

# KAMARAJ



**COLLEGE OF ENGINEERING & TECHNOLOGY**

**(An Autonomous Institution - AFFILIATED TO ANNA UNIVERSITY, CHENNAI)**

**S.P.G.Chidambara Nadar - C.Nagammal Campus**

**S.P.G.C. Nagar, K.Vellakulam – 625 701 (Near VIRUDHUNAGAR).**

## NEWSLETTER

**DEPARTMENT OF BIOTECHNOLOGY**

ACCREDITED BY NATIONAL BOARD OF ACCREDITATION ,  
NEW DELHI

## BIO - NEXUS

**JULY TO SEPTEMBER 2024**



# EDITORIAL BOARD



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**Vision :** To make the Department of Biotechnology, unique of its kind in the field of research and development activities pertaining to the field of biotechnology in this part of the world

**Mission:** To impart highly innovative and technical knowledge in the field of biotechnology to the urban and rural student folks through “Total Quality Education”

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### **Program Educational Outcome (PEO)**

**PEO 1:** The student will be able to pursue higher education in India/Abroad in Biotechnology and its related fields by taking up competitive exams like GATE, CSIR, TANCET, GRE, TOEFL etc.

**PEO 2 :** The student will be able to come up with solutions for any scientific or technical problems related to Biotechnological industries/institutes.

**PEO 3 :** The student will be able to plan and conduct experiments in modern biotechnology and allied field laboratories including interpreting the significance of resulting data, reporting results and writing technical reports.

**PEO 4 :** The student will be able to get familiarized with professional and economical issues in biotechnology and foster important job related skills such as communications and experience in working as a team that will help them to become good Entrepreneurs.

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

**PSO1 :** Future ready graduates: The student will be able to identify, choose and perform to their best ability in the next career step: Higher education/Job/Entrepreneurial initiatives.

**PSO2 :** Industry ready graduates: The student will be able to apply the acquired knowledge to provide cost-effective and sustainable solutions in Biotechnology.



## Program Outcomes (PO)

**PO1 :** Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

**PO2 :** Problem analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

**PO3 :** Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

**PO4 :** Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

**PO5 :** Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.

**PO6 :** The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

**PO7 :** Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

**PO8:** Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

**PO9 :** Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

**PO10 :** Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

**PO11 :** Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

**PO12 :** Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

# STUDENT ACHIEVEMENTS

July to September 2024

## Technical & Innovation Achievements

- **R.N.Mohana Kannan, B.Sabari Raj, and S.Muthu Ganesh, IV BT** have received First prize of Rs.5000 in **NEC Startup Entrepreneurship Summit (NECSES)- 2024 Ideathon** held at NEC, Kovilpatti during August 2024.
- **S.R.Santhosh Kaveri, K.Dharsan and S.YogaDharshan** of IV B.Tech Biotechnology presented a Paper titled **"3D printing using cellulose extracted from floral wastes"** and won III Prize at National Conference on Emerging Trends in Biological Sciences (NCETBS) organised by SRM Institute of Science and Technology on 06-09-2024.



**S.Sakthi Shivani, III BT** won 1st prize in **Yogasana championship** held at Kanchipuram.



**R.Sujitha, IV BT**, has been recognized as **NPTEL Motivated learner (Jul-Dec 2024)**.

## Special achievements

- **M. Yakagna Devi, IV BT** has been selected for **Summer Project** at **NIIST, Thiruvananthapuram**.
- **V. Swetha, IV BT** has been selected as Student intern for 2 months to work in **SERB Project** at **Department of Ocular Pharmacology**, Aravind Medical Research Foundation, Madurai with a stipend of Rs 5000/- per month.
- **V. Bavadarshini, M. Meganaharshini, K.S. Krisha and S. Shalini, IV BT** have got placed in **FacePrep**
- **S. Sanjayveera, II year BT** was selected in **all india trekking expedition AP trek** at **Tirupati**.



**K.Dharsan, S.R.Santhosh Kaveri and S.Yogadharshan, IV BT** won I prize in the paper presentation competition at Kongunadu College of Engineering, receiving a cash prize of ₹3,000.

