



Dr. M.G.R. EDUCATIONAL AND RESEARCH INSTITUTE

(Deemed to be University with Special Autonomy Status)

Maduravoyal, Chennai - 600 095, Tamilnadu, India.

(An ISO 9001-2015 Certified Institution)



Q3 EDITION

DEPARTMENT OF BIOTECHNOLOGY

PRESENT'S

BIobyTES NEWSLETTER

A QUARTERLY NEWSLETTER

2021

"Only those who dare to fail greatly can ever achieve greatly."

A newsletter is a tool used by businesses and organizations to share relevant and valuable information with their network of customers, prospects and subscribers.

ISSUE NO : Q3



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DEPARTMENT OF BIOTECHNOLOGY

DEPT. - ISSUE NO. - DATE / MONTH / YEAR : BT - Q1& Q2 & Q3 & Q4 -

DEPARTMENT VISION AND MISSION

Vision

To strive towards the innovative knowledge in the domains of biotechnology for the development of new processes and product useful to the society and enrich economy.

Mission

- To impart knowledge and skills in the biological sciences to improve human health, protect environment and to enrich economy.
- To provide an outstanding environment to learn for facing the global need in the fields of Biotechnology.
- We focus on excellence in teaching and research as well as to promote entrepreneurship

“Our world is built on biology and once we begin to understand it, it then becomes a technology”



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PROGRAM EDUCATIONAL OBJECTIVES OF THE DEPARTMENT

| PEO No. | Program Educational Objectives Statements |
|---------|---|
| PEO 1 | <ul style="list-style-type: none">Pursue higher studies or involve themselves in R&D activities in Biotechnology Industries and related organizations |
| PEO 2 | <ul style="list-style-type: none">Be a successful entrepreneur in creating jobs related to health science and Biomedical Society. |
| PEO 3 | <ul style="list-style-type: none">Promote ethics, sustainability, social environmental responsibility in their profession and career. |

List of Program Outcome for the program Engineering Graduates will be able to:

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 modelling 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.



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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.

PO: 9 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 holders (Industry experts, and with the other reputed universities) have been received.

LIST OF PROGRAM SPECIFIC OUTCOMES (PSOs)

PSO1: Ability to Apply knowledge of basic Life sciences for Biotechnological innovation and promoting entrepreneurship

PSO2: Proficiency to develop value-added Biotechnological products through implementation, Design, optimization, and scale-up of Biotechnological processes.

PSO3: Competency to promote Biotechnological research in the fields of biomedical, food and environment-related fields and also to publish papers in highly reputed journals



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BIobytes NEWSLETTER

HEAD OF DEPARTMENT

DESK MESSAGE



Dr. Rajeswary Hari

HOD of Department Biotechnology

The Department of Biotechnology was started in the year 2003 with an objective of generating trained manpower in Biotechnology with disciplinary skills from Chemical engineering, Computer Science and Management Skills. Biotechnology is the application of Biology for industrial purposes such as development of vaccines, biomaterials, reducing toxic waste by using microbial or enzyme based processes, development of new drugs for treating emerging and reemerging diseases, development of newer diagnostic methods for diagnosis of human diseases, development of crops with additional productivity or added advantages etc. The Research focus in our Department involves methods to reduce environmental pollution by using micro organisms, identifying the plant products which can be used to treat diabetes, fasten the wound healing processes; understanding the role of SNP in critical gene in the development of cancer; and monitoring and understanding the mechanisms of antibiotic resistance in bacteria. The Dept. is supported by grants from the SERB, DST, DBT & CSIR. The department is motivating the students and faculties to actively involve in research programme and also to publish articles in national and international journals & Conference. The Department offers B.Tech and M.Tech Programs in Biotechnology, M.Tech in Medical Biotechnology and Ph.D. programs also

Rajeswary Hari

HOD Sign



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BIobytes NEWSLETTER

ACHIEVEMENT

"BELIEVE IN YOURSELF "

We are terribly proud to publish our department Newsletter " Biobytes " , for this firstly we make a loudly moment to appreciate our department students, Those who participated & won prizes in various outside events & works . Now we move for a appreciation part: Ms Sneha D of third



D.Sneha
3rd year
Biotechnology



Lalith kumarr .D.A
2nd year
Biotechnology

year B currently pursuing Btech in Biotechnology from Dr. M.G.R Educational and Research Institute attended the CADRE ' B ''

CERTIFICATE TRAINING CAMP conducted by 1 (TN) Medical Unit NCC in Chennai from the 13th of February to 15th February 2021. This was conducted by The National Cadet Corps .Then Lalith Kumarr D.A from second year B.tech, studying at Dr. M.G.R Educational and Research Institute had the incredible opportunity to be a part of NASA's 'Scientists for a day' event where he learnt about the moons of planet Uranus.



