Best Project award in the academic year 2022-23.



- Anna Merlin Alfred presented paper in the International e-Conference on Bioengineering for Health & Environment (ICBHE 2022) organized by Sathyabama Institute of Science and Technology, India and MAHSA University, Malaysia held on 15th and 16th December 2022.

- The following students were the toppers in the University results.

S6-

- Sreema M (SGPA 9.41)
- Aleen Mathson (SGPA 8.91)
- Linda Joe Francis (SGPA 8.65)

S4-

- M Maneesha Manikandan (SGPA 9.27)
- Vivina Puthur (SGPA 9.14)
- Nikhila N (SGPA 8.95)

S2-

- Aisha Mohammed Shafeek (SGPA 9.62)
- Shirin Fathima M (SGPA 9.48)
- Dona Paulson (SGPA 9.4)

## Faculty Achievements

- Dr. Amitha Joy and Ms. Marria C. Cyriac published a paper 'Modelling of AgrA inhibitors to combat anti-microbial resistance in Staphylococcus aureus' in Journal of Biomolecular Structure and Dynamics, 2023.
- Dr. Amitha Joy, Dr. Midhila Padman and Dr.P.Praveena published a paper 'In silico Identification of Potential Small Molecules Targeting Six Proteins in Nipah Virus using Molecular Docking, Pharmacophore and Molecular Dynamics Simulation' in Letters in drug design and discovery, 2023.
- Dr. Leon Ittiachen published a paper 'Evaluation of Antibacterial activity of Biosynthesized Silver nanoparticles coated Low Density Polyethylene films' in Materials Today: Proceedings, 2023.
- Ms. Marria C Cyriac published a paper 'Phytochemicals as Potential Drug Candidates for SARS CoV-2: An RDRp based In-silico Drug Designing' in Advances in Biological Sciences and Research, 2022.
- Ms. Ranimol G published a paper 'Docking and Molecular Dynamics Simulation studies for the Evaluation of Laccase mediated Biodegradation of Triclosan' in Advances in Biological Sciences and Research, 2022.

- Ms. Ranimol G published a paper 'A comparative study of free laccase and laccase immobilized in copper alginate' in Indian Journal of Biochemistry, 2022.
  - Dr. Amitha Joy, Dr. Dhanya Gangadharan, Dr. P Praveena, Ms. Smeera Thomas and Ms. Salini P J participated in the Faculty Development Programme titled "Technical Paper Writing using LaTeX" organized by Sahrdaya College of Engg. & Technology on 22/10/2022.
  - Ms. Marria Cyriac participated in the Faculty Development Programme titled "Advanced Research and Quality Publication" organized by FISAT, Ernakulam from 29/08/2022 to 02/09/2022.
  - Dr. P. Praveena participated in the Research Innovation Programme for Women Start Ups organized by Sahrdaya College of Engg. & Technology on 17/02/2023.
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Staff Editor:

Dr. Uma Krishnakumar

Student Editor:

Mr. Anand Narayan & Mr. Nithin Siby

S8 BT

## Gallery