## Sports achievements

- **S. Gowri, III BT** has got 1st prize in **Individual and rhythmic Yoga competition** held at Virudhunagar organized by Virudhunagar District Yogasana Association.
- **S. Sakthi Shivani, III BT** has got 2nd prize with cash award of Rs. 8000 in **Khelo India Yoga competition** at zonal level.
- **K. Abinanthan, R.Pugazhenthii, G. Selva murugan, III year BT** won III prize in sports event **"Anna University zonal Hockey tournament"** organised by SSM institute of engineering and technology on 23.09.2024.
- **S. Sivaganesh, IV BT** won II place in sports event **"Anna University Zonal Tennis tournament"** on 26.09.2024.
- **R. Sharmila** of III Year B. Tech Biotechnology won III Prize in **CM Trophy Judo Match** on 19-09-2024 and Selected for State Level Competetion.
- **K.Ragul** participated in **Basketball zonal match** and won II prize, Anna University on 30-09-2024.



## Extra-curricular Achievements

- **S.Jeyaprincy**, III BT, Got II prize for duo dance with cash prize of 500 in Hindusthan institute of technology.
- **Swetha.S, Gowri.S , Nancy.G , Suruthi.N** of III year B.Tech Biotechnology participated in a "Mini marathon" organised by PSC School, Virudhunagar on 9-02-2025.
- **k. Sakthishivani** of III year B. Tech Biotechnology won II prize in **SPARKZ 2K25, Engima** (Solo Dance) Competition held at Kalasalingam University on 14-02-2025



**K.Harikrishan and K.Dharsan**, IV BT won third prize in group dance and won third prize in solo dance at Mepco Schlenk Engineering College, Sivakasi.

## value-added course



**III BT Students** attended a five-day Industry Certified Value Added Program on **Pre-Clinical Research** from 8th July to 12th July 2024, covering zebrafish and mouse model studies, dissection techniques, ethical practices, and hands-on assays.



# Faculty Achievements

- **Ms. Latchia Sri, Mr. Poornachandar Gugulothu, and Dr.K.Geetha** Karuppasamy presented a paper titled **Exploring the Genomic DNA: Isolation, Analysis, and Comparative Study of Algal DNA** in International Conference **SYMBIOT'24** (Symphony of Medicine, Biological Sciences & Omics Technology) on 3rd and 4th July 2024, organized by Department of Biotechnology, Manipal Institute of Technology, Manipal



**Dr. D. Pradiba**, AP/BT acted as resource person and delivered a guest lecture on **"Cracking Competitive Exams"** at Dr Zakir Husain College, Ilayangudi, Sivaganga.



**Dr.R.Shyam kumar** Prof/Head /BT and **Dr. S.Karthikumar**, ASP/BT, delivered a special lecture to students at **Department of Microbiology, P.S.G college of Arts and Science, Coimbatore.**



**Dr.K.Geetha**, ASP/BT & **Dr. D.Pradiba**, AP/BT attended a five Days Workshop/Faculty Development Programme (FDP) on **"From Bench to Bedside: Challenges in Translational Biomedical Research (TBR 2024)"**, organized by Department of Biotechnology and Medical Engineering, NIT Rourkela, Odissa.



**Dr. R. Shyam Kumar**, Prof & Head/BT and **Dr. S.Karthikumar**, ASP/BT have set up a stall at **Global Bio Summit 2024, Pragathi Maidan, New Delhi.**