RESEARCH & INNOVATIONS



We are extremely diligent to announce that Ourdepartment of biotechnology never fails to upgrade its standard when it comes to research article publications and new innovations. Feeling extremely elated to announce even this year 3 research articles has been published and also154 articles were published in past. So this brings up the count to 157 article publications.Eventually 3 patents and 3 projects were accomplished in a successful manner. This really shows how department is devoted to new innovation and Creativities."Great things are never done by one person, they are done by team effort" . This quote really depicts above result. & finally we take a hearty moment to appreciate the members





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STUDENT CORNER



The Institution of Green Engineers (IGEN) is an organization that helps people across the world connect with the main purpose of developing a greener world. 2021 saw the 51st anniversary of the Earth Day and to celebrate this occasion, the IGEN Energy99 Challenge was created. This was collaborated with our prestigious college, Dr. M.G.R. Educational and Research Institute to give our students an opportunity to help make the world greener and to spread the much needed awareness. The Objective of the project is to implement energy saving, #igen green 9 mantras to 99 public in 99 days with the outcome to save 36K units per year. From the Btech Biotechnology department we saw Ms. D. Sneha, Ms. M. Varsha Mahesh and Ms. V. Divyadarshini take up lead and spread awareness by going over to houses and educating families on how to save one unit per day. Ms D. Sneha and Ms.V. Divyadarshini did live presentations with the public and Ms. M. Varsha Mahesh demonstrated exceptional commitment and action towards creating a Sustainable Green Earth. All of them did admirable work towards the UN SDG Green goals. This year on the 25th day of the MGR Alumni Conclave 2021.

his third year the Office of International Relations, Collaboration Cell and MAGIC Association for the event titled "Higher Education and Job opportunities in Foreign Countries". Ms. Gangothri Manoj, Ms. B. Kanagavalli, Ms. Swetha V. and Ms. Thamarai G completed an internship at Deepam Hospital from the 16th of July 2021 until the 26th of August 2021. They did clinical research and learnt about the guidelines of ICMR, drug regulatory affairs, clinical trial regulations and so much more. Mr. Tamilarasi & Ms. Roshini R did internship at Optimurz from 28th July to 14th August 2021. Mr. Venkata Sai learned Java programming from Great Learning. Ms. Priyadarshini V. learnt a course on java from John Hopkins on 12th September 2021. She also got a completion certificate from GDG Ranchi. Ms. Vidhya did a software testing certificate course on 2nd August 2021. Mr. Surya K. completed an internship at Unschool from 19th August 2021. Ms. S. Roshini did 5 internships this year.

This year on the 25th day of the MGR Alumni Conclave 2021, Pranav of Btech Biotechnology, currently in



Exit Student Group Photo :

Here we share a picture of 2021 passed out batch students " B section "





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BIOBYTES NEWSLETTER

DEPARTMENT MEET

We department of Biotechnology are the one of the most engaging department of our esteemed Dr. M.G.R Educational & Reseach Institute. For this defenitely we have to thank our Dr. Rajeswari hari HOD, Dr. K. Gomathi Additional HOD & Our department Faculty members . For this year they appointed a two faculty members as a Association convener (Primary & Secondary), that namely

That the ever enthusiastic students Roshini .S Secretary from 4th year B.tech Biotechnology , P. Pranav join Secretary-1 from 3rd year B.tech Biotechnology , D. Sneha Joint secretary-2 from 3rd year B.tech Biotechnology , C. Kamali Joint secretary-2 from 2nd year BSc Biotechnology , Shuruthi V Treasurer from 4th year B.tech Biotechnology , C. Saran aravinda Joint Treasurer from 3rd year B.tech Biotechnology , B. kanagavalli Manager (Publication and designing) from 3rd year B.tech Biotechnology , Gangothri Manoj Event Manager from 3rd year B.tech Biotechnology , and the Executive members also elected.



Mrs. V. Shanmugapriya
Assistant professor
Dept. of Biotechnology

Primary convener -
Mrs.V.
Shanmugapriya
Assistant
Professor,
Biotechnology
department at Dr.
M.G.R University

Secondary
convener -Dr. S.
Karthkeyan
Assistant Professor
,Biotechnology
department at Dr.
M.G.R University



Dr. S. Karthikeyan
Assosiate professor
Dept. of Biotechnology

They elected a students from our department for Biotechnology association & they allotted a posting for each students to clearly do thier part of work in organizing the department events & meets.



S Roshini
Secretary



P. Pranav
join Secretary-1



D. Sneha
Joint Secretary-2



Shuruthi V
Treasurer



C. Saran
aravinda
joint Treasurer



B. Kanagavalli
Event (Publication
and designing)



Gangothri manoj
Event manager



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EVENT CORNER

We Department of Biotechnology, organised a Technology Talk on the topic "Biotechnique - A basic understanding" held on 16.08.2021 on online mode .The special speaker of this session was Dr.B. Prakash M.Sc., M.Phil., Ph.D. Associate Professor, Head of Biotechnology Department, at Vels Institution of Science Technology and Advanced Science. Many Guest lectures were

Technology Talk



Dr. B. Prakash
M.Sc., M.Phil.,
Ph.D.

Guest Lecture -1



Mr.N.Kalidass
Assistant Professor
(Agricultural
Economics)

biotechnology on the topic" Application of biotechnology in agriculture" .The speaker of this session was Mr.N.Kalidass Assistant Professor (Agricultural Economics) Department of Biotechnology at Dr MGR Educational &Research Institute. Secondly,organised a Guest Lecture on the topic "Evolution of Microbes" held on 8.09.2021 which

Guest Lecture -2



Dr. C.Priya
M.Tech., Ph.D.

was conducted through Google Meet. The esteemed speaker of this session was Dr. C.Priya M.Tech.,Ph.d Assistant Professor , Department of Biotechnology at Dr MGR Educational & Research Institute and also organised a guest lecture on "Marine flora pharmacology" held on 24/09/2021 which was conducted through Google Meet. The vibrant speaker of this session was Dr P Thirunavukkarasu professor Department of Biotechnology,Dr MGR Educational Research Institute. The "Alumni Interaction series-Viii"also held on 22.09.2021 which was

Guest Lecture -3



Dr. P.THIRUNAVUKKARASU
M.Sc., M.Phil., Ph.D.

conducted through Google Meet .The renowned speaker of this session was Shubra srivastava, Research associate at Samon Fraser University, Vancouver. whole event was inundated with our ever-inquisitive students and staff with a substantially accelerated appetite for knowledge.

Alumni Series 8



Mrs. Shubra srivastava
Research associate



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ALUMNI CORNER

We are very much proud to tell you about our 2021 batch alumni names that ever-enthusiastic Mr. Pruthiv rajan K , Mr. Bavin V , Mrs. Rachel S . They really make our department to be proud by their activities

Lastly we like to mention Mr. Nithish Raj Prasad 2021 passed out alumni, for him we mentioned his success story as separately in this edition



Mr. Pruthiv rajan K
Alumni - BT



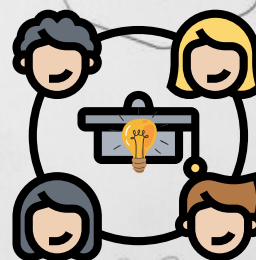
Mr. Bavin V
Alumni - BT



Mrs. Rachel S
Alumni - BT

Then our alumni visited the department to get back their old memories. Namely K. Mugesh , who is currently doing MS in Biotechnology (cell & molecular biology) at Wageningen research & university Netherland , the other person G. S. Vaidyanathan , presently doing M.tech in (food process engineering) at SRM university. They both shared some feedbacks about our esteemed institute, in that some of the common points are Good Infrastructure , Staffs are excellent in teaching , Various opportunities for the students