- **Dr. R. SHYAM KUMAR/Professor-** Participated five days Faculty Development Program (FDP) on "Current Bioprocess Technology, Products, and Opportunities", scheduled from June 29 to July 03, 2024. Organized by Department of Biotechnology, K. L. University, Andhra Pradesh 522502, India.
- **Dr K.Geetha**, ASP/BT, attended an online workshop on the title "In silico techniques in development of antiviral therapeutics" organized by Department of Biotechnology, Manipal Institute of Technology, MAHE, Manipal on 05-07-2024.
- **Dr K.Geetha**, ASP/BT, attended online webinar on AI in Biotechnology, organized by Anand School of Engineering and Technology, Sharda University, Agra on 11-07-2024.
- **III Year B. Tech Biotechnology Students** along with **Dr. Shyam Kumar**, Prof & Head / BT, **Dr. K. Geetha**, ASP/BT and **Er. Karl Joseph Samuel**, AP/BT visited **Indian Immunologicals Limited, Hyderabad** on 12-08-2024.
- **III Year B. Tech Biotechnology Students** along with **Dr. Shyam Kumar**, Prof & Head / BT, **Dr. K. Geetha**, ASP/BT and **Er. Karl Joseph Samuel**, AP/BT visited **Centre for DNA Fingerprinting and Diagnostics, Hyderabad** on 13-08-2024
- **Er. Karl Joseph Samuel**, AP/BT attended "One day Faculty Training Programme on GATE 2025 and JAM 2025 Examination awareness session" organized by GATE and JAM Office, IIT Mardas on 31-08-2024



## Alumni interaction



The event "**Interdisciplinary Insights: Bridging Data Science and Biotechnology**" was attended by 41 participants from Biotechnology (BT) and 59 participants from Artificial Intelligence & Data Science (AI & DS). This event was organized by **Mr. K. Palani Kannan**, a **Clinical Bioinformatics Researcher**, specializing in Empowering AI Innovation in Omics Data, based in Abu Dhabi Emirates, UAE.

## Special lecture

**Ms. S. Nagajothi**, alumnus of 2017-21 batch, currently clinical trial coordinator and ethical committee coordinator, delivered a special lecture on **clinical trial: protocols, opportunities and policies** to III and IV BT students



The event "**Higher Study Opportunities Abroad**" was held on August 2, 2024, from 12:00 p.m. to 1:00 p.m., attended by 53 participants from II BT. This event was organized by **Ms. S. Sindhuja**, a Postgraduate student (M.S. in Molecular Biology at the University of Queensland, Australia).

## Guest lecture by Industrial expert

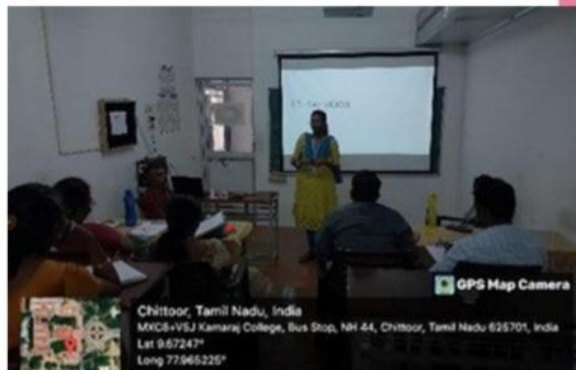
**Mr. Akash**, Deputy Manager at Aavin, Srivilliputtur, conducted a session on **dairy product processing and the TNPSC exam for Deputy Manager roles**. The event covered innovation, recipe formulation, and packaging design. Hands-on activities encouraged problem-solving and critical thinking. Students improved communication skills through discussions and networking. The session inspired interest in dairy industry careers.





## PAC Meeting

PAC meeting was conducted by Department of biotechnology on 20th July, 2024. Programme Assessment Committee (PAC) is one of the important committees of our department. Constituted to accelerate the pace of development and to ensure balanced growth of the department. This committee consists of academicians and representatives from industry/ research laboratories, Parent and Alumni representative besides the senior faculty members of the department and student representatives from all undergraduate & postgraduate classes.



## Guest lecture

On 20th July 2024, our department hosted a guest lecture on the "Application of Biotechnology in Stem Cell Research" by Dr. Gowripriya, Scientist at Aravind Medical Foundation, Madurai. The session explored how biotechnological advancements are revolutionizing stem cell research, from regenerative medicine to disease treatment. Students gained insights into the practical applications of stem cells in developing therapies and personalized medicine. The interactive lecture encouraged discussions and real-world examples, emphasizing biotechnology's role in innovation. This session broadened students' understanding and inspired interest in future research opportunities in biotechnology and stem cell science.



***Comprehensive workshop on Biotechnology Processing: Upstream Downstream organized by Dept. of Biotechnology - 23-24, August 20***