Now we move for part of that Article or Good Information from Alumni. For this we have a note from our department alumni Mrs. Jania das gupta 2009 batch, she short & sweetly said that ,10 yrs a decade gone by in the blink of my eyes. Lovely memories of my life are associated with this college. My love for biotechnology got shaped here by all the faculties , especially Sharmila mam , Raji mam , Jayalakshmi mam. I will be always thankful to them for all their contribution towards my life. All what I am today is because of them & the college. Really happy to be here after a decade. Happy for college success & infrastructure. Specially thanks for arranging such an event alumni meet 2009 batch . love you guys



We can prominently say that from 2002 to till date each batch of students are most successful in their lives. For this edition we mainly mention 2021 passout

batch students that mainly Mr. Nithish Raj Prasad , Mr. Pruthiv rajan K , Mr. Bavin V , Mrs. Rachel S , who all perfectly doing their career after passed out from our university





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STAR OF Q3



D.Sneha
3 year Biotechnology

We are glad to publish the Star person of our Department that ever passionate Ms. D.sneha, Who is studying 3rd year Biotechnology at our esteemed Dr.MGR Educational and Research Institute. She is an promising NCC candidate got B certificate. One of the most sincere & dedicated SW cadet in our college. She plays major role in GOD OF HONOR parade, Independence day parade. She took part in Online EBSB camp and in various events & camps like Vaccination camp in college.. etc. She has won many certificates in various competitions also. In MGR Ensav club, IGEN and biotech department , she organized many events and got appreciation from Chief guests. She went for energy audit in one of our MGR College staff house and completed my Energy Green 99 Challenge. Then working as communication manager for volunteers heads in IGEN as well as joint secretary of MGR Ensav club. Presently gonna start the village project ASAP. Then in our department of biotechnology , she is elected as a Additional secretary of our Biotechnology Association



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SEMESTER TOPPERS

4th year



**Narendran
ashwath**
4th year B.tech
Biotechnology



S Roshini
4th year B.tech
Biotechnology

3rd year

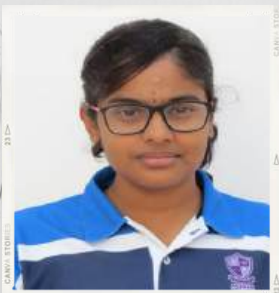


B Kanagavalli
A section 3rd
year B.tech
Biotechnology



P Pranav
B section 3rd
year B.tech
Biotechnology

2nd year



**Sri Siva
Sruthika. S. T**
2nd year B.tech
Biotechnology



KURUGUNTLA SRUTHI
2nd year B.tech
Biotechnology



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SUCCESS STORIES



**Mr. Nithish Raj Prasad,
Ph.D in Biomedical Engineering
at the University of Illinois at Chicago
(UIC), Chicago, United States of America.**

We are gratified to write a " Success Story " of Our Biotechnology department alumnus (2021) , the ever enthusiastic Mr. Nithish Raj Prasad, Who is Currently doing PhD in Biomedical Engineering at the University of Illinois (UIC) at Chicago, United States of America. He completed his B.Tech this summer (May 2021) immediately secured his admission at UIC, one of the superior institutions in the United States of America. His fervour for research enabled him to present his works at various National as well as International conferences and symposiums across the country. He was also awarded the Best Paper award in an International Conference held at Arunai University, Tiruvannamalai , Tamilnadu, India. Have organized over a hundred events and completed ten Engineering projects during his period of study hall at our esteemed university , also happens to be the founder of invest. Utilize and MultiSols. He also happens to bear " The Best NewGen IEDC " projects of the year 2020 for his start-up MultiSols. His passion for entrepreneurship got him opportunities to be the resource person of various workshops, guest lectures, and panel discussions,etc Presently he is working on a research team understanding the neutrophils mechanism in the lung of rodent models using 2 photon microscopy Under the guidance of Dr. Asrar B. Malik, a Schweppe Family Distinguished Professor, Head of Department of Pharmacology and Regenerative Medicine, and the Director of Center for Lung and Vascular Biology, at the University of Illinois at Chicago, College of Medicine.

Newsletter



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